

**East West Engineering (PVT)LTD.**  
**12-01 East Tower World Trade Center Colombo 00100**

**CONCRETE MIX DESIGN DATA**  
**(British Method of Normal concrete Mixes)**

Client : Access Projects (Pvt) Ltd.

Concrete Grade: 20N

Project : Cape Weligama

Design slump : 125mm (+/-25mm)

Stage	Item	Reference of Calculation	Values			
1	1.1 characteristic strength	Specified	Comp.	20	N/mm <sup>2</sup> at	<u>28</u> Days
			Proportion defective			5 percent
	1.2 standard deviation		6	N/mm <sup>2</sup>		N/mm <sup>2</sup>
	1.3 margin	C1	<u>(k=1.64)</u>	<u>1.64</u>	<u>6</u>	9.84 N/mm <sup>2</sup>
		or specified				
	1.4 Target mean strength	C2		<u>20</u>	10	30 N/mm <sup>2</sup>
	1.5 Cement type	Specified	(OPC/SRPC/RHPC)		<u>OPC</u>	
	1.6 Aggregate type: coarse		<u>Crushed /</u>	Uncrushed		
	Aggregate type: Fine		<u>Crushed /</u>	<u>Uncrushed</u>		
1.7 Free water/cement ratio	Table2 Fig 4		0.67			
1.8 Max. Free water/cement ratio	Specified		_____			
1.9 modified water/ Cement ratio			0.53			
2	2.1 Slump or Vabe time	Specified	Slump	<u>125</u> mm	or V-B _____ s	
	2.2 Maximum aggregate size	Specified				<u>20</u> mm
	2.3 Free water content	Table 3				205 kg/m <sup>3</sup>
	2.4 Reduced water quantity					170 kg/m <sup>3</sup>
3	3.1 Cement content	C3		205	0.67	306 kg/m <sup>3</sup>
	3.2 Maximum cement content	Specified				kg/m <sup>3</sup>
	3.3 Modified cement content			170	0.53	321 kg/m <sup>3</sup>
4	4.1 Relative density of aggregate (ssd)		<u>Known /</u>	Assumed		2.7 kg/m <sup>3</sup>
	4.2 Concrete density	Fig. 5				2430 kg/m <sup>3</sup>
	4.3 Total aggregate content	C4	2430	321	170	1939 kg/m <sup>3</sup>
5	5.1 Grading of fine aggregate		Percentage passing 600 µm			35 percent
	5.2 Proportion of fine aggregate	Fig. 6				0.44 percent
	5.3 fine aggregate content	C5		1939	0.44	853 kg/m <sup>3</sup>
	5.4 Coarse aggregate content	C5		1939	853	1086 kg/m <sup>3</sup>
	5.5 Admixture 1(Adcrete) dosage	(450ml / 100 kg of cement)				1.5 Lts.
Quantities	Cement	Water	Fine agg.	C/agg. 20mm	Admix 1	Admix 2
	(kg)	(kg or Lts)..	(kg)	(kg)	Lts.	(Lts.)
per m3 (To nearest 5kg)	325	170	850	1090	1	0
per trial mix of 0.025 m <sup>3</sup>	8.125	4.25	21.25	27.25	0.0375	0

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Quality control officer