



GOVERNMENT OF TAMILNADU

PUBLIC WORKS DEPARTMENT

WATER RESOURCES ORGANISATION

TN IAM WARM PROJECT

NISHABANADHI SUB BASIN

ADDITIONAL PROPOSAL DPR

MADURAI REGION

**Additional proposals for providing Lining of Head Irrigation Channel and Flow
Measuring Device in Nishabanadhi 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 Nishabanadhi 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. 263.40 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 : Nishabanadhi Sub basin
 Total Number of Tanks taken up under IAMWARM : 40

NO OF TANKS, SLUICES IN EACH PACKAGE

Rs. in Lakhs

SI No	Package No	Name of Tank	No of Sluice	Flow Measuring Device		Lining the Head Irrigation channel			Total Amount	L.S.Provision @2.80%	Grand Total	Remarks
				No	Amount	Type of soil BC / OS*	Length	Amount				
							in Metre					
1	2	3	4	5	6	7	8	9.00	10.00	11	12	13
1	Package-1	Periyapanchamannar Tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	2	4	0.48		100	5.00	5.48	0.10	5.58	
2	Package-2	Narayanaperi Tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
3		Ilanthaikulam Tank	2	4	0.48	BC	100	5.00	5.48			
		Total	4	8	0.96		200	10.00	10.96	0.30	11.26	
4	Package-3	Pattakulam Tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	2	4	0.48		100	5.00	5.48	0.10	5.58	
5	Package-4	Kothandaramperi tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	

6	Package-5	Samuthiram tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	
7	Package-6	Indraperi tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
8		Vannaneri Tank	2	4	0.48	BC	100	5.00	5.48			
		Total	4	8	0.96		200	10.00	10.96	0.30	11.26	
9	Package-7	Peikulam Tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	
10	Package-8	Periyasadayaneri Tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	
11	Package-9	Sahalaneri Tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	
12	Package-10	Keelachinthamani tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
13		Pattakurichi Tank	1	2	0.24	BC	50	2.50	2.74			
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	

14	Package-11	Sirukulam tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	
15	Package-12	Rajagopalaperi Tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	2	4	0.48		100	5.00	5.48	0.10	5.58	
16	Package-13	Nagaram tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
17		Periya Veeriruppu Tank	2	4	0.48	BC	100	5.00	5.48			
		Total	4	8	0.96		200	10.00	10.96	0.30	11.26	
18	Package-14	Periyoor Tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
19		Kuvalaikanni Tank	1	2	0.24	BC	50	2.50	2.74			
		Total	4	8	0.96		200	10.00	10.96	0.30	11.26	
20	Package-15	Ariyoor Tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	
21	Package-16	Manalur Tank	3	7	0.84	BC	150	7.50	8.34			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
22		Karivalam Vanthanallur Big Tank	1	2	0.24	BC	50	2.50	2.74			
23		Perumbathur tank	2	4	0.48	BC	0	0.00	0.48			
		Total	6	13	1.56		200	10.00	11.56	0.30	11.86	

24	Package-17	Chinthamani tank	4	8	0.96	BC	200	10.00	10.96			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	4	8	0.96		200	10.00	10.96	0.30	11.26	
25	Package-18	Paraikulam Tank	3	6	0.72	BC	150	7.50	8.22			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	
26	Package-19	Soundaraperi tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
27		Keelakarisalkulam Tank	2	5	0.60	BC	100	5.00	5.60			
		Total	4	9	1.08		200	10.00	11.08	0.30	11.38	
28	Package-20	Kannasembalkulam tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	2	4	0.48		100	5.00	5.48	0.10	5.58	
29	Package-21	Veeraparakkiraman Tank	4	8	0.96	BC	200	10.00	10.96			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	4	8	0.96		200	10.00	10.96	0.30	11.26	
30	Package-22	Maruthankulam tank	2	4	0.48	BC	100	5.00	5.48			
		Total	2	4	0.48		100	5	5.48	0.1		

31	Package-23	Marathoni tank	4	8	0.96	BC	200	10.00	10.96			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	4	8	0.96		200	10.00	10.96	0.30	11.26	
32	Package-24	Chattirapattitherkukulam	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	2	4	0.48		100	5.00	5.48	0.10	5.58	
33	Package-25	Thiruvengadam tank	5	10	1.20	BC	210	10.50	11.70			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	5	10	1.20		210	10.50	11.70	0.30	12.00	
34	Package-26	Koothadikulam Tank	6	12	1.44	BC	205	10.25	11.69			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
		Total	6	12	1.44		205	10.25	11.69	0.30	11.99	
35	Package-27	Vagaikulam	1	2	0.24	BC	50	2.50	2.74			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
36		Perungottur periyakulam	2	4	0.48	BC	100	5.00	5.48			
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	
37	Package-28	Vayali tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
38		Sevalkulam periyakulam	1	2	0.24	BC	50	2.50	2.74			
		Total	3	6	0.72		150	7.50	8.22	0.20	8.42	

39	Package-29	Alamanaickanpattikulam tank	2	4	0.48	BC	100	5.00	5.48			Head Irrigation Channel branches in to 2 or 3 offtake forwhich necessary numbers of measuring devices is proposed
40		Vellakulam tank	2	4	0.48	BC	100	5.00	5.48			
		Total	4	8	0.96		200	10.00	10.96	0.29	11.25	
GRAND TOTAL			98	198	23.76		4665	233.25	257.01	6.39	263.40	

Certified that the Tanks included in the originally approved DPR of Nishabanadhi 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,
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Upper Vaippar Basin
Division
Rajapalayam

Superintending Engineer,
PWD/WRO
Vaippar Basin
Circle, Virudhunagar.

Chief Engineer,
PWD/WRO
Madurai
Region, Madurai

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 : Nishabanadhi Sub basin
Total Number of Tanks taken up under IAMWARM : 40
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	No. of Measuring Devices	Length of Lining of Head Irrigation Channel	Total Amount including L.S.	Remarks
						(Rs. In Lakhs)	
1	2	3	4	5	6	7	8
1	AP-1 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Periyanchamannar tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	4	100	5.58	
2	AP-2 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Naranaperi & Ilandaikulam tanks in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	8	200	11.26	
3	AP-3 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Pattakulam tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	4	100	5.58	

4	AP-4 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Kodandaramaperi tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	6	150	8.42	
5	AP-5 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Samudaram tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	6	150	8.42	
6	AP-6 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Indiraperi & Vannaneri tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	8	200	11.26	
7	AP-7 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Peikulam tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	6	150	8.42	
8	AP-8 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Periyasadayaneri Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	6	150	8.42	
9	AP-9 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Sahalaneri Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	6	150	8.42	
10	AP-10 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Keelachinthamani & Pattakurichi tanks in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	6	150	8.42	

11	AP-11 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Sirukulam tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	6	150	8.42	
12	AP-12 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Rajagopalaperi Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	4	100	5.58	
13	AP-13 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Nagaram & Periya Veeriruppu tanks in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	8	200	11.26	
14	AP-14 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Periyoor & Kuvalaikanni tanks in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	8	200	11.26	
15	AP-15 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Ariyoor Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	6	150	8.42	
16	AP-16 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Manalur & Karivalam Vanthanallur Big Tank, Perumbathoor tanks in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	3	13	200	11.86	
17	AP-17 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Chinthamani tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	8	200	11.26	

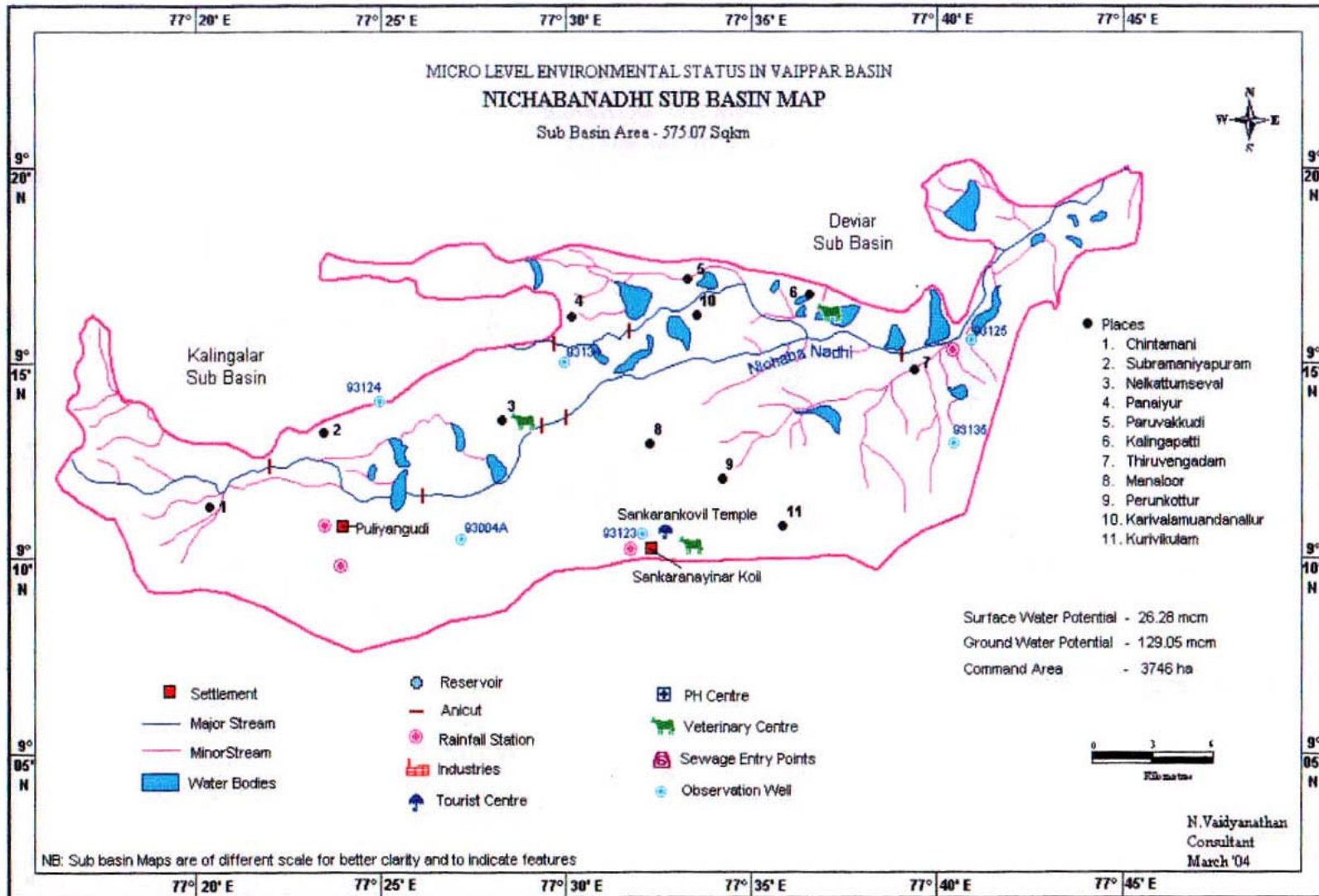
18	AP-18 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Paraikulam Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	6	150	8.42	
19	AP-19 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Soundaraperi & Keelakaraisalkulam tanks in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	9	200	11.38	
20	AP-20 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Kannasembalkulam tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	4	100	5.58	
21	AP-21 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Veeraparakkiraman Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	8	200	11.26	
22	AP-22 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Maruthankulam Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	4	100	5.58	
23	AP-23 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Marathoni Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	8	200	11.26	
24	AP-24 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011-2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Chattirapattitherkukulam Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	4	100	5.58	

25	AP-25 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011- 2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Thiruvengadam Tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	10	210	12.00
26	AP-26 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011- 2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Koothadikulam tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	1	12	205	11.99
27	AP-27 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011- 2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Vagaikulam & Perungottur periyakulam tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	6	150	8.42
28	AP-28 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011- 2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Vayali & Sevalkulamperiyakulam tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	6	150	8.42
29	AP-29 / IAMWARM/ WRD/ NBN / WORKS/ II / 2011- 2012	Lining of head Irrigation Channel and providing Flow Measuring devices for Alamanaickanpattikulam & Vellakulam tank in Nishabanadhi sub basin in Sivagiri taluk in Tirunelveli District	2	8	200	11.25
		TOTAL	40	198	4665	263.40

Executive Engineer,
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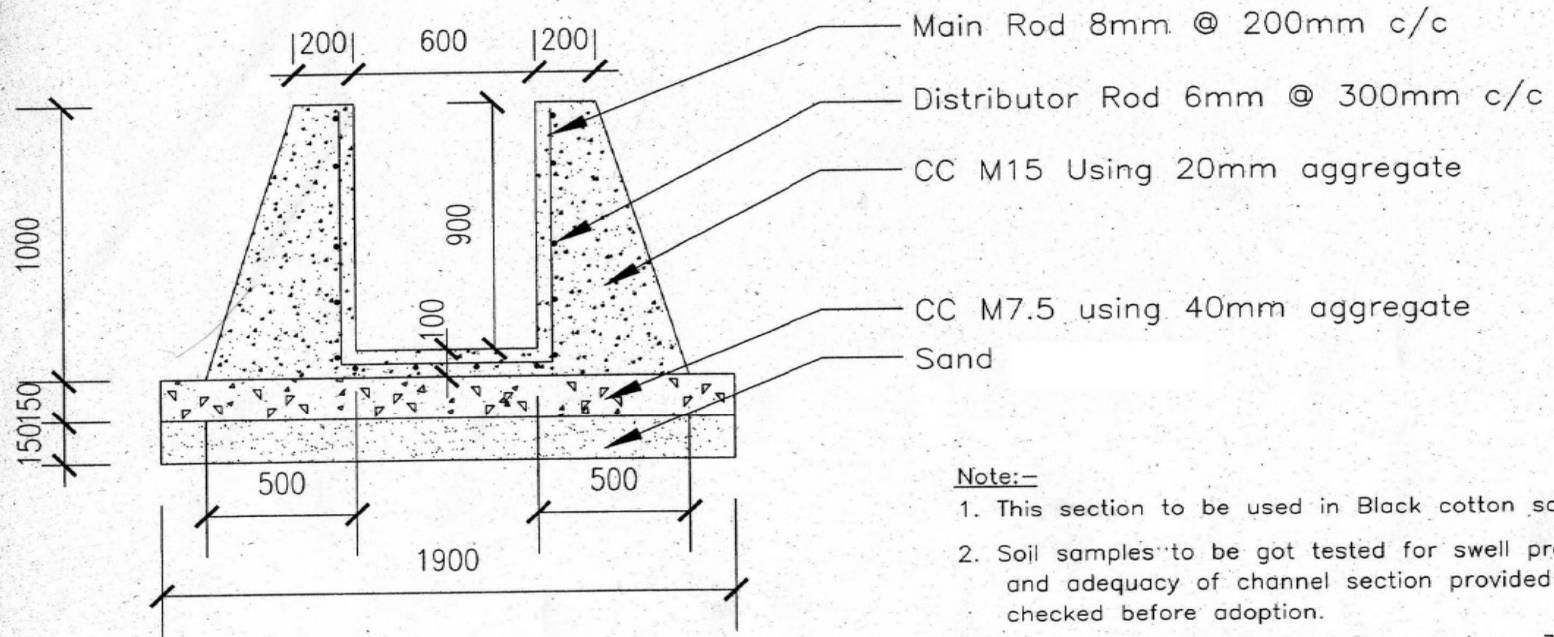
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Chief Engineer,
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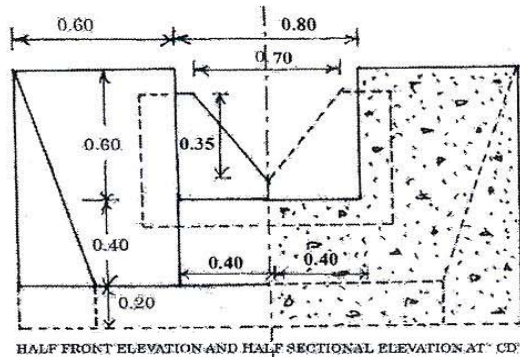
Source: Institute of Water Studies

LINING OF IRRIGATION CHANNEL
TYPICAL CROSS SECTION
FOR BLACK COTTON SOIL

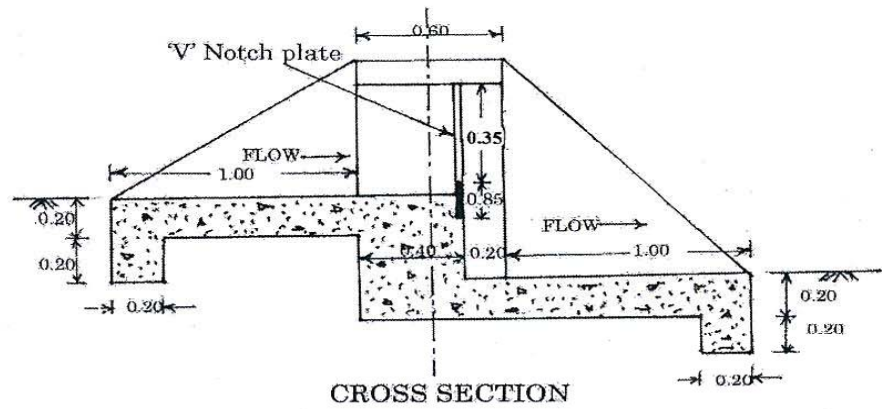


IAMWARM PROJECT
 KOTTAKARAIYAR SUB BASIN
 IRRIGATION CHANNEL LINING
 Scale:-1:1000
 All dimension are in MM

Scale:1:1000
 All dimensions are in mm

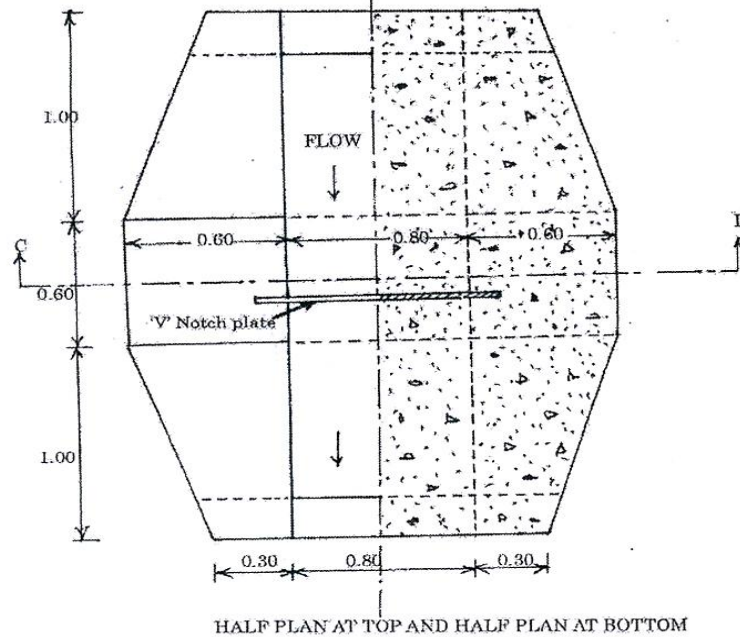


HALF FRONT ELEVATION AND HALF SECTIONAL ELEVATION AT 'CD'



CROSS SECTION

TYPE - C
3 CUSEC V-NOTCH



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 85
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
PARALAIYAR SUB BASIN
PROVIDING FLOW MEASURING
DEVICE ('V' NOTCH) IN THE FIELD
CHANNEL OF TANK SLUICE
Scale :- 1cm = 0.25m
All dimation are in 'Metre'