Shreeji Technical Consultancy Service, Plot No.-12, Sitaram Nagar, Bhavnagar Road, Botad, Gujarat Laboratory

**Accreditation Standard** ISO/IEC 17025: 2005

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Validity 30.10.2017 to 29.10.2019 Last Amended on --

| SI. | Product / Material of Test | Specific Test<br>Performed | Test Method Specification against which tests are | Range of Testing /<br>Limits of Detection |
|-----|----------------------------|----------------------------|---------------------------------------------------|-------------------------------------------|
|     |                            |                            | performed                                         |                                           |

## **MECHANICAL TESTING**

| I. | BUILDING MATERIALS |                               |                    |                                              |
|----|--------------------|-------------------------------|--------------------|----------------------------------------------|
| 1. | Bituminus Mix      | Marshall Stability            | ASTM D 6927        | 200 kg to 2000 Kg                            |
|    |                    | Marshall Flow test            | ASTM D 6927        | 1.00 mm to 6.2 mm                            |
| 2. | Concrete Cube      | Compressive strength          | IS 516             | 10 N/mm <sup>2</sup> to 70 N/mm <sup>2</sup> |
|    |                    | Slump                         | IS 1199            | 1 mm to 300 mm                               |
| 3. | Aggregate:         |                               |                    |                                              |
| a. | Coarse Aggregate   | Grading of Aggregates         | IS 2386 (Part-1)   | 4.75mm to 90mm<br>(0.1% to 100%)             |
|    |                    | Specific<br>Gravity           | IS 2386 (Part-3)   | 1.50 to 3.50                                 |
|    |                    | Water Absorption              | IS 2386 (Part-3)   | 0.5% to 5%                                   |
|    |                    | Flakiness Index               | IS 2386 (Part-1)   | 5% to 40%                                    |
|    |                    | Elongation Index              | IS 2386 (Part-1)   | 5% to 40%                                    |
|    |                    | Impact value                  | IS 2386 (Part-4)   | 5% to 50%                                    |
|    |                    | Crushing Value                | IS 2386 (Part-4)   | 1% to 60%                                    |
|    |                    | Abrasion value                | IS 2386 (Part-4)   | 5% to 50%                                    |
| b. | Fine Aggregate     | Sieve analysis                | IS 2386 (Part-1)   | 150 microns                                  |
|    |                    |                               |                    | to 10 mm                                     |
|    |                    |                               |                    | (0.1% to 100%)                               |
|    |                    | Specific gravity              | IS 2386 (Part-3)   | 1.50 to 3.50                                 |
|    |                    | Water Absorption              | IS 2386 (Part-3)   | 0.5% to 5%                                   |
|    |                    | Material Finer than 75 micron | IS 2386 (Part-2)   | 0.1% to 3%                                   |
| 4. | Paver Block        | Compressive strength          | IS 15658 (Annex-D) | 5 N/mm² to 60 N/mm²                          |
|    |                    | Water absorption              | IS 15658 (Annex-C) | 1 % to 15 %                                  |
| 5. | Bricks             | Dimension                     | IS 1077            | L=4500 mm to 4700 mm<br>W=2100 mm to 2300mm  |
|    |                    | Matanakaantiaa                | 10.0405 (B-+ 0)    | H=1300 mm to 1500 mm                         |
|    |                    | Water absorption              | IS 3495 (Part-2)   | 2% to 25%                                    |
|    | -                  | Compressive strength          | IS 3495 (Part-1)   | 2.5 N/mm² to 20 N/mm²                        |
|    |                    | Efflorescence                 | IS 3495 (Part-3)   | Qualitative                                  |

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| II. | SOIL & ROCK                |                            |                                                             |                                                 |
| 1.  | Soil                       | Grain size analysis        | IS 2720 (Part-4)                                            | 75 microns to 40mm<br>(1% to 100%)              |
|     |                            | Plastic Limit              | IS 2720 (Part-5)                                            | 5% to 120%                                      |
|     |                            | Liquid Limit               | IS 2720 (Part-5)                                            | 15% to 40%                                      |
|     |                            | Light Compaction           | IS 2720 (Part-7)                                            | MDD :1g/cc to 2.10g/cc<br>OMC:5% to 40%         |
|     |                            | Heavy Compaction           | IS 2720 (Part-8)                                            | MDD :1g/cc to 2.10g/cc<br>OMC: 2% to 30%        |
|     |                            | C.B.R. Test                | IS 2720 (Part-16)                                           | 1% to 60%                                       |
|     |                            | # Direct shear Test        | IS 2720 (Part 13)                                           | C = Up to 3 kg/cm <sup>2</sup><br>Φ = 1° to 45° |