DETAILED PROJECT REPORT
OF
UMTYRWA UMIONG WATERSHED
UNDER INTEGRATED WATERSHED MANAGEMENT PROGRAMME (IWMP)
PROJECT – IX (2011-2012)
WEST KHASI HILLS DISTRICT, MEGHALAYA

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

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<th>Details</th>
</tr>
</thead>
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<td>Name of the State</td>
<td>Meghalaya</td>
</tr>
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<td>Name of the District</td>
<td>West Khasi Hills District</td>
</tr>
<tr>
<td>Name of the C&amp;RD Block</td>
<td>Mawshynrut</td>
</tr>
<tr>
<td>Name of the Villages</td>
<td>1). Seinduli-II 2). Mawsyrpat</td>
</tr>
<tr>
<td>Name of the Project</td>
<td>West Khasi Hills IWMP – IX</td>
</tr>
<tr>
<td>Total Geographical Area</td>
<td>1241 Ha</td>
</tr>
<tr>
<td>Total Treatment Area</td>
<td>1000 Ha</td>
</tr>
<tr>
<td>Total Project Cost</td>
<td>150.00 lakhs</td>
</tr>
<tr>
<td>Project Duration</td>
<td>5 Years</td>
</tr>
<tr>
<td>Project Implementing Agency</td>
<td>Soil &amp; Water Conservation Division, Nongstoin.</td>
</tr>
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<td>ANNEXURE IV</td>
<td>MoA, SUB COMMITTEE DETAILS ETC.</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION AND BACKGROUND
CHAPTER I

INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Umtyrwa Umiong (IWMP-IX) project is located in Mawshynrut C&RD Block, West Khasi Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Blei River and its tributaries flowing in a South direction. The total area is 1241 Ha. With 1000 Ha to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 26 kms from Nongstoin the District headquarter and also the Divisional Head Quarter West Khasi Hills District. A total of two villages are covered under the project. These are –

1. Seinduli-II
2. Mawsyrpat

1.2 Micro-watershed Information:

The project Area fall under only one micro-watershed. The micro-watershed code is 3B1C2a4a as codified by the North East Space Application Centre (NESAC). The total area of the micro-watershed is 1241 Ha. With 1000 hectares to be treated under the Integrated Watershed Management Programme (IWMP).
1.3 Need and Scope for Watershed Development:
The micro-watersheds 3B1C2a4a falls under the High – Very High Priority category as per the prioritization of watersheds by the North East Space Application Centre (NESAC). The geomorphology of the area consists of steep slopes dissected by a number of small tributaries running across the Watershed with considerable nature vegetation covers. The farmers also practice Jhum (Bun) cultivation and Charcoal Burning which are the major contributing factor for land degradation. Though the area receives sufficient rainfall during the monsoon, there is water shortage during the dry months.

1.4 Aim of the Project: To conserve and manage natural resources such as soil, water & vegetation for enhancing & sustaining land & water productivity on a sustainable basis thereby promoting food, social, economic & livelihood security.

Objectives:
1. To dissipate soil & water erosion & surface runoff
2. To harvest/ recycle surface runoff & rain water.
3. To enhance soil moisture regime/ water holding capacity.
4. To improve soil health & tilth.
5. To improve crop production & biomass productivity.
7. To promote generation of gainful employment opportunities.
CHAPTER II

BASIC INFORMATION OF THE PROJECT AREA
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BASIC INFORMATION OF THE PROJECT AREA

2.1 Location:

The Project area is located at a distance of 26 kms away from Nongstoin, the Headquarter of West Khasi Hills District and also fall under the Mawshynrut C &RD Block. The project area is situated between the two Rivers of West Khasi Hills the Riwiang and the Blei River on the way to Mawshynrut C&RD Block. The geographical location is between $91^0 07' 45''$ to $91^0 08' 50''$ E Longitude and $25^0 38' 00''$ to $25^0 40' 45''$ N Latitude. There are 2 villages within the Watershed which are as follows –

1. Seinduli-II
2. Mawsyrpat

The Nongstoin-Sonapahar Road passes through the Heart of Seinduli-II and the Mawsyrpat is reached by the Kutcha road

2.2 Physiography:

The physiography of the micro-watershed is undulating. The altitude ranges from 1330m to 1520m in the upper region of the watershed while in the middle region ranges from 1220m to 1330m whereas in the lower region of the watershed it ranges from 1000m to 1200m respectively

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>1031m to 1247m</td>
<td>5% to 35%</td>
<td>Micro Watershed</td>
<td>Wah Riat tham &amp; Umiong</td>
<td>Sloping</td>
</tr>
</tbody>
</table>

**Drainage:** The major stream draining the micro-watershed is the Riwiang River which is a 4th order stream flowing in a South-West direction. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Riwiang River. The drainage density calculated is 3.50 Km/Km² & the average bifurcation ratio worked out is 3.87. The total length of all the streams/rivers is 48.50 Km (1st Order to IVth Order). 1st Order Streams 56 Nos, 2nd Order Streams 8 Nos, 3rd Order Streams 3 Nos and 4th Order Streams 2 Nos.

**Drainage Density** = \( \frac{Total \ length \ of \ streams/rivers \ in \ the \ Watershed \ (Km)}{Area \ of \ Watershed \ (Km^2)} \)

**Bifurcation Ratio** = \( \frac{Previous \ streams \ order \ (Nos. \ of \ Segments)}{Next \ Order \ (Nos. \ of \ Segments)} \)
2.2.1 **Soil:** The Soil as per the Soil Map prepared by GIS Lab, State Level Nodal Agency Soil & Water Conservation Department Meghalaya and Soil Testing done by Soil & Water Conservation Survey Division, Shillong, Meghalaya, indicates Loamy Soil in the A1 Horizon, Clayloam in the A2 Horizon and Clay soil in the B3 Horizon with a deep depth and medium texture with moderate erosion. The $\text{pH}$ of the soil is 4.72 which is highly Acidic, Nitrogen content is 1388.3Kg/Ha, Phosphorus content is 3.17Kg/Ha and Potassium content is 183.5 Kg/Ha.

**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>WKH IWMP-IX</td>
<td>Water erosion:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a</td>
<td>Sheet</td>
<td>1241</td>
<td>2700-3200</td>
<td>10.50-32.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b</td>
<td>Rill</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>c</td>
<td>Gully</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sub total</td>
<td></td>
<td>1241</td>
<td>2700-3200</td>
<td>10.50-32.50</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>

2.3 **Climate:** The Climate as per the Agro-Climatic Map prepared by GIS Lab, State Level Nodal Agency Soil & Water Conservation Department Meghalaya, indicates cold moisture. The Average Annual Rainfall is 2960mm.
Table 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 (in ha)</th>
<th>Names of the districts</th>
<th>Names of the Projects</th>
<th>Major soil types</th>
<th>Average annual rainfall in mm (preceding 5 years’ average)</th>
<th>Major crops</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a) Type</td>
<td>1241 Ha</td>
<td>Paddy</td>
</tr>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>Cold Moisture</td>
<td>1000 Ha</td>
<td>West Khasi Hills</td>
<td>West Khasi Hills</td>
<td>Loamy Soil in the A1 Horizon, Clay loam in the A2 Horizon and Clay soil in the B3 Horizon with a deep depth and medium texture with moderate erosion. The pH of the soil is 4.72 which is highly Acidic, Nitrogen content is 1388.3Kg/Ha, Phosphorus content is 3.17Kg/Ha and Potassium content is 183.5 Kg/Ha.</td>
<td>2990 mm</td>
<td>Potato</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b) Area (ha)</td>
<td></td>
<td>Maize</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ginger</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Orange</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>183 Ha</td>
<td></td>
</tr>
</tbody>
</table>

2.4 Agriculture: Agriculture is the mainstay of the people of the area, the principal crops are Paddy, Potato, Maize, Ginger and other vegetables. Important Horticulture crops include Peach, Pear, Oranges, Lemon, Sohphie Bah (*Myrica nagii*), Sohphie Nam (*M. farquhariana, M. esculenta*), Blackberry, Passion Fruit, etc.
<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>80</td>
<td>19.67</td>
<td>1573.60</td>
</tr>
<tr>
<td>Potato</td>
<td>20</td>
<td>38.20</td>
<td>764.00</td>
</tr>
<tr>
<td>Maize</td>
<td>28</td>
<td>11.64</td>
<td>325.92</td>
</tr>
<tr>
<td>Ginger</td>
<td>40</td>
<td>87.89</td>
<td>3515.60</td>
</tr>
<tr>
<td>Total</td>
<td>168</td>
<td>157.40</td>
<td>6179.08</td>
</tr>
</tbody>
</table>

2.5 Natural Vegetation: The tree species common to the watershed area includes — *Quercus* spp (Diengsning), *Schima khasiana* (Dieng Ngan), *Castanopsis* spp (Dieng Lieng), Bamboo spp, Pine. However, due to jhum cultivation and Charcoal burning the forest cover of the area has reduced considerably.

2.6 Socio-Economic Profile: Economically, the people of the project Area are poor mainly due to low Agricultural productivity, lack of modern methods of cultivation, farmers largely practice mono-agriculture(single cropping) and also because of low productivity potential of the land. The Average Annual Income of the Project Area is `40000.00

Demographic Status: The total households in the watershed project is 276 with a total population of 1656, of which 834 are male and 822 are female. The detail of the household in each of the villages in the watershed project is as follows:
**Infrastructure facilities:**

2.1.1 *Roads:* All the villages within the Project Area are not connected by good road. Seinduli-II passed through a pucca Road and Mawsyrpat is connected by kutcha road.

2.1.2 *School:* there are only 6 L.P Schools, 1 U.P School and 1 Secondary School within the Project Area run either by the Mission or by the Government.

2.1.3 *Electricity:* Electricity have been provided to the two Villages.

2.1.4 *Health:* No Community or Sub-Health Centre is available in the Project Area. The Local Population have to depend either in Sonapahar Nongstoin or Shillong for their Health problems.

2.1.5 *Water Supply:* Drinking water supply have been provided by the PHE Dept in certain area of the watershed. However, during lean season the entire population have to depend on springs available in the area as the supply is not sufficient to meet the daily requirement.

2.1.6 *Market:* There is a weekly local market held once in a week at Seinduli, Sonapahar and Nongstoin, the District Headquarter.
Table 2.5: Infrastructure Status.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of District</strong></td>
<td><strong>Name of Project</strong></td>
<td><strong>Parameters:</strong></td>
<td><strong>Status</strong></td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH IWMP-IX</td>
<td>(i) No. of villages connected to the main road by an all-weather road.</td>
<td>All villages motorable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) No. of village provided with electricity</td>
<td>All 2 nos. of Villages are electrified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) No. of households without access to drinking water</td>
<td>42 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) 6 Nos. (S) 1No (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 Aganwadi Centres</td>
<td>2 No.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(xiv) Any other facilities with no. of villages (please specify)</td>
<td>Nil</td>
</tr>
</tbody>
</table>
2.7 Livestock: there are only 3 kinds of livestock farming being farmed in the area viz. Piggery, Poultry, and Cattle (Cow) rearing.

Table 2.6: Existing livestock population

<table>
<thead>
<tr>
<th>Type of Animal</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piggery</td>
<td>165</td>
</tr>
<tr>
<td>Poultry</td>
<td>1100</td>
</tr>
<tr>
<td>Cattle (Cow)</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1565</strong></td>
</tr>
</tbody>
</table>

2.8 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).

Table 2.7: Land Holding:

<table>
<thead>
<tr>
<th>Name of District</th>
<th>Name of the Project</th>
<th>Types of Farmer</th>
<th>No. of households</th>
<th>No. of BPL households</th>
<th>Land holding (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(i) Large</td>
<td>-</td>
<td>-</td>
<td>26 Ha</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH IWMP-IX</td>
<td>(ii) Small</td>
<td>96</td>
<td>89</td>
<td>26 Ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Marginal</td>
<td>87</td>
<td>30</td>
<td>424 Ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) Landless</td>
<td>93</td>
<td>18</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub - Total</td>
<td>276</td>
<td>137</td>
<td>450 Ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>276</strong></td>
<td><strong>137</strong></td>
<td><strong>450 Ha</strong></td>
</tr>
</tbody>
</table>
### Table 2.5: Common Property Resources in the Project Area

<table>
<thead>
<tr>
<th>Name of District</th>
<th>Name of the Projects</th>
<th>CPR Particulars</th>
<th>Total Area (ha)</th>
<th>Area owned/In possession of</th>
<th>Area available for treatment (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pvt. Person</td>
<td>Govt. (specify deptt.)</td>
<td>PRI</td>
</tr>
<tr>
<td>West Khasi Hills</td>
<td>WKH IWMP-IX</td>
<td>(i) Wasteland/ degraded land</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Pastures</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Private Agriculture land</td>
<td>490 Ha</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) Village woodlot</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v) Forest (Degraded)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vi) Village Ponds/ Tanks</td>
<td>-</td>
<td>-</td>
<td>4 nos.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vii) Community Buildings</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(viii) Weekly Markets</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ix) Permanent Markets</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(x) Temples/ Places of worship</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(xi) Others (Pl. specify)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(School Baulevey, etc)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Total** | 490 Ha | 4 nos. | - | 385 Ha | 750 Ha | - | - | - |

#### 2.9 Land use and land cover:
As per the land use land cover map generated by GIS Lab State Level Nodal Agency Soil & Water Conservation Department Meghalaya the Watershed area has been broadly classified into the following land uses.

a) Built-up Area = 50.00 Ha
b) Water bodies-River/Stream-Perennial = 10.00 Ha
c) Agricultural land-crop land-kharif crop = 230.00 Ha
d) Tree clad Area-close = 265.00 Ha
e) Tree clad Area-open = 588.00 Ha
f) Wastelands-barren Rocky/Stony waste = 98.00 Ha
Total = 1241.00 Ha
2.10 **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. Considerable area of forest land being diverted for Jhum (Bun) cultivation.
2. Less Geographical Area under Forest Cover due to recurring fire hazards / overgrazing and charcoal burning / making has seriously disturbed the ecological balance of the area.
3. Lack of modern technological inputs for farming / agricultural leading to low crop yield.
4. Water Scarcity (Inadequate Water Supply Facility for Agriculture & Drinking Purpose)
5. Lack of Awareness & Knowledge on improved agricultural practices and Modern Technology.
7. Unutilized Wastelands.
8. Very poor sanitation.
9. Inadequate primary infrastructure.
10. Inadequate Health Care Centre.

These problems have been identified through Participatory Rural Appraisal (PRA) Exercises conducted in all the villages within the Watershed with active participation of the watershed community & primary staked holders. 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

i) **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.

ii) **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.

iii) **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>3</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>Yes, NESAC, Nongseder</td>
</tr>
<tr>
<td></td>
<td>Baseline survey</td>
<td>Yes</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>No</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>Remote sensing data-especially soil/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>crop/ run-off cover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ridge to Valley treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online IT connectivity between</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Project and DRDA cell/ZP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) DRDA and SLNA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) SLNA and DoLR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of GIS layers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Cadastral map</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>2. Village boundaries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Drainage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Soil (Soil nutrient status)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Land use</td>
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<td></td>
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<td>6. Ground water status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Watershed boundaries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crop simulation models</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated coupled analyzer/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>near infrared visible spectroscopy/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>medium spectroscopy for high speed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>soil nutrient analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normalized difference vegetation</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>index (NDVI)#</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weather Stations</td>
<td>Yes, Nongstoin</td>
<td></td>
</tr>
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</table>

**B. Inputs**

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bio-pesticides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Organic manures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Vermi-compost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Bio-fertilizer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Water saving devices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Mechanized tools/ implements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Bio-fencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Nutrient budgeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Automatic water level recorders &amp; sediment samplers</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Any other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.2 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>WKH IWMP-IX</td>
<td>(i) Type of organization# Government</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Name of organization Soil &amp; Water Conservation Division, Nongstoin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Designation &amp; Address Divisional Soil &amp; Water Conservation Officer, Nongstoin, West Khasi Hills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iv) Telephone 03654 – 280236</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(v) Fax 03654 – 280236</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vi) E-mail <a href="mailto:soilnwatercon.ngn@gmail.com">soilnwatercon.ngn@gmail.com</a></td>
</tr>
</tbody>
</table>

3.3 Institution Building

i) Watershed Committee (WC)
The Watershed Committee of the Umtyrwa Umiong, IWMP-IX was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Durbar/Council). The Umtyrwa Umiong Watershed Committee as yet to be registered under the Society Registration Act 1983.
### 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>LF</th>
<th>Landle ss</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-IW</td>
<td>Umtyrwa Water Shed Committee</td>
<td>Yet to Register</td>
<td>President</td>
<td>Shri. Klandro L. Nonglait</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Class IX</td>
<td>A,B,C,D,E,G,H,I</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Secretary</td>
<td>Secretary</td>
<td>Shri R. V. Jyrwa</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Govt. Employee</td>
<td>B.E</td>
<td>A to J</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>Member</td>
<td>Member</td>
<td>Smti. Phumlilis Wamiang</td>
<td>F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Class VIII</td>
<td>A,B,E</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>Member</td>
<td>Member</td>
<td>Shri Krestiful Iawphniaw</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Class IX</td>
<td>-do-</td>
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</tr>
<tr>
<td>5</td>
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<td></td>
<td></td>
<td>Member</td>
<td>Member</td>
<td>Shri Khulmy Nongphud</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Class VII</td>
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</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>Member</td>
<td>Member</td>
<td>Shri Bistor Nonglal</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>7</td>
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<td></td>
<td>Member</td>
<td>Member</td>
<td>Smti. Rakhol Thongri</td>
<td>F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>8</td>
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<td></td>
<td></td>
<td>Member</td>
<td>Member</td>
<td>Shri Pharding Thongni</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Class VIII</td>
<td>-do-</td>
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</tr>
<tr>
<td>9</td>
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<td></td>
<td></td>
<td>Member</td>
<td>Member</td>
<td>Shri. Edies Thongni</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>10</td>
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<td>Member</td>
<td>Shri. Orland Wamiang</td>
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<tr>
<td>11</td>
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<td>Member</td>
<td>Member</td>
<td>Smti. Happyness Thongni</td>
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<td>Member</td>
<td>Shri Lador Lyngkhoi</td>
<td>M</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>13</td>
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<td>Member</td>
<td>Member</td>
<td>Smti. Sheldaialin Nongphud</td>
<td>F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>14</td>
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<td></td>
<td></td>
<td>Member</td>
<td>Member</td>
<td>Shri Showli Nongsiej</td>
<td>M</td>
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<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>Class IX</td>
<td>-do-</td>
<td></td>
</tr>
</tbody>
</table>

*From column no.2, the total number of states, from column no.3, the total number of District: from column no.4, the total number of project: from column no.5, the total number of Watershed committees: from column no.6, the total number of registered watershed committees; from column no. 7, the total number of members, and WCs without a present and/or without a secretary, may be mentioned for the state as whole. From column no.8, the total no. of male and female members may be mentioned separately. The totals of column 9 to 18, for the entire country, may be mentioned at the end of the 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).

ii) **Self Help Group**

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

**Table 3.3: Details of Self Help Groups (SHGs) in the project areas:**

<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>Names of the Districts</td>
<td>Names of projects</td>
<td>Total no. of registered SHGs</td>
<td>No. of members</td>
<td>No. of SC/ST in each category</td>
<td>No. of BPL in each category</td>
</tr>
<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</td>
<td>WKH. IWMP-IX</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

iii) **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.
<table>
<thead>
<tr>
<th>Names of Districts</th>
<th>Names 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></td>
<td></td>
<td>1   2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Both</td>
<td>Total</td>
</tr>
<tr>
<td><strong>West Khasi Hills</strong></td>
<td>WKH. IWMP-IX</td>
<td></td>
<td></td>
<td></td>
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</tr>
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<tr>
<td><strong>Total</strong></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
CHAPTER – IV

(PROJECT ACTIVITIES)
## CHAPTER – IV

### 4.1 Preparatory Phase:

#### i) Entry Point Activities (EPA)

<table>
<thead>
<tr>
<th>Names of Project</th>
<th>Amount earmarked for EPA</th>
<th>Entry Point Activities planned</th>
<th>Geographical Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills District IWMP_IX</td>
<td>6.00</td>
<td>1. Drinking Wells 2Nos</td>
<td>91°07’45” to 91°08’50” E Longitude and 25°38’00” to 25°40’45” Latitude</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Footpath</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Check Dam Cum Washing Place</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>1 no. W/C and 2 no. of Sub-watershed Committee at each benefiting Village</td>
<td>6nos.</td>
<td>Nil</td>
<td>Participatory Rural Appraisals (PRA)</td>
<td>N.A</td>
<td>Done</td>
<td>Done</td>
</tr>
</tbody>
</table>
### 4.2 Watershed Works Phase:

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

<table>
<thead>
<tr>
<th>Name of Projects</th>
<th>Type of structures</th>
<th>No</th>
<th>Area irrigat ed (ha)</th>
<th>Storage capacity</th>
<th>Pre Project</th>
<th>Augmentation/ repair of existing structures</th>
<th>No</th>
<th>Area to be treated (ha)</th>
<th>Storage capacity</th>
<th>Estimate d cost (in lakhs)</th>
<th>Proposed Project</th>
<th>Construction of new structures</th>
<th>No</th>
<th>Area to be treated (ha)</th>
<th>Storage capacity (per unit)</th>
<th>Estimated cost (in lakhs)</th>
<th>Total target</th>
<th>No</th>
<th>Area to be treated (ha)</th>
<th>Storage capacity (m³)</th>
<th>Estimated cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>WKH-IWMP IX</td>
<td>(i) Tank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ii) Pond</td>
<td>1</td>
<td>150</td>
<td>2.50m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 Nos.</td>
<td>8.50Ha</td>
<td>300m³</td>
<td>1.96278</td>
<td></td>
<td>2 Nos.</td>
<td>8.50Ha</td>
<td>300m³</td>
<td>1.96278</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(iii) Lake</td>
<td></td>
<td></td>
<td></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>
<td></td>
</tr>
<tr>
<td></td>
<td>(iv) Check Dam</td>
<td>4</td>
<td>20Ha</td>
<td>100m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16 Nos</td>
<td>202.55 Ha</td>
<td>2284m³</td>
<td>17.17291</td>
<td></td>
<td>16Nos.</td>
<td>202.55Ha</td>
<td>2284m³</td>
<td>17.17291</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(v) Percolation Tank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(vi) Diversion Channel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(vii) Any others (please specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Protection wall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40Nos</td>
<td>-</td>
<td>5.3828.4</td>
<td>40Nos</td>
<td></td>
<td>-</td>
<td>-</td>
<td>25.38284</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water Harvesting structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14Nos</td>
<td>590.90 Ha</td>
<td>6400 m³</td>
<td>27.64955</td>
<td></td>
<td>14Nos.</td>
<td>590.90 Ha</td>
<td>6400 m³</td>
<td>27.64955</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>72 Nos</td>
<td>801.95</td>
<td>8984m³</td>
<td>72.16808</td>
<td></td>
<td>72 nos</td>
<td>801.95</td>
<td>984m³</td>
<td>72.16808</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 4.2.2 Activities related to recharging ground water resources in the project areas:

<table>
<thead>
<tr>
<th>No.</th>
<th>Names of projects</th>
<th>Type of structures</th>
<th>1. Pre-project</th>
<th>2. Proposed target</th>
<th>3. Total target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Area irrigated (ha)</td>
<td>Augmentation/ repair of existing recharging structures</td>
<td>Construction of new recharging structures</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No.</td>
<td>Area to be irrigated (ha)</td>
<td>Estimated cost</td>
</tr>
<tr>
<td>WKH-IWMP-IX</td>
<td>(i) Open wells</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>(ii) Bore wells</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>(iii) Any others (Pl. specify)</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>Dug Out Pond</td>
<td>2</td>
<td>1.96278</td>
<td>1096278</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water Harvesting</td>
<td>14</td>
<td>27.64955</td>
<td>27.61233</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total for the project</td>
<td>16</td>
<td>29.61233</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2.3 Activities executed by User Groups in the Project Areas.

User Groups within the Project Area will be responsible for maintenance of assets created through contribution by way of labour or financial assistance so as to promote sustainable development of the Project Area.
4.2.4 Activities related to livelihoods by Self Help Groups (SHGs) in the project areas:

The Self Help Group (SHG) will take up livelihood such as poultry, piggery, tailoring, carpentry etc. so as to enhance the economy of the village within the project and uplift the socio economic condition area people within the Project Area.
### 4.2.5 Other activities of watershed works phase:

<table>
<thead>
<tr>
<th>Names of projects</th>
<th>Ridge area treatment</th>
<th>Drainage line treatment</th>
<th>Nursery raising</th>
<th>Land development</th>
<th>Crop demonstrations</th>
<th>Pasture development</th>
<th>Veterinary services</th>
<th>Fishery development</th>
<th>Non-conventional energy</th>
<th>Any other (please specify)</th>
<th>Total Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>(b)</td>
<td>(a)</td>
<td>(b)</td>
<td>(a)</td>
<td>(b)</td>
<td>(a)</td>
<td>(b)</td>
<td>(a)</td>
<td>(b)</td>
<td>(a)</td>
<td>(b)</td>
</tr>
<tr>
<td>WKH-IWMP-IX</td>
<td>21,695</td>
<td>15,91646</td>
<td>167 Nos</td>
<td>74,01122</td>
<td>62,384</td>
<td>4.50</td>
<td>32</td>
<td>1.60</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 units</td>
<td>4.80</td>
<td>4 Units</td>
<td>1.40</td>
<td>-</td>
<td>-</td>
<td>1.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 Kitchen Garden</td>
<td>89,730866</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Column No. 12 ‘Total Estimated Cost’)
### 4.2.6 Details of engineering structures in watershed works:

<table>
<thead>
<tr>
<th>Project</th>
<th>Name of structures</th>
<th>Type of treatment</th>
<th>Type of land</th>
<th>No. of units (No./cum./rmt)</th>
<th>Estimated cost (Rs. in lakh)</th>
<th>Expected month &amp; year of completion (mm/yyyy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IWMP - IX</td>
<td>Loose boulder Contour bund</td>
<td>(R)</td>
<td>(D)</td>
<td>(L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graded bunding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Protection wall</td>
<td>(D)</td>
<td>(L)</td>
<td>(P)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Earthen checks dams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Masonry stop Dams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gully plug</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gabion structures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Underground dykes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Field bunds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Any others (pl. specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.CC Check Dam</td>
<td>(D)</td>
<td>(C)</td>
<td>16 Nos.</td>
<td>9.80</td>
<td>7.37291 / 17.17291 / 2015-16</td>
</tr>
<tr>
<td></td>
<td>2.Water Harvesting</td>
<td>(D)</td>
<td>(C)</td>
<td>14 Nos.</td>
<td>16.842</td>
<td>10.82555 / 27.64955 / 2015-16</td>
</tr>
</tbody>
</table>

Contd.
4.2.7 Details of activities connected with vegetative cover in watershed works:

<table>
<thead>
<tr>
<th>Project</th>
<th>Name of structure/ work</th>
<th>Type of treatment</th>
<th>Type of land</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills IWMP-IX</td>
<td>Afforestation</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regeneration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Agro-forestry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fuel wood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fodder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Agro- Horticulture</td>
<td>L</td>
<td>P</td>
<td>22.90 Ha</td>
</tr>
<tr>
<td></td>
<td>Pasture dev.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nursery raising</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others (Coffee)</td>
<td></td>
<td></td>
<td></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.
### 4.2.8 Details of allied / other activities:

<table>
<thead>
<tr>
<th>Project</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(i) Private</td>
<td>(ii) Community</td>
</tr>
<tr>
<td><strong>West Khasi Hills-IWMP-IX</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpentry</td>
<td></td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Bee Keeping (Apiculture)</td>
<td></td>
<td></td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td></td>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Pisciculture</td>
<td></td>
<td></td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Piggery Farming</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Compost pit</td>
<td></td>
<td></td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Kitchen Gardening</td>
<td></td>
<td></td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Tailoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural implements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weaving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Betel Nut Processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* from column no. 2, no. of States; from column no. 3, no. of Districts; 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, item-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.
### 4.3 Consolidation and withdrawal phase

**Details of activities in the CPRs in the project areas:**

<table>
<thead>
<tr>
<th>Names of projects</th>
<th>Name(s) of the villages</th>
<th>CPR particulars</th>
<th>Activity proposed</th>
<th>Target area under the activity (ha)</th>
<th>Estimated expenditure (Rs.)</th>
<th>Expected no. of beneficiaries</th>
<th>Estimated contribution to WDF (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills IWMP-IX</td>
<td>1.Seindli-II 2.Mawyrpat</td>
<td>Degraded Forest/Watershed</td>
<td>Improvement of Existing Degrading Forest</td>
<td>19.296Ha</td>
<td>0.237115</td>
<td>35</td>
<td>0.37500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Springs</td>
<td>Drinking Well</td>
<td>1Nos</td>
<td>0.52107</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Springs</td>
<td>Farm Pond</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Streams</td>
<td>Water Harvesting Cum Washing place</td>
<td>1Nos</td>
<td>1.68252</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Streams</td>
<td>Head water Dam/Washing place</td>
<td>1Nos</td>
<td>1.37773</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community Assets</td>
<td>Chairs</td>
<td>200Nos</td>
<td>0.505865</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community Land</td>
<td>Footpath</td>
<td>1Nos</td>
<td>0.17570</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| | | | | | | | 4.50 | 0.37500 |
CHAPTER V

PROJECT PHASING & BUDGETING
## CHAPTER - V
### PROJECT PHASING AND BUDGETTING

**WATERSHED TREATMENT PLAN OF UMTYRWA-UMIONG & UMNEI-UMSOHPHIE UNDER IWMP-IX WEST KHASI HILLS**

**NAME OF DISTRICT:** WEST KHASI HILLS  
**TOTAL GEOGRAPHICAL AREA:** 2962 Ha  
**TOTAL PROJECT COST:** Rs.375 LAKHS  
**NAME OF C&RD BLOCK:** MAWSHYNRUT  
**AREA PROPOSED FOR TREATMENT:** 2500 Ha  
**NOS. OF VILLAGES:** 11 Nos

<table>
<thead>
<tr>
<th>(Physical in Ha/Nos/Rm/Units)</th>
<th>(Rupees in Lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of District:</td>
<td>West Khasi Hills</td>
</tr>
<tr>
<td>Total Geographical Area:</td>
<td>2962 Ha</td>
</tr>
<tr>
<td>Total Project Cost:</td>
<td>Rs.375 Lakhs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NAME OF C&amp;RD BLOCK: MAWSHYNRUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREA PROPOSED FOR TREATMENT: 2500 Ha</td>
</tr>
<tr>
<td>NOS. OF VILLAGES: 11 Nos</td>
</tr>
</tbody>
</table>

### Total Geographical Area: 2962 Ha  
### Total Project Cost: Rs.375 Lakhs  
### Name of C&RD Block: MAWSHYNRUT  
### Area Proposed for Treatment: 2500 Ha  
### NOS. of Villages: 11 Nos

#### Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>1st Year</th>
<th>2nd Year</th>
<th>3rd Year</th>
<th>4th Year</th>
<th>5th Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Cost</td>
<td>10%</td>
<td>37.50</td>
<td></td>
<td></td>
<td>2%</td>
</tr>
<tr>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring &amp; Evaluation</td>
<td>2%</td>
<td>7.50</td>
<td></td>
<td></td>
<td>0.5%</td>
</tr>
<tr>
<td>Sub Total (I+II)</td>
<td>12%</td>
<td>45.00</td>
<td></td>
<td></td>
<td>2.5%</td>
</tr>
<tr>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparatory Phase</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPA</td>
<td>4%</td>
<td>15.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Drinking Well/Spring tapped chamber</td>
<td>-</td>
<td>7</td>
<td></td>
<td>3,401</td>
<td>28</td>
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**Sub Total of C**
| | 167 | 470/203 | 108.71/514 | | 19 | 400 | 9.553/6 | 143 | 2089.3/5 | 77.71/5 | 54 | 161/0.88 | 21.14/33 |

**D. Livelihood**

| Tailoring | 47 | 3.835 | 5 | 0.40 | 13 | 1.04 | 29 | 2.14/3 |
| Carpenter/Black smithy | 22 | 1.10 | 9 | 0.45 | 13 | 0.65 | | |
| Agriculture implements | 21 | 1.06 | 5 | 0.25 | 10 | 0.50 | 6 | 0.31 | |
| Vegetables Production/ Kitchen Gardening | 219 | 5.50 | 60 | 1.455 | 70 | 1.74 | 89 | 2.26/5 | |
| Apiculture | 10 | 0.80 | 5 | 0.40 | 5 | 0.40 | | |
| Masonry/ Hollow Block Making | 38 | 1.90 | 4 | 0.20 | 13 | 0.65 | 21 | 1.05 | |
| Piggery | 95 | 7.67 | 9 | 0.74 | 26 | 2.10 | 60 | 4.83 | |
| Poultry | 35 | 2.87 | 2 | 0.18 | 6 | 0.50 | 27 | 2.19 | |
| Vermi-Composting | 21 | 2.58/5 | 1 | 0.12/5 | 8 | 0.97 | 12 | 1.49 | |
| Composting | 46 | 3.08 | 2 | 0.16 | 20 | 1.60 | 24 | 1.92 | |
| Weaving | | | | | | | | |
| Stabilized Mud block Making | | | | | | | | |
| Grocery Shop/ Food Stalls | | | | | | | | |
| Promotion of Indigenous | | | | | | | | |

38
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<th>Quantity</th>
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<th>Sub Total (₹)</th>
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<td>8</td>
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<tr>
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<td>Pisciculture (including supply of fingerlings)</td>
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<td>Cableway taxiing</td>
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<td>Apiiculture/Bee Keeping</td>
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<td>3.605</td>
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<td>Floriculture</td>
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<tr>
<td>Goat Rearing</td>
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<td>Weaving &amp; Handloom</td>
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<td>Stabilized Mud block Making</td>
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<td>Carpentry/ Blacksmithy</td>
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<td>Soap making</td>
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**Divisional Soil & Water Conservation Officer**
Cum
Project Leader
Project Implementation Agency (IWMP)
Soil & Water Conservation Division: Nongstoin

**Deputy Commissioner**
West Khasi Hills District, Nongstoin
ACTION PLAN
OF
UMTYRWA UMINONG MICRO-WATERSHED
UNDER
IWMP PROJECT – IX
## CHAPTER V
### PROJECT PHASING AND BUDGETING

**WATERSHED TREATMENT PLAN OF UMTYWA-UMIONG & UNDER IWMP-IX WEST KHASI HILLS**

**NAME OF DISTRICT:** WEST KHASI HILLS  
**TOTAL GEOGRAPHICAL AREA:** 1241 Ha  
**TOTAL PROJECT COST:** Rs. 150 LAKHS

**NAME OF C&RD BLOCK:** MAWSHYNRUT  
**AREA PROPOSED FOR TREATMENT:** 1000 Ha  
**NOS. OF VILLAGES:** 2 Nos

(Physical in Ha/Nos/Rem/Units) (Rupees in Lakhs) Fin. Rs.in Lakh. Fin. Rs.in Lakh

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<th>2nd Year</th>
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### Works Phase

**A. Arable Land Treatment**

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**Total Budget:** Rs. 150 LAKHS
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**Divisional Soil & Water Conservation Officer**

Cum

Project Leader

Project Implementation Agency (IWMP)

Soil & Water Conservation Division: Nongstoin

**Deputy Commissioner**

West Khasi Hills District,

Nongstoin
VILLAGE PLAN
OF
UMTYRWA UMIONG MICRO WATERSHED
UNDER IWMP - IX
## VILLAGE WISE ACTION PLAN OF UMTRYWA UMIONG WATERSHED UNDER IWMP-IX WEST KHASI HILLS

Name of District: West Khasi Hills  
Nos of Villages: 2 Nos  
Name of C&RD Block: Mawshynrut  
Project Area: 1000 Ha  
Physical: (Rs. In Lakhs)

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<th>SEINDULI-II Fin (Lakhs)</th>
<th>MAWSYRPAT Phy (Ha)</th>
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<th>0.07634</th>
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### Activities

A. Arable Land Treatment

1. Improvement of Degraded Forest/ existing Natural Forest | 15 | 0.54 | 17.1766 | 0.61836 | 32.1766 | 1.5836 |
2. Afforestation | 3 | 0.30303 | 4.534 | 0.45797 | 7.534 | 0.76101 |
3. Agro-Forestry |
4. Nursery Establishment |
5. Avenue Plantation |

B. Non-Arable Land Treatment

1. Improvement of Degraded Forest/ existing Natural Forest | 15 | 0.54 | 17.1766 | 0.61836 | 32.1766 | 1.5836 |
2. Afforestation | 3 | 0.30303 | 4.534 | 0.45797 | 7.534 | 0.76101 |
3. Agro-Forestry |
4. Nursery Establishment |
5. Avenue Plantation |

Sub Total of B | 0.84303 | 0.07634 | 1.91937 |
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<p>| Total              | 6.375 | 7.075 | 1.35   |</p>
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52
### ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF MGNREGS WITH IWMP – 2011 – 12
UNDER UMTYRWA UMIONG MICRO WATERSHED IWMP – IX

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<tr>
<td></td>
<td></td>
<td></td>
<td>Wages</td>
<td>Materials</td>
<td>Wages</td>
<td>Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Small Dug Out Pond</td>
<td>Nos</td>
<td>1 50328</td>
<td>33552</td>
<td>1 50328</td>
<td>33552</td>
<td>2 100656</td>
<td>67104</td>
</tr>
</tbody>
</table>

53
**ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF MGNREGS WITH IWMP – 2011 – 12**  
**UNDER UMTYRWA UMIONG MICRO WATERSHED IWMP – IX**

<table>
<thead>
<tr>
<th>Name of Watershed</th>
<th>Umtyrwa Umiong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Village</td>
<td>Mawsyrpat</td>
</tr>
<tr>
<td>Name of C&amp;RD Block</td>
<td>Mawshynrut</td>
</tr>
<tr>
<td>Name of the District</td>
<td>West Khasi Hills</td>
</tr>
<tr>
<td>Total No. of Job Card holder:</td>
<td>132</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Wage Component @Rs.117/per annum in the 1st year</td>
<td>50328.00</td>
</tr>
<tr>
<td>Total Wage Component @Rs.117/per annum in the 2nd year</td>
<td>50328.00</td>
</tr>
<tr>
<td>Total Wage Component @Rs.117/per annum in the 3rd year</td>
<td>-</td>
</tr>
<tr>
<td>Total Wage Component @Rs.117/per annum in the 4th year</td>
<td>-</td>
</tr>
<tr>
<td>Total Wage Component</td>
<td>100656.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Activities</th>
<th>Units</th>
<th>2012 – 13</th>
<th>2013 – 14</th>
<th>2014 – 15</th>
<th>2015 – 16</th>
<th>Total</th>
<th>Mandays to be generated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Phy Wages</td>
<td>Phy Wages</td>
<td>Phy Wages</td>
<td>Phy Wages</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Materials</td>
<td>Materials</td>
<td>Materials</td>
<td>Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>50328</td>
<td>1 33552</td>
<td>1 50328</td>
<td>1 33552</td>
<td>2</td>
<td>100656  67104  167760  860</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Units</th>
<th>2012 – 13</th>
<th>2013 – 14</th>
<th>2014 – 15</th>
<th>2015 – 16</th>
<th>Total</th>
<th>Mandays to be generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Dug Out Pond</td>
<td>Nos</td>
<td>1</td>
<td>50328</td>
<td>1 33552</td>
<td>1 50328</td>
<td>1 33552</td>
<td>2</td>
</tr>
<tr>
<td>Block</td>
<td>Name of Project</td>
<td>Unit of Measurement</td>
<td>Project Total (100%)</td>
<td>Material Sourc &amp; Proc</td>
<td>Proc. Dated (in days)</td>
<td>Dugout Pond Cum</td>
<td>4:1 Mampat</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></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ruppes Three Lakh Five Thousand Five Hundred Twenty Only

District Programme Coordinator
MGEGAJEE
West Khasi Hills District
Nongstoin
Details of the types of areas covered under the IWMP Programme:

<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>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Names of Projects</strong></td>
<td><strong>Year of sanction (dd/mm/yyyy)</strong></td>
<td><strong>Area of the projects to be treated (Treatable Area)</strong></td>
<td><strong>Project cost (Rs. In lakh)</strong></td>
<td><strong>Names of Micro watersheds &amp; Code nos. (as per DoLR's unique codification)</strong></td>
<td><strong>Treatable Area (ha) (As per LULC)</strong></td>
<td><strong>Area details (ha) (falling within the projects) (As per ownership)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>From</strong></td>
<td><strong>To</strong></td>
<td><strong>From</strong></td>
<td><strong>To</strong></td>
<td><strong>From</strong></td>
<td><strong>To</strong></td>
<td><strong>From</strong></td>
<td><strong>To</strong></td>
</tr>
<tr>
<td>WKH IWMP- IX</td>
<td>2011-12</td>
<td>2011-12</td>
<td>2015-16</td>
<td>1000 Ha</td>
<td>150</td>
<td>JWMP-IX Umtyrwa Umiong 3B1c2a4a</td>
<td>50 Ha</td>
</tr>
</tbody>
</table>
### Fund provision for the IWMP projects from all sources:

<table>
<thead>
<tr>
<th>Name of Projects</th>
<th>IWMP Fund</th>
<th>Funds from other sources in addition to IWMP funds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Convergence funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amount (Lakhs)</td>
</tr>
<tr>
<td>WKH IWMP-IX</td>
<td>Central Share</td>
<td>135.00 Lakhs</td>
</tr>
</tbody>
</table>

**Total:** 15.3352

**Note:** The table lists the fund provision for different projects under the IWMP scheme, including Central and State shares, as well as contributions from other sources such as PPP, Community, Institutional finance, and others. The total provision is calculated for each project and summed up to provide an overall total.
## Details of Project Fund Accounts of Distt. Agency and Watershed Committees:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Names of Projects</strong></td>
<td><strong>Distt. Agency’s Project Account details</strong></td>
<td><strong>Watershed Committee (WC) account details:</strong></td>
</tr>
<tr>
<td></td>
<td>Name of the Bank and Branch where project account has been opened</td>
<td>Name &amp; Designation of authorized persons who operate the account.</td>
</tr>
<tr>
<td></td>
<td>Account Number (to be obtained confidentially)</td>
<td>Name of Watershed Committee</td>
</tr>
<tr>
<td></td>
<td>Account type (Savings/Current/Others)</td>
<td>Name of the Bank and Branch where project account has been opened</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Account number (to be obtained confidentially)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Account type (Savings/Current/others)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Name &amp; Designation of authorized persons who operate the account.</td>
</tr>
<tr>
<td>West Khasi Hills IWMP-IX</td>
<td>State Bank of India, Nongstoin Branch</td>
<td>Saving</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shri D.K Khonglah DS&amp;WCO</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Untyrwa Uniong W/C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SBI, Nongstoin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Saving</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chairman W.C, Secretary W.C, Project Leader /</td>
</tr>
</tbody>
</table>

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### Details of Convergence of IWMP with other Schemes:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>District</th>
<th>Names of projects</th>
<th>Names of Departments with Schemes converging with IWMP</th>
<th>Fund to be made available to IWMP due to convergence (Rs. in lakh)</th>
<th>Name of activity/task/structure undertaken with converged funds (a) Structures (b) livelihoods (c) Any other (pl. specify)*</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>1</td>
<td>West Khasi Hills</td>
<td>West Khasi Hills IWMP-IX</td>
<td>* Community Rural Development Department MGNREGS</td>
<td>3.35520</td>
<td>(a) Dug-out Pond</td>
<td>As per average Treatment Plant</td>
<td>District Level &amp; Block Level Village Employee Council Level</td>
</tr>
</tbody>
</table>
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.

Table 6.1: List of approved Training Institutes for Capacity Building:

<table>
<thead>
<tr>
<th>S. No</th>
<th>State</th>
<th>Name of the Training Institute</th>
<th>Full Address with contact no., website &amp; e-mail</th>
<th>Name &amp; Designation of the Head of Institute</th>
<th>Type of Institute</th>
<th>Area(s) of specialization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meghalaya</td>
<td>NIRD (NER)</td>
<td>Guwahati</td>
<td>Director</td>
<td>Central Govt.</td>
<td>Remote Sensing, Rural Devt.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>SIRD</td>
<td>Nongsder</td>
<td>Director</td>
<td>State Govt.</td>
<td>Capacity Building</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>RRTC</td>
<td>Umran</td>
<td>Director</td>
<td>Don-Bosco</td>
<td>Agri-Horti, Animal Husbandry, Entrepreneurship</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>ICAR</td>
<td>Umiam</td>
<td>Director</td>
<td>Central Govt.</td>
<td>Do</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>VTC</td>
<td>Kyrdem Kulai</td>
<td>Director</td>
<td>State Govt.</td>
<td>Animal Husbandry</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Fruit Gardening</td>
<td>Shillong</td>
<td>Jt. Director</td>
<td>State Govt.</td>
<td>Agro Horti Fruit Processing</td>
</tr>
</tbody>
</table>

- From Column no. 2, total no. of States implementing the programme, from Column no. 3, no. of training institutes, from column No. 9, total no. of category-wise trainings and trainees may be given at the end of the table for the entire country
- # Central govt. Dept./ State govt. Dept./ Autonomous Body/ Research Institutes/ Universities/ Others (pl. specify)
- $ Capacity Building/ Agriculture/ Horticulture/ Animal Husbandry/ Pisciculture/ Remote Sensing/ Water conservation/ Ground water/ Forestry/ livelihoods/ entrepreneurship development/ others (pl. specify)
- @ The training institutes must fulfill the conditions mentioned in the operations guidelines.
  (i) Technical experts in fields required by IWMP
  (ii) Past experiences
  (iii) Annual Turnover
  (iv) Receives funds either from the Central or State Government
  (v) Publications
  (vi) Not blacklisted by any Govt. organizations
  (vii) Audited accounts
  (viii) Organizational structure

Table 6.2: Capacity Building activities for the year 2011 – 12 as on 31/11/2011 (dd/mm/yyyy)*
### Capacity Building Plan (Show it for 5 years)

<table>
<thead>
<tr>
<th>Project</th>
<th>Type of Training/ Capacity Building</th>
<th>Agency/Institution to provide training</th>
<th>No. of Trainings targeted during each financial year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Year</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Year</td>
</tr>
<tr>
<td>PIAs</td>
<td>Watershed Management, Fund Management</td>
<td>SIRD</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>WDTs</td>
<td>Account, Book Keeping, PRA</td>
<td>PIA</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>UGs</td>
<td>Capacity Building</td>
<td>PIA</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>SHGs</td>
<td>Capacity Building, Livelihood &amp; Productivity</td>
<td>PIA</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>WCs</td>
<td>Capacity Building</td>
<td>PIA</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>GPs</td>
<td>Integrated Farming System &amp; Soil &amp; Water Conservation Management</td>
<td>PIA &amp; Line Department</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>Pl. specify)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6.3: Information, Education & Communication (IEC) activities for the year 2011-12 as on 31/11/2011 (dd/mm/yyyy)*

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Activity</th>
<th>Executing agency</th>
<th>Estimated expenditure (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Awareness Programme</td>
<td>S&amp;WC Division Nongstoin</td>
<td>1.50</td>
</tr>
<tr>
<td>2.</td>
<td>Preparation of Pamphlets, Booklets &amp;Banner &amp; Poster</td>
<td>S&amp;WC Division</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Capacity Building</td>
<td>S&amp;WC Division</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER VII

EXPECTED OUTCOME
CHAPTER VII
EXPECTED OUTCOME

Table 7.1 Employment related outcomes:

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Name of Village</th>
<th>Wage employment</th>
<th>Self employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of mandays</td>
<td>No. of beneficiaries</td>
<td>No. of beneficiaries</td>
</tr>
<tr>
<td></td>
<td>SC</td>
<td>ST</td>
<td>Men</td>
</tr>
<tr>
<td>1</td>
<td>Seinduli-II</td>
<td>100%</td>
<td>11400</td>
</tr>
<tr>
<td>2</td>
<td>Mawsyrpat</td>
<td>100%</td>
<td>11000</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>
</tr>
</thead>
<tbody>
<tr>
<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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(a) Structures</td>
</tr>
<tr>
<td>N</td>
<td>I</td>
<td>L</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 projects; 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 form column no. 11, average income from occupation during migration, for the entire country may be given at the end of the Table.
Table 7.3.1 Status of Drinking water:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Availability of drinking water</strong></td>
<td><strong>Quality of drinking water</strong></td>
<td><strong>Comments</strong></td>
</tr>
<tr>
<td>Pre-project</td>
<td>Post-project</td>
<td>Change in availability</td>
</tr>
<tr>
<td>Pre-project</td>
<td>Pre-project</td>
<td>Post-project</td>
</tr>
<tr>
<td>10 Months</td>
<td>12 Months</td>
<td>10 – 12 months</td>
</tr>
</tbody>
</table>

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, category-wise no. of projects, from column no. 5, average no. of months may be given at the end of the table for the entire country.

Table 7.3.2 Water Use efficiency:

The over water availability in the project area will improve due to the soil and water conservation measures. Water use efficiency and management will also be better with the active involvement of the people and formation of user groups to maintain the assets created.
Table 7.4: Vegetation/crop related outcomes:

Table 7.4.1 Details of Kharif crop area and yield in the project areas:

<table>
<thead>
<tr>
<th>Name of Projects</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>Area (ha)</td>
<td>Total Production (Qtl)</td>
<td>Area (ha)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average Yield (Qtl) per ha.</td>
<td></td>
<td>Irri</td>
</tr>
<tr>
<td>Irri Rf.</td>
<td>Paddy</td>
<td>- 90</td>
<td>- 18</td>
<td>1620</td>
</tr>
<tr>
<td>Irri Rf.</td>
<td>Maize</td>
<td>- 55</td>
<td>- 18</td>
<td>990</td>
</tr>
<tr>
<td>Irri Rf.</td>
<td>Ginger</td>
<td>- 20</td>
<td>- 55</td>
<td>1100</td>
</tr>
</tbody>
</table>

Note: The Area of Jhum crops decreases in the Mid-term and Post project because of converting it to Permanent Plantation (Rubber & Areacanut).

* 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, total no. of crops; from column no. 6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – Irrigated  Rf – Rainfed

Table 7.4.2 Details of Rabi crop area and yield in the project areas:

<table>
<thead>
<tr>
<th>Name of Projects</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>Area (ha)</td>
<td>Total Production (Qtl)</td>
<td>Area (ha)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average Yield (Qtl) per ha.</td>
<td></td>
<td>Irri</td>
</tr>
<tr>
<td>Ginger</td>
<td>- 90</td>
<td>- 50</td>
<td>- 4500</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 projects, from column no. 5, total no. of crops; from column no. 6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – Irrigated   Rf – Rainfed

Table 7.4.3 Details of Zaid crop area and yield in the project areas of the Country: State-wise:

<table>
<thead>
<tr>
<th>Name of Projects</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>Area (ha)</td>
<td>Average Yield (Qtl) per ha.</td>
<td>Total Production (Qtl)</td>
</tr>
<tr>
<td>Total for the District</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 projects, from column no. 5, total no. of crops; from column no. 6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – Irrigated   Rf – Rainfed
Table 7.4.4 Increase/ Decrease in area under fodder:
(New format will be made) Availability of fodder in tons per ha. in pre project & post project.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of project</td>
<td>Duration of Project</td>
<td>Pre project, tonnes/ha</td>
<td>Post project, tonnes/ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Source/Name of report</td>
<td>Year of reference</td>
</tr>
<tr>
<td>WKH-IWMP-IX</td>
<td>5 yrs</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

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

Table 7.4.5 Increase/ Decrease in Forest/vegetation cover:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of project</td>
<td>Duration of Project</td>
<td>Existing area tree cover (ha)</td>
<td>Expected Outcome (ha)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Source/Name of report</td>
<td>Year of reference</td>
</tr>
<tr>
<td>WKH IWMP-IX</td>
<td>5 yrs</td>
<td>NESAC,</td>
<td>2011 - 12</td>
</tr>
</tbody>
</table>

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 6 & 7, total area in ha may be given at the end of the table for the entire country.
Table 7.4.6 Increase/ Decrease in area under horticulture:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of project</td>
<td>Duration of Project</td>
<td>Pre Project Area (ha)</td>
<td>Expected outcome Area (ha.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Source/Name of report</td>
<td>Year of reference</td>
</tr>
<tr>
<td>WKH-IWMP-IX</td>
<td>5 yrs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Table 7.4.7 Increase/ Decrease in area under fuel-wood:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of project</td>
<td>Duration of Project</td>
<td>Pre Project Area (ha)</td>
<td>Post Project Area (ha)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Source/Name of report</td>
<td>Year of reference</td>
</tr>
<tr>
<td>WKH-IWMP-IX</td>
<td>5Yrs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

71
* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 6 & 7, total area in ha may be given at the end of the table for the entire country.

**Table 7.5 Livelihood related outcomes:**

**Table 7.5 Details of livestock in the project areas** (for fluids please mention in liters, for solids please mention in kgs. and income in Rs.):

<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 Projects</td>
<td>Type of Animal</td>
<td>Pre-project</td>
<td>Mid-term</td>
<td>Post-project</td>
<td>Remarks</td>
</tr>
<tr>
<td>WKH-IWMP-IX</td>
<td>Cattle</td>
<td>263</td>
<td>36.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goat</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>1450</td>
<td>5.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piggery</td>
<td>433</td>
<td>34.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total for all projects</td>
<td>2146</td>
<td>76.69</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 projects, from column nos. 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 7.6 Benefit Cost Analysis
Details of B:C ratio should be enclosed
(Return Period from 7 years)

<table>
<thead>
<tr>
<th>District</th>
<th>Name of project</th>
<th>Name of WC</th>
<th>Name of structure/activity</th>
<th>Estimated cost (Rs. In lakhs)</th>
<th>Expected quantifiable benefits (Rs.)</th>
<th>Benefit: Cost ratio²</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Khasi Hills District</td>
<td>WKH-IWMP-IX</td>
<td>Umtyrwa Umiong</td>
<td>As per Treatment Plan</td>
<td>150 lakhs</td>
<td>1700.369 lakhs</td>
<td>1.3 : 1.</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, no. of projects, from column no. 5, no. of WCs, from column no. 6, no. of structures/activities, from column no. 7 to 10, category-wise# totals, may be mentioned at the end of the table for the entire country.

² B:C ratio more than 1 – cost effective
less than 1 – Not cost effective
ANNEXURE I
MAPS
Legend

- Builtup Rural: 88 Ha.
- Tree Clad Close: 75 Ha.
- Tree Clad Open: 847 Ha.

Area: 1241 Ha.
Proposed Engineering Structure
Umtynwa Umiong Watershed
IWMP - IX (WRG)

Legend
- Water Harvesting
- Check Dam
- Irrigation Channel
- Retaining Wall
- Dug out Pond

Area: 1241 Ha.
Proposed Landuse
Umtynwa Umiong Watershed
IWMP - IX (WKH)

Legend
- Terracing: 20 Ha.
- Afforestation: 20 Ha.
- Agro-Forestry: 10 Ha.
- Crop Demonstration: 30 Ha.
- Improvement of existing paddy field: 20 Ha.

Area: 1241 Ha.
Agro-Climatic Zones
Umtyrwa Umiong Watershed
IWMP - IX (WWE)

Legend
Cold Moisture (C, M)

Area: 1241 Ha.
ANNEXURE II

SOCIO-ECONOMIC SURVEY DETAILS
## SOCIO – ECONOMIC DATA OF UMTYRSA UMIONG WATER SHED IWMP-IX WEST KHASI HILLS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Village</th>
<th>Population</th>
<th>Literacy</th>
<th>Occupation</th>
<th>Agriculture Area</th>
<th>Livestock</th>
<th>Annual Income Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Fem Male</td>
<td>Total</td>
<td>Settled (in Ha)</td>
<td>Jhum (in Ha)</td>
<td>Cow</td>
</tr>
<tr>
<td>1</td>
<td>SEINDULI-II</td>
<td>730</td>
<td>327</td>
<td>1268</td>
<td>320</td>
<td>-</td>
<td>356</td>
</tr>
<tr>
<td>2</td>
<td>MAWSYRPAT</td>
<td>423</td>
<td>327</td>
<td>750</td>
<td>242</td>
<td>-</td>
<td>450</td>
</tr>
</tbody>
</table>
ANNEXURE III
ESTIMATES
ESTIMATE FOR CONSTRUCTION OF C.C DAM CUM WASHING PLACE NO.1
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Community
Location: Seinduli-II

1/1(a) Earthwork in excavation………………….leads and all lift.
   (a) Loose boulders above one man size or soil mixed with boulders
   (b) above one man size or soft shale.
   Dam: 1 x 6 x 1.2 x 1.2 = 8.64 m³
   Wing wall: 2 x 6 x 2 x 0.50 = 12.00 m³
   U/P Apron: 1 x 6 x 2 x 0.3 = 3.60 m³
   D/S Apron: 1 x 6 x 3 x 0.3 = 5.40 m³
   Basin: 2 x 3 x 0.50 x 0.50 = 1.50 m³
   Basin base: 1 x 6 x 0.5 x 0.50 = 1.50 m³
   Total = 32.64 m³
   @ of Rs. 78.00/m³ = Rs. 2545.92

2/6.1 Providing cement concrete work in abutment, wing wall and return wall in
   proportion 1:3:6 with hard broken stone aggregates 40mm downgraded
   including necessary local carriage of stone aggregates, and within 200 m
   and curing (excluding shuttering) complete as directed
   Dam: 1 x 6 x 1.2 x 0.2 = 1.44m³
   U/P App: 1 x 2 x 6 x 0.3 = 3.60 m³
   D/S App: 1 x 3 x 6 x 0.2 = 3.60 m³
   Basin base: 1 x 6 x 3 x 0.2 = 3.60 m³
   Total = 12.24 m³
   @ of Rs. 3216.00 m³ = Rs. 44259.84

3/6.12 Providing shuttering in R.C.C. bridge and culverts with dressed planks not
   less than 25mm thick properly joined with battens of minimum size
   75mm x 100mm at spacing of not more than 600mm centre to center
   to the proper level including covering in the contact face with polythene
   sheet and removing the same after the concrete hardens complete as directed.
   (a) With new stones.
   Dam: 2 x 6 x 1.50 = 18.00 m²
   W/wall: 4 x 2 x 1.50 = 12.00 m²
   2 x 0.80 x 1.50 = 2.40 m²
   Basin wall: 2 x 12 x 0.80 = 19.20 m²
   Total = 51.60m²
   @ of Rs. 308.00 m² = Rs. 15892.80

4/4.2 Providing regular dry stone ……………… Complete as directed.
   (a) with new stones
   Dam: 1 x 6 x 1.00 x 1.20 = 7.20 m³
   1 x 6 x 0.10 + 0.60 x 7.5 = 3.75 m³
   2
   W/wall: 2 x 2 x 0.60 x 1.5 = 3.60 m³
   Basin: 1 x 12 x 0.30 x 1.30 = 4.68 m³
   Total = 22.68 m³
   @ of Rs. 1045.00/m³ = Rs. 23700.60

87
Providing 12mm thick cement plastering in proportion 1:4 ..........

5/1. ...... is to be done in retaining walls, breast walls and face walls)

(a) Over stone work and cement concrete

<table>
<thead>
<tr>
<th>Area</th>
<th>Dimensions</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>2 x 6 x 1.5</td>
<td>18.00</td>
</tr>
<tr>
<td></td>
<td>1 x 6 x 0.60</td>
<td>3.60</td>
</tr>
<tr>
<td>W/wall</td>
<td>4 x 2 x 1.5</td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td>2 x 2 x 0.80</td>
<td>3.20</td>
</tr>
<tr>
<td></td>
<td>2 x 0.1 x 0.80</td>
<td>1.60</td>
</tr>
<tr>
<td>Basin</td>
<td>2 x 12 x 0.80</td>
<td>19.20</td>
</tr>
<tr>
<td></td>
<td>1 x 12 x 0.50</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td>1 x 6 x 3</td>
<td>18.00</td>
</tr>
<tr>
<td>D/S Apron</td>
<td>1 x 3 x 6</td>
<td>18.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>99.60</td>
</tr>
</tbody>
</table>

@ of Rs. 121m³ = Rs. 12051.60

Grand Total = Rs. 98450.76
Say = Rs. 98450.00

Rupees (Ninety Eight Thousand Four Hundred and Fifty) only.
Name of Beneficiary : Community  
Location : Seinduli-II

1/1(a) Earthwork in excavation for Bridges and culverts below the lower bed level including dewatering and ………….the Engineer-in-charge.
(d) Soft or Laminated rock or medium shale
- Dam : 1 No x 6m x 1m x 0.7 = 4.2m$^3$
- Basin wall : 1No x 6m x 3m x 0.30 = 5.4m$^3$
- Wing wall : 2 No x 3.00m x 1m x 0.7m = 4.2m$^3$
- Washing Place : 1 No x 2.50m x 1.5m x 0.30m =1.125m$^3$

Total = 16.425 m$^3$

@ of Rs. 177.00/m$^3$ = Rs. 2907.22

2/6.1 Providing cement concrete work in abutment, wing wall and return wall in proportion 1:3:6 …………………………….. curing excluding shuttering) complete as directed.
- Dam : 1 No x 6 x 0.9 x 0.2 = 1.08m$^3$
- Wing wall : 2 No x 3 x 0.9 x 0.2 = 1.08m$^3$
- Basin : 1 x 2.5 x 0.3 x0.2 = 0.15m$^3$
  2 x 2 x 0.3 x 0.2 =0.24m$^3$

Total = 2.55 m$^3$

@ of Rs. 3216.00 m$^3$ = Rs. 8200.80

3/6.2 Providing cement concrete work in proportion 1:2:4 corresponding to M150 with very hard granular black chips of 20mm downgraded including curing and necessary local carriage of stone aggregate and sand within 200metres (excluding shuttering and reinforcements) complete as directed.
- Dam : 1 x 6 x 0.1 x 0.5 = 3m$^3$
  1 x 6 x $\frac{1.0+0.5}{2}$ x 1.5 = 6.75m$^3$

Wing wall : 2 x 3 x 1 x 0.5 = 3m$^3$
  2 x 3 x $\frac{1+0.5}{2}$ x 1.5 = 6.75m$^3$

Basin : 1 x 2.5 x 0.3 x 0.5 = 0.375m$^3$
  2 x 2 x 0.3 x 0.5 = 0.6m$^3$

Total = 22.475 m$^3$

@ of Rs. 4074/- m$^3$ = Rs. 91563.31

4/4.5. Providing stone pitching with one man size boulders not ………….distance of 200 meters complete as directed.
- U/P Apron = 1 x 4 x 1 x 0.25 = 1m$^3$
- Steeling Basin = 1 x 2.5 x 2 x 0.25 = 1.125m$^3$

Total = 2.125m$^3$

@ of Rs. 559/-m$^3$ = Rs. 1187.87

5/6.12 Providing shuttering in R.C.C. bridge and culverts with dressed planks not less than …………complete as directed.
- Dam : 1 x 6 x 1 = 6 m$^3$
  1 x 3 x 1 = 3 m$^3$
- Wing wall : 2 x 3 x 1 = 6 m$^3$
  2 x 2 x 2 = 4 m$^3$

Total = 19 m$^3$

@ of Rs. 308.00/-m$^3$ = Rs. 5852.00
6/1. Providing 12mm thick cement plastering in proportion 1:4 including ………..no plastering is to be done in retaining walls, breast walls and face walls)

(b) Over stone work and cement concrete

Wing wall :
2 x 3 x 1.5 = 9 m²
2 x 2 x 1.5 = 6 m²
2 x 1 x 1.5 = 3 m²

Dam :
1 x 4 x 1.5 = 6 m²
1 x 6 x 1.5 = 9 m²

Wall basin :
1 x 3.1 x 0.5 = 1.55 m²
1 x 2.5 x 0.5 = 1.25 m²
2 x 2.3 x 0.5 = 2.3 m²
2 x 2 x 0.5 = 2 m²

Stitching Basin :
1 x 2 x 2.5 = 5 m²

Washing Platform : 1 x 10 x 2 = 20 m²
Total = 65.1 m²
@ Rs. 121.00/m² = Rs. 7877.10

7/53 Providing steel reinforcement of R.C.C. work including bending, binding and placing in position as per approved design and drawing complete as directed.

(c) Mild Steel Bars.=1 % of Item No. 2/26 =
1/100 x 2.55 x 78.5 = 2.1 Quintal
@ Rs. 9612.00/ Qtl = Rs. 20185.20

Grand Total = Rs. 137773.50
Say = Rs. 137773.00

(Rupees One Lakh Thirty Seven Thousand Seven Hundred and Seventy Three) only
ESTIMATE FOR CONSTRUCTION OF C.C DAM CUM WASHING PLACE NO.3 
UNDER UMTRYWA-UMIONG IWMP-IX 
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle 
for the Year 2010 – 2011

Name of Beneficiary : Community 
Location : Mawsyrpat 

1/1(a) Earthwork in excavation for Bridges and culverts below the lower 
bed level including dewatering and ………………Engineer-in-charge. 
(d) Soft or Laminated rock or medium shale

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Dimension</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1</td>
<td>6m x 3m x 0.7</td>
<td>4.2 m³</td>
</tr>
<tr>
<td>Basin wall</td>
<td>1</td>
<td>6m x 3m x 0.3</td>
<td>5.4 m³</td>
</tr>
<tr>
<td>Wing wall</td>
<td>2</td>
<td>3.00m x 1m x 0.7</td>
<td>4.2 m³</td>
</tr>
<tr>
<td>Washing Place</td>
<td>1</td>
<td>2.50m x 1.5m x 0.30m</td>
<td>1.125 m³</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>16.425 m³</td>
</tr>
<tr>
<td>@ of Rs. 177.00/m³</td>
<td></td>
<td></td>
<td>2907.22</td>
</tr>
</tbody>
</table>

2/6.1 Providing cement concrete work in abutment, wing wall and return 
wall in proportion 1:3:6 …………………………….curing 
excluding shuttering) complete as directed

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Dimension</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1</td>
<td>6 x 0.9 x 0.2</td>
<td>1.08 m³</td>
</tr>
<tr>
<td>Wing wall</td>
<td>2</td>
<td>3 x 0.9 x 0.2</td>
<td>1.08 m³</td>
</tr>
<tr>
<td>Basin</td>
<td>1</td>
<td>2.5 x 0.3 x 0.2</td>
<td>0.15 m³</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2 x 0.3 x 0.2</td>
<td>0.24 m³</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>2.55 m³</td>
</tr>
<tr>
<td>@ of Rs. 3216.00/m³</td>
<td></td>
<td></td>
<td>8200.80</td>
</tr>
</tbody>
</table>

3/6.2 Providing cement concrete work in proportion 1:2:4 corresponding 
to M150 with very hard granular black chips of 20mm downgraded 
including curing and necessary local carriage of stone aggregate 
and sand within 200metres (excluding shuttering and 
reinforcements) complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Dimension</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1</td>
<td>6 x 1</td>
<td>6 m³</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>3 x 1</td>
<td>3 m³</td>
</tr>
<tr>
<td>Wing wall</td>
<td>2</td>
<td>3 x 1</td>
<td>6 m³</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2 x 2</td>
<td>4 m³</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>19 m³</td>
</tr>
<tr>
<td>@ of Rs. 4074/- m³</td>
<td></td>
<td></td>
<td>91563.31</td>
</tr>
</tbody>
</table>

4/4.5. Providing stone pitching with one man size boulders not …………
……………………distance of 200 meters complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Dimension</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U/P Apron</td>
<td>1</td>
<td>4 x 1 x 0.25</td>
<td>1 m³</td>
</tr>
<tr>
<td>Steeling Basin</td>
<td>1</td>
<td>2.5 x 2 x 0.25</td>
<td>1.125 m³</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>2.125 m³</td>
</tr>
<tr>
<td>@ of Rs. 559/-m³</td>
<td></td>
<td></td>
<td>1187.87</td>
</tr>
</tbody>
</table>

5/6.12 Providing shuttering in R.C.C. bridge and culverts with dressed 
planks not less than ……………complete as directed.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Dimension</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>1</td>
<td>6 x 1</td>
<td>6 m³</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>3 x 1</td>
<td>3 m³</td>
</tr>
<tr>
<td>Wing wall</td>
<td>2</td>
<td>3 x 1</td>
<td>6 m³</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2 x 2</td>
<td>4 m³</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>19 m³</td>
</tr>
<tr>
<td>@ of Rs. 308.00/-m³</td>
<td></td>
<td></td>
<td>5852.00</td>
</tr>
</tbody>
</table>

6/1. Providing 12mm thick cement plastering in proportion 1:4 including
………..no plastering is to be done in retaining walls, breast walls and face walls

(c) Over stone work and cement concrete

Wing wall: 
\[
2 \times 3 \times 1.5 = 9 \text{ m}^2 \\
2 \times 2 \times 1.5 = 6 \text{ m}^2 \\
2 \times 1 \times 1.5 = 3 \text{ m}^2
\]

Dam: 
\[
1 \times 4 \times 1.5 = 6 \text{ m}^2 \\
1 \times 6 \times 1.5 = 9 \text{ m}^2
\]

Wall basin: 
\[
1 \times 3.1 \times 0.5 = 1.55 \text{ m}^2 \\
1 \times 2.5 \times 0.5 = 1.25 \text{ m}^2 \\
2 \times 2.3 \times 0.5 = 2.3 \text{ m}^2 \\
2 \times 2 \times 0.5 = 2 \text{ m}^2
\]

Stitching Basin: 
\[
1 \times 2 \times 2.5 = 5 \text{ m}^2
\]

Washing Platform: 
\[
1 \times 10 \times 2 = 20 \text{ m}^2 \\
\text{Total} = 65.1 \text{ m}^2
\]

\[
\text{@ Rs. 121.00/m}^3 = \text{Rs. } 7877.10
\]

7/53 Providing steel reinforcement of R.C.C. work including bending, binding and placing in position as per approved design and drawing complete as directed.

(d) Mild Steel Bars =1% of Item No. 2/26 =
\[
1/100 \times 2.55 \times 78.5 = 2.1 \text{ Quintal}
\]

\[
\text{@ Rs. 9612.00/ Qtl} = \text{Rs. } 20185.20
\]

Grand Total = Rs. 137773.50
Say = Rs. 137773.00

(Rupees One Lakh Thirty Seven Thousand Seven Hundred and Seventy Three) only
ESTIMATE FOR CONSTRUCTION OF DRINKING WELL NO.4
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Community
Location : Mawsyrpat

1/1 (a) Earthwork in excavation below the lowest bed level
including dewatering and bailing out water etc including
leveling the foundation etc as directed complete.

\[
3.00 \times 3.00 \times 1.80 = 16.20 \text{ m}^3
\]

@ Rs. 177.00/- m\(^3\) .........................................................Rs.2867.40

2/4.8 Providing C.C. work in proportion 1:4:8 with hard broken
stone aggregate 40 mm and dawn graded etc complete and
as directed.

\[
\begin{align*}
3.00 \times 0.20 \times 0.20 &= 0.12 \text{ m}^3 \\
3.00 \times 0.20 \times 0.20 &= 0.12 \text{ m}^3 \\
&= 0.24 \text{ m}^3
\end{align*}
\]

@ Rs. 2823.00/- m\(^3\) .........................................................Rs.677.52

3/4.5 Providing stone pitching including filling the Interstices
and carriage of stone filling within 200m complete as directed.

\[
\begin{align*}
2.80 \times 2.80 \times 0.20 &= 1.57 \text{ m}^3 \\
3.00 \times 1.20 \times 0.20 &= 0.72 \text{ m}^3 \\
&= 2.29 \text{ m}^3
\end{align*}
\]

@ Rs. 559.00/- m\(^3\) .........................................................Rs.1280.11

4/4.1 Providing regular stone masonry with hammer dressed
Or blunt chisel dressed in cement mortar 1:6 including
carriage of stone within 200m complete as directed.

\[
\begin{align*}
2.80 \times 3.00 \times 0.20 &= 1.68 \text{ m}^3 \\
2.80 \times 2.60 \times 0.20 &= 1.46 \text{ m}^3 \\
2 \times 2.60 \times 3.00 + 2.60 \times 0.20 &= 2.91 \text{ m}^3 \\
&= 6.05 \text{ m}^3
\end{align*}
\]

@ Rs. 2045.00/- m\(^3\) .........................................................Rs.12372.25

5/5.3 Providing steel reinforcement of R.C.C work including
Bending, binding and placing in position etc complete
as directed.

\[
2 \times 37 \times 3.60 = 266.40 \text{ Rm} \times 0.62 = 1.65 \text{ Qntl}
\]

@ Rs. 9612.00/- Qntl .........................................................Rs.15859.80

6/6.12 Providing shuttering with dressed plank not less than
25mm thick properly joined etc and removing the same
after the concrete hardens complete as directed.

\[
3.60 \times 3.60 = 12.96 \text{ m}^2
\]

@ Rs. 308.00/- m\(^2\) .........................................................Rs.3991.68

93
7/6.2 Providing C.C. work in proportion 1:2:4 with hard granular Stone of 20 mm down graded including curing and necessary Local carriage of stones within 200m etc complete as directed.

\[
\begin{align*}
3.60 \times 3.60 \times 0.10 &= 1.30 \text{ m}^3 \\
3.00 \times 1.20 \times 0.10 &= 0.36 \text{ m}^3 \\
&= 1.66 \text{ m}^3
\end{align*}
\]

@ Rs. 4074.00/- m\(^3\) ................................................. Rs. 6762.84

8/1 Providing 12mm thick cement plastering in proprn. 1:4 Including clearing the surface and carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2.80 \times 3.00 &= 8.40 \text{ m}^2 \\
2.80 \times 2.60 &= 7.28 \text{ m}^2 \\
2 \times 2.60 \times 3.00 + 2.60 &= 14.56 \text{ m}^3 \\
2 &= 3.00 \times 0.60 \\
2 \times 3.00 \times 1.60 + 1.20 &= 8.40 \text{ m}^2 \\
2 &= 3.60 \times 3.60 \\
2 \times 2 \times 3.60 \times 0.10 &= 1.44 \text{ m}^2 \\
3.00 \times 1.20 &= 3.60 \text{ m}^2 \\
2 &= 3.00 \times 1.20 \\
3.60 \times 1.20 &= 58.44 \text{ m}^2
\end{align*}
\]

@ Rs. 121.00/- m\(^2\) .................................................. Rs. 7071.24

9/11 Cutting drain .............etc. complete

Length of drain = 25.0 m

@ Rs. 49.00/- Rm .................................................. Rs. 1225.00

TOTAL Rs.52107.84

SAY, Rs.52107.00

(Rupees Fifty Two Thousand One Hundred and Seven) only
ESTIMATE FOR CONSTRUCTION OF DRINKING WELL NO.5
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Community
Location: Seinduli-II

1/1 (a) Earthwork in excavation below the lowest bed level including dewatering and bailing out water etc including leveling the foundation etc as directed complete.

\[
3.00 \times 3.00 \times 1.80 = 16.20 \, m^3
\]

@ Rs. 177.00/- \, m^3 ……………………………………………….Rs.2867.40

2/4.8 Providing C.C. work in proportion 1:4:8 with hard broken stone aggregate 40 mm and dawn graded etc complete and as directed.

\[
\begin{align*}
3.00 \times 0.20 \times 0.20 &= 0.12 \, m^3 \\
3.00 \times 0.20 \times 0.20 &= 0.12 \, m^3 \\
&= 0.24 \, m^3
\end{align*}
\]

@ Rs. 2823.00/- \, m^3 ………………………………………….Rs.677.52

3/4.5 Providing stone pitching including filling the Interstices and carriage of stone filling within 200m complete as directed.

\[
\begin{align*}
2.80 \times 2.80 \times 0.20 &= 1.57 \, m^3 \\
3.00 \times 1.20 \times 0.20 &= 0.72 \, m^3 \\
&= 2.29 \, m^3
\end{align*}
\]

@ Rs. 559.00/- \, m^3 ………………………………………….Rs.1280.11

4/4.1 Providing regular stone masonry with hammer dressed Or blunt chisel dressed in cement mortar 1:6 including carriage of stone within 200m complete as directed.

\[
\begin{align*}
2.80 \times 3.00 \times 0.20 &= 1.68 \, m^3 \\
2.80 \times 2.60 \times 0.20 &= 1.46 \, m^3 \\
2 \times 2.60 \times 3.00 + 2.60 \times 0.20 &= 2.91 \, m^3 \\
\frac{2}{2} &= 6.05 \, m^3
\end{align*}
\]

@ Rs. 2045.00/- \, m^3 ………………………………………….Rs.12372.25

5/5.3 Providing steel reinforcement of R.C.C work including Bending, binding and placing in position etc complete as directed.

\[
2 \times 37 \times 3.60 = 266.40 \, Rm \times 0.62 = 1.65 \, Qntl
\]

@ Rs. 9612.00/- \, Qntl ………………………………………….Rs.15859.80

6/6.12 Providing shuttering with dressed plank not less than 25mm thick properly joined etc and removing the same after the concrete hardens complete as directed.

\[
3.60 \times 3.60 = 12.96 \, m^2
\]

@ Rs. 308.00/- \, m^2 ………………………………………….Rs.3991.68
Providing C.C. work in proportion 1:2:4 with hard granular Stone of 20 mm down graded including curing and necessary Local carriage of stones within 200m etc complete as directed.

\[
\begin{align*}
3.60 \times 3.60 \times 0.10 &= 1.30 \text{ m}^3 \\
3.00 \times 1.20 \times 0.10 &= 0.36 \text{ m}^3 \\
&= 1.66 \text{ m}^3
\end{align*}
\]

@ Rs. 4074.00/- m\(^3\) ........................................ Rs.6762.84

Providing 12mm thick cement plastering in propn. 1:4 Including clearing the surface and carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2.80 \times 3.00 &= 8.40 \text{ m}^2 \\
2.80 \times 2.60 &= 7.28 \text{ m}^2 \\
2 \times 2.60 \times 3.00 + 2.60 &= 14.56 \text{ m}^3 \\
&= 1.80 \text{ m}^2 \\
2 \times 3.00 \times 1.60 + 1.20 &= 8.40 \text{ m}^2 \\
&= 12.96 \text{ m}^2 \\
2 \times 2 \times 3.60 \times 0.10 &= 1.44 \text{ m}^2 \\
3.00 \times 1.20 &= 3.60 \text{ m}^2 \\
&= 58.44 \text{ m}^2
\end{align*}
\]

@ Rs. 121.00/- m\(^2\) ........................................ Rs. 7071.24

Cutting drain .................etc. complete

Length of drain = 25.0 m

@ Rs. 49.00/- Rm ........................................ Rs. 1225.00

TOTAL Rs.52107.84

SAY, Rs.52107.00

(Rupees Fifty Two Thousand One Hundred and Seven) only
ESTIMATE FOR CONSTRUCTION OF DRINKING WELL NO. 6
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Community
Location : Seinduli-II

1/1 (a) Earthwork in excavation below the lowest bed level
including dewatering and bailing out water etc including
leveling the foundation etc as directed complete.

\[ 3.00 \times 3.00 \times 1.80 = 16.20 \text{ m}^3 \]

\[ \text{@ Rs. 177.00/- m}^3 \] \[.......................... \text{Rs.2867.40} \]

2/4.8 Providing C.C. work in proportion 1:4:8 with hard broken
stone aggregate 40 mm and dawn graded etc complete and
as directed.

\[ 3.00 \times 0.20 \times 0.20 = 0.12 \text{ m}^3 \]
\[ 3.00 \times 0.20 \times 0.20 = 0.12 \text{ m}^3 \]
\[ = 0.24 \text{ m}^3 \]

\[ \text{@ Rs. 2823.00/- m}^3 \] \[.......................... \text{Rs.677.52} \]

3/4.5 Providing stone pitching including filling the Interstices
and carriage of stone filling within 200m complete as directed.

\[ 2.80 \times 2.80 \times 0.20 = 1.57 \text{ m}^3 \]
\[ 3.00 \times 1.20 \times 0.20 = 0.72 \text{ m}^3 \]
\[ = 2.29 \text{ m}^3 \]

\[ \text{@ Rs. 559.00/- m}^3 \] \[.......................... \text{Rs.1280.11} \]

4/4.1 Providing regular stone masonry with hammer dressed
Or blunt chisel dressed in cement mortar 1:6 including
carriage of stone within 200m complete as directed.

\[ 2.80 \times 3.00 \times 0.20 = 1.68 \text{ m}^3 \]
\[ 2.80 \times 2.60 \times 0.20 = 1.46 \text{ m}^3 \]
\[ 2 \times 2.60 \times 3.00 + 2.60 \times 0.20 = 2.91 \text{ m}^3 \]
\[ 2 = 6.05 \text{ m}^3 \]

\[ \text{@ Rs. 2045.00/- m}^3 \] \[.......................... \text{Rs.12372.25} \]

5/5.3 Providing steel reinforcement of R.C.C work including
Bending, binding and placing in position etc complete
as directed.

\[ 2 \times 37 \times 3.60 = 266.40 \text{ Rm x 0.62 = 1.65 Qntl} \]

\[ \text{@ Rs. 9612.00/- Qntl} \] \[.......................... \text{Rs.15859.80} \]

6/6.12 Providing shuttering with dressed plank not less than
25mm thick properly joined etc and removing the same
after the concrete hardens complete as directed.

\[ 3.60 \times 3.60 = 12.96 \text{ m}^2 \]

\[ \text{@ Rs. 308.00/- m}^2 \] \[.......................... \text{Rs.3991.68} \]
Providing C.C. work in proportion 1:2:4 with hard granular Stone of 20 mm down graded including curing and necessary Local carriage of stones within 200m etc complete as directed.

\[
\begin{align*}
3.60 \times 3.60 \times 0.10 & = 1.30 \text{ m}^3 \\
3.00 \times 1.20 \times 0.10 & = 0.36 \text{ m}^3 \\
& = 1.66 \text{ m}^3
\end{align*}
\]

@ Rs. 4074.00/- \text{ m}^3 .............................................. Rs. 6762.84

Providing 12mm thick cement plastering in propn. 1:4 Including clearing the surface and carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2.80 \times 3.00 & = 8.40 \text{ m}^2 \\
2.80 \times 2.60 & = 7.28 \text{ m}^2 \\
2 \times 2.60 \times 3.00 + 2.60 & = 14.56 \text{ m}^3 \\
3.00 \times 0.60 & = 1.80 \text{ m}^2 \\
2 \times 3.00 \times 1.60 + 1.20 & = 8.40 \text{ m}^2 \\
3.60 \times 3.60 & = 12.96 \text{ m}^2 \\
2 \times 2 \times 3.60 \times 0.10 & = 1.44 \text{ m}^2 \\
3.00 \times 1.20 & = 3.60 \text{ m}^2 \\
& = 58.44 \text{ m}^2
\end{align*}
\]

@ Rs. 121.00/- \text{ m}^2 .................................................. Rs. 7071.24

Cutting drain ..........etc. complete

Length of drain = 25.0 m

@ Rs. 49.00/- Rm .................................................. Rs. 1225.00

\text{TOTAL} \hspace{1cm} \text{Rs. 52107.84}

\text{SAY,} \hspace{1cm} \text{Rs. 52107.00}

\text{(Rupees Fifty Two Thousand One Hundred and Seven) only}
ESTIMATE FOR CONSTRUCTION OF DRINKING WELL NO.5
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiary : Community
Location : Seinduli-II

1/1 (a) Earthwork in excavation below the lowest bed level including dewatering and bailing out water etc including leveling the foundation etc as directed complete.

\[ 3.00 \times 3.00 \times 1.80 = 16.20 \, \text{m}^3 \]

@ Rs. 177.00/- \( \text{m}^3 \) ......................................................Rs.2867.40

2/4.8 Providing C.C. work in proportion 1:4:8 with hard broken stone aggregate 40 mm and dawn graded etc complete and as directed.

\[ 3.00 \times 0.20 \times 0.20 = 0.12 \, \text{m}^3 \]
\[ 3.00 \times 0.20 \times 0.20 = 0.12 \, \text{m}^3 \]

\[ 2 \times 0.20 \times 0.20 = 0.24 \, \text{m}^3 \]

@ Rs. 2823.00/- \( \text{m}^3 \) ......................................................Rs.677.52

3/4.5 Providing stone pitching including filling the Interstices and carriage of stone filling within 200m complete as directed.

\[ 2.80 \times 2.80 \times 0.20 = 1.57 \, \text{m}^3 \]
\[ 3.00 \times 1.20 \times 0.20 = 0.72 \, \text{m}^3 \]

\[ = 2.29 \, \text{m}^3 \]

@ Rs. 559.00/- \( \text{m}^3 \) ......................................................Rs.1280.11

4/4.1 Providing regular stone masonry with hammer dressed Or blunt chisel dressed in cement mortar 1:6 including carriage of stone within 200m complete as directed.

\[ 2.80 \times 3.00 \times 0.20 = 1.68 \, \text{m}^3 \]
\[ 2.80 \times 2.60 \times 0.20 = 1.46 \, \text{m}^3 \]
\[ 2 x 2.60 \times 3.00 + 2.60 \times 0.20 = 2.91 \, \text{m}^3 \]
\[ 2 \]

\[ = 6.05 \, \text{m}^3 \]

@ Rs. 2045.00/- \( \text{m}^3 \) ......................................................Rs.12372.25

5/5.3 Providing steel reinforcement of R.C.C work including Bending, binding and placing in position etc complete as directed.

\[ 2 \times 37 \times 3.60 = 266.40 \, \text{Rm} \times 0.62 = 1.65 \, \text{Qntl} \]

@ Rs. 9612.00/- Qntl ......................................................Rs.15859.80

6/6.12 Providing shuttering with dressed plank not less than 25mm thick properly joined etc and removing the same after the concrete hardens complete as directed.

\[ 3.60 \times 3.60 = 12.96 \, \text{m}^2 \]

@ Rs. 308.00/- \( \text{m}^2 \) ......................................................Rs.3991.68
Providing C.C. work in proportion 1:2:4 with hard granular Stone of 20 mm dawn graded including curing and necessary Local carriage of stones within 200m etc complete as directed.

\[
\begin{align*}
3.60 \times 3.60 \times 0.10 &= 1.30 \text{ m}^3 \\
3.00 \times 1.20 \times 0.10 &= 0.36 \text{ m}^3 \\
\end{align*}
\]

@ Rs. 4074.00/- m\(^3\) .............................................. Rs.6762.84

Providing 12mm thick cement plastering in propn. 1:4 Including clearing the surface and carriage of sand within 200 m complete as directed.

\[
\begin{align*}
2.80 \times 3.00 &= 8.40 \text{ m}^2 \\
2.80 \times 2.60 &= 7.28 \text{ m}^2 \\
2 \times 2.60 \times \frac{3.00 + 2.60}{2} &= 14.56 \text{ m}^2 \\
3.00 \times 0.60 &= 1.80 \text{ m}^2 \\
2 \times 3.00 \times \frac{1.60 + 1.20}{2} &= 8.40 \text{ m}^2 \\
3.60 \times 3.60 &= 12.96 \text{ m}^2 \\
2 \times 2 \times 3.60 \times 0.10 &= 1.44 \text{ m}^2 \\
3.00 \times 1.20 &= 3.60 \text{ m}^2 \\
\end{align*}
\]

@ Rs. 121.00/- m\(^2\) .............................................. Rs. 7071.24

Cutting drain ...............etc. complete

Length of drain = 25.0 m

@ Rs. 49.00/- Rm ............................................... Rs. 1225.00

TOTAL Rs.52107.84

SAY, Rs.52107.00

(Rupees Fifty Two Thousand One Hundred and Seven) only
### ESTIMATE FOR CONSTRUCTION OF FOOTPATH NO.6 UNDER UMTRYWA-UMIONG IWMP-IX

**As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011**

Name of Beneficiary: Community  
Location: Umtyrwa Umiong

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1 (a) Earthwork in excavation……………...including leveling the foundation etc as directed complete.</td>
<td>1 x 30.00 x 1.10 x 0.10 = 3.30 m³ @ Rs. 177.00/- m³</td>
<td>Rs. 584.10</td>
</tr>
<tr>
<td>2/4.5 Providing C.C. work in proportion 1:4:8 with hard broken stone aggregate 40 mm and dawn graded etc complete and as directed.</td>
<td>1 x 30.00 x 1.10 x 0.10 = 3.30 m³ @ Rs. 559.00/- m³</td>
<td>Rs. 1844.70</td>
</tr>
<tr>
<td>3/6.1 Providing stone pitching including filling the Interstices and carriage of stone filling within 200m complete as directed.</td>
<td>1 x 30.00 x 1.10 x 0.10 = 3.30 m³ @ Rs. 3216.00/- m³</td>
<td>Rs. 10612.80</td>
</tr>
</tbody>
</table>
| 4/1. Providing 12mm thick cement plastering in proportion 1:4 Including clearing the surface and carriage of sand within 200 m complete as directed. | 1 x 30 x 1.10 m = 33.00 m²  
2 x 30 x 0.10 m = 6.00 m²  
1 x 1.10 x 0.10 m = 0.11 m²  
39.11m² | @ Rs. 121.00/- Rm | Rs. 4732.31  
| TOTAL |  | Rs.17773.91  
| SAY |  | Rs.17573.00  

(Rupees Seventeen Thousand Five Hundred and Seventy Three) only
## ABSTRACT OF COST FOR HEAD WATER DAM
### UNDER UMTRYWA UMIONG IWMP-IX

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>ITEMS</th>
<th>AMOUNT IN (Rs.)</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Head Water Dam No. - 1</td>
<td>72711.00</td>
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</tr>
<tr>
<td>2</td>
<td>Head Water Dam No. - 2</td>
<td>72711.00</td>
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</tr>
<tr>
<td>3</td>
<td>Head Water Dam No. - 3</td>
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</tr>
<tr>
<td>4</td>
<td>Head Water Dam No. - 4</td>
<td>72711.00</td>
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</tr>
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<td>5</td>
<td>Head Water Dam No. - 5</td>
<td>72711.00</td>
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</tr>
<tr>
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<td>Head Water Dam No. - 6</td>
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<td>15</td>
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<td>142881.00</td>
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<td>16</td>
<td>Head Water Dam No. - 16</td>
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<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>1717291.00</strong></td>
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ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.1
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Shri Brian Nongphud
Location: Phodriattham

½.1(a) Earthwork in excavation for bridges and culvert below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of foundation by adequate shoring scaffolding including leveling the foundation longitudinally and transversely etc. as directed.

(ii). On soil mixed with above on man size etc.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Wall</td>
<td>6.0 x 1.00 x 0.90 m</td>
<td>5.40 m³</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>2 x 1.50 x 0.60 x 0.60 m</td>
<td>1.08 m³</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 4.00 x 0.80 x 0.60 m</td>
<td>3.84 m³</td>
</tr>
<tr>
<td>Apron</td>
<td>(6.00+6.00) x 1.50 x 0.30 m</td>
<td>5.40 m³</td>
</tr>
<tr>
<td>Eartheen Channel</td>
<td>96.0 x 1.00 x 0.60 m</td>
<td>57.60 m³</td>
</tr>
</tbody>
</table>

@ Rs.78/- m³ ............... Rs.5718.96

2/4.8 Providing C.C. work prop 1:4:8 with hard broken stones aggregates 40mm nominal sizes including necessary carriage of stones and sand within a distance 200m complete and curing.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>6.00 x 1.00 x 0.10 m</td>
<td>0.60 m³</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>2 x 1.50 x 0.60 x 0.10 m</td>
<td>0.18 m³</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 4.00 x 0.80 x 0.10 m</td>
<td>0.64 m³</td>
</tr>
<tr>
<td>Apron</td>
<td>(6.00 +6.00) x 1.50 x 0.10 m</td>
<td>1.80 m³</td>
</tr>
</tbody>
</table>

@ Rs. 2823/-m³………………….. Rs.9090.06

3/6.1 Providing cement concrete work in abut man, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200m and 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 {((0.80 +0.80)+(0.40 +0.80/2) x 1.60}</td>
<td>9.60 m³</td>
</tr>
<tr>
<td>Deduct spillway</td>
<td>4.00 x 0.30 x 0.40</td>
<td>(-) 0.48 m³</td>
</tr>
</tbody>
</table>

@ Rs.3216/-m³………………….. Rs.29329

4/6.12 Providing shuttering for dam wall with dressed planks not less than 25mm thick properly joined with battens of minimum sizes 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam u/s face</td>
<td>6.00 x 1.60 m</td>
<td>9.60m²</td>
</tr>
<tr>
<td>D/s face</td>
<td>6.00 x 1.70m</td>
<td>10.20m²</td>
</tr>
<tr>
<td>Deduct spillway</td>
<td>2 x 4.0 x 0.30 m</td>
<td>(-)2.40m²</td>
</tr>
</tbody>
</table>

@ Rs. 308/-m³…………………………….. Rs.5359.20
Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x30cm long with proper key stones each not less than 25 x25 x75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

Guide walls: 2 x 1.50 x (0.60 +0.40/2) x 1.90m = 2.85 m³
Wing wall : 2 x 4.00 x (0.80 + 0.40/2) x 2.20m = 10.56 m³
Apron: (6.00 + 6.00) x 1.50 x 0.20 m = 3.60 m³

@ Rs.1045/-m³………………………… Rs.17775.45

Providing 12mm thick cement plaster in proportion 1:4
Including screening sand clearing the surface and carriage of sand within 200mm complete and as directed.

Dam U/S and D/S face: 6.00 x (1.70 + 1.60) m = 19.00m²
Top: \{(6.0 x 0.40) +(2.x 0.30 x 0.40)\}m = 2.64 m²
Deduct spillway:2 x 4.00 x 0.30m = (-) 2.40 m²
Guide walls 2 x 2 x 1.50 x (1.30 + 0.60/2)m = 5.70 m²
2 x 1.50 x 0.40 = 1.20 m²
Apron: (6.0 + 6.0) x 1.50 m = 18.00m²
= 44.94m²

@ Rs.121/-m²…………………………… Rs.5437.74

Total = Rs.72711.33
Say = Rs.72711.00

(Rupees Seventy Two Thousand Seven Hundred and Eleven) only.
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.2
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Shri Krian L. Nonglait
Location : Umiong

½.1(a) Earthwork in excavation for bridges and culvert
below the lowest bed level including dewatering
and bailing out water in order to keep the foundation
trenches of water and protecting the sides of foundation
by adequate shoring scaffolding including leveling
the foundation longitudinally and transversely etc.
as directed.
(ii).On soil mixed with above on man size etc.
Head Wall : 6.0 x 1.00 x 0.90m = 5.40 m³
Guide Walls : 2 x 1.50 x 0.60 x 0.60m = 1.08 m³
Wing Wall : 2 x 4.00 x 0.80 x 0.60m = 3.84 m³
Apron : (6.00+6.00) x1.50 x0.30 m = 5.40 m³
Earthen Channel: 96.0 x 1.00 x0.60 m = 57.60 m³
= 73.32 m³
@ Rs.78/-m³ ..............................  Rs.5718.96

2/4.8 Providing C.C. work prop 1:4:8 with hard broken
stones aggregates 40mm nominal sizes including
necessary carriage of stones and sand within a distance
200m complete and curing.
Dam : 6.00 x 1.00 x 0.10 m = 0.60 m³
Guide Walls : 2 x 1.50 x 0.60 x 0.10 m = 0.18 m³
Wing Wall : 2 x 4.00 x 0.80 x 0.10 m = 0.64 m³
Apron: (6.00 +6.00) x 1.50 x 0.10 m = 1.80 m³
= 3.22 m³
@ Rs. 2823/-m³............................  Rs.9090.06

3/6.1 Providing cement concrete work in abut man, wing
wall, and return wall in proportion 1:3:6 with hard
broken stone aggregates 40mm down graded including
necessary local carriage of stone aggregates, sand within
200m and complete as directed.
Dam: 6.00 {(0.80 +0.80)+(0.40 +0.80/2) x 1.60} = 9.60m³
Deduct spillway : 4.00 x 0.30 x 0.40 = (-) 0.48 m³
= 9.12 m³
@ Rs.3216/-m³..............................  Rs.29329

4/6.12 Providing shuttering for dam wall with dressed planks
not less than 25mm thick properly joined with battens
of minimum sizes 75mm x 100mm at a spacing of not
more than 600mm centre to centre to the proper level
including covering in the contact face with polythene
sheet and removing the same after the concrete hardens
complete as directed.
Dam u/s face: 6.00 x 1.60 m = 9.60m²
D/s face: 6.00 x 1.70m = 10.20m²
Deduct spillway : 2 x 4.0 x 0.30 m = (-)2.40m²
= 17.40 m²
@ Rs. 308/-m³..............................  Rs.5359.20
Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x30cm long with proper key stones each not less than 25 x25 x75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

Guide walls: \(2 \times 1.50 \times (0.60 + 0.40/2) \times 1.90\) m = 2.85 m³
Wing wall: \(2 \times 4.00 \times (0.80 + 0.40/2) \times 2.20\) m = 10.56 m³
Apron: \((6.00 + 6.00) \times 1.50 \times 0.20\) m = 3.60 m³
= 17.01 m³

@ Rs.1045/-m³………………………………….. Rs.17775.45

Providing 12mm thick cement plaster in proportion 1:4
Including screening sand clearing the surface and carriage of sand within 200mm complete and as directed.

Dam U/S and D/S face: \(6.00 \times (1.70 + 1.60)\) m = 19.00m²
Top: \([(6.0 \times 0.40) + (2 \times 0.30 \times 0.40)]\) m = 2.64 m²
Deduct spillway: \(2 \times 4.00 \times 0.30\) m = (-) 2.40 m²
Guide walls \(2 \times 2 \times 1.50 \times (1.30 + 0.60/2)\) m = 5.70 m²
2 \(\times 1.50 \times 0.40\) = 1.20 m²
Apron: \((6.0 + 6.0) \times 1.50\) m = 18.00m²
= 44.94m²

@ Rs.121/-m²………………………………….. Rs.5437.74

Total = Rs.72711.33
Say = Rs.72711.00

(Rupees Seventy Two Thousand Seven Hundred and Eleven) only.
Name of Beneficiaries: Shri Listarwel Nonglang  
Location: Phud Umiong

½.1(a) Earthwork in excavation for bridges and culvert below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of foundation by adequate shoring scaffolding including leveling the foundation longitudinally and transversely etc. as directed.

(ii). On soil mixed with above on man size etc.

- **Head Wall**: 6.0 x 1.00 x 0.90m = 5.40 m³
- **Guide Walls**: 2 x 1.50 x 0.60 x 0.60m = 1.08 m³
- **Wing Wall**: 2 x 4.00 x 0.80 x 0.60m = 3.84 m³
- **Apron**: (6.00 + 6.00) x 1.50 x 0.30m = 5.40 m³
- **Earthen Channel**: 96.0 x 1.00 x 0.60m = 57.60 m³

Total: 73.32 m³ @ Rs.78/-/m³ = Rs. 5718.96

2/4.8 Providing C.C. work prop 1:4:8 with hard broken stones aggregates 40mm nominal sizes including necessary carriage of stones and sand within a distance 200m complete and curing.

- **Dam**: 6.00 x 1.00 x 0.10 m = 0.60 m³
- **Guide Walls**: 2 x 1.50 x 0.60 x 0.10 m = 0.18 m³
- **Wing Wall**: 2 x 4.00 x 0.80 x 0.10 m = 0.64 m³
- **Apron**: (6.00 + 6.00) x 1.50 x 0.10 m = 1.80 m³

Total: 3.22 m³ @ Rs. 2823/-/m³ = Rs. 9090.06

3/6.1 Providing cement concrete work in abut man, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200m and complete as directed.

- **Dam**: 6.00 \((0.80 + 0.80) + (0.40 + 0.80/2) \times 1.60\) = 9.60 m³
- **Deduct spillway**: 4.00 x 0.30 x 0.40 = (-) 0.48 m³

Total: 9.12 m³ @ Rs. 3216/-/m³ = Rs. 29329

4/6.12 Providing shuttering for dam wall with dressed planks not less than 25mm thick properly joined with battens of minimum sizes 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level complete as directed.

- **Dam u/s face**: 6.00 x 1.60 m = 9.60 m²
- **D/s face**: 6.00 x 1.70 m = 10.20 m²
- **Deduct spillway**: 2 x 4.0 x 0.30 m = (-) 2.40 m²

Total: 17.40 m² @ Rs. 308/-/m³ = Rs. 5359.20
Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x 30cm long with proper key stones each not less than 25 x 25 x 75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

Guide walls: 2 x 1.50 x (0.60 + 0.40/2) x 1.90m = 2.85 m³
Wing wall: 2 x 4.00 x (0.80 + 0.40/2) x 2.20m = 10.56 m³
Apron: (6.00 + 6.00) x 1.50 x 0.20 m = 3.60 m³
= 17.01 m³

@ Rs.1045/-m³…………………………… Rs.17775.45

Providing 12mm thick cement plaster in proportion 1:4 including screening sand clearing the surface and carriage of sand within 200mm complete and as directed.

Dam U/S and D/S face: 6.00 x (1.70 + 1.60) m = 19.00m²
Top: (6.0 x 0.40) + (2.0 x 0.30 x 0.40) m = 2.64 m²
Deduct spillway: 2 x 4.00 x 0.30m = (-) 2.40 m²
Guide walls: 2 x 2 x 1.50 x (1.30 + 0.60/2)m = 5.70 m²
2 x 1.50 x 0.40 = 1.20 m²
Apron: (6.0 + 6.0) x 1.50 m = 18.00m²
= 44.94m²

@ Rs.121/-m²…………………………………… Rs.5437.74

Total = Rs.72711.33
Say = Rs.72711.00

(Rupees Seventy Two Thousand Seven Hundred and Eleven) only.
## ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.4 UNDER UMTYRWA-UMIONG IWMP-IX

As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiaries: Shri Disping Langrin  
Location: Wahdiedoh

### ½.1(a)

Earthwork in excavation for bridges and culvert below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of foundation by adequate shoring scaffolding including leveling the foundation longitudinally and transversely etc. as directed.

(ii). On soil mixed with above on man size etc.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Wall</td>
<td>5.40</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>1.08</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>3.84</td>
</tr>
<tr>
<td>Apron</td>
<td>5.40</td>
</tr>
<tr>
<td>Earthen Channel</td>
<td>57.60</td>
</tr>
<tr>
<td>Total</td>
<td>73.32</td>
</tr>
</tbody>
</table>

@ Rs.78/-m³  
Rs.5718.96

### 2/4.8

Providing C.C. work prop 1:4:8 with hard broken stones aggregates 40mm nominal sizes including necessary carriage of stones and sand within a distance 200m complete and curing.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>0.60</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>0.18</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>0.64</td>
</tr>
<tr>
<td>Apron</td>
<td>1.80</td>
</tr>
<tr>
<td>Total</td>
<td>3.22</td>
</tr>
</tbody>
</table>

@ Rs. 2823/-m³  
Rs.9090.06

### 3/6.1

Providing cement concrete work in abut man, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200m and complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>9.60</td>
</tr>
<tr>
<td>Deduct spillway</td>
<td>(-0.48) m³</td>
</tr>
<tr>
<td>Total</td>
<td>9.12 m³</td>
</tr>
</tbody>
</table>

@ Rs.3216/-m³  
Rs.29329

### 4/6.12

Providing shuttering for dam wall with dressed planks not less than 25mm thick properly joined with battens of minimum sizes 75mm x 100mm at a spacing of not more the same after the concrete hardens complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam u/s face</td>
<td>9.60 m²</td>
</tr>
<tr>
<td>D/s face</td>
<td>10.20 m²</td>
</tr>
<tr>
<td>Deduct spillway</td>
<td>(-2.40 m²)</td>
</tr>
<tr>
<td>Total</td>
<td>17.40 m²</td>
</tr>
</tbody>
</table>

@ Rs. 308/-m³  
Rs.5359.20
5/4.1 Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x 30cm long with proper key stones each not less than 25 x 25 x 75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

Guide walls: \(2 \times 1.50 \times (0.60 + 0.40/2) \times 1.90m\) = 2.85 m³
Wing wall: \(2 \times 4.00 \times (0.80 + 0.40/2) \times 2.20m\) = 10.56 m³
Apron: \((6.00 + 6.00) \times 1.50 \times 0.20 m\) = \(3.60 \text{ m}^3\)
= \(17.01 \text{ m}^3\)

@ Rs.1045/-m³........................................ Rs.17775.45

6/1. Providing 12mm thick cement plaster in proportion 1:4
Including screening sand clearing the surface and carriage of sand within 200mm complete and as directed.

Dam U/S and D/S face: \(6.00 \times (1.70 + 1.60) \text{ m}\) = 19.00 m²
Top: \((6.0 \times 0.40) + (2.0 \times 0.30 \times 0.40)\)m = 2.64 m²
Deduct spillway: \(2 \times 4.00 \times 0.30\)m = \((-\) 2.40 m²
Guide walls \(2 \times 1.50 \times (1.30 + 0.60/2)\)m = 5.70 m²
\(2 \times 1.50 \times 0.40\) = 1.20 m²
Apron: \((6.0 + 6.0) \times 1.50 \text{ m}\) = \(18.00\text{m}²\)
= \(44.94\text{m}²\)

@ Rs.121/-m²........................................ Rs.5437.74

\[
\begin{align*}
\text{Total} & = \text{Rs.72711.33} \\
\text{Say} & = \text{Rs.72711.00}
\end{align*}
\]

(Rupees Seventy Two Thousand Seven Hundred and Eleven) only.
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.5 UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiaries: Smti. Ebrestilda Snaitang
Location : Wahdiedoh

½.1(a) Earthwork in excavation for bridges and culvert below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of foundation by adequate shoring scaffolding including leveling the foundation longitudinally and transversely etc. as directed.

(ii). On soil mixed with above on man size etc.

Head Wall : 6.0 x 1.00 x 0.90m = 5.40 m³
Guide Walls : 2 x 1.50 x 0.60 x 0.60m = 1.08 m³
Wing Wall : 2 x 4.00 x 0.80 x 0.60m = 3.84 m³
Apron : (6.00+6.00) x 1.50 x 0.30 m = 5.40 m³
Earthen Channel : 96.0 x 1.00 x 0.60 m = 57.60 m³
= 73.32 m³

@ Rs.78/-m³ ..................................................... Rs.5718.96

2/4.8 Providing C.C. work prop 1:4:8 with hard broken stones aggregates 40mm nominal sizes including necessary carriage of stones and sand within a distance 200m complete and curing.

Dam : 6.00 x 1.00 x 0.10 m = 0.60 m³
Guide Walls : 2 x 1.50 x 0.60 x 0.10 m = 0.18 m³
Wing Wall : 2 x 4.00 x 0.80 x 0.10 m = 0.64 m³
Apron: (6.00 +6.00) x 1.50 x 0.10 m = 1.80 m³
= 3.22 m³

@ Rs. 2823/-m³ ................................. Rs.9090.06

3/6.1 Providing cement concrete work in abut man, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200m and complete as directed.

Dam: 6.00 \{(0.80 +0.80)+(0.40 +0.80/2) x 1.60\} = 9.60m³
Deduct spillway : 4.00 x 0.30 x 0.40 = (-) 0.48 m³
= 9.12 m³

@ Rs.3216/-m³ .............................................. Rs.29329
Providing shuttering for dam wall with dressed planks not less than 25mm thick properly joined with battens of minimum sizes 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as directed.

Dam u/s face: 6.00 x 1.60 m = 9.60m²
D/s face: 6.00 x 1.70m = 10.20m²
Deduct spillway : 2 x 4.0 x 0.30 m = (-)2.40m²
= 17.40 m²

@ Rs. 308/-/m³……………………………………….Rs. 5359.20

Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x30cm long with proper key stones each not less than 25 x25 x75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

Guide walls: 2 x 1.50 x (0.60 +0.40/2) x 1.90m = 2.85 m³
Wing wall : 2 x 4.00 x (0.80 + 0.40/2) x 2.20m = 10.56 m³
Apron: (6.00 + 6.00) x 1.50 x 0.20 m = 3.60 m³
= 17.01 m³

@ Rs.1045/-m³……………………………………….Rs. 17775.45

Providing 12mm thick cement plaster in proportion 1:4 Including screening sand clearing the surface and carriage of sand within 200mm complete and as directed.

Dam U/S and D/S face: 6.00 x (1.70 + 1.60) m = 19.00m²
Top: {(6.0 x 0.40) +(2.x 0.30 x 0.40)}m = 2.64 m²
Deduct spillway: 2 x 4.00 x 0.30m = (-) 2.40 m²
Guide walls 2 x 2 x 1.50 x (1.30 + 0.60/2)m = 5.70 m²
2 x 1.50 x 0.40 = 1.20 m²
Apron: (6.0 + 6.0) x 1.50 m = 18.00m²
= 44.94m²

@ Rs.121/-m²……………………………………….Rs. 5437.74

Total = Rs.72711.33
Say = Rs.72711.00

(Rupees Seventy Two Thousand Seven Hundred and Eleven) only.
Name of Beneficiaries: Shri Tonning L. Nonglait  
Location: Mawjinong

½.1(a)  
Earthwork in excavation for bridges and culvert below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of foundation by adequate shoring scaffolding including leveling the foundation longitudinally and transversely etc. as directed.

(ii). On soil mixed with above on man size etc.

<table>
<thead>
<tr>
<th>Component</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Wall</td>
<td>6.0 x 1.00 x 0.90m</td>
<td>5.40 m³</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>2 x 1.50 x 0.60 x 0.60m</td>
<td>1.08 m³</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 4.00 x 0.80 x 0.60m</td>
<td>3.84 m³</td>
</tr>
<tr>
<td>Apron</td>
<td>(6.00+6.00) x 1.50 x 0.30m</td>
<td>5.40 m³</td>
</tr>
<tr>
<td>Earthen Channel</td>
<td>96.0 x 1.00 x 0.60 m</td>
<td>73.32 m³</td>
</tr>
</tbody>
</table>

@ Rs.78/-m³ .............................................. Rs.5718.96

2/4.8  
Providing C.C. work prop 1:4:8 with hard broken stones aggregates 40mm nominal sizes including necessary carriage of stones and sand within a distance 200m complete and curing.

<table>
<thead>
<tr>
<th>Component</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>6.00 x 1.00 x 0.10 m</td>
<td>0.60 m³</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>2 x 1.50 x 0.60 x 0.10 m</td>
<td>0.18 m³</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 4.00 x 0.80 x 0.10 m</td>
<td>0.64 m³</td>
</tr>
<tr>
<td>Apron: (6.00 +6.00) x 1.50 x 0.10 m</td>
<td>1.80 m³</td>
<td></td>
</tr>
</tbody>
</table>

@ Rs. 2823/-m³ .................. Rs.9090.06

3/6.1  
Providing cement concrete work in abut man, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200m and complete as directed.

<table>
<thead>
<tr>
<th>Component</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam: 6.00 {(0.80 +0.80)+(0.40 +0.80/2) x 1.60}</td>
<td>9.60 m³</td>
<td></td>
</tr>
<tr>
<td>Deduct spillway : 4.00 x 0.30 x 0.40</td>
<td>(-) 0.48 m³</td>
<td></td>
</tr>
</tbody>
</table>

@ Rs.3216/-m³ .............................. Rs.29329
4/6.12 Providing shuttering for dam wall with dressed planks not less than 25mm thick properly joined with battens of minimum sizes 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as directed.

- Dam u/s face: 6.00 x 1.60 m = 9.60m²
- D/s face: 6.00 x 1.70m = 10.20m²
- Deduct spillway: 2 x 4.0 x 0.30 m = (-)2.40m²
  = 17.40 m²

@ Rs. 308/-m³……………………………………… Rs.5359.20

5/4.1 Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x 30cm long with proper key stones each not less than 25 x 25 x 75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

- Guide walls: 2 x 1.50 x (0.60 + 0.40/2) x 1.90m = 2.85 m³
- Wing wall: 2 x 4.00 x (0.80 + 0.40/2) x 2.20m = 10.56 m³
- Apron: (6.00 + 6.00) x 1.50 x 0.20 m = 3.60 m³
  = 17.01 m³

@ Rs.1045/-m³……………………………………… Rs.17775.45

6/1. Providing 12mm thick cement plaster in proportion 1:4 Including screening sand clearing the surface and carriage of sand within 200mm complete and as directed.

- Dam U/S and D/S face: 6.00 x (1.70 + 1.60) m = 19.00m²
- Top: {(6.0 x 0.40) + 2 x 0.30 x 0.40}m = 2.64 m²
- Deduct spillway: 2 x 4.00 x 0.30m = (-) 2.40 m²
- Guide walls: 2 x 2 x 1.50 x (1.30 + 0.60/2)m = 5.70 m²
  2 x 1.50 x 0.40 = 1.20 m²
- Apron: (6.0 + 6.0) x 1.50 m = 18.00m²
  = 44.94m²

@ Rs.121/-m²……………………………………… Rs.5437.74

| Total      | = Rs.72711.33 |
| Say        | = Rs.72711.00 |

(Rupees Seventy Two Thousand Seven Hundred and Eleven) only.
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.7
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Smti. Selina Nongphud
Location: Ktiehdorji

½.1(a) Earthwork in excavation for bridges and culvert below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of foundation by adequate shoring scaffolding including leveling the foundation longitudinally and transversely etc. as directed.

(ii). On soil mixed with above on man size etc.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (m)</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Wall</td>
<td>6.0 x 1.00 x 0.90</td>
<td>5.40</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>2 x 1.50 x 0.60 x 0.60</td>
<td>1.08</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 4.00 x 0.80 x 0.60</td>
<td>3.84</td>
</tr>
<tr>
<td>Apron (6.00+6.00) x 1.50 x 0.30</td>
<td>5.40</td>
<td></td>
</tr>
<tr>
<td>Earthen Channel: 96.0 x 1.00 x 0.60</td>
<td>73.32</td>
<td></td>
</tr>
</tbody>
</table>

@ Rs.78/-m³ .......................................................... Rs.5718.96

2/4.8 Providing C.C. work prop 1:4:8 with hard broken stones aggregates 40mm nominal sizes including necessary carriage of stones and sand within a distance 200m complete and curing.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (m)</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam :</td>
<td>6.00 x 1.00 x 0.10</td>
<td>0.60</td>
</tr>
<tr>
<td>Guide Walls :</td>
<td>2 x 1.50 x 0.60 x 0.10</td>
<td>0.18</td>
</tr>
<tr>
<td>Wing Wall :</td>
<td>2 x 4.00 x 0.80 x 0.10</td>
<td>0.64</td>
</tr>
<tr>
<td>Apron: (6.00 +6.00) x 1.50 x 0.10</td>
<td>1.80</td>
<td></td>
</tr>
</tbody>
</table>

@ Rs. 2823/-m³ ...................................................... Rs.9090.06

3/6.1 Providing cement concrete work in abut man, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200m and complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (m)</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam:</td>
<td>6.00 {(0.80+0.80)+(0.40+0.80/2) x 1.60}</td>
<td>9.60</td>
</tr>
<tr>
<td>Deduct spillway</td>
<td>4.00 x 0.30 x 0.40</td>
<td>(-) 0.48 m³</td>
</tr>
</tbody>
</table>

@ Rs.3216/-m³ ...................................................... Rs.29329
Providing shuttering for dam wall with dressed planks not less than 25mm thick properly joined with battens of minimum sizes 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Area (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam u/s face:</td>
<td>6.00 x 1.60 = 9.60m²</td>
</tr>
<tr>
<td>D/s face:</td>
<td>6.00 x 1.70m = 10.20m²</td>
</tr>
<tr>
<td>Deduct spillway:</td>
<td>2 x 4.0 x 0.30 m = (-)2.40m²</td>
</tr>
<tr>
<td>Total</td>
<td>= 17.40 m²</td>
</tr>
</tbody>
</table>

@ Rs. 308/-m³……………………………………… Rs.5359.20

Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x30cm long with proper key stones each not less than 25 x25 x75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

Guide walls: 2 x 1.50 x (0.60 +0.40/2) x 1.90m = 2.85 m³
Wing wall : 2 x 4.00 x (0.80 + 0.40/2) x 2.20m = 10.56 m³
Apron: (6.00 + 6.00) x 1.50 x 0.20 m = 3.60 m³

@ Rs.1045/-m³……………………………………… Rs.17775.45

Providing 12mm thick cement plaster in proportion 1:4 including screening sand clearing the surface and carriage of sand within 200mm complete and as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Area (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam U/S and D/S face:</td>
<td>6.00 x (1.70 + 1.60) m = 19.00m²</td>
</tr>
<tr>
<td>Top:</td>
<td>{(6.0 x 0.40) +(2.x 0.30 x 0.40)}m = 2.64 m²</td>
</tr>
<tr>
<td>Deduct spillway:</td>
<td>2 x 4.00 x 0.30m = (-) 2.40 m²</td>
</tr>
<tr>
<td>Guide walls</td>
<td>2 x 2 x 1.50 x (1.30 + 0.60/2)m = 5.70 m²</td>
</tr>
<tr>
<td></td>
<td>2 x 1.50 x 0.40 = 1.20 m²</td>
</tr>
<tr>
<td>Apron:</td>
<td>(6.0 + 6.0) x 1.50 m = 18.00m²</td>
</tr>
<tr>
<td></td>
<td>= 44.94m²</td>
</tr>
</tbody>
</table>

@ Rs.121/-m²……………………………………… Rs.5437.74

Total = Rs.72711.33
Say = Rs.72711.00

(Rupees Seventy Two Thousand Seven Hundred and Eleven) only.
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.8
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Shri Brian Nongphud
Location : Phodriattham

½.1(a) Earthwork in excavation for bridges and culvert below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of foundation by adequate shoring scaffolding including leveling the foundation longitudinally and transversely etc. as directed.

(ii). On soil mixed with above on man size etc.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Quantity</th>
<th>Rate (Rs/m³)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Wall</td>
<td>6.0 x 1.00 x 0.90</td>
<td>5.40 m³</td>
<td>78/-</td>
<td>5718.96</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>2 x 1.50 x 0.60 x 0.60</td>
<td>1.08 m³</td>
<td>78/-</td>
<td>85.20</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 4.00 x 0.80 x 0.60</td>
<td>3.84 m³</td>
<td>78/-</td>
<td>300.36</td>
</tr>
<tr>
<td>Apron</td>
<td>(6.00+6.00) x 1.50 x 0.30</td>
<td>5.40 m³</td>
<td>78/-</td>
<td>420.60</td>
</tr>
<tr>
<td>Earthen Channel</td>
<td>96.0 x 1.00 x 0.60</td>
<td>73.32 m³</td>
<td>78/-</td>
<td>5718.96</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>6937.96</td>
</tr>
</tbody>
</table>

@ Rs. 78/- m³ .......................... Rs. 5718.96

2/4.8 Providing C.C. work prop 1:4:8 with hard broken stones aggregates 40mm nominal sizes including necessary carriage of stones and sand within a distance 200m complete and curing.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Quantity</th>
<th>Rate (Rs/m³)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>6.00 x 1.00 x 0.10</td>
<td>0.60 m³</td>
<td>2823/-</td>
<td>1693.80</td>
</tr>
<tr>
<td>Guide Walls</td>
<td>2 x 1.50 x 0.60 x 0.10</td>
<td>0.18 m³</td>
<td>2823/-</td>
<td>50.59</td>
</tr>
<tr>
<td>Wing Wall</td>
<td>2 x 4.00 x 0.80 x 0.10</td>
<td>0.64 m³</td>
<td>2823/-</td>
<td>180.94</td>
</tr>
<tr>
<td>Apron</td>
<td>(6.00+6.00) x 1.50 x 0.10</td>
<td>1.80 m³</td>
<td>2823/-</td>
<td>505.59</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>9090.06</td>
</tr>
</tbody>
</table>

@ Rs. 2823/- m³ .......................... Rs. 9090.06

3/6.1 Providing cement concrete work in abut man, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200m and complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Quantity</th>
<th>Rate (Rs/m³)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam</td>
<td>6.00 {(0.80+0.80)+(0.40+0.80/2) x 1.60}</td>
<td>9.60 m³</td>
<td>3216/-</td>
<td>30426.06</td>
</tr>
<tr>
<td>Deduct spillway</td>
<td>4.00 x 0.30 x 0.40</td>
<td>0.48 m³</td>
<td></td>
<td>1483.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.12 m³</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>29329</td>
</tr>
</tbody>
</table>

@ Rs. 3216/- m³ .......................... Rs. 29329
Providing shuttering for dam wall with dressed planks not less than 25mm thick properly joined with battens of minimum sizes 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam u/s face</td>
<td>6.00 x 1.60 m</td>
<td>9.60 m²</td>
</tr>
<tr>
<td>D/s face</td>
<td>6.00 x 1.70 m</td>
<td>10.20 m²</td>
</tr>
<tr>
<td>Deduct spillway</td>
<td>2 x 4.0 x 0.30 m</td>
<td>( - ) 2.40 m²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.40 m²</td>
</tr>
</tbody>
</table>

@ Rs. 308/- m³ ...................... Rs. 5359.20

Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x 30cm long with proper key stones each not less than 25 x 25 x 75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

Guide walls: 2 x 1.50 x (0.60 + 0.40/2) x 1.90m = 2.85 m³
Wing wall: 2 x 4.00 x (0.80 + 0.40/2) x 2.20m = 10.56 m³
Apron: (6.00 + 6.00) x 1.50 x 0.20 m = 3.60 m³

@ Rs. 1045/- m³ ...................... Rs. 17775.45

Providing 12mm thick cement plaster in proportion 1:4
Including screening sand clearing the surface and carriage of sand within 200mm complete and as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dam U/S and D/S face</td>
<td>6.00 x (1.70 + 1.60) m</td>
<td>19.00 m²</td>
</tr>
<tr>
<td>Top</td>
<td>(6.0 x 0.40) + (2 x 0.30 x 0.40) m</td>
<td>2.64 m²</td>
</tr>
<tr>
<td>Deduct spillway</td>
<td>2 x 4.00 x 0.30m</td>
<td>( - ) 2.40 m²</td>
</tr>
<tr>
<td>Guide walls</td>
<td>2 x 2 x 1.50 x (1.30 + 0.60/2) m</td>
<td>5.70 m²</td>
</tr>
<tr>
<td>Apron</td>
<td>(6.0 + 6.0) x 1.50 m</td>
<td>18.00 m²</td>
</tr>
</tbody>
</table>

@ Rs. 121/- m² ...................... Rs. 5437.74

Total = Rs. 72711.33
Say = Rs. 72711.00

(Rupees Seventy Two Thousand Seven Hundred and Eleven) only.
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.9 UNDER UMTYRW-A-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiaries: Shri Lasting Iawphniaw
Location: Seinduli-I

1/2.1(a) Earthwork in excavation ……..
leads and all lift.
(c) Loose boulders above one man size or soil mixed with boulders above one man size or soft shale.

- \(1 \times 6 \times 1.2 \times 1.2\) = 8.64 m³
- \(2 \times 3 \times 0.5 \times 0.5\) = 1.50 m³
- \(1 \times 7 \times 0.8 \times 0.5\) = 2.8 m³
- \(1 \times 6 \times 0.5 \times 0.5\) = 1.50 m³
- \(1 \times 6 \times 5 \times 0.30\) = 9 m³
- \(1 \times 5 \times 3 \times 0.30\) = 5.4 m³

Total = 28.84 m³

@ Rs. 78.00/m³
Rs. 2249.52

2/6.5 Providing cement concrete work in abutment, wing wall and return wall …………………200metres and curing (excluding shuttering) complete as directed.

- \(1 \times 6 \times 1.2 \times 0.2\) = 1.44 m³
- \(1 \times 6 \times 5 \times 0.3\) = 9.00 m³
- \(1 \times 6 \times 3 \times 0.2\) = 3.60 m³
- \(1 \times 6 \times 3 \times 0.2\) = 3.60 m³

Total = 17.64 m³

@ Rs. 3421.00 / m³
Rs. 60346.44

3/6.12 Providing shuttering in R.C.C. bridge and culverts ………………..hardens complete as directed.

- \(2 \times 6 \times 1.50\) = 18.00 m²
- \(2 \times 7 \times 1.5\) = 21.00 m²
- \(1 \times 7 \times 0.80\) = 5.6 m²
- \(1 \times 1.5 \times 0.80\) = 1.2 m²

Total = 65.00 m²

@ Rs. 308.00/ m²
Rs. 20020.00

4/6.1 Providing cement concrete work………………...completed as directed.

- \(2 \times 12 \times 0.10\) = 1.92 m³
- \(2 \times 6 \times 2.5 \times 0.10\) = 3.00 m³
- \(1 \times 6 \times 0.6 \times 0.1\) = 0.36 m³
- \(2 \times 2 \times 0.8 \times 0.1\) = 0.32 m³
- \(1 \times 12 \times 0.5 \times 0.1\) = 0.60 m³
- \(1 \times 2 \times 0.6 \times 0.1\) = 0.12 m³
- \(1 \times 12 \times 0.1\) = 0.016 m³

Total = 6.696 m³

@ Rs. 3216.00/m³
Rs. 21534.33
5/4.1 Providing regular dry stone …………………
Complete as directed.
(a) with new stones
1 x 6 x 1.00 x 1.20 = 7.20 m³
1 x 6 x 1.00 + 0.60 x 1.5 = 7.20 m³
\[
\frac{2}{2}
\]
1 x 7 x 0.60 x 1.5 = 6.30 m³
1 x 12 x 0.30 x 1.30 = 4.68 m³
Total = 25.38 m³
\[
\text{@ Rs. 1045.00/m³} \quad \text{Rs. 26522.10}
\]

6/1. Providing 12mm thick cement plastering in proportion
1:4………………………………………(no plastering is
to be done in retaining walls, breast walls and face
walls)
(a) Over stone work and cement concrete
2 x 6 x 1.5 = 18.00 m²
1 x 6 x 0.60 = 3.00 m²
1 x 7 x 0.8 = 5.6 m²
1 x 1 x 0.80 = 0.80 m²
2 x 12 x 0.80 = 19.20 m²
1 x 12 x 0.50 = 6.00 m²
1 x 6 x 3 = 18.00 m²
1 x 3 x 6 = 18.00 m²
\[
\text{@ Rs. 121/m²} \quad \text{Rs. 10720.60}
\]
Grand Total \text{Rs. 141392.99}
Say \text{Rs. 141392.00}

Rupees (One Lakh Forty One Thousand Three Hundred and Ninety Two) Only.
1/2.1(a) Earthwork in excavation ………
leads and all lift.
(c) Loose boulders above one man size or soil mixed
with boulders above one man size or soft shale.
\[
\begin{align*}
1 \times 6 \times 1.2 \times 1.2 & = 8.64 \text{ m}^3 \\
2 \times 3 \times 0.5 \times 0.50 & = 1.50 \text{ m}^3 \\
1 \times 7 \times 0.8 \times 0.5 & = 2.8 \text{ m}^3 \\
1 \times 6 \times 0.5 \times 0.5 & = 1.50 \text{ m}^3 \\
1 \times 6 \times 5 \times 0.30 & = 9 \text{ m}^3 \\
1 \times 5 \times 3 \times 0.30 & = 5.4 \text{ m}^3 \\
\end{align*}
\]
\[\text{Total} = 28.84 \text{ m}^3\]
\[\text{Rs. 2249.52}\]

2/6.5 Providing cement concrete work in abutment, wing wall
and return wall ……………….200metres and
curing (excluding shuttering) complete as directed.
\[
\begin{align*}
1 \times 6 \times 1.2 \times 0.2 & = 1.44 \text{ m}^3 \\
1 \times 6 \times 5 \times 0.3 & = 9.00 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.2 & = 3.60 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.2 & = 3.60 \text{ m}^3 \\
\end{align*}
\]
\[\text{Total} = 17.64 \text{ m}^3\]
\[\text{Rs. 60346.44}\]

3/6.12 Providing shuttering in R.C.C. bridge and culverts
……………..hardens complete as directed.
\[
\begin{align*}
2 \times 6 \times 1.50 & = 18.00 \text{ m}^2 \\
2 \times 7 \times 1.5 & = 21.00 \text{ m}^2 \\
1 \times 7 \times .80 & = 5.6 \text{ m}^2 \\
1 \times 1.5 \times 0.80 & = 1.2 \text{ m}^2 \\
\end{align*}
\]
\[\text{Total} = 65.00\text{m}^2\]
\[\text{Rs. 20020.00}\]

4/6.1 Providing cement concrete work………………
completed as directed.
\[
\begin{align*}
2 \times 12 \times .8 \times 0.10 & = 1.92 \text{ m}^3 \\
2 \times 6 \times 2.5 \times 0.10 & = 3.00 \text{ m}^3 \\
1 \times 6 \times 0.6 \times 0.1 & = 0.36 \text{ m}^3 \\
2 \times 2 \times 0.8 \times 0.1 & = 0.32 \text{ m}^3 \\
1 \times 12 \times 0.5 \times 0.1 & = 0.60 \text{ m}^3 \\
1 \times 2 \times 0.6 \times 0.1 & = 0.12 \text{ m}^3 \\
1 \times .8 \times 2 \times 0.1 & = 0.016 \text{ m}^3 \\
\end{align*}
\]
\[\text{Total} = 6.696 \text{ m}^3\]
\[\text{Rs. 21534.33}\]
5/4.1 Providing regular dry stone …………………
Complete as directed.
(a) with new stones
\[
\begin{align*}
1 \times 6 \times 1.00 \times 1.20 & = 7.20 \ m^3 \\
1 \times 6 \times 1.00 + 0.60 \times 1.5 & = 7.20 \ m^3 \\
\frac{1}{2} \times 7 \times 0.60 \times 1.5 & = 6.30 \ m^3 \\
1 \times 12 \times 0.30 \times 1.30 & = 4.68 \ m^3 \\
\text{Total} & = 25.38 \ m^3
\end{align*}
\]
\@ Rs. 1045.00/m³ Rs. 26522.10

6/1. Providing 12mm thick cement plastering in proportion 1:4………………………………………(no plastering is to be done in retaining walls, breast walls and face walls)
(a) Over stone work and cement concrete
\[
\begin{align*}
2 \times 6 \times 1.5 & = 18.00 \ m^2 \\
1 \times 6 \times 0.60 & = 3.00m^2 \\
1 \times 7 \times 0.8 & = 5.6m^2 \\
1 \times 1 \times 0.80 & = 0.80 \ m^2 \\
2 \times 12 \times 0.80 & = 19.20 \ m^2 \\
1 \times 12 \times 0.50 & = 6.00 \ m^2 \\
1 \times 6 \times 3 & = 18.00 \ m^2 \\
1 \times 3 \times 6 & = 18.00 \ m^2 \\
\end{align*}
\]
\@ Rs. 121/m² Rs. 10720.60

Grand Total Rs. 141392.99
Say Rs. 141392.00

Rupees (One Lakh Forty One Thousand Three Hundred and Ninety Two) Only.
1/2.1(a) Earthwork in excavation …….. 
leads and all lift. 
(c) Loose boulders above one man size or soil mixed with boulders above one man size or soft shale. 
\[
\begin{array}{ccc}
1 \times 6 \times 1.2 \times 1.2 & = 8.64 \text{ m}^3 \\
2 \times 3 \times 0.5 \times 0.50 & = 1.50 \text{ m}^3 \\
1 \times 7 \times 0.8 \times 0.5 & = 2.8 \text{ m}^3 \\
1 \times 6 \times 0.5 \times 0.5 & = 1.50 \text{ m}^3 \\
1 \times 6 \times 5 \times 0.30 & = 9 \text{ m}^3 \\
1 \times 5 \times 3 \times 0.30 & = 5.4 \text{ m}^3 \\
\end{array}
\]
Total = 28.84 \text{ m}^3 
@ Rs. 78.00/\text{m}^3 
Rs. 2249.52

2/6.5 Providing cement concrete work in abutment, wing wall and return wall ………………………..200metres and curing (excluding shuttering) complete as directed 
\[
\begin{array}{ccc}
1 \times 6 \times 1.2 \times 0.2 & = 1.44 \text{ m}^3 \\
1 \times 6 \times 5 \times 0.3 & = 9.00 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.2 & = 3.60 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.2 & = 3.60 \text{ m}^3 \\
\end{array}
\]
Total = 17.64 \text{ m}^3 
@ Rs. 3421.00 / \text{m}^3 
Rs. 60346.44

3/6.12 Providing shuttering in R.C.C. bridge and culverts ……………….hardens complete as directed. 
\[
\begin{array}{ccc}
2 \times 6 \times 1.50 & = 18.00 \text{ m}^2 \\
2 \times 7 \times 1.5 & = 21.00 \text{ m}^2 \\
1 \times 7 \times 0.80 & = 5.6 \text{ m}^2 \\
1 \times 1.5 \times 0.80 & = 1.2 \text{ m}^2 \\
\end{array}
\]
Total = 65.00\text{m}^2 
@ Rs. 308.00/ \text{m}^2 
Rs. 20020.00

4/6.1 Providing cement concrete work……………. 
completed as directed. 
\[
\begin{array}{ccc}
2 \times 12 \times .8 \times 0.10 & = 1.92 \text{ m}^3 \\
2 \times 6 \times 2.5 \times 0.10 & = 3.00 \text{ m}^3 \\
1 \times 6 \times 0.6 \times 0.1 & = 0.36 \text{ m}^3 \\
2 \times 2 \times 0.8 \times 0.1 & = 0.32 \text{ m}^3 \\
1 \times 12 \times 0.5 \times 0.1 & = 0.60 \text{ m}^3 \\
1 \times 2 \times 0.6 \times 0.1 & = 0.12 \text{ m}^3 \\
1 \times .8 \times 2 \times 0.1 & = 0.016 \text{ m}^3 \\
\end{array}
\]
Total = 6.696 \text{ m}^3 
@ Rs. 3216.00/\text{m}^3 
Rs. 21534.33
5/4.1  Providing regular dry stone …………………
Complete as directed.
(a) with new stones
\[
\begin{align*}
  &1 \times 6 \times 1.00 \times 1.20 = 7.20 \text{ m}^3 \\
  &\frac{1 \times 6 \times 1.00 + 0.60 \times 1.5}{2} = 7.20 \text{ m}^3 \\
  &1 \times 7 \times 0.60 \times 1.5 = 6.30 \text{ m}^3 \\
  &1 \times 12 \times 0.30 \times 1.30 = 4.68 \text{ m}^3 \\
  \text{Total} &= 25.38 \text{ m}^3 \\
\end{align*}
\]
\[
@ \text{ Rs. 1045.00/m}^3 \quad \text{Rs. 26522.10}
\]

6/1.  Providing 12mm thick cement plastering in proportion 1:4…………………..(no plastering is to be done in retaining walls, breast walls and face walls)
(a) Over stone work and cement concrete
\[
\begin{align*}
  &2 \times 6 \times 1.5 = 18.00 \text{ m}^2 \\
  &1 \times 6 \times 0.60 = 3.00 \text{ m}^2 \\
  &1 \times 7 \times 0.8 = 5.60 \text{ m}^2 \\
  &1 \times 1 \times 0.80 = 0.80 \text{ m}^2 \\
  &2 \times 12 \times 0.80 = 19.20 \text{ m}^2 \\
  &1 \times 12 \times 0.50 = 6.00 \text{ m}^2 \\
  &1 \times 6 \times 3 = 18.00 \text{ m}^2 \\
  &1 \times 3 \times 6 = 18.00 \text{ m}^2 \\
  \text{Total} &= 10720.60 \\
\end{align*}
\]
\[
@ \text{ Rs. 121/m}^2 \quad \text{Rs. 141392.99} \\
\text{Grand Total} &\text{ Rs. 141392.99} \\
\text{Say} &\text{ Rs. 141392.00}
\]

Rupees (One Lakh Forty One Thousand Three Hundred and Ninety Two) Only.
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.12
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Smti. Selina Thongni
Location: Shnad Seinduli

1/2.1(a) Earthwork in excavation ……….
leads and all lift.
(c) Loose boulders above one man size or soil mixed
with boulders above one man size or soft shale.

\[\begin{align*}
1 \times 6 \times 1.2 \times 1.2 & = 8.64 \text{ m}^3 \\
2 \times 3 \times 0.5 \times 0.50 & = 1.50 \text{ m}^3 \\
1 \times 7 \times 0.8 \times 0.5 & = 2.8 \text{ m}^3 \\
1 \times 6 \times 0.5 \times 0.5 & = 1.50 \text{ m}^3 \\
1 \times 6 \times 5 \times 0.30 & = 9 \text{ m}^3 \\
1 \times 5 \times 3 \times 0.30 & = 5.4 \text{ m}^3 \\
\text{Total} & = 28.84 \text{ m}^3 \\
\text{@ Rs. 78.00/m}^3 & \text{Rs. 2249.52}
\end{align*}\]

2/6.5 Providing cement concrete work in abutment, wing wall
and return wall …………………….200metres and
curing (excluding shuttering) complete as directed.

\[\begin{align*}
1 \times 6 \times 1.2 \times 0.2 & = 1.44 \text{ m}^3 \\
1 \times 6 \times 5 \times 0.3 & = 9.00 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.2 & = 3.60 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.2 & = 3.60 \text{ m}^3 \\
\text{Total} & = 17.64 \text{ m}^3 \\
\text{@ Rs. 3421.00 / m}^3 & \text{Rs. 60346.44}
\end{align*}\]

3/6.12 Providing shuttering in R.C.C. bridge and culverts
………………….hardens complete as directed.

\[\begin{align*}
2 \times 6 \times 1.50 & = 18.00 \text{ m}^2 \\
2 \times 7 \times 1.5 & = 21.00 \text{ m}^2 \\
1 \times 7 \times 0.80 & = 5.6 \text{ m}^2 \\
1 \times 1.5 \times 0.80 & = 1.2 \text{ m}^2 \\
\text{Total} & = 65.00 \text{m}^2 \\
\text{@ Rs. 308.00/ m}^2 & \text{Rs. 20020.00}
\end{align*}\]

4/6.1 Providing cement concrete work…………………
completed as directed.

\[\begin{align*}
2 \times 12 \times .8 \times 0.10 & = 1.92 \text{ m}^3 \\
2 \times 6 \times 2.5 \times 0.10 & = 3.00 \text{ m}^3 \\
1 \times 6 \times 0.6 \times 0.1 & = 0.36 \text{ m}^3 \\
2 \times 2 \times 0.8 \times 0.1 & = 0.32 \text{ m}^3 \\
1 \times 12 \times 0.5 \times 0.1 & = 0.60 \text{ m}^3 \\
1 \times 2 \times 0.6 \times 0.1 & = 0.12 \text{ m}^3 \\
1 \times .8 \times 2 \times 0.1 & = 0.016 \text{ m}^3 \\
\text{Total} & = 6.696 \text{ m}^3 \\
\text{@ Rs. 3216.00/m}^3 & \text{Rs. 21534.33}
\end{align*}\]
5/4.1 Providing regular dry stone ……………………
Complete as directed.
(a) with new stones
1 x 6 x 1.00 x 1.20 = 7.20 m³
1 x 6 x 1.00 + 0.60 x 1.5 = 7.20 m³
\[ \frac{1}{2} \]
1 x 7 x 0.60 x 1.5 = 6.30 m³
1 x 12 x 0.30 x 1.30 = 4.68 m³
Total = 25.38 m³
@ Rs. 1045.00/m³  Rs. 26522.10

6/1. Providing 12mm thick cement plastering in proportion
1:4………………………………………(no plastering is
to be done in retaining walls, breast walls and face
walls)
(a) Over stone work and cement concrete
2 x 6 x 1.5 = 18.00 m²
1 x 6 x 0.60 = 3.00 m²
1 x 7 x 0.8 = 5.6 m²
1 x 1 x 0.80 = 0.80 m²
2 x 12 x 0.80 = 19.20 m²
1 x 12 x 0.50 = 6.00 m²
1 x 6 x 3 = 18.00 m²
1 x 3 x 6 = 18.00 m²
@ Rs. 121/m²  Rs. 10720.60
Grand Total  Rs. 141392.99
Say  Rs. 141392.00

Rupees (One Lakh Forty One Thousand Three Hundred and Ninety Two) Only.
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.13
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Smti. Nobina K. Bani
Location : Umtympuin

1/2.1(a) Earthwork in excavation ........
leads and all lift.
(c) Loose boulders above one man size or soil mixed
with boulders above one man size or soft shale.

\[
\begin{align*}
1 \times 6 \times 1.2 \times 1.2 & = 8.64 \text{ m}^3 \\
2 \times 3 \times 0.5 \times 0.50 & = 1.50 \text{ m}^3 \\
1 \times 7 \times 0.8 \times 0.5 & = 2.8 \text{ m}^3 \\
1 \times 6 \times 0.5 \times 0.5 & = 1.50 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.30 & = 9 \text{ m}^3 \\
1 \times 5 \times 3 \times 0.30 & = 4.5 \text{ m}^3 \\
\text{Total} & = 28.84 \text{ m}^3
\end{align*}
\]
@ Rs. 78.00/m^3  Rs. 2249.52

2/6.5 Providing cement concrete work in abutment, wing wall
and return wall .........................200 metres and
curing (excluding shuttering) complete as directed.

\[
\begin{align*}
1 \times 6 \times 1.2 \times 0.2 & = 1.44 \text{ m}^3 \\
1 \times 6 \times 5 \times 0.3 & = 9.00 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.2 & = 3.60 \text{ m}^3 \\
1 \times 6 \times 3 \times 0.2 & = 3.60 \text{ m}^3 \\
\text{Total} & = 17.64 \text{ m}^3
\end{align*}
\]
@ Rs. 3421.00 / m^3  Rs. 60346.44

3/6.12 Providing shuttering in R.C.C. bridge and culverts
.........................hardens complete as directed.

\[
\begin{align*}
2 \times 6 \times 1.50 & = 18.00 \text{ m}^2 \\
2 \times 7 \times 1.5 & = 21.00 \text{ m}^2 \\
1 \times 7 \times 0.80 & = 5.6 \text{ m}^2 \\
1 \times 1.5 \times 0.80 & = 1.2 \text{ m}^2 \\
\text{Total} & = 65.00 \text{ m}^3
\end{align*}
\]
@ Rs. 308.00/ m^2  Rs. 20020.00

4/6.1 Providing cement concrete work..................
completed as directed.

\[
\begin{align*}
2 \times 12 \times 0.10 & = 1.92 \text{ m}^3 \\
2 \times 6 \times 2.5 \times 0.10 & = 3.00 \text{ m}^3 \\
1 \times 6 \times 0.6 \times 0.1 & = 0.36 \text{ m}^3 \\
2 \times 2 \times 0.8 \times 0.1 & = 0.32 \text{ m}^3 \\
1 \times 12 \times 0.5 \times 0.1 & = 0.60 \text{ m}^3 \\
1 \times 2 \times 0.6 \times 0.1 & = 0.12 \text{ m}^3 \\
1 \times 0.8 \times 2 \times 0.1 & = 0.016 \text{ m}^3 \\
\text{Total} & = 6.696 \text{ m}^3
\end{align*}
\]
@ Rs. 3216.00/m^3  Rs. 21534.33
5/4.1 Providing regular dry stone …………………
Complete as directed.
(a) with new stones
\[
\begin{align*}
1 \times 6 \times 1.00 \times 1.20 & = 7.20 \text{ m}^3 \\
1 \times 6 \times 1.00 + 0.60 \times 1.5 & = 7.20 \text{ m}^3 \\
2 & \\
1 \times 7 \times 0.60 \times 1.5 & = 6.30 \text{ m}^3 \\
1 \times 12 \times 0.30 \times 1.30 & = 4.68 \text{ m}^3 \\
\text{Total} & = 25.38 \text{ m}^3 \\
@ \text{Rs. } 1045.00/\text{m}^3 & \quad \text{Rs. } 26522.10
\end{align*}
\]

6/1. Providing 12mm thick cement plastering in proportion 1:4………………………………………(no plastering is to be done in retaining walls, breast walls and face walls)
(a) Over stone work and cement concrete
\[
\begin{align*}
2 \times 6 \times 1.5 & = 18.00 \text{ m}^2 \\
1 \times 6 \times 0.60 & = 3.00 \text{ m}^2 \\
1 \times 7 \times 0.8 & = 5.6 \text{ m}^2 \\
1 \times 1 \times 0.80 & = 0.80 \text{ m}^2 \\
2 \times 12 \times 0.80 & = 19.20 \text{ m}^2 \\
1 \times 12 \times 0.50 & = 6.00 \text{ m}^2 \\
1 \times 6 \times 3 & = 18.00 \text{ m}^2 \\
1 \times 3 \times 6 & = 18.00 \text{ m}^2 \\
\text{Total} & = 10720.60
\end{align*}
\]
@ Rs. 121/m²

\begin{align*}
\text{Grand Total} & \quad \text{Rs. } 141392.99 \\
\text{Say} & \quad \text{Rs. } 141392.00
\end{align*}

*Rupees (One Lakh Forty One Thousand Three Hundred and Ninety Two) Only.*
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.14  
UNDER UMTRYWA-UMIONG IWMP-IX  
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle  
for the Year 2010 – 2011

Name of Beneficiaries: Smti. Krian L. Nonglait  
Location: Lawdiedoh

1/2.1(a) Earthwork in excavation …………………leads and all lift.  
(a) Loose boulders above one man size or soil mixed with boulders above one man size or soft shale.

\[
\begin{align*}
1 \times 16 \times 1.2 \times 1.2 & = 23.04 \text{ m}^3 \\
1 \times 16 \times 3.0 \times 0.30 & = 14.4 \text{ m}^3 \\
1 \times 16 \times 3.0 \times 0.30 & = 14.4 \text{ m}^3 \\
\end{align*}
\]

Total = 51.84 \text{ m}^3  
@ Rs. 78.00/\text{m}^3  
Rs. 4043.52

2/6.1 Providing cement concrete work in abutment, wing wall and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates, and within 200metres and curing (excluding shuttering) complete as directed.

\[
\begin{align*}
1 \times 16 \times 1.2 \times 0.2 & = 3.84 \text{ m}^3 \\
1 \times 16 \times .2 \times 3.0 & = 9.60 \text{ m}^3 \\
1 \times 16 \times .3 \times 3.0 & = 1.44 \text{ m}^3 \\
\end{align*}
\]

Total = 14.88 \text{ m}^3  
@ Rs. 3216.00/ \text{m}^3  
Rs. 47854.08

3/6.12 Providing shuttering in R.C.C. bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at spacing of not more than 600mm centre to center to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as directed.

\[
\begin{align*}
2 \times 16 \times 1.50 & = 48.00 \text{ m}^2 \\
1 \times 16 \times .10 & = 1.60 \text{ m}^2 \\
2 \times 3 \times 0.10 & = 0.60 \text{ m}^2 \\
\end{align*}
\]

Total = 50.20 \text{ m}^2  
@ Rs. 308.00/ \text{m}^2  
Rs. 15461.60

4/6.5 Providing cement concrete work……………………completed as directed.

\[
\begin{align*}
1 \times 16 \times 1.2 \times 0.10 & = 1.92 \text{ m}^3 \\
2 \times 16 \times 2.3 \times 0.10 & = 1.28 \text{ m}^3 \\
1 \times 16 \times 0.4 \times 0.10 & = 0.64 \text{ m}^3 \\
1 \times 16 \times 0.1 \times 3.00 & = 4.80 \text{ m}^3 \\
\end{align*}
\]

Total = 8.64 \text{ m}^3  
@ Rs. 3421.00/\text{m}^3  
Rs. 29557.44
5/4.1 Providing regular dry stone ..................................
Complete as directed.
(a) with new stones

\[
\frac{1 \times 16 \times 1.00 \times 1.00}{m^3} = 16.00
\]
\[
\frac{1 \times 16 \times 1.00 + 0.40 \times 1.5}{2} = 16.80 m^3
\]
Total = 32.80 m³

@ Rs. 1045.00/m³

Rs. 34276.00

6/1. Providing 12mm thick cement plastering in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 metre complete as directed. (no plastering is to be done in retaining walls, breast walls and face walls)

(a) Over stone work and cement concrete

\[
2 \times 16 \times 1.5 = 38.40 m^2
\]
\[
1 \times 16 \times 0.60 = 9.60 m^2
\]
\[
1 \times 16 \times 3.0 = 48.00 m^2
\]
\[
2 \times 3 \times 0.10 = 0.60 m^2
\]
Total = 96.60 m²

@ Rs. 121/m²

Rs. 11688.60

Grand Total

Rs. 142881.24

Say

Rs. 142881.00

Rupees (One Lakh Forty Two Thousand Eight Hundred and Eighty One) Only.
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.15
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Smti. Kolina Dkhar
Location : Ktiehdorji

1/2.1(a) Earthwork in excavation …………………..leads and all lift.
(b) Loose boulders above one man size or soil mixed with
boulders above one man size or soft shale.
1 x 16 x 1.2 x 1.2 = 23.04 m$^3$
1 x 16 x 3.0 x 0.30 = 14.4 m$^3$
1 x 16 x 3.0 x 0.30 = 14.4 m$^3$
Total = 51.84 m$^3$
@ Rs. 78.00/m$^3$ Rs. 4043.52

2/6.1 Providing cement concrete work in abutment, wing wall and return wall
in proportion 1:3:6 with hard broken stone aggregates 40mm
downgraded including necessary local carriage of stone aggregates,
and within 200metres and curing (excluding shuttering)
complete as directed

1 x 16 x 1.2 x 0.2 = 3.84 m$^3$
1 x 16 x .2 x 3.0 = 9.60 m$^3$
1 x 16 x .3 x 3.0 = 1.44 m$^3$
Total = 14.88 m$^3$
@ Rs. 3216.00 / m$^3$ Rs. 47854.08

3/6.12 Providing shuttering in R.C.C. bridge and culverts with dressed planks
not less than 25mm thick properly joined with battens of minimum size
75mm x 100mm at spacing of not more than 600mm centre to center
to the proper level including covering in the contact face with polythene
sheet and removing the same after the concrete hardens complete as directed.

2 x 16 x 1.50 = 48.00 m$^2$
1 x 16 x .10 = 1.60 m$^2$
2 x 3 x0.10 = 0.60 m$^2$
Total = 50.20 m$^2$
@ Rs. 308.00/ m$^2$ Rs. 15461.60

4/6.5 Providing cement concrete
work…………………………..completed as directed.

1 x 16 x 1.2 x 0.10 = 1.92 m$^3$
2 x16x 2.3 x 0.10 = 1.28 m$^3$
1 x 16 x 0.4 x 0.10 = 0.64 m$^3$
1 x 16 x 0.1 x 3.00 = 4.80 m$^3$
Total = 8.64 m$^3$
@ Rs. 3421.00/m$^3$ Rs. 29557.44
5/4.1 Providing regular dry stone ..............................
Complete as directed.
(a) with new stones

\[
\begin{align*}
1 \times 16 \times 1.00 \times 1.00 & = 16.00 \\
\frac{1 \times 16 \times 1.00 + 0.40 \times 1.5}{2} & = 16.80 \text{ m}^3 \\
\text{Total} & = 32.80 \text{ m}^3 \\
\text{@ Rs.} & \quad \text{Rs. 34276.00}
\end{align*}
\]

\[
1045.00/\text{m}^3
\]

6/1. 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)

(b) Over stone work and cement concrete

\[
\begin{align*}
2 \times 16 \times 1.5 & = 38.40 \text{ m}^2 \\
1 \times 16 \times 0.60 & = 9.60 \text{ m}^2 \\
1 \times 16 \times 3.0 & = 48.00 \text{ m}^2 \\
2 \times 3 \times 0.10 & = 0.60 \text{ m}^2 \\
\text{Total} & = 96.60 \text{ m}^2 \\
\text{@ Rs.} & \quad \text{Rs. 11688.60}
\end{align*}
\]

Grand Total  \quad \text{Rs. 142881.24}
Say  \quad \text{Rs. 142881.00}

\textit{Rupees (One Lakh Forty Two Thousand Eight Hundred and Eighty One) Only.}
ESTIMATE FOR CONSTRUCTION OF HEAD WATER DAM NO.16
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Smti. Krestiful Iawphniaw
Location: Waria

1/2.1(a) Earthwork in excavation …………………leads and all lift.
\( (c) \) Loose boulders above one man size or soil mixed with
boulders above one man size or soft shale.
\[
\begin{align*}
1 \times 16 \times 1.2 \times 1.2 & = 23.04 \text{ m}^3 \\
1 \times 16 \times 3.0 \times 0.30 & = 14.4 \text{ m}^3 \\
1 \times 16 \times 3.0 \times 0.30 & = 14.4 \text{ m}^3
\end{align*}
\]
Total = 51.84 \text{ m}^3
@ Rs. 78.00/m\text{^3}  
Rs. 4043.52

2/6.1 Providing cement concrete work in abutment, wing wall and return wall
in proportion 1:3:6 with hard broken stone aggregates 40mm
dowgraded including necessary local carriage of stone aggregates,
and within 200metres and curing (excluding shuttering)
complete as directed
\[
\begin{align*}
1 \times 16 \times 1.2 \times 0.2 & = 3.84 \text{ m}^3 \\
1 \times 16 \times 0.2 \times 3.0 & = 9.60 \text{ m}^3 \\
1 \times 16 \times 0.3 \times 3.0 & = 1.44 \text{ m}^3
\end{align*}
\]
Total = 14.88 \text{ m}^3
@ Rs. 3216.00 / m\text{^3}  
Rs. 47854.08

3/6.12 Providing shuttering in R.C.C. bridge and culverts with dressed planks
not less than 25mm thick properly joined with battens of minimum size
75mm x 100mm at spacing of not more than 600mm centre to center
to the proper level including covering in the contact face with polythene
sheet and removing the same after the concrete hardens complete as directed.
\[
\begin{align*}
2 \times 16 \times 1.50 & = 48.00 \text{ m}^2 \\
1 \times 16 \times 0.10 & = 1.60 \text{ m}^2 \\
2 \times 3 \times 0.10 & = 0.60 \text{ m}^2
\end{align*}
\]
Total = 50.20 \text{ m}^2
@ Rs. 308.00/ m\text{^2}  
Rs. 15461.60

4/6.5 Providing cement concrete
work……………………completed as directed.
\[
\begin{align*}
1 \times 16 \times 1.2 \times 0.10 & = 1.92 \text{ m}^3 \\
2 \times 16 \times 2.3 \times 0.10 & = 1.28 \text{ m}^3 \\
1 \times 16 \times 0.4 \times 0.10 & = 0.64 \text{ m}^3 \\
1 \times 16 \times 0.1 \times 3.00 & = 4.80 \text{ m}^3
\end{align*}
\]
Total = 8.64 \text{ m}^3
@ Rs. 3421.00/m\text{^3}  
Rs. 29557.44
5/4.1 Providing regular dry stone ..............................
Complete as directed.
(a) with new stones

\[
\begin{align*}
1 \times 16 \times 1.00 \times 1.00 &= 16.00 \text{m}^3 \\
\frac{1 \times 16 \times 1.00 + 0.40 \times 1.5}{2} &= 16.80 \text{ m}^3 \\
\text{Total} &= 32.80 \text{ m}^3 \\
@ \text{Rs.} 1045.00/\text{m}^3 &= \text{Rs.} 34276.00
\end{align*}
\]

6/1. Providing 12mm thick cement plastering in proportion 1:4 including screening the sand, cleaning the surface and carriage of sand within 200 metre complete as directed. (no plastering is to be done in retaining walls, breast walls and face walls)
(c) Over stone work and cement concrete

\[
\begin{align*}
2 \times 16 \times 1.5 &= 38.40 \text{ m}^2 \\
1 \times 16 \times 0.60 &= 9.60 \text{ m}^2 \\
1 \times 16 \times 3.0 &= 48.00 \text{ m}^2 \\
2 \times 3 \times 0.10 &= 0.60 \text{ m}^2 \\
\text{Total} &= 96.60 \text{ m}^2 \\
@ \text{Rs.} 121/\text{m}^2 &= \text{Rs.} 11688.60
\end{align*}
\]

Grand Total  \text{Rs.} 142881.24
Say  \text{Rs.} 142881.00

**Rupees (One Lakh Forty Two Thousand Eight Hundred and Eighty One) Only.**
### ABSTRACT OF COST FOR WATER HARVESTING STRUCTURE UNDER UMTYRWA UMIONG IWMP-IX

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>ITEMS</th>
<th>AMOUNT IN (Rs.)</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water Harvesting Structure No. - 1</td>
<td>168252.00</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Water Harvesting Structure No. - 2</td>
<td>168252.00</td>
<td></td>
</tr>
<tr>
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ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.1 UNDER UMTYRWA-UMIONG IWMP

As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiary: Shri Kingly Nongphud.
Location: Lawdidoh.

1/1(a) Earth work is excavation to the proper grade including light dressing. Providing cambering and super elevation as directed and removal of Spoil upto 30cm lead and all lift.
(d) Soft or laminated rock or medium share
Face wall:- \[28.00 \times 0.8 \times 1.20\text{m} = 26.88\text{m}^3\]
U/S Apron:- \[28.00 \times (1.50 \times 0.30) \times 0.15 = 5.04\text{m}^3\]
Dry stone wall:- \[28.00 \times 0.60 \times 0.70\text{m} \quad = 11.60\text{m}^3\]
\[= 43.68\text{m}^3\]
@ Rs. 78.00/m³ ........................................ Rs. 3407.04

2/8.5 Collection and supply of hard broken boulders for soiling stone. including carriage within 200m and stacking in measurable stacks complete.
(a) Hard Sandstone, line and the like 75cm to 150mm size.
Foundation :- \[28.00 \times 0.80 \times 0.15\text{m} \quad = 3.36\text{m}^3\]
Apron:- \[28.00 \times 1.50 \times 0.15\text{m} \quad = 6.30\text{m}^3\]
\[= 9.66\text{m}^3\]
@ Rs. 394.00/m³ ........................... Rs. 3806.04

3/8.13 Labour for lying the stone soiling or stone bottoming 150mm thick in one layer each about 75mm thick including dressing the sub grade to the super elevation in camber and grading by using necessary template or straight edges spirit level, string filling in the interstice with small stone chipping stone, chipping rolling the soiling with roller 8 to 10 tone capacity and the earth edging 54mm wide complete as directed

Total:- B.F..item No.2/60
\[= 9.66\text{m}^3\]
@ Rs. 227.00/m³ ............................... Rs. 2192.82

4/6.1 Providing cement concrete work in abutment, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200 meters and complete as directed.

Footing:- \[28.00 \times 0.80 \times 0.35\text{m} = 7.84\text{m}^3\]
Face wall:- \[28.00 \times 2.50 \times 0.20\text{m} = 14.00\text{m}^2\]
\[= 21.84\text{m}^2\]
@ Rs. 3216.00/m³ ............................. Rs. 70237.4

4/6.12 Providing shuttering in RCC bridge and culvert with dressed plank not less than 25mm thick property joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as direct.

Face wall \[28.00 \times 2.50 \times 1\text{side} = 70.00\text{m}^3\]
@ Rs. 308.00/m³ .............................. Rs. 21560.00

6/4.1 providing regular dry masonry wall with hammer dressed or
Blunt chisel dress stone of heavy section (size not less than 25 cm x 30cm long) with proper key stone each not less than 25cm x 200 meters and filling in trenches.

(b) With new stone
(i) \[28.00 \times 0.30 \times 0.60m = 5.04m^3\]
(ii) \[28.00 \times 0.60 \times 0.60m = 10.08m^3\]
(iii) \[28.00 \times 0.90 \times 1.30m = 32.76m^3\]
\[= 47.88m^3\]
@ Rs. 1045.00/m\(^3\) …………………… Rs. 50034.60

7/
(P.H.E. schedule of rate for 2007 – 08). Providing and lying of sluice pipes including filling the joint, with spun yarn, soaked in neat Cement slurry and Cement Motor 1:2
(1cement:2 sand) and including Cement Concrete blocks (10 10 x 10)cm of (1:2:4) etc
(c) 100 meters diameters
Length:- = 16.50m
@ Rs. 793.75/m …………………… Rs.13093.91

8/1(a)
Cutting roads side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15meters complete.
(d) In soft rock
(i) 0.60cm X 0.60
Total Length:- 2 x 40.00Rm = 80.00Rm
@ Rs. 49.00/running meters………………. Rs. 3920.00

Total = Rs.168251.85
Say = Rs.168252.00

(Rupees One Lakh Sixty Eight Thousand Two Hundred Fifty Two) only.
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.2
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Society of Don Bosco
Location : Seinduli-II

1/1(a) Earth work is excavation to the proper grade including light dressing.
Providing cambering and super elevation as directed and removal of
Spoil upto 30cm lead and all lift.
(d) Soft or laminated rock or medium share
Face wall:- $28.00 \times 0.8 \times 1.20m = 26.88m^3$
U/S Apron:- $28.00 \times (1.50 \times 0.30) \times 0.15 = 5.04m^3$
Dry stone wall:- $28.00 \times 0.60 \times 0.70m = 11.60m^3$
\[\text{Total} = 43.68m^3\]
\[\text{Rs. 78.00/m}^3 \text{..................} \text{Rs. 3407.04}\]

2/8 Collection and supply of hard broken boulders for soiling stone.
including carriage within 200m and stacking in measurable stacks
complete.
(e) Hard Sandstone, line and the like 75cm to 150mm size.
Foundation :- $28.00 \times 0.80 \times 0.15m = 3.36m^2$
Apron:- $28.00 \times 1.50 \times 0.15m = 6.30m^3$
\[\text{Total} = 9.66m^2\]
\[\text{Rs. 394.00/m}^3 \text{..................} \text{Rs. 3806.04}\]

3/ 8.13 Labour for lying the stone soiling or stone bottoming 150mm thick in
one layer each about 75mm thick including dressing the sub grade to
the super elevation in camber and grading by using necessary template
or straight edges spirit level, string filling in the interstice with small
stone chipping stone, chipping rolling the soiling with roller 8 to 10
tone capacity and the earth edging 54mm wide complete as directed

Total:- \[\text{B.F..item No.2/60} = 9.66m^2\]
\[\text{Rs. 227.00/m}^3 \text{..................} \text{Rs. 2192.82}\]

4/6.1 Providing cement concrete work in abutment, wing wall, and return
wall in proportion 1:3:6 with hard broken stone aggregates 40mm
down graded including necessary local carriage of stone aggregates,
sand within 200 meters and complete as directed.
Footing:- $28.00 \times 0.80 \times 0.35m = 7.84m^3$
Face wall:- $28.00 \times 2.50 \times 0.20m = 14.00m^2$
\[\text{Total} = 21.84m^2\]
\[\text{Rs. 3216.00/m}^3 \text{..................} \text{Rs. 70237.44}\]

5/6.12 Providing shuttering in RCC bridge and culvert with dressed plank
not less than 25mm thick property joined with battens
of minimum size 75mm x 100mm at a spacing of not more
than 600mm centre to centre to the proper level including
covering in the contact face with polythene sheet and removing
the same after the concrete hardens complete as direct.
Face wall \[28.00 \times 2.50 \times 1\text{side} = 70.00m^3\]
\[\text{Rs. 308.00/m}^3 \text{..................} \text{Rs. 21560.00}\]
6/4.1 providing regular dry masonry wall with hammer dressed or
Blunt chisel dress stone of heavy section (size not less than
25 cm x 30cm long) with proper key stone each not less than
25cm x 200 meters and filling in trenches.

(f) With new stone
(i) \( 28.00 \times 0.30 \times 0.60 \text{m} = 5.04 \text{m}^3 \)
(ii) \( 28.00 \times 0.60 \times 0.60 \text{m} = 10.08 \text{m}^3 \)
(iii) \( 28.00 \times 0.90 \times 1.30 \text{m} = 32.76 \text{m}^3 \)
\[ = 47.88 \text{m}^3 \]
\[ @ \text{Rs.} \ 1045.00/\text{m}^3 \]
\[ \text{Rs.} \ 50034.60 \]

7/
(P.H.E. schedule of rate for 2007 – 08). Providing and lying
of sluice pipes including filling the joint, with spun yarn,
soaked in neat Cement slurry and Cement Motor 1:2
(1cement:2 sand) and including Cement Concrete blocks
(11 \(10\times10\)cm of (1:2:4) etc
(g) 100 meters diameters
Length:- \[= 16.50 \text{m} \]
\[ @ \text{Rs.} \ 793.75/\text{m} \]
\[ \text{Rs.} \ 13093.91 \]

8/1(a) Cutting roads side drain 60cm wide 60cm deep including dressing
grading and removal of spoils upto 15meters complete.

(h) In soft rock
(i) \( 0.60\text{cm} \times 0.60 \text{cm} \)
Total Length:- \( 2 \times 40.00 \text{Rm} \)
\[ = 80.00 \text{Rm} \]
\[ @ \text{Rs.} \ 49.00/\text{running meters} \]
\[ \text{Rs.} \ 3920.00 \]

\[ \begin{align*}
\text{Total} &= \text{Rs.}168251.85 \\
\text{Say} &= \text{Rs.}168252.00
\end{align*} \]

(Rupees One Lakh Sixty Eight Thousand Two Hundred Fifty Two) only.
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.3  
UNDER UMTYRWA-UMIONG IWMP IX  
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle  
for the Year 2010 – 2011

Name of Beneficiary : Shri Winly Thongni  
Location : Pordistap

1/1(a)  Earth work is excavation to the proper grade including light dressing. 
Providing cambering and super elevation as directed and removal of Spoil upto 30cm lead and all lift. 
(d) Soft or laminated rock or medium share  
Face wall:-  
28.00 × 0.8 × 1.20m  = 26.88 m³  
U/S Apron:-  
28.00 × (1.50 × 0.30) × 0.15 = 5.04m³  
Dry stone wall:-  
28.00 × 0.60 × 0.70m  = 11.60m³  
= 43.68 m³  
@ Rs. 78.00/m³  = Rs. 3407.04

2/8.5  Collection and supply of hard broken boulders for soiling stone.  
including carriage within 200m and stacking in measurable stacks complete.  
(i) Hard Sandstone, line and the like 75cm to 150mm size.  
Foundation :-  
28.00 × 0.80 × 0.15m =3.36m³  
Apron:-  
28.00 × 1.50 × 0.15m = 6.30m³  
= 9.66m³  
@ Rs. 394.00/m³  = Rs. 3806.04

3/8.13  Labour for lying the stone soiling or stone bottoming 150mm thick in one layer each about 75mm thick including dressing the sub grade to the super elevation in camber and grading by using necessary template or straight edges spirit level, string filling in the interstice with small stone chipping stone, chipping rolling the soiling with roller 8 to 10 tone capacity and the earth edging 54mm wide complete as directed  
Total:-  
B.F. item No.2/60  
= 9.66m³  
@ Rs. 227.00/m³  = Rs. 2192.82

4/6.1  Providing cement concrete work in abutment, wing wall, and return wall in proportion 1:3:6 with hard broken stone aggregates 40mm down graded including necessary local carriage of stone aggregates, sand within 200 meters and complete as directed.  
Footing:-  
28.00 × 0.80 × 0.35m = 7.84 m³  
Face wall:-  
28.00 × 2.50 × 0.20m = 14.00m²  
= 21.84m³  
@ Rs. 3216.00/m³  = Rs. 70237.44

5/6.12  Providing shuttering in RCC bridge and culvert with dressed plank not less than 25mm thick property joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as direct.  
Face wall  
28.00 × 2.50 × 1side = 70.00m³  
@ Rs. 308.00/m³  = Rs. 21560.00
6/4.1 providing regular dry masonry wall with hammer dressed or Blunt chisel dress stone of heavy section (size not less than 25 cm x 30cm long) with proper key stone each not less than 25cm x 200 meters and filling in trenches.

(j) With new stone
(i) \(28.00 \times 0.30 \times 0.60\)m = 5.04m³
(ii) \(28.00 \times 0.60 \times 0.60\)m = 10.08m³
(iii) \(28.00 \times 0.90 \times 1.30\)m = 32.76m³
\[
\frac{47.88}{\text{m}^3}
\]
\[\text{@ Rs. 1045.00/m}^3 \] .......................... Rs. 50034.60

7/ (P.H.E. schedule of rate for 2007 – 08). Providing and lying of sluice pipes including filling the joint, with spun yarn, soaked in neat Cement slurry and Cement Motor 1:2 (1cement:2 sand) and including Cement Concrete blocks (12 10 x 10)cm of (1:2:4) etc
(k) 100 meters diameters
Length:- = 16.50m
\[\text{@ Rs. 793.75/m} \] .......................... Rs.13093.91

8/1(a) Cutting roads side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15meters complete.

(l) In soft rock
(i) 0.60cm X 0.60
Total Length:- 2 x 40.00Rm = 80.00Rm
\[\text{@ Rs. 49.00/running meters} \] .......................... Rs. 3920.00
\[
\text{Total} = \text{Rs.168251.85}
\]
\[\text{Say } = \text{Rs.168252.00}
\]
(Rupees One Lakh Sixty Eight Thousand Two Hundred Fifty Two) only.
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.4
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Triphila Thongni
Location : Seinduli

1/1(a) Earth work is excavation to the proper grade including light dressing.
Providing cambering and super elevation as directed and removal of
Spoil upto 30cm lead and all lift.
(d) Soft or laminated rock or medium share
Face wall:- \(28.00 \times 0.8 \times 1.20m = 26.88m^3\)
U/S Apron:- \(28.00 \times (1.50 \times 0.30) \times 0.15 = 5.04m^3\)
Dry stone wall:- \(28.00 \times 0.60 \times 0.70m = 11.60m^3\)
\(= 43.68m^3\)
\(@ Rs. 78.00/m^3 \) \(\ldots \ldots \ldots \ldots \ldots \) \(\text{Rs. 3407.04}\)

2/8.5 Collection and supply of hard broken boulders for soiling stone.
including carriage within 200m and stacking in measurable stacks complete.
(m)Hard Sandstone, line and the like 75cm to 150mm size.
Foundation :- \(28.00 \times 0.80 \times 0.15m = 3.36m^2\)
Apron:- \(28.00 \times 1.50 \times 0.15m = 6.30m^3\)
\(= 9.66m^3\)
\(@ Rs. 394.00/m^3 \) \(\ldots \ldots \ldots \ldots \ldots \) \(\text{Rs. 3806.04}\)

3/ 8.13 Labour for lying the stone soiling or stone bottoming 150mm thick in
one layer each about 75mm thick including dressing the sub grade to
the super elevation in camber and grading by using necessary template
or straight edges spirit level, string filling in the interstice with small
stone chipping stone, chipping rolling the soiling with roller 8 to 10
tone capacity and the earth edging 54mm wide complete as directed

Total:- B.F. item No.2/60
\(= 9.66m^3\)
\(@ Rs. 227.00/m^3 \) \(\ldots \ldots \ldots \ldots \ldots \) \(\text{Rs. 2192.82}\)

4/6.1 Providing cement concrete work in abutment, wing wall, and return
wall in proportion 1:3:6 with hard broken stone aggregates 40mm
down graded including necessary local carriage of stone aggregates,
sand within 200 meters and complete as directed.

Footing:- \(28.00 \times 0.80 \times 0.35m = 7.84m^3\)
Face wall:- \(28.00 \times 2.50 \times 0.20m = 14.00m^2\)
\(= 21.84m^3\)
\(@ Rs. 3216.00/m^3 \) \(\ldots \ldots \ldots \ldots \ldots \) \(\text{Rs. 70237.44}\)

5/6.12 Providing shuttering in RCC bridge and culvert with dressed plank
not less than 25mm thick property joined with battens
of minimum size 75mm x 100mm at a spacing of not more
than 600mm centre to centre to the proper level including
covering in the contact face with polythene sheet and removing
the same after the concrete hardens complete as direct.

Face wall \(28.00 \times 2.50 \times 1\text{side} = 70.00m^3\)
\(@ Rs. 308.00/m^3 \) \(\ldots \ldots \ldots \ldots \ldots \) \(\text{Rs. 21560.00}\)
providing regular dry masonry wall with hammer dressed or Blunt chisel dress stone of heavy section (size not less than 25 cm x 30cm long) with proper key stone each not less than 25cm x 200 meters and filling in trenches.

(n) With new stone
(i) \[28.00 \times 0.30 \times 0.60 \text{m} = 5.04 \text{m}^3\]
(ii) \[28.00 \times 0.60 \times 0.60 \text{m} = 10.08 \text{m}^3\]
(iii) \[28.00 \times 0.90 \times 1.30 \text{m} = 32.76 \text{m}^3\]
\[= 47.88 \text{m}^3\]
@ Rs. 1045.00/\text{m}^3 ........................................... Rs. 50034.60

(P.H.E. schedule of rate for 2007 – 08). Providing and lying of sluice pipes including filling the joint, with spun yarn, soaked in neat Cement slurry and Cement Motor 1:2
(1cement:2 sand) and including Cement Concrete blocks (13 10 x 10)cm of (1:2:4) etc
(o) 100 meters diameters
Length:- .................................................. \[= 16.50\text{m}\]
@ Rs. 793.75/\text{m} .............................................. Rs.13093.91

Cutting roads side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15meters complete.
(p) In soft rock
(i) 0.60cm X 0.60
Total Length:- \[2 \times 40.00 \text{Rm} = 80.00\text{Rm}\]
@ Rs. 49.00/running meters......................... Rs. 3920.00

Total = \[Rs.168251.85\]
Say = \[Rs.168252.00\]

(Rupees One Lakh Sixty Eight Thousand Two Hundred Fifty Two) only.
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.5
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Olibia Thongni
Location : Seinduli-I

1/1(a) Earth work is excavation to the proper grade including light dressing.
Providing cambering and super elevation as directed and removal of
Spoil upto 30cm lead and all lift.
(d) Soft or laminated rock or medium share
Face wall:- 28.00 × 0.8 × 1.20m = 26.88m³
U/S Apron:- 28.00 × (1.50 × 0.30) × 0.15 = 5.04m³
Dry stone wall:- 28.00 × 0.60 × 0.70m = 11.60m³
= 43.68m³
@ Rs. 78.00/m³ ................................. Rs. 3407.04

2/8.5 Collection and supply of hard broken boulders for soiling stone.
including carriage within 200m and stacking in measurable stacks
complete.
(q) Hard Sandstone, line and the like 75cm to 150mm size.
Foundation :- 28.00 × 0.80 × 0.15m = 3.36m³
Apron:- 28.00 × 1.50 × 0.15m = 6.30m³
= 9.66m³
@ Rs. 394.00/m³ ................................. Rs. 3806.04

3/8.13 Labour for lying the stone soiling or stone bottoming 150mm thick in
one layer each about 75mm thick including dressing the sub grade to
the super elevation in camber and grading by using necessary template
or straight edges spirit level, string filling in the interstice with small
stone chipping stone, chipping rolling the soiling with roller 8 to 10
tone capacity and the earth edging 54mm wide complete as directed

Total:- B.F. item No.2/60
= 9.66m³
@ Rs. 227.00/m³ ................................. Rs. 2192.82

4/6.1 Providing cement concrete work in abutment, wing wall, and return
wall in proportion 1:3:6 with hard broken stone aggregates 40mm
down graded including necessary local carriage of stone aggregates,
sand within 200 meters and complete as directed.

Footing:- 28.00 × 0.80 × 0.35m = 7.84m³
Face wall:- 28.00 × 2.50 × 0.20m = 14.00m³
= 21.84m³
@ Rs. 3216.00/m³ ................................. Rs. 70237.44

5/6.12 Providing shettering in RCC bridge and culvert with dressed plank
not less than 25mm thick property joined with battens
of minimum size 75mm x 100mm at a spacing of not more
than 600mm centre to centre to the proper level including
covering in the contact face with polythene sheet and removing
the same after the concrete hardens complete as direct.
Face wall 28.00 × 2.50 × 1side = 70.00m³
@ Rs. 308.00/m³ ................................. Rs. 21560.00
providing regular dry masonry wall with hammer dressed or
Blunt chisel dress stone of heavy section (size not less than
25 cm x 30cm long) with proper key stone each not less than
25cm x 200 meters and filling in trenches.

(r) With new stone
(i) \[28.00 \times 0.30 \times 0.60\text{m} = 5.04\text{m}^3\]
(ii) \[28.00 \times 0.60 \times 0.60\text{m} = 10.08\text{m}^3\]
(iii) \[28.00 \times 0.90 \times 1.30\text{m} = 32.76\text{m}^3\]
\[= \frac{47.88\text{m}^3}{\text{m}^3}\]

@ Rs. 1045.00/m\(^3\) …………………………….. Rs. 50034.60

7/
(P.H.E. schedule of rate for 2007 – 08). Providing and lying
of sluice pipes including filling the joint, with spun yarn,
soaked in neat Cement slurry and Cement Motor 1:2
(1cement:2 sand) and including Cement Concrete blocks
(14 \times 10 \times 1\text{cm}) of (1:2:4) etc
(s) 100 meters diameters
Length:- \[= 16.50\text{m}\]

@ Rs. 793.75/m …………………………….. Rs.13093.91

8/1(a) Cutting roads side drain 60cm wide 60cm deep including dressing
grading and removal of spoils upto 15meters complete.

(t) In soft rock
(i) \[0.60\text{cm} \times 0.60\text{cm}\]
Total Length:- \[2 \times 40.00\text{Rm} = 80.00\text{Rm}\]

@ Rs. 49.00/running meters…………………. Rs. 3920.00

Total = Rs.168251.85
Say = Rs.168252.00

(Rupees One Lakh Sixty Eight Thousand Two Hundred Fifty Two) only.
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO.6
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Community
Location : Lawdiedoh (Seinduli-II)

1/1(a) Earth work in excavation for Proper grade including light
dressing and removal of spoils up to 30m level and all lift.

C.C. Wall: 20.00 x 1.00 x 1.50m = 30.00 m³
Masonry Wall: 20.00 x 2.00 x 0.85m = 34.00 m³
Apron: 20.00 x 2.00 x 0.15m = 6.00 m³
= 70.00 m³

@ Rs. 78.00 / m³ ……………………………… Rs. 5460.00

2/4.8 Providing cement concrete work proportion 1:4:8 with hard
broken stone aggregate 40mm, nominal size including
necessary carriage of stone and sand within a distance
of 200 meters and curing (excluding shuttering)
completed as directed.

Masonry Wall: 20.00 x 2.00 x 0.35m = 14.00 m³

@ Rs. 2823 / m³ ……………………………….. Rs. 39522.00

3/4.1 Providing stone masonry work in wing wall/guide
wall with harmer dressed stone of heavy section 25
x 25 x30cm long with proper key stones each not
less than 25 x25 x75 cm long in cement mortar 1:4
including carriage of stone within 200m complete
fitting in trenches etc. with new stones.

Masonry Wall: 20.00 x 2.00 x 1.00 = 40.00 m³
20.00 x 1.50 x 0.50 = 15.00 m³
20.00 x 1.00 x 0.50 = 10.00 m³
20.00 x 0.50 x 0.50 = 5.00 m³
= 70.00 m³

@ Rs.1045/-m³………………………………… Rs.73150.00

4/4.6 Providing stone soling with one man size boulders
Etc. as directed.

20.00 x 1.00 x 0.20 = 4.00 m³
20.00 x 2.00 x 0.15 = 6.00 m³
= 10.00 m³

@ Rs.576/-m³………………………………… Rs.5760.00
5/6.1 Providing concrete in prop 1: 3: 6 with hard broken stone aggregate 40mm downgraded including necessary local carriage of stone aggregates, sand within 200meters and curing (Excluding shuttering) complete as directed.

\[
\begin{align*}
20.00 \times 1.00 \times 0.50 \text{ m} & = 10.00 \text{ m}^3 \\
20.00 \times 2.80 \times 0.20 \text{ m} & = 11.20 \text{ m}^3 \\
& = 21.20 \text{ m}^3
\end{align*}
\]

@ Rs. 3216 / m\(^3\) ........................................... Rs. 68179.20

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

\[
\begin{align*}
20.00 \times 2.00 & = 40.00 \text{ m}^2 \\
20.00 \times 0.70 & = 14.00 \text{ m}^2 \\
4 \times 20.00 \times 0.50 & = 40.00 \text{ m}^2 \\
3 \times 20.00 \times 0.50 & = 30.00 \text{ m}^2 \\
\text{Apron: } 20.00 \times 2.00 & = 40.00 \text{ m}^2 \\
& = 164.00 \text{ m}^2
\end{align*}
\]

@ Rs.121 / m\(^2\) ................................. Rs. 19844.00

7/11 Cutting side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15 meters complete

Length: 20.00 Rm

@ Rs.49 / m\(^2\) ................................. Rs. 980.00

TOTAL Rs.212895.20

Say Rs.212895.00

(Rupees Two Lakhs Twelve Thousand Eight Hundred and Ninety Five) only
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO.7
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Shri Edius Thongni
Location: Mawthung

1/1(a) Earth work in excavation for proper grade including light dressing and removal of spoils up to 30m level and all lift.

C.C. Wall: 20.00 x 1.00 x 1.50m = 30.00 m³
Masonry Wall: 20.00 x 2.00 x 0.85m = 34.00 m³
Apron: 20.00 x 2.00 x 0.15m = 6.00 m³

= 70.00 m³

@ Rs. 78.00 / m³------------------------------Rs. 5460.00

2/4.8 Providing cement concrete work proportion 1:4:8 with hard broken stone aggregate 40mm, nominal size including necessary carriage of stone and sand within a distance of 200 meters and curing (excluding shuttering) completed as directed.

Masonry Wall: 20.00 x 2.00 x 0.35m = 14.00 m³

@ Rs. 2823 / m³---------------------------Rs. 39522.00

3/4.1 Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x 30cm long with proper key stones each not less than 25 x 25 x 75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

Masonry Wall:

- 20.00 x 2.00 x 1.00 = 40.00 m³
- 20.00 x 1.50 x 0.50 = 15.00 m³
- 20.00 x 1.00 x 0.50 = 10.00 m³
- 20.00 x 0.50 x 0.50 = 5.00 m³

= 70.00 m³

@ Rs.1045/-/m³-----------------------------Rs.73150.00

4/4.6 Providing stone soling with one man size boulders Etc. as directed.

- 20.00 x 1.00 x 0.20 = 4.00 m³
- 20.00 x 2.00 x 0.15 = 6.00 m³

= 10.00 m³

@ Rs.576/-m³-------------------------------Rs.5760.00
5/6.1 Providing concrete in prop 1: 3: 6 with hard broken stone aggregate 40mm downgraded including necessary local carriage of stone aggregates, sand within 200meters and curing (Excluding shuttering) complete as directed. 

\[
\begin{align*}
20.00 \times 1.00 \times 0.50 \text{ m} &= 10.00 \text{ m}^3 \\
20.00 \times 2.80 \times 0.20 \text{ m} &= 11.20 \text{ m}^3 \\
&= 21.20 \text{ m}^3
\end{align*}
\]

@ Rs. 3216 / m² .............................................. Rs. 68179.20

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

\[
\begin{align*}
20.00 \times 2.00 &= 40.00 \text{ m}^2 \\
20.00 \times 0.70 &= 14.00 \text{ m}^2 \\
4 \times 20.00 \times 0.50 &= 40.00 \text{ m}^2 \\
3 \times 20.00 \times 0.50 &= 30.00 \text{ m}^2 \\
\text{Apron:} \\
20.00 \times 2.00 &= 40.00 \text{ m}^2 \\
&= 164.00 \text{ m}^2
\end{align*}
\]

@ Rs.121 / m² .............................................. Rs. 19844.00

7/11 Cutting side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15 meters complete

\[
\begin{align*}
\text{Length:} \\
20.00 \text{ Rm}
\end{align*}
\]

@ Rs.49 / m² .............................................. Rs. 980.00

TOTAL Rs.212895.20

Say Rs.212895.00

(Rupees Two Lakhs Twelve Thousand Eight Hundred and Ninety Five) only
**ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO.8 UNDER UMTYRWA-UMIONG IWMP-IX**

As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiary : Smti. Ibalamlynti Nonglang  
Location : Lawdiedoh

1/1(a) Earth work in excavation for Proper grade including light dressing and removal of spoils up to 30m level and all lift.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity (m^3)</th>
<th>Rate (Rs./m^3)</th>
<th>Total Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.C. Wall:</td>
<td>20.00 x 1.00 x 1.50</td>
<td>@ Rs. 78.00</td>
<td>30.00 m^3</td>
</tr>
<tr>
<td>Masonry Wall:</td>
<td>20.00 x 2.00 x 0.85</td>
<td>= 34.00 m^3</td>
<td>6.00</td>
</tr>
<tr>
<td>Apron:</td>
<td>20.00 x 2.00 x 0.15</td>
<td>= 70.00 m^3</td>
<td>70.00</td>
</tr>
</tbody>
</table>

**Total Cost for 1/1(a)**: Rs. 5460.00

2/4.8 Providing cement concrete work proportion 1:4:8 with hard broken stone aggregate 40mm, nominal size including necessary carriage of stone and sand within a distance of 200 meters and curing (excluding shuttering) completed as directed.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity (m^3)</th>
<th>Rate (Rs./m^3)</th>
<th>Total Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masonry Wall:</td>
<td>20.00 x 2.00 x 0.35</td>
<td>= 14.00 m^3</td>
<td>2823</td>
</tr>
</tbody>
</table>

**Total Cost for 2/4.8**: Rs. 39522.00

3/4.1 Providing stone masonry work in wing wall/guide wall with harmer dressed stone of heavy section 25 x 25 x30cm long with proper key stones each not less than 25 x25 x75 cm long in cement mortar 1:4 including carriage of stone within 200m complete fitting in trenches etc. with new stones.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity (m^3)</th>
<th>Rate (Rs./m^3)</th>
<th>Total Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masonry Wall:</td>
<td>20.00 x 2.00 x 1.00</td>
<td>= 40.00 m^3</td>
<td>1045/</td>
</tr>
<tr>
<td>20.00 x 1.50 x 0.50</td>
<td>= 15.00 m^3</td>
<td>1045/</td>
<td></td>
</tr>
<tr>
<td>20.00 x 1.00 x 0.50</td>
<td>= 10.00 m^3</td>
<td>1045/</td>
<td></td>
</tr>
<tr>
<td>20.00 x 0.50 x 0.50</td>
<td>= 5.00 m^3</td>
<td>1045/</td>
<td></td>
</tr>
<tr>
<td>Apron:</td>
<td>20.00 x 1.00 x 0.20</td>
<td>= 4.00 m^3</td>
<td>576/</td>
</tr>
<tr>
<td>20.00 x 2.00 x 0.15</td>
<td>= 6.00 m^3</td>
<td>576/</td>
<td></td>
</tr>
</tbody>
</table>

**Total Cost for 3/4.1**: Rs. 73150.00

4/4.6 Providing stone soling with one man size boulders Etc. as directed.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity (m^3)</th>
<th>Rate (Rs./m^3)</th>
<th>Total Cost (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apron:</td>
<td>20.00 x 1.00 x 0.20</td>
<td>= 4.00 m^3</td>
<td>576/</td>
</tr>
<tr>
<td>20.00 x 2.00 x 0.15</td>
<td>= 6.00 m^3</td>
<td>576/</td>
<td></td>
</tr>
</tbody>
</table>

**Total Cost for 4/4.6**: Rs. 5760.00
5/6.1 Providing concrete in prop 1: 3: 6 with hard broken stone aggregate 40mm downgraded including necessary local carriage of stone aggregates, sand within 200meters and curing (Excluding shuttering) complete as directed.

\[
\begin{align*}
20.00 \times 1.00 \times 0.50 \text{ m} & = 10.00 \text{ m}^3 \\
20.00 \times 2.80 \times 0.20 \text{ m} & = 11.20 \text{ m}^3 \\
& = 21.20 \text{ m}^3 \\
\end{align*}
\]

@ Rs. 3216 / m² .................. Rs. 68179.20

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

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Area (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.00 x 2.00</td>
<td>40.00</td>
</tr>
<tr>
<td>20.00 x 0.70</td>
<td>14.00</td>
</tr>
<tr>
<td>4 x 20.00 x 0.50</td>
<td>40.00</td>
</tr>
<tr>
<td>3 x 20.00 x 0.50</td>
<td>30.00</td>
</tr>
<tr>
<td>Apron: 20.00 x 2.00</td>
<td>40.00</td>
</tr>
<tr>
<td></td>
<td>164.00</td>
</tr>
</tbody>
</table>

@ Rs. 121 / m² .................. Rs. 19844.00

7/11 Cutting side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15 meters complete

<table>
<thead>
<tr>
<th>Length</th>
<th>Area (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.00 Rm</td>
<td>980.00</td>
</tr>
</tbody>
</table>

@ Rs.49 / m² .................. Rs. 212895.20

TOTAL Rs.212895.00

Say (Rupees Two Lakhs Twelve Thousand Eight Hundred and Ninety Five) only
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO.9
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Orlands Thyrniang
Location : Umtympuin

1/1(a) Earth work in excavation for Proper grade including light
dressing and removal of spoils up to 30m level and all lift.

<table>
<thead>
<tr>
<th>Description</th>
<th>Length</th>
<th>Height</th>
<th>Thickness</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.C. Wall:</td>
<td>20.00</td>
<td>1.00</td>
<td>1.50m</td>
<td>30.00 m³</td>
</tr>
<tr>
<td>Masonry Wall:</td>
<td>20.00</td>
<td>2.00</td>
<td>0.85m</td>
<td>34.00 m³</td>
</tr>
<tr>
<td>Apron:</td>
<td>20.00</td>
<td>2.00</td>
<td>0.15m</td>
<td>6.00 m³</td>
</tr>
</tbody>
</table>

\[\text{Volume} = \text{Length} \times \text{Height} \times \text{Thickness}\]

\[30.00 \text{ m}³ + 34.00 \text{ m}³ + 6.00 \text{ m}³ = 70.00 \text{ m}³\]

\[\text{@ Rs.} 78.00 / \text{ m}³ \]

\[= \text{ Rs.} 5460.00\]

2/4.8 Providing cement concrete work proportion 1:4:8 with hard
broken stone aggregate 40mm, nominal size including
necessary carriage of stone and sand within a distance
of 200 meters and curing (excluding shuttering)
completed as directed.

Masonry Wall: 20.00 x 2.00 x 0.35m = 14.00 m³

\[\text{Volume} = \text{Length} \times \text{Height} \times \text{Thickness}\]

\[\text{@ Rs.} 28.23 / \text{ m}³ \]

\[= \text{ Rs.} 39522.00\]

3/4.1 Providing stone masonry work in wing wall/guide
wall with harmer dressed stone of heavy section 25
x 25 x 30cm long with proper key stones each not
less than 25 x 25 x 75 cm long in cement mortar 1:4
including carriage of stone within 200m complete
fitting in trenches etc. with new stones.

Masonry Wall: 20.00 x 2.00 x 1.00 = 40.00 m³
20.00 x 1.50 x 0.50 = 15.00 m³
20.00 x 1.00 x 0.50 = 10.00 m³
20.00 x 0.50 x 0.50 = 5.00 m³

\[\text{Volume} = \text{Length} \times \text{Height} \times \text{Thickness}\]

\[= 70.00 \text{ m}³\]

\[\text{@ Rs.} 1045/-/\text{m}³ \]

\[= \text{ Rs.} 73150.00\]

4/4.6 Providing stone soling with one man size boulders
Etc. as directed.

\[\begin{align*}
20.00 \times 1.00 \times 0.20 &= 4.00 \text{ m}³ \\
20.00 \times 2.00 \times 0.15 &= 6.00 \text{ m}³ \\
\end{align*}\]

\[\text{@ Rs.} 576/-/\text{m}³ \]

\[= \text{ Rs.} 5760.00\]
5/6.1 Providing concrete in prop 1: 3: 6 with hard broken stone aggregate 40mm downgraded including necessary local carriage of stone aggregates, sand within 200meters and curing (Excluding shuttering) complete as directed.

\[
\begin{align*}
20.00 \times 1.00 \times 0.50 \text{ m} & = 10.00 \text{ m}^3 \\
20.00 \times 2.80 \times 0.20 \text{ m} & = 11.20 \text{ m}^3 \\
& = 21.20 \text{ m}^3 \\
\end{align*}
\]

@ Rs. 3216 / m\(^3\)................................. Rs. 68179.20

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

\[
\begin{align*}
20.00 \times 2.00 & = 40.00 \text{ m}^2 \\
20.00 \times 0.70 & = 14.00 \text{ m}^2 \\
4 \times 20.00 \times 0.50 & = 40.00 \text{ m}^2 \\
3 \times 20.00 \times 0.50 & = 30.00 \text{ m}^2 \\
\text{Apron:} & 20.00 \times 2.00 = 40.00 \text{ m}^2 \\
& = 164.00 \text{ m}^2 \\
\end{align*}
\]

@ Rs.121 / m\(^2\)................................. Rs. 19844.00

7/11 Cutting side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15 meters complete

Length: 20.00 Rm

@ Rs.49 / m\(^2\)................................. Rs. 980.00

\text{TOTAL} \hspace{1cm} \text{Rs.212895.20}

Say \hspace{1cm} \text{Rs.212895.00}

(Rupees Two Lakhs Twelve Thousand Eight Hundred and Ninety Five) only
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO. 10
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Shelbis L. Marshillong
Location : Umniangiong

1/1(a) Earth work in excavation for Proper grade including light
dressing and removal of spoils up to 30m level and all lift.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume(m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.C. Wall</td>
<td>20.00 x 1.00 x 1.50m</td>
<td>30.00</td>
</tr>
<tr>
<td>Masonry Wall</td>
<td>20.00 x 2.00 x 0.85m</td>
<td>34.00</td>
</tr>
<tr>
<td>Apron</td>
<td>20.00 x 2.00 x 0.15m</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70.00</td>
</tr>
</tbody>
</table>

@ Rs. 78.00 / m³ ……………………………… Rs. 5460.00

2/4.8 Providing cement concrete work proportion 1:4:8 with hard
broken stone aggregate 40mm, nominal size including
necessary carriage of stone and sand within a distance
of 200 meters and curing (excluding shuttering)
completed as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume(m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masonry Wall</td>
<td>20.00 x 2.00 x 0.35m</td>
<td>14.00</td>
</tr>
</tbody>
</table>

@ Rs. 2823 / m³ ……………………………… Rs. 39522.00

3/4.1 Providing stone masonry work in wing wall/guide
wall with harmer dressed stone of heavy section 25
x 25 x30cm long with proper key stones each not
less than 25 x25 x75 cm long in cement mortar 1:4
including carriage of stone within 200m complete
fitting in trenches etc. with new stones.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume(m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masonry Wall</td>
<td>20.00 x 2.00 x 1.00</td>
<td>40.00</td>
</tr>
<tr>
<td></td>
<td>20.00 x 1.50 x 0.50</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>20.00 x 1.00 x 0.50</td>
<td>10.00</td>
</tr>
<tr>
<td></td>
<td>20.00 x 0.50 x 0.50</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70.00</td>
</tr>
</tbody>
</table>

@ Rs.1045/-m³………………………………… Rs.73150.00

4/4.6 Providing stone soling with one man size boulders
Etc. as directed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions</th>
<th>Volume(m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20.00 x 1.00 x 0.20</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td>20.00 x 2.00 x 0.15</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10.00</td>
</tr>
</tbody>
</table>

@ Rs.576/-m³………………………………… Rs.5760.00
5/6.1 Providing concrete in prop 1: 3: 6 with hard broken stone aggregate 40mm downgraded including necessary local carriage of stone aggregates, sand within 200meters and curing (Excluding shuttering) complete as directed.

\[
\begin{align*}
20.00 \times 1.00 \times 0.50 \text{ m} & = 10.00 \text{ m}^3 \\
20.00 \times 2.80 \times 0.20 \text{ m} & = 11.20 \text{ m}^3 \\
& = 21.20 \text{ m}^3
\end{align*}
\]

@ Rs. 3216 / m\(^2\) ......................... Rs. 68179.20

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

\[
\begin{align*}
20.00 \times 2.00 & = 40.00 \text{ m}^2 \\
20.00 \times 0.70 & = 14.00 \text{ m}^2 \\
4 \times 20.00 \times 0.50 & = 40.00 \text{ m}^2 \\
3 \times 20.00 \times 0.50 & = 30.00 \text{ m}^2 \\
\text{Apron:} & \quad 20.00 \times 2.00 \\
& = 40.00 \text{ m}^2 \\
& = 164.00 \text{ m}^2
\end{align*}
\]

@ Rs.121 / m\(^2\) .............................. Rs. 19844.00

7/11 Cutting side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15 meters complete

Length: 20.00 Rm

@ Rs.49 / m\(^2\) .............................. Rs. 980.00

\text{TOTAL} \quad \text{Rs.212895.20}

Say \quad \text{Rs.212895.00}

(Rupees Two Lakhs Twelve Thousand Eight Hundred and Ninety Five) only
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO.11
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Amstrong L. Nonglait
Location : Lawdiedoh

1/1(a) Earth work is excavation to the proper grade including light dressing.
Providing cambering and super elevation as directed and removal of
Spoil upto 30cm lead and all lift.
(d) Soft or laminated rock or medium share
Face wall:- 28.00 × 1.25 × 0.90m = 31.50m³
U/S Apron:- 28.00 × 1.20 × 0.15m = 5.04m³
Dry stone wall:- 28.00 × 0.60 × 0.75m = 12.60m³

= 49.14m³
= 78.00/m³
……………….. Rs. 3832.92

2/8.5 Collection and supply of hard broken boulders for soiling stone.
including carriage within 200m and stacking in measurable stacks
complete.
(u) Hard Sandstone, line and the like 75cm to 150mm size.
Foundation :- 28.00 × 0.90 × 0.15m =3.78m³
Apron:- 28.00 × 1.50 × 0.15m = 6.30m³

= 10.08m³
= 394.00/m³
……….. Rs. 3971.52

3/8.13 Labour for lying the stone soiling or stone bottoming 150mm thick in
one layer each about 75mm thick including dressing the sub grade to
the super elevation in camber and grading by using necessary template
or straight edges spirit level, string filling in the interstice with small
stone chipping stone, chipping rolling the soiling with roller 8 to 10
tone capacity and the earth edging 54mm wide complete as directed

Total:- B.F.item No.2/60

= 10.08m³
= 227.00/m³
………………….Rs. 2288.16

4/6.1 Providing cement concrete work in abutment, wing wall, and return
in proportion 1:3:6 with hard broken stone aggregates 40mm
down graded including necessary local carriage of stone aggregates,
sand within 200 meters and complete as directed.

Footing:- 28.00 × 0.90 × 0.35m = 8.52m³
Face wall:- 28.00 × 3.00 × 0.30m = 25.20m²

= 34.02m²
= 3216.00/m³
…………………. Rs. 109408.32

5/6.12 Providing shuttering in RCC bridge and culvert with dressed plank
not less than 25mm thick property joined with battens
of minimum size 75mm x 100mm at a spacing of not more
than 600mm centre to centre to the proper level including
covering in the contact face with polythene sheet and removing
the same after the concrete hardens complete as direct.

Face wall

= 84.00m³
= 308.00/m³
…………………. Rs. 25872.00

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6/4.1 Providing regular dry masonry wall with hammer dressed or Blunt chisel dress stone of heavy section (size not less than 25 cm x 30cm long) with proper key stone each not less than 25cm x 200 meters and filling in trenches.

(a) With new stone
   (i) $28.00 \times 1.50 \times 0.90m = 37.80m^3$
   (ii) $28.00 \times 0.75 \times 0.60m = 12.60m^3$
   (iii) $28.00 \times 0.75 \times 0.30m = 6.30m^3$

   $\frac{37.80 + 12.60 + 6.30}{3} = 56.70m^3$

   @ Rs.1045.00/m^3 .......................... Rs. 59251.50

7/ (P.H.E. schedule of rate for 2007 – 08). Providing and lying of sluice pipes including filling the joint, with spun yarn, soaked in neat Cement slurry and Cement Motor 1:2 (1cement:2 sand) and including Cement Concrete blocks (15 10 x 10)cm of (1:2:4) etc

(b) 100 meters diameters
Length:- 7.50m

@ Rs. 793.75/m .............................. Rs. 5951.77

8/1(a) Cutting roads side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15meters complete.

(c) In soft rock
   (i) 0.60cm X 0.60
Total Length:- Rm 86.30Rm

@ Rs. 49.00/running meters..................... Rs. 4228.70

Total = Rs. 214804.89
Say = Rs. 214805.00

(Rupees Two Lakhs Fourteen Thousand Eight Hundred and Five) only.
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO.12 UNDER UMTYRWA-UMIONG IWMP
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiary : Shri Khrowel L. Nonglait
Location : Seinduli-II

1/1(a) Earth work is excavation to the proper grade including light dressing.
Providing cambering and super elevation as directed and removal of
Spoil upto 30cm lead and all lift.
(d) Soft or laminated rock or medium share
Face wall:- \[28.00 \times 1.25 \times 0.90m \times 31.50m^3\]
U/S Apron:- \[28.00 \times 1.20 \times 0.15m \times 5.04m^3\]
Dry stone wall:- \[28.00 \times 0.60 \times 0.75m \times 12.60m^3\]
\[= 49.14m^3\]
\[\text{Rs. 78.00/m}^3 \text{……………………………………… Rs. 3832.92}\]

2/8.5 Collection and supply of hard broken boulders for soiling stone.
including carriage within 200m and stacking in measurable stacks complete.
(v) Hard Sandstone, line and the like 75cm to 150mm size.
Foundation :- \[28.00 \times 0.90 \times 0.15m \times 3.78m^3\]
Apron:- \[28.00 \times 1.50 \times 0.15m \times 6.30m^3\]
\[= 10.08m^3\]
\[\text{Rs. 394.00/m}^3 \text{…………………………………… Rs. 3971.52}\]

3/8.13 Labour for lying the stone soiling or stone bottoming 150mm thick in
one layer each about 75mm thick including dressing the sub grade to
the super elevation in camber and grading by using necessary template
or straight edges spirit level, string filling in the interstice with small
stone chipping stone, chipping rolling the soiling with roller 8 to 10
tone capacity and the earth edging 54mm wide complete as directed
Total:- \[\text{B.F. item No.2/60}\]
\[= 10.08m^3\]
\[\text{Rs. 227.00/m}^3 \text{…………………………………… Rs. 2288.16}\]

4/6.1 Providing cement concrete work in abutment, wing wall, and return
in proportion 1:3:6 with hard broken stone aggregates 40mm
down graded including necessary local carriage of stone aggregates,
sand within 200 meters and complete as directed.
Footing:- \[28.00 \times 0.90 \times 0.35m \times 8.52m^3\]
Face wall:- \[28.00 \times 3.00 \times 0.30m \times 25.20m^2\]
\[= 34.02m^2\]
\[\text{Rs. 3216.00/m}^3 \text{…………………………………… Rs. 109408.32}\]

5/6.12 Providing shuttering in RCC bridge and culvert with dressed plank
not less than 25mm thick property joined with battens
of minimum size 75mm x 100mm at a spacing of not more
than 600mm centre to centre to the proper level including
covering in the contact face with polythene sheet and removing
the same after the concrete hardens complete as direct.
Face wall \[28.00 \times 3.00m \times 84.00m^3\]
\[\text{Rs. 308.00/m}^3 \text{……………………………………… Rs. 25872.00}\]
6/4.1 Providing regular dry masonry wall with hammer dressed or Blunt chisel dress stone of heavy section (size not less than 25 cm x 30cm long) with proper key stone each not less than 25cm x 200 meters and filling in trenches.

(d) With new stone

(i) \(28.00 \times 1.50 \times 0.90 \text{m} = 37.80 \text{m}^3\)
(ii) \(28.00 \times 0.75 \times 0.60 \text{m} = 12.60 \text{m}^3\)
(iii) \(28.00 \times 0.75 \times 0.30 \text{m} = 6.30 \text{m}^3\)

\[= 56.70 \text{m}^3\]

@ Rs.1045.00/m³ .............................. Rs. 59251.50

7/ (P.H.E. schedule of rate for 2007 – 08). Providing and lying of sluice pipes including filling the joint, with spun yarn, soaked in neat Cement slurry and Cement Motor 1:2 (1cement:2 sand) and including Cement Concrete blocks (16 10 x 10)cm of (1:2:4) etc

(e) 100 meters diameters
Length: - .......................... = 7.50m

@ Rs. 793.75/m .............................. Rs. 5951.77

8/1(a) Cutting roads side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15meters complete.

(f) In soft rock

(i) \(0.60 \times 0.60 \text{cm} = 8.63 \text{cm}^2\)

Total Length:- .......................... = 86.30 cm

@ Rs. 49.00/running meters ................. Rs. 4228.70

Total = Rs. 214804.89
Say = Rs. 214805.00

(Rupees Two Lakhs Fourteen Thousand Eight Hundred and Five) only.
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO.13
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Shri Daparlin Nonglang
Location: Ktiehdorji

1/1(a) Earth work is excavation to the proper grade including light dressing.
Providing cambering and super elevation as directed and removal of
Spoil upto 30cm lead and all lift,
(d) Soft or laminated rock or medium share
Face wall:- 28.00 × 1.25 × 0.90m = 31.50m³
U/S Apron:- 28.00 × 1.20 × 0.15m = 5.04m³
Dry stone wall:- 28.00 × 0.60 × 0.75m = 12.60m³
= 49.14m³
@ Rs. 78.00/m³ …………………………………… Rs. 3832.92

2/8.5 Collection and supply of hard broken boulders for soiling stone.
including carriage within 200m and stacking in measurable stacks
complete.
(w) Hard Sandstone, line and the like 75cm to 150mm size.
Foundation :- 28.00 × 0.90 × 0.15m = 3.78m³
Apron:- 28.00 × 1.50 × 0.15m = 6.30m³
= 10.08m³
@ Rs. 394.00/m³…………………………………… Rs. 3971.52

3/8.13 Labour for lying the stone soiling or stone bottoming 150mm thick in
one layer each about 75mm thick including dressing the sub grade to
the super elevation in camber and grading by using necessary template
or straight edges spirit level, string filling in the interstice with small
stone chipping stone, chipping rolling the soiling with roller 8 to 10
tone capacity and the earth edging 54mm wide complete as directed
Total:- B.F. item No.2/60
= 10.08m³
@ Rs. 227.00/m³ ………………………………… Rs. 2288.16

4/6.1 Providing cement concrete work in abutment, wing wall, and return
in proportion 1:3:6 with hard broken stone aggregates 40mm
down graded including necessary local carriage of stone aggregates,
sand within 200 meters and complete as directed.
Footing:- 28.00 × 0.90 × 0.35m = 8.52m³
Face wall:- 28.00 × 3.00 × 0.30m = 25.20m²
= 34.02m²
@ Rs. 3216.00/m³ …………………………………… Rs. 109408.32

5/6.12 Providing shuttering in RCC bridge and culvert with dressed plank
not less than 25mm thick property joined with battens
of minimum size 75mm x 100mm at a spacing of not more
than 600mm centre to centre to the proper level including
covering in the contact face with polythene sheet and removing
the same after the concrete hardens complete as direct.
Face wall 28.00 × 3.00m = 84.00m³
@ Rs. 308.00/m³…………………………………… Rs. 25872.00
6/4.1 Providing regular dry masonry wall with hammer dressed or Blunt chisel dress stone of heavy section (size not less than 25 cm x 30cm long) with proper key stone each not less than 25cm x 200 meters and filling in trenches.

(g) With new stone
(i) \(28.00 \times 1.50 \times 0.90m = 37.80m^3\)
(ii) \(28.00 \times 0.75 \times 0.60m = 12.60m^3\)
(iii) \(28.00 \times 0.75 \times 0.30m = 6.30m^3\)
\[= 56.70m^3\]
@ Rs.1045.00/m³ ........................................... Rs. 59251.50

7/ (P.H.E. schedule of rate for 2007 – 08). Providing and lying of sluice pipes including filling the joint, with spun yarn, soaked in neat Cement slurry and Cement Motor 1:2 (1cement:2 sand) and including Cement Concrete blocks (17 10 x 10)cm of (1:2:4) etc

(h) 100 meters diameters
Length:- \(= 7.50m\)
@ Rs. 793.75/m ........................................... Rs. 5951.77

8/1(a) Cutting roads side drain 60cm wide 60cm deep including dressing grading and removal of spoils upto 15meters complete.

(i) In soft rock \(i) 0.60cm X 0.60\)
Total Length:- Rm \(= 86.30Rm\)
@ Rs. 49.00/running meters..................... Rs. 4228.70

\[\text{Total} = \text{Rs. 214804.89} \]
\[\text{Say} = \text{Rs. 214805.00} \]

(Rupees Two Lakhs Fourteen Thousand Eight Hundred and Five) only.
ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE NO.14
UNDER UMTRYWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Aitisna Thongni
Location : Porkynbang

1/1(a) Earth work is excavation to the proper grade including light dressing. Providing cambering and super elevation as directed and removal of Spoil upto 30cm lead and all lift.
(d) Soft or laminated rock or medium share

Face wall:- 28.00 × 1.25 × 0.90m = 31.50m³
U/S Apron:- 28.00 × 1.20 × 0.15m = 5.04m³
Dry stone wall:- 28.00 × 0.60 × 0.75m = 12.60m³

= 49.14m³

@ Rs. 78.00/m³ .............................................. Rs. 3832.92

2/8.5 Collection and supply of hard broken boulders for soiling stone.
including carriage within 200m and stacking in measurable stacks complete.
(x) Hard Sandstone, line and the like 75cm to 150mm size.
Foundation :- 28.00 × 0.90 × 0.15m =3.78m³
Apron:- 28.00 × 1.50 × 0.15m = 6.30m³

= 10.08m³

@ Rs. 394.00/m³ .............................................. Rs. 3971.52

3/8.13 Labour for lying the stone soiling or stone bottoming 150mm thick in one layer each about 75mm thick including dressing the sub grade to the super elevation in camber and grading by using necessary template or straight edges spirit level, string filling in the interstice with small stone chipping stone, chipping rolling the soiling with roller 8 to 10 tone capacity and the earth edging 54mm wide complete as directed

Total:- B.F. item No.2/60

= 10.08m³

@ Rs. 227.00/m³  .............................................. Rs. 2288.16

4/6.1 Providing cement concrete work in abutment, wing wall, and return in proportion 1:3:6 with hard broken stone aggregates 40mm
down graded including necessary local carriage of stone aggregates, sand within 200 meters and complete as directed.

Footing:- 28.00 × 0.90 × 0.35m = 8.52m³
Face wall:- 28.00 × 3.00 × 0.30m = 25.20m²

= 34.02m²

@ Rs. 3216.00/m³ .............................................. Rs. 109408.32

5/6.12 Providing shuttering in RCC bridge and culvert with dressed plank
not less than 25mm thick property joined with battens
of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to centre to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens complete as direct.

Face wall 28.00 × 3.00m = 84.00m³

@ Rs. 308.00/m³ .............................................. Rs. 25872.00
6/4.1 Providing regular dry masonry wall with hammer dressed or blunt chisel dress stone of heavy section (size not less than 25 cm x 30 cm long) with proper key stone each not less than 25 cm x 200 meters and filling in trenches.

(j) With new stone
   (i) \(28.00 \times 1.50 \times 0.90m = 37.80m^3\)
   (ii) \(28.00 \times 0.75 \times 0.60m = 12.60m^3\)
   (iii) \(28.00 \times 0.75 \times 0.30m = 6.30m^3\)

   \(= 56.70m^3\)

   @ Rs.1045.00/m\(^3\) .............................................. Rs. 59251.50

7/ (P.H.E. schedule of rate for 2007 – 08). Providing and lying of sluice pipes including filling the joint, with spun yarn, soaked in neat Cement slurry and Cement Motor 1:2 (1 cement:2 sand) and including Cement Concrete blocks (18 10 x 10cm of (1:2:4) etc

(k) 100 meters diameters
Length:- = 7.50m

@ Rs. 793.75/m .............................................. Rs. 5951.77

8/1(a) Cutting roads side drain 60 cm wide 60 cm deep including dressing grading and removal of spoils upto 15 meters complete.

(l) In soft rock
   (i) 0.60 cm X 0.60

Total Length:- Rm = 86.30 Rm

@ Rs. 49.00/running meters.............................. Rs. 4228.70

   Total = Rs. 214804.89
   Say = Rs. 214805.00

(Rupees Two Lakhs Fourteen Thousand Eight Hundred and Five) only.
## ABSTRACT OF COST FOR RETAINING WALLS
UNDER UMTRYWA UMIONG IWMP-IX

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ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.1
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Pinglan Lyngkhoi
Location : Shad Wah Seinduli

1/1(a) Earth work to proper level and grade including light dressing
………………………soils up to 3meters lead all lift.
(a) Very hard shale.

\[
1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3
\]

@ Rs.78/m^3 …………………………… = Rs. 2059.20/-

2/4.1 Providing regular stone masonry in retaining walls breast
walls………………………………apart staggered complete.
(a) With new stone

\[
1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3
1 \times 24 \times 1.10 + 0.6 \times 1.00
\]

\[
\frac{2}{2} = 20.40 \text{ m}^3
\]

Total = 46.80 m^3

@ Rs.1045/m^3 …………………………… =Rs.48906.00 /-

TOTAL: = Rs.50965.20

Say =Rs. 50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.2
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Wanboklin Iawphniaw
Location : Seinduli-I

1/1(a) Earth work to proper level and grade including light dressing
..........................soils up to 3meters lead all lift.
(a) Very hard shale.

\[1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3\]

@ Rs.78/m$^3$ .......................... = Rs. 2059.20/

2/4.1 Providing regular stone masonry in retaining walls breast
walls..................................apart staggered complete.
(a) With new stone

\[1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3\]
\[1 \times 24 \times \frac{1.10 + 0.6 \times 1.00}{2} = 20.40 \text{ m}^3\]

Total = 46.80 m$^3$

@ Rs.1045/m$^3$ .......................... = Rs.48906.00 /

TOTAL: = Rs.50965.20
Say = Rs. 50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.3
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Selina Iawphniaw
Location : Wahria

1/1(a) Earth work to proper level and grade including light dressing
………………………..soils up to 3meters lead all lift.
(a) Very hard shale.

\[1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3\]

\[@ \text{Rs.} 78/\text{m}^3 \text{...............} = \text{Rs. } 2059.20/-\]

2/4.1 Providing regular stone masonry in retaining walls breast
walls…………………………apart staggered complete.
(a) With new stone

\[\frac{1 \times 24 \times 1.10 \times 0.1}{2} = 26.40 \text{ m}^3\]

\[1 \times 24 \times 1.10 + 0.6 \times 1.00 = 20.40 \text{ m}^3\]

Total \[= 46.80 \text{ m}^3\]

\[@ \text{Rs.} 1045/\text{m}^3 \text{...............} = \text{Rs. } 48906.00/-\]

TOTAL: \[= \text{Rs. } 50965.20\]

say \[= \text{Rs. } 50965.00\]

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO. 4
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Pheristone L. Nonglait
Location : Umtympuin

1/1(a) Earth work to proper level and grade including light dressing
………………………………soils up to 3meters lead all lift.
(a) Very hard shale.

\[ 1 \times 24 \times 1.10 \times 0.1 = 26.40 \, m^3 \]

\[ @ \text{ Rs.}78/m^3 \]  ………..= Rs. 2059.20/-

2/4.1 Providing regular stone masonry in retaining walls breast
walls…………………………apart staggered complete.
(a) With new stone

\[ 1 \times 24 \times 1.10 \times 0.1 = 26.40 \, m^3 \]
\[ 1 \times 24 \times 1.10 + 0.6 \times 1.00 \]
\[ \frac{2}{2} \]
\[ = 20.40 \, m^3 \]

Total = 46.80 m³

\[ @ \text{ Rs.}1045/m^3 \]  …………………..=Rs.48906.00 /-

TOTAL: = Rs.50965.20

Say =Rs. 50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.5
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Haslinda K. Bani
Location : Lawdidoh.

1/1(a) Earth work to proper level and grade including light dressing
………………………soils up to 3meters lead all lift.
(a) Very hard shale.

\[1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3\]
\[@ \text{Rs.} 78/\text{m}^3 \text{ } \text{= Rs.} 2059.20/\text{-}\]

2/4.1 Providing regular stone masonry in retaining walls breast walls…………………………apart staggered complete.
(a) With new stone

\[1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3\]
\[1 \times 24 \times \frac{1.10 + 0.6 \times 1.00}{2} = 20.40 \text{ m}^3\]
Total = 46.80 m³
\[@ \text{Rs.1045/m}^3 \text{ } \text{=Rs.} 48906.00/-\]

TOTAL: = Rs.50965.20
Say = Rs.50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.6
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Elisis L. Marshillong
Location : Umniangiong

1/1(a) Earth work to proper level and grade including light dressing
…………………………..soils up to 3 meters lead all lift.
(a) Very hard shale.

\[ 1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3 \]
\[ @ \text{Rs.78/m}^3 \] ............................... \[ = \text{Rs. 2059.20/-} \]

2/4.1 Providing regular stone masonry in retaining walls breast
walls……………………………apart staggered complete.
(a) With new stone

\[ 1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3 \]
\[ 1 \times 24 \times 1.10 + 0.6 \times 1.00 = 20.40 \text{ m}^3 \]
\[ \frac{2}{2} \text{ Total} = 46.80 \text{ m}^3 \]

\[ @ \text{Rs.1045/m}^3 \] ............................... \[ = \text{Rs.48906.00/-} \]

TOTAL: \[ = \text{Rs.50965.20} \]
Say \[ = \text{Rs. 50965.00} \]

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO. 7
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiary: Smti. Anjela Sangriang
Location: Porkenbah

1/1(a) Earth work to proper level and grade including light dressing
………………………….soils up to 3meters lead all lift.
(a) Very hard shale.

\[1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3\]
@ Rs.78/m$^3$ ………………………… = Rs. 2059.20/-

2/4.1 Providing regular stone masonry in retaining walls breast
walls………………………………apart staggered complete.
(a) With new stone

\[
\begin{align*}
1 \times 24 \times 1.10 \times 0.1 &= 26.40 \text{ m}^3 \\
1 \times 24 \times (1.10 + 0.6) \times 1.00 &= 20.40 \text{ m}^3 \\
\text{Total} &= 46.80 \text{ m}^3
\end{align*}
\]
@ Rs.1045/m$^3$ …………………………… = Rs.4890.60/-

TOTAL: = Rs.5096.20

Say =Rs. 50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.8
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Airin Iawphniaw
Location : Porkenbah

1/1(a) Earth work to proper level and grade including light dressing
………………………soils up to 3meters lead all lift.
(a) Very hard shale.

\[ 1 \times 24 \times 1.10 \times 0.1 = 26.40 \, m^3 \]
\[ @ \, Rs.78/m^3 \, \text{..................} = \, Rs. \, 2059.20/- \]

2/4.1 Providing regular stone masonry in retaining walls breast
walls………………………………apart staggered complete.
(a) With new stone

\[ 1 \times 24 \times 1.10 \times 0.1 = 26.40 \, m^3 \]
\[ 1 \times 24 \times (1.10 + 0.6) \times 1.00 = 20.40 \, m^3 \]
\[ \text{Total} = 46.80 \, m^3 \]
\[ @ \, Rs.1045/m^3 \, \text{..................} = \, Rs. \, 48906.00/- \]

\text{TOTAL:} \, = \, Rs.50965.20

\text{Say} \, =\, Rs. \, 50965.00

\text{Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only}
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.9
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Smti. Bistilda Sangriang
Location: Shnad Wah Seinduli

1/1(a) Earth work to proper level and grade including light dressing
...........................................soils up to 3meters lead all lift.
(a) Very hard shale.
1 x 24 x 1.10 x 0.1 = 26.40 m³
@ Rs.78/m³ ............................... = Rs. 2059.20/

2/4.1 Providing regular stone masonry in retaining walls breast walls................................ HTTP staggered complete.
(a) With new stone
1 x 24 x 1.10 x 0.1 = 26.40 m³
1 x 24 x 1.10 + 0.6 x 1.00
\[
\frac{2}{2}
\]
Total = 46.80 m³
@ Rs.1045/m³ ............................... =Rs.48906.00 /

TOTAL: = Rs.50965.20
Say =Rs. 50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO. 10
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Shri. Mokes K. Bani
Location: Shnad Wah Seinduli

1/1(a) Earth work to proper level and grade including light dressing
…………………..soils up to 3 meters lead all lift.
(a) Very hard shale.

\[1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3\]

@ Rs. 78/m$^3$ …………………... = Rs. 2059.20

2/4.1 Providing regular stone masonry in retaining walls breast
walls………………………………apart staggered complete.
(a) With new stone

\[1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3\]
\[1 \times 24 \times 1.10 + 0.6 \times 1.00 \times \frac{1}{2} = 20.40 \text{ m}^3\]

Total = 46.80 m$^3$

@ Rs. 1045/m$^3$ …………………... = Rs. 48906.00

TOTAL: = Rs. 50965.20

Say = Rs. 50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.11
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri. Le K. Bani
Location : Umniangiong

1/1(a) Earth work to proper level and grade including light dressing

……………………..soils up to 3meters lead all lift.
(a) Very hard shale.

\[
1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3
\]

@ Rs.78/m$^3$ ………………………….. = Rs. 2059.20/-

2/4.1 Providing regular stone masonry in retaining walls breast walls……………………………..apart staggered complete.
(a) With new stone

\[
\begin{align*}
1 \times 24 \times 1.10 \times 0.1 & = 26.40 \text{ m}^3 \\
\frac{1 \times 24 \times 1.10 + 0.6 \times 1.00}{2} & = 20.40 \text{ m}^3 \\
\text{Total} & = 46.80 \text{ m}^3
\end{align*}
\]

@ Rs.1045/m$^3$ ………………………….. =Rs.48906.00 /-

TOTAL: = Rs.50965.20

Say =Rs. 50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.12
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Betina K. Maw
Location : Wahria

1/1(a) Earth work to proper level and grade including light dressing
……………….soils up to 3meters lead all lift.
(a) Very hard shale.

\[
1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3
\]

\[
@ \text{Rs.78/m}^3 \text{………….} = \text{Rs. 2059.20/-}
\]

2/4.1 Providing regular stone masonry in retaining walls breast
walls………………………………apart staggered complete.
(a) With new stone

\[
1 \times 24 \times 1.10 \times 0.1 = 26.40 \text{ m}^3
\]

\[
1 \times 24 \times 1.10 + 0.6 \times 1.00 = 20.40 \text{ m}^3
\]

\[
\frac{2}{\text{Total}} = 46.80 \text{ m}^3
\]

\[
@ \text{Rs.1045/m}^3 \text{…………….} = \text{Rs.48906.00 /-}
\]

TOTAL: = Rs.50965.20

Say = Rs. 50965.00

Rupees (Fifty Thousand Nine Hundred and Sixty Five) Only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.13
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Khriah L. Marshillong
Location : Umniangiong

1/1(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.

R/Wall Trenches:
\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]
@ Rs.177.00/m³  ……………………  Rs.3964.80

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed

R/Wall:
\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]
\[ 1 \times 35 \times 0.40 + 0.80 \times 1.50 = 31.50 \text{ m}^3 \]
\[ \frac{2 \times 31.50}{2} = 31.50 \text{ m}^3 \]
@Rs.1045.00/m³  ……………………  Rs.56325.50

TOTAL  =  Rs.60290.30

Say  =  Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.14 UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiary : Shri Pring Langrin
Location : Mawthawjinong

1/1(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.

R/Wall Trenches:
\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]
\[ \text{@ Rs.177.00/m}^3 \] .......................... Rs.3964.80

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section. providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed

R/Wall:
\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]
\[ 1 \times 35 \times 0.40 + 0.80 \times 1.50 \times \frac{2}{2} = 31.50 \text{ m}^3 \]
\[ = 53.90 \text{ m}^3 \]
\[ \text{@Rs.1045.00/m}^3 \] .......................... Rs.56325.50

\[ \text{TOTAL} = \text{Rs.60290.30} \]
\[ \text{Say} = \text{Rs.60290.00} \]

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.15
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Phestar K. Dewsaw
Location : Lawsiej

1/1(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.

R/Wall Trenches:
\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]

@ Rs.177.00/m\(^3\) ..........................  Rs.3964.80

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed

R/Wall:
\[ \frac{1 \times 35 \times 0.80 \times 0.80}{2} = 22.40 \text{ m}^3 \]
\[ 1 \times 35 \times 0.40 + 0.80 \times 1.50 = 31.50 \text{ m}^3 \]

\[ = 53.90 \text{ m}^3 \]

@Rs.1045.00/m\(^3\) ..........................  Rs.56325.50

\[ \text{TOTAL } = \text{ Rs.60290.30} \]

Say  =  \text{ Rs.60290.00}

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.16
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Mitiil Thyrmang
Location : Snad Untympuin

1/1(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.

R/Wall Trenches:
1 x 35 x 0.80 x 0.80 = 22.40 m³
@ Rs.177.00/m³ ...................... Rs.3964.80

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed

R/Wall:
1 x 35 x 0.80 x 0.80 = 22.40 m³
1 x 35 x 0.40 + 0.80 x 1.50 = 31.50 m³
\[
\frac{2}{2} = 53.90 m^3
\]
@Rs.1045.00/m³ ...................... Rs.56325.50

\[
\text{TOTAL} = \text{Rs.60290.30}
\]

\[
\text{Say} = \text{Rs.60290.00}
\]

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.17 UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiary: Smti. Arian K. Bani
Location: Sdad Wah Seinduli

1/1(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.

R/Wall Trenches:

1 x 35 x 0.80 x 0.80 = 22.40 m³

@ Rs.177.00/m³ ................. Rs.3964.80

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section. providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed

R/Wall:

1 x 35 x 0.80 x 0.80 = 22.40 m³

1 x 35 x 0.40 + 0.80 x 1.50

= 31.50 m³

2

= 53.90 m³

@Rs.1045.00/m³ ................. Rs.56325.50

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.18
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Boklin Sangriang
Location : Mawphanrang

1/1(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.

R/Wall Trenches:
1 x 35 x 0.80 x 0.80 = 22.40 m³
@ Rs.177.00/m³ ............................ Rs.3964.80

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed

R/Wall:
1 x 35 x 0.80 x 0.80 = 22.40 m³
1 x 35 x 0.40 + 0.80 x 1.50 = 31.50 m³
\[
\frac{2}{2} = 53.90 \text{ m}^3
\]
@Rs.1045.00/m³ ............................ Rs.56325.50

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.19
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Smti. Krian L. Nonglait
Location: Mawphanrang

1/1(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.

R/Wall Trenches:

\[
\begin{align*}
1 \times 35 \times 0.80 \times 0.80 &= 22.40 \text{ m}^3 \\
\times Rs.177.00/\text{m}^3 &\quad \text{………………..} \\
&= Rs.3964.80
\end{align*}
\]

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed

R/Wall:

\[
\begin{align*}
1 \times 35 \times 0.80 \times 0.80 &= 22.40 \text{ m}^3 \\
1 \times 35 \times 0.40 + 0.80 \times 1.50 &= 31.50 \text{ m}^3 \\
\frac{2}{2} &= 53.90 \text{ m}^3 \\
\times Rs.1045.00/\text{m}^3 &\quad \text{………………..} \\
&= Rs.56325.50
\end{align*}
\]

TOTAL \quad = \quad Rs.60290.30

Say \quad = \quad Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.20
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Pherik Lyngkhoi
Location : Mawthung

1/1(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.

R/Wall Trenches:

\[
1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3
\]

@ Rs.177.00/m \text{^3} ………………… Rs.3964.80

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed

R/Wall:

\[
1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3
\]
\[
1 \times 35 \times 0.40 + 0.80 \times 1.50 = 31.50 \text{ m}^3
\]
\[
\frac{2}{2} = 53.90 \text{ m}^3
\]

@Rs.1045.00/m \text{^3} ………………… Rs.56325.50

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.21
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Khereli Sangriang
Location : Shnad Wah Seinduli

1/1(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.

R/Wall Trenches:
\[1 \times 35 \times 0.80 \times 0.80 = 22.40 \, \text{m}^3\]

@ Rs.177.00/m\(^3\) \…………………… Rs.3964.80

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section, providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed.

R/Wall:
\[1 \times 35 \times 0.80 \times 0.80 = 22.40 \, \text{m}^3\]
\[1 \times 35 \times 0.40 + 0.80 \times 1.50 = 31.50 \, \text{m}^3\]
\[\frac{2}{2} = 53.90 \, \text{m}^3\]

@Rs.1045.00/m\(^3\) \…………………… Rs.56325.50

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.22
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Shri Donbosco Thongni
Location: Shnad Seinduli

1/1(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.

R/Wall Trenches:

\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]

@ Rs.177.00/m\(^3\) \(\ldots\ldots\ldots\ldots\ldots\) Rs.3964.80

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section. providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed

R/Wall:

\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]
\[ 1 \times 35 \times 0.40 + 0.80 \times 1.50 \]
\[ \frac{2}{2} = 31.50 \text{ m}^3 \]
\[ = 53.90 \text{ m}^3 \]

@Rs.1045.00/m\(^3\) \(\ldots\ldots\ldots\ldots\ldots\) Rs.56325.50

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.23 UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011

Name of Beneficiary : Smti. Butina Dkhar
Location : Lawdiedoh

1/1(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.

R/Wall Trenches:
\[
1 \times 35 \times 0.80 \times 0.80 = 22.40 \, \text{m}^3
\]
\[
@ \text{Rs.177.00/m}^3 \quad \text{………………} \quad \text{Rs.3964.80}
\]

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section, providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed

R/Wall:
\[
1 \times 35 \times 0.80 \times 0.80 = 22.40 \, \text{m}^3
\]
\[
1 \times 35 \times 0.40 + 0.80 \times 1.50 = 31.50 \, \text{m}^3
\]
\[
\frac{31.50}{2} = 53.90 \, \text{m}^3
\]
\[
@ \text{Rs.1045.00/m}^3 \quad \text{………………} \quad \text{Rs.56325.50}
\]

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.24
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Jrosim Nongphud
Location : Mawphanrang

1/1(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.

R/Wall Trenches:
\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]
\[ @ \text{Rs.177.00/m}^3 \text{ .........................} \text{Rs.3964.80} \]

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed

R/Wall:
\[ 1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3 \]
\[ 1 \times 35 \times 0.40 + 0.80 \times 1.50 \]
\[ = 31.50 \text{ m}^3 \]
\[ = 53.90 \text{ m}^3 \]
\[ @\text{Rs.1045.00/m}^3 \text{ .........................} \text{Rs.56325.50} \]

\[ \text{TOTAL} = \text{Rs.60290.30} \]
\[ \text{Say} = \text{Rs.60290.00} \]

(Rupees Sixty Thousand Two Hundred and Ninety) only
Name of Beneficiary: Smti. Phoris Snaitang
Location: Twahidedoh

1/1(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.

R/Wall Trenches:
1 x 35 x 0.80 x 0.80 = 22.40 m³
@ Rs.177.00/m³ …………………… Rs.3964.80

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section. providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed

R/Wall:
1 x 35 x 0.80 x 0.80 = 22.40 m³
1 x 35 x 0.40 + 0.80 x 1.50 = 31.50 m³
\[
\frac{2}{2} = 53.90 \text{ m}³
\]

@ Rs.1045.00/m³ …………………… Rs.56325.50

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.26
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Phuldalin Nongphud
Location : Mawphanrang

1/1(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.

R/Wall Trenches:
1 x 35 x 0.80 x 0.80 = 22.40 m³
@ Rs.177.00/m³ ……………… Rs.3964.80

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed
R/Wall:
\[
\begin{align*}
1 \times 35 \times 0.80 \times 0.80 &= 22.40 \text{ m}^3 \\
1 \times 35 \times 0.40 + 0.80 \times 1.50 &\div 2 = 31.50 \text{ m}^3 \\
&= 53.90 \text{ m}^3
\end{align*}
\]
@Rs.1045.00/m³ ………………… Rs.56325.50

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
### ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.27
**UNDER UMTYRWA-UMIONG IWMP-IX**
**As Per PWD Schedule of Rate for Road & Bridges National Highway Circle for the Year 2010 – 2011**

**Name of Beneficiary**: Smti. Drian Nongphud  
**Location**: Mawphanrang

1/1(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.

**R/Wall Trenches:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume</th>
<th>Rate/m³</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 35 x 0.80 x 0.80</td>
<td>= 22.40 m³</td>
<td>@ Rs.177.00/m³</td>
<td>Rs.3964.80</td>
</tr>
</tbody>
</table>

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section. providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed

**R/Wall:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Volume</th>
<th>Rate/m³</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 35 x 0.80 x 0.80</td>
<td>= 22.40 m³</td>
<td>@ Rs.105.00/m³</td>
<td>Rs.56325.50</td>
</tr>
<tr>
<td>1 x 35 x 0.40 + 0.80 x 1.50</td>
<td>= 31.50 m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>= 53.90 m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** = Rs.60290.30

**Say** = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.28
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Twelty L. Nonglait
Location : Mawthawjinong

1/1(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.

R/Wall Trenches:
\[ \begin{align*}
1 \times 35 \times 0.80 \times 0.80 &= 22.40 \text{ m}^3 \\
@ \text{Rs.177.00/m}^3 & \text{......................... Rs.3964.80}
\end{align*} \]

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed

R/Wall:
\[ \begin{align*}
1 \times 35 \times 0.80 \times 0.80 &= 22.40 \text{ m}^3 \\
1 \times 35 \times 0.40 + 0.80 \times 1.50 &= 31.50 \text{ m}^3 \\
\frac{2}{2} &= 53.90 \text{ m}^3 \\
@\text{Rs.1045.00/m}^3 & \text{......................... Rs.56325.50}
\end{align*} \]

\[ \text{TOTAL} = \text{Rs.60290.30} \]

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.29
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Brian L. Nonglait
Location : Phodtham

1/1(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.

R/Wall Trenches:
1 x 35 x 0.80 x 0.80 = 22.40 m³
@ Rs.177.00/m³ …………………… Rs.3964.80

2/4.1 Providing regular stone masonry with hammer
dressed or blunt chisel dressed stones of heavy section.
providing deep holes at 1.2 to 1.5 meters apart staggered
complete as directed

R/Wall:
1 x 35 x 0.80 x 0.80 = 22.40 m³
1 x 35 x 0.40 + 0.80 x 1.50
2
= 31.50 m³
= 53.90 m³

@ Rs.1045.00/m³ …………………… Rs.56325.50

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.30
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Mom L.Nonglait
Location : Mawthung

1/1(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.

R/Wall Trenches:
\[
1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3
\]
\[
\times \text{Rs. } 177.00/\text{m}^3 = \text{Rs. } 3964.80
\]

2/4.1 Providing regular stone masonry with hammer dressed or blunt chisel dressed stones of heavy section. providing deep holes at 1.2 to 1.5 meters apart staggered complete as directed

R/Wall:
\[
1 \times 35 \times 0.80 \times 0.80 = 22.40 \text{ m}^3
\]
\[
1 \times 35 \times 0.40 + 0.80 \times 1.50 = 31.50 \text{ m}^3
\]
\[
\frac{31.50 + 22.40}{2} = 53.90 \text{ m}^3
\]
\[
\times \text{Rs. } 1045.00/\text{m}^3 = \text{Rs. } 56325.50
\]

TOTAL = Rs.60290.30

Say = Rs.60290.00

(Rupees Sixty Thousand Two Hundred and Ninety) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.31
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Skip Wanniang
Location : Porkenbah

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

50x.80x.50=20 $\text{m}^3$

@ Rs.78/-............................. Rs. 1560.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x25cm x 30cm long) with proper key stones not less than 25cm x 200 metres and filling in trenches.

$\frac{50x.80x.50}{50.00x.80+0.50x1.5} = 20 \text{ m}^3$

\[ \frac{50.00x.80+0.50x1.5}{2} = \frac{68.75}{2} \]

@ Rs.1045/- ..................... Rs. 71843.75

Total = Rs. 73403.75
Say = Rs. 73403.00

Rupees (Seventy Three Thousand Four Hundred and Three) only.
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.32
UNDER UMTYRW-A-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Emeren Sangriang
Location : Porkenbah

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

50x.80x.50=20 m³

@ Rs.78/-..........................        Rs. 1560.00

2/21 Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cm x25cm x 30cm long) with proper key stones not less than 25cm x 200 metres and filling in trenches.

50x.80x.50 = 20 m³
50.00x.80+0.50x1.5
2

= 48.75 m³

@ Rs.1045/- .................        Rs. 71843.75

Total = Rs. 73403.75

Say = Rs. 73403.00

Rupees (Seventy Three Thousand Four Hundred and Three) only.
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.33
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Plin L. Nonglait
Location : Shnat Wah Seindali.

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

50x.80x.50=20 m³

@ Rs.78/-............................. Rs. 1560.00

2/21  Providing regular dry stone masonry walls with hammer dressed or
blunt chisel dressed stones of heavy section (size not less than 25cm
x25cm x 30cm long) with proper key stones not less than 25cm x
200 metres and filling in trenches.

\[
\begin{align*}
50x.80x.50 & = 20 \text{ m}^3 \\
50.00x.80+0.50x1.5 & = 48.75 \\
\frac{2}{2} & = 68.75 \text{ m}^3
\end{align*}
\]

@ Rs.1045/- ..................... Rs. 71843.75

Total = Rs. 73403.75

Say = Rs. 73403.00

Rupees (Seventy Three Thousand Four Hundred and Three) only.
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.34
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
to the Year 2010 – 2011

Name of Beneficiary : Smti. Tonning Snaitang
Location : Umniangiong

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

50x.80x.50=20 m³

@ Rs.78/-............................ Rs. 1560.00

2/21 Providing regular dry stone masonry walls with hammer dressed or
blunt chisel dressed stones of heavy section (size not less than 25cm
x25cm x 30cm long) with proper key stones not less than 25cm x
200 metres and filling in trenches.

50x.80x.50 = 20 m³
50.00x,80+0.50x1.5
2

= 48.75

2

= 68.75 m³

@ Rs.1045/- ...................... Rs. 71843.75

Total = Rs. 73403.75
Say = Rs. 73403.00

Rupees (Seventy Three Thousand Four Hundred and Three) only.
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.35
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Smti. Sentiful K. Syiemlieh
Location: Shnad Wah Seinduli

1/3(a) Earth work to proper level and grade including light
dressing .............soils up to 3 meters lead all lift.
(f) Very hard shale.

\[1 \times 43 \times 1.10 \times 0.10 = 47.30 \text{m}^3\]

\[\text{@ Rs.} 78/\text{m}^3 \quad \text{...............} \quad \text{= Rs. 3689.40/-}\]

2/4.1 Providing regular stone masonry in retaining walls breast walls
and……………………..apart staggered complete.

(a) With new stone

\[1 \times 43 \times 1.10 \times 0.10 = 47.30 \text{m}^3\]
\[1 \times 43 \times \frac{1.10 + 0.6 \times 1.00}{2} = 36.55 \text{m}^3\]

Total = 83.85 m³

\[\text{@ Rs.} 1045/\text{m}^3 \quad \text{...............} \quad \text{=Rs.87623.25/-}\]

\[\text{TOTAL: } \text{=Rs.91312.65}\]

Say \[\text{=Rs.91312.00}\]

Rupees (Ninety One Thousand Three Hundred and Twelve) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.3
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Smti. Ebanela Nongphud
Location: Pungrit

1/3(a) Earth work to proper level and grade including light
dressing ........ soils up to 3 meters lead all lift.
(f) Very hard shale.
\[1 \times 43 \times 1.10 \times 0.10 = 47.30 \text{m}^3\]
@ Rs.78/m³ ...................... = Rs. 3689.40/-

2/4.1 Providing regular stone masonry in retaining walls breast walls
and ............... apart staggered complete.
(a) With new stone
\[\frac{1 \times 43 \times 1.10 \times 0.10}{2} = 47.30 \text{ m}^3\]
\[1 \times 43 \times 1.10 + 0.6 \times 1.00 = 36.55 \text{ m}^3\]
Total = 83.85 m³
@ Rs.1045/m³ ...................... = Rs.87623.25/-

TOTAL: = Rs.91312.65
Say = Rs.91312.00

Rupees (Ninety One Thousand Three Hundred and Twelve) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.37
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary: Shri Angelus Thongni
Location: Seinduli-I

1/3(a) Earth work to proper level and grade including light
dressing ...............soils up to 3meters lead all lift.
(f) Very hard shale.
1 x 43 x 1.10 x 0.10 = 47.30m³

@ Rs.78/m³ ...................... = Rs. 3689.40/-

2/4.1 Providing regular stone masonry in retaining walls breast walls
and..............................apart staggered complete.
(a) With new stone

1 x 43 x 1.10 x 0.10 = 47.30 m³
1 x 43 x 1.10 + 0.6 x 1.00 = 36.55 m³

\[
\text{Total} = \frac{47.30 + 36.55}{2} = 83.85 \text{ m}^3
\]

@ Rs.1045/m³ ...................... =Rs.87623.25/-

TOTAL: =Rs.91312.65

Say =Rs.91312.00

Rupees (Ninety One Thousand Three Hundred and Twelve) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.38
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Selbina Dkhar
Location : Ktiehdorji

1/3(a) Earth work to proper level and grade including light dressing ..........soils up to 3meters lead all lift.
(f) Very hard shale.
1 x 43 x 1.10 x 0.10 = 47.30m³

@ Rs.78/m³ .................... = Rs. 3689.40/-

2/4.1 Providing regular stone masonry in retaining walls breast walls
and..................apart staggered complete.
(a) With new stone
1 x 43 x 1.10 x 0.10 = 47.30 m³
1 x 43 x 1.10 + 0.6 x 1.00 = 36.55 m³
\[
\text{Total} = \frac{47.30 + 36.55}{2} = 83.85 \text{ m}^3
\]

@ Rs.1045/m³..................... =Rs.87623.25/-

\[
\text{TOTAL:} \quad =Rs.91312.65
\]

Say \( =Rs.91312.00 \)

Rupees (Ninety One Thousand Three Hundred and Twelve) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.39
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Smti. Kolina Dkhar
Location : Porkynbang

1/3(a) Earth work to proper level and grade including light
dressing ............soils up to 3meters lead all lift.
(f) Very hard shale.
\[1 \times 43 \times 1.10 \times 0.10 = 47.30 m^3\]
\[@ \text{Rs.78/m}^3 \text{..................} = \text{Rs. 3689.40/-}\]

2/4.1 Providing regular stone masonry in retaining walls breast walls
and...............................apart staggered complete.
(a) With new stone
\[1 \times 43 \times 1.10 \times 0.10 = 47.30 m^3\]
\[1 \times 43 \times \frac{1.10 + 0.6 \times 1.00}{2} = 36.55 m^3\]
Total \[= 83.85 m^3\]
\[@ \text{Rs.1045/m}^3 \text{..................} = \text{Rs.87623.25/-}\]
TOTAL: \[= \text{Rs.91312.65}\]
Say \[= \text{Rs.91312.00}\]

Rupees (Ninety One Thousand Three Hundred and Twelve) only
ESTIMATE FOR CONSTRUCTION OF RETAINING WALL NO.40
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiary : Shri Lasting Iawphniaw
Location : Porkynbang

1/3(a) Earth work to proper level and grade including light
dressing .................soils up to 3meters lead all lift.
(f) Very hard shale.
1 x 43 x 1.10 x 0.10 = 47.30m³

@ Rs.78/m³ ................. = Rs. 3689.40/-

2/4.1 Providing regular stone masonry in retaining walls breast walls
and...............apart staggered complete.
(a) With new stone
1 x 43 x 1.10 x 0.10 = 47.30 m³
1 x 43 x 1.10 + 0.6 x 1.00 = 36.55 m³

\[
\text{Total} = \frac{47.30 + 36.55}{2} = 83.85 \text{ m}^3
\]

@ Rs.1045/m³ ................. =Rs.87623.25/-

TOTAL: =Rs.91312.65

Say =Rs.91312.00

Rupees (Ninety One Thousand Three Hundred and Twelve) only
### ABSTRACT OF COST FOR DUG OUT POND
**UNDER UMTYRWA UMIONG IWMP-IX**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>ITEMS</th>
<th>AMOUNT IN (Rs.)</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dug out Pond No. - 1</td>
<td>98139.00</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Dug out Pond No. - 2</td>
<td>98139.00</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>196278.00</strong></td>
<td></td>
</tr>
</tbody>
</table>
ESTIMATE FOR CONSTRUCTION OF DUG OUT POND NO.1
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Smti. Phidolis K. Syiemlieh
Location : Sdad Seindili

I/1(a) Earth work in excavation to the proper graded including light
dressing, providing cambering completed as directed.
(a) Soft or laminated rock or medium shale
30.00 x (20.00 + 1.50 + 1.80) x 1.80 = 1258.20 m³
@78.00/m³ = Rs. 98139.60

TOTAL: = Rs. 98139.00

(Rupees Ninety Eight Thousand One Hundred and Thirty Nine) Only
ESTIMATE FOR CONSTRUCTION OF DUG OUT POND NO.2
UNDER UMTYRWA-UMIONG IWMP-IX
As Per PWD Schedule of Rate for Road & Bridges National Highway Circle
for the Year 2010 – 2011

Name of Beneficiaries: Smti. Shelbis L. Marshillong
Location: Miangiong

1/1(a) Earth work in excavation to the proper graded including light dressing, providing cambering completed as directed.
(b) Soft or laminated rock or medium shale
30.00 x (20.00 + 1.50 + 1.80) x 1.80 = 1258.20 m³
@78.00/m³ = Rs. 98139.60

TOTAL: = Rs. 98139.00

(Rupees Ninety Eight Thousand One Hundred and Thirty Nine) Only
ANNEXURE IV

MOA, SUB COMMITTEE DETAILS ETC.
No Objection Certificate.

I am hereby to certify that the proposed project of the community is in accordance with the conservation requirements and has been cleared by the Conservation Department. The project has been approved and is under implementation. The project is expected to have a positive impact on the local community.

The project is under the supervision of the Department of...
KA DORBAR SHNONE MAWSYRPAT
NONGLANG SIRDARSHIP, WEST KHASI HILLS DISTRICT
B.P.O. Seinduli, P.O. – Nongstoiñ
Meghalaya – 793119

Ref: ___________ Date: ___________

No. objection certificate

Da kane nga pyngshisha ka ka office Soil & Water Conservation ka thum la ban
Pyntrei bad waniah ia ka scheme washra
um iong watershed ban Pyntrei ia ka rep
ka riang la ka Shnone Mawsyrapat la ka
liang ying umrep, ki nala, ki dam, ki
Pung pyndang um bad ki wei kiwci ki
kam la Pyntrei: paik bai. Te namarkata
ngam don jing uzor e ei hakane ka jing
Pyntrei ia ki te ki kam jong katei ka
water Shed.

[Signature]

Border Shnone
Mawsyrapat
Nonglang Sirdarship
Wasteland Under Umtyrwa Umiong

Umtyrwa Umiong Stream