## GOVERNMENT OF GOA QUALITY CONTROL LABORATORY WATER RESOURCES DEPARTMENT

Test Report No.: WRD / QC / F.6-2 / Cube -T :2651 to 2672,2680 to 2683,2693,/ Lab /**174** / 2021 - 22 Dated:-17/09/ 2021. Laboratory : Bicholim - Goa. 2694,2702,2703 Sub Division V (QC)/WRD/ Bicholim- Goa.

Name of work : Development of Poi in Survey No. 169 near Fishing Jetty and Beautification of bund of River Chapora in V.P. Siolim in Siolim Constituency

Ref. to Requisition No.: SDI/WDI/WRD/F.57/21-22/243 Dated :- 16/ 08/ 2021.

 Qty. Recived. : 30 Sets of cube
 Date of Receipt:- 19/ 08 / 2021.
 Tested on: 19,20,23 to 27,30,31/08/2021 & 01 to 04,06,07/09/2021 as per due dates.
 Ref to CPWD :2009, Vol. I

 Sample: Cube Mix
 1: 2: 4
 O.S No. :6893 to 6915,6925 to 6929,6940,6941,6949,6950/SS
 Lab. Sample No.: 2141 To 2170 Tested By: Mrs.Shirodkar. J.E.

SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or <del>below</del>	REMARK
	Cement concrete cube of mix <b>1:2:4</b> , cast on 22/07/2021. For 2 <sup>nd</sup> and 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	226.53	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>		
1		compressive	235.59	Kg/Cm <sup>2</sup>		8.23	
1		strength	219.73	Kg/Cm <sup>2</sup>			Qty represents -33.00 Cum for two sets of cubes.
		Average	227.28	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 22/07/2021. For 2 <sup>nd</sup> and 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	219.73	Kg/Cm <sup>2</sup>		5.71	
2		compressive	233.32	Ka/Cm <sup>2</sup>	$210.00  \text{Kg}  \text{cm}^2$		do
2		strenath	212.93	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>		00
		Average	222.00	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 23/07/2021. For 2 <sup>nd</sup> and 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	215.20	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	3.91	Qty represents -33.00 Cum for two sets of cubes.
2		compressive	203.87	Kg/Cm <sup>2</sup>			
5		strength	235.59	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 23/07/2021. For 2 <sup>nd</sup> and 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	217.47	Ka/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	9.31	do
		compressive	231.06	Ka/Cm <sup>2</sup>			
7		strenath	240.12	Kq/Cm <sup>2</sup>			
		Average	229.55	Kq/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 26/07/2021. For 2 <sup>nd</sup> and 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	212.93	Kq/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	5.35	Qty represents -36.00 Cum for two sets of cubes.
		compressive	231.06	Kq/Cm <sup>2</sup>			
5		strength	219.73	Kq/Cm <sup>2</sup>			
		Average	221.24	Kq/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 26/07/2021. For 2 <sup>nd</sup> and 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	210.67	Ka/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	3.55	do
6		compressive	215.20	Ka/Cm <sup>2</sup>			
0		strenath	226.53	Kg/Cm <sup>2</sup>			
		Average	217.47	Kq/Cm <sup>2</sup>			

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
7	Cement concrete cube of mix <b>1:2:4</b> , cast on 27/07/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day compressive strength <b>Average</b>	215.20 233.32 226.53 <b>225.02</b>	Kq/Cm <sup>2</sup> Kq/Cm <sup>2</sup> Kq/Cm <sup>2</sup> Kq/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	7.15	Qty represents - 35.00 Cum for two sets of cubes.
8	Cement concrete cube of mix <b>1:2:4</b> , cast on 27/07/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day compressive strength Average	228.79 219.73 208.40 <b>218.98</b>	Kq/Cm <sup>2</sup> Kq/Cm <sup>2</sup> Kq/Cm <sup>2</sup> Kq/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	4.27	do
9	Cement concrete cube of mix <b>1:2:4</b> , cast on 28/07/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day compressive strength <b>Average</b>	244.65 226.53 215.20 <b>228.79</b>	Ka/Cm <sup>2</sup> Ka/Cm <sup>2</sup> Ka/Cm <sup>2</sup> Ka/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	8.95	Qty represents - 35.00 Cum for two sets of cubes.
10	Cement concrete cube of mix <b>1:2:4</b> , cast on 28/07/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day compressive Average	217.47 203.87 228.79 <b>216.71</b>	Ka/Cm <sup>2</sup> Ka/Cm <sup>2</sup> Ka/Cm <sup>2</sup> Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	3.20	do
11	Cement concrete cube of mix <b>1:2:4</b> , cast on 29/07/2021. For Foundation & Plinth.	28 <sup>th</sup> day compressive strength <b>Average</b>	231.06 240.12 235.59 235.59	Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	12.18	Qty represents -40.00 Cum for two sets of cubes.
12	Cement concrete cube of mix <b>1:2:4</b> , cast on 29/07/2021. For Foundation & Plinth.	28 <sup>th</sup> day compressive strength Average	226.53 237.85 212.93 <b>225.77</b>	Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	7.51	do
13	Cement concrete cube of mix <b>1:2:4</b> , cast on 30/07/2021. For Foundation & Plinth.	28 <sup>th</sup> day compressive strength <b>Average</b>	212.93 226.53 233.32 <b>224.26</b>	Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	6.79	Qty represents - 43.00 Cum for two sets of cubes.
14	Cement concrete cube of mix <b>1:2:4</b> , cast on 30/07/2021. For Foundation & Plinth.	28 <sup>th</sup> day compressive strength <b>Average</b>	233.32 217.47 231.06 <b>227.28</b>	Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup> Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	8.23	do

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	FOR RESULTS		Max./Min.Value permissable	% above or below	REMARK
		28 <sup>th</sup> day	228.79	Kg/Cm <sup>2</sup>	•		
	Cement concrete cube of mix <b>1:2:4</b> , cast on 02/08/2021. For Foundation & Plinth.	compressive	226.53	<u> </u>	210.00 Kg/cm <sup>2</sup>	4.99	Oty represents - 38.00 Cum for two sets of cubes.
15		strength	206.14	Kg/Cm <sup>2</sup>			
		Average	220.49	Kg/Cm <sup>2</sup>			
		28 <sup>th</sup> day	208.40	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	5.71	do
	Cement concrete cube of mix 1:2:4, cast on	compressive	219.73	Kg/Cm <sup>2</sup>			
16	Cement concrete cube of mix <b>1:2:4</b> , cast on 02/08/2021. For Foundation & Plinth.	strength	237.85	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 03/08/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day	226.53	Kg/Cm <sup>2</sup>		6.79	Qty represents - 38.00 Cum for two sets of cubes.
17		compressive	219.73	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>		
17		strength	226.53	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 03/08/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day	212.93	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	3.91	do
18		compressive	222.00	Kg/Cm <sup>2</sup>			
		strenath	219.73	Kq/Cm <sup>2</sup>			
		Average	218.22	Ka/Cm <sup>2</sup>			
		28 <sup>th</sup> day	226.53	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	4.99	Qty represents -40.00 Cum for two sets of cubes.
19	Cement concrete cube of mix <b>1:2:4</b> , cast on 04/08/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	compressive	215.20	Kg/Cm <sup>2</sup>			
		strength	219.73	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 04/08/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day	203.87 222.00	Kq/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	5.71	do
20		compressive	222.00	Ka/Cm <sup>2</sup> Ka/Cm <sup>2</sup>			
		strenath Average	<b>2</b> 40.12 <b>222.00</b>	Kq/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 05/08/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day	217.47	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	9.31	Qty represents -32.00 Cum for two sets of cubes.
21		compressive	226.53	Kg/Cm <sup>2</sup>			
21		strenath	244.65	Kg/Cm <sup>2</sup>			
		Average	229.55	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 05/08/2021. For 1 <sup>st</sup> and 2 <sup>nd</sup> lift.	28 <sup>th</sup> day	212.93	Kg/Cm <sup>2</sup>	– 210.00 Kg/cm <sup>2</sup>	8.59	do
22		compressive	237.85	Kg/Cm <sup>2</sup>			
22		strength	233.32	Kg/Cm <sup>2</sup>			
		Average	228.04	Kg/Cm <sup>2</sup>			

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Assistant Engineer

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		RESULTS Max./Min.Value permissable		REMARK
23		28 <sup>th</sup> day	226.53	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup> 4.9		
	Cement concrete cube of mix 1:2:4, cast on	compressive	219.73	Kg/Cm <sup>2</sup>		4.00	Oty represents 11.00 Cum for two sets of subes
	06/08/2021. For Foundation & Plinth.	strength	215.20	Kg/Cm <sup>2</sup>		4.99	Oty represents - 41.00 Cum for two sets of cubes.
		Average	220.49	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 06/08/2021. For Foundation & Plinth.	28 <sup>th</sup> day	244.65	Kg/Cm <sup>2</sup>			
24		compressive	226.53	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	10.75	do
24		strength	226.53	Kg/Cm <sup>2</sup>			
		Average	232.57	Kg/Cm <sup>2</sup>			
		28 <sup>th</sup> day	208.40	Kg/Cm <sup>2</sup>			
ЭE	Cement concrete cube of mix <b>1:2:4</b> , cast on 07/08/2021. For Foundation & Plinth.	compressive	231.06	Kg/Cm <sup>2</sup>	210.00 K = / === 2	4.27	Qty represents - 40.00 Cum for two sets of cubes.
25	07/08/2021. For Foundation & Plinth.	strength	217.47	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>		
		Average	218.98	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 07/08/2021. For Foundation & Plinth.	28 <sup>th</sup> day	210.67	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	7.87	do
26		compressive	237.85	Kg/Cm <sup>2</sup>			
		strenath	231.06	Ka/Cm <sup>2</sup>			
		Average	<b>226.53</b> 226.53	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 09/08/2021. For 3 <sup>rd</sup> lift.	28 <sup>th</sup> day		Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	4.63	Qty represents - 43.00 Cum for two sets of cubes
27		compressive	219.73	Kg/Cm <sup>2</sup>			
		strength	212.93	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 09/08/2021. 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>	2.12	do
28		compressive	208.40	Kg/Cm <sup>2</sup>			
		strength	219.73	Kg/Cm <sup>2</sup>			
		Average	214.44	Kg/Cm <sup>2</sup>			
29	Cement concrete cube of mix <b>1:2:4</b> , cast on 10/08/2021. For 2 <sup>nd</sup> & 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	222.00	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	8.59	Qty represents - 30.00 Cum for two sets of cubes
		compressive	233.32	Kg/Cm <sup>2</sup>			
		strength	228.79	Kg/Cm <sup>2</sup>			
		Average	228.04	Kg/Cm <sup>2</sup>			
	Cement concrete cube of mix <b>1:2:4</b> , cast on 10/08/2021. For 2 <sup>nd</sup> & 3 <sup>rd</sup> lift.	28 <sup>th</sup> day	215.20	Ka/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	3.55	do
30		compressive	226.53	Kq/Cm <sup>2</sup>			
		strength	210.67 <b>217.47</b>	Ka/Cm <sup>2</sup>			
		Average	21/.4/	Kg/Cm <sup>2</sup>			

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

4. QC Lab File. 5. Bill File.

Junior Engineer

Assistant Engineer