



Pre-feasibility Study

MARBLE MOSAIC MANUFACTURING UNIT

January 2021

“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

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1 DISCLAIMER

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2 EXECUTIVE SUMMARY

The marble products have a developed market in Pakistan and its demand is increasing day by day. Marble Mosaic Manufacturing Unit is proposed to be located at or near the marble processing clusters and in the areas where basic infrastructure is available for easy transportation of raw material and finished goods. The products include simple mosaic borders however customized mosaics designs may also be developed on demand basis.

The proposed 'Marble Mosaic Manufacturing Unit' will comprise of the latest, grinding, engraving, cutting and polishing facilities for producing different colors and patterns of marble mosaic. The unit has an installed capacity of producing 45,000 square feet of mosaic designs per annum. The unit will operate on 8 hours single shift per day and total 300 days in a year. Initial capacity utilization is estimated at 60% per annum with a gradual increase of 5% in subsequent years to achieve the maximum operational capacity (i.e. 85%). This production capacity is estimated to be economically viable and justifies the capital as well as operational cost of the project. The commercial viability of this mosaic manufacturing facility heavily depends on the quality designs, regular orders from the customers and proximity to marble processing cluster.

The total project cost for setting up this unit is estimated at Rs. 11.207 million out of which Rs. 7.382 million is capital cost and Rs. 3.825 million is working capital. The project is proposed to be financed through 100% equity. The NPV is projected around Rs. 17.676 million, with an IRR of 41% and a Payback Period of 3.20 years. The project will provide employment opportunities to 23 people including the Owner. The legal business status of this project is assumed to be 'Sole Proprietorship'.

3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **Marble Mosaic Manufacturing Unit** by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Mosaic is a pattern or image made of small regular or irregular pieces of colored marble, stone, glass or ceramic fitted together in a place by plaster. Marble mosaics are predominantly used as floor, tessellated pavements, making borders and wall decoration.

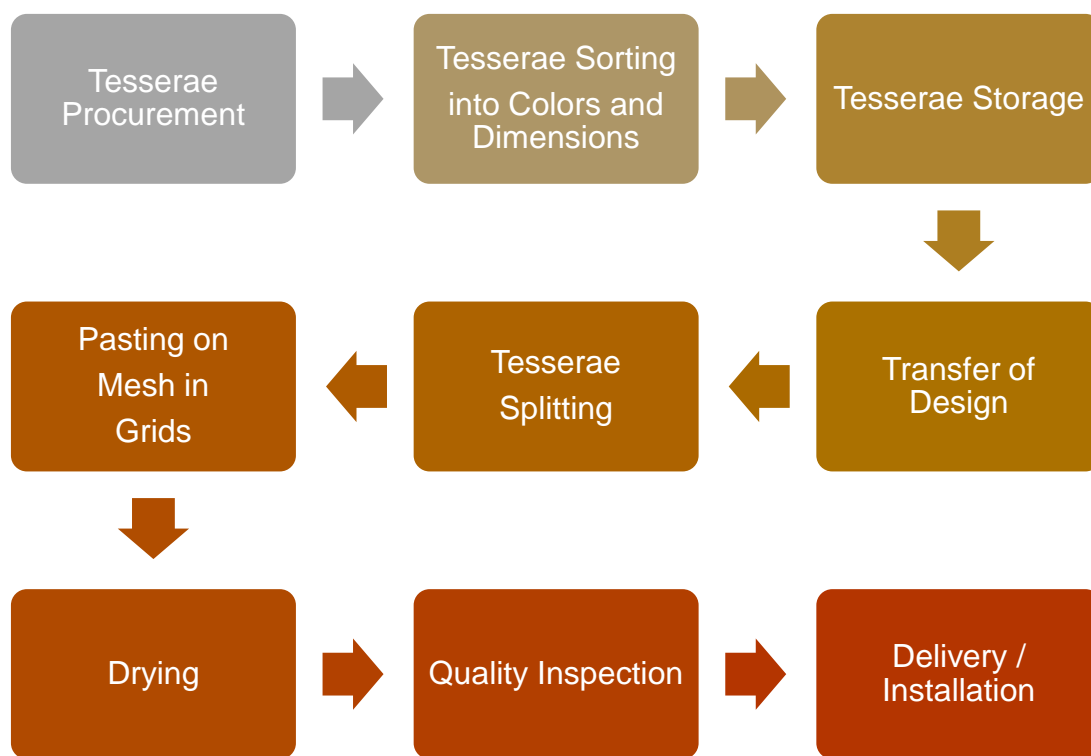
The proposed Marble Mosaic Manufacturing Unit will be equipped to design and process raw marble pieces, known as tesserae, to create mosaic pieces. The designing of patterns and shape will be done through CAD designing software, while raw marble pieces will be cut into predefined sizes and shapes to make the required mosaic. In this regard locally manufactured section machine, resizer, calibration and tumbling machines, hand cutters and polishers will be installed to produce different types, sizes and patterns of mosaics. The unit is proposed to be located nearby to marble processing clusters in KPK, Rawalpindi and Baluchistan.

The major target customers will be the housing and construction sector. Marble Mosaics can be used in the main entrances of houses, offices and hotels etc. The proposed unit will operate on order manufacturing basis from construction companies, builders and commercial contractors / traders. The Financial Analysis shows the unit will be profitable from the very first year of the operation.

5.1 Production Process Flow

The proposed project intends to use small blocks and pieces of marble called 'Tesserae' of different colors and designs for creating the mosaic art pieces. A brief of production flow process is as follows.

Figure 1: Production Process Flow



5.2 Installed and Operational Capacities

The proposed Marble Mosaic Manufacturing Unit has an installed capacity of processing and producing 45,000 square feet of mosaic designs per annum. In this regard, 10 skilled workers will be employed to process 150 square feet of mosaic design per day on 8 hours shift basis. The unit is assumed to operate 300 days per year. The unit is assumed to operate at 60% production capacity in year 1, whereas the maximum capacity utilization is worked out at 85% of the installed capacity.

Table 1: Installed and Operational Capacity

Description	Total Installed Capacity (Square Feet)	Maximum Capacity Utilization 85% (Square Feet)	Capacity Utilization, Year 1 - 60% (Square Feet)
Marble Mosaic	45,000	38,250	27,000

6 CRITICAL FACTORS

Following are the factors critical for the success of this business venture;

- ⇒ Efficient and cost-effective procurement system of raw material.
- ⇒ Technical skills are vital for effectively operating the business, as skilled workers can reduce wastage; ensure lower machine maintenance cost, in-time delivery and quality finish of the product.
- ⇒ Market knowledge and strong awareness about market trends and latest designs.
- ⇒ Availability, training, and retention of skilled labor.
- ⇒ Availability of electricity, water supply and proximity to marble processing cluster .
- ⇒ Know-how about mesh mounted products.
- ⇒ Careful selection of good location and acquiring the land at competitive rental rates.
- ⇒ Strong networking with contractors and builders for repeat orders.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The Marble and Granite industry of Pakistan has a total estimated reserve of around 160 million tons. The marble and onyx mines of Pakistan are mainly located in Baluchistan (Chaghi, Lasbela, Loralai, Mastong, and Naal), Khyber Pakhtunkhwa / FATA (Bunair, Mardan, Mohamand and Swat), Chitral, and Sindh (Dadu, Johi Range).

The major Marble and Granite processing clusters are concentrated in Gujranwala, Islamabad, Rawalpindi, Karachi, Lasbela, Lahore, Peshawar, Swat, Buner, Nowshera and Risalpur. As the production is dependent upon the easy availability of marble and onyx, therefore, the project should be established nearby to stated Marble and Onyx Mines locations or Marble and Granite processing cluster.

Resources like skilled labour, utilities, infrastructure and transportation are also easily available in these cities.

8 POTENTIAL TARGET CUSTOMERS / MARKETS.

The marble mosaic products are famous worldwide for their application in construction industry as well as for decorative purposes. They are widely used in floorings, pave ways, corridors, hotel lobbies and shopping malls. Decorative items made from Marble Mosaics are well known for its uniqueness and the natural shades/colors of marble makes it even more elusive. Therefore, construction companies, builders, acritarches, corporate offices and commercial traders of major cities are the potential customers / markets for the proposed unit.

Besides that local market, promising export markets for Onyx Mosaic are Central Asian Republics, United States of America, and Australia.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Marble Mosaic Manufacturing Unit. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are also attached as annexure.

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 31,050,000 in the year one. The capacity utilization during year one is worked out at 60%.

The following table shows internal rate of return, payback period and net present value of the proposed venture.

Table 2: Project Economics

Description	Details
Internal Rate of Return (IRR)	41%
Payback Period (Yrs.)	3.20
Net Present Value (Rs.)	17,676,173

Calculation of break-even analysis is as follows.

Table 3: Breakeven (100% Equity Based)

Break-Even Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Break Even Revenue	21,623,556	21,781,704	22,796,921	24,029,352	25,477,418	27,028,581	29,603,934	32,534,761	35,823,755	39,515,160
Break-Even Units	18,020	16,501	15,700	15,045	14,501	13,986	13,926	13,913	13,927	13,965
Margin of Safety	30%	42%	48%	52%	56%	59%	58%	57%	56%	55%

However, for the purposes of further explanation the Project Economics based on Debt:Equity (i.e. 50:50) Model has also been computed. On the basis of Debt:Equity model the Internal Rate of Return, Payback Period and Net Present Value of the proposed project are provide in the table below.

Table 4: Project Economics Based on Debt (50%):Equity (50%)

Description	Details
Internal Rate of Return (IRR)	41%
Payback Period (Yrs.)	3.23
Net Present Value (Rs.)	25,455,225

The financial assumptions for Debt:Equity are as follows:

Table 5: Financial Assumptions for Debt:Equity Model

Description	Details
Debt 50%	5,612,713
Equity 50%	5,612,713
Interest Rate on Debt	12%
Debt Tenure (Years)	5
Debt Payment / Year	1

The projected Income Statement, Cash Flow Statement and Balance Sheet, attached as annexures are based on 100% Equity Based Business Model.

9.2 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

Table 6: Project Cost

Description	Amount Rs.
Capital Cost	
Machinery & Equipment	6,453,000
Furniture & Fixture	567,000
Office Equipment	99,500
Pre-operating costs	262,500
Total Capital Cost	7,382,000
Equipment Spare Part Inventory	16,172
Raw Material Inventory	1,282,969
Upfront Building Rent	1,800,000
Cash	500,000
Upfront Insurance Payment	225,855
Total Working Capital	3,824,996
Total Project Cost	11,206,996

9.3 Space Requirement

An estimated covered area of 7,250 sq. ft. will be required for the proposed Marble Mosaic Manufacturing Unit. The space requirement is estimated considering various facilities including management office, machinery room and storage etc. In order to reduce the initial capital investment, it is recommended to start the project in a rented building. Monthly rent assumed for the project is Rs. 150,000. Details of covered area requirement for the project is given in below table:

Table 7: Space Requirement

Description	Covered Area (Sq. Ft)
Section Department	2,000
Calibration Machine	1,000
Manual Polish Room	450
Cutting And Grinding	500
Resizing / Multiblade Room	1,000
Tumbling Department	1,000

Pavements	1,000
Grounds	300
Total	7,250

9.4 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

Table 8: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Section Machine	2	270,000	540,000
Resizer / Multi Blade	1	350,000	350,000
Calibration Machine	1	1,200,000	1,200,000
Hand Cutters	14	2,500	35,000
Tumbling Machine	1	370,000	370,000
Hand Grinder Machine	14	21,500	301,000
Manual Polisher Machine	2	225,000	450,000
Generator	1	3,207,000	3,207,000
Total			6,453,000

9.5 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below.

Table 9: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Table & Chairs	3	25,000	75,000
Visitor Chairs	4	4,000	16,000
Sofas	1	24,000	24,000
Cupboard	1	15,000	15,000
Renovations & Fixtures	1	300,000	300,000
Telephones	1	2,000	2,000
Other Miscellaneous Furniture	1	50,000	50,000
Air Conditioner (1 Ton Split)	1	85,000	85,000

Total			567,000
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9.6 Office Equipment Requirement

Following office equipment will be required for the project are given below.

Table 10: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers with UPS	2	35,000	70,000
Printer and Scanner	1	29,500	29,500
Total			99,500

9.7 Raw Material requirements

'Tesserae' the small marble block in different colors and sizes are the basic raw material required for producing marble mosaics. The tesserae will be procured from the local marble processors. In addition to that glue and mesh will be the other material required. Following table provides the details of basic raw material required for the proposed unit.

Table 11: Major Raw Material Required (Year 1)

Description	Unit	Unit Cost (Rs.)	Square Ft. Produce*	Total cost (RS)
Cost of Tesserae	Sq. Ft.	550	25,875	14,231,250
Glue	Sq. Ft.	20	25,875	517,500
Mesh	Sq. Ft.	25	25,875	646,875
Total				15,395,625

* 15 Days finished goods inventory is assumed.

9.8 Human Resource Requirement

In order to run operations of Marble Mosaic Manufacturing Unit smoothly, details of human resources required along with number of employees and monthly salaries are recommended as under.

Table 12: Human Resource Requirement

Description	No. of Employees	Monthly Salary per Person (Rs.)
Owner/Manager	1	70,000

Supervisor	1	40,000
Computer Designer	1	38,000
Section Machine Operator	2	22,000
Calibration Machine Operator	1	22,000
Tumbling Machine Operator	1	20,000
Polisher Machine Operator	1	20,000
Helper	2	18,000
Skilled Labor for Mosaic Making	10	25,000
Accounts & Admin Officer	1	30,000
Resizer / Multi Blade Operator	1	35,000
Security Guard	1	17,500
Total	23	

9.9 Utilities and Other Costs

An essential cost to be borne by the project is the cost of electricity. The electricity expenses are estimated to be around Rs. 90,000 (Direct and In-direct) per month. Furthermore, promotional expense being essential for marketing of Marble Mosaic Manufacturing unit is estimated as 0.75% of Revenue.

9.10 Revenue Generation

Based on the capacity utilization of 60%, sales revenue during the first year of operations is provided in the table below.

Table 13: Revenue Generation – Year 1

Description	Qty. Produced Sq. Ft	Finish Good Inventory Sq. Ft	Qty. Sold Sq. Ft	Sale Price / Sq. Ft (Rs.)	Sales Revenue (Rs.)
Marble Mosaic	27,000	1,125	25,875	1,200	31,050,000
Total					31,050,000

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of machinery supplier is provided below.

Table 14: Machinery Suppliers

Name of Supplier	Address	Phone
Saleem & Sons Engineering	www.saleemengineering.com	+92 (42) 3653 0752

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Baluchistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jammu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
Punjab Vocational Training Council (PVTTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Pakistan Stone Development Company (PASDEC)	www.pasdec.com.pk
Pakistan Mineral Development Corporation (PMDC)	www.pmdc.gov.pk/
Mines and Mineral Development Department Government of Punjab	www.mnm.punjab.gov.pk/

Mineral Development Department Government of KPK	www.minerals_developmen.kp.gov.pk/
Mines and Mineral Development Department Government of Sindh	www.smd.gov.pk/Minerals.aspx
Mines and Mineral Development Department Government of Baluchistan	www.balochistan.gov.pk/departments/mines-and-minerals/
Zakiah Marble	www.zakiahmarble.com
Smb Marble	www.smbmarble.com

12 ANNEXURES

12.1 Income Statement

Calculations										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	31,050,000	37,611,563	43,552,617	50,173,265	57,542,027	65,733,878	70,837,540	76,150,356	81,861,632	88,001,255
<i>Cost of sales</i>										
Cost of goods sold 1	14,231,250	17,238,633	19,961,616	22,996,080	26,373,429	30,128,027	32,467,206	34,902,246	37,519,915	40,333,908
Cost of goods sold 2	1,164,375	1,410,434	1,633,223	1,881,497	2,157,826	2,465,020	2,656,408	2,855,638	3,069,811	3,300,047
Direct labour	5,604,000	6,149,613	6,748,348	7,405,377	8,126,375	8,917,571	9,785,798	10,738,557	11,784,078	12,931,392
Machinery maintenance	388,125	481,078	570,023	671,947	788,555	921,765	1,016,433	1,118,076	1,229,884	1,352,872
Direct electricity	1,080,000	1,287,000	1,524,600	1,796,850	2,108,304	2,464,080	2,710,488	2,981,537	3,279,691	3,607,660
Direct water	28,721	35,600	42,182	49,724	58,353	68,211	75,216	82,738	91,011	100,113
Total cost of sales	22,496,471	26,602,358	30,479,993	34,801,476	39,612,842	44,964,674	48,711,549	52,678,793	56,974,390	61,625,993
Gross Profit	8,553,529	11,009,205	13,072,624	15,371,790	17,929,184	20,769,203	22,125,991	23,471,563	24,887,242	26,375,262
<i>General administration & selling expenses</i>										
Administration expense	1,866,000	2,047,676	2,247,041	2,465,816	2,705,892	2,969,341	3,258,440	3,575,686	3,923,820	4,305,849
Building rental expense	1,800,000	1,980,000	2,178,000	2,395,800	2,635,380	2,898,918	3,188,810	3,507,691	3,858,460	4,244,306
Water expense	149,280	163,814	179,763	197,265	216,471	237,547	260,675	286,055	313,906	344,468
Travelling expense	111,960	122,861	134,822	147,949	162,353	178,160	195,506	214,541	235,429	258,351
Communications expense (phone, fax, mail, internet, etc.)	186,600	204,768	224,704	246,582	270,589	296,934	325,844	357,569	392,382	430,585
Office expenses (stationary, entertainment, janitorial services, etc)	373,200	409,535	449,408	493,163	541,178	593,868	651,688	715,137	784,764	861,170
Promotional expense	232,875	209,588	188,629	169,766	152,789	137,510	123,759	111,383	100,245	90,221
Insurance expense	225,855	203,270	180,684	158,099	135,513	112,928	90,342	67,757	45,171	22,586
Professional fees (legal, audit, consultants, etc.)	50,000	55,000	60,500	66,550	73,205	80,526	88,578	97,436	107,179	117,897
Depreciation expense	721,900	721,900	721,900	721,900	721,900	737,254	737,254	737,254	737,254	737,254
Amortization of pre-operating costs	52,500	52,500	52,500	52,500	52,500	-	-	-	-	-
Miscellaneous expense 1	186,600	204,768	224,704	246,582	270,589	296,934	325,844	357,569	392,382	430,585
Subtotal	5,956,770	6,375,679	6,842,656	7,361,971	7,938,360	8,539,920	9,246,741	10,028,078	10,890,993	11,843,271
Operating Income	2,596,759	4,633,526	6,229,968	8,009,818	9,990,824	12,229,283	12,879,250	13,443,485	13,996,249	14,531,991
Other income (interest on cash)	77,635	146,280	248,327	377,363	536,896	731,390	952,844	1,186,884	1,429,669	1,808,998
Earnings Before Interest & Taxes	2,674,394	4,779,806	6,478,295	8,387,181	10,527,721	12,960,673	13,832,094	14,630,369	15,425,918	16,340,989
Earnings Before Tax	2,674,394	4,779,806	6,478,295	8,387,181	10,527,721	12,960,673	13,832,094	14,630,369	15,425,918	16,340,989
Tax	304,879	853,942	1,387,403	2,055,513	2,804,702	3,656,235	3,961,232	4,240,629	4,519,071	4,839,346
NET PROFIT/(LOSS) AFTER TAX	2,369,515	3,925,864	5,090,892	6,331,668	7,723,019	9,304,438	9,870,861	10,389,740	10,906,847	11,501,643

12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	2,150,000	4,060,827	7,641,539	12,224,618	17,964,438	24,987,277	33,523,951	42,703,547	52,247,164	62,126,347	82,593,479
Finished goods inventory		978,107	1,111,996	1,273,791	1,454,101	1,654,845	1,878,131	2,029,648	2,194,950	2,373,933	2,567,750
Equipment spare part inventory	16,172	21,047	26,185	32,411	39,937	49,018	56,755	65,552	75,712	87,448	-
Raw material inventory	1,282,969	1,709,498	2,177,480	2,759,338	3,481,051	4,374,286	5,185,302	6,131,620	7,250,640	8,573,882	-
Pre-paid building rent	150,000	165,000	181,500	199,650	219,615	241,577	265,734	292,308	321,538	353,692	-
Pre-paid insurance	225,855	203,270	180,684	158,099	135,513	112,928	90,342	67,757	45,171	22,586	-
Total Current Assets	3,824,996	7,137,749	11,319,383	16,647,906	23,294,654	31,419,929	41,000,215	51,290,431	62,135,175	73,537,887	85,161,228
<i>Fixed assets</i>											
Machinery & equipment	6,453,000	5,807,700	5,162,400	4,517,100	3,871,800	3,226,500	2,581,200	1,935,900	1,290,600	645,300	-
Furniture & fixtures	567,000	510,300	453,600	396,900	340,200	283,500	226,800	170,100	113,400	56,700	-
Computer equipment	99,500	79,600	59,700	39,800	19,900	-	141,016	105,762	70,508	35,254	-
Total Fixed Assets	7,119,500	6,397,600	5,675,700	4,953,800	4,231,900	3,510,000	2,949,016	2,211,762	1,474,508	737,254	-
<i>Intangible assets</i>											
Pre-operation costs	262,500	210,000	157,500	105,000	52,500	-	-	-	-	-	-
Total Intangible Assets	262,500	210,000	157,500	105,000	52,500	-	-	-	-	-	-
TOTAL ASSETS	11,206,996	13,745,349	17,152,583	21,706,706	27,579,054	34,929,929	43,949,232	53,502,193	63,609,683	74,275,141	85,161,228
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		719,766	876,732	1,025,614	1,194,679	1,386,703	1,592,748	1,739,886	1,898,725	2,074,559	1,848,774
Total Current Liabilities	-	719,766	876,732	1,025,614	1,194,679	1,386,703	1,592,748	1,739,886	1,898,725	2,074,559	1,848,774
<i>Other liabilities</i>											
Deferred tax		(550,927)	(1,226,523)	(1,912,175)	(2,540,560)	(3,104,729)	(3,595,909)	(4,060,946)	(4,502,036)	(4,919,258)	(5,309,029)
Total Long Term Liabilities	-	(550,927)	(1,226,523)	(1,912,175)	(2,540,560)	(3,104,729)	(3,595,909)	(4,060,946)	(4,502,036)	(4,919,258)	(5,309,029)
<i>Shareholders' equity</i>											
Paid-up capital	11,206,996	11,206,996	11,206,996	11,206,996	11,206,996	11,206,996	11,206,996	11,206,996	11,206,996	11,206,996	11,206,996
Retained earnings		2,369,515	6,295,379	11,386,272	17,717,940	25,440,959	34,745,397	44,616,258	55,005,998	65,912,845	77,414,488
Total Equity	11,206,996	13,576,511	17,502,375	22,593,267	28,924,935	36,647,954	45,952,392	55,823,253	66,212,994	77,119,841	88,621,484
TOTAL CAPITAL AND LIABILITIES	11,206,996	13,745,349	17,152,583	21,706,706	27,579,054	34,929,929	43,949,232	53,502,193	63,609,683	74,275,141	85,161,228

12.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		2,369,515	3,925,864	5,090,892	6,331,668	7,723,019	9,304,438	9,870,861	10,389,740	10,906,847	11,501,643
Add: depreciation expense		721,900	721,900	721,900	721,900	721,900	737,254	737,254	737,254	737,254	737,254
amortization of pre-operating costs		52,500	52,500	52,500	52,500	52,500	-	-	-	-	-
Deferred income tax		(550,927)	(675,596)	(685,651)	(628,385)	(564,169)	(491,180)	(465,038)	(441,089)	(417,223)	(389,771)
Finished goods inventory		(978,107)	(133,888)	(161,795)	(180,310)	(200,744)	(223,287)	(151,517)	(165,302)	(178,983)	(193,817)
Equipment inventory	(16,172)	(4,875)	(5,138)	(6,225)	(7,526)	(9,081)	(7,737)	(8,797)	(10,161)	(11,735)	87,448
Raw material inventory	(1,282,969)	(426,529)	(467,982)	(581,858)	(721,713)	(893,235)	(811,016)	(946,318)	(1,119,021)	(1,323,242)	8,573,882
Pre-paid building rent	(150,000)	(15,000)	(16,500)	(18,150)	(19,965)	(21,962)	(24,158)	(26,573)	(29,231)	(32,154)	353,692
Advance insurance premium	(225,855)	22,586	22,586	22,586	22,586	22,586	22,586	22,586	22,586	22,586	22,586
Accounts payable		719,766	156,966	148,882	169,064	192,025	206,045	147,138	158,840	175,834	(225,785)
Cash provided by operations	(1,674,996)	1,910,827	3,580,711	4,583,080	5,739,819	7,022,839	8,712,945	9,179,596	9,543,616	9,879,183	20,467,132
<i>Financing activities</i>											
Issuance of shares	11,206,996	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	11,206,996	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(7,382,000)	-	-	-	-	-	(176,270)	-	-	-	-
Cash (used for) / provided by investing activities	(7,382,000)	-	-	-	-	-	(176,270)	-	-	-	-
NET CASH	2,150,000	1,910,827	3,580,711	4,583,080	5,739,819	7,022,839	8,536,674	9,179,596	9,543,616	9,879,183	20,467,132

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Communication Expenses	10% of Administration Expenses
Travelling Expenses	6% of Administration Expenses
Promotional Expenses	0.75% of Revenues
Operating Expense Growth Rate	10%
Depreciation Method	Straight Line
Depreciation Rate for Furniture & Fixtures and Office Equipment	10% Each
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%

13.2 Production Assumptions

Description	Details
Days Operational / Year	300
No of Shifts 1 Shift	1 Shift
Production Capacity Utilization in First Year	60%
Percentage Increase in Production Capacity	5%
Maximum Production Capacity Utilization	85%
Raw Material Cost Per Square Feet (Rs.)	595

13.3 Revenue Assumptions

Description	Details
Sale Growth Price	7.5%
Sale Price Per Square Feet (Rs.)	1,200
Square Feet Sold – Year 1	25,875
Finished Goods Inventory – Year 1	1,125

Small and Medium Enterprises Development Authority

HEAD OFFICE

4th Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road, Lahore
Tel: (92 42) 111 111 456, Fax: (92 42) 36304926-7

www.smeda.org.pk, helpdesk@smeda.org.pk

REGIONAL OFFICE PUNJAB	REGIONAL OFFICE SINDH	REGIONAL OFFICE KPK	REGIONAL OFFICE BALOCHISTAN
3 rd Floor, Building No. 3, Aiwan-e-Iqbal Complex, Egerton Road Lahore, Tel: (042) 111-111-456 Fax: (042) 36304926-7 helpdesk.punjab@smeda.org.pk	5 TH Floor, Bahria Complex II, M.T. Khan Road, Karachi. Tel: (021) 111-111-456 Fax: (021) 5610572 helpdesk-khi@smeda.org.pk	Ground Floor State Life Building The Mall, Peshawar. Tel: (091) 9213046-47 Fax: (091) 286908 helpdesk-pew@smeda.org.pk	Bungalow No. 15-A Chaman Housing Scheme Airport Road, Quetta. Tel: (081) 831623, 831702 Fax: (081) 831922 helpdesk-qta@smeda.org.pk