

PROJECT SUMMARY

CITI ENTERPRISE

Project Proposal to Install and Operate Facility to Produce Precast Concrete Fence Panels, Columns, Footing, and Prefabricated Corrugated Metal Buildings at Lot 5 Lot "E" Content, Mahaica ECD

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CEO

CITI Enterprise

Lot 5 Lot "E" Content

Mahaica, ECD

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INTRODUCTION

“The global precast concrete market size was estimated at USD 96.3 billion in 2021 and is expected to register a compound annual growth rate (CAGR) of 5.5% over the forecast period. The market is expected to be driven by the expanding construction industry across major regions owing to the increasing investments in infrastructure development. The increasing disposable income levels in developing as well as developed countries are expected to boost the residential construction segment. In addition, increasing initiatives by various governments for the development of their respective economies are also expected to boost the construction industry, augmenting the product demand in the years to come.” (Source:<https://www.grandviewresearch.com/industry-analysis/precast-concrete-market>)

Guyana has recently discovered significant offshore oil reserves, estimated to be worth over 8 billion barrels. This will lead to an economic boom in the medium to long term, with opportunities arising in 2020 and beyond for Guyanese businesses to profit from the development of the energy sector.

Guyana -a rapidly developing nation- has a tremendous building and rebuilding infrastructural works to be done with limited or diminished local capacity and expertise.

This industry is still, at best, a niche market in Guyana's economy currently. The shortage of locally skilled workforce coupled with the rapid increase in demand for various building products is a recipe for instant success for precast and prefabricated building products to quickly respond to such demand.

Precast concrete and Prefabricated Steel building are structurally and financially dependent and make a very strong case to be a producer, manufacturer, and supplier of product lines from both profitability and logistics perspectives.

Infrastructural and capital works directly and indirectly related to oil and gas alone require foreign and international intervention due to a lack of local capacity and expertise in almost all sectors. The demand for various precast prestressed concrete and prefabricated building products will only increase, and dramatically, hence an ideal opportunity right now for CITI Enterprise.

PROJECT OVERVIEW

The proposed operation is as follows:

- 1. A small capacity concrete batch mixing plant to be installed in the main building with ample ventilation and dust-capturing equipment. Plant capacity: 25 m³/h, Power requirement: 35-40Kw*
- 2. Concrete casting bed (40ft x 200ft)- a large area of building floor space to be used to cast and lay concrete products for curing and then storage until sold.*
- 3. Steel roll-forming building panel production line in the main building. Power Requirement: 30Kw*
- 4. Retail area for product display and sales with associated spaces for staff and administrative purposes.*
- 5. Dedicated floor space for staff recreation, lunch breaks, restrooms, social events, etc.*

6. 120ft x 90ft main entrance and parking space for customers to avoid roadside parking and traffic congestion and noise pollution.
7. 15ft wide paved concrete driveway for heavy equipment access to the rear of the building to avoid traffic congestion and hazards close to the main road.
8. A concrete platform at the rear of the building for heavy equipment and machinery parking, storage, repairs, and general maintenance. This area is at a more-than-safe distance away from the residential building on the Eastern boundary.

CUSTOMERS

Residential owners, general building contractors, subcontractors, and government agencies for applications in the construction, industrial, mining, marine, forestry, oil and gas, and agricultural sectors.

MISSION STATEMENT

To make high-quality and modern building products and materials accessible and affordable to all Guyanese across all sectors.

PRINCIPAL MEMBER

Harrinarine Ramlall (Sanjay), M.Sc.- Owner, CEO, and Mechanical Engineer - Will be responsible for all initial and day-to-day planning, designing, and operations management. Diverse background and work experience in agriculture, heavy machinery, Mechanical engineering, manufacturing, IT Process engineering, and Entrepreneurship.

LEGAL STRUCTURE

- ◆ *Sole Proprietorship at startup*
- ◆ *To become incorporated within two years or at startup if deemed necessary.*

PRODUCT/SERVICE LINES

Precast Concrete

- ◆ *Precast Concrete Panels for partition walls, fences, boundary, and utility walls.*
- ◆ *Precast Concrete Columns for partition walls, fences, boundary, and utility walls.*
- ◆ *Precast Concrete Footing for partition walls, fence, boundary, and utility walls.*
- ◆ *Fence, boundary, utility wall panel, and column delivery and installation services.*

Prefabricated Corrugated Steel Building

- ◆ *Prefabricated corrugated metal building of various shapes and sizes for all applications.*
- ◆ *On-site Prefabricated arch structure metal structure building delivery and installation*

Fence, Boundary/Utility wall delivery and installation

- ◆ Deliver and install purchased fence material and products.

Corrugated Metal Building Delivery and Installation

- ◆ Metal buildings will be designed, prefabricated on site, and delivered and installed at customers' locations. The building will be shaped using roll-forming machinery and equipment on site.

PROPOSED SITE LOCATION

The proposed venture is to be located on privately owned land at Lot 5 of Lot "E" Content Mahaica ECD. The entire property, highlighted with a yellow border in the google maps screenshot below, is 28.25 acres and runs from the main public road to the Bellamy Canal and rip-rap sea defense dam. The site to be developed, highlighted with a red border in the google maps screenshot, is the first acre of land from the main public road measuring 120ft x 360ft (43560 sq. ft)

Existing Bordering Proximities:

- ◆ South: the main public road and residential dwellings on the opposite side of the road
- ◆ East: Mixed-used residential, commercial/Industrial (Chicken Farm, Welding, Rice Farming)
- ◆ North: Bellamy Canal, Rip-rap Sea defense dam, and the Atlantic Ocean
- ◆ West: Private property access dam, drainage canal connecting to Bellamy canal. The Bellamy Canal drains into the Mahaica Creek about three miles east of the property.

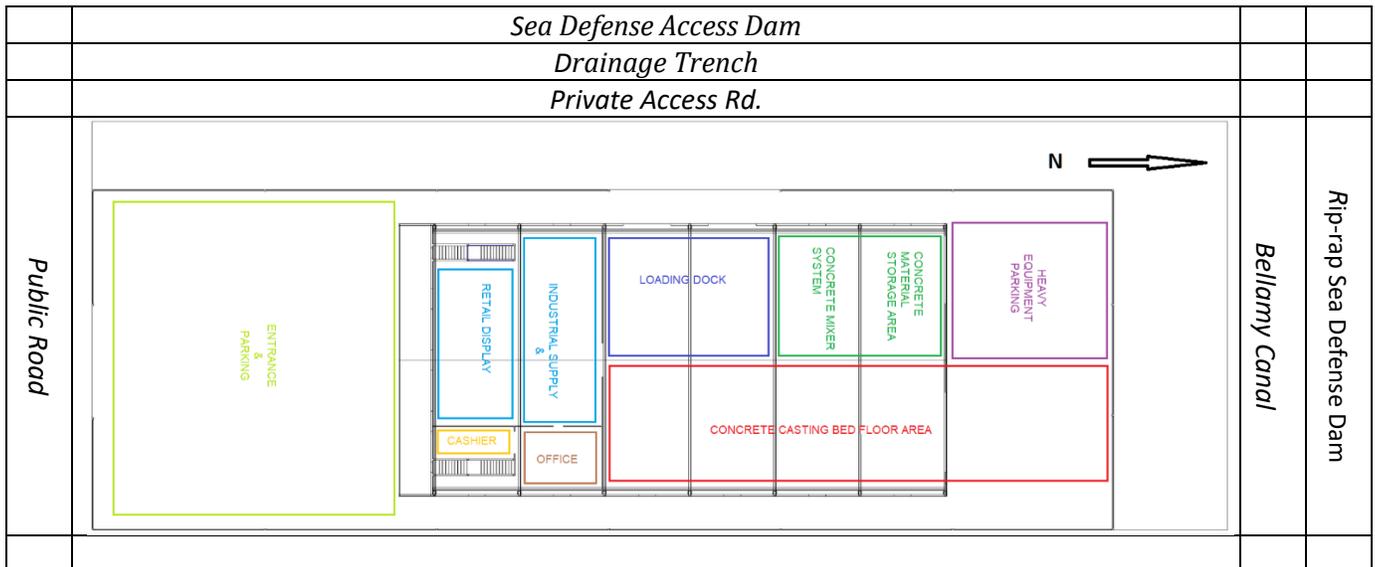




Fig.1. View From East



Fig.2. View From South



Fig.3. View From West



Fig.4. View From North



Fig.5. Sea Defense Operation



Fig.6. Rip-Rap Sea Defense



Fig.7. Sea Defense Dam



Fig.8. Lot 5 of Lot E, Content, Mahaica ECD- Yellow



Fig.9. Property Location - Lot 5 of Lot "E" Content, Mahaica, ECD- 28.25 Acres



Fig.10. -Propose Site Area for Development, 1 Acre of Lot 5 Lot "E"...- Red
-Property on left – is a large rice milling complex

CAPITAL INVESTMENT, REVENUE, AND EMPLOYMENT

The estimated total investment for this project is between \$70,000,000.00 GYD to \$80,000,000.00 GYD and project commencement is forecasted for late FY2023. A conservative annual estimated revenue of \$100,000,000.00 GYD is projected.

Initial employment is planned as follows:

- ◆ 1x CEO
- ◆ 1x Office clerk
- ◆ 1x Civil Engineer
- ◆ 4x Semi-skilled factory technicians
- ◆ 5x Labourers/Operators

ENERGY

The main source of energy for this project will be obtained from Guyana Power and Light Inc. (GPL). This will be supplemented by a 75kw, 220V, 60Hz cycle generator which will only operate during power outages/failure from the GPL source. The Generator will be housed in a self-enclosed area with sound-attenuating materials, under a concrete shed and on a concrete base. Fire extinguishers will be placed nearby for any emergencies. The exhaust will also be installed approximately 3 to 4 feet in the air.

POSSIBLE ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The main activities associated with the project during the construction phase are land clearing, earthworks, stockpiling to reclaim land excavated into the canal, machine operation, and concrete works. These will have the potential to affect the environment directly or indirectly. The potential impacts are loss of land and habitats, pollution of air and sedimentation of surface water, generation of solid waste, and health and safety related. The

impacts, however, are expected to be insignificant and short-term in duration and therefore mitigable. The following is a preliminary assessment of possible impacts on the environment and human health and the general mitigation measures that can be implemented. It must be noted that the detailed Environmental Social Management Plan (ESMP) will identify direct and indirect impacts and propose appropriate avoidance and mitigation measures.

Impact Areas	Potential Environmental Impact	Mitigation Measures
<i>Air Quality and Noise</i>	<i>Noise from the operation of machinery during construction and operation</i>	<i>Appropriate noise attenuation and adjusting working hours where other noise controls are not effective. Haulage trucks will be covered, and the aggregates sprayed with water before loading the haulage trucks.</i>
	<i>Dust particles are a potential environmental impact during construction.</i>	<i>The process of spraying water should be carried out at least three times on every construction day especially if construction work is carried out during the dry season.</i>
	<i>Operation of Diesel-powered generators and emissions of greenhouse gases</i>	<i>Generators will be equipped with silencers and housed in an enclosed area. Ensure that machinery and equipment are working efficiently and have the required silencers/mufflers installed;</i>
	<i>During the construction, noise is expected to generate mainly by machinery and vehicular traffic.</i>	<i>Adjust working hours where other noise controls are not effective. The project proponent will implement mitigation measures recommended by the EPA for the management of impacts on air quality</i>
<i>Mangroves, Flora, and Fauna</i>	<i>No Mangroves in the area. Existing Flora and Fauna will be insignificantly affected.</i>	<i>Minimal disturbance to the existing ecosystem will be a priority. Replacing and repopulating disturbed areas where possible.</i>
<i>Human Health and Safety</i>	<i>Potential for accidents and upset conditions related to workers' safety and health during construction and operations.</i>	<i>Provide workers with training in the proper use and maintenance of equipment. Appropriate PPE and safety equipment. Proper housekeeping. First aid for all staff on the site. Appropriate contingency and emergency response plans were developed and implemented.</i>

<i>Hazardous Materials</i>	<i>Hazardous materials are categorized as fuel, lubricants, and other materials of similar nature. Impacts can arise through the accidental introduction of these materials into the environment through spills onto land and waterways. Hazardous materials spilled on land can enter groundwater reservoirs through seepage via soil strata.</i>	<i>To prevent or minimize potential environmental effects from hazardous materials, storage tanks will be designed with a one hundred and ten (110) percent capacity secondary containment bund, which will create a temporary holding area in the event of spills. All necessary fuel storage permits, and precautionary measures and guidelines recommended by the Guyana Fire Service Department will be followed and adhered to.</i>
<i>Surface and Coastal waters</i>	<i>Sedimentation due to land riveting, reclamation, and construction especially during rainfall events and stormwater run-off</i>	<i>Set up embankments to contain and redirect water where necessary. Ensure the work site is properly separated and sealed off from cross-contamination.</i>
<i>Waste</i>	<i>Waste generated during construction and operation is generally municipal/domestic in nature.</i>	<i>Recover and recycle as far as practical. Garbage receptacles are placed at appropriate locations on-site and covered. Construction debris will be segregated and stored in storage bins provided at the site. Regular collection and disposal by NDC or private waste collection services.</i>
<i>Land</i>	<i>Erosion due to topsoil and vegetation removal during construction</i>	<i>Minimize removal of vegetation to only areas where necessary. Revegetate where practical. Temporary bund exposed soil and redirect flows from heavy runoff areas that threaten erosion. Landscaping to reduce sloping. The development of the landscape and planting of trees and vegetative cover will be carried out after construction work.</i>

BASIC REQUIREMENTS FOR CONTRACTORS DURING CONSTRUCTION

At all times Contractors would be required to conform to the following stipulations in implementing construction works:

- Adherence to all regulatory requirements and authorizations e.g EPA*
- There should be a clear demarcation of the extent of the Contractor’s work sites including areas for material storage, working yards, and plant storage.*
- Health and safety equipment (including protective clothing and boots) should be available and in use at work sites and construction facilities/camps. First Aid boxes will be mandatory.*

- *If required, fuel storage sites during construction will be bonded by breams to confine and mitigate the effects of any spillage. The capacity of the confined area is 100% of the volume of fuel stored and protected from rainwater.*
- *Discharge of dust and fumes should be minimized and there should be no burning of materials/substances.*
- *Dump trucks will be equipped with devices to prevent material spillage and roads should be kept clean of mud and construction debris.*
- *The contractor should remove all construction equipment and scrap waste from his sites on completion.*

ENVIRONMENTAL COMPLIANCE

The developer intends to comply with all regulations and guidelines prescribed by the EPA as well as, those prescribed by other governmental entities, in all efforts to ensure good environmental practices are maintained throughout the various phases of this operation. To this effect, an application will be made to the Guyana Environmental Protection Agency (EPA) for the issuing of an environmental permit to operate the facility.