### GOVERNMENT OF GOA QUALITY CONTROL LABORATORY WATER RESOURCES DEPARTMENT

Test Report No.: WRD / QC / F.6-2 / Cube -T :2060,2061,2067,2068,2079,2080,2103/ Lab / **103** / 2021 - 22 Dated: 10/ 06 / 2021. Laboratory : Bicholim - Goa ,2104,2113,2114,2124,2125,2134,2135,2148,2149,2168,2169,2179,2180,2188,2189 Sub Division V (QC)/WRD/ Bicholim- Goa.

## Name of work: Construction of Open Type Bandhara across Bicholim river at Gaonkarwada at Bicholim.

Ref. to Requisition No.:WRD/ WDVI/SDI/F.W.215/2021-22/65 Dated :- 21/05/2021.

Oty. Recived. :22 Sets of cube Date of Receipt:- 21/05 / 2021. Tested on: -24,26,28/05/21 & 01 to 08/06/2021 as per due dates. Ref to CPWD :2009, Vol. I

Sample: Cube Mix PCC 1:2:4 O.S No.:6284,6285,6294,6295,6309,6310,6340,6341,6352,6353/SS,69,70/RK,6364,6365,6379,6380,6399,6400,6410,6411,6419,6420/SS Lab. Sample No.: 1568 to 1589 Tested By: Mrs.R.R.Kadam.A.E. & Mrs. Shirodkar. J.E.

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RES	SULTS	Max./Min.Value permissable	% above or below	REMARK
1	Cement concrete cube of mix <b>1:2:4</b> , cast on 26/04/2021. PCC for Retaining wall foundation.	28 <sup>th</sup> day	258.24	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	13.62	Qty represents - 47.00 Cum for two sets of cubes.
		compressive	226.53	Kg/Cm <sup>2</sup>			
		strength	231.06	Kg/Cm <sup>2</sup>			
		Average	238.61	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1 : 2: 4</b> , cast on 26/04/2021. PCC for Retaining wall foundation.	28 <sup>th</sup> day	226.53	Kg/Cm <sup>2</sup>	_	14.70	do
2		compressive	249.18	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>		
-		strength	246.91	Kg/Cm <sup>2</sup>			
		Average	240.87	Kq/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 28/04/2021. PCC for 1 <sup>st</sup> lift.	28 <sup>th</sup> day	233.32	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	4.99	Qty represents - 38.70 Cum for two sets of cubes.
3		compressive	219.73	Kg/Cm <sup>2</sup>			
3		strength	208.40	Kg/Cm <sup>2</sup>			
		Average	220.49	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix 1:2:4, cast on 28/04/2021. PCC for 1 <sup>st</sup> lift.	28 <sup>th</sup> day	242.38	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	6.43	do
4		compressive	215.20	Kg/Cm <sup>2</sup>			
4		strength	212.93	Kg/Cm <sup>2</sup>			
		Average	223.51	Kg/Cm <sup>2</sup>			
5	Cement concrete cube of mix <b>1:2:4</b> , cast on 30/04/2021. PCC for 2 <sup>nd</sup> lift.	28 <sup>th</sup> day	217.47	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	5.35	Qty represents - 28.80 Cum for two sets of cubes.
		compressive	215.20	Ka/Cm <sup>2</sup>			
		strength	231.06	Kg/Cm <sup>2</sup>			
		Average	221.24	Kg/Cm <sup>2</sup>			

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR		ULTS	Max./Min.Value	% above or below	REMARK
<u>U.</u>		oo th i	228.79	1/ 10 2	permissable	Delow	
6	Cement concrete cube of mix <b>1:2:4</b> , cast on 30/04/2021. PCC for 2 <sup>nd</sup> lift.	28 <sup>th</sup> day compressive	203.87	Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	5.71	Qty represents - 28.80 Cum for two sets of cubes.
		strength	233.32	Kg/Cm <sup>2</sup>			
		Average	222.00	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 04/05/2021. PCC for 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	203.87	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	1.40	Qty represents - 18.90 Cum for two sets of cubes.
7		compressive	215.20	Kg/Cm <sup>2</sup>			
'		strength	219.73	Kg/Cm <sup>2</sup>			
		Average	212.93	Kg/Cm <sup>2</sup>			
		28 <sup>th</sup> day	219.73	Kg/Cm <sup>2</sup>		6.43	do
8	Cement concrete cube of mix 1:2:4, cast on 04/05/2021. PCC for 3 <sup>rd</sup> lift.	compressive	240.12	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>		
8		strength	210.67	Kg/Cm <sup>2</sup>			
		Average	223.51	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix 1:2:4, cast on 05/05/2021. PCC for 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	215.20	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	3.20	Qty represents - 18.90 Cum for two sets of cubes.
9		compressive	226.53	Kg/Cm <sup>2</sup>			
9		strength	208.40	Kg/Cm <sup>2</sup>			
		Average	216.71	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 05/05/2021. PCC for 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	231.06	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	2.84	do
10		compressive	212.93	Kg/Cm <sup>2</sup>			
10		strength	203.87	Kg/Cm <sup>2</sup>			
		Average	215.95	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1 : 2: 4</b> , cast on 06/05/2021. PCC for 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	244.65	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	9.31	Qty represents - 18.90 Cum for two sets of cubes.
11		compressive	226.53	Kg/Cm <sup>2</sup>			
''		strength	217.47	Kg/Cm <sup>2</sup>			
		Average	229.55	Kg/Cm <sup>2</sup>			
12	Cement concrete cube of mix <b>1:2:4</b> , cast on 06/05/2021. PCC for 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	231.06	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	11.11	do
		compressive	242.38	Kg/Cm <sup>2</sup>			
		strength	226.53	Kg/Cm <sup>2</sup>			
		Average	233.32	Kg/Cm <sup>2</sup>			

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RES	SULTS	Max./Min.Value permissable	% above or	REMARK
		28 <sup>th</sup> day	203.87	Kg/Cm <sup>2</sup>			
13	Cement concrete cube of mix <b>1 : 2: 4</b> , cast on 07/05/2021. PCC for 3 <sup>rd</sup> lift.	compressive	219.73	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	2.84	Qty represents - 18.90 Cum for two sets of cubes.
		strength	224.26	Kg/Cm <sup>2</sup>			
		Average	215.95	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 07/05/2021. PCC for 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	246.91	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	5.71	do
14		compressive	203.87	Kg/Cm <sup>2</sup>			
14		strength	215.20	Kg/Cm <sup>2</sup>			
		Average	222.00	Kg/Cm <sup>2</sup>			
		28 <sup>th</sup> day	212.93	Kg/Cm <sup>2</sup>		4.99	Qty represents - 9.00 Cum for two sets of cubes.
15	Cement concrete cube of mix <b>1:2:4</b> , cast on 08/05/2021. PCC for 4 <sup>th</sup> lift.	compressive	215.20	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>		
13		strength	233.32	Kg/Cm <sup>2</sup>			
		Average	220.49	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 08/05/2021. PCC for 4 <sup>th</sup> lift.	28 <sup>th</sup> day	212.93	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	6.07	do
16		compressive	235.59	Kg/Cm <sup>2</sup>			
'		strength	219.73	Kg/Cm <sup>2</sup>			
		Average	222.75	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 09/05/2021. PCC for 4 <sup>th</sup> lift.	28 <sup>th</sup> day	244.65	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	7.15	Qty represents - 9.00 Cum for two sets of cubes.
17		compressive	222.00	Kg/Cm <sup>2</sup>			
''		strength	208.40	Kg/Cm <sup>2</sup>			
		Average	225.02	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 09/05/2021. PCC for 4 <sup>th</sup> lift.	28 <sup>th</sup> day	222.00	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	3.91	do
18		compressive	206.14	Kg/Cm <sup>2</sup>			
		strength	226.53	Kg/Cm <sup>2</sup>			
		Average	218.22	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 10/05/2021. PCC for 4 <sup>th</sup> lift.	28 <sup>th</sup> day	203.87	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	2.12	Qty represents - 9.00 Cum for two sets of cubes.
19		compressive	215.20	Kg/Cm <sup>2</sup>			
		strength	224.26	Kg/Cm <sup>2</sup>			
		Average	214.44	Kg/Cm <sup>2</sup>			

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
20	Cement concrete cube of mix <b>1:2:4</b> , cast on 10/05/2021. PCC for 4 <sup>th</sup> lift.	28 <sup>th</sup> day	208.40	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	6.79	Qty represents - 9.00 Cum for two sets of cubes.
		compressive	226.53	Kg/Cm <sup>2</sup>			
20		strength	237.85	Kg/Cm <sup>2</sup>			
		Average	224.26	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 11/05/2021. PCC for 4 <sup>th</sup> lift.	28 <sup>th</sup> day	212.93	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	4.63	Qty represents - 9.00 Cum for two sets of cubes.
21		compressive	226.53	Kg/Cm <sup>2</sup>			
21		strength	219.73	Kg/Cm <sup>2</sup>			
		Average	219.73	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 11/05/2021. PCC for 4 <sup>th</sup> lift.	28 <sup>th</sup> day	206.14	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	5.35	do
22		compressive	240.12	Kg/Cm <sup>2</sup>			
		strength	217.47	Kg/Cm <sup>2</sup>			
		Average	221.24	Kg/Cm <sup>2</sup>			

Copy to: 1. The Assistant Engineer , SD I , WD VI, WRD, Bicholim - Goa.

- 2. Copy submitted to The Superintending Engineer ,CPO,WRD, Sinchai Bhavan, Porvorim Goa for kind Information.
- 3. Copy submitted to The Executive Engineer , WD VI ,WRD, Bicholim- Goa.
- 4. QC Lab File. 5. Bill File.

Junior Engineer

Assistant Engineer