DETAILED PROJECT REPORT OF UMTYNRU-WEISAR WATERSHED UNDER INTEGRATED WATERSHED MANAGEMENT PROGRAMME (IWMP) PROJECT – V (2010 – 2011) WEST KHASI HILLS DISTRICT, MEGHALAYA

PROJECT IMPLEMENTATION AGENCY (IWMP) WEST KHASI HILLS DISTRICT SOIL & WATER CONSERVATION DIVISION: NONGSTOIN
SUMMARY

Name of the State : Meghalaya
Name of the District : West Khasi Hills District
Name of the C&RD Block : Nongstoin
Name of the Villages : Pungphreit, Mawkohiang, Mawlangbah, Shilliang Ktieh, Thiepkseh, Mawrok, Mawrok-Nongnah
Name of the Project : West Khasi Hills – IWMP – V
Total Geographical Area : 2615 Ha
Total Treatment Area : 2500 Ha
Total Project Cost : 375.00 Lakhs
Project Duration : 5 Years
Project Implementing Agency : Soil & Water Conservation Division, Nongstoin.
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CHAPTER I
INTRODUCTION AND BACKGROUND
INTRODUCTION AND BACKGROUND

1.1 Project Background: The Umtynru-Weisar Watershed (IWMP-V) project is located in Nongstoin C&RD Block, West Khasi Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Umtynru-Weisar stream and its tributaries flowing in a north to south direction falls to the Rwiang River which is the main Drainage Basin of the area. The total area is 2615 Ha. with 2500 Ha to be treated under the Integrated Watershed Management Programme (IWMP). The Project area is located at a distance of about 30 km from Nongstoin Head Quarter.

A total of 7 villages are covered under the project. These are –
1. Pungphreit
2. Mawlangbah
3. Thiepkseh
4. Mawrok-Nongnah
5. Mawkohiang
6. Mawrok
7. Shilliangktieh

1.2 Micro-watershed Information: There are four numbers micro-watershed with code number are 3B1C3b1b, 3C1B3b1l, 3B1C3a1d, 3B1C3b3k as codified by the North East Space Application Centre (NESAC). The total area of the micro-watershed is 2615 Ha with 2500 hectares to be treated under the Integrated Watershed Management Programme (IWMP).

1.3 Need and Scope for Watershed Development: The micro-watershed Umtynru-Weisar falls under the High Priority category as per the prioritization of watersheds by the North East Space Application Centre (NESAC). The major landscape consists of degraded and barren land/wastelands with rocky outcrops and sandy soil exposed due to lack of vegetative cover which is highly vulnerable to soil erosion. The farmers are all marginal and 113 households are below the poverty line, which are 237 of the total households. Jhum cultivation is practiced by most of the inhabitants of these villages on the slopes.

1.4 Other Development Project/Scheme running in the project area: The other development project/scheme running in the project area are

1. IC DS
2. MGNREGS
3. PHE.
CHAPTER II
BASIC INFORMATION OF THE PROJECT AREA
CHAPTER II
BASIC INFORMATION OF THE PROJECT AREA

2.1.1 Location: It is situated at a distance of 34 Kms away from Nongstoin the Headquarter of West Khasi Hills District and falls under Nongstoint C&RD Block which is within Nongstoin Districts jurisdiction. The geographical location is between 91°13’30” to 91°19’30” E Longitude and 25°37’00” to 25°40’30” N Latitude. There are 7 villages within the Watershed which are as follows –


2.1.2 Physiography: The physiography of the micro-watershed is sloppy and moderately undulating. The altitude ranges from 1360 m to 1640 m above mean sea level. In the lower reaches the slope ranges from 1% to 70% from the main sea level.

Table 2.1: Physiographic details

<table>
<thead>
<tr>
<th>Elevation (metres)</th>
<th>Slope Range (%)</th>
<th>Order of watershed Sub/Micro-watershed</th>
<th>Major streams</th>
<th>Topography</th>
</tr>
</thead>
<tbody>
<tr>
<td>1140 m to 1640 m</td>
<td>&lt; 1% to &gt; 70 %</td>
<td>Micro Watershed</td>
<td>Umtynru-umweisar</td>
<td>Gentle to moderately Sloping</td>
</tr>
</tbody>
</table>

2.1.3 Drainage: The Watershed is drained by Umtynru-Weisar and Rwiang Rivers as the main drainage North-South direction with a network of tributaries & streamlets. The drainage density calculated is 3.75 Km/Km² & the average bifurcation ratio worked out is 3.30 The total length of all the streams/rivers is 119.72 Km (Ist Order to IVth Order). There are 144 First Order streams, 38 Second Order streams, 6 Third Order streams, and 2 Fourth Order streams.

Drainage Density = \( \frac{\text{Total length of streams/rivers in the Watershed (Km)}}{\text{Area of Watershed (Km²)}} \)

Bifurcation Ratio = \( \frac{\text{Previous streams order (Nos. of Segments)}}{\text{Next Order (Nos. of Segments)}} \)
2.1.3.1 **Soil:** Soils are course-loam at the upper reach fine at the middle and loamy-skelets at the lower reach. Texture is medium and soil depth is deep. Exposure to erosion hazard is moderately severe.

**Table 2.2: Details of soil erosion in the project areas:**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Names of State</th>
<th>Names of District</th>
<th>Names of Projects</th>
<th>Cause</th>
<th>Types of erosion</th>
<th>Area affected (ha)</th>
<th>Run-off (mm/year)</th>
<th>Average soil loss (Tonnes/ha/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>West Khasi Hills – IWMP V</td>
<td>Water erosion:</td>
<td>a) Sheet</td>
<td>2615</td>
<td>2700 - 3200</td>
<td>10.50 – 32.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b) Rill</td>
<td>2615</td>
<td>2700 - 3200</td>
<td>10.50 – 32.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>c) Gully</td>
<td>3760</td>
<td>2700 - 3200</td>
<td>10.50 – 32.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sub total</td>
<td>3760</td>
<td>2700 - 3200</td>
<td>10.50 – 32.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Wind erosion</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

2.1.4 **Climate:** The Climate of the Area is humid Sub-Tropical (Sub – Montane), a typical characteristic & representative of the Shillong Plateau Agro – Climatic Zone. The area experiences moderately warm summer & severe winter. Average Annual Rainfall is 6000mm received during June to September. The Watershed Project area is adjacent to Mawsynram which once held the distinction of being the wettest place on earth. Aerial distance is about 20 Kms (approximately).

2.3 **Agro-climatic zones of the project areas, soil types, average rainfall and major crops.**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of State</th>
<th>Name of the Agro-climatic zone</th>
<th>Area (ha)</th>
<th>Name of the Districts</th>
<th>Name of the Projects</th>
<th>Major soil types</th>
<th>Average rainfall in mm (preceding 5 years average)</th>
<th>Major crops</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Meghalaya</td>
<td>Cold Moisture</td>
<td>2615</td>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>Soils are course-loam at the upper reach fine at the middle and loamy-skelets at the lower reach. Texture is medium and soil depth is deep. Exposure to erosion hazard is moderately severe.</td>
<td>2615</td>
<td>2980 mm</td>
</tr>
</tbody>
</table>

| Total | 325 |
2.1.5 **Agriculture:** Agriculture in the mainstay of the people of the area Principal agricultural Crops include Paddy, Potato, Maize, Sweet Potato, Yam & other Vegetables. Important horticulture crops are Sohphie bah (*Myrica nagii*), Sohphie nam (*M. farquhariana, M. esculenta*), Pear, Peach, Plum, Sohlyngdkhur (*Morus alba*), Himalayan cherry, Passion fruit, etc.

### Table 2.4: Crop yield and production

<table>
<thead>
<tr>
<th>Crops</th>
<th>Area (ha)</th>
<th>Average Yield (Qtl) per ha.</th>
<th>Total Production (Qtl.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy</td>
<td>115</td>
<td>18</td>
<td>4500</td>
</tr>
<tr>
<td>Maize</td>
<td>60</td>
<td>11</td>
<td>1595</td>
</tr>
<tr>
<td>Ginger</td>
<td>40</td>
<td>80</td>
<td>3200</td>
</tr>
<tr>
<td>Potato</td>
<td>80</td>
<td>90</td>
<td>12600</td>
</tr>
<tr>
<td>Sweet Potato</td>
<td>30</td>
<td>37</td>
<td>2590</td>
</tr>
</tbody>
</table>

2.1.6 **Natural Vegetation:** The natural vegetation of the area is fairly poor due to tremendous biotic pressure such as recurring fire hazards, overgrazing & over exploitation of timber and fuel wood, particularly charcoal burning which has spelt a bane for the farmers of the area. The barren undulating topography of the area blended in a mosaic of rocky outcrop exposures where soil depth is very low to low with sandy soil texture bears testimony to this fact. As a result of these factors Pine (*Pinus kesiya*) has become the dominant tree species across landscapes. The primary vegetation of the area can be seen only on a few scattered pockets along depressions having good moisture concentration mostly on the northern aspects. The important tree species includes - *Quercus spp.* (Dieng sning, Dieng sai), *Castanapsis spp*., (Dingstap, Dieng sohot), *Schima khasiana* (Dieng ngan) *Myrica nagii* (Sohphie bah) *Myrica farquhariana*, (Sohphie nam) *Betula alnoides*, (Dieng lieng lieh) *Alnus napalensis*, (Dieng lieng iong) *Bucklandia populnea*, (Dieng doh).

2.1.7 **Socio-Economic Profile:** Socio-economically the people of the area are very poor owing primarily to low agricultural productivity where people have to explore other means of livelihood to make both ends meet. Although agriculture is the primary occupation of the people, this sector could barely meet their livelihood requirements as it is largely mono – agriculture (single cropping) and because of low productive potential of the land. The average annual income is only about Rs. 42400/- per family.
**Demographic Status:** The total population of the watershed is 1474 numbers of which 696 are males & 778 are females and the total no. of household is 237. The demographic details village-wise falling within the Project area are as below:

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Villages</th>
<th>Nos of Households</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pungphreit</td>
<td>52</td>
<td>154</td>
<td>198</td>
<td>352</td>
</tr>
<tr>
<td>2</td>
<td>Mawrok</td>
<td>47</td>
<td>100</td>
<td>103</td>
<td>203</td>
</tr>
<tr>
<td>3</td>
<td>Thiepksel</td>
<td>40</td>
<td>71</td>
<td>83</td>
<td>154</td>
</tr>
<tr>
<td>4</td>
<td>Mawrok-Nongnah</td>
<td>29</td>
<td>125</td>
<td>137</td>
<td>262</td>
</tr>
<tr>
<td>5</td>
<td>Shillingkship</td>
<td>23</td>
<td>139</td>
<td>143</td>
<td>282</td>
</tr>
<tr>
<td>6</td>
<td>Mawlangbah</td>
<td>35</td>
<td>78</td>
<td>81</td>
<td>159</td>
</tr>
<tr>
<td>7</td>
<td>Mawkohiang</td>
<td>11</td>
<td>29</td>
<td>33</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>237</strong></td>
<td><strong>696</strong></td>
<td><strong>778</strong></td>
<td><strong>1474</strong></td>
</tr>
</tbody>
</table>

**Infrastructure facilities:**

2.5  
2.1.1 (a) **Roads:** Almost all the villages within the Project Area are not connected by roads Communication except for Pungphreit village which has proper communication means by P.W.D road but all are by approaching road or footpaths (kutch).

2.1.2 (b) **Schools:** there are only 9 L.P Schools and 1 U.P. School within the Project Area run either by the Mission or by the Government.

2.1.3 (c) **Electricity:** Connections have been provided to all villages but not regular.

2.1.4 (d) **Health:** No Community Health Centre at the Project area and the villagers of this area could get medical aids only at Ramrai PHC.

2.1.5 (e) **Water Supply:** Drinking water supply have been provided by the PHE Deptt. but not regularly. However, during lean season the entire population has to depend on springs available in the area as the supply is not sufficient to meet the daily requirement.

2.1.6 (f) **Marketing Facility:** There is a weekly market held twice a week on rational basis centrally located at Rambrai where all the villages avail marketing facilities.
2.5 Details of infrastructure in the project areas:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of District</td>
<td>Name of Project</td>
<td>Parameters</td>
<td>Status</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>(i) No. of villages connected to the main road by an all-weather road</td>
<td>7 Nos. villages are connected by village roads to the main road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) No. of village provided with electricity</td>
<td>All 7 villages have been electrified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) No. of households without access to drinking water</td>
<td>375 Nos.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)</td>
<td>(P) 9 Nos (S) - (HS) - (VI) -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v) No. of village with access to Primary Health Centre</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vi) No. of village with access Veterinary Dispensary</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vii) No. of village with access Post Office</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(viii) No. of village with access Banks</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ix) No. of village with access Markets/ mandis</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(x) No. of village with access Agro-Industries</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(xi) Total quantity of surplus milk</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(xii) No. of milk collection centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))</td>
<td>(U) Nil (S) Nil (PA) Nil (O) Nil</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(xiii) No. of villages with access to Anganwadi Centres</td>
<td>5 Nos.</td>
</tr>
</tbody>
</table>
| | | (xiv) Any other facilities with no. of villages (please specify) | 2.1.8 Livestock: The important livestock of the area includes Cattle (Cows), Goats, Piggery & Poultry, etc and these are also being taken up only as a part time occupation.

2.1.9 Table 2.6: Existing livestock population

<table>
<thead>
<tr>
<th>Type of Animal</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle (Cows)</td>
<td>2772</td>
</tr>
<tr>
<td>Goats</td>
<td>839</td>
</tr>
<tr>
<td>Piggery</td>
<td>259</td>
</tr>
<tr>
<td>Poultry</td>
<td>3511</td>
</tr>
</tbody>
</table>

Land ownership: There are primarily two types of land holding system, namely private lands (Ri Kynti i.e. individually owned land) and community lands (Ri Kur i.e. clan land and Ri Raid i.e. village community land).
### 2.7 Details of land holding pattern in the project area:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of District</td>
<td>Name of projects</td>
<td>Types of Farmer</td>
<td>No. of households</td>
<td>No. of BPL household</td>
<td>Land holding (ha)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Irrigated)</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>(i) Large</td>
<td>5 nos</td>
<td>-</td>
<td>2615Ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Small</td>
<td>150 nos</td>
<td>56</td>
<td>2615Ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Marginal</td>
<td>76 nos</td>
<td>51</td>
<td>2615Ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) Landless</td>
<td>6 nos</td>
<td>6</td>
<td>2615Ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub - Total</td>
<td>237</td>
<td>113</td>
<td>2615Ha</td>
</tr>
</tbody>
</table>

### 2.8 Details of Common property resources of the project areas:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of District</td>
<td>Name of the Projects</td>
<td>CPR Particulars</td>
<td>Total Area (ha)</td>
<td>Area available for treatment (ha)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pvt. Person</td>
<td>Govt. (specify deptt.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Village community</td>
<td>Village community</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>(i) Wasteland/ degraded land</td>
<td>263Ha</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Pastures</td>
<td>50Ha</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Orchards/private agriculture</td>
<td>1916Ha</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) Village woodlot</td>
<td>375Ha</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v) Forest (degraded)</td>
<td>2Ha</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vii) Community Buildings</td>
<td>2.5ha</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(viii) Weekly Markets</td>
<td>-</td>
<td>1 (Rambrai)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ix) Permanent Markets</td>
<td>-</td>
<td>1 (Rambrai)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(x) Temples/ Places of worship</td>
<td>6.5Ha</td>
<td>8 Nos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(xi) Others (Pl. specify)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>2615Ha</td>
<td>-</td>
</tr>
</tbody>
</table>
2.1.10 **Land use and land cover**: As per Land Use & Land Cover map generated by the North Eastern Space Application Center (NESAC), Meghalaya from Satellite image taken during 2005 – 2006 (LISS – 3, Image), the Watershed is broadly classified in to the following Land uses:-

<table>
<thead>
<tr>
<th>Description</th>
<th>Area (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Built up Area</td>
<td>11.00</td>
</tr>
<tr>
<td>(b) Agriculture Land – Crop Land – Kharif Crop</td>
<td>198.00</td>
</tr>
<tr>
<td>(c) Tree Clad Area – Close</td>
<td>375.00</td>
</tr>
<tr>
<td>(d) Tree Clad Area – Open</td>
<td>1768.00</td>
</tr>
<tr>
<td>(f) Wasteland/open Scrub</td>
<td>263.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2615.00</strong></td>
</tr>
</tbody>
</table>

2.12 **Problems of the Area**: Baseline Survey and PRA Exercise carried out indicates the major problems of the Watershed Area as per the villages surveyed are as listed below:

1. Very low agricultural productivity
2. Low fertility of soil due to heavy rainfall causing leaching of nutrients.
3. Lack of Awareness & Knowledge on improved agricultural practices.
4. Low marketing potential of agricultural products.
5. Very poor sanitation.
6. Inadequate primary infrastructure.
8. Acute shortage of drinking water.
10. Area of the Project not covered under Assured Irrigation.
11. Preponderance of degraded lands/wastelands.

These problems have been identified through Participatory Rural Appraisal (PRA) Exercises conducted in all the villages within the Watershed. Measurable attempts & approaches have been formulated in the watershed treatment plan of the Detailed Project Report so as to mitigate & overcome them.
CHAPTER III
PROJECT PLANNING & INSTITUTION BUILDING
CHAPTER III
PROJECT PLANNING & INSTITUTION BUILDING

3.1 Scientific Planning

**Base Line Survey:** To establish a benchmark for assessing the impact of any intervention (pre-project & post project) a baseline survey is essential. The baseline survey included household census & socio-economic survey by using structured and semi-structured questionnaires, bio-physical survey to identify and assess the status of natural resources in the project area.

**Participatory Rural Appraisal:** To further obtain information on the project area, the people, resources, various PRA techniques like resource mapping, social mapping, seasonal calendars, matrix ranking, Venn diagrams were used.

**GIS & Remote Sensing:** To facilitate the process of prioritization and planning Geographic Information System was use. The land use and land cover (LULC) maps were prepared by the North Eastern Space Application Centre (NESAC) using the LISS III images (2006). The activities were located on the field by using GPS and accordingly transferred to the maps on GIS platform.

Table 3.1: Details of Scientific Planning and Inputs in IWMP projects:

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Scientific criteria/ inputs used</th>
<th>No. of projects in which scientific criteria were used</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cluster approach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Baseline survey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hydro-geological survey</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Contour mapping</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Participatory Net Planning (PNP)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote sensing data-especially soil/ crop/ run-off cover</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Ridge to Valley treatment</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Online IT connectivity between Project and DRDA cell/ZP</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>DRDA and SLNA</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>SLNA and DoLR</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Availability of GIS layers</td>
<td></td>
</tr>
<tr>
<td>Feature</td>
<td>Yes/No</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>Cadastral map</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Village boundaries</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Drainage</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Soil (Soil nutrient status)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Land use</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Ground water status</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Watershed boundaries</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Crop simulation models¹</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Integrated coupled analyzer/ near infrared visible spectroscopy/ medium spectroscopy for high speed soil nutrient analysis</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Normalized difference vegetation index (NDVI)#</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Weather Stations</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**B. Inputs**

<table>
<thead>
<tr>
<th>Input</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio-pesticides</td>
<td>No</td>
</tr>
<tr>
<td>Organic manures</td>
<td>Yes</td>
</tr>
<tr>
<td>Vermi-compost</td>
<td>Yes</td>
</tr>
<tr>
<td>Bio-fertilizer</td>
<td>Yes</td>
</tr>
<tr>
<td>Water saving devices</td>
<td>No</td>
</tr>
<tr>
<td>Mechanized tools/ implements</td>
<td>No</td>
</tr>
<tr>
<td>Bio-fencing</td>
<td>Yes</td>
</tr>
<tr>
<td>Nutrient budgeting</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic water level recorders &amp; sediment samplers</td>
<td>No</td>
</tr>
<tr>
<td>Any other (please specify)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Project Implementing Agency:**
The PIA is the Soil & Water Conservation Division Nongstoin West Khasi Hills District of Meghalaya. The Project Manager will be the Divisional Soil and Water Conservation Officer and will be assisted by an Asst. Soil & Water Conservation Officer along with WDT members in which expertise is drawn from the relevant fields for achieving smooth and successful implementation of the project.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Names of Districts</td>
<td>Names of projects</td>
<td>Details of PIA</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>West Khasi Hills – IWMP V</td>
<td></td>
</tr>
</tbody>
</table>

**Type of organization#**

- Government

**Name of organization**

- Soil & Water Conservation Division, Nongstoin

**Designation & Address**

- Divisional Soil & Water Conservation Officer, Nongstoin

**Telephone**

- 03654-280236

**Fax**

- -do-

**E-mail**

- -
The Watershed Committee of the Umtynru-Weisar, IWMP V was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Durbar/Council). The Umtynru-Weisar Watershed Committee has been registered under the Society Registration Act 7 of 1990.

### Table 3.2: Details of Watershed Committees (WC):

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Names of States</th>
<th>Names of the District</th>
<th>Names of projects</th>
<th>Names of WCs</th>
<th>Date of registration as a Society (dd/mm/yyyy)</th>
<th>Designation</th>
<th>Name</th>
<th>M/F</th>
<th>SC</th>
<th>ST</th>
<th>SF</th>
<th>M/F</th>
<th>LF</th>
<th>Landl ess</th>
<th>UG</th>
<th>SHG</th>
<th>GP</th>
<th>Any other</th>
<th>Educational qualification</th>
<th>Function/s assigned#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>President</td>
<td>Shri. R. Lyngdoh</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Secretary</td>
<td>Shri. G. Iawphniaw</td>
<td>M</td>
<td>✓</td>
<td></td>
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<tr>
<td>3</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Shri. Proster Lyngdoh</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Shri. Khainroy Marwein</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>5</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Shri. Shrimland Lyngkhoi</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Shri. Krosly Nongshlong</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Shri. Dionis K. Dewsaw</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Shri. Throkstar Marthong</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Smt. Storis Syiem</td>
<td>F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>10</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Smt. Kwintima Syiemlieh</td>
<td>F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Smt. Dilit Sycem</td>
<td>F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Shri. Dreslan Marngar</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>13</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Umtynru-Weisar Watershed Committee</td>
<td>Yet to Register</td>
<td>Member</td>
<td>Shri. Toring Lyngkhoi</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### In column 20 only the letter assigned, as below, needs to be typed, except for ‘J’, where the type may be specifically mentioned.

- A. PNP and PRA
- B. Planning
- C. Maintenance of Accounts
- D. Signing of cheques and making payments
- E. Supervision of construction activities
- F. Cost Estimation
- G. Verification & Measurement
- H. Record of labour employed
- I. Social Audit
- J. Any other (please specify).

### Self Help Group

Awareness programmes were organized in the villages to inform and sensitize the people on the essence of organizing themselves into homogenous groups for uplifting their livelihood especially the under privilege - the women folk and the landless. Discussions were held at length for organizing training and capacity building with the WDT on the scope and procedure of group formation, availing credit, grading of the groups and so on.

#### Detail of Self Help Group (SHGs) in the project areas:

<table>
<thead>
<tr>
<th>Name of District</th>
<th>Name of project</th>
<th>Total no. of registered SHGs</th>
<th>No. of members</th>
<th>No. of SC/ST in each category</th>
<th>No. of BPL in each category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>With only Men</td>
<td>With only Women</td>
<td>With both</td>
<td>Total</td>
</tr>
<tr>
<td>West Khasi hills Districts</td>
<td>WKH-IWMP-IV</td>
<td>6Nos</td>
<td>6Nos</td>
<td>6Nos</td>
<td>6Nos</td>
</tr>
</tbody>
</table>

* From column no. 2, 3 and 4, total no. of States, District and Projects, respectively. From column no. 5 to 8, category – wise grand totals may be given for the entire country at the end of the table.
i) User Group

To manage the assets created and ensure their sustainability User Groups will be formed. The people have been sensitized on the importance of ensuring that the assets created are sustainably used and the essentiality of having User Groups for maintenance and operation of their assets.

Details of UGs in the Project areas:

<table>
<thead>
<tr>
<th>Name of District</th>
<th>Name of Projects</th>
<th>Total no. of UGs</th>
<th>No. of Members</th>
<th>No. of SC/ ST in each category</th>
<th>No. of BPL in each category</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi hills Districts</td>
<td>WKH-IWMP-IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>both</td>
<td>Total</td>
<td>Categories</td>
</tr>
<tr>
<td>(i) Landless</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>(i) Landless</td>
</tr>
<tr>
<td>(ii) SF</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>(ii) SF</td>
</tr>
<tr>
<td>(iii) MF</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>(iii) MF</td>
</tr>
<tr>
<td>(iv) LF</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>(iv) LF</td>
</tr>
<tr>
<td>Total</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Total</td>
</tr>
</tbody>
</table>

(M-Male, F- Female).

* From column 2,3, and 4, total no. of State, District and Project, respectively, from column 5 to 8 category – wise grant totals, for the entire country may be given at the end of the table.
CHAPTER IV
PROJECT ACTIVITIES
CHAPTER IV
PROJECT ACTIVITIES

4.1.1 Preparatory Phase:

i) Entry Point Activities (EPA)

(All financial figures in Lakhs Rs.)

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>State</th>
<th>District</th>
<th>Names of Project</th>
<th>Amount earmarked for EPA</th>
<th>Entry Point Activities planned</th>
<th>Estimated Cost</th>
<th>Expenditure incurred</th>
<th>Balance</th>
<th>Expected outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>West Khasi</td>
<td>West Khasi Hills – IWMP -V</td>
<td>15 Lakhs</td>
<td>Farm Pond</td>
<td>430130</td>
<td></td>
<td></td>
<td>Improving rural connectivity, Better infrastructure, Better civic amenities, Increase in availability of safe drinking water</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hills</td>
<td></td>
<td></td>
<td>Culvert</td>
<td>64800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Footpath</td>
<td>332930</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Check dam cum Washing Place</td>
<td>400860</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Washing Place</td>
<td>76080</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Drinking Well</td>
<td>53980</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Foot Bridge</td>
<td>141570</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL: 1500000

Actual outcome
### ii) Other activities of Preparatory Phase:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of projects</th>
<th>Initiation of village level institution</th>
<th>Capacity building</th>
<th>IEC activities</th>
<th>Baseline survey</th>
<th>Hydro-geological survey</th>
<th>Identifying technical support agencies</th>
<th>Resource agreements</th>
<th>Preparation of DPR</th>
<th>Evaluation of DPR</th>
<th>Any other (please specify)</th>
<th>Cost incurred (Rs. In lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>Formation of 1 no. W/C &amp; 13 nos. Su-Watershed Committee at each benefiting village.</td>
<td></td>
<td>Roles and responsibility of W/C &amp; Sub-W/C. Roles and responsibility of WDT’s. Concepts, Roles &amp; responsibilities of SHGs, UGs, Off-campus exposure trips to Research Institutes, Training Institutes. Project concepts, awareness about the programme and peoples participation.</td>
<td>Pamphlets, Posters &amp; banners</td>
<td>Socio-economic surveys and Participatory Rural Appraisal Exercises</td>
<td>GPS Survey</td>
<td>Baseline Surveys for identifying work sites and intervention areas</td>
<td>NIRD, NER, Guwahati, SIRD, Nongsder, ICAR, Umiam, RRTC Umiam, VTC, Kyrdemkulai, Fruit Garden, Shillong, NEHU, Shillong, NE-SAC, Umiam, CTI, Byrnihat, MRDS, Shillong, SCSTE, Shillong, BRO, Shillong, RGHIM, Shillong, RS Lyngdoh Training Centre, Smit</td>
<td>Resolution and agreement with village committees for taking up developmental works. Agreement for establishing and maintaining community forests. Agreement to stop charcoal burning in project area. Agreement to prevent poisoning of fishes in rivers. Agreement for convergence of IWMP with other programmes.</td>
<td>Done - - 7.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Formation of 1 WDT. Community mobilization. General meeting, general awareness, rapport building.</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>
### 4.2 Watershed Works Phase:

#### 4.2.1 Activities related to surface water resources in the project areas:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Name of States</th>
<th>Name of Districts</th>
<th>Name of Projects</th>
<th>Type of structures</th>
<th>Pre Project</th>
<th>Augmentation/repair of existing structure</th>
<th>Proposed Project</th>
<th>Construction of new structures</th>
<th>Total target</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>Area irrigated (ha)</td>
<td>Storage capacity (m³)</td>
<td>Area to be treated (ha)</td>
<td>Storage capacity (m³)</td>
</tr>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH - IWM PV</td>
<td>(i) Tank</td>
<td>27</td>
<td>110</td>
<td>85</td>
<td>29.4273</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(ii) Pond</td>
<td>3</td>
<td>10</td>
<td>6</td>
<td>1.6345</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(iii) Lake</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(iv) Check Dam</td>
<td>8618Rm</td>
<td>76.53</td>
<td>-</td>
<td>2.24068</td>
<td>8618Rm</td>
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<td></td>
<td></td>
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<td>(v) Wells</td>
<td>21</td>
<td>87</td>
<td>69.6</td>
<td>19.4901</td>
<td>21</td>
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<td></td>
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<td></td>
<td>(vi) Channel</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(vii) Water harvesting structure</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH - IWM PV</td>
<td>Total</td>
<td>283.53</td>
<td>160.60</td>
<td>52.79258</td>
<td>283.53</td>
<td>160.60</td>
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### Activities related to surface water resources in the project areas:

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<th>No</th>
<th>Area irrigated (ha)</th>
<th>Storage capacity</th>
<th>Expenditure incurred</th>
<th>Area irrigated (ha)</th>
<th>Storage capacity (m³)</th>
<th>Expenditure incurred (Rs. In Lakhs)</th>
<th>Area irrigated (ha)</th>
<th>Storage capacity (m³)</th>
<th>Estimate incurred</th>
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<tbody>
<tr>
<td>23</td>
<td>168.53</td>
<td>73</td>
<td>27.58445</td>
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<td>20</td>
<td>77</td>
<td>840</td>
<td>16.8231</td>
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<td></td>
<td></td>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td>43</td>
<td>245.53</td>
<td>913</td>
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</table>

**Total achievement**

<table>
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<tr>
<th>Change in storage capacity (Col 8-6)</th>
<th>Change in irrigated area (ha) Col. (8-6)</th>
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</thead>
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### 4.2.2 Activities related to recharging ground water resources in the project areas:

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<thead>
<tr>
<th>S. No.</th>
<th>Names of States</th>
<th>Names of Districts</th>
<th>Names of projects</th>
<th>Type of structures</th>
<th>Pre-project</th>
<th>Proposed target</th>
<th>Achievement due to project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No. Area irrigated (ha)</td>
<td>No. Area to be irrigated (ha)</td>
<td>Estimate cost</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meghala ya</td>
<td>West Khasi Hills</td>
<td>(i) Open wells</td>
<td>(ii) Bore wells</td>
<td>Nil</td>
<td>4</td>
<td>0.5398</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IWMP - V</td>
<td>(iii) Any others</td>
<td>(Pl. specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total for the project</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total for the project**

|                          |                           |                           |                           |                           |                           |                           |                      |                       |                             |                           |
|                          |                           |                           |                           |                           |                           |                           |                      |                       |                             |                           |
### 4.2.3 Activities executed by User Groups in the Project Areas:

<table>
<thead>
<tr>
<th>Names of Districts</th>
<th>Names of Projects</th>
<th>Major activities of the UGs – Targets</th>
<th>Structure/activity proposed</th>
<th>No. of UGs involved</th>
<th>Estimate Cost</th>
<th>Amount of WDF to be collected (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>West Khasi Hill IWMP-V</td>
<td>1. Footpath</td>
<td>1. Footpath</td>
<td>- 3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Drinking well</td>
<td>2. Drinking well</td>
<td>- 2</td>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Washing Place</td>
<td>3. Washing Place</td>
<td>- 5</td>
<td>15.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Footbridge</td>
<td>4. Footbridge</td>
<td>- 2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Culvert</td>
<td>5. Culvert</td>
<td>- 2</td>
<td>-</td>
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### 4.2.4 Activities executed by User Groups in the Project Areas:

<table>
<thead>
<tr>
<th>Structure/activity</th>
<th>Major activities of the UGs – Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl. No. Type No. #</td>
<td>Treated Area (ha.)</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>1. Footpath</td>
<td>- 3</td>
</tr>
<tr>
<td>2. Drinking well</td>
<td>- 2</td>
</tr>
<tr>
<td>3. Washing Place</td>
<td>- 5</td>
</tr>
<tr>
<td>4. Footbridge</td>
<td>- 2</td>
</tr>
<tr>
<td>5. Culvert</td>
<td>- 2</td>
</tr>
</tbody>
</table>
### 4.2.5 Activities related to livelihoods by Self Help Groups (SHGs) in the project areas:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the Districts</td>
<td>Names of Projects</td>
<td>Major activities of the SHGs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Name of activity</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Mushroom Cultivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Piciculture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apiculture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rice Mill Operation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Piggery</td>
</tr>
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</table>

### 4.2.6 Activities related to livelihoods by Self Help Groups (SHGs) in the project areas:

<table>
<thead>
<tr>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of SHGs given training</td>
<td>Total assistant received by the SHG (Amount in Rs.)</td>
<td>Total annual income generated (Rs.)</td>
<td>Total annual Savings (Rs.)</td>
<td>No. of SHGs Graded as</td>
<td>Total Amount of loan sanctioned by the bank (s)</td>
<td>No. of SHGs federated</td>
</tr>
<tr>
<td>Loan from revolving fund</td>
<td>Training</td>
<td>Material</td>
<td>Others (please specify)</td>
<td>I</td>
<td>II</td>
<td>III</td>
</tr>
<tr>
<td>6Nos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.20</td>
<td></td>
</tr>
<tr>
<td>5nos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
<td></td>
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<tr>
<td>3Nos</td>
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<td></td>
<td>0.60</td>
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</tr>
<tr>
<td>5Nos</td>
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<td></td>
<td></td>
<td></td>
<td>1.00</td>
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</tr>
<tr>
<td>7Nos</td>
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<td></td>
<td></td>
<td></td>
<td>1.40</td>
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### 4.2.7 Other activities of watershed works phase:

<table>
<thead>
<tr>
<th>District</th>
<th>Names of project</th>
<th>Ridge area treatment</th>
<th>Drainage line treatment</th>
<th>Nursery raising</th>
<th>Land Development</th>
<th>Crop demonstrations</th>
<th>Other Arable Land treatment</th>
<th>Veterinary services</th>
<th>Fishery development</th>
<th>Non-conventional energy</th>
<th>Any other (please specify)</th>
<th>Total cost incurred (Rs. In Lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Afforestation 345 Ha</td>
<td>Retaining Wall/Wall 10.626</td>
<td>47.5142</td>
<td>Afforestation 7.00</td>
<td>Contour Loosening 10.275</td>
<td>Agriculture 21.243</td>
<td>Veterinary Services 0.92</td>
<td>Pisciculture 1.9</td>
<td>Apiculture 37 Units 2.96</td>
<td>117.6582</td>
<td></td>
</tr>
<tr>
<td>Improve of Degraded Forest 115 Ha</td>
<td></td>
<td>Improvement of Degraded Forest 0.92</td>
<td>Improvement of Existing Paddy Field 8.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>38.43664</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Agro-forestry 3.552</td>
<td>Agro-forestry 3.783</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>13.846</td>
<td>47.5142</td>
<td>15.255</td>
<td>29.76664</td>
<td>2.9</td>
<td>24.323</td>
<td>29.80</td>
<td>1.9</td>
<td>180.1148</td>
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## 4.2.8 Details of engineering structures in watershed works:

<table>
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<tr>
<th>District</th>
<th>Project</th>
<th>Name of structures</th>
<th>Type of treatment</th>
<th>Type of land</th>
<th>Executing agency</th>
<th>Target</th>
<th>Estimated cost (Rs.in lakh)</th>
<th>Expected month &amp; Year of completion (mm/yyyy)</th>
<th>No.of units (Nos/ cu.m/ rmt)</th>
<th>Expenditure incurred (Rs.in lakh)</th>
<th>Status of completion</th>
<th>Actual month &amp; Year of completion (mm/yyyy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Peripheral Bunding</td>
<td>L</td>
<td>P</td>
<td>UG/WC</td>
<td></td>
<td>22643.2</td>
<td>8Rm</td>
<td>4.528656</td>
<td>6.792984</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Loose Boulder Contour Bund</td>
<td>L</td>
<td>P</td>
<td>UG/WC</td>
<td></td>
<td>137 Ha</td>
<td></td>
<td>4.11</td>
<td>6.105</td>
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</tr>
<tr>
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<td></td>
<td>Loose Boulder Check Dam</td>
<td>D</td>
<td>C</td>
<td>UG/WC</td>
<td></td>
<td>11 Nos</td>
<td></td>
<td>5.201</td>
<td>7.8018</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CC Check Dam/Dam/HW Dam</td>
<td>D</td>
<td>C</td>
<td>UG/WC</td>
<td></td>
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<td></td>
<td>Protection Wall/R Wall</td>
<td>D</td>
<td>C</td>
<td>UG/WC</td>
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</tr>
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<td></td>
<td>Small Dug Out Pond/Farm Pond</td>
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<td>P</td>
<td>UG/WC</td>
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<td>3 Nos</td>
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<td>0.6538</td>
<td>0.9807</td>
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</tr>
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<td></td>
<td></td>
<td>Water Harvesting Structure</td>
<td>D</td>
<td>C</td>
<td>UG/WC</td>
<td></td>
<td>21 Nos</td>
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<td>10.70022</td>
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<td></td>
<td>Runoff Disposal Channel/D Drain</td>
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<td>P</td>
<td>UG/WC</td>
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<td>1.344408</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>CC Dam Cum Washing Place</td>
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<td>C</td>
<td>UG/WC</td>
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<td>6 Nos</td>
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<td></td>
<td>Wells</td>
<td>D</td>
<td>C</td>
<td>UG/WC</td>
<td></td>
<td>2 Nos</td>
<td></td>
<td>0.21592</td>
<td>0.32388</td>
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<td></td>
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<td></td>
<td>48.48125</td>
<td>72.66229</td>
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### 4.2.9 Details of engineering structures in watershed works.

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Reduction in run off (cu.m)</th>
<th>Area treated# (ha)</th>
<th>Water level (m)</th>
<th>Production (quintal)</th>
<th>Income (Rs.)</th>
<th>Mandays generated</th>
<th>No.beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-Project</td>
<td>Post Project</td>
<td>Pre-Project</td>
<td>Post Project</td>
<td>SC</td>
<td>ST</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paddy 18 qtls</td>
<td>&gt;21 qtls</td>
<td>20000 to 30000</td>
<td>30000 to 60000</td>
<td>92000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maze 11 qtls</td>
<td>&gt;20 qtls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sweet Potato 37 qtls</td>
<td>&gt;35 qtls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potato 90 qtls</td>
<td>&gt;11 qtls</td>
<td>20000</td>
<td>30000</td>
<td>92000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ginger 80qtls</td>
<td>&gt;90qtls</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Total</td>
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Total

### 4.2.10 Details of activities connected with vegetative cover in watershed works:

<table>
<thead>
<tr>
<th>District</th>
<th>Project Name of structure/ work</th>
<th>Type of treatment</th>
<th>Type of Land</th>
<th>Executing agency</th>
<th>Target</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Afforestation</td>
<td>R</td>
<td>UG/WG Farmer</td>
<td>80</td>
<td>4 Years</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Improvement of Degraded Forest</td>
<td>R</td>
<td>UG/WG Farmer</td>
<td>425</td>
<td>4 Years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fuel Wood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agro-Forestry</td>
<td>L</td>
<td>Farmer/Beneficiary</td>
<td>125</td>
<td>4 Years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agro-Horticulture</td>
<td>L</td>
<td>Farmer/Beneficiary</td>
<td>291</td>
<td>4 Years</td>
</tr>
</tbody>
</table>

# in case two or more activities are executed over same area, the figures in area treated should be accounted only once and should reflect only the actual watershed area treated.
### 4.2.11 Details of vegetative structures in watershed works: Phase – II (contd.):

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Production (quintal)</th>
<th>Income (Rs)</th>
<th>Mandays generated</th>
<th>No. of beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in run off (cum)</td>
<td>Pre- project</td>
<td>Post project</td>
<td>Pre- project</td>
<td>Post project</td>
</tr>
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<td></td>
<td>3232</td>
<td>4848</td>
<td>8080</td>
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</tr>
<tr>
<td></td>
<td>6120</td>
<td>9180</td>
<td>15300</td>
<td></td>
</tr>
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<td></td>
<td>6000</td>
<td>9000</td>
<td>15000</td>
<td></td>
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<tr>
<td></td>
<td>10020</td>
<td>15030</td>
<td>25050</td>
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<td>25372</td>
<td>38058</td>
<td>63430</td>
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</tr>
</tbody>
</table>

### 4.2.12 Details of allied / other activities:

<table>
<thead>
<tr>
<th>District</th>
<th>Project</th>
<th>Name of Activity @</th>
<th>Type of Land</th>
<th>Executing agency</th>
<th>Target</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(i) private (ii)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comm</td>
<td>(iii) Others (pl.</td>
<td>(i) UG</td>
<td>Estimated cost</td>
<td>Expected month &amp; year of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>unity</td>
<td>specify)</td>
<td>(ii) SHG</td>
<td>(Rs.in lakh)</td>
<td>completion (mm/yyyy)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Others (pl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>specify)</td>
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</tr>
<tr>
<td>West Khasi</td>
<td>WKH-IWMP</td>
<td>Carpentry/Basketry/Black Smithy/Agri</td>
<td>P</td>
<td>Beneficiary</td>
<td>3.35</td>
<td>4 Years</td>
</tr>
<tr>
<td>Hills</td>
<td>V</td>
<td>Implements</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Kitchen Garden</td>
<td>F</td>
<td>Beneficiary</td>
<td>7.475</td>
<td>4 Years</td>
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<tr>
<td></td>
<td></td>
<td>Vermin composting</td>
<td>F</td>
<td>SHG</td>
<td>Beneficiary, SHG</td>
<td>4.375</td>
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<tr>
<td></td>
<td></td>
<td>Tailoring/knitting</td>
<td>F</td>
<td>SHG</td>
<td>Beneficiary, SHG</td>
<td>3.84</td>
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<tr>
<td></td>
<td></td>
<td>Backyard poultry</td>
<td>F</td>
<td>SHG</td>
<td>Beneficiary</td>
<td>16.56</td>
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<tr>
<td></td>
<td></td>
<td>Vegetable cultivation</td>
<td>F</td>
<td>SHG</td>
<td>Beneficiary, SHG</td>
<td>5.45</td>
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<tr>
<td></td>
<td></td>
<td>Piggery</td>
<td>F</td>
<td>SHG</td>
<td>Beneficiary, SHG</td>
<td>13.24</td>
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<tr>
<td></td>
<td></td>
<td>Pisciculture</td>
<td>F</td>
<td>SHG</td>
<td>Beneficiary, SHG</td>
<td>8.5</td>
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<tr>
<td></td>
<td></td>
<td>Mushroom Cultivation</td>
<td>F</td>
<td>SHG</td>
<td>SHG</td>
<td>6.00</td>
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<td></td>
<td></td>
<td>Rice Mill Operation</td>
<td>F</td>
<td>SHG</td>
<td>SHG</td>
<td>8.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apiculture</td>
<td>F</td>
<td>UG,SHG</td>
<td>SHG</td>
<td>2.96</td>
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<tr>
<td></td>
<td></td>
<td>Weaving and handloom</td>
<td>F</td>
<td>SHG</td>
<td>SHG</td>
<td>8.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>86.25</td>
</tr>
</tbody>
</table>

# from column no.2 no. of States: from column no.3 no. of District; from column no.4. total no of projects; from column no. 5 activity wise totals; from column no. 6 type wise totals; from column no. 7 agency wise totals; from column no. 8 total estimated cost; from column no. 9 total expenditure incurred. Structure – wise no. of completed works. from column no.10 items –wise totals, for the entire country may be indicated at the end of the table.

@ The activities given in this column are merely indicative and states are free to choose any other activity suited to the project area.
### 4.2.13 Details of allied / other activities:

<table>
<thead>
<tr>
<th>Income (Rs)</th>
<th>Mandays generated</th>
<th>No of beneficiaries</th>
</tr>
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<tbody>
<tr>
<td>Pre-project</td>
<td>Post-project</td>
<td>SC</td>
</tr>
<tr>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td></td>
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</tr>
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</table>
4.3 Consolidations and withdrawal phase
Details of activities in the CPRs in the project areas:

<table>
<thead>
<tr>
<th>Name of the District</th>
<th>Name of project</th>
<th>Name(s) of the villages</th>
<th>CPR particular</th>
<th>Activity proposed</th>
<th>Target area under the activity (ha)</th>
<th>Estimate expenditure (Rs)</th>
<th>Expected no. of beneficiaries</th>
<th>Estimate contribution to WDF (Rs)</th>
<th>Area treated under the activity (ha)</th>
<th>Expenditure incurred (Rs)</th>
<th>Actual no. of beneficiaries</th>
<th>No of Mandays</th>
<th>WDF collected (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Pungreit, Mawlangbah, Mawkohiang, Shilliang kieh, Thiepkseh, Mawrok, Mawrok-Nongnah.</td>
<td>Degraded Forest/Wasteland</td>
<td>Improvement of Existing Degrading Forest</td>
<td>425 Ha</td>
<td>15.30</td>
<td>85</td>
<td>0.765</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Bridla Path</td>
<td>Footpath</td>
<td>3 Nos</td>
<td>3.3297</td>
<td>1000</td>
<td>0.16646</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Streams</td>
<td>Footbridges</td>
<td>2 Nos</td>
<td>1.4157</td>
<td>600</td>
<td>0.07072</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Streams</td>
<td>CC Dam/Washing Place</td>
<td>3 Nos</td>
<td>4.0086</td>
<td>400</td>
<td>0.20073</td>
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<tr>
<td></td>
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<td></td>
<td>Springs</td>
<td>Wells</td>
<td>2 Nos</td>
<td>0.5398</td>
<td>100</td>
<td>0.02699</td>
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<tr>
<td>Total</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>24.5938</td>
<td>2185</td>
<td>1.2299</td>
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</table>
CHAPTER V
PROJECT PHASING & BUDGETING
## PLAN FOR RELEASE OF PROJECT FUND BY SLNA TO PROJECT IMPLEMENTATION AGENCY (PIA) & WATERSHED COMMITTEE FOR PROJECT V UNDER NONGSTOIN C&RD BLOCK 2010-2011

### (Physical in %) (Rs. In Lakhs)

<table>
<thead>
<tr>
<th>SL N O.</th>
<th>Particulars of Budget Component</th>
<th>Prescribed Percentage (%)</th>
<th>PIA (%)</th>
<th>Watershed Committee (%)</th>
<th>Year wise Phasing &amp; Breakup of Prescribed Percentage under Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1st Year</td>
<td>2nd Year</td>
<td>3rd Year</td>
<td>4th Year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phy</td>
<td>Fin</td>
<td>Phy</td>
<td>Fin</td>
</tr>
<tr>
<td>1</td>
<td>Administration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. Administrative Cost</td>
<td>10%</td>
<td></td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Monitoring</td>
<td>1%</td>
<td></td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. Evaluation</td>
<td>1%</td>
<td></td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total of 1</td>
<td>12%</td>
<td></td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Preparatory Phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. Entry Point Activities</td>
<td>4%</td>
<td>28.80</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Institutional Capacity building</td>
<td>5%</td>
<td>32.25</td>
<td>5%</td>
<td>32.25</td>
</tr>
<tr>
<td></td>
<td>iii. Preparation of DPR</td>
<td>1%</td>
<td>6.45</td>
<td>1%</td>
<td>6.45</td>
</tr>
<tr>
<td></td>
<td>Total of 2</td>
<td>10%</td>
<td>64.45</td>
<td>10%</td>
<td>64.45</td>
</tr>
<tr>
<td>3</td>
<td>Watershed Work phase</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>i. Watershed Works Phase</td>
<td>50%</td>
<td>322.50</td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>ii. Livelihood Activities</td>
<td>10%</td>
<td>64.45</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>iii. Production system</td>
<td>13%</td>
<td>83.85</td>
<td></td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Total of 3</td>
<td>73%</td>
<td>470.85</td>
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<td>73%</td>
</tr>
<tr>
<td>4</td>
<td>Consolidation</td>
<td>5%</td>
<td>32.25</td>
<td>5%</td>
<td>32.25</td>
</tr>
<tr>
<td>5</td>
<td>Total of 4</td>
<td>8%</td>
<td>32.25</td>
<td>5%</td>
<td>32.25</td>
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<tr>
<td></td>
<td>TOTAL OF 1 to 4</td>
<td>100%</td>
<td>645.00</td>
<td>27%</td>
<td>174.15</td>
</tr>
</tbody>
</table>

### PROJECT FUNDING:

A. CENTRAL SHARE = 90% (580.50 Lakhs)
B. STATE SHARE = 10% (64.50 Lakhs)

TOTAL (A+B) = 100% (645.00 Lakhs)

---

**Divisional Officer,**

**Cum Project Leader**
Project Implementation Agency (IWMP)
Soil & Water Conservation Division, Nongstoin

---

**Deputy Commissioner,**

**West Khasi Hills District,**

Nongstoin
### PROJECT PHASING & BUDGETING

**ACTION PLAN FOR PROJECT V UNDER NONGSTOIN C&R D BLOCK 2010-2011 UNDER SOIL & WATER CONSERVATION DIVISION: NONGSTOIN**

**NAME OF DISTRICT:** WEST KHASI HILLS  
**NAME OF C&R D BLOCK:** NONGSTOIN

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Particulars activities</th>
<th>Budget Head of Account</th>
<th>1st year Phy</th>
<th>2nd year Phy</th>
<th>3rd year Phy</th>
<th>4th year Phy</th>
<th>5th year Phy</th>
<th>TOTAL Phy</th>
<th>1st year Fin</th>
<th>2nd year Fin</th>
<th>3rd year Fin</th>
<th>4th year Fin</th>
<th>5th year Fin</th>
<th>TOTAL Fin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ADMINISTRATION</td>
<td>2402 S&amp;W 800- other expenditures</td>
<td>2% 12.90</td>
<td>5% 32.25</td>
<td>3% 19.35</td>
<td>-</td>
<td>-</td>
<td>10% 64.50</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>64.50</td>
</tr>
<tr>
<td>2</td>
<td>Honorarium to WDT Members</td>
<td>800- other expenditures</td>
<td>0.2M 1.29</td>
<td>0.5M 3.225</td>
<td>0.3M 1.935</td>
<td>-</td>
<td>-</td>
<td>1% 6.45</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6.45</td>
</tr>
<tr>
<td>3</td>
<td>Evaluation</td>
<td>0.3E 1.935</td>
<td>0.5E 3.225</td>
<td>0.2E 1.29</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1% 6.45</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6.45</td>
</tr>
</tbody>
</table>

**TOTAL OF (A) Administrative cost**  
2% 12.90 5% 32.25 3% 19.35 - - 10% 64.50

**TOTAL OF B & C**  
0.5% 3.225 1% 6.45 0.5% 3.225 - - 2% 12.90
<p>| | | | | | | | | | | | | | | | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>PREPARATORY PHASE</strong></td>
<td></td>
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</tr>
<tr>
<td>A</td>
<td>Entry point activities: (i) Farm pond (ii) Culvert (iii) Footpath (iv) Check Dam cum washing place (v) Footbridge.</td>
<td>800- other 37/ EXPENDITURE 27-Minor Works</td>
<td>4%</td>
<td>25.80</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4%</td>
<td>25.80</td>
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</tr>
<tr>
<td>B</td>
<td>Institutional, Capacity Building &amp; Training, IEC activities Awareness Campaign &amp; Capacity Building, Capacity Building of SHGs, Ugs, Capacity Building of WC members, Capacity Building of WDT/WV, Capacity Building of PIA, Institutional Training, exposure visit-off Campus(SHG, Ugs, WC, WDT) etc.</td>
<td>800- other 37/ EXPENDITURE 04- Institution &amp; Capacity Building 20- Other Administrative Expenses</td>
<td>1%</td>
<td>6.45</td>
<td>2%</td>
<td>12.90</td>
<td>1%</td>
<td>6.45</td>
<td>1%</td>
<td>6.45</td>
<td>-</td>
<td>-</td>
<td>5%</td>
<td>32.25</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Preparation of Detailed Project Report</td>
<td>800- other 37/ EXPENDITURE 05- preparation of DPR</td>
<td>1%</td>
<td>6.45</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1%</td>
<td>6.45</td>
<td></td>
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<tr>
<td></td>
<td>TOTAL OF PREPARATORY PHASE (II A+B+C)</td>
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<tr>
<td>III</td>
<td>WATERSHED WORKS PHASE</td>
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</tr>
<tr>
<td></td>
<td>1) Agro-Horticulture @ Rs.8350/Ha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>2) Agro-Horticulture @ Rs.8600/Ha</td>
<td>79Ha</td>
<td>1.896</td>
<td>M</td>
<td>2.8282</td>
<td>M</td>
<td>1.8723</td>
<td>-</td>
<td>-</td>
<td>79Ha</td>
<td>6.5965</td>
<td></td>
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<tr>
<td></td>
<td>3) Agro-Forestry @ Rs.10100/Ha</td>
<td>1403Ha 'C'</td>
<td>3.552</td>
<td>M</td>
<td>7.104</td>
<td>M</td>
<td>4.292</td>
<td>-</td>
<td>-</td>
<td>148.00Ha</td>
<td>14.948</td>
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<tr>
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<td>4) Contour Building/Loose Boulder Bund @ Rs.7500/Ha</td>
<td>76Ha</td>
<td>5.70</td>
<td>109Ha</td>
<td>8.175</td>
<td>2Ha</td>
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<td>187Ha</td>
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<td>5) Peripheral Bunding @ Rs.50/Km</td>
<td>2031.64</td>
<td>1.01582</td>
<td>33202.78</td>
<td>16.604</td>
<td>2012.076</td>
<td>1.01582</td>
<td>2031.64</td>
<td>1.01582</td>
<td>33202.78</td>
<td>16.604</td>
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<td></td>
<td>1) Improvement of Existing Paddy Field @ Rs.4300/Ha</td>
<td>68Ha</td>
<td>2.929</td>
<td>176Ha</td>
<td>7.588</td>
<td>6Ha</td>
<td>0.258</td>
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<td>250Ha</td>
<td>10.75</td>
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<td>6) Construction of Terrace @ 15000/Ha</td>
<td>12.5Ha</td>
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<td>17.50Ha</td>
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<td>2) Crop Demonstration @Rs.50/Unit</td>
<td>31Units</td>
<td>0.25</td>
<td>92Units</td>
<td>4.60</td>
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<td>TOTAL OF (I)</td>
<td>19.12082</td>
<td>61.20009</td>
<td>16.71465</td>
<td>-</td>
<td>-</td>
<td>97.03556</td>
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<tr>
<td>B</td>
<td>Non Arable Land Treatment</td>
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<tr>
<td></td>
<td>1) Afforestation with Pine/Non Pine @ Rs. 10100/-Ha**</td>
<td>503Ha 'C'</td>
<td>7.104</td>
<td>M</td>
<td>14.208</td>
<td>M</td>
<td>8.584</td>
<td>-</td>
<td>-</td>
<td>503Ha</td>
<td>29.896</td>
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N.O.B = 'C' for creation, 'M' for maintenance.
### Improvement of Degraded Forest @Rs. 3600/- Ha

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<tr>
<td>2) Improvement of Degraded forest @Rs. 3600/- Ha</td>
<td>-</td>
<td>160Ha</td>
<td>1.28</td>
<td>M</td>
<td>2.88</td>
<td>M</td>
<td>1.60</td>
<td>-</td>
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<td>160Ha</td>
<td>5.76</td>
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<td>TOTAL of (ii)</td>
<td>8,384</td>
<td>17,088</td>
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<td>35,456</td>
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iii Drainage Line Treatment

- 1. Loose Boulder Check Dam - - - - - 11 Nos 13.003 - - - 11 Nos 13.003
- 2. Check Dam/Diversion Dam/Head Water Dam ** - - 3 Nos 3,258.05 23 Nos 19,908.09 3 Nos 2,925.7 - - 23 Nos 26,044.44
- 3. Protection Wall/Retaining Wall - - - - - 20 Nos 8,130.21 118 Nos 54,826.67 50 Nos 14,700.55 188 Nos 77,657.43
- 4. Small Dug-out Pond/Farm Pond ** - - 1 Nos 1,445.16 1 Nos 1,795.9 30 Nos 15,335 11 Nos 8,510.76
- 5. Water Harvesting Structures - - - - - 3 Nos 7,641.84 32 Nos 49,511.31 1 Nos 3,236.6 36 Nos 60,395.31
- 6. Run off Disposal Channel/Diversion Drains @Rs. 26/ Rm. - - - - - - 83,18 Rm 2,162.68 300 Rm 0.078 - - 86,18 Rm 2,240.68
- 7. Wells - - - - - 10 Nos 3.5 - - 10 Nos 3.50
- 8. Footbridge ** - - 1 No 0.394 32 0.39432 - - - 1 No 0.39432

TOTAL of A (iii) | 20,870.18 | 147,461.91 | 21,476.35 | 189,808.44 |

TOTAL of A (I + ii + iii) | 48,375 | 225,75 | 48,375 | 322,50 |

### Livelihood Activities

- i. Carpentry/Blacksmith/Basketry/Agri Implements. @Rs. 5000/Unit
- ii. Pisciculture @ Rs. 10000/Unit
- iii. Tailoring/Knitting @ Rs. 8000/Unit
- iv. Apiculture @ Rs. 8000/Unit
- v. Piggery/ Poultry @ Rs. 8000/Unit
- vi. Vermi Composting @ Rs. 12500
- vii. Kitchen Garden @ Rs. 2500/Unit
- viii. Hollow block making @ Rs. 5000/Unit

TOTAL of B (i-viii) | 1% 6.45 | 3% 19.35 | 6% 38.70 |   |

TOTAL of B (i-vii) | 1% 6.45 | 3% 19.35 | 6% 38.70 |   |

### Production System & Micro Enterprises

- i. Weaving/Handloom/Grocery Shops @ Rs. 30000/Unit
- ii. Mushroom Cultivation/Mud block making @ Rs. 30000/Unit

TOTAL of C (i-ii) | 1% 6.45 | 3% 19.35 | 6% 38.70 |   |

TOTAL of C (i-vii) | 1% 6.45 | 3% 19.35 | 6% 38.70 |   |

NB: Items indicated as ** shown have been selected for convergence with MGNREGS worked out in the action plan for convergence and not shown above.
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<tr>
<td>ii. Pisciculture @ Rs. 30000/- Unit</td>
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<td>3 Units</td>
<td>0.90</td>
<td>24 Units</td>
<td>7.20</td>
<td>28 Units</td>
<td>8.40</td>
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<td>55 Units</td>
<td>16.50</td>
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<td>iv. Piggery/Poultry @ Rs.30000/- Unit</td>
<td></td>
<td>2 Units</td>
<td>0.60</td>
<td>37 Units</td>
<td>11.10</td>
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<td>15.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>89 Units</td>
<td>26.70</td>
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<td>vii. Rice mill @ Rs.50000/- Unit</td>
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<td>3 Units</td>
<td>1.50</td>
<td>13 Units</td>
<td>7.50</td>
<td>18 Units</td>
<td>9.00</td>
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<td>-</td>
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<td>36 Units</td>
<td>18.00</td>
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<td>vi. Ginger/ Turmeric Cultivation @ Rs 15000/-Unit</td>
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<td>4 units</td>
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<td>8 units</td>
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<td>1.80</td>
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<td>-</td>
<td>22 Units</td>
<td>1.80</td>
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<tr>
<td>vii. Other Vegetative Cultivation @ Rs.15000/unit</td>
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<td>3 units</td>
<td>0.45</td>
<td></td>
<td>1 unit</td>
<td>0.15</td>
<td>13 units</td>
<td>1.95</td>
<td>-</td>
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<td>17 units</td>
<td>2.55</td>
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<tr>
<td>TOTAL of C (i– ix)</td>
<td></td>
<td>1%</td>
<td>6.45</td>
<td>5%</td>
<td>32.25</td>
<td>7%</td>
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<td>5%</td>
<td>32.25</td>
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<td>IV</td>
<td>CONSOLIDATION &amp; WITHDRAWAL PHASE.</td>
<td>800-</td>
<td>Other expenditure on consolidation &amp; withdrawal works.</td>
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<td>32.25</td>
<td>5%</td>
<td>32.25</td>
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<td>5%</td>
<td>32.25</td>
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<tr>
<td></td>
<td>1.Repairs &amp; Maintenance of CRP’s.</td>
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<td></td>
<td>2.Improving the sustainability of various interventions.</td>
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<td></td>
<td>4.Capacity Building of W.C, SHGs, UGs, for maintenance &amp; operation of assets during post project period.</td>
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<td>TOTAL of IV</td>
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<td>5%</td>
<td>32.25</td>
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<td>GRAND TOTAL OF (I - IV)</td>
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<td>6%</td>
<td>38.70</td>
<td>14%</td>
<td>90.30</td>
<td>50%</td>
<td>322.50</td>
<td>25%</td>
<td>161.25</td>
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<td>32.25</td>
<td>100%</td>
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## PROJECT PHASING & BUDGETING

**WATERSHED TREATMENT PLAN OF UMTYNRU-WEISAR MICRO WATERSHED UNDER IWMP- WEST KHASI HILLS PROJECT- V**

**NAME OF DISTRICT:** WEST KHASI HILLS  
**TOTAL GEOGRAPHICAL AREA:** 2615 Ha  
**TOTAL PROJECT COST:** Rs. 375 lakhs  
**NAME OF C&R BLOCK:** NONGSTOIN  
**AREA PROPOSED FOR TREATMENT:** 2500 Ha  
**NOS. OF VILLAGES:** 7 Nos.

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<th>Sl. No.</th>
<th>Particulars activities</th>
<th>Budget Head of Account</th>
<th>1st year</th>
<th>2nd year</th>
<th>3rd year</th>
<th>4th year</th>
<th>5th year</th>
<th>TOTAL</th>
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<tr>
<td>1</td>
<td>I ADMINISTRATION</td>
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<tr>
<td>2</td>
<td>A Administrative cost</td>
<td>2402 S&amp;WC 800- other expenditures</td>
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<tr>
<td></td>
<td>i. Honorarium to WDT Members</td>
<td></td>
<td>2%</td>
<td>7.50</td>
<td>5%</td>
<td>18.75</td>
<td>3%</td>
<td>11.25</td>
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<td>ii. Honorarium to Watershed Volunteers</td>
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<td>iii. Honorarium to watershed committee organizers.</td>
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<td>iv. Small Honorarium to watershed committee members.</td>
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<td>v. Small Honorarium to sub- watershed committee members.</td>
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<td>vi. Honorarium/ Fees to chartered Accountant.</td>
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<td>vii. Hiring Charge of vehicles.</td>
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<td>viii. Office expenses/overhead expenditure (stores &amp; stationeries, POL, printing of booklets, IWMP guidelines, Signboard, Xerox, Typing &amp; printing, Computer set purchase,etc)</td>
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<td>ix. Documentation &amp; Reporting (cost of Cameras/Digital cameras, photography etc), Honorarium to office assistant, TA/DA of staff, Hiring charge of office Building.</td>
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<td>TOTAL OF (A)Administrative cost</td>
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<td>0.2M 0.75 0.5M 1.875 0.3M 1.125</td>
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<td>C Evaluation</td>
<td>0.3E 1.125 0.5E 1.875 0.2E 0.75</td>
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<td>2.5% 9.375 6.00% 22.50 3.5% 13.125</td>
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<td>TOTAL OF I (A+B+C)</td>
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<tr>
<td>I</td>
<td>II PREPARATORY PHASE</td>
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<td>Entry point activities: (i) Farm pond (ii) Culvert (iii) Footpath (iv) Check Dam cum washing place (v) Footbridge</td>
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<td>Institutional, Capacity Building &amp; Training, IEC activities</td>
<td>1%</td>
<td>3.75</td>
<td>2%</td>
<td>7.50</td>
<td>1%</td>
<td>3.75</td>
<td>1%</td>
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<td>Awareness Campaign &amp; Capacity Building, Capacity Building of SHGs, UGs, Capacity Building of WC members, Capacity Building of WDT/WV, Capacity Building of PIA, Institutional Training, exposure visit-off Campus(UGs, WC, WDT) etc.</td>
<td>1%</td>
<td>3.75</td>
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<td>Preparation of Detailed Project Report</td>
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<td>Cost of Resources Inventory Works</td>
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<td>Cost of PRA Exercises</td>
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<td>Cost of Land Use Survey Works</td>
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<td>Watershed Treatment/Development Works</td>
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N.O.B = items indicated as Arable Land treatment SL No 1&2 and Non-Arable land treatment SL no 1&3 ‘C’ mean creation and ‘M’ means maintenance.
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<td>12 Units</td>
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NB: Items indicated as ** shown have been selected for convergence with MGNREGS worked out in the action plan for convergence and not shown above.

Divisional Officer,
Cum Project Leader
Implementation Agency (IWMP)
Soil & Water Conservation Division,
Nongstoin,

Deputy Commissioner
West Khasi Hills District
Nongstoin.
UMTYNRU-WEISAR WATERSHED IWMP-V
CHART FOR ENTRY POINT ACTIVITIES.

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<th>NAME OF VILLAGES</th>
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<th>MEASUREMENT</th>
<th>COST(RS)</th>
<th>LOCATION</th>
<th>REMARKS</th>
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Rupees (Fifteen lakhs) only

/SUBMITTED/
## VILLAGE WISE ACTION PLAN OF UMTYNRU-WEISAR MICRO WATERSHED UNDER IWMP-CONVERGENE WEST KHASI HILLS PROJECT-V

### Name of District: West Khasi Hills
### Name of C & RD Block : Nongstoin
### Nos of villages: 7nos
### Project Area: 2500Ha

<table>
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<tr>
<th>Sl. No</th>
<th>Particulars</th>
<th>Pungphreit</th>
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<th>Mawrok Nongnah</th>
<th>Thiepkseh</th>
<th>Shiliang Ktieh</th>
<th>Mawlangbah</th>
<th>Mawkohiang</th>
<th>Total</th>
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<td>1.95</td>
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<td>0.946</td>
<td>0.946</td>
<td>0.54</td>
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<td>Drainage Line Treatment</td>
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<td>3.0476</td>
<td>3.0476</td>
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<td>3.0476</td>
<td>3.0476</td>
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<td>3.7062</td>
<td>2.5517</td>
<td>1.5694</td>
<td>1.2417</td>
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**Total A, B & C**

- Physical in Ha
- Financial (Rs.in lakhs)
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<th>Mawrok PHY FIN</th>
<th>Mawrok Nongnah PHY FIN</th>
<th>Thiepkseh PHY FIN</th>
<th>Shiliang Ktieh PHY FIN</th>
<th>Mawlangbah PHY FIN</th>
<th>Mawkohiang PHY FIN</th>
<th>Total PHY FIN</th>
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<td>PHY FIN</td>
<td>PHY FIN</td>
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<td>4 0.40</td>
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<td>6 0.48</td>
<td>4 0.32</td>
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<td>16 1.28</td>
<td>10 0.80</td>
<td>14 1.12</td>
<td>12 0.96</td>
<td>9 0.72</td>
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<td>Apiculters @RS.8000/Unit</td>
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<td>8 0.64</td>
<td>4 0.32</td>
<td>6 0.48</td>
<td>5 0.40</td>
<td>3 0.24</td>
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<td>3 0.90</td>
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<td>3 0.90</td>
<td>3 0.90</td>
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<td>Piggery @RS.30000/Unit</td>
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<td>5 1.50</td>
<td>3 0.90</td>
<td>4 1.20</td>
<td>4 1.20</td>
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<td>3 0.90</td>
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<td>4 2.00</td>
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**PLAN FOR RELEASE OF PROJECT FUND BY SLNA TO PROJECT IMPLEMENTATION AGENCY (PIA) & WATERSHED COMMITTEE FOR UMTYNRU-WEISAR WATERSHED (WEST KHASI HILLS, IWMP – PROJECT V)**

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<th>PIA (%)</th>
<th>Watershed Committee (%)</th>
<th>Year wise Phasing &amp; Breakup of Prescribed Percentage under Column 2</th>
<th>(Physical in %) (Rs. In Lakhs)</th>
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<td>iv. Administrative Cost</td>
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<td>iv. Entry Point Activities</td>
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<td>4% 15.00</td>
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<td>4%(SS) 15.00</td>
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<td>5% 18.75</td>
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<td>50% 187.50</td>
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<td>73% 273.75</td>
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<td>5% 18.75</td>
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<td>5% 18.75</td>
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<td>27% 101.25</td>
<td>73% 273.75</td>
<td>6% 22.50</td>
<td>14% 52.50</td>
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**PROJECT FUNDING:**

A. CENTRAL SHARE = 90% (337.50 Lakhs)
B. STATE SHARE = 10% (37.50 Lakhs)

TOTAL (A+B) = 100% (375.00 Lakhs)

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Divisional Officer,
Cum
Project Leader
Project Implementation Agency (IWMP)
Soil & Water Conservation Division,
Nongstoin

Deputy Commissioner,
West Khasi Hills District,
Nongstoin
**Detail of types of areas covered under the IWMP Programme:**

<table>
<thead>
<tr>
<th>Sl no</th>
<th>State</th>
<th>Districts</th>
<th>Names of Projects</th>
<th>Year of Sanction</th>
<th>Area of Projects</th>
<th>Project Duration (dd/mm/yyyy)</th>
<th>Project cost (Rs. in Lakh)</th>
<th>Names of Micro watersheds &amp; Code Nos (As per DOLR’s unique Codification)</th>
<th>Area (Ha) of the Projects</th>
<th>Area details (ha) (falling within the Projects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>West Khasi Hills – IWMP V</td>
<td>2010-11</td>
<td>2500Ha</td>
<td>2010 - 2011 - 2014</td>
<td>375.00 Lakh</td>
<td>Umtynru-Weisar Watershed 3B1C3b1b 3C1B3b11 3B1C3a1d 3B1C3b3k</td>
<td>573Ha</td>
<td>1779Ha 263Ha 2229Ha 375Ha 11.00Ha</td>
</tr>
</tbody>
</table>

**Fund provision for the IWMP projects from all sources:**

<table>
<thead>
<tr>
<th>District</th>
<th>Name of projects</th>
<th>IWMP Fund</th>
<th>Convergence funds</th>
<th>PPP</th>
<th>Community</th>
<th>Institutional finance</th>
<th>Others (Pl. Specify)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>337.5</td>
<td>37.50</td>
<td>MGNREGS 39.6974</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
<td>nil</td>
</tr>
</tbody>
</table>
Details of Project Fund Accounts of Distt. Agency and Watershed Committees:

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Names of States</th>
<th>Name of Districts</th>
<th>Name of Projects</th>
<th>Name of the Bank and Branch Where Project account has been opened</th>
<th>Account No. (to be obtained confidentially)</th>
<th>Name &amp; Designation of authorized Persons who operate the Account.</th>
<th>Name of Watershed committee</th>
<th>Name of the Bank and Branch Where project account has been opened</th>
<th>Account number (to be obtained confidentially)</th>
<th>Account type (savings/ current others)</th>
<th>Name &amp; Designation of authorized persons who operate the account.</th>
</tr>
</thead>
</table>

Details of convergence of IWMP with other Schemes:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of Projects</th>
<th>Name of Department with scheme converging with IWMP</th>
<th>Fund made available to IWMP due to convergence (Rs. In lakh)</th>
<th>Name of activity / task/ structure undertaken with converged funds</th>
<th>Reference no.of activity / task/ structure in DPR</th>
<th>Level at which decision for convergence was taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>W.K.H- IWMP V</td>
<td>C&amp;RD Deptt. (MGNREGS)</td>
<td>15.87896</td>
<td>CC Dam cum Washing Place</td>
<td></td>
<td>District Level &amp; Block Level</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Run off Disposal Channel/ Diversion Drain</td>
<td>3Nos</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Foot Bridge</td>
<td>1No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Small Dug Out Pond/ Farm Pond</td>
<td>1No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Afforestation</td>
<td>345Ha</td>
<td></td>
</tr>
</tbody>
</table>
### OFFICE OF THE
DISTRICT RURAL DEVELOPMENT AGENCY
WEST KHASI HILLS DISTRICT
NONGSTOIN

No.DRDA/NG-63/Com/NREGA/09/ 84

Dated Nongstoin the 15th April, 2011

CERTIFICATE OF APPROVAL

In pursuance to the Provision of Convergence/Dovetailing of Mahatma Gandhi NREGA Operational Guidelines, the below mentioned projects are hereby approved to be taken up under convergence of IWMP during the financial year 2011-12, 2012-13 and 2013-14 with Soil and Water Conservation Department, Nongstoin Vide proposal No.ND/IWMP/Genc/2010-11/81-83 dt 8th April, 2011.

<table>
<thead>
<tr>
<th>Block</th>
<th>Name of Project</th>
<th>Unit of Measurement</th>
<th>Name of Village</th>
<th>Fin. Year</th>
<th>Wages MGNREGA (90%)</th>
<th>Materials Soil &amp; WC Dept. (40%)</th>
<th>Total (100%)</th>
<th>Phy. target</th>
</tr>
</thead>
</table>
| Afforestation | ha | 1. Pungphreit  
2. Mawroak  
3. Mawroak, nongnah  
4. Thiepkaheh  
5. Shillangkhiheh  
6. Mawlingbah  
7. Mawkohiang | 2nd 2011-12  
3rd 2012-13  
4th 2013-14 | 4.968  
9.936  
6.003 | 3.312  
6.624  
4.002 | 8.28  
16.66  
10.005 | 345ha |
| Total of 1 | | | | 20.907 | 13.938 | 34.845 | 345ha |
| Farm Pond | cum | 1. Pungphreit | 2nd 2011-12  
3rd 2012-13  
4th 2013-14 | 1.02114 | 0.68076 | 1.7019 | 1no |
| Total of 2 | | | | 1.02114 | 0.68076 | 1.7019 | 1no |
| Footbridge | cum | 1. Mawkohiang | 2nd 2011-12  
3rd 2012-13  
4th 2013-14 | 0.59148  
0.39432  
- | 0.39432  
0.9858  
- | 0.9858  
1no | 1no |
| Total of 3 | | | | 0.59148 | 0.39432 | 0.9858 | 1no |
| Diversion Dam | cum | 1. P Chomawiah (Pungshwell)  
2. TwaunThiep (Mawroak)  
3. Panganslang (Mawroak, Nongnah) | 2nd 2011-12  
3rd 2012-13  
4th 2013-14 | 0.94104  
0.62736  
0.35768 | 0.23652  
1.5684  
0.5953 | 1.5684  
2nos  
1no | 2nos |
| Total of 4 | | | | 1.29882 | 0.85588 | 2.1547 | 3nos |
| Grand Total | | | | 23.81844 | 15.87896 | 39.6974 | 7nos |

District Programme Coordinator
MGNREGA/MGNREGS
West Khasi Hills District
Nongstoin
**Annexure**

**DETAILED ACTION PLAN FOR CONVERGENCE OF IWMP WITH MGNREGA UNDER UMTYNRU WEISAR WATERSHED**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Nos &amp; Name of villages</th>
<th>Name of works</th>
<th>Year of Project</th>
<th>IWMP (40%)</th>
<th>MGNREGA (60%)</th>
<th>Total (100%)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amount</td>
<td>Amount</td>
<td>Amount</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>7nos.</td>
<td>Afforestation</td>
<td>2nd 2011-12</td>
<td>3.312</td>
<td>4.968</td>
<td>8.28</td>
<td>345ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3rd 2012-13</td>
<td>6.624</td>
<td>9.936</td>
<td>16.56</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4th 2013-14</td>
<td>4.002</td>
<td>6.003</td>
<td>10.005</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13.938</td>
<td>20.907</td>
<td>34.845</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mawrok, Nongnah</td>
<td>Farm Pond</td>
<td>2nd 2011-12</td>
<td>0.68076</td>
<td>1.02114</td>
<td>1.7019</td>
<td>1no</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3rd 2012-13</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4th 2013-14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>0.68076</td>
<td>1.02114</td>
<td>1.7019</td>
<td>1no</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Footbridge</td>
<td>2nd 2011-12</td>
<td>0.39432</td>
<td>0.59148</td>
<td>0.9858</td>
<td>1no</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3rd 2012-13</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4th 2013-14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.39432</td>
<td>0.59148</td>
<td>0.9858</td>
<td>1no</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diversion Dam</td>
<td>2nd 2011-12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3rd 2012-13</td>
<td>0.62736</td>
<td>0.94104</td>
<td>1.5684</td>
<td>2nos</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4th 2013-14</td>
<td>0.23852</td>
<td>0.35778</td>
<td>0.5963</td>
<td>1nos</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>0.86588</td>
<td>1.29882</td>
<td>2.1647</td>
<td>3nos</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15.87896</td>
<td>23.81844</td>
<td>39.6974</td>
<td>7nos</td>
</tr>
</tbody>
</table>

**Divisional Officer, Cum Project Leader**

Project Implementation Agency (IWMP)
Soil & Water Conservation Division, Nongstoin
## Public – Private partnership in the IWMP Project:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of Project</th>
<th>Name of Private sector partner agency</th>
<th>Type of agreement signed</th>
<th>Financial contribution</th>
<th>Partner-ship Interventions</th>
<th>Expected Outcomes</th>
<th>Actual outcomes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>W.K.H-IWMP V</td>
<td>(a) MoU, b) Contract, c) Any others (pl. specify)</td>
<td>IWM P, Private sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*# from column no.2 totals no. of State implementing the programme, from column no.3 total no. of District; from column no.4 total no. of project under PPP from column no.5 total no of private companies / agencies, from column no.7, total amount may be mention at the end of the table for the entire Country.*
CHAPTER VI
CAPACITY BUILDING
CHAPTER VI
CAPACITY BUILDING

Capacity Building is a process to systematically upgrade the skill of individuals or groups for achieving a specific target. Capacity building in the project has been planned for all the stakeholders involved i.e. State Level, District Level, Project Level and Village Level. The relevant details pertaining to Capacity Building has been shown below.

Capacity Building:

Table 6.1 List of Approved Training Institutes for Capacity Building:

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>State Name of the Training Institute</th>
<th>Full address with contact no, website &amp; email</th>
<th>Name &amp; Designation of the head of the Institute</th>
<th>Type of Institute</th>
<th>Area(s) of specialization</th>
<th>Accreditation details</th>
<th>Performance Reference year</th>
<th>No. of Training assigned</th>
<th>No. of Trainees to be trained</th>
<th>No. of Training conduct</th>
<th>No. of trainees trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meghalaya NIRD (NER) Guwahati</td>
<td>Director Central Govt. (Training)</td>
<td>Remote Sensing, Rural Development, Capacity &amp; Building</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SIRD Nongsder Director</td>
<td>State Govt. (Training)</td>
<td>Capacity Building &amp; Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>RRTC Umran Director</td>
<td>Don Bosco (Production &amp; Training)</td>
<td>Agri-Horti, Animal Husbandary, Entrepreneurship</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>ICAR Umiam Director</td>
<td>Central Govt. (Research &amp; Development)</td>
<td>Agri-Horti, Animal Husbandary, Entrepreneurship, Integrated Farming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>VTC Kyrdem Kulai Director</td>
<td>State Govt. (Production, Training &amp; Research)</td>
<td>Animal Husbandary</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Fruit Garden Shillong Director</td>
<td>State Govt. (Training &amp; Research)</td>
<td>Agri-Horti, Fruit Processing</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
* From column no. 2, total no. of States implementing the programme, from column no.3, no. of Training institute, from, column no.9 total no. of category-wise training and trainees may be given at the end of the table for the entire country.

# Central Govt. Dept/ State Govt. Dept/ autonomous body/ Research Institute/ Universities/ others (pl. specify)

$ Capacity Building / Agriculture/ Horticulture/ Animal Husbandry/ Pisciculture/ remote sensing/ Water Conservation/ Ground water/ Forestry/ Livelihood/Entrepreneurship Development/ Others (pl. specify)

@ The Training institute must fulfill the conditions mention in the operation guideline.
1. Technical experts in field required by IWMP.
2. Past experience.
3. Annual turnover.
4. Receives Fund either from the Central or State Govt.
5. Publication.
7. Audited account.
8. Organizational structure

Table 6.2: Capacity Building activities for the Year 2010-11 to 2014-15 as on 31.03.2011 (dd/mm/yyyy)*

<table>
<thead>
<tr>
<th>Project Stakeholder</th>
<th>Total no. of persons.</th>
<th>No. of person trained so far</th>
<th>No. of person to be trained during current financial year</th>
<th>No. of person to be trained during current financial year</th>
<th>Sources of Funding for Training</th>
<th>Fund utilised</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLNA</td>
<td>3.75</td>
<td></td>
<td></td>
<td></td>
<td>(a) DoLR</td>
<td>3.75</td>
</tr>
<tr>
<td>DRDA/ ZP cell</td>
<td>3.75</td>
<td></td>
<td></td>
<td></td>
<td>(b) Any others (pl. specify)</td>
<td></td>
</tr>
<tr>
<td>PIAs</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td>(a) DoLR</td>
<td>3.75</td>
</tr>
<tr>
<td>WDIs</td>
<td>7</td>
<td>7</td>
<td></td>
<td></td>
<td>(b) Any others (pl. specify)</td>
<td></td>
</tr>
<tr>
<td>UGs</td>
<td>650</td>
<td>130</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHGs</td>
<td>300</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WCs</td>
<td>80</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPs</td>
<td>65</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td>1206</td>
<td>1206</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (pl. specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6.3: Information, Education & Communication (IEC) activities for the year 2010-2011 as on 31-03-2011 (dd/mm/yyyy)*

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Activity</th>
<th>Executing agency</th>
<th>Estimated expenditure (Rs.)</th>
<th>Expenditure incurred (Rs.)</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Awareness</td>
<td>S&amp;WC (T) Division, Nongstoin</td>
<td>18.75</td>
<td>18.75</td>
<td>Better Awareness and Understanding about Project Concept Better Awareness about Natural Resources Conservation</td>
</tr>
<tr>
<td>2</td>
<td>PRA Exercises</td>
<td>S&amp;WC (T) Division</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Exposure Visits</td>
<td>S&amp;WC (T) Division</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Capacity Building</td>
<td>S&amp;WC (T) Division</td>
<td>18.75</td>
<td>18.75</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Preparation of Pamphlets, Booklet &amp; Banner &amp; Posters</td>
<td>S&amp;WC (T) Division</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER VII
EXPECTED OUTCOME
CHAPTER VII
EXPECTED OUTCOME

Table 7.1 Employment related outcomes:

<table>
<thead>
<tr>
<th>SI No</th>
<th>Name of Village</th>
<th>No. of mandays</th>
<th>Wage employment</th>
<th>Self employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SC</td>
<td>ST</td>
<td>Others</td>
</tr>
<tr>
<td>1.</td>
<td>Mawrok</td>
<td>100 %</td>
<td>14428</td>
<td>11844</td>
</tr>
<tr>
<td>2.</td>
<td>Thiepskheh</td>
<td>100 %</td>
<td>22900</td>
<td>14194</td>
</tr>
<tr>
<td>3.</td>
<td>Mwrok-Nongnoh</td>
<td>100 %</td>
<td>7942</td>
<td>7332</td>
</tr>
<tr>
<td>4.</td>
<td>Pungphreit</td>
<td>100 %</td>
<td>16680</td>
<td>12596</td>
</tr>
<tr>
<td>5.</td>
<td>Mawlangbah</td>
<td>100 %</td>
<td>9928</td>
<td>6392</td>
</tr>
<tr>
<td>6.</td>
<td>Shilliang Ktieh</td>
<td>100 %</td>
<td>9531</td>
<td>7144</td>
</tr>
<tr>
<td>7.</td>
<td>Mawkohiang</td>
<td>100 %</td>
<td>8075</td>
<td>5170</td>
</tr>
</tbody>
</table>

Table 7.2 Migration Details:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Names of the Districts</td>
<td>Names of projects</td>
<td>Name of Village</td>
<td>No. of persons migrating</td>
<td>No. of days per year of migration</td>
<td>Major reason(s) for migrating</td>
<td>Distance of destination of migration from the village (Km)</td>
<td>Occupation during migration</td>
<td>Income from such occupation (Rs. In lakh)</td>
<td>For reduced migration identify major activities of IWMP responsible</td>
</tr>
<tr>
<td>(a) Structures</td>
<td>(b) Livelihoods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>I</td>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From column no.2, total number of States; from column no.3, total no. of Districts; from column no.4, total no. of project; from column no.5, total no. of villages; from column no.6, total no. of persons migrating; from column no.7, average no. of days for annual migration; from column no.9, average distance of migration from the village and from column no.11, average income from occupation during migration, for the entire country may be given at the end of the Table.*
**Table 7.3 Economic benefits accrued to women:**

<table>
<thead>
<tr>
<th>Wages</th>
<th>Training</th>
<th>Livelihoods</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women days</td>
<td>Amount (Rs. In lakh)</td>
<td>No. of women participants</td>
<td>Amount (Rs. In lakh)</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>48 Nos</td>
<td>3.84</td>
<td>3.84</td>
<td></td>
</tr>
</tbody>
</table>

- From Column no.2, total no. of States implementing the programme, from Column no.3 to 6, category-wise totals, may be mentioned at the end of the table for the entire country.

**Table 7.4 Details of rights conferred in the CPRs of the project areas**

<table>
<thead>
<tr>
<th>Names of the Districts</th>
<th>Names of the Projects</th>
<th>Names of the Villages</th>
<th>Particular of CPR</th>
<th>Nature of right</th>
<th>Period of right</th>
<th>Beneficiary details (No. of families)</th>
<th>User Charges (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>Pungphrei, Mawkohiang, Mawlangbah, Thiekseh, Shilliang Ktieh, Mawrok, Mawrok-Nongnah.</td>
<td>Improvement of Degraded Forest Footpath Footbridges CC Dam, Cum Washing Palce Wells</td>
<td>FW, WD</td>
<td>P</td>
<td>Wi</td>
<td>Wd</td>
</tr>
</tbody>
</table>

- *From Column no.2, no. of States ; from Column no.3, no. of Districts; from column no.4, of projects, from column no.5, no. of villages, from column nos.9 &10, particular-wise totals, for the entire country may be given at the end of the table.
- In column no.6, the categories given in table no. M(SP) 10, column 5 may be filled as required.
- # In Column no.7, only the letter assigned to each type, as given below, needs to be typed.
  - F for right to fishing [culture, harvest and sale]
  - FW for right to collect firewood for domestic purposes
  - G for right of grazing for cattle and
  - MFP for right to collect and sell minor forest produces
  - P for right to passage across the CPR
  - Rd for right to construct a road for access to individual property
  - S/M for right to collect and sell sand and minerals
  - So for right to collect soil for nursery and plantation activities and constructions
T for right to collect timber for construction of house
Wd for right to collect/use water for drinking
Wi for right to use water for irrigation
O for any right other than indicated above (please specify)

Table 7.5 Water related outcomes:
Table 7.5.1 Details of average ground water table depth in the project areas of the Country: State-wise *(in metres)*

<table>
<thead>
<tr>
<th>Names of Districts</th>
<th>Names of Projects</th>
<th>Sources</th>
<th>Pre-Project level</th>
<th>Mid-term project level</th>
<th>Post-project level</th>
<th>Increase/decrease (Col.8-Col.6)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Open wells</td>
<td>1.50m</td>
<td>1.30m</td>
<td>1.20m</td>
<td>0.30m</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bore wells</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Others (specify)</td>
<td>Very poor to poor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From column no.2, total number of States, from column no.3, total no. of Districts; from column no.4, total no. of project; from column nos.6 to 9, the average measurements, category-wise, for the entire country may be given at the end of the table. The data must be based on the average of the Ground Water Table depth collected by PIA with the help of concerned technical expert in the same sample of 10% of selected wells and bore wells in the villages in the watershed project area, during pre-project, mid-term and post-project periods.

Table 7.5.2 Status of Drinking Water:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of Project</th>
<th>Availability of Drinking water ( no. of month in a year)</th>
<th>Quality of Drinking water</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre- project</td>
<td>Post- project</td>
<td>Pre-project</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>10 months</td>
<td>12 months</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

* From column no. 2 total no. of states implementing the programme, from, column no.3 total no. of District, from column no. 4 category – wise no. of project, from column no. 5 average no. of month may be given at the end of the table for the entire country.
### Table 7.5.3 Water Use efficiency:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of Project</th>
<th>Name of major crop</th>
<th>Water saving in cu.m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Through water saving device</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH-IWMP V</td>
<td>Paddy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potato</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maize</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sweet Potato</td>
<td></td>
</tr>
</tbody>
</table>

- * From column no. 2 total no. of states implementing the programme, from column no. 3 total no. of District, from column no. 4 total no. of project, from column no. 6 practices – wise total may be mention at the end of the table for the entire country.

*Sprinkler, Drip PVC pipe etc.*

*Vermi- Compost, Organic manuring, mulching, Check basin, alternate furrow, ridges & furrow and other scientific practices.*

### Table 7.6: Vegetation/ crop related outcomes:

<table>
<thead>
<tr>
<th>Names of the District</th>
<th>Name of Project</th>
<th>Name of Crops</th>
<th>Pre-Project</th>
<th>Mid-Term</th>
<th>Post-Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Area (ha)</td>
<td>Average yield (Qtl) /ha</td>
<td>Total production (Qtl)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paddy</td>
<td>250</td>
<td>18</td>
<td>4500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maize</td>
<td>145</td>
<td>11</td>
<td>1595</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ginger</td>
<td>40</td>
<td>80</td>
<td>3200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potato</td>
<td>140</td>
<td>90</td>
<td>12600</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sweet Potato</td>
<td>70</td>
<td>37</td>
<td>2590</td>
</tr>
</tbody>
</table>

- *From column no. 2 total no. of states, from column no. 3 total no. of District, from column no. 4 total no. of project, from column no. 5 total no. of crop from column no. 6 to 8 the total for the area average yield per ha and total production category–wise entire country may be given at the end of the table for the*
- Irri – Irrigated, Rf- Rainfed.

Table 7.6.2 Details of Rabi crop area and yield in the project areas:

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Names of States</th>
<th>Names of the District</th>
<th>Name of Project</th>
<th>Name of Crops</th>
<th>Pre-Project</th>
<th>Mid-Term</th>
<th>Post-Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Area (ha)</td>
<td>Average yield (Qtl) /ha</td>
<td>Total production (Qtl)</td>
</tr>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH – IWMPV</td>
<td>Irri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rf</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total for the District

* * From column no. 2 total no. of states, from column no.3 total no. of District, from column no.4 total no. of project, from column no.5 total no. of crop from column no.6 to 8 the total for the area average yield per ha and total production category–wise entire country may be given at the end of the table for the :- Irri – Irrigated, Rf- Rainfed.

Table 7.6.3 Details of Zaid crop area and yield in the project areas of the Country: State-wise:

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Names of States</th>
<th>Names of the District</th>
<th>Name of Project</th>
<th>Name of Crops</th>
<th>Pre-Project</th>
<th>Mid-Term</th>
<th>Post-Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Area (ha)</td>
<td>Average yield (Qtl) /ha</td>
<td>Total production (Qtl)</td>
</tr>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>West Khasi Hills</td>
<td>WKH – IWMPV</td>
<td>Irri</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rf</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total for the District

* * From column no. 2 total no. of states, from column no.3 total no. of District, from column no.4 total no. of project, from column no.5 total no. of crop from column no.6 to 8 the total for the area average yield per ha and total production category–wise entire country may be given at the end of the table for the :- Irri – Irrigated, Rf- Rainfed.
### Table 7.6.4 Increase/ Decrease in area under fodder:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of Project</th>
<th>Duration of Project</th>
<th>Existing area under fodder (ha)</th>
<th>Achievement (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>5 Years</td>
<td>NA</td>
<td>nil</td>
</tr>
</tbody>
</table>

*From Column no.2, total no. of States implementing the programme; from Column no.3, total no. of Districts; from column no.4, total no. of projects, from column no.6 & 7 total area in ha may be given at the end of the table for the entire Country.

### Table 7.6.5 Increase/ Decrease in Forest/vegetation cover:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of Project</th>
<th>Duration of Project</th>
<th>Existing tree cover (ha)</th>
<th>Achievement (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>5 Years (2009 – 10 to 2013 – 14)</td>
<td>LULC Map (NESAC, Umiam)</td>
<td>2006</td>
</tr>
</tbody>
</table>

*From Column no.2, total no. of States implementing the programme; from Column no.3, total no. of Districts; from column no.4, total no. of projects, from column no.6 & 7 total area in ha may be given at the end of the table for the entire Country.
Table 7.6.6 Increase/ Decrease in area under horticulture:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of Project</th>
<th>Duration of Project</th>
<th>Existing area under horticulture (ha)</th>
<th>Achievement (ha)</th>
<th>Source/ Name of report</th>
<th>Year of reference</th>
<th>Area already under horticulture</th>
<th>Area under horticulture proposed to be covered through IWMP</th>
<th>Area under horticulture actually covered through IWMP</th>
<th>Change in area under horticulture</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>5 Years</td>
<td>291 Ha</td>
<td>Yet to be covered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From Column no.2, total no. of States implementing the programme; from Column no.3, total no. of Districts; from Column no.4, total no. of projects, from Column no.6 & 7 total area in ha may be given at the end of the table for the entire Country.*

Table 7.6.7 Increase/ Decrease in area under fuel-wood:

<table>
<thead>
<tr>
<th>District</th>
<th>Name of Project</th>
<th>Duration of Project</th>
<th>Existing area under fuel-wood (ha)</th>
<th>Achievement (ha)</th>
<th>Source/ Name of report</th>
<th>Year of reference</th>
<th>Area already under fuel-wood</th>
<th>Area under fuel-wood proposed to be covered through IWMP</th>
<th>Area under fuel-wood actually covered through IWMP</th>
<th>Change in area under fuel-wood</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>5 Years</td>
<td>460 Ha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From Column no.2, total no. of States implementing the programme; from Column no.3, total no. of Districts; from Column no.4, total no. of projects, from Column no.6 & 7 total area in ha may be given at the end of the table for the entire Country.*
### Table 7.7 Livelihood related outcomes:
#### Table 7.7.1 Details of livestock in the project areas
(for fluids please mention in litres, for solids please mention in kgs. and income in Rs.):

<table>
<thead>
<tr>
<th>Name of the District</th>
<th>Name of the Project</th>
<th>Type of Animal</th>
<th>Pre-Project</th>
<th>Mid-term</th>
<th>Post-project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>No.</td>
<td>Yield (in Lakhs)</td>
<td>No.</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>Goats</td>
<td>839</td>
<td>1.078</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Piggery</td>
<td>259</td>
<td>2.90</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poultry</td>
<td>3511</td>
<td>2.06</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total for all projects</td>
<td>4619</td>
<td>5.699</td>
<td>6.70</td>
</tr>
</tbody>
</table>

*From Column no.2, total number of States, from Column no.3, total no. of Districts; from column no.4, total no. of projects, from column no.5 to 8, the total nos. of animals and the average yield and incomes, category-wise, for the entire Country may be given at the end of the Table.

### Table 7.7.2 Details of other livelihoods created for landless people:

<table>
<thead>
<tr>
<th>Distric t</th>
<th>Project</th>
<th>Name of activity</th>
<th>No. of beneficiaries trained</th>
<th>No. of beneficiaries taking up activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>Carpentry</td>
<td>6Nos.</td>
<td>2Nos.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tailoring</td>
<td>6Nos.</td>
<td>2Nos.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weaving (handloom)</td>
<td>6Nos.</td>
<td>2Nos.</td>
</tr>
</tbody>
</table>

*From Column no.2, total number of States, from Column no.3, total no. of Districts; from column no.4, total no. of projects, from column no.5 to 8, the total nos. of activities, from column no.6, total funds required for the activity, from column no.7 to 12, category-wise totals, from column no.13, category-wise totals, for the entire Country may be given at the end of the Table.
### Table 7.7.3 Details of other livelihoods created for landless people:

<table>
<thead>
<tr>
<th>No. of persons employed in directly in the activity</th>
<th>Annual increase in income due to activity (Rs.)</th>
<th>Impact of livelihoods programmes</th>
<th>Any other information (pl.Specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>Grand Total (8+9)</td>
<td>Pre-project</td>
<td>Post-project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-project</td>
<td>Post-project</td>
</tr>
</tbody>
</table>

### Table 7.7.4 Details of other livelihoods created for farmers:

<table>
<thead>
<tr>
<th>1: District</th>
<th>2: Project</th>
<th>3: Name of activity</th>
<th>4: Funds of required for the activity (Rs.)</th>
<th>5: Source of funding (Rs.)</th>
<th>6: Actual Expenditure incurred on activity (Rs.)</th>
<th>7: No. Farmers trained</th>
<th>8: No. of Farmers taking up activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Apiculture</td>
<td>2.96</td>
<td>2.96</td>
<td>2.96</td>
<td>2.96</td>
<td>2.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pisciculture</td>
<td>1.90</td>
<td>1.91</td>
<td>1.90</td>
<td>1.91</td>
<td>1.91</td>
</tr>
</tbody>
</table>

*From column no.2, total no. of State, from column no.3, total no. of District; from column no. 4, no. of projects; from column no. 5, total no. of activities, from column 6, no total of fund required for the activity, from column no. 7 to 12, category-wise total, from column no. 13 cartegory-wise total for the entire country may be given at the end of the table.
### Table 7.7.5 Details of other livelihoods created for farmers *(contd.)*

<table>
<thead>
<tr>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of persons employed indirectly</td>
<td>Annual increase in income due to activity (Rs.)</td>
<td>Impact of livelihood programme</td>
<td>Migration (No. of beneficiaries)</td>
</tr>
<tr>
<td>Total</td>
<td>Grand total (8+9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 7.8 Marketing related outcomes: Backward-Forward linkages *

#### Backward linkages

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>District</td>
<td>Project</td>
<td>Type of Marketing Facility</td>
<td>Pre-project (no.)</td>
<td>During the project (no.)</td>
<td>Post-project (no.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(A) Backward linkages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(i) Seed certification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Seed supply system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Fertilizer supply system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) Pesticide supply system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v) Credit institutions</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vi) Water supply</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vii) Extension services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(viii) Nurseries</td>
<td>0</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ix) Tools/machinery suppliers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(x) Price Support system</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>(xi) Labour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(xii) Any other (please specify)</td>
<td></td>
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<td></td>
<td></td>
<td>(B) Forward linkages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(i) Harvesting/threshing machinery</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td></td>
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<tr>
<td>Sl. No.</td>
<td>State</td>
<td>Item</td>
<td>Pre-project Status</td>
<td>Post-project Status</td>
<td>Remarks</td>
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<td>-------------------</td>
<td>-------------------</td>
<td>---------</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Status of water table</td>
<td>Very poor – poor</td>
<td>Good</td>
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<tr>
<td>2</td>
<td></td>
<td>Ground water structures repaired/ rejuvenated</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Quality of drinking water</td>
<td>Moderate potable</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Availability of drinking water</td>
<td>Insufficient</td>
<td>Sufficient</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
<td>Increase in irrigation potential</td>
<td>100% - Rainfed</td>
<td>30 nos.</td>
<td></td>
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<tr>
<td>6</td>
<td></td>
<td>Change in cropping/ land use pattern</td>
<td>Mono-cropping</td>
<td>Double Cropping</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Area under agricultural crop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td></td>
<td>Area under single crop</td>
<td>300 Ha</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td></td>
<td>Area under double crop</td>
<td>-</td>
<td>250 ha</td>
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<td>iii</td>
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<td>Area under multiple crop</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Net increase in crop production area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Increase in area under vegetation</td>
<td>665.20</td>
<td>1127.20 ha</td>
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<td>10</td>
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<td>Increase in area under horticulture</td>
<td>-</td>
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<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Increase in area under fuel &amp; fodder</td>
<td>665.20</td>
<td>794 ha</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Increase in milk production</td>
<td></td>
<td>38825 liter</td>
<td></td>
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<tr>
<td>No. of SHGs</td>
<td>8nos.</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in no. of livelihoods</td>
<td>4 nos</td>
<td>15 nos.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Increase in income</td>
<td>Rs 45000/- annually</td>
<td>Rs 75000/- annually</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migration</td>
<td>-</td>
<td>-</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>No. of school going children</td>
<td>3728 nos.</td>
<td>5014 nos.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SHG Federations formed</td>
<td>6</td>
<td>10 nos.</td>
<td></td>
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</tr>
<tr>
<td>Credit linkage with banks</td>
<td>-</td>
<td>7 nos.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Resource use agreements</td>
<td>-</td>
<td>39 nos.</td>
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<td>WDF collection &amp; management</td>
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<td>1 no.</td>
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Summary of lessons learnt: May be attached as a separate file

---

**Table 7.10 Cost effectiveness of structures/ activities***

<table>
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<tr>
<th>1</th>
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<th>6</th>
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<th>8</th>
<th>9</th>
<th>10</th>
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<tbody>
<tr>
<td>District</td>
<td>Name of project</td>
<td>Name of WC</td>
<td>Name of structure/activity</td>
<td>Estimated cost (Rs.)</td>
<td>Expected quantifiable benefits (Rs.)</td>
<td>Expenditure incurred (Rs.)</td>
<td>Actual quantifiable benefit (Rs.)</td>
<td>Benefit: Cost ratio#</td>
<td>IRR</td>
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<td>West Khasi Hills</td>
<td>WKH – IWMP V</td>
<td>Umtynru-Wei sar Water Commitee</td>
<td>As per Action Plan</td>
<td>375.00</td>
<td>8849.043</td>
<td>375.00</td>
<td>3337.870</td>
<td>1.3:1</td>
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*From column no.2, total no. of State implementing the programme, from column no.3, total no. of District; from column no. 4, no. of projects; from column no. 5, no of WCs, fro column 6, no. of structures/ activities, fro column no. 7 to 10, category-wise# totals may be mentioned at the end of the table for the entire country.

B:C ratio more than 1 – cost effective

Less than 1 - Not cost effective
## Benefit Cost Ratio of Umynrub-umweisar Micro Watershed under IWMP – West Khasi Hills Project - V

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL PROJECT COST (A)</th>
<th>INPUT/RUNNING COSTS TO BE BORNE BY FARMERS (B)</th>
<th>TOTAL COSTS (A+B)</th>
<th>TOTAL BENEFITS</th>
<th>DISCOUNT FACTOR (15%)</th>
<th>DISCOUNTED COSTS</th>
<th>DISCOUNTED BENEFITS</th>
<th>INTERNAL RATE OF RETURN</th>
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<td>1</td>
<td>22.50</td>
<td>0</td>
<td>22.50</td>
<td>0</td>
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<td>19.575</td>
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<td>2</td>
<td>52.50</td>
<td>238.327</td>
<td>290.827</td>
<td>324.764</td>
<td>0.756</td>
<td>219.865</td>
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<td>400.382</td>
<td>587.882</td>
<td>534.346</td>
<td>0.658</td>
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<td>315.600</td>
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<td>93.75</td>
<td>577.818</td>
<td>671.568</td>
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<td>0.572</td>
<td>384.137</td>
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<td>18.75</td>
<td>587.522</td>
<td>606.272</td>
<td>835.623</td>
<td>0.497</td>
<td>301.317</td>
<td>415.305</td>
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<td>593.342</td>
<td>593.342</td>
<td>1186.684</td>
<td>961.697</td>
<td>0.376</td>
<td>223.097</td>
<td>323.998</td>
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<td>593.342</td>
<td>1186.684</td>
<td>961.697</td>
<td>0.376</td>
<td>223.097</td>
<td>323.998</td>
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<td>0.376</td>
<td>223.097</td>
<td>323.998</td>
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<td>593.342</td>
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<td>0.376</td>
<td>223.097</td>
<td>323.998</td>
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<td>593.342</td>
<td>1186.684</td>
<td>961.697</td>
<td>0.376</td>
<td>223.097</td>
<td>323.998</td>
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<td>593.342</td>
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<td>961.697</td>
<td>0.376</td>
<td>223.097</td>
<td>323.998</td>
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<td>1186.684</td>
<td>961.697</td>
<td>0.376</td>
<td>223.097</td>
<td>323.998</td>
<td></td>
</tr>
</tbody>
</table>

|     | 375.00                 | 8849.043                                      | 2538.752          | 3337.870      |                      |                 |                   |                        |

Benefit Cost Ratio  = \( \frac{\text{Discounted Benefits}}{\text{Discounted Costs}} \)

\[
= \frac{3337.870}{2538.752} = 1.30
\]

B.C. Ratio  = 1.31:1
ANNEXURE I

MAP
Proposed Landused Map
Umtynru- Weisar watershed

**Legend**
- Afforestation: 345 Ha.
- Agro - Forestry: 148 Ha.
- Improvement of Existing Paddy field: 190 Ha.
- Improvement of Degraded Forest: 115 Ha.
- Contour bunding: 137 Ha.

Area: 2615 Ha.

Prepared by:
GOVERNMENT OF WEST BENGAL
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
ANNEXURE II

SOCIO-ECONOMIC SURVEY REPORT
# ABSTRACT OF STATEMENT SHOWING SOCIO-ECONOMIC SURVEY

Name of the watershed: Umtynru-Weisar watershed  
Name of C&RD Block: Nongstoin C&RD Block  
Name of District: West Khasi Hills Districts

<table>
<thead>
<tr>
<th>S. No</th>
<th>Name of Villages</th>
<th>No of Households</th>
<th>No of Population</th>
<th>Total of child below 12 yrs both male &amp; female</th>
<th>Occupation</th>
<th>Literacy</th>
<th>Illiteracy</th>
<th>Land holding in Ha/Person</th>
<th>Name of Crops grown</th>
<th>Averages yield of each crop grown</th>
<th>Livestock in Nos</th>
<th>Total income of each family anum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PUNGPHREIT</td>
<td>52</td>
<td>154</td>
<td>198</td>
<td>385</td>
<td>3.15 Ha</td>
<td>3.07 Ha</td>
<td>6.22 Ha</td>
<td>Farmer= Labor= Business= teacher= govt servant= Other=</td>
<td>Paddy, Maize, potato, vegetable,</td>
<td>400</td>
<td>132</td>
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<tr>
<td>2</td>
<td>MAWLANGBAH</td>
<td>36</td>
<td>100</td>
<td>103</td>
<td>113</td>
<td>3.41 Ha</td>
<td>4.97 Ha</td>
<td>8.38 Ha</td>
<td>Farmer= Labor= Business= teacher= Other=</td>
<td>Paddy, Maize, potato, vegetable,</td>
<td>580</td>
<td>148</td>
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<td>3</td>
<td>SHILLIANG KTIEH</td>
<td>23</td>
<td>71</td>
<td>83</td>
<td>76</td>
<td>1.50 Ha</td>
<td>1.13 Ha</td>
<td>2.63 Ha</td>
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<td>399</td>
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<td>4</td>
<td>THIEPKSEH</td>
<td>40</td>
<td>125</td>
<td>137</td>
<td>137</td>
<td>1.48 Ha</td>
<td>1.45 Ha</td>
<td>2.93 Ha</td>
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<td>5</td>
<td>MAWROK</td>
<td>47</td>
<td>139</td>
<td>143</td>
<td>155</td>
<td>1.22 Ha</td>
<td>1.52 Ha</td>
<td>2.74 Ha</td>
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<td>Paddy, Maize, potato, vegetable,</td>
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<td>6</td>
<td>MAWROK-NONGNAH</td>
<td>29</td>
<td>78</td>
<td>81</td>
<td>88</td>
<td>2.09 Ha</td>
<td>2.92 Ha</td>
<td>5.01 Ha</td>
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<td>7</td>
<td>MAWKOHANG</td>
<td>10</td>
<td>29</td>
<td>33</td>
<td>62</td>
<td>7.50 Ha</td>
<td>2.10 Ha</td>
<td>9.60 Ha</td>
<td>Farmer= Labor= Business= teacher= Other=</td>
<td>Paddy, Maize, potato, vegetable,</td>
<td>120</td>
<td>60</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td>237</td>
<td>696</td>
<td>778</td>
<td>1474</td>
<td>20.26 Ha</td>
<td>17.16 Ha</td>
<td>37.51 Ha</td>
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<td>2772</td>
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</table>
ANNEXURE III

ESTIMATE COST
ANNEXURE III
ESTIMATE COST

ESTIMATE FOR CONSTRUCTION OF CULVERT AT PUNGPHREIT
UNDER UMTYNRU-WEISAR FOR WATERSHEAD IWMP-V.
(Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD (Roads) for the year 2007 – 2008.)

1/3 (a) Earthwork in excavation for Dam, wing wall below the lowest bed level including dewatering and boiling complete as directed.

(b) Soft or laminated rock or medium shale

Abutment: 2 x 1.50 x 0.80 x 0.50 = 1.20 m³
Wing Wall: 4 x 1.00 x 0.80 x 0.80 = 1.60 m³
= 2.80 m³
@Rs.46.00/m³ .......................................................... = Rs.128.80/-

2/24 (a) Providing pitching with one man size not less than 25 cm x 25 cm x 30 cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200 m complete as directed.

Abutment: 2 x 1.50 x 0.80 x 0.80 = 1.92 m³
Wing Wall: 2 x 1.30 x 1.00 x 1.00 = 2.60 m³
4 x 1.50 x 1.00 x 1.00 = 6.00 m³
Total = 10.52 m³
@Rs.432.00/m³ .......................................................... = Rs.4544.64/-

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete

Abutment: 2 x 1.50 x 0.80 x 0.80 = 1.92 m³
@Rs.2281.00/m³ .......................................................... = Rs.4379.52/-

4/23 (a) Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section not less than 25 cm x 25 cm x 30 cm with proper key stone of size not less than 25 cm x 25 cm x 75 cm complete as directed

Abutment: 2 x 1.50 x (0.40 + 0.80) x 1.20 = 2.16 m³
Wing Wall: 4 x 1.00 x (0.40 + 0.80) x 1.50 = 3.60 m³
2 x 1.50 x 2.50 x 0.20 = 0.75 m³
Total = 6.51 m³
@Rs.756.00/m³ .......................................................... = Rs.4354.56/-

5/5 (a) Extra for rolling the embankment or in an embankment in the layers not exceeding 20 cm thick including breaking cloths, dressing, sectioning, ramming lead up to 30 meter and lift up to 150 cm. With earth obtained from borrow pits within the private land.

2 x (1.30 +1.80) x 0.90 x 0 + 1/2 = 1.39 m³
1 x 1.50 x 2.50 x 0.20 = 0.75 m³
2 x 1.50 x 2.50 x 0.20 = 2.14 m³
@Rs.108.00/m³ .......................................................... = Rs.231.12/-

6/28 Providing cement concrete work in proportion 1:2:4 corresponding to M150 with very hard stone or river shingle aggregates complete as directed.

Slab: 1 x 1.50 x 1.50 x 0.10 = 0.23 m³
Railing: 6 x 0.70 x 0.15 x 0.15 = 0.09 m³
4 x 1.50 x 0.10 x 0.10 = 0.06 m³
Total = 0.38 m³
@Rs.3000.00/m³ .......................................................... = Rs.1140.00/-
7/40 Providing steel reinforcement of R.C.C. work including bending, binding and placing in position as per approved design and drawing complete as directed.

Mild steel bars.
1.50% of items 7/8
1.50% x 0.38 m$^3$ x 78.5 quintal = 4.47 quintal
@Rs.3773.00/quintal…………………………………… =Rs.16865.31/-

8/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including hatten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
<th>Calculation</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slab</td>
<td>1 x 1.50 x 1.50</td>
<td>= 2.25 m$^2$</td>
<td>@Rs.281.00/m$^2$</td>
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<tr>
<td>Railing</td>
<td>0 x 4 x 0.70 x 0.15</td>
<td>= 2.52 m$^2$</td>
<td>@Rs.281.00/m$^2$</td>
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</tr>
<tr>
<td>Railing</td>
<td>4 x 3 x 1.50 x 0.10</td>
<td>= 1.80 m$^2$</td>
<td>@Rs.281.00/m$^2$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>@Rs.281.00/m$^2$</td>
<td>=Rs.1877.08/-</td>
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</table>

9/25 Providing cement concrete work in propor. 1:4:8 with hard broken stone aggregate or river shingle 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
<th>Calculation</th>
<th>Rate</th>
<th>Amount</th>
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<tr>
<td>Slab</td>
<td>1 x 1.50 x 2.50 x 0.20</td>
<td>= 0.75 m$^3$</td>
<td>@Rs.2022.00/m$^3$</td>
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<td>=Rs.1516.50/-</td>
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10/39 Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
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<th>Item</th>
<th>Quantity</th>
<th>Description</th>
<th>Calculation</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slab</td>
<td>1 x 1.50 x 1.50</td>
<td>= 2.25 m$^2$</td>
<td>@Rs.86.00/m$^2$</td>
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<td>=Rs.1578.96/-</td>
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<tr>
<td>Railing</td>
<td>6 x 4 x 0.70 x 0.15</td>
<td>= 2.52 m$^2$</td>
<td>@Rs.86.00/m$^2$</td>
<td></td>
<td>=Rs.1578.96/-</td>
</tr>
<tr>
<td>Railing</td>
<td>6 x 0.15 x 0.15</td>
<td>= 0.14 m$^2$</td>
<td>@Rs.86.00/m$^2$</td>
<td></td>
<td>=Rs.1578.96/-</td>
</tr>
<tr>
<td>Abutment</td>
<td>2 x 1.50 x 1.00</td>
<td>= 3.00 m$^2$</td>
<td>@Rs.86.00/m$^2$</td>
<td></td>
<td>=Rs.1578.96/-</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>4 x 1.00 x 1.00</td>
<td>= 1.60 m$^2$</td>
<td>@Rs.86.00/m$^2$</td>
<td></td>
<td>=Rs.1578.96/-</td>
</tr>
<tr>
<td>C.C Bed</td>
<td>1 x 1.50 x 2.50</td>
<td>= 3.75 m$^2$</td>
<td>@Rs.86.00/m$^2$</td>
<td></td>
<td>=Rs.1578.96/-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>=Rs.36,616.49</td>
</tr>
</tbody>
</table>

**TOTAL** =Rs.36,616.49

Rupees (Thirty Six Thousand Six Hundred) only
1/3(b) Earthwork in excavation for Bridges and culverts below the lower bed level including dewatering and bailing out water in order to keep the foundation trenches free of water and protecting the sides of foundation by adequate shoring, scaffolding including leveling the foundation longitudinally and transversely etc as directed by the Engineer-in-charge

(d) Soft or Laminated rock or medium shale

1) Well
   \[ 1 \times 2.6 \times 2.1 \times 1.356 = 7.371 \text{m}^3 \]
2) Wash Basin
   \[ 1 \times 2.6 \times 2.1 \times 0.4 = 2.184 \text{m}^3 \]

Total = 9.55 \text{m}^3

@ of Rs. 103.00/m\text{3} = Rs. 984.165

2/22 Providing regular stone masonry in retaining walls breast walls and wing walls etc. with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30 cm long) with proper key stone within 200 meters and providing weep holes at 1.2 to 1.5 meter apart staggered complete (a height of wall for every 1 metre should be kept exposed till inspected by the Supervising Officer.

With new stone

Well: \[ 2 \times 2.6 \times 0.3 \times 0.5 = 0.678 \text{m}^3 \]
Bed: \[ 1 \times 2.6 \times 2.1 \times 0.5 = 2.73 \text{m}^3 \]
Basin: \[ 2 \times 2.6 \times 0.3 \times 0.5 = 0.36 \text{m}^3 \]

Total = 5.148 \text{m}^3

@ Rs. 1022/m\text{3} = Rs. 5261.26

3/24 (a) Providing stone pitching with one man size boulders not less than 25cm x 30 cm long including filling the interstices with spoils and carriage of stone filling within a distance of 200 meters complete as directed.

Wash Basin: \[ 2 \times 2.2 \times 1 \times 0.2 = 0.88 \text{m}^3 \]
Bed: \[ 1 \times 2.6 \times 1 \times 0.2 = 0.52 \text{m}^3 \]

Total = 1.40 \text{m}^3

@ Rs. 432/m\text{3} = Rs. 604.80

4/25 Providing cement concrete work proportion 1:4:8 with hard broken stone aggregates 40mm, nominal size including necessary carriage of stones and sand within distance of 200 metres and curing (excluding shuttering) complete as directed.

Washing Place: \[ 2 \times 2.2 \times 1 \times 0.1 = 0.44 \text{m}^3 \]
Bed: \[ 1 \times 2.6 \times 1 \times 0.1 = 0.26 \text{m}^3 \]
Slab: \[ 1 \times 3 \times 2.7 = 8.1 \text{m}^3 \]

Total = 3.16 \text{m}^3

@ Rs. 2022.00/m\text{3} = Rs. 6389.52

5/28 Providing cement concrete work in proportion 1:2:4 corresponding to M150 with very hard stone or river shingle aggregates of 23mm downgraded including curing and necessary local carriage of stone aggregates and sand within 200metres for R.C.C. slab in decking, girders, diaphragm and railing, rails posts, kerbs, etc. (excluding shuttering and reinforcement).

Slab: \[ 1 \times 3 \times 2.7 \times 0.1 = 0.81 \text{m}^3 \]

@ of Rs. 3000.00/m\text{3} = Rs. 2430.00

6/38 Providing shuttering in R.C.C. bridge and culverts with complete as directed.

Internal: \[ 2 \times 1.4 \times 1 = 3 \text{m}^2 \]
\[ 2 \times 2 \times 1 = 4 \text{m}^2 \]

External: \[ 2 \times 2.6 \times 0.5 = 2.1 \text{m}^2 \]
\[ 2 \times 2.6 \times 0.5 = 2.6 \text{m}^2 \]

Slab: \[ 1 \times 3 \times 2.7 = 8.1 \text{m}^3 \]
\[ 2 \times 3 \times 0.1 = 0.6 \text{m}^3 \]
\[ 2 \times 2.7 \times 0.1 = 0.54 \text{m}^2 \]

Total = 21.4m\text{2}

@ of Rs. 281 m\text{2} = Rs. 6041.5
Providing 12mm thick cement plastering in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200metre complete as directed. (No plastering is to be done in retaining walls, breast walls and face walls over stone work and cement concrete.

Slab: 2 x 1.5 x 1 = 3 m²
2 x 2 x 1 = 4 m²
External: 2 x 2.1 x 0.5 = 2.1 m²
2 x 2.7 x 0.1 = 0.4 m²
Washing Place: 2 x 2.6 x 0.1 = 0.52 m²
1 x 4 x 0.1 = 0.4 m²
2 x 2.6 x 1.3 = 6.76 m²
1 x 4 x 1.3 = 5.2 m²
Total = 33.46 m² @ of Rs. 86 m² = Rs. 2877.56

Providing steel reinforcement of R.C.C. work including bending, binding and placing in position as per approved design and drawing complete as directed.

Mild Steel Bars: 1% of Item No. 5/28
= 0.63585 m

@ of Rs. 3773.00 = Rs. 2399.06

Grand Total = Rs. 26987.87

Says = Rs. 26990.00
(Rupees Twenty six thousand nine hundred ninety only)
ESTIMATE FOR CONSTRUCTION OF CHECK DAM CUM WASHING PLACE AT MAWLANGBAH,
UNDER UMTYNRU-WEISAR FOR WATERSHEAD IWMP-V.

Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD

1/3 (a) Earthwork in excavation for Dam below the lowest bed level including
dewatering and bailing out water in order to keep the foundation trenches
free of water etc. including leveling the foundation complete and as directed
(d). Soft or laminated rock or medium shale.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Unit Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>34.20</td>
<td>46.00</td>
<td>1571.20</td>
</tr>
<tr>
<td>Side wall</td>
<td>1.28</td>
<td>46.00</td>
<td>58.08</td>
</tr>
<tr>
<td>U/P Apron</td>
<td>7.125</td>
<td>46.00</td>
<td>332.70</td>
</tr>
<tr>
<td>Steeling basin</td>
<td>1.50</td>
<td>46.00</td>
<td>69.00</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>1.20</td>
<td>46.00</td>
<td>55.20</td>
</tr>
<tr>
<td>Washing place</td>
<td>6.84</td>
<td>46.00</td>
<td>316.08</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52.145</strong></td>
<td></td>
<td><strong>Rs.2398.67/-</strong></td>
</tr>
</tbody>
</table>

2/24 (a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm
including filling the interstices with spoils and dressing including carriage
within 200m complete

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Unit Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>2.85</td>
<td>432.00</td>
<td>1237.80</td>
</tr>
<tr>
<td>Side wall</td>
<td>0.32</td>
<td>432.00</td>
<td>138.24</td>
</tr>
<tr>
<td>U/P Apron</td>
<td>2.85</td>
<td>432.00</td>
<td>1237.80</td>
</tr>
<tr>
<td>Steeling basin</td>
<td>0.60</td>
<td>432.00</td>
<td>259.20</td>
</tr>
<tr>
<td>Washing place</td>
<td>2.28</td>
<td>432.00</td>
<td>980.36</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>8.90</strong></td>
<td></td>
<td><strong>Rs.3844.80/-</strong></td>
</tr>
</tbody>
</table>

3/25 Providing cement concrete work in prop. 1:4:8 with hard broken stone
aggregate or river shingles 40mm down graded including necessary carriage
of stones with distance of 200m and curing complete

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Unit Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>2.85</td>
<td>2022.00</td>
<td>5805.50</td>
</tr>
<tr>
<td>Side wall</td>
<td>0.32</td>
<td>2022.00</td>
<td>646.24</td>
</tr>
<tr>
<td>U/P Apron</td>
<td>2.85</td>
<td>2022.00</td>
<td>5805.50</td>
</tr>
<tr>
<td>Steeling basin</td>
<td>0.60</td>
<td>2022.00</td>
<td>1213.20</td>
</tr>
<tr>
<td>Washing place</td>
<td>2.28</td>
<td>2022.00</td>
<td>4609.44</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8.90</strong></td>
<td></td>
<td><strong>Rs.17995.80/-</strong></td>
</tr>
</tbody>
</table>

4/26 Providing cement concrete work in prop 1:3:6 with hard broken stone aggregates
including curing and local carriage of stone within 200 m complete

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Unit Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>28.50</td>
<td>2281.00</td>
<td>65721.90</td>
</tr>
<tr>
<td>Side wall</td>
<td>18.05</td>
<td>2281.00</td>
<td>41125.90</td>
</tr>
<tr>
<td>U/P Apron</td>
<td>2.85</td>
<td>2281.00</td>
<td>5175.85</td>
</tr>
<tr>
<td>Steeling basin</td>
<td>0.60</td>
<td>2281.00</td>
<td>1368.60</td>
</tr>
<tr>
<td>Washing place</td>
<td>2.28</td>
<td>2281.00</td>
<td>5175.85</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50.87</strong></td>
<td></td>
<td><strong>Rs.116034.47/-</strong></td>
</tr>
</tbody>
</table>

5/22 Providing regular stone masonry in retaining walls breast walls and wing walls
with new stones

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Unit Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Wall</td>
<td>3.60</td>
<td>1022.00</td>
<td>3679.20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.60</strong></td>
<td></td>
<td><strong>Rs.3433.92/-</strong></td>
</tr>
</tbody>
</table>

6/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined
including batten, props to the proper level and removing the same after the concrete
harden as directed

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Unit Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>24.70</td>
<td>281.00</td>
<td>7001.00</td>
</tr>
<tr>
<td>Side wall</td>
<td>10.80</td>
<td>281.00</td>
<td>3050.40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35.50</strong></td>
<td></td>
<td><strong>Rs.15314.50/-</strong></td>
</tr>
</tbody>
</table>
Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed

Side wall: \[2 \times (2.00 + 2.50) \times 1.20 = 5.40 \text{ m}^2\]

Steeling basin: \[1 \times 3.00 \times 2.00 = 6.00 \text{ m}^2\]

Washing place: \[1 \times 19.00 \times 1.20 = 22.80 \text{ m}^2\]
\[= 34.20 \text{ m}^2\]

@Rs.86.00/m\(^3\)……………………………………… \[= \text{Rs.2941.20/-}\]

TOTAL \[= \text{Rs.161963.36/-}\]
SAY, \[= \text{Rs.1,61960.00/-}\]

(Rupees One lakh sixty one thousand nine hundred and sixty) only
## ESTIMATE FOR CONSTRUCTION OF CHECK DAM CUM WASHING PLACE UNDER IWMP-V WATERSHED (BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007 – 08

### 1/3 (a) Earthwork in excavation for Dam below the lowest bed level including dewatering and building out water in order to keep the foundation trenches free of water etc. including leveling the foundation complete and as directed (d). Soft or laminated rock or medium shale.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Calculation</th>
<th>Volume m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 1.50 x 1.20</td>
<td>m³</td>
<td>= 18.00 m³</td>
<td></td>
</tr>
<tr>
<td>Side wall</td>
<td>2 x 2.00 x 0.80 x 0.40</td>
<td>m³</td>
<td>= 1.28 m³</td>
<td></td>
</tr>
<tr>
<td>U/P Apron</td>
<td>1 x 10.00 x 1.50 x 0.25</td>
<td>m³</td>
<td>= 3.75 m³</td>
<td></td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 3.00 x 0.50 x 0.40</td>
<td>m³</td>
<td>= 1.20 m³</td>
<td></td>
</tr>
<tr>
<td>Washing place</td>
<td>1 x 10.00 x 1.20 x 0.30</td>
<td>m³</td>
<td>= 3.60 m³</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>29.33 m³</td>
</tr>
<tr>
<td>@Rs.46.00/m³</td>
<td></td>
<td></td>
<td></td>
<td>= Rs.1349.18/-</td>
</tr>
</tbody>
</table>

### 2/24 (a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Calculation</th>
<th>Volume m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 1.50 x .10</td>
<td>m³</td>
<td>= 1.50 m³</td>
<td></td>
</tr>
<tr>
<td>Side wall</td>
<td>2 x 2.00 x 0.80 x 0.10</td>
<td>m³</td>
<td>= 0.32 m³</td>
<td></td>
</tr>
<tr>
<td>U/P Apron</td>
<td>1 x 10.00 x 1.50 x 0.10</td>
<td>m³</td>
<td>= 1.50 m³</td>
<td></td>
</tr>
<tr>
<td>Steeling basin:</td>
<td>1 x 3.00 x 2.00 x 0.40</td>
<td>m³</td>
<td>= 0.60 m³</td>
<td></td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 3.00 x 1.20 x 0.10</td>
<td>m³</td>
<td>= 1.20 m³</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>5.12 m³</td>
</tr>
<tr>
<td>@Rs.432.00/m³</td>
<td></td>
<td></td>
<td></td>
<td>= Rs.2211.84/-</td>
</tr>
</tbody>
</table>

### 3/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Calculation</th>
<th>Volume m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 1.50 x .10</td>
<td>m³</td>
<td>= 1.50 m³</td>
<td></td>
</tr>
<tr>
<td>Side wall</td>
<td>2 x 2.00 x 0.80 x 0.10</td>
<td>m³</td>
<td>= 0.32 m³</td>
<td></td>
</tr>
<tr>
<td>U/P Apron</td>
<td>1 x 10.00 x 1.50 x 0.10</td>
<td>m³</td>
<td>= 1.50 m³</td>
<td></td>
</tr>
<tr>
<td>Steeling basin:</td>
<td>1 x 3.00 x 2.00 x 0.40</td>
<td>m³</td>
<td>= 0.60 m³</td>
<td></td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 3.00 x 1.20 x 0.10</td>
<td>m³</td>
<td>= 1.20 m³</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>5.12 m³</td>
</tr>
<tr>
<td>@Rs.2022.00/m3</td>
<td></td>
<td></td>
<td></td>
<td>= Rs.10352.64/-</td>
</tr>
</tbody>
</table>

### 4/26 Providing cement concrete work in prop 1:3:6 with hard broken stone aggregates or river shingles 40mm down graded including curing and local carriage of stone within 200 m complete

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Calculation</th>
<th>Volume m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 1.50 x 1.00</td>
<td>m³</td>
<td>= 15.00 m³</td>
<td></td>
</tr>
<tr>
<td>1 x 10.00 x (0.40 + 1.50) x 1.00</td>
<td>m³</td>
<td>= 9.50 m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>24.50 m³</td>
</tr>
<tr>
<td>@Rs.2281.00/m3</td>
<td></td>
<td></td>
<td></td>
<td>= Rs.657384.42/-</td>
</tr>
</tbody>
</table>

### 5/23 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section not less than 25cm x 25 cm x 30 cm with proper key stone of size not less than 25cm x 25cm x 75cm long in cement mortar 1:6 including carriage of stone within 200m filling in trenches complete as directed (a) With new stones

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Calculation</th>
<th>Volume m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Wall</td>
<td>2 x 3.00 x 0.80 x 0.70</td>
<td>m³</td>
<td>= 3.36 m³</td>
<td></td>
</tr>
<tr>
<td>@Rs.1020.00/m3</td>
<td></td>
<td></td>
<td></td>
<td>= Rs.3433.92/-</td>
</tr>
</tbody>
</table>

### 6/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battering, props to the proper level and removing the same after the concrete harden as directed

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Calculation</th>
<th>Volume m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 1.00</td>
<td>m³</td>
<td>= 10.00 m³</td>
<td></td>
</tr>
<tr>
<td>1 x 10.00 x 1.30</td>
<td>m³</td>
<td>= 13.00 m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Side wall</td>
<td>4 x (2.00 + 2.50) x 1.20</td>
<td>m³</td>
<td>= 10.80 m³</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>33.80 m³</td>
</tr>
<tr>
<td>@Rs.281.00/m3</td>
<td></td>
<td></td>
<td></td>
<td>= Rs.9497.80/-</td>
</tr>
</tbody>
</table>
Providing 12mm thick cement plastering including clearing surface in proportion
1:4 including screening the sand, cleaning the surface and carriage of sand within
200 m complete as directed

Side wall: \( \frac{4 \times (2.00 + 2.50) \times 1.20}{2} = 5.40 \text{ m}^2 \)

Steeling basin: \( 1 \times 3.00 \times 2.00 = 6.00 \text{ m}^2 \)

Washing place: \( 1 \times 10.00 \times 1.20 = 12.00 \text{ m}^2 \)

= 23.40 \text{ m}^2

@Rs.86.00/m³........................................... =Rs.2012.40/-

TOTAL =Rs.94596.20/-

SAY, =Rs.94590.00/-

(Rupees ninety four thousand five hundred and ninety) only
ESTIMATE FOR CONSTRUCTION OF FARM POND AT PUNGPHREIT
UNDER UMTYNRU-WEISAR FOR WATERSHEAD IWMP-V.
Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD
(Roads) for the year 2007 – 2008.

1/3(a)(c) Earthwork in excavation to the proper level and grade including light
dressing as directed and removal of spoils up to 30m lead and all lift.

\[
\begin{align*}
30.00 \times 1.50 \times 0.70 & = 31.50 \text{ m}^3 \\
\text{@Rs.29.00/m3} & \Rightarrow \text{Rs. 913.50/-}
\end{align*}
\]

2/2 (a) Providing regular stone masonry walls with hammer dressed or blunt chisel
dressed stones of heavy section(size not less than 25cm x 25cm x 30cm long) completed as directed.

\[
\begin{align*}
1 \times 30.00 \times 0.70 \times 0.60 & = 12.60 \text{ m}^3 \\
1 \times 30.00 \times (0.70 + 0.50) \times 1.20 & = 21.60 \text{ m}^3 \\
\text{Less: } 1 \times 0.40 \times 0.60 \times 0.30 & = 0.07 \text{ m}^3 \\
\text{Total: } 34.27 \text{ m}^3 \\
\text{@Rs.618.00/m3} & \Rightarrow \text{Rs.21178.86/-}
\end{align*}
\]

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly
joined including batter, props to the proper level and removing the same after
the concrete harden as directed.

\[
\begin{align*}
1 \times 30.00 \times 1.20 & = 36.00 \text{ m}^2 \\
2 \times 5.00 \times 0.40 & = 4.00 \text{ m}^2 \\
\text{Total: } 40.00 \text{ m}^2 \\
\text{@Rs.281.00/m2} & \Rightarrow \text{Rs.10,116.00/-}
\end{align*}
\]

4/25 Providing cement concrete work in prop. 1:4:8 with hard broken stone
aggregate or river shingles 40mm down graded including necessary carriage
of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
1 \times 30.00 \times 0.70 \times 0.10 & = 2.10 \text{ m}^3 \\
1 \times 30.00 \times 0.10 \times 0.30 & = 6.72 \text{ m}^3 \\
\text{Less channel: } 1 \times 5.00 \times 0.60 \times 0.10 & = 0.30 \text{ m}^3 \\
2 \times 5.00 \times 0.10 \times 0.30 & = 0.30 \text{ m}^3 \\
\text{Total: } 9.42 \text{ m}^3 \\
\text{@Rs.2202.00/m3} & \Rightarrow \text{Rs.19047.24/-}
\end{align*}
\]

5/39 Providing 12mm thick cement plastering including clearing surface
in proportion 1:4 including screening the sand, cleaning the surface and
carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2 \times 30.00 \times 1.20 & = 72.00 \text{ m}^2 \\
1 \times 30.00 \times 0.60 & = 18.00 \text{ m}^2 \\
3 \times 5.00 \times 0.30 & = 6.00 \text{ m}^2 \\
\text{Total: } 96.00 \text{ m}^2 \\
\text{@Rs.86.00/m2} & \Rightarrow \text{Rs.8256.00/-}
\end{align*}
\]

\[
\text{TOTAL = Rs.59,511.60/-}
\]

\[
\text{Say, = Rs.59500.00/- (Rupees Fifty nine thousand and five hundred) only}
\]
ESTIMATE FOR CONSTRUCTION OF FOOTBRIDGE AT MAWROK/PHOTUM UNDER UMTYNRU-WEISAR FOR WATERSHEAD IWMP-V. Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD (Roads) for the year 2007 – 2008.

1/3(b) Earthwork in excavation for Dam, wing wall below the lowest bed level including dewatering and boiling out water in order to keep the foundation dry and protection of sides of foundation by adequate shorting scaffolding including leveling the foundation complete as directed.
(d). Soft or laminated rock or medium shale.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abutment</td>
<td>0.96</td>
<td>103.00</td>
<td>99.08</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>4.80</td>
<td>103.00</td>
<td>499.28</td>
</tr>
<tr>
<td>Total</td>
<td>5.76</td>
<td></td>
<td>593.28</td>
</tr>
</tbody>
</table>

2/24(a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abutment</td>
<td>0.77</td>
<td>432.00</td>
<td>332.84</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>4.80</td>
<td>432.00</td>
<td>2073.60</td>
</tr>
<tr>
<td>Total</td>
<td>5.57</td>
<td></td>
<td>2406.44</td>
</tr>
</tbody>
</table>

3/23 (a) Providing regular coursed stone masonry work in abutment wall with hammer dressed stones of heavy section complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abutment</td>
<td>1.08</td>
<td>1020.00</td>
<td>1048.00</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>1.44</td>
<td>1020.00</td>
<td>1444.00</td>
</tr>
<tr>
<td>Railing block</td>
<td>6.84</td>
<td>1020.00</td>
<td>6976.80</td>
</tr>
<tr>
<td>Total</td>
<td>6.42</td>
<td></td>
<td>8072.80</td>
</tr>
</tbody>
</table>

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abutment</td>
<td>0.58</td>
<td>2281.00</td>
<td>1339.04</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>4.80</td>
<td>2281.00</td>
<td>10950.40</td>
</tr>
<tr>
<td>Railing</td>
<td>1.39</td>
<td>3000.00</td>
<td>4170.00</td>
</tr>
<tr>
<td>Total</td>
<td>6.77</td>
<td></td>
<td>16559.44</td>
</tr>
</tbody>
</table>

5/28 Providing cement concrete work in proportion 1:2:4 corresponding to M150 with very hard stone or river shingle aggregates complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slab</td>
<td>1.08</td>
<td>3000.00</td>
<td>3000.00</td>
</tr>
<tr>
<td>Railing</td>
<td>0.25</td>
<td>3000.00</td>
<td>750.00</td>
</tr>
<tr>
<td>Total</td>
<td>1.33</td>
<td></td>
<td>3750.00</td>
</tr>
</tbody>
</table>

6/40(a) Providing steel reinforcement of R.C.C work including bending, binding and placing in position as per approved design and drawing complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Weight (kg)</th>
<th>Rate (Rs/kg)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slab</td>
<td>18.6</td>
<td>3000.00</td>
<td>55800.00</td>
</tr>
<tr>
<td>Railing</td>
<td>11.04</td>
<td>3000.00</td>
<td>33120.00</td>
</tr>
<tr>
<td>Total</td>
<td>29.64</td>
<td></td>
<td>88920.00</td>
</tr>
</tbody>
</table>

92
7/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

Slab: 8.00 x 1.20 = 7.20 m²
Railing: 8 x 4 x 0.10 x 0.80 = 2.56 m²
12 x 3 x 2.15 x 0.10 = 7.74 m²
= 17.50 m²
@ Rs.281.00/m² .................................................. = Rs.4,917.50/-

8/5 Earth work in filling or in an embankment in layer not exceeding 20cm thick including breaking clods, dressing ......lead upto 30meter and lift upto 150cm.
(ii) With earth obtained from borrow pits in the private land at the contractors own arrangement.

2 x (½ x 10.70 x 1.80) x 11.20 = 215.71 m³
@ Rs.74.00/m³ .................................................. = Rs.15962.54/-

9/39 (a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

Slab: 6.00 x 1.20 = 7.20 m²
2 x 6.00 x 0.15 = 1.80 m²
Railing: 8 x 4 x 0.10 x 0.80 = 2.56 m²
12 x 3 x 2.15 x 0.10 = 7.74 m²
Abutment: 1.60 x 1.80 = 2.88 m²
Wing Wall: 4 x 8.00 x 1.80 = 57.60 m²
Railing block: 18 x 2 x 1.00 x 0.60 = 21.60 m²
18 x 1 x 1.00 x 0.40 = 7.20m²
18 x 2 x 0.60 x 0.40 = 8.64 m²
= Rs.117.22 m²
@ Rs.86.00/m².................................................. = Rs.10,080.92/-

TOTAL Rs.65,545.36/-
SAY, Rs.65,540.00/-

(Rupees Sixty five thousand five hundred forty) only
ESTIMATE FOR CONSTRUCTION OF FOOTPATH AT SHILLIANG KTEIH
UNDER UMTYNRU-WEISAR FOR WATERSHEAD IWMP-V.
Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD
(Roads) for the year 2007 – 2008.

1/3 (a) Earthwork in excavation to the proper level and grade including light
dressing as directed and removal of spoils up to 30m lead and all lift.
   (d) Soft or laminated rock or medium shale.

   1 x 148 x 1.20 x 0.50 = 88.80 m³
   @Rs.46/ m³………………………………………………… =Rs.4084.80/-

2/60 Collecting and supply of hard broken boulders for soiling stones, including
   carriage within 200meters and stacking in measurable stacks completes.

   (a) 1 x 148 x 1.20 x 0.20 = 35.52 m³
   @Rs.268.00/m³……………………………………….. =Rs.9519.36/-

3/61 Labour for laying the stones soling or stone bottoming 150mm thick in one layer
   or two layers each about 75mm thick including dressing sub grade to the super
elevation and cambering an grading by using necessary templates completed as directed.

   1 x 148 x 1.20 x 0.20 = 35.52 m³
   @Rs.93.00/ m³…………………………………………… =Rs.3303.36/-

4/25 Providing cement concrete work in prop. 1:4:8 with hard broken stone
   aggregate or river shingles 40mm down graded including necessary carriage
   of stones with distance of 200m and curing complete as directed.

   2 x 148 x 1.20 x 0.10 = 17.76 m³
   @Rs.2022.00/m3……………………………………….. =Rs.35910.72/-

5/38 Providing shuttering with dressed planks not less than 25 cm thick properly
   joined including battern, props to the proper level and removing the same
   after the concrete harden as directed.

   2 x 148 x 1.00 x 0.10 = 29.60 m³
   @Rs.281.00/m2…………………………………………… =Rs.8317.60/-

6/39 Providing 12mm thick cement plastering including clearing surface in proportion
   1:4 including screening the sand, cleaning the surface and carriage of sand within
   200 m complete as directed.

   Over stone and cement concrete.

   2 x 148 x 0.10 = 29.60 m³
   1 x 148 x 1.20 = 177.60 m³
   = 207.20 m³
   @Rs.86.00/m2…………………………………………… =Rs.17819.20/-
   TOTAL =Rs.78,955.04/-
   Say, = Rs.78,955.00/-

(Rupees Seventy eighty thousand nine hundred and fifty five) only
1/3 (a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift.

(d) Soft or laminated rock or medium shale.

\[
1 \times 150 \times 1.20 \times 0.50 = 90 \text{ m}^3
\]

\[
\text{Rs.46/ m}^3 \rightarrow \text{Rs.4140.00/-}
\]

2/60 Collecting and supply of hard broken boulders for soiling stones, including carriage within 200meters and stacking in measurable stacks completes.

\[
(a) 1 \times 150 \times 1.20 \times 0.20 = 36.00 \text{ m}^3
\]

\[
\text{Rs.268.00/m}^3 \rightarrow \text{Rs.9648.00/-}
\]

3/61 Labour for laying the stones soling or stone bottoming 150mm thick in one layer or two layers each about 75mm thick including dressing sub grade to completed as directed.

\[
1 \times 150 \times 1.20 \times 0.20 = 36.00 \text{ m}^3
\]

\[
\text{Rs.93.00/} \rightarrow \text{Rs.3348.00/-}
\]

4/25 Providing cement concrete work in prop1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
1 \times 150 \times 1.20 \times 0.10 = 18.00 \text{ m}^3
\]

\[
\text{Rs.2022.00/m}^3 \rightarrow \text{Rs.36396.00/-}
\]

5/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

\[
2 \times 150 \times 1.20 \times 0.10 = 30.00 \text{ m}^3
\]

\[
\text{Rs.281.00/m2} \rightarrow \text{Rs.8430.00/-}
\]

6/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

Over stone and cement concrete.

\[
2 \times 150 \times 0.10 = 30.00 \text{ m}^3
\]

\[
1 \times 150 \times 1.20 = 180.00 \text{ m}^3
\]

\[
= 210.00 \text{ m}^3
\]

\[
\text{Rs.86.00/m2} \rightarrow \text{Rs.18060.00/-}
\]

\[
\text{TOTAL} = \text{Rs.80022.00/-}
\]

\[
\text{Say,} = \text{Rs.80000.00/-}
\]

(Rupees Eighty seven thousand) only
ESTIMATE FOR CONSTRUCTION OF FOOTPATH AT PUNGPHREIT
UNDER UMTYNRU-WEISAR FOR WATERSHEAD IWMP-V.
Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD (Roads) for the year 2007 – 2008.

1/3(a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift:
(d) Soft or laminated rock or medium shale.

\[
1 \times 218 \times 1.20 \times 0.50 = 130.80 \text{ m}^3 \\
\text{@Rs.}46/ \text{m}^3 \rightarrow \text{Rs.6016.80/}
\]

2/60 Collecting and supply of hard broken boulders for soiling stones, including carriage within 200meters and stacking in measurable stacks completes.

(a) \[
1 \times 218 \times 1.20 \times 0.20 = 52.32\text{m}^3 \\
\text{@Rs.}287.00/\text{m}^3 \rightarrow \text{Rs.15,015.84/-}
\]

3/61 Labour for laying the stones soling or stone bottoming 150mm thick in one layer or two layers each about 75mm completed as directed.

\[
1 \times 218 \times 1.20 \times 0.20 = 52.32\text{m}^3 \\
\text{@Rs.}93.00/\text{m}^3 \rightarrow \text{Rs.4865.76/-}
\]

4/25 Providing cement concrete work in prop. 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
2 \times 218 \times 1.20 \times 0.10 = 52.32\text{m}^3 \\
\text{@Rs.}2022.00/\text{m}^3 \rightarrow \text{Rs.105791.04/-}
\]

5/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including batten, props to the proper level and removing the same after the concrete harden as directed.

\[
1 \times 218 \times 1.20 \times 0.10 = 26.16\text{ m}^3 \\
\text{@Rs.}281.00/\text{m}^2 \rightarrow \text{Rs.7350.96/-}
\]

6/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

Over stone and cement concrete.

\[
2 \times 218 \times 0.10 = 43.60\text{ m}^3 \\
1 \times 218 \times 1.20 = 201.60\text{ m}^3 \\
\text{Total} = 305.20\text{ m}^3. \\
\text{@Rs.}86.00/\text{m}^2 \rightarrow \text{Rs.26247.20/-} \\
\text{TOTAL} = \text{Rs.1,65,288.00/-} \\
\text{(Rupees One lakh Sixty five thousand two hundred and eighty eight) only.}
\]
ESTIMATE FOR CONSTRUCTION OF WASHING PLACE AT THIEPKSEH UNDER UMTYNRU-WEISAR FOR WATERSHEAD IWMP-V

Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD (Roads) for the year 2007 – 2008

1/3 (a) Earthwork in excavation to the proper grade including light dressing etc

(d) Soft or laminated rock or medium shale.

C.C. wall: 14 x 1.00 x 1.50 = 21.00m

Masonry wall: 14 x 3.00 x 0.85 = 35.70m

Apron: 14 x 2.00 x 0.10 = 2.80m

Side walls: 2.00 x 4.00 x 2.00 x 1.00 = 16.00m

Washing place: 2.00 x 4.00 x 2.00 x 1.00 = 16.00m

Total = 91.50 m

@Rs.46/m = Rs.4209.00/-

2/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

C.C. wall: 14 x 1.00 x 0.50 = 7.00m

Masonry wall: 14 x 3.00 x 0.35 = 14.70m

Apron: 14 x 2.00 x 0.10 = 2.80m

Side walls: 2.00 x 4.00 x 2.00 x 0.50 = 8.00m

Washing place: 2.00 x 4.00 x 1.90 x 0.50 = 7.60m

= 40.10 m

@Rs.2022/m = Rs.81082.20/-

3/21 (b) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stone of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stone each not less than 25cm x 25cm x 75cm long including carriage of stone within 200metres and filling in trenches.

Dam; 14{(3.00 x 3.50)-(2.50 x 3.00)} = 94.50 m

Side wall: 2 x 4.00 x {(3.00 x 5/2) x (0.60 x + 1.70)} = 32.20 m

Total = 157.50 m

@Rs.396.00/m = Rs.62370.00/

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

Footing: 14 x 1.00 x 0.50 = 7.00 m

Footing: 14 x 4.25 x 0.30 = 17.85 m

= 24.85 m

@Rs.2022.00/m = Rs.50246.70/-

5/39 (a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

U/S Face: 14 x 4.25 = 59.50 m

Top width: 14 x 0.80 = 11.20 m

Apron: 14 x 2.00 = 28.00 m

= 98.70 m

@Rs.86.00/m = Rs.8488.20/-

6/11 (d) Cutting side drains 60cm widev60cm deep including dressing grassing and removal of spoils up to 15 metres complete as directed.

(i) 0.60m x 0.60m

Total length = 2 x 800.00Rm

@Rs.35/Rm = Rs. 56000.00/-

Total = Rs.266725.10

Say = Rs.266700.00/-

(Rupees Two lakhs sixty six thousand seven hundred) only
1/3(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.

- **Abutment**: 2x1.60x0.60x0.50 = 0.96m³
- **Wingwall**: 4x10.00x0.50x0.30 = 6.00m³
  @Rs.103/ m³  
  … … … … … … … … … … … … … … … … Rs.716.88/-

2/24(a) Providing stone pitching with one man size boulders not less than 25cm x 30cm long including filling the interstices with spoils and carriage of stone filling within a distance of 200 meters complete as directed.

- **Abutment**: 2x1.60x0.60x0.40 = 0.77m³
- **Wingwall**: 4x10.00x0.50x0.30 = 6.00m³
  @Rs.432/ m³  
  … … … … … … … … … … … … … … … … … … Rs.2924.64/-

3/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stone filling with distance of 200m and curing complete as directed.

- **Abutment**: 2x{(1.20x0.30) + (½x0.30x1.20)} = 1.08m³
- **Wingwall**: 4x{(1.20x0.20) + (½x0.20x1.20)} = 1.44m³
- **Railing block**: 20x1.00x0.40x0.60 = 4.80m³
  @Rs.1020/ m³  
  … … … … … … … … … … … … … … … … …  Rs.7466.40/-

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete.

- **Abutment**: 2x1.60x0.60x0.30 = 0.58m³
- **Wingwall**: 4x10.00x0.50x0.30 = 6.00m³
  @Rs.2281/ m³  
  … … … … … … … … … … … … … … … … … … Rs.15,008.98/-

5/28 Providing cement concrete work in proportion 1:2:4 diaphragm and railing, rails, posts, kerbs etc……….completed as directed.

- **Slab**: 8.00x1.20x0.15 = 1.62m³
- **Railing**: 8.00x0.10x0.10x0.18 = 0.06m³
  12.00x2.15x0.10x0.10 = 0.25m³
  12x3x2.15x0.10 = 1.94m³
  @Rs.3000.00/ m³  
  … … … … … … … … … … … … … … … … … … Rs.5820.00/-

6/40(a) Providing steel reinforcement of R.C.C work including …….drawing complete as directed.

- **Slab**: 5pec x 1no x 9.00 x 0.62 = 27.09 kg
  4pec x 1no x 9.20 x 0.62 = 22.82 kg
  4pec x 1no x 1.20 x 0.62 = 33.48 kg
  4pec x 1no x 1.40 x 0.62 = 38.20 kg
- **Railing**: 32pec x 1no x 0.80 x 0.62 = 27.09 kg
  16pec x 1no x 9.00 x 0.62 = 22.82 kg
  112pec x 1no x 0.40 x 0.62 = 33.48 kg
  8pec x 1no x 0.40 x 0.62 = 267.42 kg
  @Rs.3000.00/ quintal  
  … … … … … … … … … … … … … … … … … … Rs.5820.00/-

7/38 Providing shuttering with dressed planks not less than 25mm thick complete as directed.

- **Slab**: 9.00x1.20x = 10.80m²
- **Railing**: 8x4x0.10x0.80 = 2.56m²
  12x3x2.15x0.10 = 7.74m²
  @Rs.281/- m²  
  … … … … … … … … … … … … … … … … … … Rs.5929.10/-
8/5 Earthwork in filling or in an embankment in layer…........lead upto 30meter and lift upto 150cm. completed as directed.  
   (ii) With earth obtained from borrow pits in the private land  
At the contractors own arrangement.  
   
\[
2 \times (\frac{1}{2} \times 10.70 \times 1.80) \times 11.20 = 215.71 \text{m}^3 \\
= 215.71 \text{m}^3 \\
\]
   @Rs.74.00/m$^3$.…………………………………….. =Rs.15962.54/-

5/39 Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.  
   
Slab : 9.00 x 1.20 = 10.80$^2$ 
2x9.00x0.15 = 2.70$m^2$  
Railing : 8x4x0.10x1.80 = 2.56$m^2$  
12x3x2.15x0.10 = 7.74$m^2$  
Abutment: 1.60x1.80 = 2.88$m^2$  
Wing wall: 4x10.00x1.80 = 72.00$m^2$  
Railing block: 20x2x1.00x0.60 = 24.00$m^2$  
20x1x1.00x0.40 = 8.00$m^2$  
20x2x0.60x0.40 = 9.60$m^2$ 
\@Rs86/m$^2$.…………………………………….. =Rs.1578.96/-

Total Rs.75966.00/-  
(Say, Rs.75,960.00/)

Rupees (Seventy Five Thousand Nine Hundred and Sixty Six) only
ESTIMATE FOR CONSTRUCTION OF FARMPOND AT MAWROK,
WEST KHASI HILLS DISTRICT
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS),
MEGHALAYA FOR THE YEAR 2007 – 08

1/3(a) (a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift.

\[
14.00 \times 0.80 \times 0.70 = 7.84 \text{ m}^3
\]
\[
@ \text{Rs.} 29.00/\text{m}^3 .......................................................... = \text{Rs. 227.36/-}
\]

2/21 (a) Providing regular stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section(size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stones within 200meter and filling in trenches.

\[
1 \times 14.00 \times 0.70 \times 0.60 = 5.88 \text{ m}^3
\]
\[
1 \times 14.00 \times 0.50 \times 1.20 = 10.08 \text{ m}^3
\]
\[
\frac{2}{2} \text{ Less: } 1 \times 0.40 \times 0.60 \times 0.30 = 0.07 \text{ m}^3
\]
\[
= 16.03 \text{ m}^3
\]
\[
@ \text{Rs.} 618.00/\text{m}^3 .......................................................... = \text{Rs. 9906.54/-}
\]

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

\[
1 \times 14.00 \times 1.20 = 16.80 \text{ m}^2
\]
\[
2 \times 5.00 \times 0.40 = 4.00 \text{ m}^2
\]
\[
= 20.80 \text{ m}^2
\]
\[
@ \text{Rs.} 281.00/\text{m}^2 .......................................................... = \text{Rs. 58,44.80/-}
\]

4/25 Providing cement concrete work in prop. 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
1 \times 14.00 \times 0.70 \times 0.10 = 0.98 \text{ m}^3
\]
\[
1 \times 14.00 \times 0.10 \times 2.24 = 3.14 \text{ m}^3
\]
\[
\text{Less channel: } 1 \times 5.00 \times 0.60 \times 0.10 = 0.30 \text{ m}^3
\]
\[
2 \times 5.00 \times 0.10 \times 0.30 = 0.30 \text{ m}^3
\]
\[
= 4.72 \text{ m}^3
\]
\[
@ \text{Rs.} 2022.00/\text{m}^3 .......................................................... = \text{Rs. 95,43.84/-}
\]

5/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

\[
\text{Over stone and cement concrete.}
2 \times 14 \times 1.20 = 33.60 \text{ m}^2
1 \times 14.00 \times 0.80 = 8.40 \text{ m}^2
3 \times 5.00 \times 0.80 = 6.00 \text{ m}^2
\]
\[
= 48.00 \text{ m}^2
\]
\[
@ \text{Rs.} 86.00/\text{m}^2 .......................................................... = \text{Rs. 4128.00/-}
\]

\[
\text{TOTAL} = \text{Rs. 29,650.54/-}
\]
\[
\text{Say, } = \text{Rs. 29,650.00/-}
\]

(Rupees Twenty nine thousand six hundred and fifty) only
ESTIMATE FOR CONSTRUCTION OF WASHING PLACE CUM WASHING PLATFORM AT MAWROK WEST KHASI HILLS DISTRICT.
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGLHALAYA FOR THE YEAR 2007 – 08

1/3 (a) (a) Earthwork in excavation for Dam below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches free of water etc. including leveling the foundation complete and as directed

\[
\begin{align*}
\text{Dam:} & \quad 1 \times 6.00 \times 1.00 \times 0.50 = 3.00 \text{ m}^3 \\
\text{Platform:} & \quad 1 \times 3.00 \times 3.00 \times 0.25 = 2.25 \text{ m}^3 \\
& \quad = 5.25 \text{ m}^3 \\
& \quad @ \text{Rs. 18.00/m}^3 \quad = \text{Rs. 94.50/-}
\end{align*}
\]

2/22 (a) Providing regular stone retaining walls breast walls and wing walls etc. with hammer dressed or blunt chisel dressed stones of heavy section(size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than (25cm x 25cm x 75cm long) in stones within 200 meter and providing weep holes at 1.2 to 1.5 meter apart staggered complete (a height of wall for every 1meter should be kept exposed till inspected by supervising officer).

\[
\begin{align*}
\text{Dam:} & \quad 1 \times 6.00 \times 1.00 \times 0.50 = 3.00 \text{ m}^3 \\
& \quad 1 \times 6.00 \times (1.00 + 0.80) \times 0.80 = 4.32 \text{ m}^3 \\
& \quad = 7.32 \text{ m}^3 \\
& \quad @ \text{Rs. 1022.00/m}^3 \quad = \text{Rs. 7,481.04/-}
\end{align*}
\]

3/24 (a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete

\[
\begin{align*}
\text{Washing basin:} & \quad 1 \times 6.00 \times 0.90 \times 0.20 = 2.40 \text{ m}^3 \\
\text{Washing platform:} & \quad 1 \times 3.00 \times 2.20 \times 0.05 = 0.33 \text{ m}^3 \\
\text{Total} & \quad = 2.73 \text{ m}^3 \\
& \quad @ \text{Rs. 2022.00/m}^3 \quad = \text{Rs. 5,520.06/-}
\end{align*}
\]

4/26  Providing cement concrete work in prop 1:3:6 with hard broken stone aggregates or river shingles 40mm down graded including curing and local carriage of stone within 200 m complete

\[
\begin{align*}
\text{Dam:} & \quad 1 \times 6.00 \times 0.80 \times 0.10 = 0.48 \text{ m}^3 \\
\text{Washing basin:} & \quad 1 \times 6.00 \times 2.00 \times 0.10 = 1.20 \text{ m}^3 \\
\text{Washing platform:} & \quad 1 \times 3.00 \times 2.20 \times 0.05 = 0.33 \text{ m}^3 \\
& \quad = 2.01 \text{ m}^3 \\
& \quad @ \text{Rs. 2281.00/m}^3 \quad = \text{Rs. 4,584.81/-}
\end{align*}
\]

5/39 (a) Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed

\[
\begin{align*}
\text{Dam:} & \quad 2 \times 6.00 \times 0.80 = 9.60 \text{ m}^2 \\
& \quad 1 \times 6.00 \times 0.80 = 9.90 \text{ m}^2 \\
\text{Washing basin:} & \quad 1 \times 6.00 \times 2.00 = 12.00 \text{ m}^2 \\
\text{Washing basin:} & \quad 1 \times 3.00 \times 3.00 = 9.00 \text{ m}^2 \\
& \quad = 35.40 \text{ m}^2 \\
& \quad @ \text{Rs. 86.00/} \text{m}^2 \quad = \text{Rs. 3,044.40/-}
\end{align*}
\]

\[
\begin{align*}
\text{TOTAL} & \quad = \text{Rs. 20,724.81/-} \\
& \quad \text{SAY,} \quad \text{Rs. 20,700.00/-}
\end{align*}
\]

(Rupees Twenty thousand seven hundred) only
ESTIMATE FOR CONSTRUCTION OF CHECK DAM CUM WASHING PLACE
UNDER IWMP – V WATERDHED AT WEST KHASI HILLS DISTRICT.
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS),
MEGHALAYA FOR THE YEAR 2007 – 08

1/3 (a) Earthwork in excavation for Dam below the lowest bed level including dewatering
and bailing out water in order to keep the foundation trenches free of water etc.
including leveling the foundation complete and as directed
(d). Soft or laminated rock or medium shale.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1.05 m³</td>
</tr>
<tr>
<td>Side wall</td>
<td>0.32 m³</td>
</tr>
<tr>
<td>U/P Apron</td>
<td>1.05 m³</td>
</tr>
<tr>
<td>Steeling basin</td>
<td>0.60 m³</td>
</tr>
<tr>
<td>Washing place</td>
<td>0.84 m³</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.86 m³</strong></td>
</tr>
</tbody>
</table>

@Rs.46.00/m³... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... ... 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Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

Side wall: \[\frac{2 \times (2.00 + 2.50) \times 1.20}{2} = 5.40 \text{ m}^2\]

Steeling basin: \[1 \times 3.00 \times 2.00 = 6.00 \text{ m}^2\]

Washing place: \[1 \times 7.00 \times 1.20 = 8.40 \text{ m}^2\]

\[= 19.80 \text{ m}^2\]

@Rs.86.00/m\(^3\) .................................................. =Rs.1702.80/-

TOTAL =Rs.72140.71/-

SAY, =Rs.72150.00/-

(Rupees Seventy two thousand one hundred and fifty) only
ESTIMATE FOR CONSTRUCTION OF CHECK DAM CUM WASHING
PLACE UNSER IWMP-IV WATERSHED AT WEST KHASI HILLS DISTRICT.
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007 – 08)

1/3 (a) Earthwork in excavation for Dam below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches free of water etc. including leveling the foundation complete and as directed
(d). Soft or laminated rock or medium shale.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (cu m)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>12.60</td>
<td>46.00</td>
<td>574.40</td>
</tr>
<tr>
<td>Side wall</td>
<td>1.28</td>
<td>46.00</td>
<td>58.08</td>
</tr>
<tr>
<td>U/P Apron</td>
<td>1.50</td>
<td>46.00</td>
<td>70.50</td>
</tr>
<tr>
<td>Washing place</td>
<td>2.52</td>
<td>46.00</td>
<td>115.92</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21.73</strong></td>
<td></td>
<td><strong>999.58</strong></td>
</tr>
</tbody>
</table>

2/24 (a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (cu m)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1.05</td>
<td>432.00</td>
<td>446.80</td>
</tr>
<tr>
<td>Side wall</td>
<td>0.32</td>
<td>432.00</td>
<td>136.16</td>
</tr>
<tr>
<td>U/P Apron</td>
<td>1.05</td>
<td>432.00</td>
<td>446.80</td>
</tr>
<tr>
<td>Washing place</td>
<td>0.84</td>
<td>432.00</td>
<td>352.64</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.86</strong></td>
<td></td>
<td><strong>1667.52</strong></td>
</tr>
</tbody>
</table>

3/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (cu m)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1.05</td>
<td>2022.00</td>
<td>2128.10</td>
</tr>
<tr>
<td>Side wall</td>
<td>0.32</td>
<td>2022.00</td>
<td>647.04</td>
</tr>
<tr>
<td>U/P Apron</td>
<td>1.05</td>
<td>2022.00</td>
<td>2128.10</td>
</tr>
<tr>
<td>Washing place</td>
<td>0.84</td>
<td>2022.00</td>
<td>1697.92</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.86</strong></td>
<td></td>
<td><strong>7804.92</strong></td>
</tr>
</tbody>
</table>

4/26 Providing cement concrete work in prop 1:3:6 with hard broken stone aggregates or river shingles 40mm down graded including curing and local carriage of stone within 200m complete

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (cu m)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>10.50</td>
<td>2281.00</td>
<td>24289.00</td>
</tr>
<tr>
<td>Side wall</td>
<td>6.65</td>
<td>2281.00</td>
<td>14798.85</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17.15</strong></td>
<td></td>
<td><strong>39087.85</strong></td>
</tr>
</tbody>
</table>

5/22 Providing regular stone masonry in retaining walls breast walls and wing walls etc., with hammer dressed or blunt chisel dressed stones of heavy section not less than 25cm x 25 cm x 30 cm completed as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (cu m)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Wall</td>
<td>3.36</td>
<td>1022.00</td>
<td>3433.92</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.36</strong></td>
<td></td>
<td><strong>3433.92</strong></td>
</tr>
</tbody>
</table>

6/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including pattern, props to the proper level and removing the same after the concrete harden as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (cu m)</th>
<th>Rate (Rs/m³)</th>
<th>Total Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>7.00</td>
<td>281.00</td>
<td>1967.00</td>
</tr>
<tr>
<td>Side wall</td>
<td>9.10</td>
<td>281.00</td>
<td>2541.90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16.10</strong></td>
<td></td>
<td><strong>4508.90</strong></td>
</tr>
</tbody>
</table>
Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed

\[
\text{Side wall: } \frac{2 \times (2.00 + 2.50)}{2} \times 1.20 = 5.40 \text{ m}^2 \\
\text{Steeling basin: } 1 \times 3.00 \times 2.00 = 6.00 \text{ m}^2 \\
\text{Washing place: } 1 \times 7.00 \times 1.20 = 8.40 \text{ m}^2 \\
= 19.80 \text{ m}^2
\]

@Rs.86.00/m3………………………………………………………….. =Rs.1702.80/-

TOTAL = Rs.72140.71/-

SAY, Rs.72150.00/-

(Rupees Seventy two thousand one hundred and fifty) only
ESTIMATE FOR CONSTRUCTION OF FARM POND AND WASHING BASIN AT THIEPKSEH UNDER IWMP-V WATER SHED 2010

Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD (Roads) for the year 2007–2008.

1/3 (b) Earthwork in excavation for Dam, wing wall below the lowest bed level including dewatering and boiling out water in order to keep the foundation dry and protection of sides of foundation by adequate shoring scaffolding including leveling the foundation complete as directed.

(d). Soft or laminated rock or medium shale.

Pond:     1 x 0.50

\[
= \frac{(20.00 \times 19.00) + (2.50 \times 1.50) + (\text{other term})}{3} = 71.65\text{m}^3
\]

Washing basin: 1 x 6.00 x 1.50 x (0 + 0.60)  = 2.70 m

\[
= 2 \times 3.00 \times (0 + 0.60 \times 1.50) = 2.70 \text{m}^3
\]

\[
= 77.05 \text{m}^3
\]

@Rs.103.00/m

\[
= \text{Rs.7936.15/-}
\]

2/11 (e) Cutting road side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15 metres complete.

(i)       0.60m x 0.60m

\[
= (2 \times 20) + (2 \times 2) = 1 \times 44\text{Rm x 0.60 x 0.60} = 15.84 \text{m}^3
\]

@Rs.58.00/m

\[
= \text{Rs.918.72/-}
\]

3/21 (a) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stone of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stone each not less than 25cm x 25cm x 75cm long including carriage of stone within 200metres and filling in trenches.

Farm pond:     2 x 20.00 x 0.40 x 2.00 = 32.00 m

\[
= 2 \times 2.50 \times 0.40 \times 2.00 = 4.00 \text{m}^3
\]

Side drains:    2 x 44Rm x 0.25 x 0.60 = 13.20 m

\[
= 49.20 \text{m}^3
\]

@Rs.618.00/m

\[
= \text{Rs.30405.60/-}
\]

4/24 (a) Providing stone pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200 metres as directed.

Farm pond:  1 x 19.00 x 1.50 x 0.25  = 7.13 m

Washing basin: 1 x 6.00 x 1.50 x 0.25 = 2.25 m

\[
= 2 \times 3.00 \times 1.50 \times 0.25 = 2.25 \text{m}^3
\]

\[
= 15.47 \text{m}^3
\]

@Rs.432.00/m

\[
= \text{Rs.6683.04/-}
\]

5/27 Providing cement concrete work in abutment, wing wall and return wall in proportion 1:3:6 with hard broken stone aggregate 40mm down graded including necessary 40mm down graded including local carriage of stone aggregates, sand within 200metres and curing (excluding shuttering) complete as directed.

Washing basin:    2 x 6.00 x 0.20 x 0.60                   = 1.44 m

\[
= 2 \times 1.50 \times 0.20 \times 0.60                   = 0.04 \text{m}^3
\]

\[
= 2 \times 3.00 \times 0.20 \times 0.60                   = 0.72 \text{m}^3
\]

\[
= 2 \times 1.50 \times 0.20 \times 0.60                   = 0.36 \text{m}^3
\]

\[
= 2 \times 3.00 \times 0.20 \times 0.60                   = 0.72 \text{m}^3
\]

\[
= 2 \times 1.50 \times 0.20 \times 0.60                   = 0.36 \text{m}^3
\]

\[
= 3.64 \text{m}^3
\]

@Rs.2951.00/m

\[
= \text{Rs.10741.64/-}
\]
6/39 (a) Providing 12mm thick cement plastering in proportion 1:4 including clearing
the surface and carriage of sand within 200m complete as directed.

Farm pond:
\[ \frac{2}{2} \times (20.00 + 19.00) \times 2.00 = 78.00 \, \text{m}^2 \]
\[ 2 \times (2.50 + 1.50) \times 2.00 = 8.00 \, \text{m}^2 \]
\[ 2 \times 19.00 \times 1.50 = 28.50 \, \text{m}^2 \]

Washing basin:
\[ 2 \times 6.00 \times 0.60 = 7.20 \, \text{m}^3 \]
\[ 2 \times 1.50 \times 0.60 = 1.80 \, \text{m}^3 \]
\[ 1 \times 6.00 \times 1.50 = 9.00 \, \text{m}^3 \]
\[ 4 \times 3.00 \times 0.60 = 7.20 \, \text{m}^3 \]
\[ 4 \times 1.50 \times 0.60 = 3.60 \, \text{m}^3 \]
\[ 1 \times 3.00 \times 1.50 = 4.50 \, \text{m}^3 \]

Washing platform:
\[ 1 \times 6.00 \times 1.00 = 6.00 \, \text{m}^2 \]
\[ 1 \times 6.00 \times 0.10 = 0.603 \, \text{m}^2 \]
\[ 2 \times 1.00 \times 0.10 = 0.205 \, \text{m}^2 \]
\[ 1 \times 3.00 \times 1.00 = 3.00 \, \text{m}^2 \]
\[ 1 \times 3.00 \times 0.10 = 0.30 \, \text{m}^2 \]
\[ 1 \times 1.00 \times 0.10 = 0.10 \, \text{m}^2 \]

Total = 176.70 m²
\[ @ \text{Rs.86.00/m}^2 = \text{Rs.15196.20/-} \]

7/25 Providing cement concrete work in prop1:4:8 with hard broken stone
aggregate or river shingles 40mm down graded including necessary carriage
of stones with distance of 200m and curing complete as directed.

Washing platform:
\[ 1 \times 6.00 \times 1.00 \times 0.10 = 0.60 \, \text{m}^3 \]
\[ 2 \times 3.00 \times 1.00 \times 0.10 = 0.60 \, \text{m}^3 \]
\[ 1 \times 1.00 = 1.20 \, \text{m}^3 \]
\[ @ \text{Rs.2022.00/m}^3 = \text{Rs.2426.40/-} \]

TOTAL = Rs.74307.75/-

(Say, Rs.74300.00/-

(Rupees Seventy four thousand three hundred.) only
ESTIMATE FOR CONSTRUCTION OF FARM POND AND WASHING BASIN
AT SHILLANG KTEH UNDER IWMP-V MICRO-WATERSHED 2010
Based as per MPWD Schedule of Rates for Roads & Bridges under Western Circle PWD (Roads) for the year 2007 – 2008.

1/3 (a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift.
(a) Soft or laminated rock or medium shale.

Dam: 1 x 11.00 x 1.00 x 1.00 = 11.00m³

@Rs.18.00/m³ ................................................................. = Rs.198.00/-

2/22(a) Providing regular stone masonry in retaining walls breast walls and wing wall etc. with hammer dressed or blunt chisel dressed stones of heavy section(size not less than 25cm x 25cm x 75cm long) in cement mortar 1:6 including carriage of stones within 200metres and providing weep holes at 1.2 to 1.5 meter apart staged complete (a height of wall for every 1meter should be kept exposed till inspected by the Supervising Officer.

Dam: 1 x 11.00 x 1.00 x 1.00 = 11.00m³
1 x (1.00 + 0.90) x 0.90 = 9.405m³

2/22 @Rs.1022.00/m³ ................................................................. = Rs.20853.91/-

3/24 (a) Providing stone pitching with one man size boulder not less than 25cm x 25cm x 30cm length including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

Washing basin: 1 x 11.00 x 2.00 x 0.20 = 4.40 m³

@Rs.432.00/m³ ................................................................. = Rs.6683.04/-

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete

Dam: 1 x 11.00 x 0.90 x 0.10 = 0.99 m³
Washing basin: 1 x 11.00 x 2.00 x 0.10 = 2.20 m³

@Rs.2281.00/m³ ................................................................. = Rs.7276.39/-

6/39 (a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

Dam: 2 x 11.00 x 0.90 = 19.80 m²
1 x 11.00 x 0.90 = 9.90 m²
Washing basin: 1 x 11.00 x 2.00 = 22.00 m²

@Rs.86.00/m² ................................................................. = Rs.4446.20/-

TOTAL =Rs.34675.29/-
SAY, Rs.34670.00/-

(Rupees Thirty four thousand six hundred and seventy) only
Spacing 6m x 5.5m
Plant Density – 300 Nos.

Preliminary works

I. Cost of planting materials
   300 Nos. @ Rs.8/- each - Rs. 2400.00

B. First year Planting
   Jungle clearance etc.
   5 mandays @ Rs.100/- per manday - Rs. 500.00

II. Pit digging (pit size 0.30m x 0.30m x 0.30m)
   300 Nos. @ Rs.4/- each - Rs. 1200.00

III. Cost of planting 300 Nos. @ Rs. 2/- each - Rs. 600.00

IV. Weeding two times 20 mandays
   @ Rs.100/- per manday - Rs. 2000.00

V. Fire protection measures
   5 mandays @ Rs.100/- per manday - Rs. 500.00
   Total - Rs. 4800.00

C. Second year Planting
   I. Vacancy refilling (10%) - Rs. 400.00
   II. Weeding two times 20 mandays
      @ Rs.100/- per manday - Rs. 2000.00
   III. Fire protection measures
      5 mandays @ Rs.100/- per manday - Rs. 500.00
      Total - Rs. 2900.00

Grand Total A+B+C = Rs.2400.00 + Rs.4800.00 + Rs.2900.00 = Rs.10100.00

(Rupees Ten thousand one hundred) only.
## CONTOUR BUNDS SPECIFICATION & COSTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Width</td>
<td>0.5 m</td>
</tr>
<tr>
<td>Bottom Width</td>
<td>1.0 m</td>
</tr>
<tr>
<td>Height</td>
<td>0.77 m</td>
</tr>
<tr>
<td>Spacing</td>
<td>20 m</td>
</tr>
<tr>
<td>Total Length</td>
<td>5 x 100 = 500 m</td>
</tr>
</tbody>
</table>

\[
\frac{1}{3} \text{ (a) Earthwork in excavation etc. in ordinary soil etc.} \\
500 \text{m} \times \frac{0.5 + 1.0}{2} \text{m} \times 0.77 = 288.5 \text{m}^3 \\
\text{@ Rs.26.00/ m}^3 \text{ - } = \text{ Rs.7500.00} \\
\text{Total} = \text{ Rs.7500.00}
\]

(Rupees Seven Thousand Five Hundred) only
COST NORMS FOR IMPROVEMENT OF EXISTING PADDY FIELD (INTEGRATED WATERSHED MANAGEMENT PROGRAMME)

(Marginal Bund)

\[\text{Total} = \text{Rs.} 4,329.00\]

\[= \text{Rs.} 4,329.00 + \text{Rs.} 16.50 = \text{Rs.} 4,345.50\]

\[= \text{Rs.} 4,345.50 \times 0.60 = 2,607.30\]

\[= 2,607.30 \times 0.30 = 782.19\]

\[= 2,607.30 \times 0.20 = 521.46\]

\[= 2,607.30 \times 0.05 = 130.36\]

\[= 2,607.30 \times 0.01 = 26.07\]

\[\text{Total} = 2,607.30 + 521.46 + 130.36 + 26.07 = 3,385.19\]

\[\text{Say} \text{ Rs.} 4,300.00\]

\[= \text{Rupees Four thousand three hundred) only.}\]
COST NORMS FOR PERIPHERAL BUNDING/EARTHEN PERIPHERAL BUND WITH LIVE VEGETATION PER METRE
(INTEGRATED WATERSHED MANAGEMENT PROGRAMME)
(Rate as per PWD, SOR for R&B 2008 – 2009)

PERIPHERAL BUND SPECIFICATION & COSTS

1/3 (a) Earthwork in excavation etc. in ordinary soil etc.

Top Width  = 1.0 m
Bottom Width  = 1.2 m
Height   = 1.0 m

\[
\text{Earthwork in excavation etc. in ordinary soil etc.:}
\]

\[
\text{Total} = \frac{0.390 \times 1.0}{0.390} \times 1.1 = Rs. 43.00
\]

2. Supplying and planting of live hedges on toe of bunds per Running metre in L.S

per Running metre in L.S     = Rs.  7.00

Total  = Rs.50.00
(Rupees Fifty) only

(Permitted as per PWD, SOR for R&B 2008 – 2009)
(INTEGRATED WATERSHED MANAGEMENT PROGRAMME)

COST NORMS FOR PERIPHERAL BUNDING/EARTHEN PERIPHERAL BUND WITH LIVE VEGETATION PER METRE
**COST NORMS FOR RUN – OFF DISPOSAL CHANNEL/DIVERSION DRAIN**  
(INTEGRATED WATERSHED MANAGEMENT PROGRAMME)  
(Rate as per PWD, SOR for R&B 2008 – 2009)

Specification -  
Top Width     - 1.00m  
Bottom Width  - 0.70m  
Depth         - 1.2m  

1/3 (a) Earthwork in excavation etc. in ordinary soil.

\[
1 \text{m} \times \frac{1.00 + 0.7}{2} \times 1.2 \text{m} = 1.02 \text{ m}^3
\]

@ Rs.26.00/- per m³………………………………………………………… = Rs.26.52

Total = Rs.26.52

Say Rs.26.00

(Rupees Twenty six) only.
### Crop Demonstration

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Items of Works</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Soil working and cost of sowing -5Mandays @Rs.100/Mdays</td>
<td>Rs. 500.00</td>
</tr>
<tr>
<td>2.</td>
<td>Cost of seed for 4 varieties @RS.300/Variety/Kg</td>
<td>Rs. 1200.00</td>
</tr>
<tr>
<td>3.</td>
<td>Organic manure</td>
<td>Rs. 500.00</td>
</tr>
<tr>
<td>4.</td>
<td>Watering including implements (pipe etc)</td>
<td>Rs. 1500.00</td>
</tr>
<tr>
<td>5.</td>
<td>Plant protection including hand sprayers</td>
<td>Rs. 800.00</td>
</tr>
<tr>
<td>6.</td>
<td>Mulching (winter crop to conserve moisture)/ weeding /</td>
<td>Rs. 500.00</td>
</tr>
<tr>
<td></td>
<td>intercultural operation</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>Rs. 5000.00</strong></td>
</tr>
</tbody>
</table>
### Model Norms per Hectare for Afforestation with Pine/Non-Pine (Integrated Watershed Management Programme)

**Spacing 6m x 5.5m**

**Plant Density** = 300 Nos

#### Preliminary Works

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost (RS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Planting Materials for 300 Nos @ RS. 8/- each</td>
<td>2400.00</td>
</tr>
<tr>
<td>First Year Planting</td>
<td></td>
</tr>
<tr>
<td>Jungle Clearance etc.</td>
<td>5 Mandays @ RS. 100/- each</td>
</tr>
<tr>
<td>Pit digging (pit size 0.3m x 0.3m x 0.3m) @ RS. 4/- each</td>
<td>1200.00</td>
</tr>
<tr>
<td>Cost of planting 300 Nos @ RS. 2/- each</td>
<td>600.00</td>
</tr>
<tr>
<td>Weeding two times 20 Mandays @ RS. 100/- each</td>
<td>2000.00</td>
</tr>
<tr>
<td>Fire protection measures 5 Mandays @ RS. 100/- each</td>
<td>500.00</td>
</tr>
<tr>
<td>Grand Total of A+B+C</td>
<td>10100.00</td>
</tr>
</tbody>
</table>

*(Rate as per PWD, SOR for R&B 2008 – 2009)*

---

**Note:**

- **Plant Density** = 300 Nos
- **Spacing** = 6m x 5.5m
- **Rate** = 60 Mandays per Hectare
- **Duration** = 2 years
- **Total Land Area** = 300 Nos
- **Total Cost** = RS. 10,100.00

*(Grand Total)*

---

**Model Norms per Hectare for Afforestation with Pine/Non-Pine (Integrated Watershed Management Programme)
A. Preliminary Works
- **Cost of Planting materials.**
  - 160 Nos @Rs.8/- each - Rs.2400.00

**First Year Planting**
- **Site Clearance etc.**
  - Mandays @Rs.100/per manday - Rs. 300.00

- **Pit digging (pit size 0.30m x 0.30 m x 0.30)**
  - 160 Nos @Rs.4/- each - Rs. 800.00

- **Cost of planting 160 Nos @Rs.2/each** - Rs. 480.00

- **Weeding two times 20 mandays @Rs.100/- Manday**
  - Rs.2000.00
  - Rs.3580.00

**Second Year Planting**
- **Refilling vacancy (10%)**
  - Rs. 370.00

- **Weeding two times**
  - 20 mandays @Rs.100/- Manday
  - Rs.2000.00
  - Rs.2370.00

Grand Total of A+B+C = Rs.2400 + Rs.3580 + Rs.2370) = Rs.8350.00

(Rupees Eighty Thousand Three Hundred Fifty) only
## Model Norms Per Hectare for Improvement of Degraded Forest (Integrated Watershed Management Programme)

### A. Preliminary Works
- Cost of planting materials:
  - 100 nos seedlings @ Rs.8/- each = Rs. 800.00

### B. First Year Planting
1. Site Clearance etc.
   - Mandays @ Rs.100/- per manday = Rs. 300.00
2. Pit digging (pit size 0.30m x 0.30m x 0.30m):
   - 100 Nos @ Rs.4/- each = Rs. 400.00
3. Cost of planting 100 Nos @ Rs.2/- each = Rs. 200.00
4. Round weeding around the plant four times:
   - 5 mandays @ Rs.100/- per manday = Rs. 500.00
5. Fire protection measures:
   - 4 mandays @ Rs.100/- per manday = Rs. 400.00

### C. Second Year Planting
- Refilling vacancy (10%) = Rs. 100.00
- Round weeding around the plant four times:
  - 5 mandays @ Rs.100/- per manday = Rs. 500.00
- Fire protection measures:
  - 4 mandays @ Rs.100/- per manday = Rs. 400.00

### Grand Total of A + B + C = Rs.800 + Rs.1800 + Rs.1000 = Rs.3600.00

(Rupees Three Thousand Six Hundred only)
MODEL NORMS PER HECTARE FOR STRIP PLANTATION TWO ROWS ALONG THE BOUNDARY WITH FAST GROWING SPECIES
(INTEGRATED WATERSHED MANAGEMENT PROGRAMME).

Preliminary Works

- Cost of Planting materials.  
  134 Nos @Rs.8/- each = Rs.1072.00

First Year Planting

- Site Clearance etc.  
  Mandays @Rs.100/- Manday
  Rs. 200.00

- Pit digging (pit size 0.30m x 0.30m x 0.30m)  
  134 Nos @Rs.4/- each = Rs.536.00

- Cost of planting 134 Nos @Rs.2/each = Rs.268.00

- Round Weeding around the plant two times  
  6 mandays @Rs.100/- Manday = Rs.600.00

- Fire protection measures  
  4 mandays @Rs.100/- Manday = Rs.400.00

Second Year Planting

- Refilling vacancy (10%)  
  134 Nos @Rs.8/- each = Rs.1072.00

- Round Weeding around the plant two times  
  6 mandays @Rs.100/- Manday = Rs.600.00

- Fire protection measures  
  4 mandays @Rs.100/- Manday = Rs.400.00

Grand Total of A+B+C = (Rs.1072.00 + Rs.2004.00 + Rs.1190.00) = Rs.4266.00

(Thousands of Rupees Four Thousand Two Hundred Six) only

Rupees Four Thousand Two Hundred Six (Rs.4266.00)

Cost of Planting materials, Site Clearance etc., Refilling vacancy, Round Weeding around the plant two times, Fire protection measures...
ESTIMATE CONSTRUCTION OF RETAINING WALL/PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 ± 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.

Loamy soil etc.

1 x 60.00 x 1.00 x 1.00 m = 60.00m³
3 @ Rs.18/m³
3 = Rs.1080.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

With new stone

1 x 60.00 x 1.00 x 1.00 m = 60.00m³
3
1 x 60.00 x 1.00 + 0.80 x 1.00 = 58.80m³
3
2 = 117.60m³
3 @ Rs.618/m³
3 = Rs.71952.00

TOTAL: = Rs.73032.00

For 5Nos = 5 x 73032.00 = Rs.365160.00

Rupees (Three Lakh Sixty Five Thousand One Hundred) Only
ESTIMATE CONSTRUCTION OF RETAINING WALL/PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 - 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.

(b) loose boulder (20.00 x 0.75 x 0.60)

\[ 1 \times 30.00 \times 1.00 \times 0.60 = 18.00 \text{m}^3 \]

\[ 3 \times \text{Rs.29/m} = \text{Rs.522.00} \]

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(c)

\[ 1 \times 30.00 \times 1.00 \times 0.60 = 18.00 \text{m}^3 \]

\[ 3 \times \text{Rs.618/m} = \text{Rs.1854.00} \]

\[ 2 \times \text{Rs.29/m} = \text{Rs.522.00} \]

\[ \text{TOTAL: Rs.26478.00} \]

For 9Nos = 9 x 26478.00 = Rs.238302.00

Rupees (Two Lakh Three Thousand Two Hundred Twenty) Only

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ESTIMATE CONSTRUCTION OF RETAINING WALL/PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 - 2008)

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(d)

\[ 1 \times 20.00 \times 1.00 \times 1.00 = 20.00 \text{m}^3 \]

\[ 3 \times \text{Rs.46/m} = \text{Rs.138.00} \]

\[ \text{TOTAL: Rs.24400.00} \]

For 3Nos = 3 x 24400.00 = Rs.73200.00

Rupees (Seventy Three Thousand Two Hundred) Only
1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.

(e) Soft or laminated medium shale.

\[ 1 \times 23.00 \times 1.00 \times 0.60m = 13.80m^3 \]
\[ @ \text{ Rs.46/m}^3 \] ................................. \[ = \text{Rs.634.80} \]

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(e) With new stone

\[ 1 \times 23.00 \times 1.00 \times 0.60m = 13.80m^3 \]
\[ 1 \times 23.00 \times 1.00 + 0.80 \times 1.00 = 20.70m^3 \]
\[ \frac{2}{2} = 34.50m^3 \]
\[ @ \text{ Rs.618/m}^3 \] ................................. \[ = \text{Rs.21321.00} \]

TOTAL: \[ = \text{Rs.21955.80} \]
SAY: \[ = \text{Rs.21950.00} \]

For 2Nos = 2 x 21950.00 =Rs.43900.00
Say: \[ = \text{Rs.43912.00} \]

Rupees (Forty Three Thousand Nine Hundred) Only

---

ESTIMATE CONSTRUCTION OF RETAINING WALL/
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 – 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.

(f) Soft or laminated medium shale.

\[ 1 \times 35.00 \times 1.00 \times 0.50m = 17.50m^3 \]
\[ @ \text{ Rs.46/m}^3 \] ................................. \[ = \text{Rs.805.00} \]

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(f) With new stone

\[ 1 \times 35.00 \times 1.00 \times 0.50m = 17.50m^3 \]
\[ 1 \times 35.00 \times 1.00 + 0.60 \times 1.50 = 42.00m^3 \]
\[ \frac{2}{2} = 59.50m^3 \]
\[ @ \text{ Rs.618/m}^3 \] ................................. \[ = \text{Rs.36771.00} \]

TOTAL: \[ = \text{Rs.37570.00} \]
SAY: \[ = \text{Rs.37570.00} \]

For 4Nos = 4 x 37570.00 =Rs.150280.00
Say: \[ = \text{Rs.150280.00} \]

Rupees (One Lakhs Fifty Thousand Two Hundred) Only
ESTIMATE CONSTRUCTION OF RETAINING WALL/PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 ± 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soil or other medium sand.

(d) Soft or laminated medium shale.

1 x 30.00 x 1.00 x 0.50m = 15.00m

3 @ Rs.46/m

... ... ... ... ... ... ... ... ... ... ... ... ... ... = Rs.690.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(g) With new stone

1 x 30.00 x 1.00 x 0.50m = 15.00m

3

1 x 30.00 x 1.00 + 0.60 x 4.00 = 96.00m

3 2 = 111.00m

@ Rs.618/m

... ... ... ... ... ... ... ... ... ... ... ... ... ... = Rs.68598.00

TOTAL: = Rs.69288.00

Say = Rs.69280.00

Rupees (Sixty Nine Thousand Two Hundred Eight) Only
ESTIMATE CONSTRUCTION OF RETAINING WALL/
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 – 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.
(d) Soft or laminated medium shale.

\[1 \times 60.00 \times 1.00 \times 0.60m = 36.00m^3\]
\[\times \text{ Rs.} 46/m^3\] ........................................... ........................ =Rs.1656.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(i) With new stone

\[1 \times 60.00 \times 1.00 \times 0.60m = 36.00m^3\]
\[1 \times 60.00 \times 1.00 + 0.60 \times 3.00 = 144.00m^3\]
\[\times \text{ Rs.} 618/m^3\] ........................................... ........................ =Rs.112896.00

TOTAL: =Rs.11240.00
Say=Rs.112890.00

Rupees (One Lakh Twelve Thousand Eight Hundred Ninety) Only

ESTIMATE CONSTRUCTION OF RETAINING WALL/
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 – 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.
(b) loose boulder

\[1 \times 12.00 \times 0.75 \times 0.60m = 5.40m^3\]
\[\times \text{ Rs.} 29/m^3\] ........................................... ........................ =Rs.156.60

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(j) With new stone

\[1 \times 12.00 \times 0.75 \times 0.60m = 5.40m^3\]
\[1 \times 12.00 \times 0.75 + 0.50 \times 1.50 = 11.25m^3\]
\[\times \text{ Rs.} 618/m^3\] ........................................... ........................ =Rs.10289.70

TOTAL: =Rs.10446.30
Say: =Rs.10440.00

For 4Nos =4 x 10440.30 =Rs.41760.00

Rupees (Forty One Thousand Seven Hundred Sixty) Only
1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.

(b) loose boulder

\[
1 \times 28.00 \times 1.00 \times 1.00m = 28.00m^3
\]

@ Rs.29/m^3 ........................................... =Rs.812.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(k) With new stone

\[
\frac{1 \times 28.00 \times 1.00 \times 1.00m}{2} = 14.00m^3
\]

\[
\frac{1 \times 28.00 \times (1.00 + 0.60) \times 3.00}{2} = 42.60m^3
\]

\[
\frac{14.00 + 42.60}{2} = 28.30m^3
\]

@ Rs.618/m^3 ........................................... =Rs.178920.00

\[\text{TOTAL:} = Rs.59640.00 \]

\[\text{Say:} = Rs.59640.00 \]

Rupees (One Lakh Seventy Eight Thousand Nine Hundred Twenty) Only

____________________________________________________________________________________________

ESTIMATE CONSTRUCTION OF RETAINING WALL/
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 - 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.

(b) loose boulder

\[
1 \times 28.00 \times 1.00 \times 1.00m = 28.00m^3
\]

@ Rs.29/m^3 ........................................... =Rs.812.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(l) With new stone

\[
\frac{1 \times 28.00 \times 1.00 \times 1.00m}{2} = 14.00m^3
\]

\[
\frac{1 \times 28.00 \times (1.00 + 0.60) \times 3.00}{2} = 44.80m^3
\]

\[
\frac{14.00 + 44.80}{2} = 29.40m^3
\]

@ Rs.618/m^3 ........................................... =Rs.178920.00

\[\text{TOTAL:} = Rs.59640.00 \]

\[\text{Say:} = Rs.59640.00 \]

Rupees (One Lakh Seventy Eight Thousand Nine Hundred Twenty) Only

____________________________________________________________________________________________

ESTIMATE CONSTRUCTION OF RETAINING WALL/
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 - 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.

(b) loose boulder

\[
1 \times 28.00 \times 1.00 \times 1.00m = 28.00m^3
\]

@ Rs.29/m^3 ........................................... =Rs.812.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(l) With new stone

\[
\frac{1 \times 28.00 \times 1.00 \times 1.00m}{2} = 14.00m^3
\]

\[
\frac{1 \times 28.00 \times (1.00 + 0.60) \times 3.00}{2} = 44.80m^3
\]

\[
\frac{14.00 + 44.80}{2} = 29.40m^3
\]

@ Rs.618/m^3 ........................................... =Rs.178920.00

\[\text{TOTAL:} = Rs.59640.00 \]

\[\text{Say:} = Rs.59640.00 \]

Rupees (Two Lakh Seventy Four Thousand Eight Hundred) Only
ESTIMATE CONSTRUCTION OF RETAINING WALL /
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 – 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.
(d) Soft or laminated medium shale.

\[ 1 \times 26.00 \times 1.00 \times 1.00m = 26.00m^3 \]  
\[ @ Rs.46/m^3 \]  
\[ \text{TOTAL: } = \text{Rs.1196.00} \]

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(m) With new stone

\[ 1 \times 26.00 \times 1.00 \times 1.00m = 26.00m^3 \]  
\[ 1 \times 26.00 \times 1.00 + 0.60 \times 1.50 \times 0.50m = 57.20m^3 \]  
\[ @ Rs.618/m^3 \]  
\[ \text{TOTAL: } = \text{Rs.35349.60} \]  
\[ \text{SAY: } = \text{Rs.35450.00} \]  

For 3Nos = 3 x 36540.00 = Rs.109620.00

Rupees (One Lakhs Nine Thousand Six Hundred Twenty ) Only

ESTIMATE CONSTRUCTION OF RETAINING WALL /
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 – 2008)

Village/Location: Thiepksheh/Thiepksheh

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.
(d) Soft or laminated medium shale.

\[ 1 \times 120.00 \times 1.00 \times 0.50m = 60.00m^3 \]  
\[ @ Rs.46/m^3 \]  
\[ \text{TOTAL: } = \text{Rs.2760.00} \]

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(n) With new stone

\[ 1 \times 120.00 \times 1.00 \times 0.50m = 60.00m^3 \]  
\[ 1 \times 120.00 \times 1.00 + 0.60 \times 1.00 \times 1.00 = 156.00m^3 \]  
\[ @ Rs.618/m^3 \]  
\[ \text{TOTAL: } = \text{Rs.99168.00} \]  
\[ \text{SAY: } = \text{Rs.99160.00} \]

Rupees (Ninety Nine Thousand One Hundred Sixty) Only
1/3(a) Earth work to proper level and grade including light dressing
providing cambering and super devotion as directed and removal
of soils up to 3meters lead all lift.
(b) loose boulder

$$1 \times 70.00 \times 1.00 \times 0.60 = 42.00 \text{m}^3$$

@ Rs.29/m$^3$ .............................................. =Rs.1218.00

2/21 Providing regular dry stone masonry walls with hammer
dressed or blunt chisel dressed stones of heavy section
(Size not less than 25cm x 25cm x 30cm long) with proper
key not less than 25cm x 200cm meters and filling in trenches.

(o) With new stone

$$1 \times 70.00 \times 1.00 \times 0.60 = 42.00 \text{m}^3$$
$$1 \times 70.00 \times 1.00 + 0.60 \times 1.00 = 56.00 \text{m}^3$$

$$\frac{2}{2} = 98.00 \text{m}^3$$

@ Rs.618/m$^3$ .............................................. =Rs.60564.00

TOTAL: =Rs.61782.00
Say: =Rs.61780.00

For 2Nos =2 x 61780.00 =Rs.123560.00

Rupees (One Lakh Twenty Three Thousand Five Hundred Sixty) Only

ESTIMATE CONSTRUCTION OF RETAINING WALL/
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and

1/3(a) Earth work to proper level and grade including light dressing
providing cambering and super devotion as directed and removal
of soils up to 3meters lead all lift.

(d) Soft or laminated medium shale.

$$1 \times 90.00 \times 1.00 \times 0.70m = 63.00 \text{m}^3$$

@ Rs.46/m$^3$ .............................................. =Rs.2,898.00

2/21 Providing regular dry stone masonry walls with hammer
dressed or blunt chisel dressed stones of heavy section
(Size not less than 25cm x 25cm x 30cm long) with proper
key not less than 25cm x 200cm meters and filling in trenches.

(p) With new stone

$$1 \times 90.00 \times 1.00 \times 0.70m = 63.00 \text{m}^3$$
$$1 \times 90.00 \times 1.00 + 0.60 \times 1.20 = 86.40 \text{m}^3$$

$$\frac{2}{2} = 149.40 \text{m}^3$$

@ Rs.618/m$^3$ .............................................. =Rs.92,329.20

TOTAL: =Rs.95,227.20
Say =Rs.95,220.00

Rupees (Ninety Five Thousand Two Hundred Twenty) Only
1/3(a)  Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.
   (d) Soft or laminated medium shale.

   \[ 1 \times 45.00 \times 0.75 \times 0.60m = 20.25m^3 \]

   \[ @ \text{Rs.} 46/m^3 \] ................................. =Rs.931.50

2/21  Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

   (q) With new stone

   \[ \frac{1 \times 45.00 \times 0.75 \times 0.60m}{2} = 20.25m^3 \]

   \[ 1 \times 45.00 \times 0.75 + 0.60 \times 1.00 = 30.38m^3 \]

   \[ @ \text{Rs.} 618/m^3 \] ................................. =Rs.33143.34

   \[ \text{TOTAL:} \quad =\text{Rs.}34074.84 \]

   \[ \text{SAY:} \quad =\text{Rs.}34070.00 \]

   For 2Nos = 2 x 34070.00 =Rs.68140.00

Rupees (Sixty Eight Thousand One Hundred Forty) Only

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ESTIMATE CONSTRUCTION OF RETAINING WALL/ PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 - 2008)

1/3(a)  Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.
   (d) Soft or laminated medium shale.

   \[ 1 \times 10.00 \times 1.00 \times 0.75 m = 7.50m^3 \]

   \[ @ \text{Rs.} 46/m^3 \] ................................. =Rs.345.00

2/21  Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

   (r) With new stone

   \[ \frac{1 \times 10.00 \times 1.00 \times 0.75 m}{2} = 7.50m^3 \]

   \[ 1 \times 10.00 \times 1.00 + 0.60 \times 2.50 = 20.00m^3 \]

   \[ @ \text{Rs.} 618/m^3 \] ................................. =Rs.16955.00

   \[ \text{TOTAL:} \quad =\text{Rs.}17300.00 \]

   For 8Nos = 8 x 17300.00 =Rs.138400.00

Rupees (One Lakh Thirty Eighty Thousand Four Hundred ) Only
1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.
(b) loose boulder

\[ 1 \times 25.00 \times 1.00 \times 0.60 = 15.00 \text{m}^3 \]

@ Rs.29/m\(^3\) ............................................... =Rs.435.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(s) With new stone

\[ 1 \times 25.00 \times 1.00 \times 0.60 = 15.00 \text{m}^3 \]

\[ 2 \times 25.00 \times 1.00 + 0.60 \times 2.00 = 50.00 \text{m}^3 \]

@ Rs.618/m\(^3\) ............................................... =Rs.27810.00

TOTAL: =Rs.28245.00
SAY: =Rs.28240.00
For 10Nos =10 x 28240.00 =Rs. 282400.00
Rupees (Two Lakh Eighty Two Thousand Four Hundred) Only

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.
(b) loose boulder

\[ 1 \times 15.00 \times 0.75 \times 0.60 = 6.75 \text{m}^3 \]

@ Rs.29/m\(^3\) ............................................... =Rs.195.75

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(t) With new stone

\[ 1 \times 15.00 \times 0.75 \times 0.60 = 6.75 \text{m}^3 \]

\[ 2 \times 15.00 \times 0.75 + 0.60 \times 2.00 = 27.00 \text{m}^3 \]

@ Rs.618/m\(^3\) ............................................... =Rs.16686.00

TOTAL: =Rs.16881.75
SAY: =Rs.16880.00
For 10Nos =10 x 16880.00 =Rs. 168800.00
Rupees (One Lakh Sixty Eight Thousand Eight Hundred) Only
1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3meters lead all lift.

(b) loose boulder

\[ 1 \times 18.00 \times 1.00 \times 0.80m = 14.40m^3 \]

@ Rs.29/m³ ................................. = Rs.417.60

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches.

(v) With new stone

\[ 1 \times 34.00 \times 1.00 \times 1.00m = 34.00m^3 \]
\[ 1 \times 34.00 \times 1.00+0.60 \times 1.50 = 81.00m^3 \]
\[ \frac{2}{2} = 115.00m^3 \]

@ Rs.618/m³ ................................. = Rs.71070.00

TOTAL: = Rs.72050.00

Say=Rs.720.50

For 2Nos = 2 x 72050.00 = Rs.144100.00

Rupees (One Lakh Forty Four Thousand One Hundred) Only
1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.
(d) Soft or laminated medium shale.

\[1 \times 20.00 \times 1.00 \times 0.75m = 15.00m^3\]
\[\text{@ Rs.}46/m^3\] \[\text{………………………………………} = \text{Rs.}690.00\]

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25 cm x 25 cm x 30 cm long) with proper key not less than 25 cm x 200 cm meters and filling in trenches.

(w) With new stone

\[1 \times 20.00 \times 1.00 \times 0.75m = 15.00m^3\]
\[1 \times 20.00 \times 1.00 + 0.60 \times 2.50 = 40.00m^3\]
\[\frac{2}{2} = 28.50m^3\]
\[\text{@ Rs.}618/m^3\] \[\text{………………………………………} = \text{Rs.}33990.00\]

\[\text{TOTAL:} = \text{Rs.}34680.00\]

For 8 Nos = 3 x 34680.00 = \text{Rs.}277440.00

Rupees (Two Lakhs Seventy Seven Thousand Four Hundred Forty) Only

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ESTIMATE CONSTRUCTION OF RETAINING WALL /
PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V
(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 – 2008)

1/3(a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.
(d) Soft or laminated medium shale.

\[1 \times 20.00 \times 1.00 \times 0.75m = 15.00m^3\]
\[\text{@ Rs.}46/m^3\] \[\text{………………………………………} = \text{Rs.}690.00\]

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25 cm x 25 cm x 30 cm long) with proper key not less than 25 cm x 200 cm meters and filling in trenches.

(x) With new stone

\[1 \times 20.00 \times 1.00 \times 0.80m = 16.00m^3\]
\[\text{@ Rs.}46/m^3\] \[\text{………………………………………} = \text{Rs.}464.00\]

For 4 Nos\(=\)4 x 30120.00 = \text{Rs.}120480.00

Rupees (One Lakh Twenty Thousand Four Hundred Eighty) Only
ESTIMATE CONSTRUCTION OF RETAINING WALL/PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V

(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 ± 2008)

1/3 (a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soft or loose earth, clay and silt from trenches.

(d) Soft or laminated medium shale.

1 x 15.00 x 1.00 x 1.00 = 15.00m

3 @ Rs.46/m

… … … … … … … … … … … … … … .. = Rs.620.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches with new stone.

1 x 15.00 x 1.00 x 0.80m = 18.40m

3 @ Rs.618/m

… … … … … … … … … … … … … … .. = Rs.27810.00

TOTAL: = Rs.28500.00

For 3 Nos = 3 x 28500.00 = Rs.85500.00

Rupees (Eighty Thousand Five Hundred) Only

ESTIMATE CONSTRUCTION OF RETAINING WALL/PROTECTION WALL NO____ UNDER UMTYNRU-WEISAR WATERSHED IWMP-V

(The rate based as per P.W.D Schedule of rates for Roads, Bridges and E & D Works 2007 ± 2008)

Village/Location: Thiepkseh/Mawriat

1/3 (a) Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soft or loose earth, clay and silt from trenches.

(d) Soft or laminated medium shale.

1 x 23.00 x 1.00 x 0.80m = 18.40m

3 @ Rs.46/m

… … … … … … … … … … … … … … .. = Rs.846.40

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (Size not less than 25cm x 25cm x 30cm long) with proper key not less than 25cm x 200cm meters and filling in trenches with new stone.

1 x 23.00 x 1.00 x 0.80m = 18.40m

3 @ Rs.618/m

… … … … … … … … … … … … … … .. = Rs.39799.20

TOTAL: = Rs.40645.60

SAY: = Rs.40640.00

Rupees (Forty Thousand Six Hundred Forty) Only
ESTIMATE CONSTRUCTION OF RETAINING WALL/PROTECTION WALL NO

![Image]

- Earth work to proper level and grade including light dressing providing cambering and super devotion as directed and removal of soils up to 3 meters lead all lift.
- Soft or laminated medium shale

1 x 52.53 x 1.00 x 0.80 m = 42.024 m³

@ Rs. 46/m³

... ... ... ... ... ... ... ... ... ... ... = Rs. 1933.104

- Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25 cm x 25 cm x 30 cm long) with proper key not less than 25 cm x 200 cm meters and filling in trenches.

With new stone

1 x 52.53 x 1.00 x 0.80 m = 42.024 m³

@ Rs. 618/m³

... ... ... ... ... ... ... ... ... ... ... = Rs. 64927.08

TOTAL: = Rs. 66860.184

SAY: = Rs. 66860.00

Rupees (Sixty Six Thousand Eight Hundred & Sixty) Only

WESTERN CIRCLE P.W.D. (ROAD) MEHRANGARH FOR 2007 - 2008

AS PER P.L. 729, SCHEDULE OF RATES FOR ROAD, BRIDGE AND E. A. WORKS, "NEW" IS THE INCREASED RATE. W.P.W.P.R.ับ W.M.R, PROJECTIONS WILL ON CONSTRUCTION OF RETAINING WALL / PROTECTION WALL

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Rate</th>
<th>Quantity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rs.618/m³</td>
<td>1 x 52.53 x 1.00 x 0.80 m</td>
<td>Rs. 64927.08</td>
</tr>
<tr>
<td>2</td>
<td>Rs. 46/m³</td>
<td>1 x 52.53 x 1.00 x 0.80 m</td>
<td>Rs. 1933.104</td>
</tr>
<tr>
<td></td>
<td>TOTAL:</td>
<td>= Rs. 66860.184</td>
<td></td>
</tr>
</tbody>
</table>

(Use black or permanent marker only)

Available for distribution to the nearest higher level and filling in trenches.

Key not less than 25 cm x 25 cm x 30 cm long with proper key not less than 25 cm x 200 cm meters and filling in trenches.

Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25 cm x 25 cm x 30 cm long) with proper key not less than 25 cm x 200 cm meters and filling in trenches.

Rupees (Sixty Six Thousand Eight Hundred & Sixty) Only

(Use black or permanent marker only)

The rate is based on P.L.W.D. Schedule of Rates for Roads, Bridges and Protection Wall on Construction of Retaining Wall / Protection Wall

1/3(a) Earth work to proper level and grading include dressing
**Estimate for Construction of Retaining Wall / Protection Wall No. Under UMTN 1 - Weiser Watershed, W.M.P. Western Circle P.W.D. (Road) Meghalaya for 2007 - 2008**

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
<th><strong>Rate</strong></th>
<th><strong>Quantity</strong></th>
<th><strong>Total</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthwork to the proper level and grade including site dressing</td>
<td>Rs. 618/perm³</td>
<td>3no x 31700.00 = Rs. 95,100.00</td>
<td>Rs. 95,100.00</td>
</tr>
<tr>
<td>Providing regular stone masonry wall with hammer dressed or burnished dress stone of heavy section (not less than 25 cm x 25 cm) long with proper key stone not less than 35 cm x 200 metres and filling in trenches</td>
<td>@ Rs. 46/- per m³</td>
<td>$ = 3140 m³</td>
<td>= 1803.4 m³</td>
</tr>
<tr>
<td>Soft or laminated rock medium shale</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All costs are exclusive of taxes and levies.
77.00 m

$ = 44.00 m

\[ \frac{77.00}{44.00} = \frac{z}{1.00} \times 0.60 \times \frac{I}{I} \]

\[ \frac{z}{1.00} \times 0.60 \times \frac{I}{I} \]

With new stone.

200 meters and 100 meters in total.

With proper key stone not less than 25 cm x 25 cm x 25 cm (B.O.C.) with proper key stone not less than 25 cm x 25 cm x 25 cm. Both shall be of sandstone or stone masonry wall with hammer dressed or

2/21

3.30 m

\[ \frac{3.30}{1.00} \times 0.60 \times \frac{I}{I} \]

(c)


A.P.R. P.W.D. Schedule of Rates for Roads, Bridges and E.D. Work


Estimate for construction of Retaining Wall / Protection

PACES ONE LAKH HUNDRED FIVE THOUSAND THREE HUNDRED NINETY

\[ \frac{5.00 \times 39.20}{0.00} = \frac{6.00 \times 1.00}{0.00} \times \frac{1.00}{1.00} \times \frac{1.00}{1.00} \]

\[ \frac{6.00 \times 1.00}{0.00} \times \frac{1.00}{1.00} \times \frac{1.00}{1.00} \]

(d)

With proper key stone not less than 25 cm x 25 cm x 25 cm (B.O.C.) with proper key stone not less than 25 cm x 25 cm x 25 cm. Both shall be of sandstone or stone masonry wall with hammer dressed or

2/21

2.9 m

\[ \frac{2.9}{1.00} \times 0.60 \times \frac{I}{I} \]

(d)

Estimation work to the proper key stone including hammer dressing and removal of old upturned masonry and all ill


Estimate for construction of Retaining Wall / Protection

PACES ONE LAKH HUNDRED FIVE THOUSAND THREE HUNDRED NINETY
1/3 (a) Earthwork to the proper level and grade including light dressing
Providing cambering and super devotion as directed and removal
of soil upto 3 metres lead and all lift

(c) Loose Boulder
\[ 1 \times 50.00 \times 1.00 \times 0.60m = 30.00m^3 \]

@ Rs. 29/- per m\(^3\) .........................Rs. 870.00

2/21 providing regular dry stone masonry wall with hammer dressed or
bunt chisel dressed stones of heavy section (size not less than 25cm
x 25cm x 30cm long) with proper key stone not less than 25cm x
200 metres and filling in trenches.

(a) With new stone.
\[ 1 \times 50.00 \times 1.00 \times 0.60m = 30.00m^3 \]
\[ 1 \times 50.00 \times \frac{1.00 \times 1.00 \times 0.60 \times 1.20}{2} = 48.00m^3 \]
\[ = 78.00m^3 \]

@ Rs. 618/- per m\(^3\) .........................Rs. 48,204.00

Say Rs. 49,074.00

3no. x 49070.00 = Rs. 147210.00

(Rupees One Lakh Forty Seven Thousand Two Hundred Ten) only.

135
1/3 (a) Earthwork to the proper level and grade including light dressing
Providing cambering and super devotion as directed and removal
of soil upto 3 metres lead and all lift

2) Loose Boulder

\[ 1 \times 90.00 \times 0.80 \times 0.50 \text{m} = 36.00 \text{m}^3 \]

@ Rs. 29/- per m\(^3\) ..........................Rs. 1,044.00

2/21 providing regular dry stone masonry wall with hammer dressed or
bunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stone not less than 25cm x
200 metres and filling in trenches.

(a) With new stone.

\[ 1 \times 90.00 \times 0.8 \times 0.50 \text{m} = 36.00 \text{m}^3 \]
\[ 1 \times 90.00 \times \frac{(0.80+0.50)}{2} \times 0.80 = 46.80 \text{m}^3 \]
\[ = 86.80 \text{m}^3 \]

@ Rs. 618/- per m\(^3\) ..........................Rs. 51,170.40

\[ \text{Rs. 52,214.40} \]

Say Rs. 52,210.00

2 no. x 52210.00 = Rs. 1,04,420.00

(Rupees. One Lakh Four Thousand and Twenty) only
(1/3)(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches free of water and protecting the sides of foundation by adequate shoring, scaffolding including leveling the foundation longitudinal and transversely etc as directed by the Engineer-in-charge.

(d) Soft or laminated rock or medium shale

\[
\begin{align*}
\text{Dam} & : 23.00 \times 0.90 \times 3.00 = 16.10 \text{m}^3 \\
\text{Wingwall} & : 2 \times 3.00 \times 0.70 \times 3.00 = 12.60 \text{ m}^3 \\
\text{Cost} & = 16.10 \times Rs.103/\text{m}^3 = Rs.2,336.04\text{-}/
\end{align*}
\]

2/25 Providing cement concrete work in proportion 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
\text{Dam} & : 1 \times 23.00 \times 0.90 \times 0.10 = 2.07 \text{m}^3 \\
\text{Wingwall} & : 2 \times 3.00 \times 0.70 \times 0.10 = 0.42 \text{ m}^3 \\
\text{Cost} & = 2.49 \text{ m}^3 \times Rs.2022/\text{m}^3 = Rs.5,034.78\text{-}/
\end{align*}
\]

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local carriage of stone within 200m complete.

\[
\begin{align*}
\text{Dam} & : 23.00 \times 0.90 \times 2.90 = 60.03 \text{ m}^3 \\
\text{Wingwall} & : 2 \times 3.00 \times (0.70 + 2.35) \times 1.5 = 8.11 \text{ m}^3 \\
\text{Cost} & = 106.32 \text{ m}^3 \times Rs.2281/\text{m}^3 = Rs.242,510.2\text{-}/
\end{align*}
\]

4/22 (a) Providing regular stone masonry in retaining walls, breast walls and wing walls etc. with hammer dressed

\[
\begin{align*}
\text{Wingwall} & : 2 \times 3.00 \times 0.70 \times 2.90 = 60.03 \text{ m}^3 \\
& : 2 \times 3.00 \times (0.70 + 2.35) \times 1.5 = 8.11 \text{ m}^3 \\
\text{Cost} & = 68.14 \text{ m}^3 \times Rs.1022/\text{m}^3 = Rs.20,733.83\text{-}/
\end{align*}
\]

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

\[
\begin{align*}
\text{Dam} & : 23.00 \times 0.90 = 20.70 \text{m}^3 \\
& : 23.00 \times 1.00 = 23.00 \text{ m}^2 \\
& : 23.00 \times 0.45 = 10.35 \text{ m}^2 \\
\text{Cost} & = 43.70 \text{ m}^2 \times Rs.281/\text{m}^2 = Rs.12,279.70\text{-}/
\end{align*}
\]

6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

\[
\begin{align*}
\text{Dam} & : 23.00 \times 0.90 = 20.70 \text{m}^2 \\
& : 23.00 \times 1.00 = 23.00 \text{m}^2 \\
& : 23.00 \times 0.45 = 10.35 \text{ m}^2 \\
\text{Cost} & = 54.05 \text{ m}^2 \times Rs.86/\text{m}^2 = Rs.4,648.30\text{-}/
\end{align*}
\]

Total = Rs.2,92,900.00/-
Say =Rs.2,92,900.00/-

Rupees (Two Lakhs Ninety Two Thousand Nine Hundred) Only
ESTIMATE FOR CONSTRUCTION OF CHECK DAM UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V, (BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

(1/3)(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches completed as directed.
(d). Soft or laminated rock or medium shale

<table>
<thead>
<tr>
<th></th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 5.00 x 0.90 x 2.00 = 16.10 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 2.00 x 0.70 x 2.00 = 5.60 m³</td>
</tr>
</tbody>
</table>

@Rs.103/ m³………………………………… = Rs.1,503.80/-

2/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

<table>
<thead>
<tr>
<th></th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 5.00 x 0.90 x 0.10 = 0.45 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 2.00 x 0.70 x 0.10 = 0.28 m³</td>
</tr>
</tbody>
</table>

@Rs.2022/ m³………………………………… = Rs.1,476.06/-

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete

<table>
<thead>
<tr>
<th></th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 5.00 x 0.90 x 1.35 = 8.325 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 2.00 x (0.70 + 1.30) x 0.90 = 3.24 m³</td>
</tr>
</tbody>
</table>

@Rs.2281/ m³………………………………… = Rs.31,563.34/-

4/22) (a) Providing regular stone masonry in retaining walls breast walls and wing walls etc. with hammer dressed

<table>
<thead>
<tr>
<th></th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 2.00 x 0.70 x 1.85 = 5.18 m³</td>
</tr>
</tbody>
</table>

@Rs.1022/ m³………………………………… = Rs.8,605.24/-

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th></th>
<th>Volume (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>5.00 x 0.90 = 4.50 m²</td>
</tr>
<tr>
<td>Wingwall</td>
<td>5.00 x 1.00 = 5.00 m²</td>
</tr>
<tr>
<td>Wingwall</td>
<td>5.00 x 0.90 =9.50 m²</td>
</tr>
</tbody>
</table>

@Rs.28/ m²………………………………… = Rs.2,669.50/-

6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th></th>
<th>Volume (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1.50 x 0.90 = 4.50 m²</td>
</tr>
<tr>
<td>Wingwall</td>
<td>1.50 x 1.00 =5.00 m²</td>
</tr>
<tr>
<td>Wingwall</td>
<td>1.50 x 0.45 =2.25 m²</td>
</tr>
</tbody>
</table>

@Rs.86/ m²………………………………… = Rs.1,010.50/-

Total = Rs.46,828.44/-
(Say = Rs.46,820.00/-

Rupees (Forty Six Thousand Eight Hundred and Twenty) Only
(1/3)(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches completed as directed.

(d). Soft or laminated rock or medium shale

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 6.00 x 0.90 x 1.50</td>
<td>8.10 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 1.50</td>
<td>6.30 m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14.40 m³</td>
</tr>
<tr>
<td>@ Rs.103/- m³</td>
<td></td>
<td>= Rs.1,483.20/-</td>
</tr>
</tbody>
</table>

2/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 6.00 x 0.90 x 0.10</td>
<td>0.54 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 0.10</td>
<td>0.42 m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.96 m³</td>
</tr>
<tr>
<td>@ Rs.2022/- m³</td>
<td></td>
<td>= Rs.1,941.12/-</td>
</tr>
</tbody>
</table>

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 6.00 x 0.90 x 1.35</td>
<td>7.29 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x (0.70 + 0.85) x 0.80</td>
<td>3.72 m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.39 m³</td>
</tr>
<tr>
<td>@ Rs.2281/- m³</td>
<td></td>
<td>= Rs.27,577.29/-</td>
</tr>
</tbody>
</table>

4/22) (a) Providing regular stone masonry in retaining walls breast walls and wing walls etc. with hammer dressed

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 1.35</td>
<td>5.67 m³</td>
</tr>
<tr>
<td></td>
<td>2 x 3.00 x (0.70 + 0.85) x 0.80</td>
<td>3.72 m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.39 m³</td>
</tr>
<tr>
<td>@ Rs.1022/- m³</td>
<td></td>
<td>= Rs.9,596.58/-</td>
</tr>
</tbody>
</table>

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>6.00 x 0.90</td>
<td>5.40 m²</td>
</tr>
<tr>
<td></td>
<td>6.00 x 1.00</td>
<td>6.00 m²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11.40 m²</td>
</tr>
<tr>
<td>@ Rs.281/- m²</td>
<td></td>
<td>= Rs.3,203.40/-</td>
</tr>
</tbody>
</table>

6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1.6.00 x 0.90</td>
<td>5.40 m²</td>
</tr>
<tr>
<td></td>
<td>1.6.00 x 1.00</td>
<td>6.00 m²</td>
</tr>
<tr>
<td></td>
<td>1.6.00 x 0.45</td>
<td>2.70 m²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14.10 m²</td>
</tr>
<tr>
<td>@ Rs.86/- m²</td>
<td></td>
<td>= Rs.1,212.60/-</td>
</tr>
</tbody>
</table>

Total = Rs.45,014.19/-

(Say = Rs.45,000.00/-

Rupees (Forty Five Thousand) Only
ESTIMATE FOR CONSTRUCTION OF CHECK DAM UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V,

(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

(1/3)(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches completed as directed.

(d). Soft or laminated rock or medium shale

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 8.00 x 0.90 x 2.00</td>
<td>= 14.40 m³</td>
<td>@Rs.103/ m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 2.00</td>
<td>= 8.40 m³</td>
<td>@Rs.103/ m³</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>22.80/m³</strong></td>
<td></td>
</tr>
</tbody>
</table>

2/25 Providing cement concrete work in proportion 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 8.00 x 0.90 x 0.10</td>
<td>= 0.72 m³</td>
<td>@Rs.202/ m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 0.10</td>
<td>= 0.42 m³</td>
<td>@Rs.202/ m³</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1.14/m³</strong></td>
<td></td>
</tr>
</tbody>
</table>

2/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local carriage of stone within 200m complete.

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 8.00 x 0.90 x 1.35</td>
<td>= 13.32 m³</td>
<td>@Rs.228/ m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x (0.70 + 1.30) x 0.90</td>
<td>= 8.82 m³</td>
<td>@Rs.228/ m³</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>22.14 m³</strong></td>
<td></td>
</tr>
</tbody>
</table>

4/22) (a) Providing regular stone masonry in retaining walls breast walls etc. with hammer dressed

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 1.85</td>
<td>= 7.77 m³</td>
<td>@Rs.102/ m³</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>13.17 m³</strong></td>
<td></td>
</tr>
</tbody>
</table>

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>8.00 x 0.90</td>
<td>= 7.20 m³</td>
<td>@Rs.281/ m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>8.00 x 1.00</td>
<td>= 8.00 m³</td>
<td>@Rs.281/ m³</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>15.20 m³</strong></td>
<td></td>
</tr>
</tbody>
</table>

6/39 (a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1.8.00 x 0.90</td>
<td>= 7.20 m³</td>
<td>@Rs.202/ m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>1.8.00 x 1.00</td>
<td>= 8.00 m³</td>
<td>@Rs.202/ m³</td>
</tr>
<tr>
<td></td>
<td>1.8.00 x 0.45</td>
<td>= 3.60 m³</td>
<td>@Rs.202/ m³</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>18.80 m³</strong></td>
<td></td>
</tr>
</tbody>
</table>

Total=Rs.74,502.56/- (Say =Rs.74,500.00/-

Rupees (Seventy Four Thousand and Five Hundred) Only

CIRCLE: PRADIP ROY, MECHANICAL ENGINEER FOR THE YEAR 2007-08.

(AS DIRECTED)

BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

ESTIMATE FOR CONSTRUCTION OF CHECK DAM UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V.
ESTIMATE FOR CONSTRUCTION OF CHECK DAM UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V, (BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

(1/3)(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches completed as directed.

(d). Soft or laminated rock or medium shale

\[ \text{Dam} : 1 \times 18.00 \times 0.90 \times 0.90 = 40.50 \text{m}^3 \]
\[ \text{Wingwall} : 2 \times 3.00 \times 0.70 \times 0.90 = 10.50 \text{m}^3 \]
\[ = 51.00 \text{m}^3 \]
\[ @ \text{Rs.}103/ \text{m}^3 \]
\[ = \text{Rs.}5,253.00/- \]

2/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[ \text{Dam} : 1 \times 18.00 \times 0.90 \times 0.10 = 1.62 \text{m}^3 \]
\[ \text{Wingwall} : 2 \times 3.00 \times 0.70 \times 0.10 = 0.42 \text{m}^3 \]
\[ = 2.04 \text{m}^3 \]
\[ @ \text{Rs.}2022/ \text{m}^3 \]
\[ = \text{Rs.}4,124.88/- \]

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local carriage of stone within 200 m complete

\[ \text{Dam} \]
\[ : 1 \times 18.00 \times 0.90 \times 2.30 = 37.26 \text{m}^3 \]
\[ : 1 \times 18.00 \times (0.90 + 1.90) \times 1.10 = 27.72 \text{m}^3 \]
\[ = 64.98 \text{m}^3 \]
\[ @ \text{Rs.}2281/ \text{m}^3 \]
\[ = \text{Rs.}148,129.98/- \]

4/22 (a) Providing regular stone masonry in retaining walls breast walls and wing walls etc. with hammer dressed

\[ \text{Wingwall} : 2 \times 3.00 \times 0.70 \times 2.30 = 9.66 \text{m}^3 \]
\[ : 2 \times 3.00 \times (0.70 + 1.30) \times 1.10 = 6.60 \text{m}^3 \]
\[ = 16.26 \text{m}^3 \]
\[ @ \text{Rs.}1022/ \text{m}^3 \]
\[ = \text{Rs.}16,617.72/- \]

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

\[ \text{Dam} \]
\[ : 1 \times 18.00 \times 0.90 = 16.20 \text{m}^2 \]
\[ : 1 \times 18.00 \times 1.00 = 18.00 \text{m}^2 \]
\[ = 34.20 \text{m}^2 \]
\[ @ \text{Rs.}281/ \text{m}^2 \]
\[ = \text{Rs.}9,610.20/- \]

6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

\[ \text{Dam} \]
\[ : 1.18.00 \times 0.90 = 16.20 \text{m}^2 \]
\[ : 1.18.00 \times 1.00 = 18.00 \text{m}^2 \]
\[ : 1.18.00 \times 0.45 = 8.10 \text{m}^2 \]
\[ = 42.30 \text{m}^2 \]
\[ @ \text{Rs.}86/ \text{m}^2 \]
\[ = \text{Rs.}3,637.80/- \]

Total =Rs.1,87,463.58/-
(Say =Rs.1,87,460.00/-)

Rupees (One Lakh Eighty Seven Thousand Four Hundred and Sixty)Only
ESTIMATE FOR CONSTRUCTION OF CHECK DAM UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

(1/3)(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches completed as directed.
(d). Soft or laminated rock or medium shale

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 17.00 x 0.90 x 2.50 = 38.25m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 2.50 = 10.50m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 48.75m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Rs.103/ m³................................. = Rs.5021.25/-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 17.00 x 0.90 x 0.10 = 38.25m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 0.10 = 0.42m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 1.95m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Rs.2022/ m³................................. = Rs.3,942.90/-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 17.00 x 0.90 x 2.30 = 35.19m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 61.37m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Rs.2281/ m³................................. = Rs.139,984.97/-</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

4/22) (a) Providing regular stone masonry in retaining walls breast walls and wing walls etc. with hammer dressed

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 2.30 = 9.66m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 16.26 m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Rs.1022/ m³................................. = Rs.16,617.72/-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 1.17 x 0.90 = 15.30m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 32.30m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Rs.28/ m²................................. = Rs.9,076.30/-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 1.17 x 0.90 =15.30m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>=39.95m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Rs.86/ m²................................. =Rs.3435.70/-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total =Rs.178,078.84/-
(Say =Rs.1,78,080.00/-

Rupees (One Lakh Seventy Eight Thousand and Eighty) Only
ESTIMATE FOR CONSTRUCTION OF CHECK DAM UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V,

(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

(a) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches completed as directed.

(b) Soft or laminated rock or medium shale

<table>
<thead>
<tr>
<th>Dam</th>
<th>Volume (m³)</th>
<th>Rate (Rs. per m³)</th>
<th>Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 11.00 x 0.90 x 1.50</td>
<td>= 14.85</td>
<td>103</td>
<td>1,529.55</td>
</tr>
<tr>
<td>2 x 3.00 x 0.90 x 1.50</td>
<td>= 6.30</td>
<td>25</td>
<td>157.50</td>
</tr>
<tr>
<td>Total</td>
<td>= 21.15</td>
<td>(\text{Rs.} , 2,187.05)</td>
<td></td>
</tr>
</tbody>
</table>

(c) Providing 1:4:8 cement concrete grading of hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones within 200m and curing complete as directed.

<table>
<thead>
<tr>
<th>Dam</th>
<th>Volume (m³)</th>
<th>Rate (Rs. per m³)</th>
<th>Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 11.00 x 0.90 x 0.10</td>
<td>= 0.99</td>
<td>202</td>
<td>199.98</td>
</tr>
<tr>
<td>2 x 3.00 x 0.70 x 0.10</td>
<td>= 0.42</td>
<td>102</td>
<td>43.04</td>
</tr>
<tr>
<td>Total</td>
<td>= 1.41</td>
<td>(\text{Rs.} , 243.02)</td>
<td></td>
</tr>
</tbody>
</table>

(d) Providing 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local carriage of stone within 200m complete.

<table>
<thead>
<tr>
<th>Dam</th>
<th>Volume (m³)</th>
<th>Rate (Rs. per m³)</th>
<th>Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 11.00 x 0.90 x 1.35</td>
<td>= 13.365</td>
<td>228</td>
<td>1336.58</td>
</tr>
<tr>
<td>Total</td>
<td>= 22.165</td>
<td>(\text{Rs.} , 50,558.365)</td>
<td></td>
</tr>
</tbody>
</table>

(e) Providing regular stone masonry in retaining walls breast walls etc. with hammer dressed

<table>
<thead>
<tr>
<th>Wingwall</th>
<th>Volume (m³)</th>
<th>Rate (Rs. per m³)</th>
<th>Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x 3.00 x 0.70 x 1.35</td>
<td>= 5.67</td>
<td>102</td>
<td>579.60</td>
</tr>
<tr>
<td>2 x 3.00 x 0.85 x 1.35</td>
<td>= 3.72</td>
<td>102</td>
<td>371.48</td>
</tr>
<tr>
<td>Total</td>
<td>= 9.39</td>
<td>(\text{Rs.} , 9596.58)</td>
<td></td>
</tr>
</tbody>
</table>

(f) Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th>Dam</th>
<th>Volume (m³)</th>
<th>Rate (Rs. per m³)</th>
<th>Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 1.11 x 0.90</td>
<td>= 9.90</td>
<td>281</td>
<td>2,751.90</td>
</tr>
<tr>
<td>1 x 1.11 x 1.00</td>
<td>= 11.00</td>
<td>281</td>
<td>3,091.00</td>
</tr>
<tr>
<td>1 x 1.11 x 0.45</td>
<td>= 4.95</td>
<td>281</td>
<td>1,393.85</td>
</tr>
<tr>
<td>Total</td>
<td>= 25.85</td>
<td>(\text{Rs.} , 5872.90)</td>
<td></td>
</tr>
</tbody>
</table>

(g) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th>Dam</th>
<th>Volume (m³)</th>
<th>Rate (Rs. per m³)</th>
<th>Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 1.11 x 0.90</td>
<td>= 9.90</td>
<td>86</td>
<td>840.60</td>
</tr>
<tr>
<td>1 x 1.11 x 1.00</td>
<td>= 11.00</td>
<td>86</td>
<td>946.00</td>
</tr>
<tr>
<td>1 x 1.11 x 0.45</td>
<td>= 4.95</td>
<td>86</td>
<td>429.30</td>
</tr>
<tr>
<td>Total</td>
<td>= 25.85</td>
<td>(\text{Rs.} , 2223.10)</td>
<td></td>
</tr>
</tbody>
</table>

Total Cost = \(\text{Rs.} \, 73,280.415\) (Say \(\text{Rs.} \, 73,280.00\) Rupees (Seventy Three Thousand Two Hundred and Eighty) Only)
(1/3)(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches completed as directed.

(d) Soft or laminated rock or medium shale

<table>
<thead>
<tr>
<th></th>
<th>Volume Calculation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 18.00 x 0.90 x 0.90 = 40.50m³</td>
<td>40.50m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 0.90 = 10.50m³</td>
<td>10.50m³</td>
</tr>
<tr>
<td></td>
<td>= 51.00m³</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>@Rs.103/ m³</td>
<td>= Rs.5,253.00/-</td>
</tr>
</tbody>
</table>

2/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

<table>
<thead>
<tr>
<th></th>
<th>Volume Calculation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 18.00 x 0.90 x 0.10 = 1.62m³</td>
<td>1.62m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 0.10 = 0.42 m³</td>
<td>0.42m³</td>
</tr>
<tr>
<td></td>
<td>= 2.04m³</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>@Rs.2022/ m³</td>
<td>= Rs.4,124.88/-</td>
</tr>
</tbody>
</table>

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local carriage of stone within 200m complete

<table>
<thead>
<tr>
<th></th>
<th>Volume Calculation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 18.00 x 0.90 x 2.30 = 37.26m³</td>
<td>37.26m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x (0.70+1.30) x 1.10 = 6.60 m³</td>
<td>6.60m³</td>
</tr>
<tr>
<td></td>
<td>= 43.86m³</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>@Rs.2281/ m³</td>
<td>= Rs.148,129.98/-</td>
</tr>
</tbody>
</table>

4/22) (a) Providing regular stone masonry in retaining walls breast walls and wing walls etc. with hammer dressed

<table>
<thead>
<tr>
<th></th>
<th>Volume Calculation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.70 x 2.30 = 9.66m³</td>
<td>9.66m³</td>
</tr>
<tr>
<td></td>
<td>= 16.26m³</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>@Rs.1022/ m³</td>
<td>= Rs.16,617.72/-</td>
</tr>
</tbody>
</table>

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th></th>
<th>Volume Calculation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 18.00 x 0.90 = 16.20m²</td>
<td>16.20m²</td>
</tr>
<tr>
<td>: 1 x 18.00 x 1.00 = 18.00 m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>: 1 x 18.00 x 0.45 =8.10m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 42.30m²</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>@Rs.281/ m²</td>
<td>= Rs.9,610.20/-</td>
</tr>
</tbody>
</table>

6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th></th>
<th>Volume Calculation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1.18.00 x 0.90 =16.20m²</td>
<td>16.20m²</td>
</tr>
<tr>
<td>: 1.18.00 x 1.00 =18.00m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td>: 1.18.00 x 0.45 =8.10m²</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>=42.30m²</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>@Rs.86/ m²</td>
<td>=Rs.3,637.80/-</td>
</tr>
</tbody>
</table>

Total = Rs.1,87,463.58/-
(Say = Rs.1,87,460.00/-)

Rupees (One Lakh Eighty Seven Thousand Four Hundred and Sixty) Only
ESTIMATE FOR CONSTRUCTION OF CHECK DAM UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V,

(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

(a) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches completed as directed.

(b) Soft or laminated rock or medium shale

<table>
<thead>
<tr>
<th>Item</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>12.825</td>
<td>103</td>
<td>1308.29</td>
</tr>
<tr>
<td>Wingwall</td>
<td>6.30</td>
<td>103</td>
<td>648.39</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>1969.88</td>
</tr>
</tbody>
</table>

Providing 12mm thick cement concrete in proportion 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

(c) Providing regular stone masonry in retaining walls, breast walls and wing walls etc. with hammer dressed

<table>
<thead>
<tr>
<th>Item</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>11.540</td>
<td>2281</td>
<td>26279.22</td>
</tr>
<tr>
<td>Wingwall</td>
<td>3.72</td>
<td>2281</td>
<td>8670.82</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>34940.04</td>
</tr>
</tbody>
</table>

Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete matured complete as directed.

(d) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>8.550</td>
<td>86</td>
<td>733.50</td>
</tr>
<tr>
<td>Wingwall</td>
<td>4.275</td>
<td>86</td>
<td>364.35</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>1097.85</td>
</tr>
</tbody>
</table>

Providing regular stone masonry in foundation walls complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>8.550</td>
<td>1022</td>
<td>8709.05</td>
</tr>
<tr>
<td>Wingwall</td>
<td>3.72</td>
<td>1022</td>
<td>3799.45</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>12508.50</td>
</tr>
</tbody>
</table>

Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>8.550</td>
<td>281</td>
<td>2339.50</td>
</tr>
<tr>
<td>Wingwall</td>
<td>4.275</td>
<td>281</td>
<td>1197.32</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>3536.82</td>
</tr>
</tbody>
</table>

Total Amount = 64,800.545/- (Say = 64,800.00/- Rupees)
<table>
<thead>
<tr>
<th>Item Description</th>
<th>Measurement</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ESTIMATE FOR CONSTRUCTION OF HEAD DAM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/3(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft or laminated rock or medium shale.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dam</strong></td>
<td>1 x 6.00 x 80 x 1.00 = 4.80m^3</td>
<td>@Rs.103/ m</td>
<td>Rs.1,246.04/-</td>
</tr>
<tr>
<td><strong>Wingwall</strong></td>
<td>2 x 3.00 x 0.80 x 1.00 = 4.80m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G/Wall</strong></td>
<td>3 x 3.00 x 0.40 x 0.60 = 2.16m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C/Wall</strong></td>
<td>1 x 5.00 x 0.15 x 0.45 = 0.3375m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>=</strong></td>
<td></td>
<td></td>
<td>12.0975 m^3</td>
</tr>
<tr>
<td>2/24(a) Providing stone pitching with one man size boulders not less than 25cm x 30cm long including filling the interstices with spoils and carriage of stone filling within a distance of 200 meters complete as directed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dam</strong></td>
<td>1 x 6.00 x 80 x 1.00 = 4.80m^3</td>
<td>@Rs.432/ m</td>
<td>Rs.602.64/-</td>
</tr>
<tr>
<td><strong>Wingwall</strong></td>
<td>2 x 3.00 x 0.80 x 1.00 = 4.80m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G/Wall</strong></td>
<td>3 x 3.00 x 0.40 x 0.10 = 0.36m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C/Wall</strong></td>
<td>1 x 5.00 x 0.15 x 0.10 = 0.075m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>=</strong></td>
<td></td>
<td></td>
<td>1.395m^3</td>
</tr>
<tr>
<td>3/25 Providing cement concrete work in proportion 1:4:8 with hard broken stone or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dam</strong></td>
<td>1 x 6.00 x 80 x 1.00 = 4.80m^3</td>
<td>@Rs.2022/ m</td>
<td>Rs.2,669.04/-</td>
</tr>
<tr>
<td><strong>Wingwall</strong></td>
<td>2 x 3.00 x 0.80 x 1.00 = 4.80m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G/Wall</strong></td>
<td>3 x 3.00 x 0.40 (0+1.60) x 0.40 = 2.88m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C/Wall</strong></td>
<td>1 x 5.00 x 0.75 x 0.15 = 0.5625m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>=</strong></td>
<td></td>
<td></td>
<td>16.5925 m^3</td>
</tr>
<tr>
<td>4/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone or river shingles 40mm downgraded including curing and local carriage of stone within 200 m complete.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dam</strong></td>
<td>1 x 6.00 x 2.00 = 12.00m^3</td>
<td>@Rs.2281/ m</td>
<td>Rs.37,847.49/-</td>
</tr>
<tr>
<td><strong>Wingwall</strong></td>
<td>2 x 3.00 x 0.10 = 0.60m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G/Wall</strong></td>
<td>3 x 3.00 x 0.40 (0+1.60) x 0.40 = 2.88m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C/Wall</strong></td>
<td>2 x 5.00 x 0.75 = 7.5m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>=</strong></td>
<td></td>
<td></td>
<td>16.5925 m^3</td>
</tr>
<tr>
<td>5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dam</strong></td>
<td>1 x 6.00 x 2.00 = 12.00m^3</td>
<td>@Rs.281/ m</td>
<td>Rs.10,284.60/-</td>
</tr>
<tr>
<td><strong>Wingwall</strong></td>
<td>2 x 3.00 x 0.10 = 0.60m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G/Wall</strong></td>
<td>3 x 3.00 x 0.40 (0+1.60) x 0.40 = 2.88m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C/Wall</strong></td>
<td>2 x 5.00 x 0.75 = 7.5m^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>=</strong></td>
<td></td>
<td></td>
<td>16.5925 m^3</td>
</tr>
</tbody>
</table>

**Note:** All prices are exclusive of taxes and duties.
6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

\[
\begin{align*}
\text{Dam} & : 1 \times 6.00 \times 1.00 = 6.00\text{m}^2 \\
& : 1 \times 6.00 \times 0.50 = 3.00\text{m}^2 \\
& : 1 \times 6.00 \times 1.10 = 6.60\text{m}^2 \\
& \quad = 15.60\text{m}^2 \\
\text{@Rs.86/m}^2 & \quad \text{-----------------------------------------------} \quad \text{Rs.1,341.60/-}
\end{align*}
\]

Total \(\text{Rs.53,991.41/-}\)

For C.C. Channel with 10 Rm.

1/11(i) Cutting road side drain 60cm wide 60cm Deep including dressing grading and Removal of soils upto 15 metres complete.

\[\text{(d) In soft rock} \]

\[(i) \quad 0.60\text{m} \times 0.60\text{m} \]

Length of the channel = 10.00Rm

\[\text{@Rs.35/Rm} \quad \text{-----------------------------------------------} \quad \text{Rs.350.00/-} \]

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stone within 200metres and filling in trenches.

\[2 \times 5.00 \times 0.25 \times 0.60 \quad = 1.50\text{m}^3\]

\[\text{@Rs.618/m}^3 \quad \text{-----------------------------------------------} \quad \text{Rs.927.00/-} \]

3/24(a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

\[1 \times 60.00 \times 0.20 \quad = 0.27\text{m}^3\]

\[\text{@Rs.432/m}^3 \quad \text{-----------------------------------------------} \quad \text{Rs.311.04/-} \]

4/37 Extra for carriage of sand, stone aggregates, Stone chips..................unloading and Average to.

\[(ii) \quad \text{On rough road other than black topped roads}.\]

\[(a) \quad 1^{\text{st}} \text{Km-per kilometers or part thereof}.\]

\[
\text{Quantity as per item no. (2/21) & (3/24).} \\
\quad = (1.50 + 0.72)\text{m}^3 = 2.22\text{m}^3 \\
\quad \text{@Rs.93/m}^3 \quad \text{-----------------------------------------------} \quad \text{Rs.206.46/-} \]

5/39 Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

\[
\begin{align*}
2 \times 6.00 \times 0.25 & = 3.00\text{m}^2 \\
2 \times 6.00 \times 0.60 & = 7.20\text{m}^2 \\
1 \times 6.00 \times 0.60 & = 3.60\text{m}^2 \\
& \quad = 13.80\text{m}^2 \\
\text{@Rs86/m}^3 & \quad \text{-----------------------------------------------} \quad \text{Rs.1,186.80/-} \\
\text{Total} & \quad \text{-----------------------------------------------} \quad \text{Rs.29,81.30/-} \\
\text{Grand Total} & \quad \text{-----------------------------------------------} \quad \text{Rs.(53991.41 + 2981.30)} \\
& \quad \text{-----------------------------------------------} \quad \text{Rs.56,972.71/-}. \quad \text{(Say Rs.56,970.00/-)}
\end{align*}
\]

(Rupees Fifty Six Thousand Nine Hundred and Seventy) only
ESTIMATE FOR CONSTRUCTION OF HEAD DAM
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

1/3(b)  Earth work in excavation for bridges and culverts below the lowest bed
level including dewatering and bailing out water completed as directed.
(d). Soft or laminated rock or medium shale.

Dam  : 1 x 7.00 x 80 x 1.50 = 8.40 m³
Wingwall : 2 x 3.00 x 0.80 x 1.50 = 7.20 m³
G/Wall  : 3 x 3.00 x 0.40 x 0.75 = 2.70 m³
C/Wall  : 1 x 6.00 x 0.15 x 0.60 = 0.54 m³

\[ \text{Total} = 18.84 \text{ m}^3 \]
\[ \text{Rate} = \text{Rs.}103/ \text{m}^3 \]
\[ \text{Cost} = \text{Rs.}1,940.52/- \]

2/24(a) Providing stone pitching with one man size boulders not less than
25 cm x 30 cm. long including filling the interstices with spoils and
carriage of stone filling within a distance of 200 m complete as directed.

Dam  : 1 x 7.00 x 80 x 0.10 = 0.56 m³
Wingwall : 2 x 3.00 x 0.80 x 0.10 = 0.48 m³
G/Wall  : 3 x 3.00 x 0.40 x 0.10 = 0.36 m³
C/Wall  : 1 x 6.00 x 0.15 x 0.10 = 0.09 m³

\[ \text{Total} = 1.49 \text{ m}^3 \]
\[ \text{Rate} = \text{Rs.}432/ \text{m}^3 \]
\[ \text{Cost} = \text{Rs.}643.68/- \]

3/25 Providing cement concrete work in prop 1:4:8 with hard broken stone
aggregate or river shingles 40 mm downgraded including necessary
 carriage of stones with distance of 200 m and curing complete as directed.

Dam  : 1 x 7.00 x 80 x 0.10 = 0.56 m³
Wingwall : 2 x 3.00 x 0.80 x 0.10 = 0.48 m³
G/Wall  : 3 x 3.00 x 0.40 x 0.10 = 0.36 m³

\[ \text{Total} = 1.40 \text{ m}^3 \]
\[ \text{Rate} = \text{Rs.}2022/ \text{m}^3 \]
\[ \text{Cost} = \text{Rs.}2,830.80/- \]

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken
stone aggregates or river shingles 40 mm downgraded including curing and
local carriage of stone within 200 m complete.

Dam  : 1 x 7.00 x 80 x 1.50 = 8.40 m³
\[ \frac{1 \times 7.00 \times (0.40 + 0.80) \times 1.90}{2} = 7.98 \text{ m}^3 \]
Wingwall : 2 x 3.00 x 0.40 x 0.40 = 1.12 m³
\[ \frac{3 \times 3.00 \times 0.40 \times 0.40}{2} = 1.44 \text{ m}^3 \]
G/Wall  : 3 x 3.00 x (0+1.90) x 0.40 = 3.42 m³
\[ \frac{3 \times 0.40 \times 0.40 \times 0.40}{2} = 0.19 \text{ m}^3 \]
C/Wall  : 1 x 6.00 x 0.75 x 0.15 = 0.675 m³
\[ \frac{3 \times 0.40 \times 0.40 \times 0.40}{2} = 0.225 \text{ m}^3 \]
\[ \text{Total} = 23.225 \text{ m}^3 \]
\[ \text{Rate} = \text{Rs.}2281/ \text{m}^3 \]
\[ \text{Cost} = \text{Rs.}52,976.22/- \]

5/38 Providing shuttering with dressed planks not less than 25 mm thick properly
joined including batten, etc. to the proper level and removing of the same after
the concrete hardened complete as directed.

Dam  : 1 x 7.00 x 2.00 = 14.00 m²
\[ \frac{1 \times 7.00 \times 0.40}{2} = 2.80 \text{ m}^2 \]
\[ \frac{1 \times 7.00 \times 1.9}{2} = 13.30 \text{ m}^2 \]
C/Wall  : 2 x 6.00 x 0.75 = 7.5 m²
\[ \text{Total} = 39.10 \text{ m}^2 \]
\[ \text{Rate} = \text{Rs.}281/ \text{m}^2 \]
\[ \text{Cost} = \text{Rs.}10,987.10/- \]
6/39 (a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

\[
\text{Dam: } 1 \times 7.00 \times 1.50 = 10.50 \text{m}^2 \\
1 \times 7.00 \times 0.75 = 5.25 \text{m}^2 \\
1 \times 7.00 \times 1.60 = 11.20 \text{m}^2 \\
\text{26.95m}^2 \\
\] @Rs.86/m\text{ }^2 \text{.................................................................} \quad \text{Rs.2,317.70/-}

\text{Total} \quad \text{Rs.71,696.02/-}

**For C.C. Channel with 18 Rm.**

1/11 (i) Cutting road side drain 60cm wide 60cm Deep including dressing grading and Removal of soils upto 15metres complete.

(d) In soft rock

(i) \(0.60 \text{m} \times 0.60 \text{m}\)

\[
\text{Length of the channel} = 10.00 \text{Rm} \\
\] @Rs.35/Rm \text{.................................................................} =Rs.630.00/-

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stone within 200metres and filling in trenches.

\[
2 \times 6.00 \times 0.25 \times 0.75 = 2.25 \text{m}^3 \\
\] @Rs.618/m\text{ }^3 \text{.................................................................} =Rs.1,390.50/-

3/24 (a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

\[
1 \times 7.00 \times 0.60 \times 0.35 = 1.47 \text{m}^3 \\
\] @Rs.432/m\text{ }^3 \text{.................................................................} =Rs.635.04/-

4/37 Extra for carriage of sand, stone aggregates, Stone chips...................unloading and Average to.

(ii) On rough road other than black topped roads.

(a) \(1^{st}\) Km-per kilometers or part thereof.

\[
\text{Quantity as per item no. (2/21) & (3/24).} \\
(2.25 + 1.47)\text{m}^3 = 3.72 \text{m}^3 \\
\] @Rs.93/m\text{ }^3 \text{.................................................................} =Rs345.96/-

5/39 Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

\[
2 \times 7.00 \times 0.25 = 3.50 \text{m}^2 \\
2 \times 7.00 \times 0.60 = 8.40 \text{m}^2 \\
1 \times 7.00 \times 0.60 = 4.20 \text{m}^2 \\
\] = 16.10\text{m}^2

@Rs86/m\text{ }^3 \text{.................................................................} \quad =Rs.1,384.10/-

Total \quad \text{Rs.4386.10/-}

\text{Grand Total} \quad =\text{Rs.(71,696.02 + 4386.10)} \\
\quad =\text{Rs.76,082.12/-} \\
\quad (Say \text{Rs.76,080.00/-})

(Rupees Seventy Six Thousand and Eighty) only
### ESTIMATE FOR CONSTRUCTION OF HEAD DAM

**Under UMTYNRU-WEISAR FOR WATERSHED IWMP-V (Based as per Schedule of Rates for Roads, Bridges, etc. for Western Circle, PWD (ROADS), Meghalaya for the Year 2007-08)**

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
<th>Rate (Rs.)</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.80 x 1.50</td>
<td>7.20m</td>
<td>103 x 7.20 = 745.60</td>
</tr>
<tr>
<td>G/Wall</td>
<td>3 x 3.00 x 0.40 x 0.75</td>
<td>2.75m</td>
<td>103 x 2.75 = 282.75</td>
</tr>
<tr>
<td>C/Wall</td>
<td>1 x 7.00 x 0.15 x 0.60</td>
<td>0.63m</td>
<td>103 x 0.63 = 65.09</td>
</tr>
<tr>
<td>=</td>
<td></td>
<td>20.18m</td>
<td></td>
</tr>
<tr>
<td>@Rs.103/m</td>
<td></td>
<td>Rs.2,078.54</td>
<td></td>
</tr>
</tbody>
</table>

**Providing stone pitching with one man size boulders not less than 25cm x 30cm long including filling the interstices within a distance of 200 meters complete.**

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
<th>Rate (Rs.)</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.80 x 0.10</td>
<td>0.48m</td>
<td>432 x 0.48 = 207.36</td>
</tr>
<tr>
<td>G/Wall</td>
<td>3 x 3.00 x 0.40 x 0.10</td>
<td>0.36m</td>
<td>432 x 0.36 = 155.52</td>
</tr>
<tr>
<td>C/Wall</td>
<td>1 x 7.00 x 0.15 x 0.10</td>
<td>0.105m</td>
<td>432 x 0.105 = 45.36</td>
</tr>
<tr>
<td>=</td>
<td></td>
<td>1.585m</td>
<td></td>
</tr>
<tr>
<td>@Rs.432/m</td>
<td></td>
<td>Rs.684.72</td>
<td></td>
</tr>
</tbody>
</table>

**Providing cement concrete work in proportion 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones within 200m and curing complete.**

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
<th>Rate (Rs.)</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.80 x 0.10</td>
<td>0.48m</td>
<td>2022 x 0.48 = 980.56</td>
</tr>
<tr>
<td>G/Wall</td>
<td>3 x 3.00 x 0.40 x 0.10</td>
<td>0.36m</td>
<td>2022 x 0.36 = 727.92</td>
</tr>
<tr>
<td>C/Wall</td>
<td>1 x 7.00 x 0.75 x 0.15</td>
<td>0.7875m</td>
<td>2022 x 0.7875 = 1610.49</td>
</tr>
<tr>
<td>=</td>
<td></td>
<td>20.18m</td>
<td></td>
</tr>
<tr>
<td>@Rs.2022/m</td>
<td></td>
<td>Rs.58,939.89</td>
<td></td>
</tr>
</tbody>
</table>

**Providing shuttering with dressed planks properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete.**

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
<th>Rate (Rs.)</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.80 x 1.50</td>
<td>9.00m</td>
<td>281 x 9.00 = 2,529</td>
</tr>
<tr>
<td>G/Wall</td>
<td>3 x 3.00 x 0.40 x 1.90</td>
<td>3.42m</td>
<td>281 x 3.42 = 958.42</td>
</tr>
<tr>
<td>C/Wall</td>
<td>1 x 7.00 x 0.75 x 0.15</td>
<td>0.7875m</td>
<td>281 x 0.7875 = 224.84</td>
</tr>
<tr>
<td>=</td>
<td></td>
<td>25.8395m</td>
<td></td>
</tr>
<tr>
<td>@Rs.281/m</td>
<td></td>
<td>Rs.71,445.25</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- All dimensions are in meters unless specified otherwise.
- Rates are in Rs. per meter.
- Quantities are in cubic meters (m³).
- All materials and workmanship are as specified in the Schedule of Rates.
6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

Dam:
- : 1 x 8.00 x 1.50 = 12.00m²
- : 1 x 8.00 x 0.75 = 6.00m²
- : 1 x 8.00 x 1.60 = 12.80m²

\[ \frac{30.80m²}{30.80m²} \]

@Rs.86/ m² .......................................................... =Rs.2,648.80/-

Total =Rs.79,961.41/-
(Say Rs.79,960.00/-)

For Three nos=3 x 79960 = Rs.239880.00

Rupees (Two Lakhs Thirty Nine Thousand Eight hundred and Eighty) Only
ESTIMATE FOR CONSTRUCTION OF HEAD DAM
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

1/3(b)  Earth work in excavation for bridges and culverts below the lowest
bed level including dewatering and bailing out water completed as directed.

(d). Soft or laminated rock or medium shale.

**Dam** : 1 x 5.0 x 0.80 x 1.00m = 4.00m

**Wingwall** : 2 x 3.00 x 0.80 x 1.00m = 4.80m

**G/Wall** : 3 x 3.00 x 0.40 x 0.60 = 2.16m

**C/Wall** : 1 x 4.00 x 0.15 x 0.45 = 0.27m

= 11.23m

@Rs.103/ m

= Rs.1156.60

2/24(a) Providing stone pitching with one man size boulders not less than 25cm x 30cm.

Including filling the interstices with spoils and carriage of stone filling
within a distance of 200 meters complete as directed.

**Dam** : 1 x 5.00 x 80 x 0.10 = 0.40m

**Wingwall** : 2 x 3.00 x 0.80 x 0.10 = 0.48m

**G/Wall** : 3 x 3.00 x 0.40 x 0.10 = 0.36m

**C/Wall** : 1 x 4.00 x 0.15 x 0.10 = 0.06m

= 1.30m

@Rs.432/ m

= Rs.651.60

3/25 Providing cement concrete work in proportion 1:4:8 with hard broken stone
aggregate or river shingles 40mm downgraded including necessary carriage
of stones with distance of 200 meters and curing complete as directed.

**Dam** : 1 x 5.00 x 80 x 0.10 = 0.40m

**Wingwall** : 2 x 3.00 x 0.80 x 0.10 = 0.48m

**G/Wall** : 3 x 3.00 x 0.40 x 0.10 = 0.36m

= 1.24 m

@Rs.2022/ m

= Rs.2,507.28/-

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone
aggregate or river shingles 40mm downgraded including curing and local
carriage of stone within 200 meters complete.

**Dam** : 1 x 5.00 x 80 x 1.00 = 4.00m

**Wingwall** : 2 x 3.00 x 0.40 x 0.40 = 0.80m

**G/Wall** : 3 x 3.00 x 0.40 x 1.60 = 2.88m

**C/Wall** : 3 x 0.40 x 0.40 x 0.40 = 0.19m

= 14.56 m

@Rs.2281/ m

= Rs.33,211.36/-

5/38 Providing shuttering with dressed planks not less than 25mm thick properly
joined including batten, etc. to the proper level and removing of the same
after the concrete hardened complete as directed.

**Dam** : 1 x 5.00 x 2.00 = 10.00m

**Wingwall** : 1 x 5.00 x 0.40 = 2.00m

**C/Wall** : 1 x 5.00 x 1.65 = 8.25m

Less for Spillways : 4 x 4.00 x 0.30 = 4.80m

= 31.05m

@Rs.281/ m

= Rs.8,725.05/-
6/39(a) Providing 12mm thick cement plastering in proportion
1:4 including clearing the surface and carriage of sand
within 200m complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 5.00 x 1.00</td>
<td>= 10.50m²</td>
</tr>
<tr>
<td></td>
<td>1 x 5.00 x 0.50</td>
<td>= 5.25m²</td>
</tr>
<tr>
<td></td>
<td>1 x 5.00 x 1.10</td>
<td>= 5.50m²</td>
</tr>
</tbody>
</table>

\[ \frac{13m^3}{13m^3} \]

@Rs.86/ m³ ............................................................ Rs.21,118.00/-

Total = Rs.47,279.88/-
(Say Rs.47,280.00/-)

(Rupees Forty Seven Thousand Two Hundred and Eighty) only
ESTIMATE FOR CONSTRUCTION OF HEAD DAM UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V (BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

1/3(b)  Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.

(d). Soft or laminated rock or medium shale.

Dam : 1 x 12.00 x 80 x 1.00 = 9.60 m

Wingwall : 2 x 3.00 x 0.80 x 1.00 = 4.80 m

G/Wall : 3 x 3.00 x 0.40 x 0.50 = 1.80 m

C/Wall : 1 x 11.00 x 0.15 x 0.35 = 0.5775 m

= 16.7775 m

@Rs.103/ m

..... Rs.1,728.08/-

2/24(a) Providing stone pitching with one man size boulders not less than 25 cm x 30 cm.

Dam : 1 x 12.00 x 80 x 1.10 = 0.96 m

Wingwall : 2 x 3.00 x 0.80 x 1.10 = 0.48 m

G/Wall : 3 x 3.00 x 0.40 x 0.10 = 0.36 m

C/Wall : 1 x 11.00 x 0.15 x 0.10 = 0.165 m

= 1.80 m

@Rs.432/ m

..... Rs.848.88/-

3/25 Providing cement concrete work in proportion 1:4:8 with hard broken stone aggregate or river shingles 40 mm down graded including necessary carriage of stones with distance of 200 m and curing complete as directed.

Dam : 1 x 12.00 x 2.00 = 24.00 m

Wingwall : 1 x 12.00 x 0.40 = 4.80 m

G/Wall : 3 x 3.00 x 0.40 x 0.40 = 1.44 m

C/Wall : 3 x 0.40 x 0.40 x 0.40 = 0.19 m

= 28.7875 m

@Rs.2281/ m

..... Rs.65,664.28/-

5/38 Providing shuttering with dressed planks not less than 25 mm thick properly joined including batten etc. to the proper level and removing of the same after pouring concrete mixture in accordance to the proper levels and forming local earth works of stone within 200 m complete.

Dam : 1 x 12.00 x 2.00 = 24.00 m

Wingwall : 1 x 12.00 x 0.40 = 4.80 m

G/Wall : 3 x 3.00 x 0.40 x 0.40 = 1.44 m

C/Wall : 2 x 11.00 x 0.30 = 6.60 m

= 30.78 m

Less for Spillways : 4 x 4.00 x 0.30 = 4.80 m

Total = 35.58 m

@Rs.281/ m

..... Rs.9,990.40/-
6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

| Dam | 
|-----|------------------|
| 1 x 12.00 x 1.00 | 12.00 m² |
| 1 x 12.00 x 0.50 | 6.00 m² |
| 1 x 12.00 x 1.10 | 13.20 m² |
| Total | 31.20 m² |

@Rs.86/ m² ....................................................... =Rs.2,683.20

Total =Rs.91,424.04

For C.C. Channel of 16m and earthen channel of 25 Rm.

1/15(i) Cutting catch water drain 60cm wide and 60cm deep in the earth and rocky soil including dressing and grading complete. (Payment as per different classification of drain (a) to (h) of item 12 above.

Length of the channel = 16 x 0.60 x 1.00 = 9.6m³

@Rs.28/ m³ ....................................................... = Rs.268.80/-

1/11(i) Cutting road side drain 60cm wide 60cm Deep including dressing grading and Removal of soils upto 15metres complete.

(d) In soft rock
(i) 0.60m x 0.60m

Length of the channel = 25Rm

@Rs.35/Rm....................................................... = Rs.875.00/-

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stone within 200metres and filling in trenches.

2 x 11.00 x 0.25 x 0.60 = 3.30 m³

@Rs.618/m³ ....................................................... = Rs.2,039.40/-

3/24(a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

1 x 12.00 x 0.60 x 0.20 = 1.44 m³

@Rs.432/m³ ....................................................... = Rs.622.08/-

4/37 Extra for carriage of sand, stone aggregates, Stone chips…………………..unloading and Average to.

(ii) On rough road other than black topped roads.

(a) 1st Km-per kilometers or part thereof.

Quantity as per item no. (2/21) & (3/24).

= (2.30 + 1.44)m³ = 4.74 m³

@Rs.93/ m³ ....................................................... = Rs.440.82/-

5/39 Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

2 x 12.00 x 0.25= 6.00m²
2 x 12.00 x 0.60= 14.40m²
1 x 12.00 x 0.60= 7.20m²

= 27.60m²

@Rs.86/ m³ ....................................................... = Rs.2,373.60/-

Grand Total =Rs.(91,424.04 + 6,619.70)

= Rs.98,043.74/-

(Say Rs.98,040.00/-)

(Rupees Ninety Eight Thousand Forty) only
ESTIMATE FOR CONSTRUCTION OF HEAD DAM
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

1/3(b) Earth work in excavation for bridges and culverts below the lowest bed
level including dewatering and bailing out water completed as directed.
(d). Soft or laminated rock or medium shale.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 4.00 x 8.00 x 2.00</td>
<td>6.40 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.80 x 2.00</td>
<td>9.60 m³</td>
</tr>
<tr>
<td>G/Wall</td>
<td>3 x 3.00 x 0.40 x 1.00</td>
<td>3.60 m³</td>
</tr>
<tr>
<td>C/Wall</td>
<td>1 x 3.00 x 0.15 x 0.85</td>
<td>0.3825 m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>19.9825 m³</td>
</tr>
<tr>
<td>@Rs.103/ m³</td>
<td></td>
<td>Rs.2,058.20/-</td>
</tr>
</tbody>
</table>

2/24(a) Providing stone pitching with one man size boulders not less than 25cm x 30cm.
long including filling the interstices with spoils and carriage of stone filling
within a distance of 200 meters complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 4.00 x 8.00 x 0.10</td>
<td>0.32 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.80 x 0.10</td>
<td>0.48 m³</td>
</tr>
<tr>
<td>G/Wall</td>
<td>3 x 3.00 x 0.40 x 0.10</td>
<td>0.36 m³</td>
</tr>
<tr>
<td>C/Wall</td>
<td>1 x 3.00 x 0.15 x 0.10</td>
<td>0.045 m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.205 m³</td>
</tr>
<tr>
<td>@Rs.432/ m³</td>
<td></td>
<td>Rs.520.56/-</td>
</tr>
</tbody>
</table>

3/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate
or river shingles 40mm down graded including necessary carriage of stones with
distance of 200m and curing complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 4.00 x 8.00 x 0.10</td>
<td>0.32 m³</td>
</tr>
<tr>
<td>Wingwall</td>
<td>2 x 3.00 x 0.80 x 0.10</td>
<td>0.48 m³</td>
</tr>
<tr>
<td>G/Wall</td>
<td>3 x 3.00 x 0.40 x 0.10</td>
<td>0.36 m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.16 m³</td>
</tr>
<tr>
<td>@Rs.2022/ m³</td>
<td></td>
<td>Rs.2,345.52/-</td>
</tr>
</tbody>
</table>

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken
stone aggregates or river shingles 40mm downgraded including curing
and local Carriage of stone within 200 m complete.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 4.00 x 8.00 x 1.00</td>
<td>3.20 m³</td>
</tr>
<tr>
<td>: 1 x 4.00 x (0.40 + 0.80) x 1.60</td>
<td>3.84 m³</td>
<td></td>
</tr>
<tr>
<td>: 1 x 6.00 x 0.40 x 0.40</td>
<td>0.64 m³</td>
<td></td>
</tr>
<tr>
<td>G/Wall</td>
<td>3 x 3.00 x 0.40 x 0.40</td>
<td>1.44 m³</td>
</tr>
<tr>
<td>: 3 x 3.00 x (0+1.60) x 0.40</td>
<td>2.88 m³</td>
<td></td>
</tr>
<tr>
<td>: 3 x 0.40 x 0.40 x 0.40</td>
<td>0.19 m³</td>
<td></td>
</tr>
<tr>
<td>C/Wall</td>
<td>1 x 3.00 x 0.75 x 0.15</td>
<td>0.3375 m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.5275 m³</td>
</tr>
<tr>
<td>@Rs.2281/ m³</td>
<td></td>
<td>Rs.28,575.23/-</td>
</tr>
</tbody>
</table>

5/38 Providing shuttering with dressed planks not less than 25mm thick properly
joined including batten, etc. to the proper level and removing of the same after
the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 4.00 x 2.00</td>
<td>8.00 m²</td>
</tr>
<tr>
<td>: 1 x 4.00 x 0.40</td>
<td>1.60 m²</td>
<td></td>
</tr>
<tr>
<td>: 1 x 4.00 x 1.65</td>
<td>6.60 m²</td>
<td></td>
</tr>
<tr>
<td>C/Wall</td>
<td>2 x 5.00 x 0.65</td>
<td>4.50 m²</td>
</tr>
<tr>
<td>Less for Spillways</td>
<td>4 x 4.00 x 0.30</td>
<td>4.80 m²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25.50 m²</td>
</tr>
<tr>
<td>@Rs.281/ m²</td>
<td></td>
<td>Rs.7,165.50/-</td>
</tr>
</tbody>
</table>
6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Total (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>4.00</td>
<td>86</td>
<td>344</td>
</tr>
<tr>
<td>: 1 x 4.00 x 1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>: 1 x 4.00 x 0.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>: 1 x 4.00 x 1.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@Rs.86/m³</td>
<td></td>
<td></td>
<td>Rs.344</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>Rs.344</td>
</tr>
</tbody>
</table>

For C.C.Channel with 18 Rm & Earthen channel = 30Rm

1/15(i) Cutting catch water drain 60cm wide and 60cm deep in the earth and rocky soil including dressing and grading complete. (Payment as per different classification of drain (a) to (h) of item 12 above.

Length of the channel = 18 x 0.60 x 1.00 = 10.8m³

@Rs.28/m³ ......................................................... = Rs.302.40

1/11(i) Cutting road side drain 60cm wide 60cm deep including dressing grading and Removal of soils upto 15metres complete.

(d) In soft rock
(i) 0.60m x 0.60m
Length of the channel = 300Rm
@Rs.35/Rm ......................................................... = Rs.10,500.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stone within 200metres and filling in trenches.

2 x 3.00 x 0.25 x 0.60 = 0.90m³
@Rs.618/m³ ......................................................... = Rs.556.00

3/24(a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

1 x 4.00 x 0.60 x 0.20 = 0.48m³
@Rs.432/m³ ......................................................... = Rs.207.36

4/37 Extra for carriage of sand, stone aggregates, Stone chips ................. Unloading and Average to.

(ii) On rough road other than black topped roads.
1 1st Km-per kilometers or part thereof.

Quantity as per item no. (2/21) & (3/24).

= (0.90 + 0.48)m³ = 1.38 m³
@Rs.93/m³ ......................................................... = Rs.128.34

5/39 Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

2 x 4.00 x 0.25 = 2.00m³
2 x 4.00 x 0.60 = 4.80m³
1 x 4.00 x 0.60 = 2.40m³
= 9.20m³

@Rs86/m³ ......................................................... = Rs.791.20

Grand Total = Rs.(1559.41 + 12,48.50)
= Rs.54,044.91
(Say Rs. 54,040.00)

(Rupees Fifty Four Thousand and Forty) only.
ESTIMATE FOR CONSTRUCTION OF HEAD DAM
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

1/3(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.

- Dam: 1 x 8.00 x 80 x 1.50 = 9.60m
- Wingwall: 2 x 3.00 x 0.80 x 1.50 = 7.20m
- G/Wall: 3 x 3.00 x 0.40 x 0.75 = 2.75m
- C/Wall: 1 x 5.95 x 0.15 x 0.60 = 0.53m

Total = 20.08m

@Rs.103/m = Rs.2,068.24

2/24(a) Providing stone pitching with one man size boulders not less than 25cm x 30cm. long including filling the interstices with spoils and carriage of stone filling within a distance of 200 meters complete as directed.

- Dam: 1 x 8.00 x 80 x 0.10 = 0.64m
- Wingwall: 2 x 3.00 x 0.80 x 0.10 = 0.48m
- G/Wall: 3 x 3.00 x 0.40 x 0.10 = 0.36m
- C/Wall: 1 x 5.95 x 0.15 x 0.10 = 0.8m

Total = 1.56m

@Rs.432/m = Rs.673.92

3/25 Providing cement concrete work in proportion 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

- Dam: 1 x 8.00 x 80 x 0.10 = 0.64m
- Wingwall: 2 x 3.00 x 0.80 x 0.10 = 0.48m
- G/Wall: 3 x 3.00 x 0.40 x 0.10 = 0.36m

Total = 1.48m

@Rs.2022/m = Rs.2,992.56

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local carriage of stone within 200m complete.

- Dam: 1 x 8.00 x 2.00 = 16.00m
- Wingwall: 1 x 8.00 x 0.40 = 3.20m
- G/Wall: 3 x 3.00 x 0.40 x 0.40 = 1.44m
- C/Wall: 2 x 5.95 x 0.75 = 8.92m

Total = 43.32m

@Rs.281/m = Rs.12,172.92

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened with any overhead work in proportion 1:3:6 with hard broken stone aggregate.

- Dam: 1 x 8.00 x 1.90 = 15.20m
- C/Wall: 2 x 5.95 x 0.75 = 8.92m

Total = 24.12m

@Rs.281/m = Rs.6,813.42

CUTTING OF SOIL WITHIN 200M IN COMPLETE.

- Dam: 1 x 8.00 x 0.40 = 3.20m
- G/Wall: 3 x 3.00 x 0.40 x 0.40 = 0.192m

Total = 3.392m

@Rs.281/m = Rs.959.84

Providing concrete on roof to form roof top overhead structure, including setting of columns, floor joists, slabs, etc., including work in proper level and forming of structures on roof including fitting in hoists and cranes.

- Dam: 1 x 8.00 x 1.90 = 15.20m
- C/Wall: 2 x 5.95 x 0.75 = 8.92m

Total = 24.12m

@Rs.2281/m = Rs.54,662.92

CUTTING OF SOIL WITHIN 200M IN COMPLETE.
6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th>Dam</th>
<th>Calculation</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>: 1 x 8.00 x 1.50</td>
<td>= 12.00m²</td>
<td></td>
</tr>
<tr>
<td>: 1 x 8.00 x 0.75</td>
<td>= 6.00m²</td>
<td></td>
</tr>
<tr>
<td>: 1 x 8.00 x 1.60</td>
<td>= 12.80m²</td>
<td></td>
</tr>
</tbody>
</table>

@Rs.86/ m² .......................................................... Rs.2,648.80/-

Total Rs.79,226.04/-

(Say Rs.79,220.00/-)

Rupees (Seventy Nine Thousand Two hundred and Twenty) Only
1/3(b)  Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.
(d) Soft or laminated rock or medium shale.

U/P Appron  :  1nos x 3.00 x 12.00 x 0.20 = 7.20m³
Dam  :  1nos x 12.00 x 0.90 x 0.80 = 8.64m³
Wingwall  :  2nos x 0.50 x 3.00 x 0.60 = 1.80m³

@Rs.103/ m³ .............................................................................. =Rs.1816.92/-

2/24(a) Providing stone pitching with one man size boulders not less than 25cm x 30cm long including filling the interstices with spoils and carriage of stone filling within a distance of 200 meters complete as directed.

Dam  :  1nos x 12.00 x 0.90 x 0.20 = 2.16m³
Wingwall  :  2nos x 3.00 x 3.20 x 0.60 = 0.72m³

@Rs.432/ m³ .............................................................................. =Rs.1244.16/-

3/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stone within 200 metres and filling in trenches.

U/P Appron  :  1nos x 3.00 x 12.00 x 0.20 = 7.20m³

@Rs.618/m³ .............................................................................. =Rs.4449.60/-

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete.

Dam  :  1nos x 12.00 x 0.60 x 0.90 = 6.48m³
:  1nos x (0.90 + 0.40) x 1.00 = 0.65m³
 W/Wall  :  2nos x 3.00 x 1.30 x 0.60 = 4.68m³

@Rs.2281/m³ ............................................................................... =Rs.26,938.61/-

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

Dam  :  2 x 12.00 x 1.00 = 48.00m²
W/Wall  :  4 x 3.00 x 1.00 = 12.00m²

@Rs.281/ m² ............................................................................... =Rs.16,860.00/-

6/40. Providing steel reinforcement of R.C.C work including Bending and placing in position as per approved design and drawing complete as directed. Mild steel Bars.

1% of item no.(4/25)
= 1.5/100 x 11.81 x 78.5 qtl.
= 13.90 qtl.
@Rs.3773.00/qtl.......................................................... =Rs.52444.70/-
(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

\[ \text{Total} = \text{Rs.} 1,07,697.26 \]

(b) In medium rock or hard shale

\[ \text{Length} = 600 \text{Rm} \]

\[ \text{Rate} = \text{Rs.} 46/ \text{Rm} \]

\[ \text{Total} = \text{Rs.} 27,600 \]

(c) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

\[ \text{Channel base} = 1 \text{nos} \times 600 \times 0.60 \times 0.10 = 36.00 \text{m} \]

\[ \text{Channel wall} = 2 \text{nos} \times 600 \times 0.60 \times 0.10 = 72.00 \text{m} \]

\[ \text{Total} = \text{Rs.} 46,656.00 \]

(e) Providing cement concrete work in proportion 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[ \text{Channel base} = 1 \text{nos} \times 600 \times 0.60 \times 0.015 = 5.40 \text{m} \]

\[ \text{Channel wall} = 2 \text{nos} \times 600 \times 0.60 \times 0.015 = 10.80 \text{m} \]

\[ \text{Total} = \text{Rs.} 32,756.40 \]

Total = Rs. 2,11,760.40

Grand Total = Rs. (1,07,697.26 + 2,11,760.40)

= Rs. 3,19,457.66

(Say Rs. 3,19,460/-)

(Rupees Three lakhs Nineteen thousand Four hundred and Sixty/- only)
ESTIMATE FOR CONSTRUCTION OF DIVERSION DAM
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

1/3(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water Complete as directed.
(d) Soft or laminated rock or medium shale
Dam : 1 x 11.00 x 0.60 x 2.00 = 13.20m³
Wing wall : 2 x 3.00 x 0.60 x 1.50 = 7.20m³
= 20.40m³
@Rs. 103/ m³ …………………………………… = Rs. 2,101.20/-

2/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.
Dam : 1 x 11.00 x 0.60 x 0.10 = 0.66m³
Wing wall : 2 x 3.00 x 0.60 x 0.10 = 0.36m³
= 1.02m³
@Rs. 2022/ m³ ………………………… = Rs. 2,062.00/-

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local carriage of stone within 200m complete.
Dam : 1 x 11.00 x 0.60 x 0.10 = 0.66m³
@Rs. 2281/ m³ …………………………………… = Rs. 1,505.46/-

4/22(a) Providing regular stone masonry in retaining walls breast walls and wing walls etc. with hammer dressed complete as directed.
Dam : 1 x 11.00 x 0.60 x 2.00 = 13.20m³
: 1 x 11.00 x (0.60 + 1.00) x 1.20 = 10.56m³
2
Wing wall : 2 x 3.00 x 0.30 x 0.80 = 1.44m³
: 2 x 3.00 x (0.80 + 0.30) x 1.20 = 3.96m³
2
= 29.16m³
@Rs. 1022/ m³ ………………………… = Rs. 29,801.52/-

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including battened to the proper level and removing of the same after the concrete hardened complete as directed.
Dam : 1 x 1.11 x 2.20 = 24.20m²
@Rs. 281/ m² …………………………………… = Rs. 6,800.20/-

6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.
Dam : 1 x 11.00 x 2.20 = 24.20m²
: 1 x 11.00 x 1.10 = 12.10m²
L/Channel : 2 x 11.00 x 0.25 = 5.50m²
: 2 x 11.00 x 0.60 = 13.20m²
: 1 x 6.00 x 0.60 = 3.60m²
= 58.60m²
@Rs. 86/ m² …………………………………… = Rs. 50, 39.60/-

7/11(i) Cutting road side drain 60cm wide 60cm deep including dressing grading and removal of soils up to 15metres complete.
(d) In soft rock
(i) 0.60m x 0.60m
L/Channel = 10.00Rm
@Rs. 35/m³ …………………………………… = Rs. 350.00/-
8/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stone within 200 metres and filling in trenches.

\[2 \times 10 \times 0.25 \times 0.60 = 3.80\text{m}^3\]

@ Rs. 618/m$^3$ ............................................................... = Rs. 1854.00/-

9/24(a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

\[1 \times 11 \times 0.60 \times 0.20 = 1.32\text{m}^3\]

@ Rs. 432/m$^3$ ............................................................... = Rs. 570.24/-

Total: = Rs. 48,729.22/-
Say: = Rs. 48,730.00

Rupees (Forty Thousand Seven Hundred Thirty) Only
1/3(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water Completed as directed.

(d) Soft or laminated rock or medium shale

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 25.00 x 0.80 x 1.50</td>
<td>30.00</td>
<td>103</td>
</tr>
<tr>
<td>Wing wall</td>
<td>2 x 3.00 x 0.80 x 1.50</td>
<td>7.20</td>
<td>37.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs.103/ m³</td>
<td>Rs.3,831.60/-</td>
</tr>
</tbody>
</table>

2/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm downgraded including necessary carriage of stones with distance of 200m and curing complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 25.00 x 0.80 x 0.10</td>
<td>2.00</td>
<td>102</td>
</tr>
<tr>
<td>Wing wall</td>
<td>2 x 3.00 x 0.80 x 0.10</td>
<td>0.48</td>
<td>2.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs.2022/ m³</td>
<td>Rs.5,014.56/-</td>
</tr>
</tbody>
</table>

3/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local carriage of stone within 200m complete

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 25.00 x 0.80 x 0.10</td>
<td>2.00</td>
<td>228</td>
</tr>
<tr>
<td>Wing wall</td>
<td></td>
<td>Rs.2281/ m³</td>
<td>Rs.4,562.00/-</td>
</tr>
</tbody>
</table>

4/22 (a) Providing regular stone masonry in retaining walls breast walls and wing walls etc. with hammer dressed

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
<th>Rate (Rs/m³)</th>
<th>Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 25.00 x 0.80 x 1.50</td>
<td>30.00</td>
<td>25</td>
</tr>
<tr>
<td>Wing wall</td>
<td></td>
<td>1 x 25.00 x (0.80 + 0.75) x 1.15= 22.281m³</td>
<td>228</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs.281/ m²</td>
<td>Rs.58,781.352/</td>
</tr>
</tbody>
</table>

5/38 Providing shuttering with dressed planks not less than 25mm thick properly joined including batten, etc. to the proper level and removing of the same after the concrete hardened complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m²)</th>
<th>Rate (Rs/m²)</th>
<th>Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 25.00 x 1.60</td>
<td>40.00</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs.28/ m²</td>
<td>Rs.11,240.00/-</td>
</tr>
</tbody>
</table>

6/39(a) Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m²)</th>
<th>Rate (Rs/m²)</th>
<th>Cost (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 25.00 x 1.50</td>
<td>37.50</td>
<td>86</td>
</tr>
<tr>
<td>Lead Channel</td>
<td>2 x 25.00 x 0.25</td>
<td>12.50</td>
<td>122.50</td>
</tr>
<tr>
<td></td>
<td>2 x 25.00 x 0.60</td>
<td>30.00</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>1 x 25.00 x 0.60</td>
<td>15.00</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rs.86/ m²</td>
<td>Rs.10,535.00/-</td>
</tr>
</tbody>
</table>
7/11(i) Cutting road side drain 60cm wide 60cm deep including dressing grading and Removal of soils up to 15metres complete as directed.

(d) In soft rock

(i) 0.60m x 0.60m

\[
\begin{align*}
200.00 \times 0.80 \times 1.50 &= 240.00 \text{ Rm} \\
\text{Rs.35/m}^3 \text{..........................................................} &= \text{Rs.8,400.00/-}
\end{align*}
\]

8/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stone within 200metres and filling in trenches.

\[
\begin{align*}
2 \times 24.00 \times 0.25 \times 0.60 &= 7.20 \text{m}^3 \\
\text{Rs.618/m}^3 \text{..........................................................} &= \text{Rs.4,449.60/-}
\end{align*}
\]

9/24(a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing including carriage of stone within a distance of 200m complete as directed.

\[
\begin{align*}
1 \times 25.00 \times 0.60 \times 0.20 &= 3.00 \text{m}^3 \\
\text{Rs.432/m}^3 \text{..........................................................} &= \text{Rs.1,296.00/-}
\end{align*}
\]

\[
\text{Total} = \text{Rs.108110.112} \\
\text{Say:} = \text{Rs.108110.00}
\]

\text{Rupees (One Lakh Eight Thousand One Hundred Ten) Only}
ESTIMATE FOR CONSTRUCTION OF DIVERSION DAM
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

1/3(b) Earth work in excavation for bridges and culverts below
the lowest bed level including dewatering and bailing out
water Completed as directed.
(d). Soft or laminated rock or medium shale

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cubic Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 0.80 x 2.25</td>
<td>18.00m³</td>
</tr>
<tr>
<td>Wing wall</td>
<td>2 x 3.00 x 0.80 x 2.25</td>
<td>10.80m³</td>
</tr>
<tr>
<td></td>
<td>@Rs.103/ m³</td>
<td>Rs.2,966.40/-</td>
</tr>
</tbody>
</table>

2/25 Providing cement concrete work in prop 1:4:8 with hard
broken stone aggregate or river shingles 40mm downgraded
including necessary carriage of stones with distance of 200m
and curing complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cubic Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 0.80 x 0.10</td>
<td>0.80m³</td>
</tr>
<tr>
<td>Wing wall</td>
<td>2 x 3.00 x 0.80 x 0.10</td>
<td>0.48m³</td>
</tr>
<tr>
<td></td>
<td>@Rs.2022/ m³</td>
<td>Rs.2,588.16/-</td>
</tr>
</tbody>
</table>

3/26 Providing cement concrete work in proportion 1:3:6 with hard
broken stone aggregates or river shingles 40mm downgraded
including curing and local carriage of stone within 200 m complete

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cubic Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 0.80 x 0.10</td>
<td>0.80m³</td>
</tr>
<tr>
<td></td>
<td>@Rs.2281/ m³</td>
<td>Rs.1,824.80/-</td>
</tr>
</tbody>
</table>

4/22 (a) Providing regular stone masonry in retaining walls breast
walls and wing walls etc. with hammer dressed

<table>
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<tr>
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<th>Quantity</th>
<th>Cubic Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 0.80 x 2.25</td>
<td>18.00m³</td>
</tr>
<tr>
<td></td>
<td>1 x 10.00 x (0.80 + 1.10) x 1.25= 11.875m³</td>
<td></td>
</tr>
<tr>
<td>Wing wall</td>
<td>2 x 3.00 x 0.30 x 0.80</td>
<td>1.44m³</td>
</tr>
<tr>
<td></td>
<td>2 x 3.00 x (0.80 + 0.30) x 1.25 = 4.125m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 = 35.44m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>@Rs.1022/ m³</td>
<td>Rs.36,219.68/-</td>
</tr>
</tbody>
</table>

5/38 Providing shuttering with dressed planks not less than
25mm thick properly joined including batten, etc. to the proper
level and removing of the same after the concrete hardened
complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cubic Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 2.30</td>
<td>23.00m²</td>
</tr>
<tr>
<td></td>
<td>@Rs.28/ m²</td>
<td>Rs.6,463.00/-</td>
</tr>
</tbody>
</table>

6/39(a) Providing 12mm thick cement plastering in proportion
1:4 including clearing the surface and carriage of sand
within 200m complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cubic Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1 x 10.00 x 2.30</td>
<td>23.00m²</td>
</tr>
<tr>
<td></td>
<td>1 x 10.00 x 1.10</td>
<td>11.00m²</td>
</tr>
<tr>
<td>Lead Channel</td>
<td>2 x 10.00 x 0.25</td>
<td>5.00m²</td>
</tr>
<tr>
<td></td>
<td>2 x 10.00 x 0.60</td>
<td>12.00m²</td>
</tr>
<tr>
<td></td>
<td>1 x 10.00 x 0.60</td>
<td>6.00m²</td>
</tr>
<tr>
<td></td>
<td>= 57.00m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>@Rs.86/ m²</td>
<td>Rs.4902.00/-</td>
</tr>
</tbody>
</table>
7/11 (i) Cutting road side drain 60cm wide 60cm Deep including dressing grading and Removal of soils up to 15metres complete as directed.

\( \text{Volume} = 1 \times 10.00 \times 0.60 \times 0.20 \text{m}^3 \)

\( \text{Volume} = 1.20 \text{m}^3 \)

\( @ \text{Rs.} 46.00/\text{m}^3 \)

\( \text{Rate} = \text{Rs.} 1668.00 \)

\( 8/21 \) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) including carriage of stone within 200metres and filling in trenches.

\( \text{Volume} = 2 \times 9.00 \times 0.25 \times 0.60 \text{m}^3 \)

\( \text{Volume} = 2.70 \text{m}^3 \)

\( @ \text{Rs.} 618.00/\text{m}^3 \)

\( \text{Rate} = \text{Rs.} 1668.60 \)

9/24 (a) Providing pitching with one man size boulder not less than 25cm x 25cm x 30cm long including filling the interstices with spoils and dressing and carriage of stone within 200metres.

\( \text{Volume} = 1 \times 10.00 \times 0.60 \times 0.20 \text{m}^3 \)

\( \text{Volume} = 1.20 \text{m}^3 \)

\( @ \text{Rs.} 432.00/\text{m}^3 \)

\( \text{Rate} = \text{Rs.} 518.40 \)

\( \text{Total} = \text{Rs.} 5963.04 \)

\( \text{Say:} = \text{Rs.} 5963.00 \)
1/3 Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed. 
(d). Soft or laminated rock or medium shale.

\[
23.00 \times 0.90 \times 1.00 = 20.70 \text{m}^3.
\]

\[\text{@Rs. 103/m}^3 = 2,132.10\] Rs.

2/21(a) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200 meters and filling in trenches.

\[
\begin{align*}
1 \times 23.00 \times 0.80 \times 1.90 & = 34.96 \text{m}^3. \\
1 \times 23.00 \times (0.80+1.80) \times 2.00 & = 59.80 \text{m}^3 \\
\frac{2}{2} & \\
\text{Less: } 1 \times 0.40 \times 0.60 \times 0.70 & = (-) 0.168 \text{m}^3 \\
& = 92.592 \text{m}^3 \\
\text{@Rs.618/m}^3 = 58,457.856 \text{/-}.
\end{align*}
\]

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

\[
\begin{align*}
1 \times 23.00 \times 2.00 & = 46.00 \text{m}^2 \\
2 \times 3.00 \times 0.40 & = 2.40 \text{m}^2 \\
& = 48.40 \text{m}^2 \\
\text{@Rs.281/ m}^2 = 13,600.40 \text{/-}.
\end{align*}
\]

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
1 \times 23.00 \times 0.80 \times 0.10 & = 1.84 \text{m}^3 \\
1 \times 23.00 \times 2.24 \times 0.10 & = 5.152 \text{m}^3 \\
\text{L/channel: } 1 \times 3.00 \times 0.60 \times 0.10 & = 0.18 \text{m}^3 \\
2 \times 3.00 \times 0.30 \times 0.10 & = 0.18 \text{m}^3 \\
& = 7.352 \text{m}^3 \\
\text{@Rs.2022/m}^3 = 14,865.744 \text{/-}.
\end{align*}
\]

5/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2 \times 23.00 \times 2.00 & = 92 \text{m}^2 \\
1 \times 23.00 \times 1.00 & = 23.00 \text{m}^2 \\
3 \times 3.00 \times 0.50 & = 4.50 \text{m}^2 \\
& = 119.50 \text{m}^2 \\
\text{@Rs.86/m}^2 = 10,277.00
\end{align*}
\]

6/15 (i) cutting of catch water drain 60cm wide and 60cm deep completed as directed.

94.18 Rm

\[\text{@Rs.28/Rm} = 2,637.04 \text{/-} \]

Total =Rs.1,03,206.04

Say =Rs.1,03,206.00

(Rupees One lakh Three hundred Two hundred six) only
ESTIMATE CONSTRUCTION OF
FARM POND UNDER UMTYNRU-WEISAR IWMP
(As per P.W.D schedule of rate for Road, Bridges and E&D Western Circle P.W.D Road Meghalaya, for 2007-2008)

1/3(a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift completed as directed.

(c) loose boulders above one man size

\[ 20.00 \times 1.50 \times 1.20m = 36.00m^3 \]

@Rs.29/m^3

\[ \text{Total Cost} = Rs.1044.00/- \]

2/21 Providing regular stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stones within 200meter and filling in trenches

\[
\begin{align*}
\text{Dam:} & \quad 1 \times 20.00 \times 1.30 \times 1.00 = 26.00m^3 \\
& \quad 1 \times 20.00 \times (1.30+0.40) \times 2.50 = 42.50m^3 \\
& \quad 2 \times 68.50m^3 = \text{Rs.618/m}^3 \\
\end{align*}
\]

\[ \text{Total Cost} = Rs.42,333.00/- \]

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including batten, props to the proper level and removing the same after the concrete harden as directed.

\[
\begin{align*}
\text{Over stone and cement concrete.} \\
1 \times 20.00 \times 2.5 = 100.00m^2 \\
2 \times 5.00 \times 0.40m = 4.00m^2 \\
\quad = 104m^2 \\
\text{@Rs281/m}^2 \\
\quad = \text{Rs.29,224.00} \\
\end{align*}
\]

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
\text{L/Channel:} \\
1 \times 5.00 \times 0.60 \times 0.10 m = (-)0.30m^3 \\
2 \times 5.00 \times 0.10 \times 0.30m = (-)0.30m^3 \\
\quad = 15.40m^3 \\
\quad = \text{Rs.2022/m}^3 \\
\end{align*}
\]

\[ \text{Total Cost} = Rs.31,138.80/- \]

5/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200m complete as directed.

\[
\begin{align*}
\text{Over stone and cement concrete.} \\
2 \times 20.00 \times 2.5 m = 100.00m^2 \\
1 \times 20.00 \times 0.60 m = 12.00m^2 \\
3 \times 5.00 \times 0.30m = 6.00m^2 \\
\quad = 118.00m^2 \\
\text{@Rs86/m}^2 \\
\quad = \text{Rs.10,148.00/-} \\
\end{align*}
\]

\[ \text{Grand Total:} \quad = \text{Rs.113,887.8/-} \]

\[ \text{(say} = \text{Rs.1,13,880/-)} \]

\[ \text{Rupees (One Lakh Thirteen Thousand and Eight Hundred) only.} \]

\[ \text{for 2nos= 2x1,13,888} = 2,27,776/- \]

\[ \text{Rupees (Two Lakhs Twenty Seven Thousand Seven hundred and Seventy)only.} \]
(1/3) (b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches free of completed as directed.

(d). Soft or laminated rock or medium shale.

32.00 x 0.90 x 1.00 = 28.80 m³.
@Rs. 103/m³………………………………………… = Rs. 2966.40/-

(2/21)(a) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stone within 200 metres and filling in trenches.

1 x 32.00 x 0.80 x 0.90 = 23.04 m³.
1 x 32.00 x (0.80 + 1.80) x 2.30 = 58.88 m³

\[
\text{Less : 1 x 0.40 x 0.60 x 0.70} = (-) 0.168 \text{m}^3 \\
\text{= 81.92 m}^3
\]

@Rs. 618/m³ …………………………………………… = Rs. 50,626.56/-

(3/38) Providing shuttering with dressed planks not less than 25 cm thick properly joined including batten, props to the proper level and removing the same after the concrete harden as directed.

\[
\begin{align*}
1 & x 32.00 \times 2.30 = 73.60 \text{ m}^2 \\
2 & x 32.00 \times 0.60 = 19.20 \text{ m}^2 \\
& = 92.80 \text{ m}^2 \\
\end{align*}
\]

@Rs. 281/m² …………………………………………… = Rs. 26,076.80/-

(4/25) Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
1x32.00 \times 0.80 \times 0.10 & = 2.56 \text{ m}^3 \\
1x32.00 \times 2.24 \times 0.10 & = 7.168 \text{ m}^3 \\
1x3.00 \times 0.60 \times 0.10 & = 0.18 \text{ m}^3 \\
2x3.00 \times 0.30 \times 0.10 & = 0.18 \text{ m}^3 \\
& = 0.088 \text{ m}^3, \\
\end{align*}
\]

@Rs. 2022/m³………………………………………… = Rs. 20,397.93/-

(5/39) Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2 & x 32.00 \times 2.50 = 147.20 \text{ m}^2 \\
1 & x 32.00 \times 1.15 = 36.80 \text{ m}^2 \\
3 & x 32.00 \times 0.57 = 54.72 \text{ m}^2 \\
& = 238.72.50 \text{ m}^2 \\
\end{align*}
\]

@Rs. 86/m² …………………………………………… = Rs. 20,529.92/-

Total = Rs. 1,20,597.64/-
(say Rs. 1,20,590.00/-).

(Rupees One Lakh Twenty Thousand Five Hundred & Ninety) only
ESTIMATE FOR CONSTRUCTION OF WATER HERVESTING STRUCTURE
NO-UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08.

1/3(b) Earth work in excavation for bridges and culverts below
the lowest bed level including dewatering and bailing
out water completed as directed.
(d). Soft or laminated rock or medium shale.
\[
1 \times 13.00 \times 0.90 \times 1.00 = 11.70 \text{m}^3
\]
@Rs. 103/m³ .......................................................... = Rs. 1, 205.10

2/21(a) Providing regular dry stone masonry walls with hammer
dressed or blunt chisel dressed stones of heavy section
(size not less than 25cmx25cmx30cm long) with proper key
stones each not less than 25cmx25cmx75cm long including carriage
of stone within 200 meters and filling in trenches.
\[
1 \times 13.00 \times 1.90 = 22.23 \text{m}^3.
\]
\[
1 \times 13.00 \times (0.80+1.80) \times 2.00 = 33.80 \text{m}^3
\]
\[\frac{2}{2}\]
Less :
\[
1 \times 0.40 \times 0.60 \times 0.70 = (-) 0.168 \text{m}^3
\]
\[= 56.03 \text{m}^3
\]
@Rs.618/m³, .......................................................... =Rs.34, 656.54

3/38 Providing shuttering with dressed planks not less than
25 cm thick properly joined including battern, props to
the proper level and removing the same after the concrete
harden as directed.
\[
1 \times 13.00 \times 2.00 = 26.00 \text{m}^2
\]
\[
2 \times 3.00 \times 0.40 = 2.40 \text{m}^2
\]
\[= 28.40 \text{m}^2
\]
@Rs.281/ m², .......................................................... = Rs. 7, 980.40

4/25 Providing cement concrete work in prop 1:4:8 with hard
broken stone aggregate or river shingles 40mm down graded
including necessary carriage of stones with distance of 200m
and curing complete as directed.
\[
1\times13.00 \times 0.80 \times 0.10 = 1.04 \text{m}^3
\]
\[
1\times13.00 \times 2.24 \times 0.10 = 2.912 \text{m}^3
\]
L/channel: 
\[
1\times3.00 \times 0.60 \times 0.10 = 0.18 \text{m}^3
\]
\[
2\times3.00 \times 0.30 \times 0.10 = 0.18 \text{m}^3
\]
\[= 4.312 \text{m}^3
\]
@Rs.2022/m³, .......................................................... = Rs.8718.864

5/39 Providing 12mm thick cement plastering including clearing surface
in proportion 1:4 including screening the sand, cleaning the surface and
carriage of sand within 200 m complete as directed.
\[
2 \times 13.00 \times 2.00 = 52.00 \text{m}^2
\]
\[
1 \times 13.00 \times 1.00 = 13.00 \text{m}^2
\]
\[
3 \times 13.00 \times 0.50 = 19.50 \text{m}^2
\]
\[= 84.50 \text{m}^3
\]
@Rs.86/m², .......................................................... = Rs.7, 267.00

6/15 (i) cutting of catch water drain 60cm wide and 60cm deep
completed as directed.
\[
73.14 \text{Rm}
\]
@Rs.28/Rm, .......................................................... = Rs. 2, 047.04

TOTAL: .......................................................... = Rs.61, 875.82
SAY: .......................................................... = Rs.61875.00

(Rupees Sixty one thousand eight hundred Seventy Five)
ESTIMATE FOR CONSTRUCTION OF WATER HERVESTING POND
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08

1/3  (b) Earth work in excavation for bridges and culverts below the lowest
bed level including dewatering and bailing out water in order to keep
the foundation trenches free of water and completed as directed.
(d). Soft or laminated rock or medium shale.

\[1 \times 30 \times 1.5 \times 1.2 = 54.00 \text{m}^3\]
\[@\text{Rs. 29/m}^3 \Rightarrow \text{Rs. 1566.00/-}\]

(2/21)(a). Providing regular dry stone masonry walls with hammer dressed or
blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long)
with proper key stones each not less than 25cmx25cmx75cm long
including carriage of stone within 200 metres and filling in trenches.

\[
\begin{align*}
\text{Dam: } & 1 \times 30.00 \times 1.30 \times 1.00 = 39.00 \text{m}^3, \\
& 1 \times 30.00 \times (1.30+0.40) \times 2.50 = 63.75 \text{m}^3 \\
& 1 \times 102.75 \text{m}^3 \\
& @\text{Rs.} 618/\text{m}^3 \Rightarrow \text{Rs. 63499.50/-}
\end{align*}
\]

(3/38) Providing shuttering with dressed planks not less than 25 cm thick
properly joined including battern, props to the proper level and removing t
he same after the concrete harden as directed.

\[2 \times 30 \times 2.5 = 150.00 \text{ m}^2\]
\[@\text{Rs.} 281/\text{m}^2 \Rightarrow \text{Rs. 42150.00/-}\]

aggregate or river shingles 40mm down graded including necessary carriage
of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
&1 \times 30.00 \times 1.50 \times 0.20 = 9.00 \text{m}^3 \\
&2 \times 30.00 \times 0.10 \times 2.50 = 15.00 \text{m}^3 \\
&24.00 \text{m}^3 \\
&@\text{Rs.} 2022/\text{m}^3 \Rightarrow \text{Rs. 48528.00/-}
\end{align*}
\]

(3/39) Providing 12mm thick cement plastering including clearing surface
in proportion 1:4 including screening the sand, cleaning the surface and
carriage of sand within 200 m complete as directed.

\[
\begin{align*}
&2 \times 30.00 \times 2.5 = 150.00 \text{m}^2 \\
&1 \times 30.00 \times 0.60 = 7.20 \text{m}^2 \\
&168.00 \text{m}^2 \\
&@\text{Rs.} 86/\text{m}^2 \Rightarrow \text{Rs. 14448.00/-}
\end{align*}
\]

Grand Total = Rs. 170191.5/-
(say Rs. 1,70,190/-)

(Rupees One Lakh Seventy Thousand One Hundred & Ninety) only
ESTIMATE FOR CONSTRUCTION OF WATER HERVESTING STRUCTURE
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08

(1/3) (b) Earth work in excavation for bridges and culverts below the lowest
bed level including dewatering and bailing out water in order to keep the
foundation trenches free of water completed as directed.
(d). Soft or laminated rock or medium shale.

\[
\begin{align*}
28.00 \times 0.90 \times 1.00 &= 25.20 \text{m}^3 \\
@ \text{Rs. } 103/\text{m}^3 &\quad \Rightarrow \text{Rs. } 2595.60/-
\end{align*}
\]

(2/21)(a). Providing regular dry stone masonry walls with hammer dressed or
blunt chisel dressed stones of heavy section (size not less than
25cmx25cmx30cm long) with proper key stones each not less than
25cmx25cmx75cm long including carriage of stone within 200 metres and filling in trenches.

\[
\begin{align*}
1 \times 28.00 \times 0.80 \times 1.90 &= 42.56 \text{m}^3 \\
1 \times 28.00 \times (0.80+1.80) \times 2.00 &= 81.86 \text{m}^3 \\
\frac{1}{2} \times 0.40 \times 0.60 \times 0.70 &= (-0.168) \text{m}^3 \\
= 124.42 \text{m}^3 \\
@ \text{Rs. } 618/\text{m}^3 &\quad \Rightarrow \text{Rs. } 76,891.56/-
\end{align*}
\]

(3/38) Providing shuttering with dressed planks not less than 25 cm thick properly
joined including battern, props to the proper level and removing the same
after the concrete harden as directed.

\[
\begin{align*}
1 \times 28.00 \times 2.00 &= 56.00 \text{m}^2 \\
2 \times 3.00 \times 0.40 &= 24.00 \text{m}^2 \\
&= 58.40 \text{m}^2 \\
@ \text{Rs. } 281/\text{m}^2 &\quad \Rightarrow \text{Rs. } 16410.40/-
\end{align*}
\]

aggregate or river shingles 40mm down graded including necessary carriage
of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
1 \times 28.00 \times 0.80 \times 0.10 &= 2.24 \text{m}^3 \\
1 \times 28.00 \times 2.24 \times 0.10 &= 6.272 \text{m}^3 \\
\text{L.channel} \times 3.00 \times 0.60 \times 0.10 &= 0.18 \text{m}^3 \\
2 \times 3.00 \times 0.30 \times 0.10 &= 0.18 \text{m}^3 \\
&= 8.872 \text{m}^3 \\
@ \text{Rs. } 2022/\text{m}^3 &\quad \Rightarrow \text{Rs. } 17,939.184/-
\end{align*}
\]

(3/39) Providing 12mm thick cement plastering including clearing surface
in proportion 1:4 including screening the sand, cleaning the surface and
 carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2 \times 28.00 \times 2.00 &= 112.00 \text{m}^2 \\
2 \times 28.00 \times 1.00 &= 56.00 \text{m}^2 \\
2 \times 28.00 \times 0.50 &= 28.00 \text{m}^2 \\
&= 196.00 \text{m}^2 \\
@ \text{Rs. } 86/\text{m}^2 &\quad \Rightarrow \text{Rs. } 16,856.00/-
\end{align*}
\]

Total = \text{Rs.1,30,692.744/-}
(say \text{Rs.1,30,690.00/-}).

For 3 Nos = 3 x 130690.00 = \text{Rs.392070.00}

(\text{Rupees Three lakh Ninety Two thousand Seventy}) only
1/3(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.

(d) Soft or laminated rock or medium shale.

\[ 1 \times 13.00 \times 0.90 \times 1.00 = 11.70 \text{m}^3 \]

@Rs. 103/m³ ................................................. = Rs.1, 205.10

2/21(a) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200 meters and filling in trenches.

\[ 1 \times 13.00 \times 0.90 \times 1.90 = 22.23 \text{m}^3 \]
\[ 1 \times 13.00 \times (0.80+1.80) \times 2.00 = 33.80 \text{m}^3 \]

Less : \[ 1 \times 0.40 \times 0.60 \times 0.70 = (-) 0.168 \text{m}^3 \]

= 56.03 m³

@Rs.618/m³ .................................................. = Rs.34, 656.54

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

\[ 1 \times 13.00 \times 2.00 = 26.00 \text{ m}^2 \]
\[ 2 \times 3.00 \times 0.40 = 2.40 \text{ m}^2 \]

= 28.40 m²

@Rs.281/ m² ................................................. = Rs.7, 980.40

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[ 1x13.00 \times 0.80 \times 0.10 = 1.04 \text{m}^3 \]
\[ 1x13.00 \times 2.24 \times 0.10 = 2.912 \text{m}^3 \]

L/channel: \[ 1x3.00 \times 0.60 \times 0.10 = 0.18 \text{m}^3 \]
\[ 2x3.00 \times 0.30 \times 0.10 = 0.18 \text{m}^3 \]

= 4.312 m³

@Rs.2022/m³ ................................................... = Rs.8718.864

(3/39) Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

\[ 2 \times 13.00 \times 2.00 = 52.00 \text{m}^2 \]
\[ 1 \times 13.00 \times 1.00 = 13.00 \text{m}^2 \]
\[ 3 \times 13.00 \times 0.50 = 19.50 \text{m}^2 \]

= 84.50 m²

@Rs.86/m² ..................................................... =Rs.7, 267.00

TOTAL: = Rs.59, 827.90

SAY: = Rs.59, 830.00

For 2 Nos = 2 x 59830.00 = Rs.119660.00

(Rupees One Lakh Nineteen thousand Six hundred Sixty) Only
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08

1/3 (b) Earth work in excavation for bridges and culverts below the lowest
bed level including dewatering and bailing out water in order to keep
the foundation trenches free of water completed as directed.

(d) Soft or laminated rock or medium shale.

\[ 27 \times 0.90 \times 0.95 = 23.085 \text{m}^3 \]
\[ @ \text{Rs. } 103/\text{m}^3 \text{ } \rightarrow \text{Rs. } 2377.755/- \]

(2/21(a). Providing regular dry stone masonry walls with hammer dressed or
blunt chisel dressed stones of heavy section (size not less than
25cmx25cmx30cm long) with proper key stones each not less than
25cmx25cmx75cm long including carriage of stone within 200 metres
and filling in trenches.

\[ 1 \times 27.00 \times 0.80 \times 0.95 = 20.52 \text{m}^3 \]
\[ 1 \times 27.00 \times (0.80+0.75) \times 2.20 = 44.55 \text{m}^3 \]
\[ \text{Less: } 1 \times 0.40 \times 0.60 \times 0.70 = (-) 0.168 \text{m}^3 \]
\[ = 64.902 \text{m}^3 \]
\[ @ \text{Rs. } 618/\text{m}^3 \text{ } \rightarrow \text{Rs. } 40,109.436/- \]

(3/38) Providing shuttering with dressed planks not less than 25 cm thick properly
joined including batten, props to the proper level and removing the same
after the concrete harden as directed.

\[ 1 \times 27 \times 2.20 = 59.40 \text{m}^2 \]
\[ 2 \times 3.00 \times 0.70 = 4.20 \text{m}^2 \]
\[ = 63.60 \text{m}^2 \]
\[ @ \text{Rs. } 281/\text{m}^2 \text{ } \rightarrow \text{Rs. } 17,871.60/- \]

aggregate or river shingles 40mm down graded including necessary carriage
of stones with distance of 200m and curing complete as directed.

\[ 1 \times 27.00 \times 0.80 \times 0.10 = 2.16 \text{m}^3 \]
\[ 1 \times 27.00 \times 2.24 \times 0.10 = 6.048 \text{m}^3 \]
\[ \text{L.channel } 1 \times 3.00 \times 0.60 \times 0.10 = 0.18 \text{m}^3 \]
\[ 2 \times 3.00 \times 0.30 \times 0.10 = 0.18 \text{m}^3 \]
\[ = 8.568 \text{m}^3 \]
\[ @ \text{Rs. } 2022/\text{m}^3 \text{ } \rightarrow \text{Rs. } 17,324.496/- \]

(3/39) Providing 12mm thick cement plastering including clearing surface
in proportion 1:4 including screening the sand, cleaning the surface and
 carriage of sand within 200 m complete as directed.

\[ 2 \times 27.00 \times 2.20 = 118.80 \text{m}^2 \]
\[ 1 \times 27.00 \times 1.10 = 29.70 \text{m}^2 \]
\[ 3 \times 27.00 \times 0.55 = 44.50 \text{m}^2 \]
\[ = 193.05 \text{m}^2 \]
\[ @ \text{Rs. } 86/\text{m}^2 \text{ } \rightarrow \text{Rs. } 16,602.30/- \]
\[ \text{Total } = \text{Rs. } 94,389.411/- \]
\[ \text{(say } = \text{Rs. } 94,389.00/-) \]

For 3 Nos = 3 x 94389.00 =Rs.283167.00

(Rupees Two Lakh Eighty Three Thousand One Hundred & Sixty Nine)only
1/3(a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift completed as directed. 
(c) loose boulders above one man size

<table>
<thead>
<tr>
<th>Volume Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.00 x 1.50 x 0.70 = 31.50 m³</td>
<td>@Rs.29/m³ = Rs.913.50</td>
</tr>
</tbody>
</table>

2/21 Providing regular stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stones within 200meter and filling in trenches

<table>
<thead>
<tr>
<th>Volume Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 30.00 x 1.50 + 0.50 x 1.20 = 21.60 m³</td>
<td>@Rs618/m³ = Rs.21092.34</td>
</tr>
</tbody>
</table>

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

<table>
<thead>
<tr>
<th>Volume Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 30.00 x 1.20 = 36.00m²</td>
<td>@Rs281/m² = Rs.10678.00</td>
</tr>
</tbody>
</table>

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

<table>
<thead>
<tr>
<th>Volume Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 30.00 x 0.70 x 0.10 = 2.10m³</td>
<td>@Rs2022/m³ = Rs.19047.24</td>
</tr>
</tbody>
</table>

5/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200m complete as directed.

<table>
<thead>
<tr>
<th>Volume Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x 30.00 x 1.20 = 72.00m²</td>
<td>@Rs86/m² = Rs.8127.00</td>
</tr>
</tbody>
</table>

**TOTAL:** =Rs.59858.08

**SAY:** =Rs.59850.00

Rupees (Fifty Nine Thousand Eight Hundred Fifty) Only
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP-V,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08

1/3 Earth work in excavation for bridges and culverts below the lowest
bed level including dewatering and bailing out water completed as directed.
(d). Soft or laminated rock or medium shale.
\[ 14 \times 0.90 \times 1.00 = 12.60 \text{m}^3 \]
@Rs. 103/m³………………………………………………… = Rs. 1,297.80/-

2/21(a) Providing regular dry stone masonry walls with hammer dressed or blunt
chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long)
with proper key stones each not less than 25cmx25cmx75cm long including
carrage of stone within 200 meters and filling in trenches.
\[
\begin{align*}
1 \times 14.00 \times 0.80 \times 1.90 &= 21.28 \text{m}^3 \\
1 \times 14.00 \times (0.80+1.80) \times 2.25 &= 40.95 \text{m}^3 \\
\text{Less : } 1 \times 0.40 \times 0.60 \times 0.70 &= (-) 0.168 \text{m}^3 \\
\text{Total : } &= 62.062 \text{m}^3
\end{align*}
\]
@Rs.618/m³………………………………………………… = Rs.38,354.316/-

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly
joined including battern, props to the proper level and removing the same
after the concrete harden as directed.
\[
\begin{align*}
1 \times 14.00 \times 2.25 &= 31.5 \text{ m}^2 \\
2 \times 3.00 \times 0.40 &= 2.40 \text{ m}^2 \\
\text{Total : } &= 33.90 \text{ m}^2
\end{align*}
\]
@Rs.281/m²………………………………………………… = Rs.9525.90/-

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone
aggregate or river shingles 40mm down graded including necessary carriage
of stones with distance of 200m and curing complete as directed.
\[
\begin{align*}
1 \times 14.00 \times 0.80 \times 0.10 &= 1.12 \text{m}^3 \\
1 \times 14.00 \times 2.24 \times 0.10 &= 3.136 \text{m}^3 \\
\text{L/channel: } 1 \times 3.00 \times 0.60 \times 0.10 &= 0.18 \text{m}^3 \\
2 \times 3.00 \times 0.30 \times 0.10 &= 0.18 \text{m}^3 \\
\text{Total : } &= 4.616 \text{m}^3
\end{align*}
\]
@Rs.2022/m³………………………………………………… = Rs.9333.552/-

3/39 Providing 12mm thick cement plastering including clearing surface in
proportion 1:4 including screening the sand, cleaning the surface and carriage
of sand within 200 m complete as directed.
\[
\begin{align*}
2 \times 14.00 \times 2.25 &= 63.00 \text{m}^2 \\
2 \times 14.00 \times 1.123 &= 31.5\text{m}^2 \\
2 \times 14.00 \times 0.56 &= 15.75\text{m}^2 \\
\text{Total : } &= 110.25 \text{m}^2
\end{align*}
\]
@Rs.86/m²………………………………………………… = Rs.9481.50

For 2 nos = 2 x 67993.00 =Rs.135986.00

(Rupees One Lakh Thirty Five thousand nine hundred Eighty Six) only

177
ESTIMATE FOR CONSTRUCTION OF
WATER HARVESTING STRUCTURE UNDER UMTYRNUS-WEISAR FOR WATERSHED IWMP,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN
CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08

(1/3) (b) Earth work in excavation for bridges and culverts below the lowest bed
level including dewatering and bailing out water in order to keep the
foundation trenches free of water completed as directed.
(d). Soft or laminated rock or medium shale.

19.00 x 0.90 x 1.00 = 17.10m³

@Rs. 103/m³ .................................................. = Rs. 1761.30/-

(2/21)(a). Providing regular dry stone masonry walls with hammer dressed or
blunt chisel dressed stones of heavy section (size not less than
25cmx25cmx30cm long) with proper key stones each not less than
25cmx25cmx75cm long including carriage of stone within 200 metres
and filling in trenches.

\[
\begin{align*}
1 \times 19.00 \times 0.80 \times 0.90 & = 13.68m³, \\
1 \times 19.00 \times (0.80+1.80) \times 2.50 & = 38.00m³ \\
\text{Less: } 1 \times 0.40 \times 0.60 \times 0.70 & =(-) 0.168m³ \\
\text{=} & 51.682m³ \\
\text{@Rs.618/m³} & \text{.................................................. = Rs. 31,939.476/-}
\end{align*}
\]

(3/38) Providing shuttering with dressed planks not less than 25 cm thick properly
joined including battern, props to the proper level and removing the same
after the concrete harden as directed.

\[
\begin{align*}
1 \times 19.00 \times 2.50 & = 47.50 m², \\
2 \times 3.00 \times 0.60 & = 3.60 m² \\
\text{=} & 51.10m² \\
\text{@Rs.281/ m²} & \text{.................................................. = Rs.14,359.10/-}
\end{align*}
\]

aggregate or river shingles 40mm down graded including necessary carriage
of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
1 \times 19.00 \times 0.80 \times 0.10 & = 1.52m³ \\
1 \times 19.00 \times 2.24 \times 0.10 & = 4.256m³ \\
\text{L.channel} \times 3.00 \times 0.60 \times 0.10 & = 0.18m³ \\
2 \times 3.00 \times 0.30 \times 0.10 & = 0.18m³ \\
& = 6.138m³ \\
\text{@Rs.2022/m³} & \text{.................................................. = Rs. 12,406.99/-}
\end{align*}
\]

(3/39) Providing 12mm thick cement plastering including clearing surface
in proportion 1:4 including screening the sand, cleaning the surface and
carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2 \times 19.00 \times 2.50 & = 95.00m² \\
1 \times 19.00 \times 1.25 & = 23.75m² \\
1 \times 19.00 \times 0.60 & = 11.40m² \\
& = 130.15m² \\
\text{@Rs.86/m²} & \text{.................................................. = Rs.11,192.90/-}
\end{align*}
\]

Total = Rs.71,659.766/-
(say =Rs.71,660.00/-).

(Rupees Seventy One Thousand Six Hundred & Sixty) Only
ESTIMATE CONSTRUCTION OF WATER HARVESTING STRUCTURE UNDER UMTYNRU-WEISAR IWMP
(As per P.W.D schedule of rate for Road, Bridges and E&D Western Circle P.W.D Road Meghalaya, for 2007-2008)

1/3(a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift completed as directed.
(c) loose boulders above one man size

\[
25.00 \times 1.50 \times 0.70 = 26.25 \text{ m}^3
\]

@Rs.29/m$^3$ .................................................. = Rs.761.25

2/21 Providing regular stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stones within 200meter and filling in trenches

\[
\begin{align*}
1 \times 25.00 \times 0.70 \times 0.60 &= 10.50 \text{ m}^3 \\
1 \times 25.00 \times 0.70 + 0.50 \times 1.20 &= 18.00 \text{ m}^3 \\
&= 28.43 \text{ m}^3 \\
&\text{@Rs.618/m}^3\text{..................................................} = \text{Rs.17659.74}
\end{align*}
\]

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

\[
\begin{align*}
1 \times 25.00 \times 1.20 &= 30.00 \text{ m}^3 \\
1 \times 5.00 \times 0.40m &= 4.00 \text{ m}^3 \\
&= 34.00 \text{ m}^3 \\
&\text{@Rs.281/m}^3\text{..................................................} = \text{Rs.9554.00}
\end{align*}
\]

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
1 \times 25.00 \times 0.70 \times 0.10 \text{ m} &= 1.75 \text{ m}^3 \\
1 \times 25.00 \times 0.10 \times 2.24 \text{ m} &= 5.60 \text{ m}^3 \\
&\text{L/Channel: } 1 \times 5.00 \times 0.60 \times 0.10 \text{ m} &= 0.30 \text{ m}^3 \\
2 \times 5.00 \times 0.10 \times 0.30 \text{ m} &= 0.30 \text{ m}^3 \\
&= 7.95 \text{ m}^3 \\
&\text{@Rs.2022/m}^3\text{..................................................} = \text{Rs.16074.90}
\end{align*}
\]

5/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200m complete as directed.

\[
\begin{align*}
2 \times 25.00 \times 1.20 \text{ m} &= 60.00 \text{ m}^3 \\
1 \times 25.00 \times 0.60 \text{ m} &= 15.00 \text{ m}^3 \\
3 \times 5.00 \times 0.30 \text{ m} &= 4.50 \text{ m}^3 \\
&= 79.50 \text{ m}^3 \\
&\text{@Rs.86/m}^3\text{..................................................} = \text{Rs.6837.00}
\end{align*}
\]

TOTAL: =Rs.50886.89
SAY: =Rs.50880.00

Rupees (Fifty Thousand Eight Hundred Eighty) Only
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP

(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08)

1/3 Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.

(d). Soft or laminated rock or medium shale.

14.25 x 0.90 x 1.00 = 12.825m³.

@Rs. 103/m³ … … … … … … … … … … … … … … … … … = Rs. 1,320.97/-

2/21 (a) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200 meters and filling in trenches.

1 x 14.25 x 2.25 = 32.062 m³

1 x 3.00 x 0.40 = 2.4 m³

= 34.462m³

@Rs. 618/m³ … … … … … … … … … … … … … … … … … = Rs. 9683.82/-

3/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate of river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

1 x 14.25 x 0.80 x 0.10 = 1.14m³

1 x 14.25 x 2.24 x 0.10 = 3.206m³

L/channel: 1 x 3.00 x 0.60 x 0.10 = 0.18m³

2 x 3.00 x 0.30 x 0.10 = 0.18m³

= 4.706m³

@Rs. 2022/m³ … … … … … … … … … … … … … … … … .. = Rs. 9515.53/-

3/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

2 x 14.25 x 2.25 = 64.125m²

2 x 14.25 x 1.13 = 32.205m²

2 x 14.25 x 0.56 = 15.96m²

= 112.39m²

@Rs. 86/m² … … … … … … … … … … … … … … … … … = Rs. 9665.54

Total = Rs. 69,226.77

Say = Rs. 69,222.00

(Rupees Sixty Nine Thousand Two Hundred and Twenty Two) only

CIRCLE (PWD) MECHALAYA FOR THE YEAR 2007-08

Water Harvesting Structure under Maintenance Works for Watershed MP.

Estimate for Construction of
ESTIMATE CONSTRUCTION OF WATER HARVESTING STRUCTURE UNDER UMTYNRU-WEISAR IWMP (As per P.W.D schedule of rate for Road, Bridges and E&D Western Circle P.W.D Road Meghalaya, for 2007-2008)

1/3 (a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift completed as directed.

\[ \text{Volume} = 20.00 \times 3.00 \times 0.70 \times 0.20 = 42.00 \text{m}^3 \]

\[ \text{Rate} \times \text{Volume} = Rs.29/m \times 42.00 \text{m}^3 = Rs.1218.00 \]

2/2  Providing regular stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stones within 200meter and filling in trenches.

\[ \text{Volume} = 20.00 \times 0.70 \times 0.60 = 8.40 \text{m}^3 \]

\[ 2 \times 5.00 \times 0.40 \times 0.20 = 4.00 \text{m}^3 \]

\[ \text{Less: } 1 \times 0.40 \times 0.60 \times 0.30 = (-) 0.07 \text{m}^3 \]

\[ \text{Total Volume} = 9.77 \text{m}^3 \]

\[ \text{Rate} \times \text{Volume} = Rs.618/m \times 9.77 \text{m}^3 = Rs.6037.86 \]

3/3 Providing shuttering with dressed planks not less than 25 cm thick properly joined including batten, props to the proper level and removing the same after the concrete harden as directed.

\[ \text{Volume} = 20.00 \times 1.20 = 24.00 \text{m}^3 \]

\[ 2 \times 5.00 \times 0.40 \times 0.20 = 4.00 \text{m}^3 \]

\[ \text{Rate} \times \text{Volume} = Rs.281/m \times 28.00 \text{m}^3 = Rs.7868.00 \]

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200meter and curing complete as directed.

\[ \text{Volume} = 20.00 \times 0.70 \times 0.10 \times 0.20 = 1.40 \text{m}^3 \]

\[ 1 \times 20.00 \times 0.10 \times 2.24 = 4.48 \text{m}^3 \]

\[ \text{L/Channel: } 1 \times 5.00 \times 0.60 \times 0.10 = 0.30 \text{m}^3 \]

\[ 2 \times 5.00 \times 0.10 \times 0.30 = 0.30 \text{m}^3 \]

\[ \text{Total Volume} = 6.48 \text{m}^3 \]

\[ \text{Rate} \times \text{Volume} = Rs.2022/m \times 6.48 \text{m}^3 = Rs.13102.56 \]

5/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200meter complete as directed.

\[ \text{Volume} = 2 \times 20.00 \times 1.20 \times 0.60 = 48.00 \text{m}^3 \]

\[ 1 \times 20.00 \times 0.30 \times 0.50 = 3.00 \text{m}^3 \]

\[ \text{Rate} \times \text{Volume} = Rs.86/m \times 64.50 \text{m}^3 = Rs.5547.00 \]

TOTAL: Rs.33,773.42

SAY: Rs.33,770.00

Rupees (Thirty Three Thousand Seven Hundred and Seventy) Only
1/3(a) Earthwork in excavation to the proper level and grade including light dressing as directed and removal of spoils up to 30m lead and all lift completed as directed.
(c) loose boulders above one man size

\[
\begin{align*}
20.00 \times 1.50 \times 1.20m &= 36.00m^3 \\
\text{@Rs.29/m}^3 &\text{..........................................................} = \text{Rs.1044.00/-}
\end{align*}
\]

2/21 Providing regular stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x 25cm x 30cm long) with proper key stones each not less than 25cm x 25cm x 75cm long including carriage of stones within 200meter and filling in trenches

\[
\begin{align*}
\text{Dam} :& 1 \times 20.00 \times 1.30 \times 1.00 \quad = 26.00m^3 \\
1 \times 20.00 \times (1.30+0.40) \times 2.50 &= 42.50m^3 \\
\frac{1}{2} &= 68.50m^3 \\
\text{@Rs618/m}^3 &\text{..........................................................} = \text{Rs.42,333.00/-}
\end{align*}
\]

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

\[
\begin{align*}
1 \times 20.00 \times 2.5 &= 100.00m^2 \\
2 \times 5.00 \times 0.40 &= 4.00m^2 \\
\text{@Rs281/m}^2 &\text{..........................................................} = \text{Rs.29,224.00}
\end{align*}
\]

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[
\begin{align*}
1 \times 20.00 \times 1.50 \times 0.20m &= 6.00m^3 \\
2 \times 20.00 \times 0.10 \times 2.50m &= 10.00m^3 \\
\text{L/Channel:} \quad 1 \times 5.00 \times 0.60 \times 0.10m &= (-)0.30m^3 \\
2 \times 5.00 \times 0.10 \times 0.30m &= (-)0.30m^3 \\
\text{= 15.40m}^3 \\
\text{@Rs2022/m}^3 &\text{..........................................................} = \text{Rs.31,138.80/-}
\end{align*}
\]

5/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200m complete as directed.

\[
\begin{align*}
\text{Over stone and cement concrete.} \\
2 \times 20.00 \times 2.5m &= 100.00m^2 \\
1 \times 20.00 \times 0.60m &= 12.00m^2 \\
3 \times 5.00 \times 0.30m &= 6.00m^2 \\
\text{= 118.00m}^2 \\
\text{@Rs86/m}^2 &\text{..........................................................} = \text{Rs.10,148.00/-}
\end{align*}
\]

\[
\begin{align*}
\text{Grand Total :} &= \text{Rs.113,887.8/-} \\
\text{(say} &= \text{Rs.1,13,880.00/-})
\end{align*}
\]

Rupees (One Lakh Thirteen Thousand and Eight Hundred) only.
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08

(1/3) (b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches free of completed as directed.
(d) Soft or laminated rock or medium shale.

\[ 32.00 \times 0.90 \times 1.00 = 28.80 \text{m}^3. \]
\[ @ \text{Rs. 103/m}^3 \]
\[ = \text{Rs. 2966.40/-} \]

(2/21)(a) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200 metres and filling in trenches.

\[ 1 \times 32.00 \times 0.80 \times 0.90 = 23.04 \text{m}^3. \]
\[ 1 \times 32.00 \times (0.80+1.80) \times 2.30 = 58.88 \text{m}^3 \]
\[ \frac{2}{3} \]
\[ \text{Less : } 1 \times 0.40 \times 0.60 \times 0.70 = (-) 0.168 \text{m}^3 \]
\[ = 81.92 \text{m}^3 \]
\[ @ \text{Rs.618/m}^3 \]
\[ = \text{Rs. 50,626.56/-} \]

(3/38) Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

\[ 1 \times 32.00 \times 2.30 = 73.60 \text{m}^2 \]
\[ 2 \times 32.00 \times 0.60 = 19.20 \text{m}^2 \]
\[ = 92.80 \text{m}^2 \]
\[ @ \text{Rs.281/m}^2 \]
\[ = \text{Rs. 26,076.80/-} \]

(4/25) Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingle 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

\[ 1 \times 32.00 \times 0.80 \times 0.10 = 2.56 \text{m}^3 \]
\[ 1 \times 32.00 \times 2.24 \times 0.10 = 7.168 \text{m}^3 \]
\[ \text{L.channel } 1 \times 3.00 \times 0.60 \times 0.10 = 0.18 \text{m}^3 \]
\[ 2 \times 3.00 \times 0.30 \times 0.10 = 0.18 \text{m}^3 \]
\[ = 0.088 \text{m}^3. \]
\[ @ \text{Rs.2022/m}^3 \]
\[ = \text{Rs. 20,397.93/-} \]

(5/39) Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

\[ 2 \times 32.00 \times 2.50 = 147.20 \text{m}^2 \]
\[ 1 \times 32.00 \times 1.15 = 36.80 \text{m}^2 \]
\[ 3 \times 32.00 \times 0.57 = 54.72 \text{m}^2 \]
\[ = 238.72 \text{, 50m}^2 \]
\[ @ \text{Rs.86/m}^2 \]
\[ = \text{Rs. 20,529.92/-} \]

\[ \text{Total } = \text{Rs. 1,20,597.64/-} \]
\[ (\text{say } \text{Rs. 1,20,590.00/-}). \]

(Rupees One Lakh Twenty Thousand Five Hundred & Ninety) only
ESTIMATE FOR CONSTRUCTION WATER HARVESTING STRUCTURE
UNDER UMTYNRU-WEISAR FOR WATERSHED IWMP,
(BASED AS PER SCHEDULE OF RATES FOR ROADS, BRIDGES, ETC. FOR WESTERN CIRCLE, PWD (ROADS), MEGHALAYA FOR THE YEAR 2007-08

1/3 Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.
(d). Soft or laminated rock or medium shale.

23.00 x 0.90 x 1.00 = 20.70m³.

@Rs. 103/m³……………………………………… = Rs. 2,132.10/-

2/21(a) Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200 meters and filling in trenches.

23.00 x 0.90 x 1.00 = 20.70m³

23.00 x (0.80+1.80) x 2.00 = 59.80m³

Less : 1 x 0.40 x 0.60 x 0.70 = (-) 0.168m³

= 92.592m³

@Rs.618/m³……………………………………… = Rs.58,457.856/-

3/38 Providing shuttering with dressed planks not less than 25 cm thick properly joined including battern, props to the proper level and removing the same after the concrete harden as directed.

1 x 23.00 x 2.00 = 46.00 m²

2 x 3.00 x 0.40 = 2.40 m²

= 48.40m²

@Rs.281/m²……………………………………… = Rs. 13,600.40/-

4/25 Providing cement concrete work in prop 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

1x23.00 x 0.80 x 0.10 = 1.84m³

1x23.00 x 2.24 x 0.10 = 5.152m³

L/channel: 1x3.00 x 0.60 x 0.10 = 0.18m³

2x3.00 x 0.30 x 0.10 = 0.18m³

= 7.352m³

@Rs.2022/m³……………………………………… = Rs.14,865.744/-

5/39 Providing 12mm thick cement plastering including clearing surface in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 m complete as directed.

2 x 23.00 x 2.00 = 92m²

1 x 23.00 x 1.00 = 23.00m²

3 x 3.00 x 0.50 = 4.50m²

= 119.50m²

@Rs.86/m²……………………………………… = Rs.10,277.00

Total =Rs.1,00,569.10

Say =Rs.1,00,570.00

(Rupees One lakh five hundred Seventy ) only
1/3(b) Earth work in excavation for bridges and culverts below the lowest bed level including dewatering and bailing out water completed as directed.
(d) Soft or laminated rock or medium shale.

Abutment : 
2x1.60x0.60x0.50 = 0.96m$^3$

Wingwall : 
4x10.00x0.50x0.30 = 6.00m$^3$

@Rs.103/ m$^3$ .......................................................Rs.716.88/-

2/24(a) Providing stone pitching with one man size boulders not less than 25cm x 30cm along including filling the interstices with spoils and carriage of stone filling within a distance of 200 meters complete as directed.

Abutment : 
2x1.60x0.60x0.40 = 0.77m$^3$

Wingwall : 
4x10.00x0.50x0.30 = 6.00m$^3$

@Rs.432/ m$^3$ ....................................................... Rs.2924.64/-

3/25 Providing cement concrete work in proportion 1:4:8 with hard broken stone aggregate or river shingles 40mm down graded including necessary carriage of stones with distance of 200m and curing complete as directed.

Abutment : 
2x((1.20x0.30) + (½x0.30x1.20) ) = 1.08m$^3$

Wingwall : 
4x((1.20x0.20) + (½x0.20x1.20) ) = 1.44m$^3$

Railing block : 
20x1.00x0.40x0.60 = 4.80m$^3$

@Rs.1020.00/ m$^3$ ....................................................... Rs.7466.40/-

4/26 Providing cement concrete work in proportion 1:3:6 with hard broken stone aggregates or river shingles 40mm downgraded including curing and local Carriage of stone within 200 m complete.

Abutment: 
2x1.60x0.60x0.30 = 0.58m$^3$

Wing wall: 
4x10.00x0.50x0.30 = 6.00m$^3$

@Rs.2281/ m$^3$ ....................................................... Rs.15,008.98/-

5/28 Providing cement concrete work in proportion 1:2:4 ..........................................................diaphragm and railing, rails, posts, kerbs etc..........................completed as directed.

Slab: 
8.00x1.20x0.15 = 1.62m$^3$

Railing : 
8.00x0.10x0.10x0.18 = 0.06m$^3$

12.00x2.15x0.10x0.10 = 0.25m$^3$

112pec x 1no x 0.40 x 0.62 = 1.94m$^3$

@Rs.3000.00/ m$^3$ ....................................................... Rs.5820.00/-

6/40(a) Providing steel reinforcement of R.C.C work including ..................drawing complete as directed.

Slab : 
5pec x 1no x 9.00 x 0.62 = 27.09 kg

4pec x 1no x 9.20 x 0.62 = 22.82 kg

4pec x 1no x 1.20 x 0.62 = 33.48 kg

4pec x 1no x 1.40 x 0.62 = 38.20 kg

Railing : 
32pec x 1no x 0.80 x 0.62 = 27.09 kg

16pec x 1no x 9.00 x 0.62 = 22.82 kg

112pec x 1no x 0.40 x 0.62 = 33.48 kg

= 267.42 kg

= 2.67 quintal

@Rs.3000.00/ quintal .................................................. Rs.5820.00/-

7/38 Providing shuttering with dressed planks not less than 25mm thick complete as directed.

Slab: 
9.00x1.20 = 10.80m$^2$

Railing : 
8x4x0.10x0.80 = 2.56m$^2$

12x3x1.15x0.10 = 7.74m$^2$

= 21.10m$^2$

@Rs.281.00/ m$^2$ ....................................................... Rs.5929.10/-
8/5 Earthwork in filling or in an embankment in layer………………lead upto 30meter and lift upto 150cm. completed as directed.

(ii) With earth obtained from borrow pits in the private land
At the contractors own arrangement.

\[2 \times (\frac{1}{2} \times 10.70 \times 1.80) \times 11.20 = 215.71 m^3\]

\[= \frac{215.71 m^3}{3} = \frac{215.71 m^3}{3} \times 74 \text{Rs.} = \text{Rs.15962.54/-}\]

5/39 Providing 12mm thick cement plastering in proportion 1:4 including clearing the surface and carriage of sand within 200m complete as directed.

- Slab : \(9.00 \times 1.20 = 10.80 m^2\)
  \(2 \times 9.00 \times 0.15 = 2.70 m^2\)
- Railing : \(8 \times 4 \times 0.10 \times 1.80 = 2.56 m^2\)
  \(12 \times 3 \times 2.15 \times 0.10 = 7.74 m^2\)
- Abutment: \(1.60 \times 1.80 = 2.88 m^2\)
- Wing wall: \(4 \times 10.00 \times 1.80 = 72.00 m^2\)
- Railing block: \(20 \times 2 \times 1.00 \times 0.40 = 8.00 m^2\)
  \(20 \times 2 \times 0.60 \times 0.40 = 9.60 m^2\)
  \(\text{@Rs}86/ m^2\) = Rs.1578.96/-

Total Rs.75966.00/-
(Say, Rs.75,960.00/-)

Rupees (Seventy Five Thousand Nine Hundred and Sixty Six) only
ANNEXURE IV
MaO, SUB-COMMITTEE DETAILS ETC
To,

The Divisional Officer,
Soil & Water Conservation,
Nongstoin

Subject: -  Application for I.W.M.P. Watershed Project.

Sir,

With reference to the subject cited above, we the undersigned request on your honour to kindly include our village to the Umtynru – Weisar Watershed under I.W.M.P. Project.

For which act of your kindness, we shall be grateful to you.

Yours faithfully,

(1) (Shri. Dressland Marngar)

(2) (Shri. Kroily Nongshlong)

D. Mawrko
Yours faithfully,

For which act of your kindness, I shall be grateful to you.

Honour to kindly include our Village to the Lijimui - Western Watershed under IWM P.

With reference to the subject cited above, I am pleased to request on your

Subject: Application for IWM P. Watershed Project

Nonprolith
Soil & Water Conservation
The Divisional Officer

To

Dated: Mawrok, the

Village Durbar Mawrok
OFFICE OF THE
WEST KHASI HILLS DISTRICT - 793119
Dated Mawkohiang, the __________

To,

The Divisional Officer,
Soil & Water Conservation,
Nongstoin

Subject: -  Application for I.W.M.P. Watershed Project.

Sir,

With reference to the subject cited above, we the undersigned request on your honour to kindly include our village to the Umtynru – Weisar Watershed under I.W.M.P. Project.

For which act of your kindness, we shall be grateful to you.

Yours faithfully,

(1) (Shri. Shimbor Marwein)
  Secretary
  Shillong Mawkohiang

Arkwis.

(2) (Shri. Arkwis Syiemlieh)

Border Shillong
Mawkohiang
Rambau Syiem Ship
OFFICE OF THE
Village Durbar Shillianktieh
WEST KHASI HILLS DISTRICT – 793119

Dated Shillianktieh, the

To,

The Divisional Officer,
Soil & Water Conservation,
Nongstoin

Subject: - Application for I.W.M.P. Watershed Project.

Sir,

With reference to the subject cited above, I the undersigned request on your
honour to kindly include our village to the Umtynru – Weisar Watershed under I.W.M.P.

Project.

For which act of your kindness I shall be grateful to you.

Yours faithfully,

(1) (Shri. Sriniland Lyngkhoi)
Shnong Shillianktieh
Rambrai Syiemship
OFFICE OF THE
Village Durbar Mawlangbah
WEST KHASI HILLS DISTRICT - 793119

Dated Mawlangbah, the 28/9/2010

To,
The Divisional Officer,
Soil & Water Conservation,
Nongstoin

Subject: - Application for I.W.M.P. Watershed Project.

Sir,

With reference to the subject cited above, I the undersigned request on your
honour to kindly include our village to the Umtynru – Weisar Watershed under I.W.M.P.
Project.

For which act of your kindness, I shall be grateful to you.

Yours faithfully,

(1) (Shri. Khainroy Marwein)

S K Marwein
Viro Sordar
Shnong Mawlangbah
Rambrui Supership
OFFICE OF THE
Village Durbar Pungphreit
WEST KHASI HILLS DISTRICT - 793119

Dated Pungphreit, the 23rd Sept 2010

To,

The Divisional Officer,
Soil & Water Conservation,
Nongstoin

Subject: - Application for I.W.M.P. Watershed Project.

Sir,

With reference to the subject cited above, we the undersigned request on your honour to kindly include our village to the Umtynru – Weisar Watershed under I.W.M.P. Project.

For which act of your kindness we shall be grateful to you.

Yours faithfully,

(1) (Shri. M. Nongsiej)
Secretary

(2) (Shri. S. Longdoh)
Shnong Pungphreit

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Yours Faithfully,

For which act of your kindness I shall be grateful to you.

Honour to kindly include our Village to the Limnity – Wester Waterhed under I.W.M.P.

With reference to the subject cited above, I the undersigned request on your behalf,

Subject: Application for I.W.M.P. Watershed Project

To,

The Divisional Officer,

Non-Union
Soil & Water Conservation

Dated, Thapeshwar, the 35 - 9 - 2019

WEST KHALI HILLS DISTRICT - 793119
Village Durbar Thapeshwar
Office of the
OFFICE OF THE VILLAGES COMMITTEE/DORBAR SHNONG
MAWROK, THIEPKSEH, MAWROK-NONGNAH, PUNGPHEREIT, MAWLANGBAH,
SHILLIANG KTIEH, NONGKSEH, MAWKOHIAH VILLAGES
WEST KHASI HILLS DISTRICT

NO OBJECTION CERTIFICATE

This is to certify that the Dorbar Shnong Mawrok, Thiepkseh, Mawrok-Nongnah,
Pungphereit, Mawlangbah, Shilliang Ktieh, Nongkseh, Mawkohiang welcome the
implementation of the Project and has NO OBJECTION to the Soil & Water Conservation
Department Government of Meghalaya to implement the WKH-IWMP Project (Umtynru-
Weisar) within the area of the above mentioned villages.

1. MAWROK

[Signature]
Sordar Shnong
Mawrok Myriaw & Rambrai Syiemship

2. THIEPKSEH

[Signature]
Sordar
Shnong Thiepkseh
Rambrai Myriaw Syiemship

3. MAWROK-NONGNAH

[Signature]
Sordar
Mawrok-Nongnah

4. PUNGPHEREIT

[Signature]
(S.S. Lyngdoh)
Headman
Shnong Pungphereit

5. MAWLANGBAH

[Signature]
Sordar
Shnong Mawlangbah
Rambrai Syiemship

6. SHILLIANG KTIEH

[Signature]
Sordar
Shnong Shilliangktieh
Rambrai Syiemship

7. MAWKOHIAH

[Signature]
Sordar
Shnong Mawkohiang
Rambrai Syiemship

8. MAWKOHIAH

[Signature]
Sordar
Shnong Mawkohiang
Rambrai Syiemship

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This is to certify that WKH-IWMP - V has been selected based on the following criteria:

1. That the Watershed has a population of Schedule Tribes only.
2. That it has acute shortage of drinking water.
3. That it had preponderance of Wastelands and Degraded Lands.
4. That it has Productivity potential of the land.
5. That the area of Project not covered under Assured Irrigation.
6. That the People of the Watershed has assured of their full participation during the implementation of the Programme as well as for the operation and maintenance of the assets created after the handing over of the land.
7. That the common profits will be shared among all within the Villages, including the weaker section, women and the landless.
8. That the people of the villages are willing to make voluntary contributions for the betterment.

1. Mawrok
   
   Sordar: S.hong
   Mawrok Myliew & Rambrai Syiemship

2. Thiepkseh
   
   Secretary
   Shnong
   Mawrok

3. Mawrok-Nongnah
   
   Secretary
   Shnong
   Mawrok

4. Pungphriet
   
   (R.S.Lyngdoh)
   Headman
   Shnong Pungphriet

5. Mawlangbah
   
   Secretary
   Shnong Mawlangbah
   Rambrai Syiemship

6. Shilliangktrieh
   
   Secretary
   Shnong Shilliangktrieh
   Rambrai Syiemship

8. Mawkohiang
   
   Secretary
   Shnong Mawkohiang
   Rambrai Syiemship
RESOLUTION OF THE VILLAGES COMMITTEE/DORBAR SHNONG

A General meeting of the 8 Villages falling under Umtynu-Weisar Watershed (Mawrok, Thiepkseh, Mawrok-Nongnah, Pungphriet, Mawlangbah, Shilliangktieh, Nongkseh, Mawkohiang) was held 22th September, 2010 and the following resolution were adopted unanimously by the Committee.

1. That the villages posses land more than 2500 Ha to treated under various soil and watershed works.
2. That we will extend all possible help to the Soil And Water conservation Department while implementing the Integrated Watershed Management Programme (IWMP) in the degraded wasteland areas of villages.
3. That we will render all help possible to the survey team and cooperate with the Officers of the State/Central Government whenever they come to our village.
4. That the Sectary of the Watershed Committee will be from the Office of the Soil & Water Conservation Department, Nongstoin Soil & Water Conservation Division, Nongstoin and the Chairman of the Watershed Committee will be elected from the member of the villages.
5. That the villages will be take over all assets created by the department when they will be handed over after completion of the Project and device means to maintain and improve their sustainability.
6. That the common benefits will be shared amongst all the villages including the weaker section, women and the landless.

1. Mawrok
   [Signature]
   Secretary

2. Thiepkseh
   [Signature]
   Secretary

3. Mawrok-Nongnah
   [Signature]

4. Pungphriet
   [Signature]
   Secretary

5. Mawlangbah
   [Signature]

6. Shilliangktieh
   [Signature]

8. Mawkohiang
   [Signature]
The Sub-Committee met on February 18, 2010, and discussed the following:

A. Approval of the Committee slate for the election.
B. Approval of the program and activity for the year.

The following had mentioned names for the election:

1. Footbridge at Weielpan
2. Drinking well

Present members:

1. Arkinis K. Zepinhiel
2. Salinor Marweni
3. Korin K. Bani
4. Ratia Nungshang
5. Martina Nungshang

Secretary
Minang Mawkohiang

Arkinis
Border Shmong
Mawkohiang
Ramhrai Suetem Shiu
Ko Zorbar Shnong Mawrok Haka la shong
Zorbar Akyntak ha ko 25 tarik September 2010.
Bai Kawi Ko jingmat la itanai sad mynrin
lang ban la jed (form) in Ko Sub Committee
Water Shed C.C.M.P. Umtynru Weisar. Ba la Gun-
trai Kyntba Kku office Soil Conservation Department
Hongston west Khazai Hills District, Ki Kynteng Kii
Kong Kine Karen.

SL. No.  Kynteng Jait
1. Chairman - Shri. Dronis K. Zensaro  - K. Zensaro
2. Secretary - Shri. Phemstar K. Syiemliet  - P. Syiemliet
4. - do - Shri. Biolinda K. Syiemliet  - B. Syiemliet
5. - do - Shri. Kuwintina Syiemliet  - K. Syiemliet

Dated: Mawrok
Shri - 25/9/10

Soroti. Shnong
Mawrok Myntew & Pembral Syiemship
To Sub-committee Jungphreet (Watershed Management)

We wish to inform the Shong ha Ka that on 20th Nov 2010 the
in the Punyshah (Sonler Shong)

As per your request, the committee shall undertake the

1. Playground (football)
2. Football
3. Worship point

As per your request, the committee shall undertake the

Members present:

Kyrong
1st R. S. Lyndel
2nd B. Shingla
3rd D. K. Lyndel
4th J. J. Lyndel
5th N. Nanglen

(P.S. Lyngdoh)
Headman
Shnong Pungphreet