RJR Investment & Holdings Inc

Project Description

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1.0. PROJECT DESCRIPTION

This facility will be located at Seawall Public Road, Georgetown. The site is approximately 9.5 km from the center of Georgetown. The GPS coordinates are as follows: 6.8251758, -58.1614324. The site can be accessed using the seawall road, it is bordered by the Pegasus Hotel to the West, the Atlantic Ocean and seawall to the north, the Pegasus Suites and Cooperate Center to the East and the Guyana Bank for Trade and Industry (GBTI) and Seawall Public Road to the south. The location of the project site is a commercial zone with commercial businesses and government entities within the area of influence such as the US Embassy, the Guyana Marine Turtle Monument, the Umana Yana, the Guyana Marriott Hotel, Exxon Mobile, Headquarters, Guyana Police force headquarters and the Ministry of Public Works.

The project site currently houses the Savannah Suite and Essequibo Room for the Pegasus Hotel. These are private conference rooms used for Weddings and special events. The area is being Lease to RJR Investment Holding Inc by Pegasus Hotel and Suites

Map showing the proposed project location.

Proposed Building Design

2.0 Description of Project

This project follows a MOU between the Pegasus Hotel and the government of Guyana. It compares a 14-story state-of-the-art hotel. The project land size is 1000 square meters.
The hotel will have 170 executive rooms, each thoughtfully designed with modern amenities and elegant décor, offering a relaxing retreat for our guests. From cozy single rooms to spacious suites, our diverse selection of accommodations ensures that every guest's preference is met. The hotel structure will have a unitized curtain wall envelope providing floor-to-ceiling views of the Atlantic Ocean and Georgetown skyline. All rooms are equipped with comfortable bedding, high-speed Wi-Fi, flat-screen TVs, minibars, and luxurious en-suite bathrooms with premium toiletries. A fully equipped fitness gym overlooking the Atlantic Ocean. An outdoor Lobby restaurant on the ground floor, on the 14-story executive lounge overlooking the Atlantic Ocean, Penthouse sky view overlooking the city skyline.
The construction will involve more than 300 skilled workers with 60% of the workers being Guyanese, with approximately 60 workers for the various aspects of the operation phase of the hotel.
This development is a transformative project for which all Guyanese will be proud. It will bring significant economic benefits to our economy and significantly fill the gap for accommodation for tourists due to the influx of people due to the country's oil bloom.

Development stages:

Engineering and Design Phase

During the Engineering and Design Phase, the hotel followed an iterative process to maintain a balance between cost, functionality, environmental impact, and expectations. Both local and international suppliers were contacted to ensure that the design and materials met international construction standards and regulations. The fourteen-storey building will primarily utilize steel and concrete in its design. All architectural drawings were finalized and submitted to the Central Housing and Planning Authority (CH&PA) and the City Engineer's Department of the Georgetown City Council. CH&PA approved the designs, and a Building Permit was issued by the City Engineer's Department.

Pre-Construction phase

Prior to starting demolition, all utilities (water, electricity, gas, etc.) will be properly disconnected. The utility companies and skilled contractors will be hired to conduct such. Heavy machinery (excavators, bulldozers, etc.) will be used to tear down the structure. As the demolition takes place, the debris is sorted into categories, such as metals, wood, concrete, and hazardous materials. This is being done to ensure proper disposal and recycling where possible. The site will then be cleared up and prepared for construction.

Construction Phase

Once all permits have been granted, it is expected to start with the mobilization on site of the different contractors and project team to start with pile driving, slab and beam foundations, steel structure, and general civil works. Additionally, miscellaneous work such as plumbing, electrical wiring, painting, installation of communication systems, elevators, after which the finishing and external works will commence. This phase is expected to be two and half years.

Operational Phase:

The operation of a hotel will ensure guests are provided with world-class services. The hotel will have efficient management, high-quality service, and strong organizational processes from well-trained customer service staff.

Feasible and reasonable alternatives

RJR Investment is committed to safeguarding the environment in which it operates, along with having quality in everything that it does. As such, this project has been designed by our team with due consideration to all possible alternatives. We have concluded that the current design is the most optimal, and efficient option considering the surroundings, its environmental impact, and energy and water efficiency.

CAPITAL INVESTMENT, REVENUE, AND EMPLOYMENT

The estimated total investment for this project is USD$42,000,000. A conservative annual estimated revenue of over USD 10M is projected. The project will be financed by a consortium of regional and local banks.

Utilities

Energy Sources

The main source of energy for this project will be obtained from Guyana Power and Light Inc. (GPL). This will be supplemented by three existing generators which will only operate during power outages/failure from the GPL source. The Generator is 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.

Water Source

There is currently an existing portable water system established for the Pegasus Suites and Cooperate Center operations. This system uses water from Guyana Water Incorporated and is stored in an underground reservoir, where the water is filtered before being used for the operations. This Water system will be used for this establishment as well.

3.0 Potential Impacts and its Significance

Although the generation of contaminants is unavoidable, the main goal of prevention and mitigation strategies is to ensure that the resulting effluent discharge, waste disposal, air, and noise emissions remain within permissible limits. This helps to prevent them from becoming significant environmental pollutants or causing disturbances. The following sections will outline the potential impacts that may arise from the hotel's construction and operational activities, which can be prevented or managed through the application of preventive and mitigation measures.

1. Air Quality and Noise

Construction Phase:

- **Dust and Particulate Matter:** During the demolition, excavation, and construction of the hotel, large amounts of dust and particulate matter will be released into the air. This can reduce air quality in the surrounding area, causing an impact on air quality that could impact nearby residents and workers.
- **Construction Equipment Emissions:** The use of diesel-powered construction equipment (cranes, excavators, bulldozers) and Trucks and transport vehicles moving materials to and from the site releases nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOCs), and particulate matter. Their emissions, particularly CO2 and NOx, add to the overall carbon footprint of the project and increase the levels of harmful pollutants in the vicinity.
- **Heavy Machinery and Equipment:** The use of loud machinery such as bulldozers, cranes, jackhammers, and pile drivers during construction can generate noise levels that far exceed acceptable limits, particularly in densely populated areas. The noise can disturb residents, and businesses, affecting sleep patterns, stress levels, and overall well-being. Prolonged exposure to high levels of noise can lead to hearing loss, anxiety, and other health problems.

- **Noise:** The movement of construction trucks, deliveries of materials, and equipment to and from the site can generate significant noise, this increases traffic noise pollution, which can be disruptive to the surrounding community.

Operational Phase:

- **Energy Consumption and HVAC Systems:** The operational hotel will require significant energy use for heating, cooling, and ventilation (HVAC systems). The hotel relies on fossil fuels for energy, which can contribute to carbon emissions and local air pollution. Energy-efficient systems can also impact air quality by the release of gases from the building's systems, such as refrigerants from cooling units, if not properly managed.

- **Traffic and Vehicle Emissions:** The hotel will likely increase vehicle traffic in the area, both from guests and service providers. This can exacerbate local air pollution, particularly if public transportation options are limited. The additional vehicles will emit CO2, nitrogen oxides, and particulate matter, further contributing to air quality degradation.

- **HVAC Systems:** Once the hotel is operational, the HVAC systems (cooling, and ventilation) will run continuously, generating noise, especially if the units are located near windows or open spaces. This noise can be a nuisance to both guests and surrounding buildings, impacting the comfort of the hotel's residents as well as nearby offices or homes.

- **Event Noise:** If the hotel hosts events such as conferences, weddings, or parties, this could significantly increase noise levels, especially if loud music, speeches, or celebrations are involved. These activities can affect neighboring businesses and residents, particularly in areas where noise regulations are strict.

2. Water Quality

Construction Phase Impacts

Construction activities can lead to an increase in stormwater runoff, especially if proper erosion control measures are not in place. Rainwater can pick up contaminants like oil, construction debris, cement, or chemicals, and carry them into nearby water bodies, affecting water quality. Additionally, excavation, grading, and soil disturbances during construction can result in sediment being washed into nearby water bodies. Increased sedimentation can reduce water clarity, and harm aquatic life.

Heavy machinery, fuel storage, and other construction-related activities can introduce pollutants such as hydrocarbons, metals, and chemicals into nearby water systems if not properly managed. Also, during construction, temporary site facilities (e.g., portable restrooms) may lead to improper wastewater discharge, especially if wastewater management systems aren't established or maintained. In extreme cases, especially in stagnant water, the discharge of effluent with high phosphate content can result in severe cases of eutrophication.

2. Operational Phase Impacts

The hotel and restaurant will generate significant amounts of wastewater, including sewage, food waste, and greywater. If this wastewater is not properly treated before being discharged into the environment, it could contribute to pollution and contamination of water bodies. Nutrients like nitrogen and phosphorus from food waste can cause eutrophication, which leads to algal blooms and oxygen depletion in aquatic ecosystems.

Cleaning chemicals, detergents, and disinfectants used in the management of hotels and restaurants If not carefully disposed of or treated, these substances can enter the water system, leading to contamination and possible harm to aquatic organisms.

3. Hazardous and non-hazardous Waste

During the construction and operation of the hotel, both non-hazardous and hazardous waste will be generated. Non-hazardous solid waste is expected to include materials resulting from construction activities, such as concrete, wood, and steel; packaging materials; and office waste,

including plastics, cardboard, and paper. In addition, waste generated from guest consumption will include plastic and glass bottles, empty detergent, shampoo, and conditioner containers. Organic waste will primarily consist of kitchen scraps, including fruit and vegetable peelings and leftover food. The hotel will also produce non-hazardous liquid waste, particularly used cooking oil, mainly from the restaurant operations.

In terms of hazardous waste, both solid and liquid waste will be generated. This includes end-of-life electrical and electronic equipment, used lead-acid batteries, and waste oils (such as fuel and lubricants) from the maintenance of the hotel's generator and company vehicles. Proper disposal and management of these hazardous materials will be a priority to ensure environmental compliance and safety. The hotel is committed to adhering to the best practices in waste management to minimize its environmental footprint while maintaining a clean and sustainable operation.

4. Traffic congestion

The presence of a hotel in a central city area can significantly contribute to congestion and parking challenges. The influx of guests and event attendees increases traffic volume, particularly during busy peak hour, leading to delays and longer travel times for commuters. Limited parking spaces force guests to park on nearby streets, often overflowing into residential and commercial areas, inconveniencing locals and businesses. This exacerbates environmental issues like air and noise pollution, while also creating safety hazards for pedestrians and drivers. Local businesses may experience reduced customer traffic due to inaccessibility, and the demand for additional parking infrastructure can alter the surrounding urban landscape.

4.0 Mitigation Measures

Air Quality mitigation measures to be implemented are as follows:

- Regularly irrigate construction areas, unpaved roads, and material stockpiles to prevent dust from becoming airborne.
- Utilize non-toxic, polymer-based products that stabilize dust on the surface of exposed soil, minimizing both dust and erosion.
- Utilize tarps, mesh, or other suitable covers to protect material stockpiles (such as sand, gravel, or soil) from wind-induced erosion.
- Impose speed restrictions on construction sites, access roads and haul routes to reduce dust generation from vehicle movement.
- Limit the number of vehicle trips and restrict unnecessary vehicular movement, particularly during periods of high winds or dry conditions.
- Establish wash stations at the site exit points to remove dust and debris from vehicle tires, preventing the tracking of dust onto public roadways.
- Implement procedures to clean construction vehicle tires before they exit the site to minimize the dispersal of dust off-site.
- Where applicable, enclose or cover dust-generating activities such as grinding, sanding, or blasting, to contain dust emissions at the point of generation.
- Equip workers with appropriate PPE, such as dust masks or respirators, especially for those working in high-dust environments or performing dust-generating tasks.
- Notify local communities of the construction schedule, especially during periods of heightened dust activity. Provide contact information for local authorities or site managers in case of dust-related concerns.

Noise impact mitigation measures to be implemented are as follows:

- Where possible, utilize construction machinery and equipment that is specifically designed to operate at lower noise levels, such as electric-powered tools or quieter versions of traditional machines.

- Ensure that all equipment is properly maintained, as poorly maintained machinery tends to generate more noise. Regularly inspect and service engines, mufflers, and exhaust systems to keep noise emissions within acceptable limits.
- Establish a preventive maintenance schedule for all construction equipment to ensure that engines, mufflers, and exhaust systems are functioning optimally, reducing noise emissions.
- Equip all noisy machinery with proper mufflers or noise-reducing silencers to minimize sound levels at the source.
- Schedule the most noise-intensive construction activities, such as pile driving, demolition, or rock drilling, from 7 am to 6 pm, and avoid conducting these activities during nighttime or early morning hours when they are likely to disturb nearby residents and guests of the hotels next door.
- Use vibration isolation pads or mats under equipment that generates high levels of vibration (such as generators, compressors, or pile drivers) to reduce both noise and vibration transmission.
- Provide workers with appropriate personal protective equipment (PPE) to protect their hearing, such as earplugs or earmuffs, particularly for those exposed to high noise levels.

Water Quality

Water quality impacts mitigation measures to be implemented are as follows:

- Locate and properly cover material stock piles and excavated materials in a designated area, away from water bodies to prevent excessive soil deposits.
- Waste storage stockpiles or stockpiled material shall not be placed within 10m of any watercourse.
- Minimize and contain suspended sediment (i.e., Non-Filterable Residue, NFR) within the immediate zone of construction.
- Undertake appropriate containment measures during concrete pours to ensure that uncured concrete or concrete leachate does not enter any watercourse or drainage. Preventative methods include sediment traps.

- Place pumps and generators on polyethylene sheeting to prevent hydraulic fluid and/or fuel leaks from entering water Bodies.
- Ensure that a perimeter drain is constructed in the early stages to collect all runoff from the project site.
- An efficient sanitary and waste treatment system will be implemented to reduce the potential for improperly treated wastewater discharges into the canal. Secondary drains will also be installed as an added prophylactic measure.

Waste management

Mitigation measures to reduce potential impacts associated with improper waste disposal

- Reduce the amount of waste required to be managed. Therefore, avenues of reusing 'waste' materials will be explored in situ.
- Waste generated will be segregated into organic wastes (vegetation, topsoil); inert waste such as plastics, food boxes, rubber, etc.; and hazardous waste. Inert and hazardous wastes will be stored in covered bins.
- Waste generated at the construction site will be collected and transported to a designated Landfill by a contracted service provider.
- Burning of waste materials and littering around the construction zone will be prohibited.
- Frequent clean-ups will be done by the contractor to ensure the work ground is kept tidy at all times.
- Daily housekeeping to be done.
- Bins will be available onsite for storage of waste materials. Domestic Waste will not accumulate for more than 7 days on-site. The Developer will transport waste materials to designated and fill them weekly.
- Poorly kept garbage receptacles may harbor pests and even diseases carrying vectors. Developers ensure contractors wash the garbage receptacles weekly.
- Demolition waste will be sorted and what can be recycled or reused in the construction phase and the remainder will be collected by a private contractor to be disposed of at the landfill.

5.0 Assumptions, uncertainties and Gaps in Knowledge

For this project's design, uncertainties have been addressed through the consultant and, as detailed in previous chapters. Soil analysis and water level measurements were conducted to incorporate these variables into the engineering calculations. As part of the research, both local and international suppliers were contacted to assess the availability and specifications of materials. Based on this research, the estimated procurement time and construction timeline have been integrated into the schedule. However, there remains significant uncertainty about market conditions in the coming years, particularly concerning timelines and costs. Factors such as shipping expenses, logistics, political situations, and other global influences may impact the project's progression and budget in the future.