

Table 1: Costs of Materials and Equipment

Equipment/Material	Rate	Price
Sieve Machine/ Sieves	Buy	700.00
Mixer	Buy	170.00
Compressive Strength Machine	60\$ /hr	480.00
Void Ratio Machine	20\$ /hr	140.00
Freeze-Thaw Machine	100\$ /day	2000.00
Molds	80.95\$ /36 molds	161.90
Cement	9.45\$ /bag	28.35
Aggregate	20\$ /cubic yard	28.80
Sand	4.17\$ /bag	8.34
Total		\$ 3,717.39

Table 2: Rates of Workers

Type of Worker	Rate \$/Hr
1. Senior Engineer	140
2. Project Engineer	110
3. Engineer in training	75
4. Intern/Technician	60

Table 3: Total Costs

Major Task	Subtask	Hours		Worker Fee		Type of Worker
		Fawaz	Fahad	Fawaz	Fahad	
Task 1	1.1 Meetings	20	20	2500.00	2500.00	1,2
Task 2	2.1 Project Description	4	4	370.00	370.00	2,3
	2.2 Task Breakdown	4	4	370.00	370.00	2,3
	2.3 Timeline, Staff Plan and Budget	4	4	370.00	370.00	2,3
	2.4 Final Project Proposal	7	7	647.50	647.50	2,3
Task 3	3.1 Previous Work	8	8	653.33	653.33	2,3,4
	3.2 Aggregate Gradation	8	8	653.33	653.33	2,3,4
	3.3 Mix Design	9	9	735.00	735.00	2,3,4
	3.4 Admixtures	6	6	490.00	490.00	2,3,4
Task 4	4.1 Material Preparation	8	8	480.00	480.00	4
	4.2 Testing Equipment Preparation	4	4	240.00	240.00	4
	4.3 Sieve Analysis	4	4	240.00	240.00	4
Task 5	5.1 Proportions Calculation	6	6	555.00	555.00	2,3
	5.2 Sieve Analysis	10	10	600.00	600.00	4
	5.3 Add new Admixture	6	6	490.00	490.00	2,3,4
Task 6	6.1 Specimen Production	11	11	1017.50	1017.50	3,4
Task 7	7.1 Void Ratio Test	7	7	647.50	647.50	3,4
	7.2 Compression Strength Test	8	8	740.00	740.00	3,4
	7.4 Freeze-thaw Cycle Test	8	8	740.00	740.00	3,4
Task 8	8.1 Final Data Sheet	5	5	541.67	541.67	1,2,3
	8.2 Final Mixture Formula	5	5	541.67	541.67	1,2,3
Task 9	9.1 Research Paper	20	20	2166.67	2166.67	1,2,3
	9.2 Presentation	8	8	866.67	866.67	1,2,3
	9.3 Website	10	10	925.00	925.00	2,3
	Hours per Worker	190	190	\$ 17,580.83	\$ 17,580.83	
	Total Hours	380		\$ 35,161.67		
	Equipment Total			\$ 3,717.39		
	Total Project Price			\$ 38,879.06		