Prestige Fir Flooring:

<u>Business Plan</u>



Submitted to: Dr. Rob Kozak

Submitted by: Tim Kester Ryan Lush Jake Power Aaron Racher

Wood 465

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Executive Summary

Prestige Fir Flooring is being developed in response to an environmental problem brought forward by the University of British Columbia's (UBC) Alex Fraser Research Forest (AFRF), located near Williams Lake BC. Across large portions of AFRF, the structure and distribution of Douglas-fir stands has changed due to fire suppression. These changes have resulted in stands that have an increased fire hazard, decreased productivity, and provide poor mule deer winter habitat. As a result, AFRF has undertaken a process of thinning out the small diameter Douglas-fir trees in these stands.

As markets for these logs are non-existent, they can be purchased at discount prices and exhibit many of the qualities desirable in fine flooring. Having access to fine quality wood at low prices puts Prestige Fir Flooring at a distinct competitive advantage, and allows the company to sell the product for prices that lead to high profit margins, while maintaining low overhead costs. Prestige Fir Flooring will produce high quality softwood flooring that has many qualities similar to hardwood flooring, and offer the products to consumers at competitive prices.

The development of this company coincides with a boom in residential and commercial construction. Due to this increase in building starts in North America, the flooring market is continuing to grow. In particular, the wood flooring industry has been increasing its market share in the flooring industry. Prestige Fir Flooring will use its high-quality, affordable prices, and strong industry experience to achieve a strong position in this market.

Prestige Fir Flooring will have one owner, who will also act as the head of sales, President and General Manager. He has many years experience in the secondary wood products industry, and will employ highly skilled workers in the plant who operate in a team-oriented environment. It is imperative to the success of Prestige Fir Flooring that every member of the production team understands the entire production process. In the past, the flooring market has placed a lower value on softwoods than hardwoods, because of the differences in density and appearance. Most high-quality Douglas-fir flooring sold has typically been from slow grown, tight grained old-growth trees, with fast grown second-growth trees making up the lower end of the market. The Douglas-fir that will be used by Prestige Fir Flooring has properties similar to old-growth Douglas-fir, with very dense tight grains, and can be marketed as an environmentally friendly, affordable, high-end product.

An analysis of the financial viability of this business venture shows extreme promise. Low overhead costs combined with healthy revenues allows Prestige Fir Flooring to experience high profit margins, even in the early stages of the company during which high sales numbers could be difficult to achieve.

Based on the plant running at a very manageable 85% of capacity, Prestige Fir Flooring will earn monthly profits in excess of \$30,000, and will clear \$500,000 by the end of the first year. The business will also be in a very strong position with regards to debt. Start-up costs are budgeted at \$600,000, with \$385,000 going directly into the purchase of capital equipment. Based on conservative loan and interest payments, this debt will be abolished within two years of inception.

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1.0 Company Description

1.1 Background

Prestige Fir Flooring (PFF) will be a value-added wood products company that specializes in the utilization of small-diameter, high-quality interior Douglas-fir sawlogs for the manufacture of high-end tongue-and-groove flooring. PFF will be privately owned and operated, and located in Williams Lake in the central interior of British Columbia. This company will work in partnership with the University of British Columbia's Alex Fraser Research Forest (AFRF), which will be providing PFF with their log supply.

AFRF is located in a very dry part of the province, where frequent small fires have traditionally occurred across the landscape. These frequent fires served to maintain the natural structure of the Douglas-fir stands in the area, but as a result of almost 100 years of fire suppression by the BC Forest Service, these stands are losing their structure.

The interior Douglas-fir forests maintained by fire used to consist of stands that had clumps of trees, with a few small fir trees growing under large Douglas-firs with large canopies and heavy branching. Because of the exclusion of fire, these stands now contain many smaller trees and the clumpy distribution is being lost. Managers at AFRF are attempting to restore the traditional structure to these stands for a number of reasons. The current structure of these forests leaves them especially vulnerable to fire. With the high number of small closely-spaced trees providing a continuous fuel supply, a little spark could lead to a large-scale wildfire.

Besides reducing the risk of fire, thinning these small trees provides habitat for mule deer

(*Odocoilus hemionus*). Large portions of the Alex Fraser Research Forest are included in the mule deer winter range habitat area that has been designated by the province. Mule deer rely on large Douglas-fir trees with lots of heavy branching to intercept snow and provide thermal protection. By removing some of the small Douglas-fir trees, the residuals are able to grow to sizes that provide the necessary winter habitat for the deer.



Figure 1 - Mule Deer

The large increase in the number of trees, and their distribution across the landscape, also decreases the amount of water and nutrients available for the larger trees. The result is that these stands are now both unproductive for timber, and provide poor habitat for mule deer.

Currently, thinning operations are being done without any market for these logs, as they are too small for the traditional primary processing industry in BC (*i.e.* dimensional lumber for residential construction); however, the material is a desirable species of high quality, and this business proposition intends to take advantage of these qualities.

1.2 Location

The company will be located in Williams Lake, B.C. This location provides fast and easy access to the company's supply of logs at the AFRF. The AFRF is located about 30 minutes from 150 Mile House, which is about 10 minutes from Williams Lake. The location also provides easy access to BC, Alberta, and Washington State, all of which can be reached by truck in two days or less.

1.3 Business Philosophy

From the beginning, PFF will be committed to a program of continuous improvement in safety, quality, production, and service. This philosophy will be the basis for all decisions made by the management of this company.

1.3.1 Mission Statement

"Manufacturing environmentally friendly, high-quality Douglas-fir flooring, while promoting forest health and sustainability"

1.3.2 Vision Statement

We will be a world-class organization -- one that becomes a benchmark for other organizations; one that impresses its customers the first time and every time; and one that fully empowers its employees and lets them know that they are an integral part of our success.

1.3.3 Value Statement

Our values:

- Reliability
- Sustainability
- IntegritySafety
- Profitability

1.4 Objectives

As a company, PFF will have several objectives it will meet through its business activities. The objectives are as follow:

- ✓ Utilize small-diameter, slow-grown Douglas-fir sawlogs
- ✓ Create high-quality tongue-and-groove wood flooring
- ✓ Employ enthusiastic and motivated workers from the local community
- ✓ Restore natural forest structure to interior Douglas-fir stands at AFRF
- ✓ Operate in a sustainable manner

1.5 Management Structure

PFF will be managed as a flat organization. The manager, who will also be the owner, will oversee the entire operation. The manager's duties will be to ensure operations run smoothly, and he will also be responsible for sales and promotion. All other employees will report directly to the supervisor, who will oversee day-to-day operations at the mill. The company will require 9 employees to work with the manager:

- Mill operators (2 hourly employees)
- Finishing equipment operators (2 hourly employees)
- Labourers (4 hourly employees)
- Secretary/book keeper (1 salary employee)

The two mill operators will be required to operate and maintain the two band mills, and one of them will be chosen as the supervisor in the absence of the owner. As the primary breakdown of the logs entering the mill determines the quality and recovery of merchantable wood from the logs, the sawyers must be skilled and experienced.

Two workers are required to operate the wide belt sander, 5-head moulder, and chop saw. The four labourer's duties will include forklift driving, shipping, receiving, packaging, and general plant maintenance and upkeep. In the office, there will be an immediate need for a secretary with bookkeeping and accounting skills.

The services of several outside professionals will be required to operate the company, as certified accountants, bankers, and lawyers will be employed as needed. The plant will also require external services, such as mechanical contracts with forklift and mill equipment companies.

1.6 Legal Information

PFF will be incorporated as a small business with one owner. The company will remain private for the foreseeable future, and shares will not be made available to the general public.

2.0 Industry, Markets, and Sales

2.1 Target Markets

The target market for our product will be home owners and builders who wish to renovate or build with high-quality flooring products. Our product is aimed at mid- to high-end consumers who wish to incorporate the prestige and warmth of real wood flooring into their homes.

Initially, the product will only be offered in BC, Alberta, and Washington State. At startup, we will be able to supply a medium-sized customer base, with possible expansion planned as demand for the product grows.

2.2 The Industry

The residential and non-residential construction and renovation markets have been, and continue to be, quite strong across North America. With interest rates projected to remain low and experts forecasting a positive economic outlook, this demand should persist. This strong construction market has led to large growth in North American flooring sales. In 1999, the Canadian flooring market increased by a real growth rate of 11.8% to US\$677.7 million and continues to grow (Patlan 2000). Currently, wood flooring accounts for approximately 7% of the flooring market, and its market share is expected to continue to increase over the next five years.

Wood flooring is considered to be the high-end flooring product of choice for beauty, durability, and ease of maintenance. Traditionally, the wood flooring industry has been located in eastern North America, as most flooring is made from the hardwood species of the region. These hardwood species are generally more resistant to impacts and wear than the softwood species of BC; however, the slow grown Douglas-fir of the central interior of BC has similar properties to hardwood species.

2.3 Marketing Mix

2.3.1 Product

Our product line will include two sizes of Douglas-fir flooring, which can be stained to suit customers' demands. The finished product will be available in either 2 ¹/₄" or 3 ¹/₄" widths, both of which will be ³/₄" thick, and is shown in Figure 2 to the right. Lengths will vary as boards will be sawn in order to remove knots and other imperfections, which is standard procedure for flooring manufacturers.

Our Douglas-fir flooring will provide a warm and rich atmosphere to any room in which it is installed. It appeals to the high-end market, and is durable and



Figure 2 - Douglas-fir Floor Plank

long-lasting. PFF Douglas-fir flooring possesses the appearance and upscale quality many people are looking for, and features tight knots and rich color variation. The wood has very tight grain, which increases the strength of the flooring and makes it dentresistant.

The wood used in our flooring comes from environmentally sound sources and is being

harvested for forest health reasons. Our fir comes from stunted trees that were culled to restore forest health and reduce the chance of catastrophic wildfires. The stunted growth of these trees has resulted in the tight grain that adds strength and character to our product.

Not only does this product provide the warmth and richness that high-end consumers are seeking when they buy wood flooring, as seen in Figure 3,



Figure 3 - Example of Douglas-fir Flooring

it also provides ecological benefits and customers can feel good about purchasing PFF Douglas-fir flooring.

A by-product of our operations will also provide additional income to the company. In order to deal with waste, PFF will sell all the off-cuts and sawdust to Pinnacle Pellet Inc., who will use it to create wood stove pellets. Pellets are comprised of sawdust, shavings, and other wood waste leftover from the processing of other secondary wood products. More than 500,000 homes in North America rely on fuel pellets for heating, with those being produced in BC being of the highest quality.

Pinnacle Pellet has a plant in Williams Lake, and will coordinate the removal of the material. They are currently paying \$5.00 per oven-dry tonne of waste. This provides a stable, long-term method for waste removal.

2.3.2 Pricing Strategy

Prices for Douglas-fir flooring range from \$2.50 to \$6.00, depending on the different qualities and sizes. As we are producing high quality flooring that has high durability, we will be selling our products starting at \$5.00 per square foot for flooring with a clear finish. This price will allow us to obtain a sizable market share based on price, and will also permit us to secure high profit margins on orders (see section 5.1).

To maintain simplicity in the budget, it was assumed that all flooring would be sold at this price. There will, however, be a small portion of our product that will sell for up to \$6.00. This increase in price will result from customized finishing, as we will offer custom staining to clients, which requires extra drying time and labour.

2.3.3 Placement

Our chain of responsibility begins when the wood is delivered to the plant. We are responsible for any damage or product loss from the time the logs are unloaded off the trucks to the time the customer receives the finished product. Once the raw materials arrive at our plant, they will remain there until they have been fully manufactured into finished product. They will be packaged and shipped from the plant to intermediaries or end users.

We will focus our resources on the residential market and sell our products through two major distribution channels. We will sell directly to big-box retailers, such as Home Depot, Rona Home & Garden, Dick's Lumber, and The Finishing Store, who will provide us with reliable consistent customers. We will also sell to quality home manufacturers, in particular log home manufacturers such as Williams Lake-based Pioneer Log Homes, whose customers demand high-quality and unique products.

2.3.4 Promotion

We will be promoting our product line as a high-quality, durable flooring option that is easy to maintain and available in a variety of finishes. In helping to promote our product to interested consumers, we will provide an extensive warranty program. Our flooring will carry a warrantee of 25 years against defects in workmanship and damage due to dimensional instability. We will also market our flooring as an environmentally friendly and sustainably harvested wood product.

As a part of our marketing campaign, we will provide the flooring material for several of Pioneer Log Homes' show homes free of charge. We will also provide and install our flooring in the Vancouver Children's Hospital Lottery show homes, and the PNE Prize Home. These houses combined are visited by hundreds of thousands of people every year, and this will provide great exposure for our product.

We will also rent booths at trade shows, and provide retail outlets with samples of our product and point-of-purchase promotional items, such as pamphlets. The bulk of our sales will come from personal sales, requiring a sales representative to visit the aforementioned retailers and distributors.

2.4 Competition

There are many different types of floor coverings available to homeowners today. Traditional products such as carpet, ceramics, and vinyl form a large portion of the marketplace, as seen in Figure 4 below, but there is a strong demand for wood flooring products.



Figure 4 - Market Share of Various Types of Flooring (US)

2.4.1 Carpet

Some properties of carpet that makes it desirable to homeowners include comfort, reduced noise, sound-dampening, and safety. Carpets offer a warm surface, especially in areas with colder climates where floors can become very cold to the touch, and provide a non-slip surface in rooms where it is installed. Carpet is available in many textures, colours, and designs, which make it adaptable for use in various situations.

2.4.2 Ceramic Tile

Ceramic tile provides an elegant and contemporary appearance. There are thousands of unique designs and tile finishes available, which allows homeowners to create the looks that they desire. Tiles can be laid in various geometric patterns and have contrasting colors and subtle detailing, which allows for many different design possibilities (theflooringsite.com). Tiles are the most resilient and damage resistant of all floor coverings (exclusivefloors.ca).

2.4.3 Vinyl Flooring

Vinyl flooring, also called linoleum or resilient flooring, offers easy maintenance, is durable, and can keep its look for years. Although vinyl flooring products have improved, inexpensive vinyl flooring may not last as long as hardwood floors and laminate floors.

2.4.4 Hardwood Flooring

Solid hardwood flooring products have a loyal consumer base that ensures it will remain popular for the foreseeable future (theflooringsite.com), and there is an upscale market that creates demand for the product. Hardwood floors have been in use for a long time, and have garnered a high level of prestige. Hardwood floors are considered warm, natural, and are long lasting. They also have a solid wood feel that laminate floors can not duplicate.

2.4.5 Laminate Flooring

Laminate flooring is durable, and offers long-term value if care is taken in maintaining it. There are products available that look just like real wood floors, stone flooring, or ceramic tile floors. Laminates are a cheaper alternative to solid wood flooring, but do not provide the warmth or character that solid wood flooring does. Once the surface of a laminate floor is damaged or worn, the laminate must be replaced.

2.5 Marketplace Position

A "Strengths, Weaknesses, Opportunities and Threats (SWOT)" analysis of our business is displayed below, in order to further analyze PFF's position in the marketplace.

Strengths

- High quality, strong, and durable product
- Unlimited supply of raw materials
- Environmentally sustainable product
- Skilled management and labour force
- Low raw material costs

Weaknesses

- High expectations of initial sales
- Distance from major markets (Greater Vancouver, Calgary, Seattle)
- Lack of technology used in processing

Opportunities

- Current Housing and renovation boom
- Growing market for environmentally sustainable products
- New building for the 2010 Winter Olympic Games
- Develop partnerships with quality home builders

Threats

- Low cost substitutes in the marketplace
- Poor public perception of softwood flooring quality compared to hardwood

PFF recognizes the above weakness and threats exist; however, through thoughtful marketing strategies, sound management, and vigorous quality control, they can be reduced. We will be producing a quality product at competitive prices, and feel that our customers will be influenced by the environmental sustainability of our product.

3.0 Operations Management

3.1 Harvesting Overview

AFRF is the only supplier of logs to PFF and has agreed to supply logs at cost. The small diameter Douglas-fir logs will be harvested and hauled to the plant for a cost of approximately \$50 per cubic meter. The delivered log cost can be broken down as follows:

•	Logging to Roadside:	\$33 / cubic meter
•	Loading and Hauling:	\$12 / cubic meter
•	Layout and Administration:	\$4.75 / cubic meter
	Chambre a set	\$0.25 / aubia matar

• Stumpage: \$0.25 / cubic meter

There exists a surplus of small diameter Douglas-fir logs in the AFRF, which can sustain PFF for more than 50 years based on commercial thinning alone. Over time, as PFF grows and more logs are needed, suitable trees can be secured from the many thousands of hectares of similar forest that exist in the Williams Lake area.

3.2 Facility Layout

PFF will require a facility of approximately 10,000 sq ft in size to accommodate all of the equipment, a kiln, and a small office. Leasing such a facility is desirable over purchasing a mill, in order to limit the initial capital expenditure that would be required. PFF is currently in communication with Tolko Industries over the rental of part of the former Riverside Forest Products milling facilities that are not being used since the companies merged.

3.3 Manufacturing Plan

PFF will run a standard 40 hour work week at inception. It is not anticipated that extra shifts will be added in the near future, but that is a possibility based on increased demand and production capabilities. The plant is expected to run 52 weeks of the year, with allowances for statutory holidays and equipment down-time. A total of 49 full weeks should be easy to achieve, which results in approximately 1960 production hours per year.

Inventory will be controlled on a FIFO (first in first out) system. This is especially important when dealing with the logs and processed lumber, as it will still be susceptible to disease, rot, and decay at these points.

3.4 Sales, Order Entry, and Customer Service

Sales, order entry, and customer service will be handled by the manager and secretary. As mentioned previously, personal sales will be the dominant form of sales for PFF, as most orders will come from a limited number of repeat customers. The satisfaction of each customer is vital to the company's success, and therefore excellent customer service must be maintained.

4.0 Financial Plan

4.1 Source of Revenue

Based on some market research and cost analysis, we were able to determine a selling price of \$5.00 per square foot for the flooring. Douglas-fir flooring typically sells for between \$3.00 and \$10.00, depending on its characteristics. Because the logs we will be harvesting have a very slow growth rate, they will have a high density and will look much like the old-growth flooring that commands the higher prices.

One other small source of revenue is the sale of our waste to a company that manufactures heating pellets for wood stoves. This is more of a method to remove waste than it is a way to generate extra revenue. Waste can be sold for \$5.00 per oven dry ton, and we estimate that we will produce approximately 500 tons of useable waste per year. This will generate revenue of approximately \$2,500.

4.2 Estimated Sales

Our mill will be capable of producing about 520,000 board feet per year. A board foot is an industry unit of measure used to describe a piece of wood 12" by 12" by 1" thick. This figure is based on our slowest piece of equipment (the band saws) producing at a rate of 1000 board feet each per day, for a total output of 2000 board feet per day. This rate will be sustained for approximately 260 work days per year. For budget purposes, we will assume that the plant will be able to run at 85% capacity, bringing our yearly total output to 442,000 board feet. Our finished product will be sold with a thickness of 3/4", but prior to sanding and planing it will be closer to a full inch. Because of this, we can assume that our production will be 442,000 square ft per year. We plan on using approximately 10% of our first year's production for marketing purposes, as we will be providing flooring free of charge to show homes. That leaves enough inventory to generate a total sales amount of \$2,000,000.

4.3 Cost of Goods Sold

The raw logs we will be processing at the mill will be provided to us at a rate of \$50 per cubic meter. Based on a conversion factor of 1 cubic meter of input producing 221 board feet of finished flooring output (this is the conversion rate used by Tembec, a flooring company from eastern Canada), and an annual production of approximately 442,000 board feet, we can estimate that we will require approximately 2,000 cubic meters of raw logs annually. The cost of 2,000 cubic meters of delivered logs will be \$100,000.

The flooring requires a coat of protective clear coat finish. This coat is commonly sold to contractors at a tax and eco-levy inclusive price of no more than \$25 per gallon. Assuming coverage of 400 square feet per gallon, our coating costs should run no higher than \$28,000 for the first year of operations.

The product will be shipped on trucks to our target areas in British Columbia, Alberta, and Washington. We allocated \$60,000 for shipping based on a rate of \$40 per hour. It is estimated that we will ship 5,000 square feet of product per truck, and the average trip will take about 20 hours (including loading and unloading).

An additional \$36,000 was allocated for packaging the finished products. The packaging is very expensive for our wood flooring, because it could be easily damaged by forklifts and must be well protected. Our packages will contain 25 square feet of product, and we will be shipping them in groups of 20 packages per pallet.

4.4 Equipment and Start-up Costs

In order to begin production, it is estimated that the company will require an initial capital investment of \$600,000. This money will be split up three ways:

- 1. \$385,000 to purchase the required plant equipment.
- 2. \$75,000 to renovate and set up office and equipment.
- 3. \$140,000 to pay for initial operating costs and provide supplemental cash flow.

4.5 Break-even Analysis

We measured the break-even point using two different methods. First, we determined the amount of product we would have to sell in order to cover just our operating and fixed costs for Year 1. To break even, we would need to sell approximately 215,500 square feet of flooring, which is just over 41% of our annual capacity.

Second, we determined the amount of product we would have to sell in order to cover our operating, fixed, and capital costs in Year 1. To cover our costs and pay off our equipment purchases and plant setup in the first year, we would have to sell approximately 319,000 square feet of flooring, which is about 61% of our annual capacity.

4.6 Cash Flow

Assuming an output rate of 85%, we predict that we will be able to consistently produce a monthly profit of just over \$30,000 after making payments of \$30,000 against our loans. Following this formula, we will be able to reduce our debt to \$240,000 by the end of Year 1.

Our monthly profit should increase marginally each month as we reduce our debt and interest payments, which are estimated to be twice the prime rate. The exact breakdown of month to month cash flow can be seen in Appendix 2. In that table, it is evident that at the end of Year 1 our cash holdings will be significantly larger than at the start of the year, which along with payment of debts, should provide us with an opportunity for expansion within 2 years.

5.0 References

- BC Pellet Fuel Manufactures Association. 1996. About Wood Pellets and Pellet Heat [online]. Available at: http://www.pellet.org/about.html [Cited April 5, 2005].
- Blanchet, P. 2004. Technology Profile. Wood-Based Flooring Products Market Trends [online]. Forintek Canada Corp. Value to Wood Coordinator. Available at: www.valuetowood.ca [Cited April 4, 2005].
- Broughton, C. 2005. Personal Interview: Manager, The finishing Store. Victoria BC.
- Day, K. 2005. Lecture in Wood 465: Mule Deer Winter Range Small Diameter Douglasfir on Alex Fraser Research Forest. March 10, 2005. University of British Columbia, Vancouver, BC.
- Howe, J and Bratkovich, S. 1995. A Planning Guide for Small and Medium Size Wood Products Companies: The Keys to Success. United States Department of Agriculture.
- Industry Canada. 2003. Technology Roadmap: Lumber and Value-Added Wood Products [online]. Available from http://strategis.ic.gc.ca/epic/internet/infiif.nsf/en/fb01315e.html [Cited April 4, 2005].
- Kozak, R. 2005. Lecture in Wood 465: Business Management in the Wood Industry. February 24, 2005. University of British Columbia, Vancouver, BC.
- Patlan, R. 2000. Flooring Products [online]. Industry Canada. Available from http://strategis.ic.gc.ca/epic/internet/inimr-ri3.nsf/en/gr-96655e.html [Cited April 3, 2005].

Appendix 1 – Equipment Costs

2 Band mills	\$70,000
Chop saw	\$300
Four sided moulder	\$60,000
Kilns	\$100,000
Forklift	\$10,000
Water jet debarker	\$10,000
Wide belt sander	\$70,000
Truck	\$30,000
Miscellaneous equipment	\$10,000
Office furniture and supplies	\$25,000
Total Equipment Purchase	\$385,300

 Table 1 - Breakdown of Equipment Purchase Costs

Appendix 2 – Financial Analysis

	<u>January</u>	February	March	<u>April</u>	<u>May</u>	<u>June</u>
Revenue						
Loans	\$ 140,000.00	\$-	\$-	\$-	\$-	\$-
Sales	\$ 166,666.67	\$ 166,666.67	\$ 166,666.67	\$ 166,666.67	\$ 166,666.67	\$ 166,666.67
Waste sales	\$ 208.33	\$ 208.33	\$ 208.33	\$ 208.33	\$ 208.33	\$ 208.33
Asset sales	\$-	\$-	\$-	\$-	\$-	\$-
Total Cash in	\$ 306,875.00	\$ 166,875.00	\$ 166,875.00	\$ 166,875.00	\$ 166,875.00	\$ 166,875.00
Expenses						
Cost of goods sold						
Raw materials	\$ 8,333.33	\$ 8,333.33	\$ 8,333.33	\$ 8,333.33	\$ 8,333.33	\$ 8,333.33
Shipping costs	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00
Coatings	\$ 2,333.33	\$ 2,333.33	\$ 2,333.33	\$ 2,333.33	\$ 2,333.33	\$ 2,333.33
Fixed costs						
Labour	\$ 47,500.00	\$ 47,500.00	\$ 47,500.00	\$ 47,500.00	\$ 47,500.00	\$ 47,500.00
Rent / Mortgage	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
Utilities / Hydro	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
Phone / Fax / Internet	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
Marketing	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
Travel	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Insurance	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00
Licenses	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00
Maintenance and parts	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
Interest payments	\$ 5,000.00	\$ 4,750.00	\$ 4,500.00	\$ 4,250.00	\$ 4,000.00	\$ 3,750.00
Payment on loan	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Total Cash out	\$ 135,366.67	\$ 135,116.67	\$ 134,866.67	\$ 134,616.67	\$ 134,366.67	\$ 134,116.67
Total monthly Profit	\$ 31,508.33	\$ 31,758.33	\$ 32,008.33	\$ 32,258.33	\$ 32,508.33	\$ 32,758.33
Total Cash Balance	\$ 171,508.33	\$ 203,266.67	\$ 235,275.00	\$ 267,533.33	\$ 300,041.67	\$ 332,800.00
Total debt	\$ 570,000.00	\$ 540,000.00	\$ 510,000.00	\$ 480,000.00	\$ 450,000.00	\$ 420,000.00

	July	August	<u>September</u>	October	November	December	Year End
Revenue							
Loans	\$-	\$-	\$-	\$-	\$-	\$-	\$ 140,000.00
Sales	\$ 166,666.67	\$ 166,666.67	\$ 166,666.67	\$ 166,666.67	\$ 166,666.67	\$ 166,666.67	\$ 2,000,000.00
Waste sales	\$ 208.33	\$ 208.33	\$ 208.33	\$ 208.33	\$ 208.33	\$ 208.33	\$ 2,500.00
Asset sales	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Total Cash in	\$ 166,875.00	\$ 166,875.00	\$ 166,875.00	\$ 166,875.00	\$ 166,875.00	\$ 166,875.00	\$ 2,142,500.00
Expenses							
Cost of goods sold							
Raw materials	\$ 8,333.33	\$ 8,333.33	\$ 8,333.33	\$ 8,333.33	\$ 8,333.33	\$ 8,333.33	\$ 100,000.00
Shipping costs	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 8,000.00	\$ 96,000.00
Coatings	\$ 2,333.33	\$ 2,333.33	\$ 2,333.33	\$ 2,333.33	\$ 2,333.33	\$ 2,333.33	\$ 28,000.00
Fixed costs							\$-
Labour	\$ 47,500.00	\$ 47,500.00	\$ 47,500.00	\$ 47,500.00	\$ 47,500.00	\$ 47,500.00	\$ 570,000.00
Rent / Mortgage	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 120,000.00
Utilities / Hydro	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 60,000.00
Phone / Fax / Internet	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 2,400.00
Marketing	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 60,000.00
Travel	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 12,000.00
Insurance	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 24,000.00
Licenses	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 72,000.00
Maintenance and parts	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 60,000.00
Interest payments	\$ 3,500.00	\$ 3,250.00	\$ 3,000.00	\$ 2,750.00	\$ 2,500.00	\$ 2,250.00	\$ 43,500.00
Payment on loan	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 360,000.00
Total Cash out	\$ 133,866.67	\$ 133,616.67	\$ 133,366.67	\$ 133,116.67	\$ 132,866.67	\$ 132,616.67	\$ 1,607,900.00
Total monthly Profit	\$ 33,008.33	\$ 33,258.33	\$ 33,508.33	\$ 33,758.33	\$ 34,008.33	\$ 34,258.33	\$ 394,600.00
Total Cash Balance	\$ 365,808.33	\$ 399,066.66	\$ 432,575.00	\$ 466,333.33	\$ 500,341.66	\$ 534,600.00	\$ 534,600.00
Total debt	\$ 390,000.00	\$ 360,000.00	\$ 330,000.00	\$ 300,000.00	\$ 270,000.00	\$ 240,000.00	\$ 240,000.00