Project Summary

Foam Concrete Blocks and Prefab Concrete Products.

SINO ESTATE AND MANAGEMENT INCORPORATION

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Company Name

SINO ESTATE AND MANAGEMENT INCORPORATION

Company Profile

SINO ESTATE AND MANAGEMENT INCORPORATION focuses on the development and sale of innovative building materials, primarily producing foam concrete, committed to introducing environmentally friendly and energy-efficient building materials to the market. The company has a research, construction, and management team to efficiently operate and meet market demands through technological innovation.

Company Mission

The company's mission is to continually research and improve foam concrete technology, promote its advantages to the public, and drive its widespread application in the construction field. With efficiency and environmental friendliness as the foundation, we aim to provide customers with outstanding products and services.

Prepared by:

Mahendra Salikram

Project Accountant

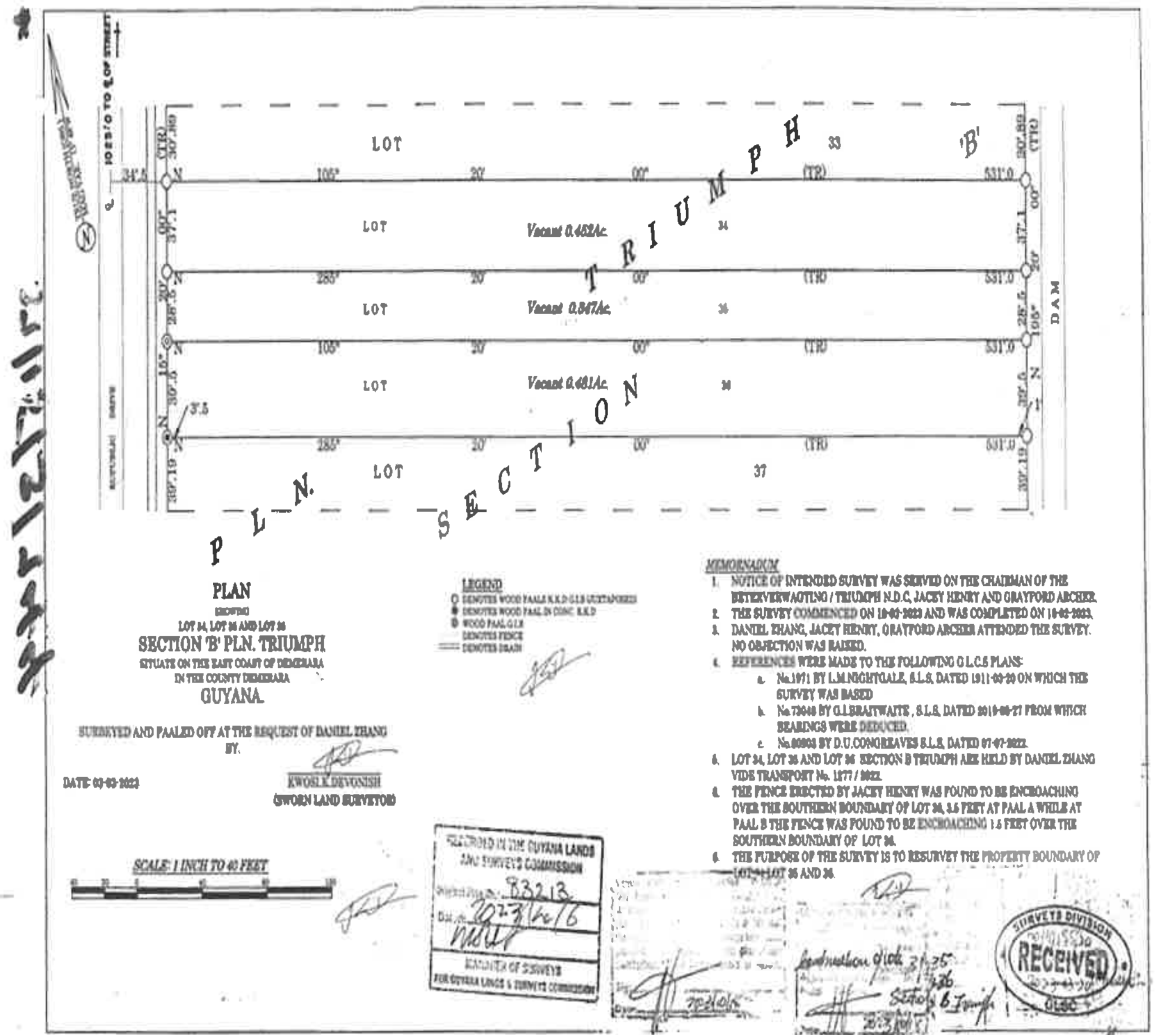
2025.03.11

Site Description

The company director presently owns the land at Lot 34-36 in Section 'B' Triumph Backland, East Coast Demerara where the project will be developed, comprising a total land space of 159.3 meters in length and 31.53 meters in width. However, the project will only utilize land spaces 24 meters in length and 25.2 meters in width. The land presently has some amount of overgrowth grass and small trees. North and South areas have residential property, and the East and West are not occupied. Due to the main road at Republic Drive discharge structure will have to be developed. The services of GWI are available and will be applied for soonest.

Map of the area at present

Site Plan


LOT
LOT
LOT
LOT
LOT
Vacant 0.452Ac.
Vacant 0.347Ac.
Vacant 0.481Ac.
33
37
'B'
DAM
PLN. SECTION TRIUMPH
PLAN
SECTION 'B' PLN. TRIUMPH
SITUATE ON THE EAST COAST OF DEMERARA
IN THE COUNTY DEMERARA
GUYANA.
SURVEYED AND PAALED OFF AT THE REQUEST OF DANIEL ZHANG
BY.
KWOSI K. DEVONISH
(SWORN LAND SURVEYOR)
SCALE: 1 INCH TO 40 FEET
LEGEND
DENOTES WOOD PAAL IN CONC. K.K.D
DENOTES FENCE
DENOTES DRAIN
MEMORANDUM
1. NOTICE OF INTENDED SURVEY WAS SERVED ON THE CHAIRMAN OF THE BETERVERWAGTING / TRIUMPH N.D.C, JACEY HENRY AND GRAYFORD ARCHER.
3. DANIEL ZHANG, JACEY HENRY, GRAYFORD ARCHER ATTENDED THE SURVEY. NO OBJECTION WAS RAISED.
4. REFERENCES WERE MADE TO THE FOLLOWING G.L.C.S PLANS:
a. No.1971 BY L.M.NIGHTGALE, S.L.S, DATED 1911 ON WHICH THE SURVEY WAS BASED
b. BY G.I.BRAITHWAITE, S.L.S, FROM WHICH BEARINGS WERE DEDUCED.
c. BY D.U.CONGREAVES S.L.S, DATED
THE FENCE ERECTED BY JACEY HENRY WAS FOUND TO BE ENCROACHING OVER THE SOUTHERN BOUNDARY OF LOT AT PAAL A WHILE AT PAAL B THE FENCE WAS FOUND TO BE ENCROACHING 1.5 FEET OVER THE SOUTHERN BOUNDARY OF LOT
THE PURPOSE OF THE SURVEY IS TO RESURVEY THE PROPERTY BOUNDARY OF
AND SURVEYS COMMISSION
83213
SURVEYS DIVISION
RECEIVED

Products and Services

A) Raw Materials and Manufacturing Process

The products to be manufactured include 4-8 inches concrete blocks, concrete boards and prefab concrete products. The factory to be powered from GPL grid and the services of a generator will be used as backup in cases of power outage. The company will construct its own well however the services of Guyana Water Incorporated will be used as back up. The factory will need the services of telephone and internet service providers.

The composition of foam concrete raw materials includes:

- **Foaming agent**: Selected for stability and no adverse effects on the setting and hardening of cementitious materials, ensuring the foam does not rupture when mixed with mortar.
- **Aggregate**: Lightweight aggregate is used to make the cement slurry structure denser, significantly improving the compressive strength of foam concrete.
- **Admixtures**: Use dispersants, waterproofing agents, hydrophobic agents, early strength agents, and accelerators to accelerate the formation process of foam concrete structure, enhance slurry structure stability and strength development.
- **Water**: Control the water-cement ratio of the cement slurry, significantly affecting the pore structure and compressive strength of foam concrete.
- **Foaming solution**: Affecting the pore morphology of foam concrete, ensuring the formation of small, closed pores.
- **Polymer emulsion**: Adding polymer emulsion improves the shrinkage performance and pore structure of foam concrete, enhancing compressive strength.

Production Line Equipment: Includes loading systems, mixing systems, stirring systems, pumping systems, control systems, and cutting systems.

- Production Raw Materials: Includes powdered coal, slag, electric furnace slag, desulfurized gypsum, cement, additives, etc.

• Working Capital: For fund turnover, business entertainment, and unforeseen circumstances leading to fund loss.

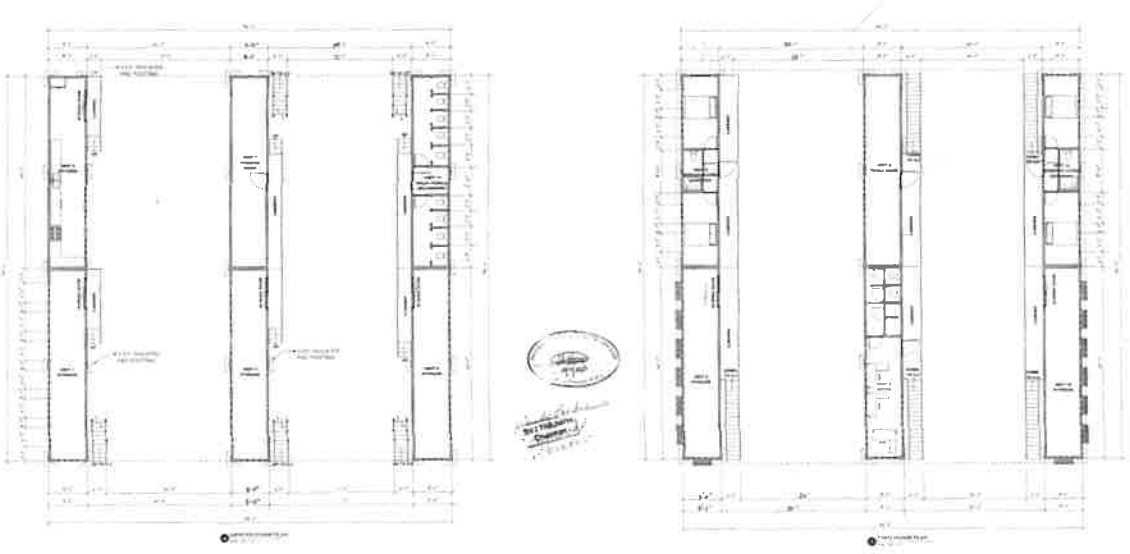
• Fixed Assets: For factory construction and the purchase of necessary equipment. Includes opening-related documents, government approvals, and advertising investment costs.

Volume and Types of Raw Materials

The company will be using on average 80 cubic meters of sand, 174 cubic meters of cement, lightweight aggregates 20 tons, 40 liters of foaming agent monthly .

The sand and aggregates will be stored in a general shed area and partially covered with tarpaulin. Cement will be stored along with the foaming agent in a 40-foot seal container.

Map for Construction of the factory



Phases in the construction of the Foam Concrete block factory

Stages	Time	Workforce
Land Clearing and Filling	1 week	3 Persons
Rolling and Levelling	2 days	2 persons
Delivery of 40 foot containers	2 days	3 persons
Installing and construction of containers	I week	5 persons
cement and small aggregates	2 days	2 persons
Construction of onsite water well	3 days	5 persons
Installation of factory equipment	2 days	6 persons
Test run	1 day	5 persons
Production	1 day	10 persons

Project Size

Phase	Value of Investment	Summary of Activity
1	$ 25 million	Land clearing, Production line equipment includes loading systems, mixing and stirring systems.
2	$ 5 Million	Sourcing of raw materials cement, sand foam etc.
3	$ 10 Million	Working capital requirements (production expenses and utilities etc)
4	$ 20 Million	Government and Licensing Approvals, Factory construction and equipment
5	$ 5 Million	Testing and Production commence
Total	$65 Million	

Estimated production is pegged at on average 4 inches blocks 8000 pieces monthly, 6000 pieces 6 inches monthly, 4000 pieces 8-inch blocks and prefab concrete products 125 pieces of various sizes.

Means of Storage and Disposal

Products used by the company will be stored strictly according to environmental standards and done in such a way that it will result in minimal impact on neighbors and the environment.

Sand and aggregates will be stored under the general shed area, cement and foaming agent in a 40-foot sealed container. The cement bags are the only item that will need disposal which the services of the Puran Brothers disposal service will be used in addition to collection from the local Triumph/ Beterverwagting NDC services. As a last resort the company will have its own canter truck to dispose of waste at the dumpsite.

There will be minimal effect on the environment in the operation of this project. No disturbances to the land will take place as there will be no excavation in the area for construction as the factory will be housed inside the 40-foot containers.

Water

A precise amount of ground water will be used as per mixing requirement. Stop valves will be installed to prevent wastage of ground water usage. The company, as part of the future plan will harness rainwater to supplement the factory.

Noise

Minimal amount of noise will likely come from the use of the generator whenever there is a power outage. The generator will be kept in a enclosed area plus it has the silent technology as part of Its features.

Air

We do anticipate a small amount of air pollution due to the storage of the sand that will be used to make concrete products. The sand will be stored in an enclosed area however, a sudden burst of high wind can cause a small amount of sand to blow into the atmosphere. As an extra precaution for this we will employ the use of tarpaulin to cover the sand to prevent disturbance.

Brief description of process to be done.

a) Manufacturing Process:

- **Foam preparation**: Use a foaming machine's foaming system to mix the foaming agent with water to generate foam.
- **Substrate cleaning**: According to design and technical requirements, clean the substrate to determine thickness and high-low points.
- **Foam concrete production**: Mix foam with cement slurry, aggregate, admixtures, etc., to form foam concrete slurry.
- **Casting**: Use an automatic pouring machine to cast the foam concrete slurry into the predetermined shape.
- **Curing**: Properly cure the cast foam concrete to ensure it reaches the design strength and performance.

Inspection: Through rigorous quality inspection, ensure the produced foam concrete products meet relevant standards and customer requirements.

b) Main Equipment:

- **Automatic feeding machine**: Enables the automatic input of raw materials, improving production efficiency.
- **Automatic mixing machine**: Precisely mixes raw materials to ensure uniform slurry.
- **Magnesium mixing machine**: Used for mixing cement slurry and aggregate to guarantee foam concrete quality.
- **Automatic pouring machine**: Achieves automated pouring of foam concrete, improving construction efficiency.
- **Molding machine**: Preliminarily shapes the cast foam concrete.
- **Cutting machine:** Precisely cuts the formed foam concrete to meet various size and shape requirements.

- **Foam mixing tube, high-pressure conveying tube, pump**: Used to convey foam concrete slurry, ensuring smooth construction.

c) Finished concrete products will be placed under shed area and sunlight for maximum curing and bulk sales.