

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.
 Project : Cape Weligama

Concrete Grade: 30N
 Design slump : 125mm (+/-25mm)

Stage	Item	Reference of Calculation	Values				
1	1.1 characteristic strength	Specified	Comp.	30	N/mm ² at	<u>28</u> Days	
			Proportion defective			5 percent	
	1.2 standard deviation		6	N/mm ²		N/mm ²	
	1.3 margin	C1	<u>(k=1.64)</u>	<u>1.64</u>	<u>6</u>	9.84 N/mm ²	
		or specified					
	1.4 Target mean strength	C2		<u>30</u>	9.84	39.84 N/mm ²	
	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 / Uncrushed</u>				
1.7 Free water/cement ratio	Table2 Fig 4		0.56				
1.8 Max. Free water/cement ratio	Specified		_____				
1.9 modified water/ Cement ratio			0.45				
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 ³	
	2.4 Reduced water quantity					180 kg/m ³	
3	3.1 Cement content	C3		180	0.45	400 kg/m ³	
	3.2 Maximum cement content	Specified				kg/m ³	
	3.3 Modified cement content					400 kg/m ³	
4	4.1 Relative density of aggregate (ssd)		<u>Known / Assumed</u>			2.68 kg/m ³	
	4.2 Concrete density	Fig. 5				2430 kg/m ³	
	4.3 Total aggregate content	C4		2430	353	180	1850 kg/m ³
5	5.1 Grading of fine aggregate		Percentage passing 600 μm			30 percent	
	5.2 Proportion of fine aggregate	Fig. 6				41 percent	
	5.3 fine aggregate content	C5		1850	0.41	759 kg/m ³	
	5.4 Coarse aggregate content	C5		1850	759	1100 kg/m ³	
	5.5 Admixture 1(Adcrete) dosage	(450ml / 100 kg of cement)				1.4 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)		400	180	800	1100	1.2	0
per trial mix of 0.025 m ³		10	4.5	20	27.5	0.04	0

.....
 Quality control officer