

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

Test Report No:WRD/QC/F.6-2/Cube-T-8339 To 8346,8359 To 8366,8380 To 8383,8390 To 8393,8406 To 8409,8423 To 8430,8452 To 8463 /Lab/ **382** /2019-20 Dated :-13 / 01 / 2020

Laboratory : Bicholim -Goa

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

**Name of Work:** - Improvement to the R.B.M.C. of T.I.P. by providing 100 mm thick RCC lining from Ch. 0.00 Kms To Ch, 6.020 Kms excluding Hassapur aqueduct and Kalna aqueduct between Ch.4.165 Kms To Ch. 4.227 Kms and Ch. 4.772 Kms To Ch. 5.117 Kms at Village Ankane, Hassapur and Hali in Pernem Taluka.

**Ref. to Requisition No.:** - SDI/WDVII/WRD /F.353/2019-20/ **282** Dated :-23-12-2019

Qty. Recived. :48 Sets of cubes Date of Receipt: -24 / 12 / 2019. Tested on: -06/01/2020 To 13/01/2020 as per due dates

Sample:RCC 1:1.5:3 Mix O.S No: 1466 To 1473,1481 To 1488/AF,2969 To 2972,2981 To 2984/SS,1493 To 1496/AF,3013 To 3020/SS, 1510 To 1521/AF.

Lab. Sample No.: 7334 To 7381. Tested By: -Mr.Anil R. Fadte,J.E. & Mrs. S.S.Shirodkar,J.E.

**REPORT PAGE 01 OF 07**

| SR. NO. | DISCRIPTION OF SAMPLE  |   | RESULTS        |                    | Max./Min.Value permissible | % above or below | REMARK   |
|---------|--|---|----------------|--------------------|----------------------------|------------------|--|
|         |  |   |                |                    |                            |                  |  |
| 1       | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 09/12/2019, for RCC canal lining from Ch.2230.00 to 2390.00(P32) . | 28 <sup>th</sup> day compressive strength | 326.20         | Kg/Cm <sup>2</sup> | 265.00 Kg/Cm <sup>2</sup>  | 8.85             | Qty represents - 160.00 Cum for eight sets of cubes cast on 09/12/2019 . |
|         |  |   | 267.30         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 271.83         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>288.44</b>      |                            |                  |  |
| 2       | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 09/12/2019, for RCC canal lining from Ch.2230.00 to 2390.00(P32) . | 28 <sup>th</sup> day compressive strength | 294.48         | Kg/Cm <sup>2</sup> | 265.00 Kg/Cm <sup>2</sup>  | 17.39            | -do-   |
|         |  |   | 317.14         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 321.67         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>311.10</b>      |                            |                  |  |
| 3       | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 09/12/2019, for RCC canal lining from Ch.2230.00 to 2390.00(P32) . | 28 <sup>th</sup> day compressive strength | 330.73         | Kg/Cm <sup>2</sup> | 265.00 Kg/Cm <sup>2</sup>  | 17.96            | -do-   |
|         |  |   | 323.93         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 283.16         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>312.61</b>      |                            |                  |  |
| 4       | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 09/12/2019, for RCC canal lining from Ch.2230.00 to 2390.00(P32) . | 28 <sup>th</sup> day compressive strength | 317.14         | Kg/Cm <sup>2</sup> | 265.00 Kg/Cm <sup>2</sup>  | 17.39            | -do-   |
|         |  |   | 305.81         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 310.34         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>311.10</b>      |                            |                  |  |
| 5       | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 09/12/2019, for RCC canal lining from Ch.2230.00 to 2390.00(P32) . | 28 <sup>th</sup> day compressive strength | 294.48         | Kg/Cm <sup>3</sup> | 265.00 Kg/Cm <sup>2</sup>  | 6.85             | -do-   |
|         |  |   | 271.83         | Kg/Cm <sup>3</sup> |                            |                  |  |
|         |  |   | 283.16         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>283.16</b>      |                            |                  |  |
| 6       | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 09/12/2019, for RCC canal lining from Ch.2230.00 to 2390.00(P32) . | 28 <sup>th</sup> day compressive strength | 328.46         | Kg/Cm <sup>2</sup> | 265.00 Kg/Cm <sup>2</sup>  | 13.98            | -do-   |
|         |  |   | 294.48         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 283.16         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>302.03</b>      |                            |                  |  |

Junior Engineer

Assistant Engineer

**REPORT PAGE 02 OF 07**

| SR.NO. | DISCRIPTION OF SAMPLE  | TESTED FOR                                | RESULTS       |                          | Max./Min.Value<br>permissable | % above or<br>below | REMARK   |
|--------|--|---|---------------|--------------------------|-------------------------------|---------------------|--|
| 7      | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 09/12/2019, for RCC canal lining from Ch.2230.00 to 2390.00(P32) . | 28th day compressive strength             | 305.81        | Kg/Cm <sup>3</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 17.68               | Qty represents - 160.00 Cum for eight sets of cubes cast on 09/12/2019 . |
|        |  |   | 317.14        | Kg/Cm <sup>3</sup>       |                               |                     |  |
|        |  |   | 312.61        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>311.85</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 8      | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 09/12/2019, for RCC canal lining from Ch.2230.00 to 2390.00(P32) . | 28 <sup>th</sup> day compressive strength | 321.67        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 19.10               | -do-   |
|        |  |   | 317.14        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 308.08        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>315.63</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 9      | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 10/12/2019, for RCC canal lining from Ch.2390.00 to 2550.00(P33) . | 28 <sup>th</sup> day compressive strength | 305.81        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 15.12               | Qty represents - 160.00 Cum for eight sets of cubes cast on 10/12/2019 . |
|        |  |   | 328.46        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 280.89        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>305.06</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 10     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 10/12/2019, for RCC canal lining from Ch.2390.00 to 2550.00(P33) . | 28 <sup>th</sup> day compressive strength | 337.52        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 28.79               | -do-   |
|        |  |   | 344.32        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 342.05        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>341.30</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 11     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 10/12/2019, for RCC canal lining from Ch.2390.00 to 2550.00(P33) . | 28 <sup>th</sup> day compressive strength | 332.99        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 25.94               | -do-   |
|        |  |   | 328.46        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 339.79        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>333.75</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 12     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 10/12/2019, for RCC canal lining from Ch.2390.00 to 2550.00(P33) . | 28 <sup>th</sup> day compressive strength | 283.16        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 19.96               | -do-   |
|        |  |   | 326.20        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 344.32        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>317.89</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 13     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 10/12/2019, for RCC canal lining from Ch.2390.00 to 2550.00(P33) . | 28th day compressive strength             | 332.99        | Kg/Cm <sup>3</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 25.94               | -do-   |
|        |  |   | 339.79        | Kg/Cm <sup>3</sup>       |                               |                     |  |
|        |  |   | 328.46        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>333.75</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |

Junior Engineer

Assistant Engineer

**REPORT PAGE 03 OF 07**

| SR.NO. | DISCRIPTION OF SAMPLE  | TESTED FOR                                | RESULTS       |                          | Max./Min.Value<br>permissable | % above or<br>below | REMARK   |
|--------|--|---|---------------|--------------------------|-------------------------------|---------------------|--|
| 14     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 10/12/2019, for RCC canal lining from Ch.2390.00 to 2550.00(P33) . | 28 <sup>th</sup> day compressive strength | 314.87        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 25.37               | Qty represents - 160.00 Cum for eight sets of cubes cast on 10/12/2019 . |
|        |  |   | 337.52        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 344.32        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>332.24</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 15     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 10/12/2019, for RCC canal lining from Ch.2390.00 to 2550.00(P33) . | 28 <sup>th</sup> day compressive strength | 339.79        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 27.08               | -do-   |
|        |  |   | 326.20        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 344.32        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>336.77</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 16     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 10/12/2019, for RCC canal lining from Ch.2390.00 to 2550.00(P33) . | 28 <sup>th</sup> day compressive strength | 314.87        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 23.95               | -do-   |
|        |  |   | 342.05        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 328.46        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>328.46</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 17     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 11/12/2019, for RCC canal lining from Ch.2550.00 to 2630.00(P34) . | 28 <sup>th</sup> day compressive strength | 253.71        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 3.15                | Qty represents - 80.00 Cum for four sets of cubes cast on 11/12/2019 .   |
|        |  |   | 271.83        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 294.48        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>273.34</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 18     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 11/12/2019, for RCC canal lining from Ch.2550.00 to 2630.00(P34) . | 28 <sup>th</sup> day compressive strength | 287.69        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 4.00                | -do-   |
|        |  |   | 276.36        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 262.77        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>275.61</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 19     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 11/12/2019, for RCC canal lining from Ch.2550.00 to 2630.00(P34) . | 28 <sup>th</sup> day compressive strength | 271.83        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 6.00                | -do-   |
|        |  |   | 294.48        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 276.36        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>280.89</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 20     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 11/12/2019, for RCC canal lining from Ch.2550.00 to 2630.00(P34) . | 28 <sup>th</sup> day compressive strength | 265.04        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 5.14                | -do-   |
|        |  |   | 289.95        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 280.89        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                            | <b>278.63</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |

Junior Engineer

Assistant Engineer

**REPORT PAGE 04 OF 07**

| SR.NO. | DISCRIPTION OF SAMPLE  | TESTED FOR                                      | RESULTS       |                          | Max./Min.Value<br>permissable | % above or<br>below | REMARK   |
|--------|--|---|---------------|--------------------------|-------------------------------|---------------------|--|
| 21     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 12/12/2019, for RCC canal lining from Ch.2630.00 to 2710.00(P35) . | 28 <sup>th</sup> day<br>compressive<br>strength | 274.10        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 1.44                | Qty represents - 80.00 Cum for four sets of cubes cast on 12/12/2019 . |
|        |  |   | 283.16        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 249.18        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>268.81</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 22     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 12/12/2019, for RCC canal lining from Ch.2630.00 to 2710.00(P35) . | 28 <sup>th</sup> day<br>compressive<br>strength | 303.55        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 7.14                | -do-   |
|        |  |   | 283.16        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 265.04        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>283.91</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 23     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 12/12/2019, for RCC canal lining from Ch.2630.00 to 2710.00(P35) . | 28 <sup>th</sup> day<br>compressive<br>strength | 260.51        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 3.15                | -do-   |
|        |  |   | 289.95        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 269.57        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>273.34</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 24     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 12/12/2019, for RCC canal lining from Ch.2630.00 to 2710.00(P35) . | 28 <sup>th</sup> day<br>compressive<br>strength | 299.01        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 3.72                | -do-   |
|        |  |   | 271.83        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 253.71        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>274.85</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 25     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 13/12/2019, for RCC canal lining from Ch.2710.00 to 2790.00(P36) . | 28 <sup>th</sup> day<br>compressive<br>strength | 262.77        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 1.72                | Qty represents - 80.00 Cum for four sets of cubes cast on 13/12/2019 . |
|        |  |   | 267.30        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 278.63        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>269.57</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 26     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 13/12/2019, for RCC canal lining from Ch.2710.00 to 2790.00(P36) . | 28 <sup>th</sup> day<br>compressive<br>strength | 269.57        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 3.43                | -do-   |
|        |  |   | 262.77        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 289.95        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>274.10</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 27     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 13/12/2019, for RCC canal lining from Ch.2710.00 to 2790.00(P36) . | 28 <sup>th</sup> day<br>compressive<br>strength | 283.16        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 4.00                | -do-   |
|        |  |   | 274.10        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 269.57        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>275.61</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |

Junior Engineer

Assistant Engineer

**REPORT PAGE 05 OF 07**

| SR.NO. | DISCRIPTION OF SAMPLE  | TESTED FOR                                      | RESULTS       |                          | Max./Min.Value<br>permissible | % above or<br>below | REMARK   |
|--------|--|---|---------------|--------------------------|-------------------------------|---------------------|--|
| 28     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 13/12/2019, for RCC canal lining from Ch.2710.00 to 2790.00(P36) . | 28 <sup>th</sup> day<br>compressive<br>strength | 276.36        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 4.29                | Qty represents - 80.00 Cum for four sets of cubes cast on 13/12/2019 .   |
|        |  |   | 287.69        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 265.04        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>276.36</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 29     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 14/12/2019, for RCC canal lining from Ch.2790.00 to 2950.00(P37) . | 28 <sup>th</sup> day<br>compressive<br>strength | 308.08        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 12.55               | Qty represents - 160.00 Cum for eight sets of cubes cast on 14/12/2019 . |
|        |  |   | 294.48        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 292.22        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>298.26</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 30     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 14/12/2019, for RCC canal lining from Ch.2790.00 to 2950.00(P37) . | 28 <sup>th</sup> day<br>compressive<br>strength | 321.67        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 9.99                | -do-   |
|        |  |   | 271.83        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 280.89        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>291.46</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 31     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 14/12/2019, for RCC canal lining from Ch.2790.00 to 2950.00(P37) . | 28 <sup>th</sup> day<br>compressive<br>strength | 269.57        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 12.55               | -do-   |
|        |  |   | 317.14        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 308.08        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>298.26</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 32     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 14/12/2019, for RCC canal lining from Ch.2790.00 to 2950.00(P37) . | 28 <sup>th</sup> day<br>compressive<br>strength | 301.28        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 15.12               | -do-   |
|        |  |   | 319.40        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 294.48        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>305.06</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 33     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 14/12/2019, for RCC canal lining from Ch.2790.00 to 2950.00(P37) . | 28 <sup>th</sup> day<br>compressive<br>strength | 305.81        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 14.83               | -do-   |
|        |  |   | 321.67        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 285.42        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>304.30</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 34     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 14/12/2019, for RCC canal lining from Ch.2790.00 to 2950.00(P37) . | 28 <sup>th</sup> day<br>compressive<br>strength | 299.01        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 7.71                | -do-   |
|        |  |   | 289.95        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 267.30        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>285.42</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |

**REPORT PAGE 06 OF 07**

| SR.NO. | DISCRIPTION OF SAMPLE  | TESTED FOR                                      | RESULTS       |                          | Max./Min.Value<br>permissable | % above or<br>below | REMARK   |
|--------|--|---|---------------|--------------------------|-------------------------------|---------------------|--|
| 35     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 14/12/2019, for RCC canal lining from Ch.2790.00 to 2950.00(P37) . | 28 <sup>th</sup> day<br>compressive<br>strength | 317.14        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 15.40               | Qty represents - 160.00 Cum for eight sets of cubes cast on 14/12/2019 . |
|        |  |   | 308.08        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 292.22        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>305.81</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 36     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 14/12/2019, for RCC canal lining from Ch.2790.00 to 2950.00(P37) . | 28 <sup>th</sup> day<br>compressive<br>strength | 271.83        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 6.57                | -do-   |
|        |  |   | 280.89        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 294.48        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>282.40</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 37     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 15/12/2019, for RCC canal lining from Ch.2950.00 to 3110.00(P38) . | 28 <sup>th</sup> day<br>compressive<br>strength | 276.36        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 4.29                | Qty represents - 160.00 Cum for eight sets of cubes cast on 15/12/2019 . |
|        |  |   | 265.04        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 287.69        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>276.36</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 38     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 15/12/2019, for RCC canal lining from Ch.2950.00 to 3110.00(P38) . | 28 <sup>th</sup> day<br>compressive<br>strength | 278.63        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 3.72                | -do-   |
|        |  |   | 283.16        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 262.77        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>274.85</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 39     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 15/12/2019, for RCC canal lining from Ch.2950.00 to 3110.00(P38) . | 28 <sup>th</sup> day<br>compressive<br>strength | 287.69        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 6.28                | -do-   |
|        |  |   | 289.95        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 267.30        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>281.65</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 40     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 15/12/2019, for RCC canal lining from Ch.2950.00 to 3110.00(P38) . | 28 <sup>th</sup> day<br>compressive<br>strength | 265.04        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 3.15                | -do-   |
|        |  |   | 274.10        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 280.89        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>273.34</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 41     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 15/12/2019, for RCC canal lining from Ch.2950.00 to 3110.00(P38) . | 28 <sup>th</sup> day<br>compressive<br>strength | 262.77        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 4.86                | -do-   |
|        |  |   | 280.89        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 289.95        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>277.87</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |

| SR.NO. | DISCRIPTION OF SAMPLE  | TESTED FOR                                      | RESULTS       |                          | Max./Min.Value<br>permissible | % above or<br>below | REMARK   |
|--------|--|---|---------------|--------------------------|-------------------------------|---------------------|--|
| 42     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 15/12/2019, for RCC canal lining from Ch.2950.00 to 3110.00(P38) . | 28 <sup>th</sup> day<br>compressive<br>strength | 265.04        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 5.14                | Qty represents - 160.00 Cum for eight sets of cubes cast on 15/12/2019 . |
|        |  |   | 283.16        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 287.69        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>278.63</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 43     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 15/12/2019, for RCC canal lining from Ch.2950.00 to 3110.00(P38) . | 28 <sup>th</sup> day<br>compressive<br>strength | 267.30        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 5.71                | -do-   |
|        |  |   | 283.16        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 289.95        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>280.14</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 44     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 15/12/2019, for RCC canal lining from Ch.2950.00 to 3110.00(P38) . | 28 <sup>th</sup> day<br>compressive<br>strength | 289.95        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 5.71                | -do-   |
|        |  |   | 269.57        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 280.89        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>280.14</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 45     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 16/12/2019, for RCC canal lining from Ch.3110.00 to 3190.00(P39) . | 28 <sup>th</sup> day<br>compressive<br>strength | 283.16        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 3.43                | Qty represents - 80.00 Cum for four sets of cubes cast on 16/12/2019 .   |
|        |  |   | 276.36        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 262.77        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>274.10</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 46     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 16/12/2019, for RCC canal lining from Ch.3110.00 to 3190.00(P39) . | 28 <sup>th</sup> day<br>compressive<br>strength | 260.51        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 3.43                | -do-   |
|        |  |   | 287.69        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 274.10        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>274.10</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 47     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 16/12/2019, for RCC canal lining from Ch.3110.00 to 3190.00(P39) . | 28 <sup>th</sup> day<br>compressive<br>strength | 271.83        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 1.72                | -do-   |
|        |  |   | 267.30        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 269.57        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>269.57</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |
| 48     | Reinforced Cement concrete cubes of mix 1:1.5:3 cast on 16/12/2019, for RCC canal lining from Ch.3110.00 to 3190.00(P39) . | 28 <sup>th</sup> day<br>compressive<br>strength | 278.63        | Kg/Cm <sup>2</sup>       | 265.00 Kg/Cm <sup>2</sup>     | 4.29                | -do-   |
|        |  |   | 262.77        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  |   | 287.69        | Kg/Cm <sup>2</sup>       |                               |                     |  |
|        |  | <b>Average</b>                                  | <b>276.36</b> | <b>Kg/Cm<sup>2</sup></b> |                               |                     |  |

Copy to: 1. The Assistant Engineer SD I , WD VII , WRD , Dhargal -Pernem- Goa.

2. Copy submitted to the Superintending Engineer ,CPO,WRD, Sinchai Bhavan, Porvorim Goa. For kind Information.

3. Copy submitted to the Executive Engineer ,WDVII,WRD , Dhargal - Pernem- Goa.

4. QC Lab File.      5. Bill File.

Junior Engineer

Assistant Engineer