GOVERNMENT OF TAMILNADU

PUBLIC WORKS DEPARTMENT

WATER RESOURCES ORGANISATION

TN IAM WARM PROJECT

KALINGALAR SUB BASIN

ADDITIONAL PROPOSAL DPR

Estimate Amount: Rs.90.16 Lakhs

MADURAI REGION

Additional proposals for providing Lining of Head Irrigation Channel and Flow Measuring Device in Kalingalar sub basin (Phase II) under IAMWARM Project

The lining of Head Irrigation channel and installation of measuring device has been proposed for Phase I and II sub basins by utilizing the Project Savings as discussed with the World Bank, during the implementation support mission from Sept 12-20th 2011.

Accordingly in the Kalingalar Sub basin, the following works have been proposed.

i) Lining of Head Irrigation channel below the tanks sluice using C.C. M 15 as per sketch enclosed
ii) Installing flow measuring device in the Head Irrigation channel as per sketch
iii) L.S provision of 2.8 % for Provision of labour welfare @ 0.30 % and provision for contingencies, advertisement charges , photographic charges @ 2.5%

The package details are appended separately and works are proposed to be taken up under national shopping procedure

The total cost for the DPR works out to Rs. 90.16 lakhs.

Executive Engineer, PWD/WRD
Upper Vaippar Basin Division
Rajapalayam

Superintending Engineer, PWD/WRD
Vaippar Basin Circle
Virudhunagar

Chief Engineer, PWD/WRD
Madurai Region, Madurai

FORMAT- I

Name of Region : Madurai

Name of Circle : Vaippar Basin Circle,Virudhunagar.

Name of Division : **Upper Vaippar Basin Division, Rajapalayam.**

Name of Sub Basin : Kalingalar Sub basin

Total Number of Tanks taken up under IAMWARM : 11

NO OF TANKS, SLUICES IN EACH PACKAGE **Rs. in Lakhs**

Sl No	Package No	Name of Tank	No of Sluice	Flow Measuring Device		Lining of Head Irrigation Field channel			Total Amount	L.S.Provision @2.80%	Grand Total	Remarks
				No	Amount	Type of soil BC / OS*	Length in Metre	Amount				
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Package No.1	Manaltheri Tank	1	3	0.36	BC	50	2.50	2.86			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
2		Vasudevanallur big tank	3	9	1.08	BC	150	7.50	8.58			
		Total	**4**	**12**	**1.44**		**200**	**10**	**11.44**	**0.30**	**11.74**	
3	Package-2	Rappai Tank	3	9	1.08	BC	150	7.50	8.58			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	**3**	**9**	**1.08**		**150**	**7.5**	**8.58**	**0.20**	**8.78**	
4	Package-3	Pudukulam Tank	2	6	0.72	BC	100	5.00	5.72			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
5		Periyaparaikulam Tank	2	6	0.72	BC	100	5.00	5.72			
		Total	**4**	**12**	**1.44**		**200**	**10**	**11.44**	**0.30**	**11.74**	

6	Package-4	Naranaperi Tank	2	6	0.72	BC	100	5.00	5.72			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	**2**	**6**	**0.72**	**BC**	**100**	**5**	**5.72**	**0.20**	**5.92**	
7	Package-5	Kulasekaraperi Tank	3	9	1.08	BC	142	7.10	8.18			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	**3**	**9**	**1.08**	**BC**	**142**	**7.1**	**8.18**	**0.20**	**8.38**	
8	Package-6	Vayalimitta Tank	3	9	1.08	BC	142	7.10	8.18			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	**3**	**9**	**1.08**	**BC**	**142**	**7.1**	**8.18**	**0.20**	**8.38**	
9	Package-7	Gudaloor big tank	2	6	0.72	BC	100	5.00	5.72			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	**2**	**6**	**0.72**	**BC**	**100**	**5**	**5.72**	**0.20**	**5.92**	
10	Package-8	Panaiyur big tank (Sluice no.1,2,3)	3	9	1.08	BC	150	7.50	8.58			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	**3**	**9**	**1.08**	**BC**	**150**	**7.5**	**8.58**	**0.20**	**8.78**	
11	Package-9	Panaiyur big tank (Sluice no.4,5,6)	4	12	1.44	BC	200	10.00	11.44			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	**4**	**12**	**1.44**	**BC**	**200**	**10**	**11.44**	**0.30**	**11.74**	

12	Package-10	Ilangulam Tank	3	9	1.08	BC	150	7.50	8.58			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	**3**	**9**	**1.08**	**BC**	**150**	**7.50**	**8.58**	**0.20**	**8.78**	
GRAND TOTAL			**31.00**	**93.00**	**11.16**		**1534.00**	**76.70**	**87.86**	**2.30**	**90.16**	

Certified that the Tanks included in the originally approved DPR of Kalingalar Sub Basin alone are considered now

Certified that the above works have not been taken up in any other Project

Certified that the field / Irrigation channel drawing type II is adopted in 40 number of tanks having black cotton soil

***** BC- Black Cotton soil
OS - Other Soil

Executive Engineer

Upper Vaippar Basin Division
Rajapalayam

Superintending Engineer

Vaippar Basin
Circle,Virudhunagar.

Chief Engineer
Madurai
Region,Madura
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FORMAT II

Name of Region : Madurai

Name of Circle : Vaippar Basin Circle,Virudhunagar.

Name of Division : **Upper Vaippar Basin Division, Rajapalayam.**

Name of Sub Basin : Kalingalar Sub basin

Total Number of Tanks taken up under IAMWARM : 11

Method of procurement : National shopping

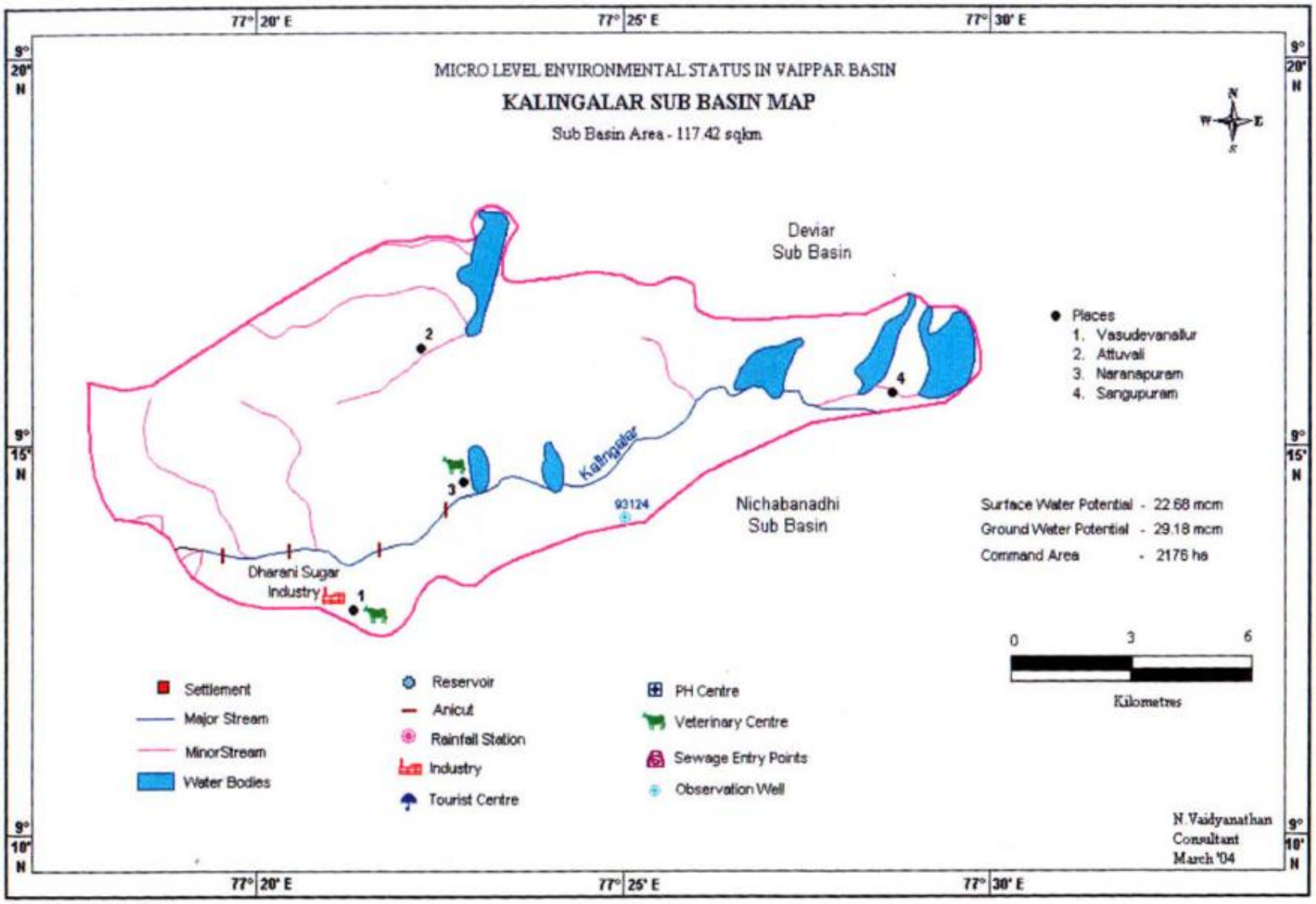
(Note : Procurement plan to be got approved by World Bank separately)

PACKAGEWISE ABSTRACT

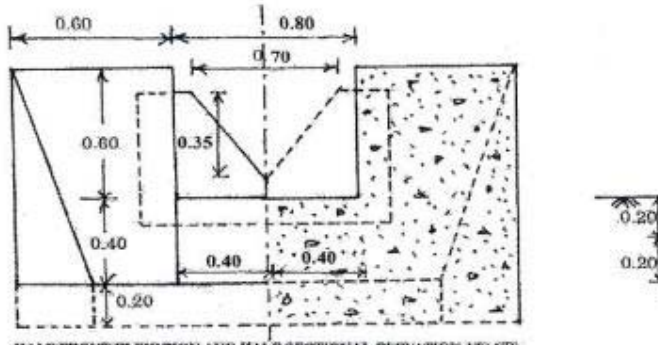
Sl.No	Package No.	Name of Work	No. of Tanks	Total Amount including L.S. (Rs. In Lakhs)	No. of Flow measuring devices	Length of lining of Head Irrigation Channel	Remarks
1	2	3	4	5			6
1	KGR-1/ IAMWARM/ WRD/ WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Manaltheri,Vasudevanallur tanks in Kalingalar sub basin in Sivagiri taluk in Tirunelveli District	2	11.74	12.00	200.00	
2	KGR-2/ IAMWARM/ WRD/ WORKS/ II / 2011-2013	Lining of head Irrigation Channel and providing Flow Measuring devices for Rappai tank in Kalingalar sub basin in Sivagiri taluk in Tirunelveli District	1	8.78	9.00	150.00	

3	KGR-3/ IAMWARM/ WRD/ WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Pudukulam & Periyaparaikulam tanks in Kalingalar sub basin in Sivagiri taluk in Tirunelveli District	2	11.74	12.00	200.00	
4	KGR-4/ IAMWARM/ WRD/ WORKS/ II / 2011-2013	Lining of head Irrigation Channel and providing Flow Measuring devices for Naranaperi tank in Kalingalar sub basin in Sivagiri taluks in Tirunelveli District	1	5.92	6.00	100.00	
5	KGR-5/ IAMWARM/ WRD/ WORKS/ II / 2011-2013	Lining of head Irrigation Channel and providing Flow Measuring devices for Kulasekaraperi tank in Kalingalar sub basin in Sivagiri taluk of Tirunelveli District	1	8.38	9.00	142.00	
6	KGR-6/ IAMWARM/ WRD/ WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Vayalimitta tank in Kalingalar sub basin in Sivagiri taluk of Tirunelveli District	1	8.38	9.00	142.00	
7	KGR-7/ IAMWARM/ WRD/ WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Gudaloor tank in Kalingalar sub basin in Sivagiri taluk of Tirunelveli District	1	5.92	6.00	100.00	
8	KGR-8/ IAMWARM/ WRD/ WORKS/ II / 2011-2013	Lining of head Irrigation Channel and providing Flow Measuring devices for Panaiyur tank (Sluice no.1,2,3) in Kalingalar sub basin in Sankarankoil & Sivagiri taluks in Tirunelveli District	1 (Part)	8.78	9.00	150.00	

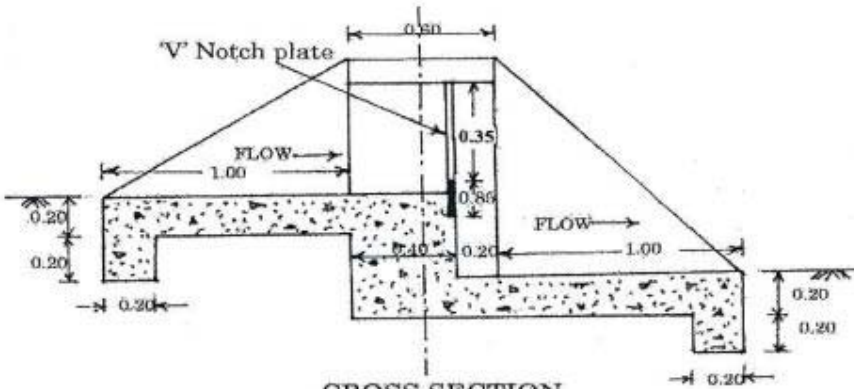
9	KGR-9 / IAMWARM/ WRD/ WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Panaiyur tank (Sluice No.4,5,6,7) in Kalingalar sub basin in Sivagiri taluk in Tirunelveli District	1 (Part)	11.74	12.00	200.00	
10	KGR-10/ IAMWARM/ WRD/ WORKS/ II / 2011-2013	Lining of head Irrigation Channel and providing Flow Measuring devices for Ilangulam tank in Kalingalar sub basin in Sivagiri taluk in Tirunelveli District	1	8.78	9.00	150.00	
		TOTAL	**11**	**90.16**	**93.00**	**1534.0**	



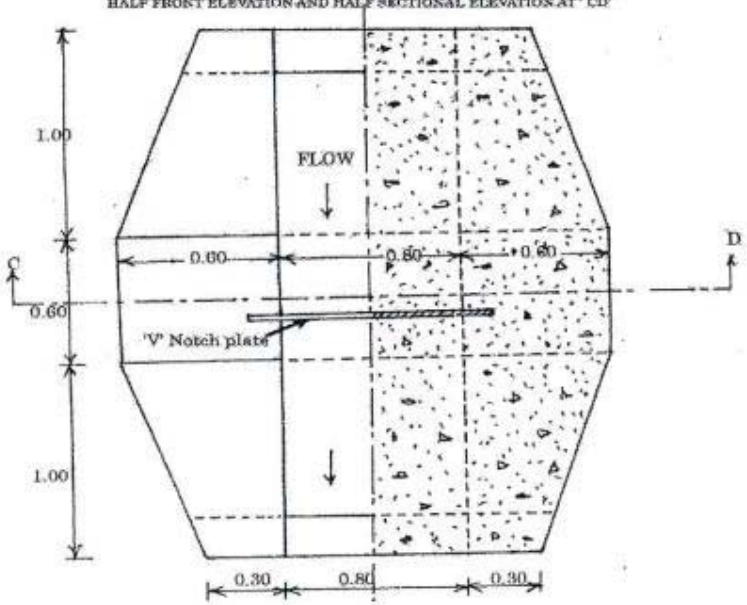
Source: Institute of Water Studies



HALF FRONT ELEVATION AND HALF SECTIONAL ELEVATION AT 'CD'



CROSS SECTION



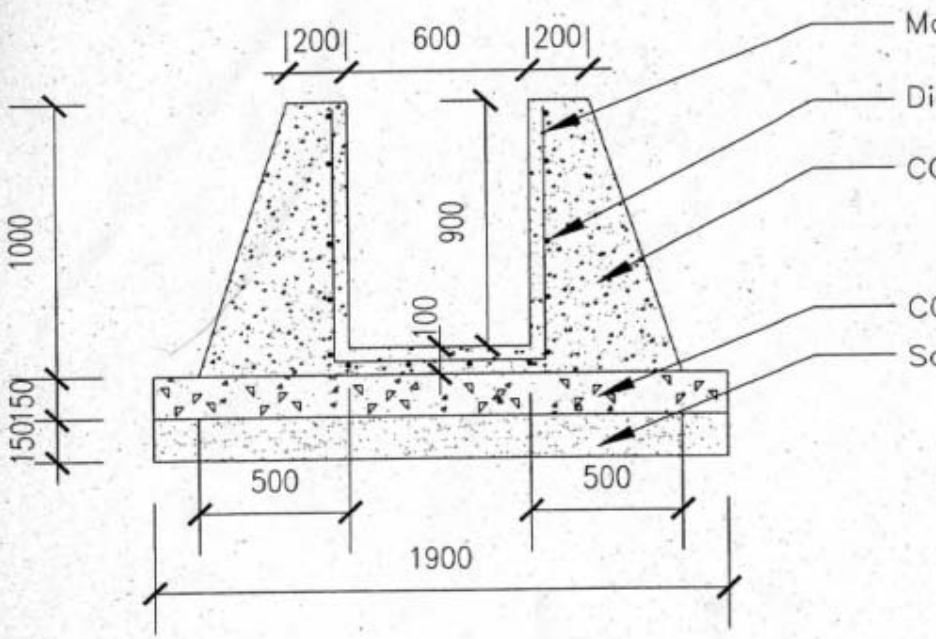
HALF PLAN AT TOP AND HALF PLAN AT BOTTOM

'V' -NOTCH - SALIENT DETAILS (For 1 to 4 C/s

Discharge		Head Over Crest Cm	'V' Notch size Cm	Overall size Cm
Cusec	Litre / sec			
1	28.3	20.5	25 x 50	50 x 65
2	56.6	27	30 x 60	50 x 75
3	85	32	35 x 70	55 x 90
4	113.27	36	42 x 84	60 x 100

IAMWARM PROJECT - PHASE IV ICE
PARALAIYAR SUB BASIN
PROVIDING FLOW MEASURING
DEVICE ('V' NOTCH)IN THE FIELI
CHANNEL OF TANK SLUICE
Scale :- 1cm =0.25m
All dimention are in 'Metre'

LINING OF IRRIGATION CHANNEL
TYPICAL CROSS SECTION
FOR BLACK COTTON SOIL



Main Rod 8mm @ 200mm c/c

Distributor Rod 6mm @ 300mm c/c

CC M15 Using 20mm aggregate

CC M7.5 using 40mm aggregate

Sand

Note:-

1. This section to be used in Black cotton soil.
2. Soil samples to be got tested for swell pressure and adequacy of channel section provided to be checked before adoption.
3. Nominal cover to steel reinforcements = 30 mm

IAMWARM PROJECT
KOTTAKARAIYAR SUB BASIN
IRRIGATION CHANNEL LINING

Scale:-1:1000
All dimention are in MM

Scale:1:1000
All dimensions are in mm