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OFFICE OF THE ENGINEER-IN-CHIEF  
WATER RESOURCES DEPARTMENT  
JAL SANSADAN BHAWAN, TULSINAGAR, BHOPAL - 3

Bhopal, Dated January 2014

To,

ALL CHIEF ENGINEERS  
M.P. WATER RESOURCES DEPARTMENT,

**Sub : MICRO-IRRIGATION SYSTEM.**

The Government of India as a policy matter, is giving top priority to MICRO-IRRIGATION SYSTEM like Sprinkler, Drip etc. In new approvals it is compulsory to provide Micro Irrigation system for 10% of the CCA.

Water Resources Department normally provides irrigation by Gravity flow. This method is simple and convenient but consumes more water. By gravity flow the total consumption of water for unlined canal is about 1 MCM for 170 ha. For lined canal this is about 200 ha. In case of Micro-Irrigation like Sprinkler / Drip this may be increased to atleast 300 ha / MCM. As such the command area may be increased by 50%.

Being a new subject for Water Resources Department, a Rate Analysis has been prepared in consultation with the agencies working in this field. The analysis is enclosed. To avoid frequent updation due to increase of cost, this has been further converted into Ruling Rates factor. Therefore, the estimate for this component may be taken as 115 R. per hectare for MICRO-IRRIGATION by SPRINKLER SYSTEM.

After completion of some works, this may be further revised as per the feedback received from field Engineers.

Encl. : Rate Analysis and Drawing of  
Jackwell.

*sd*  
(M.G. CHOUBEY)  
ENGINEER-IN-CHIEF  
WATER RESOURCES DEPTT.,  
BHOPAL

धरित निराकरण हेतु  
इस कार्यालय का संदर्भ  
क्रमांक लिखें

Endt.No. 02/व.कि.स/प्र.अ/2014

Bhopal, Date : 11 January 2014

Copy to :

1. The Commissioner, Command Area Development Authority, Bhopal
2. Project Director, World Bank Projects, W.R.Deptt., Bhopal
3. Web Manager, Water Resources Department, World Bank Projects Building, Ring Road No. 3, Bhopal

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1/11/14

  
(M.G. CHOUBEY)

ENGINEER-IN-CHIEF  
WATER RESOURCES DEPTT.,  
BHOPAL

**WATER RESOURCES DEPARTMENT**  
**ANALYSIS OF RATES FOR SPRINKLER SYSTEM**  
**COST OF MECHANICAL WORKS FOR EACH UNIT TO SERVE 5 HA**

(Rate as on 01.01.2014)

S.No.	Item	Quantity	Rate in Rs.	Unit	Amount in Rs.
1	Pump (5 HP openwell Monoset)	1	17500	One	17500/-
2	Starter	1	1600	One	1600/-
3	NRV	1	3500	One	3500/-
4	Fitting like cables etc. (L.S.)	1	1500	One	1500/-
5	Pipe HDPE 90 mm Dia	250 m	180	Metre	45000/-
6	Outlet, i/c Riser assembly etc.	4 No.	1500	each	6000/-
7	Installation cost and taxes				22500/-
	<b>Total</b>				<b>97600/-</b>

Says Rs. 98000.00

Cost per hectare -  $98000 / 5 = 19,600/-$

As per Ruling Rate =  $19600 / 200 = 98 R$

Say = 100 R

Add for Civil works as per standard design of the department

= 15 R

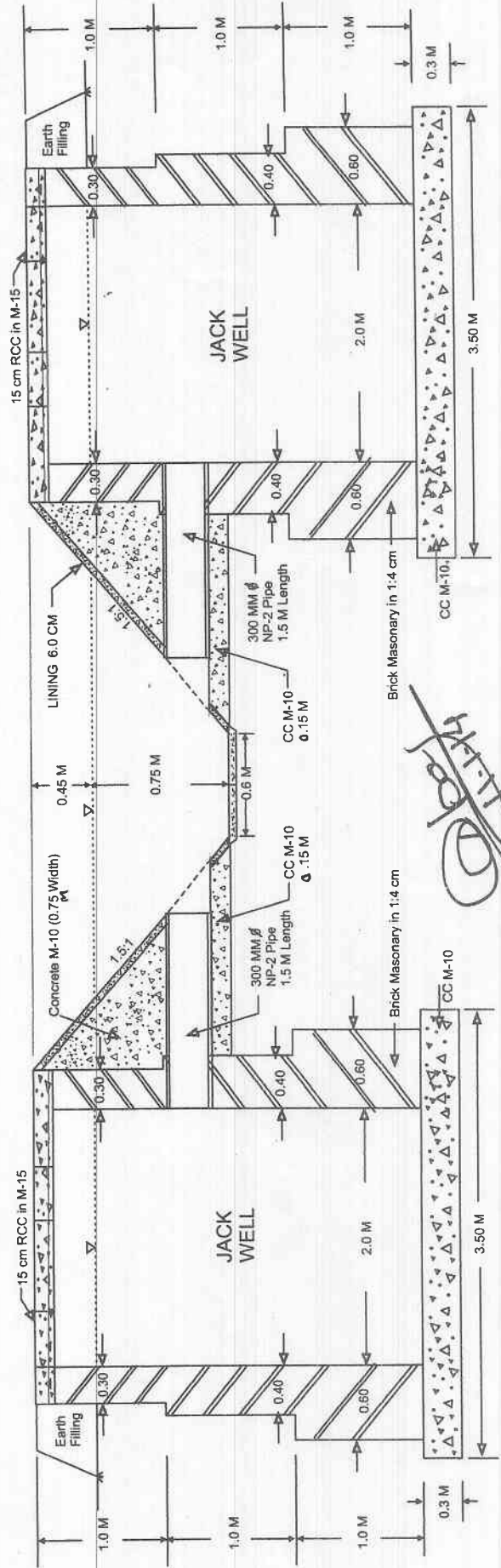
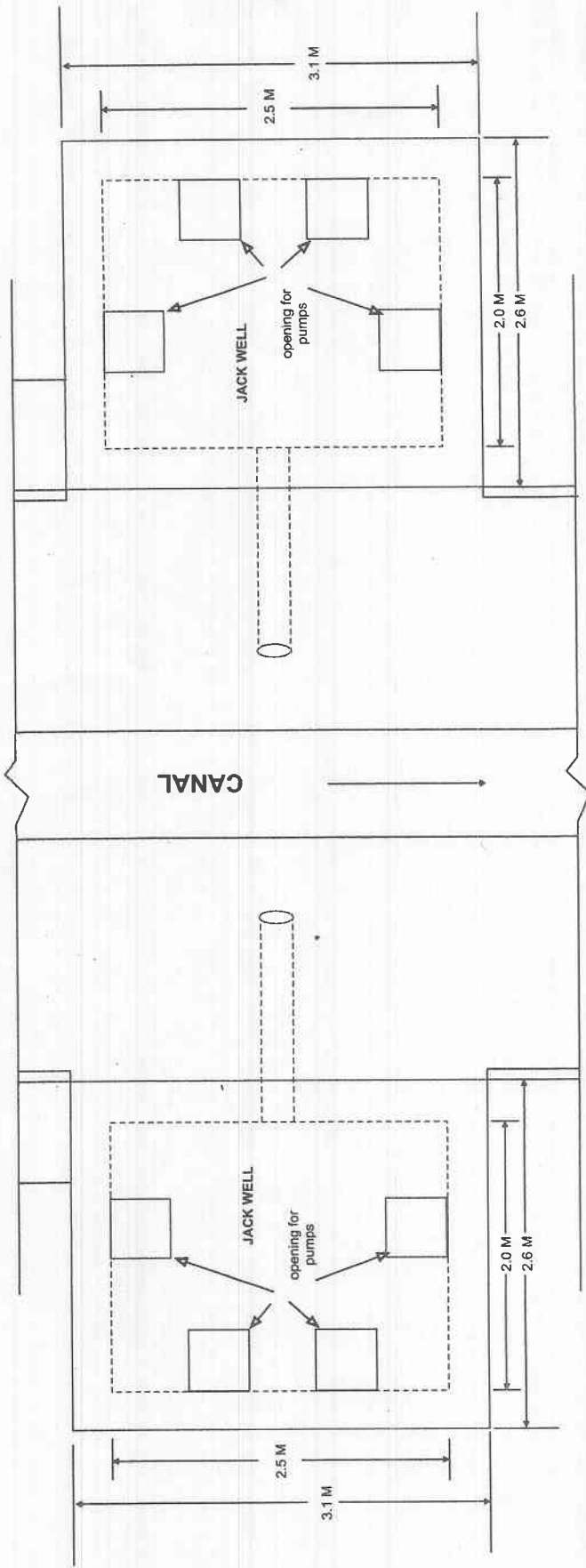
115 R

  
(M.G. Choubey)

Engineer-in-Chief,

Water Resources Deptt., Bhopal

# JACK WELL ARRANGEMENTS FOR SPRINKLER SYSTEM



*[Handwritten Signature]*  
 Engineer-in-Chief  
 Water Resources Deptt., Bhopal