Laboratory	**Dhanvi Consultancy, Vaishano Devi Circle, Ahmedabad, Gujarat**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Certificate Number	**TC-6550**	**Page 1 of 4**	
Validity	**15.11.2017 to 14.11.2019**	**Last Amended on 14.12.2018**	

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection

MECHANICAL TESTING

I.	**BUILDING MATERIALS**			
1.	**Concrete**	Compressive strength of cubes	IS 516	5 N/mm^2 to 80 N/mm^2
		Flexural strength of Beams	IS 516	1 N/mm^2 to 8 N/mm^2
		Workability of fresh concrete (Slump)	IS 1199	10 mm to 200 mm
2.	**Bricks**	Dimension: Width	IS 1077	1650 mm to 2750 mm
		Dimension: Length		3600 mm to 5000 mm
		Dimension: Height		1200 mm to 2000 mm
		Compressive strength	IS 3495 (Part 1)	2.5 N/mm^2 to 20 N/mm^2
		Water absorption	IS 3495 (Part 2)	0.5 % to 25 %
		Efflorescence	IS 3495 (Part 3)	Qualitative
3.	**Paver Blocks**	Compressive strength	IS 15658 (Annexure D)	200 kN to 2000 kN (Size : upto 200x200mm)
		Water absorption	IS 15658 (Annexure C)	0.5 % to 25 %
4.	**Coarse Aggregate**	Sieve Analysis	IS 2386 (Part 1)	90 mm to 4.75 mm
		Elongation Index	IS 2386 (Part 1)	2.0 % to 50.0 %
		Flakiness Index	IS 2386 (Part 1)	2.0 % to 50.0 %
		Water absorption	IS 2386 (Part 3)	Upto 4.0 %
		Specific Gravity	IS 2386 (Part 3)	1 to 3
		Impact Value	IS 2386 (Part 4)	2.0 % to 60.0 %
		Abrasion Value	IS 2386 (Part 4)	2.0 % to 60.0 %
		Crushing Value	IS 2386 (Part 4)	1.0 % to 50.0 %
		10% Fines Value	IS 2386 (Part 4)	40 kN to 250 kN
5.	**Fine Aggregate**	Sieve Analysis	IS 2386 (Part 1)	10 mm to 0.075 mm
		Water absorption	IS 2386 (Part 3)	Upto 3.0 %
		Specific Gravity	IS 2386 (Part 3)	1 to 3
		Material Finer than 75micron	IS 2386 (Part 1)	1.0 % to 30.0 %

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Program Manager

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6.	**Cement**	Consistency	IS 4031 (Part 4)	10 % to 45 %
		Initial Setting Time	IS 4031 (Part 5)	30 minutes to 300 minutes
		Final Setting time	IS 4031 (Part 5)	100 minutes to 600 minutes
		Compressive strength	IS 4031 (Part 6)	10 N/mm^2 to 65 N/mm^2
		Soundness with Le-Chatelier	IS 4031 (Part 3, Clause 5)	Upto 10 mm
		Soundness by Autoclave	IS 4031 (Part 3)	Upto 1 %
		Fineness by Blainse's Air Permeability	IS 4031 (Part 2)	200 m^2/kg to 700 m^2/kg
7.	**Bitumen**	Softening Point	IS 1205	30 °C to 100 °C
		Penetration	IS 1203	10 to 200 (1/10 mm)
		Ductility	IS 1208	40 cm to 100 cm
		Absolute Viscosity	IS 1206 (Part 2)	360 poise to 5000 poise
		Kinematic Viscosity	IS 1206 (Part 3)	200 cSt to 500 cSt
		Flash and Fire point	IS 1209	200 °C to 300 °C
II.	**SOIL AND ROCK**			
1.	**Soil**	Sieve analysis By Dry method	IS 2720 (Part 4, Clause 3)	Upto 100 % (size 20 mm to 4.75 mm)
		Sieve analysis By Wet method	IS 2720 (Part 4, Clause 4)	Upto 100 % (size 4.75 mm to 0.075 mm)
		Liquid Limit	IS 2720 (Part 5)	5 % to 400 %
		Plastic Limit		5 % to 150 %
		Light Compaction	IS 2720 (Part 7)	
		Maximum Dry Density		1.2 g/cm^3 to 2.50 g/cm^3
		Optimum Moisture Content		2 % to 30.0 %
		Heavy compaction	IS 2720 (Part 8)	
		Maximum Dry Density		1.2 g/cm^3 to 2.50 g/cm^3
		Optimum Moisture Content		2 % to 30.0 %
		California Bearing Ratio	IS 2720 (Part 16)	1 % to 80.0 %
		Free swell index	IS 2720 (Part 40)	1 % to 300 %

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III.	**MECHANICAL PROPERTIES OF METALS**			
1.	**Reinforcement Steel**	Ultimate Tensile Strength	IS 1608	1.0 N/mm^2 to 800 N/mm^2
		0.2% Proof stress	IS 1608	10 N/mm^2 to 600 N/mm^2
		Elongation	IS 1608	1.0 % to 40.0 %
		Bend	IS 1599	Qualitative Mandrel Diameter: (6, 8, 10, 12, 16, 20, 25, 32)mm
		Re-bend	IS 1786	Qualitative Mandrel Diameter: (6, 8, 10, 12, 16, 20, 25, 32)mm

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NON - DESTRUCTIVE TESTING

I.	**BUILDING MATERIALS-REINFORCED CONCRETE STRUCTURE**			
1.	**Reinforced Concrete Structure**	Ultrasonic Pulse Velocity Test	IS 1331 (Part 1): 1992	1000 m/s to 5000 m/s (54 kHz)
		Rebound Hammer Test	IS 13311 (Part 2): 1992	10 to 100 Rebound no.

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