

GOVERNMENT OF GOA
QUALITY CONTROL LABORATORY
WATER RESOURCES DEPARTMENT

Test Report No.: WRD / QC / F.6-2 / Cube -T :8963,8964,8995,9018,9019,9033,9034,9041,9042,9067,9068./ Lab / **506** /2019 - 20 Dated:- 30 /03 / 2020. Laboratory : Bicholim- Goa.

9089,9090,9104,9118,9119,9147,9156,9157,9172 To 9175, 9188,9189,9206 To 9208,9221,9222,9236,9237,9249,9273,9274,9297,9298,9317,9318,9330 & 9331.

Sub Division V (QC)/WRD/ Bicholim- Goa.

Name of Work: - Improvement of damaged existing bund from Nerul Bridge To Sinquerim in V.P. Candolim Bardez in Calangute Constituency.

Ref. to Requisition no.: SDII/WDI/WRD/ F.24 /2019-20/ **650** dated :- 25/02/2020.

Qty. Recived. : 41 Sets of cube Date of Receipt: 28/02/2020. Tested on: 29/02/2020 To 27/03/2020. as per due dates. Ref to CPWD :2009, Vol. I

Sample: Cube Mix 1 : 2 : 4 O.S No. :3318,3319,3326,3355,3356,3366,3367,3374,3375,3394,3395,3412,3413,3434,3444,3445,3466/SS,631,632/SP,3471 To 3474,3482,3483,3496 To 3498,3513,3514,3531,3532,3542/SS,652,653,669,670,680,681,688 & 689/SP. Lab. Sample No.: 8165 To 8205 Tested By: Mrs. S.B. Naik Shirodkar. J.E. & Mr. S. M. Patri. A. E.

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
1	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 01/02/2020. P.C.C. for foundation from Ch. 504 m to 540 m.	28 th day compressive strength	215.20	Kg/Cm ²	210.00 Kg/Cm ²	8.59	Quantity represents 35.00 Cum for two sets of cubes cast on 01/02/2020.
			224.26	Kg/Cm ²			
			244.65	Kg/Cm ²			
			Average	228.04			
2	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 01/02/2020. P.C.C. for foundation from Ch. 504 m to 540 m.	28 th day compressive strength	237.85	Kg/Cm ²	210.00 Kg/Cm ²	13.98	... Do ...
			226.53	Kg/Cm ²			
			253.71	Kg/Cm ²			
			Average	239.36			
3	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 04/02/2020. P.C.C. for foundation from Ch. 570 m to 587 m.	28 th day compressive strength	212.93	Kg/Cm ²	210.00 Kg/Cm ²	6.07	Quantity represents 16.00 Cum .
			219.73	Kg/Cm ²			
			235.59	Kg/Cm ²			
			Average	222.75			
4	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 05/02/2020. P.C.C. for foundation from Ch. 587 m to 616 m.	28 th day compressive strength	240.12	Kg/Cm ²	210.00 Kg/Cm ²	11.11	Quantity represents 28.00 Cum for two sets of cubes cast on 05/02/2020.
			226.53	Kg/Cm ²			
			233.32	Kg/Cm ²			
			Average	233.32			
5	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 05/02/2020. P.C.C. for foundation from Ch. 587 m to 616 m.	28 th day compressive strength	237.85	Kg/Cm ²	210.00 Kg/Cm ²	7.87	... Do ...
			210.67	Kg/Cm ²			
			231.06	Kg/Cm ²			
			Average	226.53			
6	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 06/02/2020. P.C.C. for foundation from Ch. 616 m to 642.50 m.	28 th day compressive strength	215.20	Kg/Cm ²	210.00 Kg/Cm ²	3.55	Quantity represents 25.00 Cum for two sets of cubes cast on 06/02/2020.
			215.20	Kg/Cm ²			
			222.00	Kg/Cm ²			
			Average	217.47			

Junior Engineer

Assistant Engineer

SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
7	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 06/02/2020. P.C.C. for foundation from Ch. 616 m to 642.50 m.	28 th day compressive strength	271.83	Kg/Cm2	210.00 Kg/Cm ²	11.11	Quantity represents 25.00 Cum for two sets of cubes cast on 06/02/2020.
			210.67	Kg/Cm2			
			217.47	Kg/Cm2			
			Average	233.32			
8	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 07/02/2020. P.C.C. for foundation from Ch. 642.50 m to 667 m.	28 th day compressive strength	224.26	Kg/Cm2	210.00 Kg/Cm ²	8.95	Quantity represents 25.00 Cum for two sets of cubes cast on 07/02/2020.
			235.59	Kg/Cm2			
			226.53	Kg/Cm2			
			Average	228.79			
9	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 07/02/2020. P.C.C. for foundation from Ch. 642.50 m to 667 m.	28 th day compressive strength	219.73	Kg/Cm2	210.00 Kg/Cm ²	6.79	... Do ...
			215.20	Kg/Cm2			
			237.85	Kg/Cm2			
			Average	224.26			
10	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 08/02/2020. P.C.C. for foundation from Ch. 705.70 m to 735.70 m.	28 th day compressive strength	224.26	Kg/Cm2	210.00 Kg/Cm ²	3.91	Quantity represents 28.00 Cum for two sets of cubes cast on 08/02/2020.
			219.73	Kg/Cm2			
			210.67	Kg/Cm2			
			Average	218.22			
11	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 08/02/2020. P.C.C. for foundation from Ch. 705.70 m to 735.70 m.	28 th day compressive strength	217.47	Kg/Cm2	210.00 Kg/Cm ²	4.63	... Do ...
			206.14	Kg/Cm2			
			235.59	Kg/Cm2			
			Average	219.73			
12	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 10/02/2020. P.C.C. for foundation from Ch. 735.70 m to 765.70 m.	28 th day compressive strength	253.71	Kg/Cm2	210.00 Kg/Cm ²	11.82	Quantity represents 28.00 Cum for two sets of cubes cast on 10/02/2020.
			235.59	Kg/Cm2			
			215.20	Kg/Cm2			
			Average	234.83			
13	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 10/02/2020. P.C.C. for foundation from Ch. 735.70 m to 765.70 m.	28 th day compressive strength	219.73	Kg/Cm2	210.00 Kg/Cm ²	8.23	... Do ...
			226.53	Kg/Cm2			
			235.59	Kg/Cm2			
			Average	227.28			
14	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 11/02/2020. P.C.C. for foundation from Ch. 765.70 m to 785.70 m.	28 th day compressive strength	212.93	Kg/Cm2	210.00 Kg/Cm ²	4.63	Quantity represents 20.00 Cum .
			237.85	Kg/Cm2			
			208.40	Kg/Cm2			
			Average	219.73			

SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
15	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 12 / 02 / 2020. P.C.C. for first lift from Ch. 504 m to 540 m.	28 th day compressive strength	244.65	Kg/Cm2	210.00 Kg/Cm ²	9.31	Quantity represents 30.00 Cum for two sets of cubes cast on 12/02/2020.
			212.93	Kg/Cm2			
			231.06	Kg/Cm2			
			Average	229.55			
16	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 12 / 02 / 2020. P.C.C. for first lift from Ch. 504 m to 540 m.	28 th day compressive strength	244.65	Kg/Cm2	210.00 Kg/Cm ²	12.18	... Do ...
			226.53	Kg/Cm2			
			235.59	Kg/Cm2			
			Average	235.59			
17	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 14 / 02 / 2020. P.C.C. for first lift from Ch. 570 m to 587 m.	28 th day compressive strength	224.26	Kg/Cm2	210.00 Kg/Cm ²	4.63	Quantity represents 15.00 Cum .
			226.53	Kg/Cm2			
			208.40	Kg/Cm2			
			Average	219.73			
18	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 15 / 02 / 2020. P.C.C. for first lift from Ch. 587 m to 616 m.	28 th day compressive strength	201.61	Kg/Cm2	210.00 Kg/Cm ²	16.86	Quantity represents 25.00 Cum for two sets of cubes cast on 15/02/2020.
			262.77	Kg/Cm2			
			271.83	Kg/Cm2			
			Average	245.40			
19	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 15 / 02 / 2020. P.C.C. for first lift from Ch. 587 m to 616 m.	28 th day compressive strength	203.87	Kg/Cm2	210.00 Kg/Cm ²	5.71	... Do ...
			235.59	Kg/Cm2			
			226.53	Kg/Cm2			
			Average	222.00			
20	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 17 / 02 / 2020. P.C.C. for foundation from Ch. 540 m to 570 m.	28 th day compressive strength	262.77	Kg/Cm2	210.00 Kg/Cm ²	20.09	Quantity represents 28.00 Cum for two sets of cubes cast on 17/02/2020.
			249.18	Kg/Cm2			
			244.65	Kg/Cm2			
			Average	252.20			
21	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 17 / 02 / 2020. P.C.C. for foundation from Ch. 540 m to 570 m.	28 th day compressive strength	226.53	Kg/Cm2	210.00 Kg/Cm ²	11.47	... Do ...
			231.06	Kg/Cm2			
			244.65	Kg/Cm2			
			Average	234.08			
22	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 17 / 02 / 2020. P.C.C. for first lift from Ch. 616 m to 642.50 m.	28 th day compressive strength	226.53	Kg/Cm2	210.00 Kg/Cm ²	12.90	Quantity represents 22.00 Cum for two sets of cubes cast on 17/02/2020.
			253.71	Kg/Cm2			
			231.06	Kg/Cm2			
			Average	237.10			

Junior Engineer

Assistant Engineer

SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
23	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 17 / 02 / 2020. P.C.C. for first lift from Ch. 616 m to 642.50 m.	28 th day compressive strength	260.51	Kg/Cm2	210.00 Kg/Cm ²	20.81	Quantity represents 22.00 Cum for two sets of cubes cast on 17/02/2020.
			255.97	Kg/Cm2			
			244.65	Kg/Cm2			
		Average	253.71	Kg/Cm2			
24	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 18 / 02 / 2020. P.C.C. for first lift from Ch. 540 m to 570 m.	28 th day compressive strength	226.53	Kg/Cm2	210.00 Kg/Cm ²	11.11	Quantity represents 25.00 Cum for two sets of cubes cast on 18/02/2020.
			231.06	Kg/Cm2			
			242.38	Kg/Cm2			
		Average	233.32	Kg/Cm2			
25	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 18 / 02 / 2020. P.C.C. for first lift from Ch. 540 m to 570 m.	28 th day compressive strength	222.00	Kg/Cm2	210.00 Kg/Cm ²	10.39	... Do ...
			237.85	Kg/Cm2			
			235.59	Kg/Cm2			
		Average	231.81	Kg/Cm2			
26	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 19 / 02 / 2020. P.C.C. for first lift from Ch. 642.50 m to 667 m.	28 th day compressive strength	237.85	Kg/Cm2	210.00 Kg/Cm ²	4.63	Quantity represents 20.00 Cum .
			208.40	Kg/Cm2			
			212.93	Kg/Cm2			
		Average	219.73	Kg/Cm2			
27	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 19 / 02 / 2020. P.C.C. for second lift from Ch. 540 m to 587 m.	28 th day compressive strength	253.71	Kg/Cm2	210.00 Kg/Cm ²	13.26	Quantity represents 28.00 Cum for two sets of cubes cast on 19/02/2020.
			231.06	Kg/Cm2			
			228.79	Kg/Cm2			
		Average	237.85	Kg/Cm2			
28	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 19 / 02 / 2020. P.C.C. for second lift from Ch. 540 m to 587 m.	28 th day compressive strength	255.97	Kg/Cm2	210.00 Kg/Cm ²	13.98	... Do ...
			242.38	Kg/Cm2			
			219.73	Kg/Cm2			
		Average	239.36	Kg/Cm2			
29	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 20 / 02 / 2020. P.C.C. for first lift from Ch. 705.70 m to 735.70 m.	28 th day compressive strength	240.12	Kg/Cm2	210.00 Kg/Cm ²	8.59	Quantity represents 25.00 Cum for two sets of cubes cast on 20/02/2020.
			217.47	Kg/Cm2			
			226.53	Kg/Cm2			
		Average	228.04	Kg/Cm2			
30	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 20 / 02 / 2020. P.C.C. for first lift from Ch. 705.70 m to 735.70 m.	28 th day compressive strength	235.59	Kg/Cm2	210.00 Kg/Cm ²	13.98	... Do ...
			255.97	Kg/Cm2			
			226.53	Kg/Cm2			
		Average	239.36	Kg/Cm2			

SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
31	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 21 / 02 / 2020. P.C.C. for first lift from Ch. 735.70 m to 765.70 m.	28 th day compressive strength	212.93	Kg/Cm2	210.00 Kg/Cm ²	5.35	Quantity represents 25.00 Cum for two sets of cubes cast on 21/02/2020.
			237.85	Kg/Cm2			
			212.93	Kg/Cm2			
		Average	221.24	Kg/Cm2			
32	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 21 / 02 / 2020. P.C.C. for first lift from Ch. 735.70 m to 765.70 m.	28 th day compressive strength	226.53	Kg/Cm2	210.00 Kg/Cm ²	3.55	... Do ...
			217.47	Kg/Cm2			
			208.40	Kg/Cm2			
		Average	217.47	Kg/Cm2			
33	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 22 / 02 / 2020. P.C.C. for first lift from Ch. 765.70 m to 785.70 m.	28 th day compressive strength	260.51	Kg/Cm2	210.00 Kg/Cm ²	19.74	Quantity represents 17.00 Cum .
			253.71	Kg/Cm2			
			240.12	Kg/Cm2			
		Average	251.44	Kg/Cm2			
34	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 24 / 02 / 2020. P.C.C. for second lift from Ch. 504 m to 540 m.	28 th day compressive strength	215.20	Kg/Cm2	210.00 Kg/Cm ²	6.07	Quantity represents 22.00 Cum for two sets of cubes cast on 24/02/2020.
			231.06	Kg/Cm2			
			222.00	Kg/Cm2			
		Average	222.75	Kg/Cm2			
35	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 24 / 02 / 2020. P.C.C. for second lift from Ch. 504 m to 540 m.	28 th day compressive strength	222.00	Kg/Cm2	210.00 Kg/Cm ²	5.71	... Do ...
			215.20	Kg/Cm2			
			228.79	Kg/Cm2			
		Average	222.00	Kg/Cm2			
36	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 26 / 02 / 2020. P.C.C. for second lift from Ch. 587 m to 642.50 m.	28 th day compressive strength	226.53	Kg/Cm2	210.00 Kg/Cm ²	10.03	Quantity represents 33.00 Cum for two sets of cubes cast on 26/02/2020.
			217.47	Kg/Cm2			
			249.18	Kg/Cm2			
		Average	231.06	Kg/Cm2			
37	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 26 / 02 / 2020. P.C.C. for second lift from Ch. 587 m to 642.50 m.	28 th day compressive strength	233.32	Kg/Cm2	210.00 Kg/Cm ²	12.90	... Do ...
			253.71	Kg/Cm2			
			224.26	Kg/Cm2			
		Average	237.10	Kg/Cm2			
38	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 27 / 02 / 2020. P.C.C. for second lift from Ch. 642.50 m to 735.70 m.	28 th day compressive strength	231.06	Kg/Cm2	210.00 Kg/Cm ²	10.75	Quantity represents 32.00 Cum for two sets of cubes cast on 27/02/2020.
			222.00	Kg/Cm2			
			244.65	Kg/Cm2			
		Average	232.57	Kg/Cm2			

Junior Engineer

Assistant Engineer

SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
39	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 27 / 02 / 2020. P.C.C. for second lift from Ch. 642.50 m to 735.70 m.	28 th day compressive strength	224.26	Kg/Cm2	210.00 Kg/Cm ²	10.03	Quantity represents 32.00 Cum for two sets of cubes cast on 27/02/2020.
			235.59	Kg/Cm2			
			233.32	Kg/Cm2			
		Average	231.06	Kg/Cm2			
40	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 28 / 02 / 2020. P.C.C. for second lift from Ch. 735.70 m to 785.70 m.	28 th day compressive strength	222.00	Kg/Cm2	210.00 Kg/Cm ²	10.03	Quantity represents 30.00 Cum for two sets of cubes cast on 27/02/2020.
			231.06	Kg/Cm2			
			240.12	Kg/Cm2			
		Average	231.06	Kg/Cm2			
41	Plain Cement concrete cube of mix 1 : 2 : 4 cast on 28 / 02 / 2020. P.C.C. for second lift from Ch. 735.70 m to 785.70 m.	28 th day compressive strength	231.06	Kg/Cm2	210.00 Kg/Cm ²	10.03	... Do ...
			224.26	Kg/Cm2			
			237.85	Kg/Cm2			
		Average	231.06	Kg/Cm2			

Copy to: 1. The Assistant Engineer ,SD II,WD I,WRD, Mapusa - 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