



PUBLIC WORKS DEPARTMENT

WATER RESOURCES ORGANISATION

MADURAI REGION

TN – IAMWARM PROJECT

**SENKOTTAIYAR SUB
BASIN**

(ADDITIONAL)

DETAILED PROJECT REPORT

Estimate Amount: Rs.61.29 Lakhs



NODAL DIVISION: VAIPPAR BASIN DIVISION

VIRUDHUNAGAR



**TN- IAMWARM PROJECT
SENKOTTAIYAR SUB BASIN**

INTRODUCTION REPORT

Additional proposals for providing Lining of Head Irrigation Channel and Flow Measuring Device in Senkottaiyar sub basin of 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 Senkottaiyar Sub basin of Phase II, 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. 61.29 lakhs.**

Executive Engineer,WRD.,
Vaippar Basin Division,
Virudhunagar.

Superintending Engineer,WRD.,
Vaippar Basin Circle,
Virudhunagar.

Chief Engineer,WRD.,
Madurai Region,
Madurai – 2.

Name of Region : Madurai
Name of Circle : Vaippar Basin Circle, Virudhunagar.
Name of Division : Vaippar Basin Division, Virudhunagar.
Name of Sub Basin : Senkottaiyar
Total Number of Tanks taken up under IAMWARM: 22 Nos.

FORMAT - I

NO OF TANKS, SLICES IN EACH PACKAGE

(Rs.in Lakhs)

SI.No	Package No.	Name of Tank	No of sluice	Flow measuring device		Lining of Head Irrigation Channel			Total Amount	L.S. Provision @ 2.80%	Grand Total	Remarks
				No	Amount	Type of Soil BC / OS	Length in M	Amount				
	Pack. 1	1) Periyapuliampatti tank	2	2	0.24	BC	60	3.00	3.24			
		2) Aruppukottai big tank	2	2	0.24	BC	60	3.00	3.24			
		3) Sukkulanatham tank	2	2	0.24	BC	60	3.00	3.24			
		Sub Total	6	6	0.72		180	9.00	9.72	0.27	9.99	
	Pack. 2	4)T. Meenatchipuram tank	2	2	0.24	BC	60	3.00	3.24			
		5) Podampatti tank	2	2	0.24	BC	-	-	0.24			Lining of Field channel already provided in podampatti tank
		6) Vaduvarpatti tank	2	2	0.24	BC	60	3.00	3.24			
		7) Kanmaipatti tank	2	2	0.24	BC	60	3.00	3.24			
		Sub Total	8	8	0.96		180	9.00	9.96	0.28	10.24	
	Pack. 3	8) Mallaiyanaickenpatti	2	2	0.24	BC	60	3.00	3.24			
		9) Pappakudi tank	3	3	0.36	BC	90	4.50	4.86			
		10) Kundalakuthur tank	2	2	0.24	BC	60	3.00	3.24			
		Sub Total	7	7	0.84		210	10.50	11.34	0.32	11.66	
Pack. 4	11) Mthusamipuram tank	2	2	0.24	BC	60	3.00	3.24				
	12) Chettikurichi big tank	2	2	0.24	BC	60	3.00	3.24				
	13) Chettikurichi small tank	3	3	0.36	BC	60	3.00	3.36				
	Sub Total	7	7	0.84		180	9.00	9.84	0.26	10.10		

Sl.No	Package No.	Name of work	No of sluice	Flow measuring device		Lining of Head Irrigation Channel			Total Amount	L.S. Provision @ 2.80%	Grand Total	Remarks
				No	Amount	Type of Soil BC / OS	Length in M	Amount				
	Pack. 5	14) Andipatti tank	2	2	0.24	BC	60	3.00	3.24			
		15) Periyathummakundu big tank	2	2	0.24	BC	60	3.00	3.24			
		Sub Total	4	4	0.48		120	6.00	6.48	0.18	6.66	
	Pack. 6	16) Ayankarisal kulam tank	2	2	0.24	BC	60	3.00	3.24			
		17)Mavil patti tank	2	2	0.24	BC	30	1.50	1.74			
		18) Melakkarandai tank	3	3	0.36	BC	-	-	0.36			Lining of Field channel already provided in Melakkarandai tank
		Sub Total	7	7	0.84		90	4.50	5.34	0.15	5.49	
	Pack. 7	19) Perayakudi tank	4	4	0.48	BC	120	6.00	6.48			
		20) Athankarai small tank	2	2	0.24	BC	-	-	0.24			Lining of Field channel already provided in Athankarai big and small tank
		21) Athankarai big tank	2	2	0.24	BC	-	-	0.24			
		Sub Total	8	8	0.96		120	6.00	6.96	0.19	7.15	
		Grand Total	47 Nos	47 Nos	5.64		1080 M	54.00	59.64	1.65	61.29	

Certified that the Tanks included in the originally approved DPR of Senkottaiyar 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 17 number of tanks having black cotton soil.

Executive Engineer,WRD.,
Vaippar Basin Division,
Virudhunagar.

Superintending Engineer,WRD.,
Vaippar Basin Circle,
Virudhunagar.

Chief Engineer,WRD.,
Madurai Region,
Madurai – 2.

FORMAT - II

Name of Region : Madurai
Name of Circle : Vaippar Basin Circle, Virudhunagar.
Name of Division : Vaippar Basin Division, Virudhunagar.
Name of Sub Basin : Senkottaiyar
Total Number of Tanks taken up under IAMWARM : 22 Nos.
Method of procurement : National shopping.

PACKAGEWISE ABSTRACT

S.No.	Package No.	Name of Work	No.of Tanks	No of flow measuring device (Nos)	Length of Lining Head Irrigation Channel (in M)	Total Amount including L.S. (Rs.in Lakhs)	Remarks
1	IAMWARM/WRD/SKR-1/ WORKS/ II / 2011 – 2012	Lining of field irrigation channel and providing Flow Measuring devices for Periyapuliyampatti, Aruppukottai, Sukkinnatham in Senkottaiyar Sub Basin in Aruppukottai taluk of Virudhunagar district.	3	6	180	10.18	--
2	IAMWARM/WRD/SKR-2/ WORKS/ II / 2011 – 2012	Lining of field irrigation channel and providing Flow Measuring devices for T. Meenatchipuram, Podampatti, Vaduvarpati, Kanmaipatti in Senkottaiyar Sub Basin in Aruppukottai and Virudhunagar taluk of Virudhunagar district.	4	8	180	10.49	--
3	IAMWARM/WRD/SKR-3/ WORKS/ II / 2011 – 2012	Lining of field irrigation channel and providing Flow Measuring devices for Mallaiyanaickenpatti, Pppakudi, Kundalakuthur Senkottaiyar Sub Basin in Aruppukottai and Sattur taluk of Virudhunagar district.	3	7	210	11.66	-
4	IAMWARM/WRD/SKR-4/ WORKS/ II / 2011 – 2012	Lining of field irrigation channel and providing Flow Measuring devices for Muthusamipuram, Chettikurichi big & small tank Senkottaiyar Sub Basin in Aruppukottai taluk of Virudhunagar district.	3	7	180	10.10	-

S.No.	Package No.	Name of Work	No.of Tanks	No of flow measuring device (Nos)	Length of Lining Head Irrigation Channel (in M)	Total Amount including L.S. (Rs.in Lakhs)	Remarks
5	IAMWARM/WRD/SKR-5/ WORKS/ II / 2011 – 2012	Lining of field irrigation channel and providing Flow Measuring devices for Andipatti, Periyathummakundu Senkottaiyar Sub Basin in Aruppukottai taluk of Virudhunagar district.	2	4	120	6.66	-
6	IAMWARM/WRD/SKR-6/ WORKS/ II / 2011 – 2012	Lining of field irrigation channel and providing Flow Measuring devices for Ayankarisalkulam Tank, Mavilpatti, Melakaranthai Senkottaiyar Sub Basin in Ettayapuram taluk of Tuticorin district.	3	7	90	5.49	-
7	IAMWARM/WRD/SKR-7/ WORKS/ II / 2011 – 2012	Lining of field irrigation channel and providing Flow Measuring devices for Perayakudi, Athankarai big & small Tank Senkottaiyar Sub Basin in Vilathikulam taluk of Tuticorin district.	3	8	120	7.15	-
		TOTAL	21Nos	47Nos	1080M	61.29	

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Vaippar Basin Circle,
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Madurai Region,
Madurai – 2.

FLOW DIAGRAM OF SENKOTTAIYAR SUB BASIN



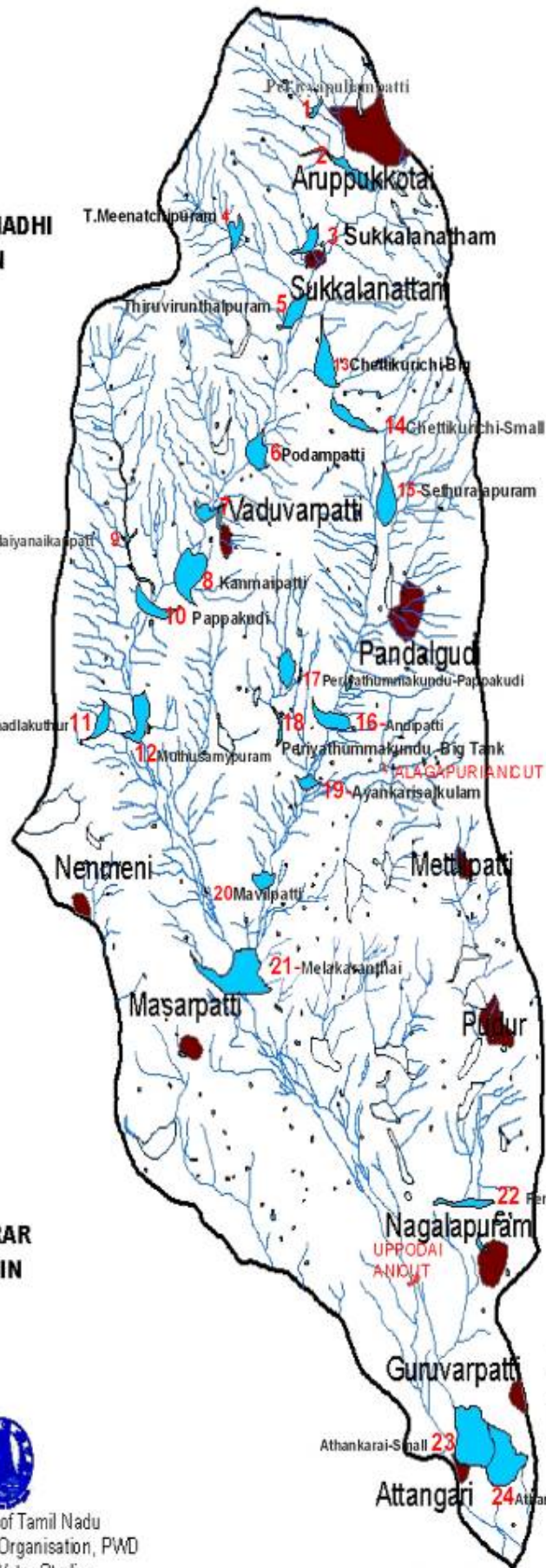
**KOUSHIGHANADHI
SUB BASIN**

**VEMBAR
SUB BASIN**





**UPPATHURAR
SUB BASIN**



Government of Tamil Nadu
Water Resources Organisation, PWD
Institute for Water Studies,
Tamil Nadu State Centre For Remote Sensing Application,
Tharamani, Chennai-113.



LEGEND

-  Anicut
-  Streams
-  Tank
-  SubBasin Boundary



SENKOTTAIYAR SUB BASIN - MAP SHOWING THE DETAILS OF TANKS, ANICUTS AND SUPPLY CHANNELS



**KOUSHIGHANADHI
SUB BASIN**

**VEMBAR
SUB BASIN**

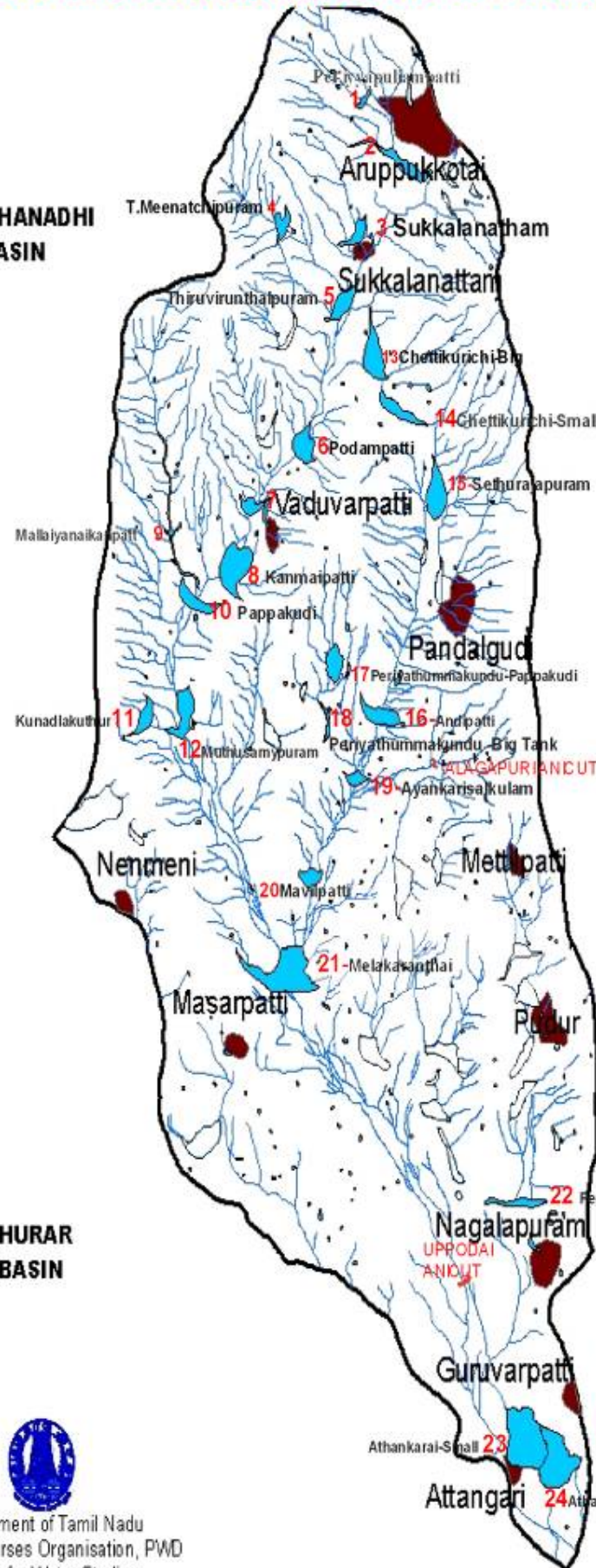
**UPPATHURAR
SUB BASIN**

LEGEND

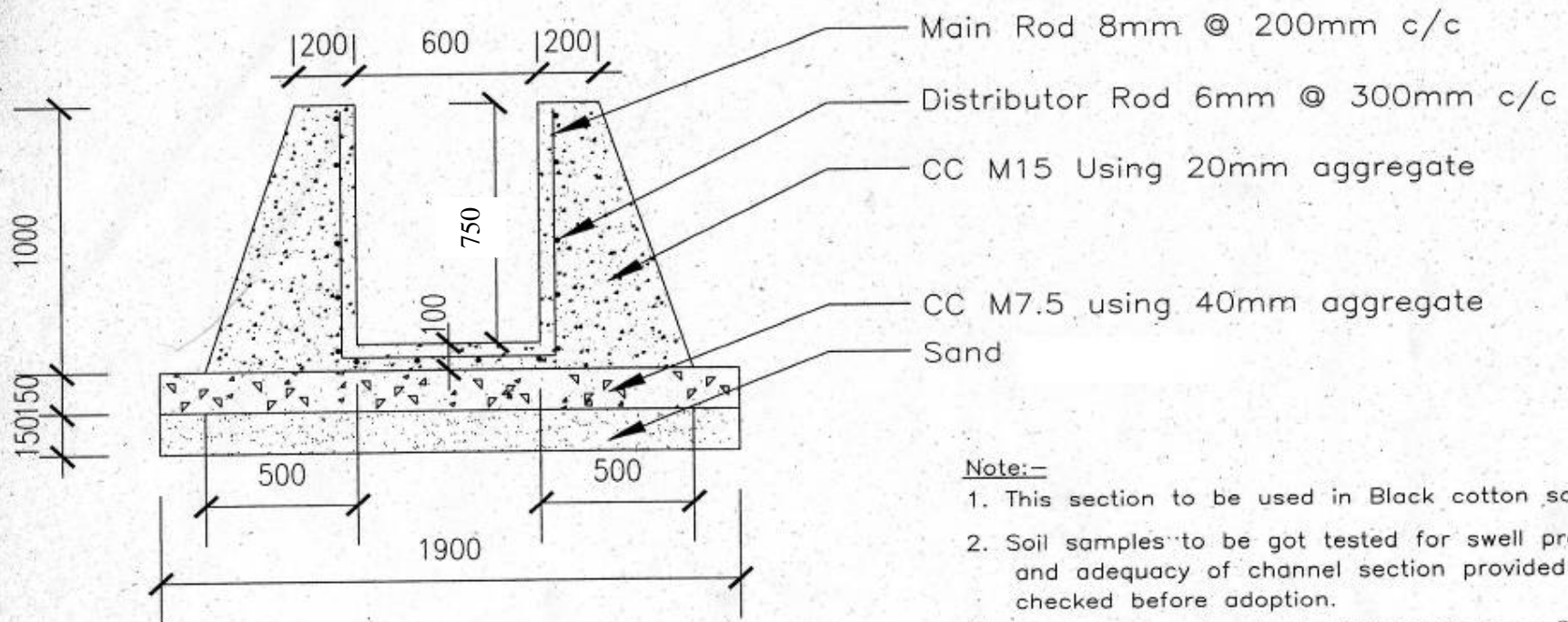
- Anicut
- Streams
- Tank
- SubBasin Boundary



Government of Tamil Nadu
Water Resources Organisation, PWD
Institute for Water Studies,
Tamil Nadu State Centre For Remote Sensing Application,
Tharamani, Chennai-113.



LINING OF IRRIGATION CHANNEL
TYPICAL CROSS SECTION
FOR BLACK COTTON SOIL



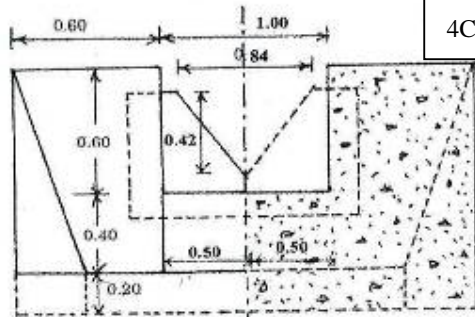
Note:-

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

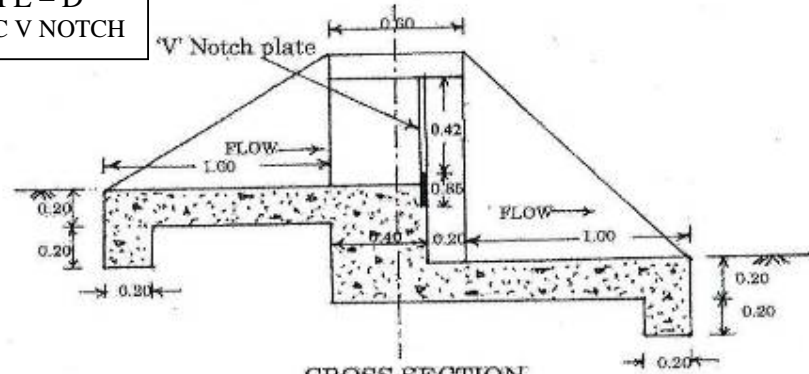
Executive Engineer PWD
 Vaippar Basin Division
 Viruthunagar

IAMWARM PROJECT
 SENKOTTAIYAR SUB BASIN
 IRRIGATION CHANNEL LINING
 Scale:- 1:1000
 All Dimention are in Metre

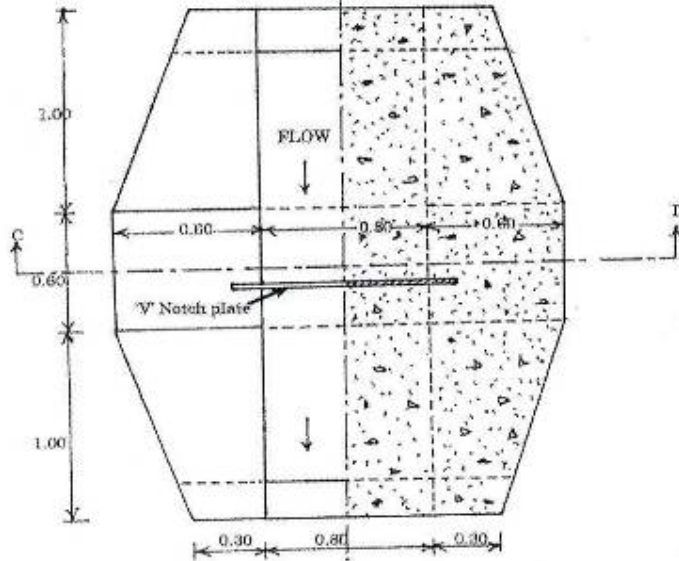
**TYPE - D
4CUSEC V NOTCH**



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	26.3	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

Executive Engineer PWD
Vaippar Basin Division
Viruthunagar

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