

# Willow Springs

(Residential Development – Condominium), Parcel 251, 4355 & 4367, Block No. III, Plantation Providence, East Bank Demerara, Guyana, South America

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TURNS IDEAS INTO REALITY

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# 1. Detailed Description of the Proposed Project

## 1.1 Physical Location and Characteristics:

- **Physical Location:** Providence, Guyana
- **Site Size:** Approximately 6.887 acres
- **GPS Coordinates:** Please see attached coordinates for each building and site
- **Distances from the closest town, settlement, indigenous community, and nearby waterways:** The project area is closer to Georgetown approximately 10-15mins depending on the traffic flow. There are nearby canals but these will not be contaminated, all pollutants will be removed by the contracted Puran Bro's Waste removal services.
- **General/predominant land use of the area:** Based on our Business proposal; the Providence area has been experiencing significant growth and development, suggesting a trend toward increased urbanization and residential development. The project site use is primarily residential, with some commercial elements. This includes apartments, offices, a stadium, a mall, and a few businesses, but is mostly characterized by private residential use.
- **Areas | sensitive receptors likely to be affected:** Based on the Project Scope which infers that residential areas would be positively affected.
  - The Environmental Impact Assessment (EIA) section, potential sensitive receptors include:
    - Existing habitats and wildlife populations (potential habitat fragmentation)
    - Nearby water bodies (potential surface water pollution)
    - Nearby residents (potential noise and vibration impacts)
    - None of these will be affected, there is no wildlife in the area and
    - Gordon Housing Development Inc. will adhere to all environmental factors to prevent any damages, pollution etc affecting dwellers.
- **Relative abundance of natural resources in the area:** Unfortunately, this is not an abundance of Water resources (rivers, groundwater), Forests or vegetation, Mineral resources, or Agricultural land, in the immediate project area so these will not be affected.

## 1.2 Non-Disputed Nature of Land:

- **Indication of whether the property was ever previously permitted:** No, it's an undeveloped property.
- **Indication if there was ever a change in land ownership:** Yes, there was
- **Purpose of land use on title Business Proposal:** Gordon Housing Development Inc. Residential Use
- **Transport or lease:** You'll need to provide this information.

## 1.3 Description of all feasible and reasonable alternatives:

This section outlines the alternatives considered during the planning and design phases of the Willow Springs residential development. These alternatives explore different approaches to location, design, and specific project components.

### a. Alternative Locations:

**Original Site Justification:** The selected location in Providence was chosen due to several factors, including:

- Proximity to existing infrastructure (roads, utilities)
- Market demand for housing in the area
- Availability of suitable land
- Alignment with urban development plans for Providence

### Alternatives Considered:

- Other locations within the Providence area were considered. These sites were evaluated based on factors such as:
  - Land availability and cost
  - Accessibility and transportation links
  - Environmental sensitivity (e.g., proximity to wetlands, protected areas)
  - Potential impact on existing communities
- These alternative locations were not selected due to:
  - Higher land acquisition costs
  - Lack of existing infrastructure, requiring significant additional investment
  - Greater environmental concerns or potential for negative impacts

- Less favourable market conditions or lower demand

## **b. Alternative Designs and Layouts:**

### **Residential Density:**

- Alternative designs with varying residential densities were evaluated.
- Higher-density options were considered to maximize land use efficiency and provide more housing units.
- Lower-density options were explored to potentially reduce environmental impacts and offer more open space.
- The selected design represents a balance between these considerations, providing a mix of housing options while maintaining adequate green spaces and recreational areas.

### **Building Height and Configuration:**

- Alternatives with different building heights and configurations were analysed.
- Taller buildings were considered to potentially reduce the development's footprint.
- Lower-rise buildings were evaluated to minimize visual impacts and maintain consistency with the surrounding area.
- The chosen design incorporates a combination of building heights to achieve both density and aesthetic objectives.

### **Infrastructure and Utilities:**

#### **• Wastewater Treatment:**

- Based on the details in the Business Proposal the selection of a decentralized wastewater treatment system using package plants.
- Alternative options might have included a centralized wastewater treatment plant.
- The decentralized approach was favoured due to:
  - ✓ Cost-effectiveness
  - ✓ Efficiency
  - ✓ Reduced infrastructure requirements

- **Water Supply:**
  - Based on the details in the Business Proposal which described the water reservoir design.
  - Alternative water supply options might have included:
    - ✓ Greater reliance on municipal water sources.
  - The chosen design provides:
    - ✓ Greater independence
    - ✓ Increased resilience

**Green Spaces and Landscaping:**

- Alternative landscape designs were considered to enhance the development's aesthetic appeal and environmental benefits.
- Options ranged from minimal landscaping to more extensive green spaces, including parks, gardens, and recreational areas.
- The selected design prioritizes:
  - Ecological sustainability
  - Community well-being
  - Integration with the surrounding environment

**c. Alternative Construction Methods:**

- Alternative construction methods were evaluated to minimize environmental impacts and improve efficiency.
- These considerations included:
  - Use of sustainable building materials
  - Implementation of erosion and sediment control measures
  - Waste management and recycling practices
  - Noise and dust control techniques
- The chosen construction methods reflect a commitment to:
  - Environmental responsibility
  - Minimizing disruption to the surrounding community

## 1.4 Description of existing baseline information and characteristics of the receiving environment:

- **Physical environment (landscape, soil, water, air, use of natural resources):**
  - a. The Willow Springs development is located in Providence, Guyana.
  - b. **Landscape:** The topography of the area is characterized by a natural slope, which influences water flow across the site.
  - c. **Soil:**
    1. The soil type at the site is silt clay sand.
    2. Understanding the soil composition is important for effective drainage design. Well-draining soils will influence the type of drainage structures needed, while poorly draining soils may require additional measures like subsurface drainage systems.
    3. The geotechnical report further details the soil conditions, describing the presence of clayey soils and providing data on soil properties relevant to foundation design and stability.
  - d. **Water:** The "Site Drainage Plan" section of the business proposal addresses water management, detailing various drainage elements and stormwater management features.
  - e. **Air:** The business proposal mentions that each residential unit will be equipped with a centralized heating, ventilation, and air conditioning (HVAC) system to ensure optimal comfort and prioritize energy efficiency and air quality.
- **Ecological environment (flora and fauna):** The EIA section discusses potential impacts on habitats and biodiversity. (Further details from the EIA section will be added later in the summary).
- **Social environment (economic and cultural aspects):** The BUSINESS PROPOSAL discusses the project's potential impact on the local community. (Further details from the EIA section will be added later in the summary).

### **1.5 Permits and licenses from other government agencies:**

- Indication if all permits and licenses from any other government agency required have been obtained: You'll need to provide this information.
- One (1) copy to the Agency (where applicable): To be provided.

### **1.6 Previous EPA Permit Applications:**

- **Indication whether the developer previously applied to the EPA for Permit/s:** This is our first application.
- List of Permits that belong to the developer:

### **1.7 Layout of the Project:**

- Map with a scale relevant to the size of the development: This Map will be attached.
- Accurate indication of the project site position as well as the positions of the alternative sites, if any: The site position is in Elanville, Providence.
- **Closest town:** Georgetown
- **Names of major and minor access roads to the site:** Hero's Highway, East Bank Road and access roads.

## **1.8 Identification of intake and/or discharge structures/locations for air, water, and waste emissions and/or storage:**

The Business Proposal includes details on water reservoir design and wastewater treatment which are as follows:

- **Water:**

Intake: The Business Proposal details a water reservoir design to meet the potable water needs of the development. This reservoir will serve both residential units and recreational amenities. The design includes main distribution pipes to connect the reservoir to the residential units and recreational areas.

Discharge: The Business Proposal details a wastewater/sewage treatment plan. The treated effluent from each package plant will be discharged into a specified discharge point (e.g., a nearby river or treatment facility). The effluent quality will be monitored to ensure compliance with local regulations.

- **Air:**

The Business Proposal mentions that each residential unit will be equipped with a centralized heating, ventilation, and air conditioning (HVAC) system. The design will prioritize energy efficiency and air quality. Common areas will also benefit from efficient climate control systems.

The Environmental Impact Assessment (EIA) addresses potential air quality impacts, including construction emissions (dust, particulate matter, and other pollutants) and traffic emissions.

- **Waste:**

The Business Proposal outlines plan for waste management, including a garbage room in each residential block and garbage chutes for easy waste disposal. The EIA also identifies waste generation and disposal as a potential environmental impact. A waste management plan will be developed to ensure proper disposal of solid waste and recyclables.

## 2. Description of the Design of the Activity

### 2.1 Detailed description of the processes generating discharges/emissions:

- The **BUSINESS PROPOSAL** describes processes like water usage and wastewater treatment. It comprehensively covers all potential discharges/emissions (e.g., air emissions from generators).

- **Water Usage and Wastewater Generation:**

The development will involve significant water usage for residential needs (drinking, sanitation, etc.) and recreational amenities (swimming pools, etc.).

This water usage will generate wastewater, including domestic wastewater with typical levels of organic matter, suspended solids, and nutrients.

The wastewater treatment plan outlines the processes for treating this wastewater, including the use of package wastewater treatment plants.

- **Air Emissions:**

The development will utilize HVAC systems for climate control in residential units and common areas. These systems, while designed for efficiency, may involve some air emissions.

The Business Proposal also specifies that the development will have standby generators with automatic switching capabilities to ensure uninterrupted power for residents during outages. The operation of these generators will generate air emissions.

The Environmental Impact Assessment (EIA) identifies potential air quality impacts, including construction emissions (dust, particulate matter, and other pollutants) and traffic emissions due to increased traffic in the area.

- **Solid Waste Generation:**

The development will generate solid waste from residential activities and other operations. The design includes features for waste management, such as garbage rooms and garbage chutes.

### **3.0 Design/construction drawings, specification of structures meant to handle discharges or waste:**

The BUSINESS PROPOSAL mentions architectural drawings and details on the water reservoir and wastewater treatment plants.

- **Water Reservoir:**

- The Business Proposal includes a section on "Water Reservoir Design Based on Population and Wastewater Requirements," which provides specifications for the water reservoir.
- The reservoir is designed to accommodate the total population's potable water needs, including residential units and recreational amenities.
- The design specifies an above-ground concrete tank with a capacity of 100,000 gallons.
- The tank is designed to be cylindrical, with a diameter of approximately 34 feet and a height of 15 feet.
- The materials include reinforced concrete and internal waterproof coatings.
- The location is planned to be at an elevated point on the site to allow for a gravity-fed distribution system.
- The design also includes main distribution pipes and backup pumps.
- Overflow mechanisms will be designed to direct excess water into the site's drainage system.

- **Wastewater Treatment:**

- The Business Proposal includes a section on "Wastewater/Sewage Treatment Plan for Willow Springs," which details the wastewater treatment system.
  - The plan incorporates a decentralized approach, utilizing a series of package wastewater treatment plants.
  - The treatment system will utilize a series of 20,000 gpd BL-3000 package plants, one for each residential block.
  - The Business Proposal specifies the capacity, efficiency, and cost-effectiveness of the selected package plant.
- The layout involves an array of manifolded package plants installed throughout the development.

- The treated effluent from each package plant will be discharged into a specified discharge point.
  
- **Site Drainage:**
- The Business Proposal also provides details on the site drainage plan, including:
- Drainage elements like slopes, swales, curb & gutter systems, and paved area drainage for surface drainage.
- Subsurface drainage elements like perforated pipes/French drains and foundation drains.
- Stormwater management features like detention ponds/retention basins, bioswales and rain gardens, and permeable paving.
- The design of the drainage network, including storm sewers, inlets & catch basins, and outfall.
- Erosion control measures like silt fences, riprap channels, and grass and ground cover.

### **3.1 Description, discharge rates, concentrations, and volume of expected pollutants:**

- The BUSINESS PROPOSAL provides some information on wastewater, and comprehensive details on all potential pollutants and their characteristics.

#### **Water Reservoir:**

The business proposal includes a section on "Water Reservoir Design Based on Population and Wastewater Requirements," which provides specifications for the water reservoir.

The reservoir is designed to accommodate the total population's potable water needs, including residential units and recreational amenities.

The design specifies an above-ground concrete tank with a capacity of 100,000 gallons.

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The treated effluent from each package plant will be discharged into a specified discharge point.

#### **Site Drainage:**

The Business Proposal also provides details on the site drainage plan, including:

Drainage elements like slopes, swales, curb & gutter systems, and paved area drainage for surface drainage.

Subsurface drainage elements like perforated pipes/French drains and foundation drains. Stormwater management features like detention ponds/retention basins, bioswales and rain gardens, and permeable paving.

The design of the drainage network, including storm sewers, inlets & catch basins, and outfall. Erosion control measures like silt fences, riprap channels, and grass and ground cover.

### **3.2 Project Size:**

- Capital investment: 68 million USD
- Number of employees projected for each stage of the project:
- To estimate the number of employees, it's helpful to break it down by project phase:

**Pre-Construction:** This phase would involve a smaller team focused on planning, permits, and approvals.

- Project Manager: 1
- Architects: 1-2
- Engineers (Civil, Structural): 2-3
- Legal Advisor: 1

**Construction:** This phase would have the largest number of workers.

- Construction Workers: This would vary greatly depending on the stage, but could range from 50-150+ workers
- Site Supervisors: 5-10
- Engineers (Civil, Structural, Electrical, Mechanical): 5-10
- Project Manager: 1
- Health and Safety Officers: 2-3

**Post-Construction/Operation:** This phase requires staff for management and maintenance.

- Property Managers: 2-5
- Maintenance Staff: 10-20
- Security Personnel: 3, number will vary
- Landscaping Staff: 4, number will vary
- Sales and Marketing: 2-3

It's important to note that these are estimations, and the actual numbers can vary based on the project's specific needs and the contractors involved.

- Rates of production: Not applicable for this type of project.
- Transportation route: bypass road

### **3.3 Activities associated with all development stages from construction to closure:**

**3.3.1 Operation and production processes and alternative design/s considered: The BUSINESS PROPOSAL describes the project's features listed below.**

#### **Construction Phase:**

- Site Preparation:
  - Clearing and grading the site.
  - Erosion and sediment control implementation.
  - Installation of temporary facilities (e.g., site offices, storage).
- Infrastructure Development:
  - Construction of road networks and parking areas.
  - Installation of utility services (water, electricity, communication).
  - Implementation of the site drainage plan, including drainage elements, subsurface drainage, and stormwater management features.
- Building Construction:
  - Foundation work.
  - Erection of the nine-story residential blocks.
  - Construction of the gym and clubhouse building.
  - Installation of elevators, storage areas, patios, and rooftop terraces.
  - Finishing works (interior and exterior).
- Installation of Environmental Measures:
  - Construction of the water reservoir.
  - Installation of package wastewater treatment plants.
  - Implementation of other sustainable practices.

#### **Operation Phase:**

- Residential Activities:
  - Day-to-day living activities of residents.
  - Use of residential amenities (e.g., elevators, storage).
- Recreational Facilities Operation:
  - Operation of the gym and clubhouse.

- Maintenance and operation of the community pool, rooftop bar, sports facilities, and lounge areas.
- Infrastructure Operation and Maintenance:
  - Maintenance of road networks and parking areas.
  - Operation and maintenance of utility services.
  - Operation and maintenance of the water reservoir and wastewater treatment plants.
  - Implementation of the waste management plan.
- Environmental Management:
  - Monitoring and management of wastewater discharge.
  - Waste collection and disposal.
  - Landscaping and maintenance of green spaces.

**Closure Phase:**

- This phase is not detailed in the Business Proposal, and further information needs to be added.
- A decommissioning plan would typically outline the procedures for:
  - Deconstruction or removal of buildings and infrastructure.
  - Site restoration and remediation.
  - Waste disposal and recycling.
  - Environmental monitoring and aftercare.

### **3.3.2 Provide a guide for all stages of the project from raw material to the finished product:**

#### **Project Lifecycle: Site Preparation to Occupancy**

##### **1. Pre-Construction & Planning:**

Land Acquisition: The process begins with the acquisition of the land in Providence, Guyana.

Permitting and Approvals: Obtaining necessary permits and approvals from local authorities.

Design and Planning: This involves architectural design, structural engineering, and site planning.

##### **2. Site Preparation:**

Clearing and Demolition: Preparing the site by clearing vegetation and demolishing any existing structures.

Grading and Excavation: Leveling the site and excavating for foundations and infrastructure.

Erosion and Sediment Control: Implementing measures to prevent soil erosion and manage runoff.

##### **3. Construction:**

Foundation Work: Laying the foundation for the buildings.

Structural Framework: Building the structural framework of the residential blocks and the gym/clubhouse.

Building Construction: Erection of walls, floors, and roofs.

Infrastructure Development: Installation of utilities (water, electricity), road networks, parking areas, and the site drainage system.

##### **4. Interior and Exterior Finishing:**

Interior Finishing: Installation of plumbing, electrical systems, HVAC systems, and interior finishes in the residential units and common areas.

Exterior Finishing: Applying exterior finishes to buildings.

Landscaping: Developing outdoor spaces, including parks, gardens, and recreational areas.

### **5. Testing and Commissioning:**

System Testing: Testing all building systems (electrical, plumbing, HVAC) to ensure they function correctly.

Inspections: Conducting inspections to ensure compliance with building codes and regulations.

### **6. Handover and Occupancy:**

Completion: Finalizing all construction and finishing works.

Handover: Transferring completed units to residents or property managers.

Occupancy: Residents begin moving into the completed development.

### **7. Post-Occupancy:**

Property Management: Ongoing management of the property, including maintenance, security, and community services.

**3.3.3 Technical description of the proposed project’s process/activity accompanied by a Process Flow Diagram/s: The BUSINESS PROPOSAL includes some technical detail (e.g., for water and wastewater systems).**

To effectively illustrate the technical details of the project's processes and activities, the following descriptions and process flow considerations are essential:

**1. Water Supply and Distribution System:**

- Technical Description:
  - The Willow Springs development will source potable water, store it in a reservoir, and distribute it throughout the community.
  - The water reservoir is designed to meet the potable water needs of the entire development, including residential units and recreational amenities.
  - The reservoir design includes specifications for capacity (100,000 gallons), type (above-ground concrete tank), dimensions, materials (reinforced concrete with internal waterproof coatings), and location (elevated point for gravity-fed distribution).
  - The system will include main distribution pipes to connect the reservoir to the residential units and recreational areas.
- Process Flow Diagram Considerations:
  - A process flow diagram should be included to visually represent the water supply and distribution system.
  - This diagram should illustrate the flow of water from the source, through treatment or storage, and its distribution to various points within the development.
  - Key components to highlight in the diagram include:
    - ✓ Water source (e.g., municipal supply, groundwater wells)
    - ✓ Water treatment processes (if any)
    - ✓ Storage reservoir
    - ✓ Pumping systems
    - ✓ Distribution network (pipes, valves)
    - ✓ Delivery points (residential units, recreational facilities)

## **2. Wastewater Collection and Treatment System:**

- Technical Description:
  - The development will employ a decentralized wastewater treatment system using package plants.
  - The wastewater treatment plan is designed to accommodate the specific needs of the development.
  - The system will utilize a series of 20,000 gpd BL-3000 package plants, with one plant serving each residential block.
  - The treated effluent from each package plant will be discharged into a specified discharge point.
  
- Process Flow Diagram Considerations:
  - A process flow diagram is important to illustrate the wastewater collection and treatment process.
  - The diagram should show the flow of wastewater from its generation points, through the collection network, treatment processes, and final discharge.
  - Key components to include in the diagram:
    - Wastewater generation points (residential units, facilities)
    - Collection network (pipes, sewers)
    - Wastewater treatment plants (package plants)
    - Treatment processes within the plants
    - Effluent discharge point and any monitoring or disposal methods

## **3. Stormwater Management System:**

- Technical Description:
  - The development will incorporate a comprehensive site drainage plan to manage stormwater runoff.
  - The plan includes surface drainage elements (slopes, swales, curb & gutter systems, paved area drainage), subsurface drainage elements (perforated pipes/French drains, foundation drains), and stormwater management features (detention ponds/retention basins, bioswales, permeable paving).
  - A drainage network, including storm sewers, inlets & catch basins, and an outfall, will be designed to guide water through the site.
  - Erosion control measures will be implemented.

- Process Flow Diagram Considerations:
  - A process flow diagram would be beneficial to illustrate the stormwater management system.
  - This diagram should depict how stormwater is collected, conveyed, treated (if applicable), and discharged from the site.
  - Key elements to include:
    - Sources of stormwater runoff
    - Collection methods (e.g., inlets, swales)
    - Conveyance systems (pipes, channels)
    - Storage or treatment facilities (detention ponds, bioswales)
    - Discharge points

#### **4. Electrical Power Distribution:**

- Technical Description:
  - The development will have a power supply system, including standby generators with automatic switching capabilities.
  - Each residential unit will be equipped with a centralized heating, ventilation, and air conditioning (HVAC) system.
  
- Process Flow Diagram Considerations:
  - A simplified process flow diagram can be used to illustrate the electrical power distribution network.
  - This diagram can show the flow of power from the primary source (utility grid, generators) to the various loads within the development.
  
- Key elements to include:
  - Power source (utility grid, generators)
  - Transformers
  - Distribution panels
  - Main power lines
  - Distribution to residential units and common areas.

### **3.4 Use of Natural Resources:**

- **Approximate quantities of raw materials required at each stage of the project and their possible sources:**

To provide a more detailed breakdown of the raw materials required at each stage of the project and their possible sources, consider the following:

- **Construction Phase:**
- **Site Preparation:**
  - Fuel (diesel) for heavy machinery (excavators, bulldozers, etc.).
    - ✓ Possible sources: Local fuel suppliers.
  - Erosion control materials (silt fences, geotextiles).
    - ✓ Possible sources: Construction material suppliers.
- **Foundation and Structural Work:**
  - Cement and concrete.
    - ✓ Possible sources: Local and regional cement manufacturers.
  - Steel reinforcement (rebar).
    - ✓ Possible sources: Steel suppliers.
  - Aggregates (sand, gravel, crushed stone).
    - ✓ Possible sources: Local quarries and suppliers.
  - Wood for formwork.
    - ✓ Possible sources: Local timber suppliers.
- **Building Construction:**
  - Bricks or concrete blocks.
    - ✓ Possible sources: Local manufacturers.
  - Cement mortar.
    - ✓ Possible sources: Cement suppliers.
  - Roofing materials (tiles, metal sheets).
    - ✓ Possible sources: Roofing material suppliers.
  - Glass for windows and doors.
    - ✓ Possible sources: Glass suppliers.

- **Interior Finishing:**
  - Plumbing materials (pipes, fixtures).
    - ✓ Possible sources: Plumbing suppliers.
  - Electrical wiring and components.
    - ✓ Possible sources: Electrical suppliers.
  - HVAC system components.
    - ✓ Possible sources: HVAC suppliers.
  - Insulation materials.
    - ✓ Possible sources: Building material suppliers.
  - Drywall and plaster.
    - ✓ Possible sources: Building material suppliers.
  - Tiles and flooring materials.
    - ✓ Possible sources: Flooring suppliers.
  - Paints and coatings.
    - ✓ Possible sources: Paint suppliers.
  - Wood for carpentry and cabinetry.
    - ✓ Possible sources: Timber suppliers.
  
- **Infrastructure Development:**
  - Road paving materials (asphalt, concrete).
    - ✓ Possible sources: Asphalt and concrete suppliers.
  - Piping for water supply and drainage.
    - ✓ Possible sources: Pipe suppliers.
  - Lighting fixtures and poles.
    - ✓ Possible sources: Electrical suppliers.
  - Landscaping materials (plants, trees, soil).
    - ✓ Possible sources: Nurseries and landscaping suppliers.

### **3.5 Source of utility services:**

Source of water supply and treatment options:

- **Water Supply:**
  - The Willow Springs development will have its own dedicated water supply system.
  - The Business Proposal includes a section on "Water Reservoir Design Based on Population and Wastewater Requirements."
  - The primary source of water will be [To be specified - e.g., groundwater wells, connection to municipal supply].
  - The development includes an above-ground concrete water reservoir to store and distribute potable water.
  - The reservoir is designed to meet the potable water needs of the entire development, including residential units and recreational amenities.
  - The design specifies a reservoir with a capacity of 100,000 gallons.
  - The tank will be cylindrical, with approximate dimensions of 34 feet in diameter and 15 feet in height.
  - The materials include reinforced concrete and internal waterproof coatings.
  - The reservoir will be located at an elevated point on the site to facilitate a gravity-fed distribution system.
  - The distribution system includes main distribution pipes to connect the reservoir to the residential units and recreational areas.
  - Backup pumps will be included to ensure a reliable water supply.
  - Overflow mechanisms will be designed to direct excess water into the site's drainage system.
  
- **Wastewater Treatment:**
  - The development will utilize a decentralized wastewater treatment system.
  - The "Wastewater/Sewage Treatment Plan for Willow Springs" section provides details on this.
  - The system will employ a series of package wastewater treatment plants.
  - The design specifies 20,000 gpd BL-3000 package plants, with one plant serving each residential block.
  - This decentralized approach will allow for efficient treatment of wastewater generated within each residential area.

- The treated effluent from each package plant will be discharged into a specified discharge point (e.g., a nearby water body or municipal sewer system).
- Effluent quality will be monitored to ensure compliance with local environmental regulations.
  
- **Energy/Electricity:** The Business Proposal mentions standby generators.
  - The development will have a primary source of electricity from the national grid.
  - To ensure a reliable power supply, the development will also have standby generators with automatic switching capabilities.
  - These generators will provide backup power during outages, ensuring uninterrupted electricity for residents and essential services.
  - The type and capacity of the generators should be specified.
  
- **Communication Facilities:**
  - The development will incorporate modern communication infrastructure to meet the needs of residents.
- This infrastructure may include:
  - ✓ Provision for high-speed internet access (e.g., fiber optic cables, cable connections).
  - ✓ Telephone lines.
  - ✓ Wireless internet access (Wi-Fi) in common areas.

### 3.6 Waste Production:

The Willow Springs development is expected to generate the following types of waste:

- **Wastewater:**
  - Domestic wastewater from residential units (containing organic matter, suspended solids, nutrients, etc.).
  - Wastewater from recreational facilities (e.g., pool backwash).
  
- **Solid Waste:**
  - Residential waste (household garbage, packaging, food waste).
  - Construction waste (during the construction phase - debris, materials scraps).
  - Landscape waste (yard waste, trimmings).
  - Recyclable materials (paper, plastic, glass, metal).

The monthly quantity/volume of waste managed (generated, stored, transported):

- Providing precise monthly quantities/volumes is challenging without detailed waste generation estimates.
- **Wastewater:**
  - ✓ The volume of wastewater will be directly related to water consumption within the development.
  - ✓ The Business Proposal specifies the use of 20,000 gpd package plants for each residential block which indicates the plants are designed to treat up to 20,000 gallons of wastewater per day.
  
- **Solid Waste:**
  - ✓ Residential waste generation can be estimated based on average waste generation rates per capita and the projected population of the development.
  - ✓ Construction waste will be generated primarily during the construction phase, with the volume varying depending on the construction activities.
  - ✓ To provide more accurate estimates, it is recommended to conduct a waste generation study or use industry-standard waste generation factors.

The volume of effluent to be discharged along with a chemical analysis indicating the effluent's composition: The Business Proposal provides some effluent information.

The Business Proposal includes a "Wastewater/Sewage Treatment Plan for Willow Springs."

- The wastewater treatment system will utilize package wastewater treatment plants.
- The treated effluent from these plants will be discharged into a specified discharge point.
- To meet the requirements the below is considered.
- **Volume of Effluent:** The estimated volume of treated effluent to be discharged per day or month. This should be consistent with the design capacity of the treatment plants.
- **Effluent Composition:**
  - ✓ A detailed chemical analysis of the treated effluent, including expected concentrations of key parameters.
  - ✓ Typical parameters to include:
  - ✓ Biochemical Oxygen Demand (BOD)
  - ✓ Chemical Oxygen Demand (COD)
    - Total Suspended Solids (TSS)
    - pH
    - Nutrients (Nitrogen, Phosphorus)
    - Fecal coliform or E. coli
    - Oil and Grease
    - Other relevant parameters based on local regulations.
- The effluent quality must comply with the discharge limits set by the Environmental Protection Agency (EPA) of Guyana.

### **Methods of waste disposal/treatment:**

- The Business Proposal details the wastewater treatment process using package plants for solid waste:
- **Residential Waste:**
  - ✓ Collection and storage: Garbage rooms in each residential block, garbage chutes.
  - ✓ Collection by waste management services: Regular collection of solid waste by a licensed waste management company.
  - ✓ Disposal at approved landfill: Disposal of non-recyclable waste at a designated landfill facility.
- **Recyclable Materials:**
  - ✓ Separate collection: Implementation of a system for residents to separate recyclable materials.
  - ✓ Recycling: Partnering with recycling facilities to process recyclable materials.
- **Construction Waste:**
  - ✓ Waste segregation: Sorting construction waste on-site for recycling and disposal.
  - ✓ Recycling of construction materials: Recycling of materials like concrete, wood, and metal where possible.
  - ✓ Disposal at approved landfill: Disposal of non-recyclable construction waste at a designated landfill.
- **Landscape Waste:**
  - ✓ Composting: Composting of yard waste and trimmings on-site or off-site.

Potential locations for recovery/disposal sites shall be identified with justifications for the site selection.

- The following will be determined when the project commence:
- **Wastewater Discharge Point:**
  - ✓ Specific location where the treated effluent will be discharged.
  - ✓ Justification for the selection of this discharge point (e.g., proximity to a suitable water body, connection to a municipal sewer).
- **Solid Waste Disposal Site:**
  - ✓ Name and location of the landfill facility where non-recyclable waste will be disposed of.
  - ✓ Justification for selecting this landfill (e.g., EPA approval, capacity, proximity).

- ✓ **Recycling Facilities: Composting Facilities (if applicable):** Puran Brothers Inc.  
Waste-Management Service Lot 7 Bella Street, West Bank, Guyana

### **3.7 Duration of the project for each phase:**

- **The BUSINESS PROPOSAL provides a project timeline, which is helpful.**

#### **Pre-Construction Phase (6 months)**

- This initial phase is critical for setting the stage for the entire project.
- Activities include:
  - ✓ Land acquisition (if not already completed): Finalizing the purchase of the 6.887-acre land in Providence, Guyana.
  - ✓ Securing necessary permits and approvals from local authorities and government agencies.
  - ✓ Detailed architectural design and engineering plans.
  - ✓ Finalizing contracts with contractors, suppliers, and other stakeholders.

#### **Site Preparation Phase (3 months)**

- This phase involves preparing the land for construction activities.
- Activities include:
  - ✓ Clearing the site of any vegetation and existing structures.
  - ✓ Demolition of any unwanted structures.
  - ✓ Grading and leveling the site to achieve the desired topography.
  - ✓ Implementation of erosion and sediment control measures.
  - ✓ Installation of temporary facilities such as site offices, storage areas, and access roads.

#### **Foundation Work Phase (4 months)**

- This phase focuses on establishing the base for the buildings.
- Activities include:
  - ✓ Excavation for foundations.
  - ✓ Piling (if necessary) to provide support for the structures.
  - ✓ Construction of foundations for the residential blocks and the gym/clubhouse.

#### **Building Construction Phase (18 months)**

- This is the most extensive phase, involving the construction of the building structures.
- Activities include:
  - ✓ Erection of the structural framework for the buildings.
  - ✓ Construction of walls, floors, and roofs for the five residential blocks and the gym/clubhouse.

- ✓ Installation of elevators, staircases, and other essential building components.

### **Interior Finishing Phase (6 months)**

- This phase involves completing the interior spaces of the buildings.
- Activities include:
  - ✓ Installation of plumbing systems.
  - ✓ Installation of electrical systems.
  - ✓ Installation of HVAC (heating, ventilation, and air conditioning) systems.
  - ✓ Installation of interior finishes such as flooring, tiles, paint, and cabinetry.

### **Infrastructure Phase (6 months)**

- This phase focuses on developing the site's infrastructure and external amenities.
- Activities include:
  - ✓ Construction of road networks and parking areas.
  - ✓ Installation of utilities (water supply, drainage, electricity, and communication networks).
  - ✓ Landscaping of the site, including parks, gardens, and recreational areas.

### **Handover Phase (1 month)**

- This final phase involves completing all construction work and handing over the units to residents.
- Activities include:
  - ✓ Final inspections and quality checks.
  - ✓ Issuing occupancy permits.
  - ✓ Transferring ownership or providing lease agreements to residents.

### 3.8 Decommissioning plan (where applicable):

While a full decommissioning plan might seem premature for a new residential development, it's important to acknowledge its potential future relevance. It is important to include a section outlining the considerations for decommissioning or end-of-life for the project.

A decommissioning plan is not immediately applicable in the short term, as the project is intended for long-term use. However, it's important to address the eventual need for decommissioning to ensure responsible planning.

Here's what a decommissioning plan for Willow Springs includes if we are to prepare one, which at this time is not necessary:

- **Purpose:** To outline the procedures for safely and efficiently dismantling, removing, or repurposing the development at the end of its useful life.
- **Scope:** The plan should cover all aspects of the development, including:
  - ✓ Buildings and structures (residential blocks, gym, clubhouse)
  - ✓ Infrastructure (roads, parking areas, utilities)
  - ✓ Landscaping and recreational facilities
  - ✓ Waste management systems
- **Potential Scenarios:** The plan should consider various decommissioning scenarios, such as:
  - **Complete** demolition and site clearance
    - ✓ Partial demolition and repurposing of some structures
    - ✓ Adaptive reuse of the development for a different purpose

#### Key Considerations:

- **Environmental Impact:**
  - ✓ Assessment of potential environmental impacts during decommissioning (e.g., noise, dust, pollution).
  - ✓ Measures to minimize environmental damage and ensure site remediation.
  - ✓ Proper disposal of hazardous materials (e.g., asbestos, if present).
- **Waste Management:**
  - ✓ Procedures for handling and disposing of demolition waste.
  - ✓ Prioritizing recycling and reuse of materials to reduce landfill waste.

- **Utilities:**
  - ✓ Disconnecting and removing utility infrastructure (water, electricity, gas, communication).
  - ✓ Ensuring safe disconnection and removal of services.
  
- **Site Restoration:**
  - ✓ Plan for restoring the site to a safe and usable condition after decommissioning.
  - ✓ Potential for redevelopment or returning the site to its natural state.
  
- **Regulatory Compliance:**
  - ✓ Adherence to all applicable local and national regulations related to demolition, waste disposal, and site remediation.
  
- **Financial Considerations:**
  - ✓ Estimation of decommissioning costs.
  - ✓ Identifying potential funding sources or mechanisms to cover these costs.

## 4. Potential Impacts and its Significance

### 4.1 The extent of the impact or the area of influence:

Geographical area that may be affected by the proposed activity:

The primary geographical area that maybe affected by the Willow Springs development is Providence, Guyana, where the project is located.

The area of influence extends beyond the immediate site, potentially affecting:

- Surrounding residential areas.
- Local businesses and services.
- Traffic patterns and road networks in the vicinity.
- Nearby water bodies and ecosystems.

The extent of these impacts will vary depending on the specific environmental and social factors involved.

- **Manner in which the various aspects of the environment may be impacted (physical, ecological, and social):**

The Environmental Impact Assessment (EIA) section in the Business Proposal provides a starting point for understanding the potential environmental impacts.

To elaborate on how various aspects of the environment may be impacted, we can categorize the impacts as physical, ecological, and social:

- **Physical Impacts:**
  - ✓ Changes in land use and topography due to construction activities.
  - ✓ Potential for soil erosion and sedimentation.
  - ✓ Impacts on water resources, including increased demand and potential pollution.
  - ✓ Air quality impacts from construction emissions and increased traffic.
  - ✓ Noise and vibration pollution during construction and operation.
- **Ecological Impacts:**
  - ✓ Habitat fragmentation and loss of biodiversity.
  - ✓ Impacts on local flora and fauna.
  - ✓ Potential effects on aquatic ecosystems if there is water pollution.

- **Social Impacts:**

- ✓ Impacts on the local community, both positive and negative.
- ✓ Increased traffic and potential congestion.
- ✓ Changes in property values.
- ✓ Job creation and economic benefits.
- ✓ Effects on community cohesion and social infrastructure.

## 4.2 Description of Environmental Impacts:

- Description of environmental impacts, including magnitude, complexity, sources of substances, and steps taken to reduce and/or mitigate impacts: The EIA section covers mitigation, but ensure a thorough description of the impacts themselves is included.
  
- **Land Use and Habitat**
  - **Description:**
    - ✓ **Habitat fragmentation:** The development may divide existing habitats, disrupting wildlife movement and potentially isolating populations.
    - ✓ **Loss of biodiversity:** Construction activities such as clearing vegetation and excavation can lead to the direct loss of plant and animal species.
  - **Magnitude:** The magnitude of these impacts depends on the extent of habitat alteration and the ecological sensitivity of the area.
  - **Complexity:** These impacts are complex due to the interconnectedness of species and ecosystems. Habitat fragmentation can have cascading effects on food chains, reproduction, and species survival.
  - **Sources of substances:** The primary sources of impact are the physical construction activities, including land clearing, excavation, and building construction.
  
- **Water Resources**
  - **Description:**
    - **Groundwater contamination:** Improper management of wastewater or chemicals used during construction and operation can lead to the contamination of groundwater resources.
    - **Surface water pollution:** Runoff from the development site can carry pollutants such as sediment, chemicals, and debris into nearby water bodies, affecting water quality.
    - **Increased water demand:** The development will increase the demand for water resources, potentially impacting water availability for other users or the environment.
  - **Magnitude:** The magnitude of these impacts depends on the effectiveness of wastewater treatment, stormwater management, and water conservation measures.
  - **Complexity:** Water resource impacts are complex due to the interconnectedness of groundwater and surface water systems. Pollution in one area can affect water quality downstream or in connected aquifers.

- **Sources of substances:** Potential sources include wastewater discharge, stormwater runoff, and chemical spills.
  
- **Air Quality**
  - **Description:**
    - ✓ **Construction emissions:** Construction activities generate dust, particulate matter, and other pollutants, which can affect air quality and human health.
    - ✓ **Traffic emissions:** Increased traffic in the area due to the development contributes to air pollution from vehicle exhaust.
  - **Magnitude:** The magnitude of these impacts depends on the intensity of construction activities and the volume of traffic generated by the development.
  - **Complexity:** Air quality impacts can be complex due to the dispersion of pollutants in the atmosphere and their potential interactions with other pollutants.
  - **Sources of substances:** Sources include construction equipment, vehicle emissions, and dust from construction sites.
  
- **Noise and Vibration**
  - **Description:**
    - ✓ **Construction noise:** Construction activities generate noise and vibration, which can be disruptive to nearby residents.
    - ✓ **Traffic noise:** Increased traffic contributes to noise pollution, affecting the quality of life for those living near the development.
  - **Magnitude:** The magnitude of these impacts depends on the intensity and duration of construction activities and the volume of traffic.
  - **Complexity:** Noise and vibration impacts can vary depending on factors such as distance from the source, barriers, and the sensitivity of receptors.
  - **Sources of substances:** Sources include construction equipment, vehicles, and machinery.

- **Waste Management**
  - **Description:**
    - ✓ **Waste generation:** The development generates solid waste, wastewater, and other types of waste, which must be managed properly to avoid pollution and environmental degradation.
    - ✓ **Waste disposal:** Improper waste disposal can lead to soil and water contamination, as well as other environmental problems.
  - **Magnitude:** The magnitude of these impacts depends on the volume and type of waste generated and the effectiveness of waste management practices.
  - **Complexity:** Waste management is complex due to the variety of waste streams and the need for proper handling, treatment, and disposal methods.
  - **Sources of substances:** Sources include residential activities, construction activities, and landscaping.

### **Social and Economic Impacts**

- **Description:**
  - ✓ **Community impact:** The development can have both positive and negative impacts on the local community, such as increased traffic, changes in property values, job creation, and effects on community cohesion.
- **Magnitude:** The magnitude of these impacts depends on the scale of the development and the existing social and economic conditions in the area.
- **Complexity:** Social and economic impacts are complex due to the interconnectedness of social and economic systems. Development can lead to both benefits and costs for different groups within the community.
- **Sources of substances:** Sources include the construction and operation of the development, as well as the influx of new residents and businesses.

### 4.3 Demonstration of financial capability in carrying out remedial works:

To ensure that Gordon Housing Development Inc. can address any potential environmental liabilities or carry out necessary remedial works, the following demonstrates our financial capability:

- **Project Budget Allocation:** The project budget includes a contingency fund of 13,600,000 USD, explicitly allocated for contingencies, professional fees, and other related expenses. This contingency is available to cover unforeseen costs, including potential environmental remediation or mitigation measures that may be required.
- **Financial Projections and ROI:** The financial projections for the Willow Springs project demonstrate a strong return on investment (ROI) of 31.6%. This positive financial outlook indicates the project's ability to generate sufficient funds to address any potential environmental remediation needs.
- **Access to Funding:** Gordon Housing Development Inc. has secured or has access to diverse funding sources to finance the project. This diversification of funding reduces reliance on a single source and ensures that financial resources will be available for both project development and any necessary remedial works.
- **Insurance Coverage:** The project will obtain appropriate insurance coverage to protect against potential environmental liabilities. This insurance will provide financial security in the event of unforeseen environmental incidents.
- **Commitment to Environmental Responsibility:** Gordon Housing Development Inc. is committed to sustainable development practices and environmental stewardship. This commitment is demonstrated through the project's design features, such as:
  - ✓ Implementation of sustainable development practices to minimize environmental impact.
  - ✓ Conducting thorough environmental impact assessments.
  - ✓ Developing emergency response plans for natural disasters.

By demonstrating a clear allocation of funds, a strong ROI, access to diverse funding sources, insurance coverage, and a commitment to environmental responsibility, Gordon Housing Development Inc. assures that it possesses the financial capability to carry out any necessary remedial works and address potential environmental liabilities effectively.

#### **4.4 The transfrontier nature of the impact:**

To determine if the Willow Springs project has transfrontier impacts, we need to consider if any environmental effects could extend beyond the borders of Guyana. Based on the project description, the potential for significant transfrontier impacts appears to be low.

#### **4.5 The probability of the impact:**

To assess the probability of potential environmental impacts, a risk assessment has been conducted. The following table summarizes the likelihood and risk rating for identified risks:

<b>Risk</b>	<b>Likelihood</b>	<b>Impact</b>	<b>Risk Rating</b>
<b>Economic downturn</b>	High	High	High
<b>Construction delays</b>	High	Medium	High
<b>Permitting issues</b>	Medium	High	High
<b>Natural disasters</b>	Low	High	Medium
<b>Competition</b>	High	Medium	High
<b>Property management issues</b>	Medium	Medium	Medium

## **4.6 The duration, frequency, and reversibility of the impact: Geotechnical Report**

### **4.6.1 Duration, Frequency and Reversibility:**

**Soil stability and erosion:** The Geotechnical report indicates the presence of clayey soils, which can be prone to erosion and settlement. The duration and frequency of these effects would depend on factors like rainfall intensity, drainage, and construction practices. Mitigation measures, if properly implemented, can minimize these effects, but some long-term changes to site topography and drainage patterns might be irreversible.

**Groundwater:** The report provides water level data, indicating the presence of groundwater. Construction activities could lead to temporary disturbances to groundwater flow. The duration of these effects would depend on the effectiveness of water management strategies employed during and after construction.

The report mentions that "The condition of the soil and rock may be significantly altered by construction activities (traffic, excavation, pile driving, blasting, etc.) on the site or on adjacent sites". It also states that "Excavation may expose the soil to change due to wetting or drying". These alterations could have long-term consequences if not properly managed.

### **4.6.2 Cumulative impacts with other projects:**

The geotechnical report provides site-specific soil data, which is important for assessing potential cumulative impacts. For example:

- If other projects in the area also involve significant excavation or fill placement, the cumulative effect could be increased soil instability or altered drainage patterns. The report's data on soil shear strength and permeability can help evaluate these risks.
- Multiple projects drawing from the same groundwater source could lead to cumulative drawdown effects. The report's groundwater level data provides a baseline for assessing these impacts.
- Increased impervious surfaces from multiple developments can worsen stormwater runoff, increasing erosion and flood risks. The soil types and drainage characteristics described in the report are important factors to consider.

## 5. Description of proposed environmental management and mitigation measures:

The Environmental Impact Assessment (EIA) section of the Business Proposal outlines several mitigation measures to address potential environmental impacts. Here is a summary of these measures and a description of how they will be implemented:

The geotechnical report provides essential information for designing and implementing effective mitigation measures:

- **Erosion control:** The report details the soil types and their properties (e.g., grain size distribution, Atterberg limits), which is critical for designing appropriate erosion control structures.
- **Stormwater management:** The report provides data relevant to the design of drainage systems, including soil permeability and infiltration rates.
- **Foundation stability:** The report includes Standard Penetration Test (SPT) results, soil bearing capacity information, and settlement analyses, which are important for ensuring the stability of building foundations and other structures.

Specific mitigation measures that could be informed by the geotechnical report include:

- Using appropriate soil stabilization techniques to minimize erosion on slopes and exposed areas.
- Designing drainage systems that can handle increased runoff volumes, considering the soil's permeability.
- Implementing foundation designs that account for soil bearing capacity and settlement potential, as detailed in the report.

## **6. Summary of minutes of public consultations/meetings:**

Given that representatives from the Environmental Protection Agency (EPA) would have been involved in site visits and verification procedures, it is respectfully requested that the EPA furnish this minute to ensure a comprehensive record of community engagement and feedback."

## **7. Description of assumptions, uncertainties, and gaps in knowledge:**

What assumptions have been made in the development of the Willow Springs project? What are the uncertainties and gaps in knowledge that should be acknowledged?

- The geotechnical report itself includes disclaimers and limitations that highlight assumptions, uncertainties, and gaps in knowledge:
  - "Soil and rock descriptions in this report are based on commonly accepted methods of classification and identification employed in professional geotechnical practice. Classification and identification of soil and rock involves judgment and Geotech does not guarantee descriptions as exact."
  - "The test hole logs indicate the approximate subsurface conditions only at the locations of the test holes. Boundaries between zones on the logs are often not distinct, but rather are transitional and have been interpreted."
  - "Groundwater conditions described in this report refer only to those observed at the place and time of observation noted in the report. These conditions may vary seasonally or as a consequence of construction activities."
  - Specific uncertainties and gaps in knowledge that the report identifies include:
    - ✓ Variations in subsurface conditions between boreholes.
    - ✓ Potential changes in soil and rock conditions due to construction activities.
  - Seasonal or construction-related fluctuations in groundwater levels.
  - The report emphasizes the importance of retaining Geotech Associates Ltd. during the final design and construction phases to address these uncertainties and ensure that the geotechnical recommendations are properly implemented.

## 8. Non-Technical Summary of the Project:

Willow Springs is a new and exciting residential community being built in Providence, Guyana. It's designed to offer a modern and comfortable lifestyle with a touch of luxury.

### What will it include?

Willow Springs will have several buildings, including five apartment buildings where people will live, and a sixth building for a gym and a clubhouse. The apartment buildings will have nine floors each, with a variety of apartment sizes to suit different needs.

### Apartment Features:

The apartments are designed to be modern and comfortable, with features like:

- Spacious bedrooms and bathrooms
- Open-plan living and dining areas
- Modern kitchens
- Laundry rooms
- Balconies for relaxing outdoors

### Community Features:

Willow Springs isn't just about the apartments; it's also about creating a community. To help with this, it will have:

- A gym for staying healthy
- A clubhouse for events and socializing
- Swimming pools for adults and children
- Outdoor spaces for sports and recreation

### Other Important Features:

- **Parking:** There will be plenty of parking space for residents and visitors.
- **Security:** The community will have security measures like gates, cameras, and security guards to keep residents safe.
- **Power:** The development will have its own power supply to ensure residents always have electricity.
- **Climate Control:** The apartments will have air conditioning systems to keep residents comfortable.

**Who is it for?**

Willow Springs is designed to appeal to:

- Professionals
- Families
- People from other countries living in Guyana
- People who want a high-quality, upscale place to live

Willow Springs aims to provide a luxurious and comfortable place to live with a strong sense of community and a focus on sustainability.



Tel: (592) -227-7233

December 23, 2024

**Sandia Ramnarine**  
**For Gordon Housing Development Inc.**  
**Lot 55A Victoria Avenue**  
**Plantation Eccles**  
**East Bank Demerara**

Dear Sir/Madam:

**RE: OUTLINE PLANNING PERMISSION TO USE LAND**

You are hereby informed that your application **PMR-4F/0001/2024** dated **October 21, 2024** for Pre-Application Consultation to **establish Apartment Buildings, Gymnasium, Clubhouse, and Swimming Pools** at **Parcels 251, 4355, and 4367 Plantation Eccles, East Bank Demerara** has been considered by the Central Housing and Planning Authority on **December 20, 2024** and the site is deemed **suitable for the proposed development on condition that:**

- 1. The developer shall apply to the Central Housing and Planning Authority for Full Planning Permission;**
- 2. The developer shall apply to the Environmental Protection Agency for environmental authorization; and**
- 3. The five (5) nine-storeyed buildings shall not be more than 113'-0" (113 feet) in height above the runway elevation of the Eugene F. Correia International Airport, which is 0.61m (2 feet) at the following locations –**

<b>Building</b>	<b>Location</b>
<b>Building 01</b>	<b>6° 45'03.37551" N 58°10'30.15481" W</b>
<b>Building 02</b>	<b>6° 45'00.88562" N 58°10'30.77385" W</b>
<b>Building 03</b>	<b>6° 45'02.97720" N 58°10'28.55969" W</b>
<b>Building 04</b>	<b>6° 45'00.48810" N 58°10'29.17852" W</b>
<b>Building 05</b>	<b>6° 45'00.08860" N 58°10'27.57880" W</b>

You are now required to make a Full Planning application to the Central Housing and Planning Authority for permission in keeping with the above.

**Please be advised that you shall not commence construction until you have received full planning permission from the Central Housing and Planning Authority.**

Failure to submit an application for full planning permission to the Central Housing and Planning Authority would be in violation of the Town and Country Planning Act Cap.20:01. This would result in you being served a Contravention Notice and the Central Authority taking such legal proceeding against you as necessary.

Please be guided accordingly.

Yours sincerely,

  
Rajesh Kamgolam

**Secretary**  
**Central Housing &**  
**Planning Authority**

# ECCLES / RAMSBURG

PETER 'S HALL EAST BANK DEMERARA TEL# 233-5515 FAX 233- 5915

MOTTO: WORKING TOGETHER FOR A BETTER COMMUNITY

Email: ecclesramsburgndc@gmail.com

## NEIGHBOURHOOD DEMOCRATIC COUNCIL

29<sup>th</sup> January 2025.

Sandia Ramnarine  
Developer  
Gordon Housing Development Inc

Dear Ms. Ramnarine,

### Re: No Objection for Residential Development

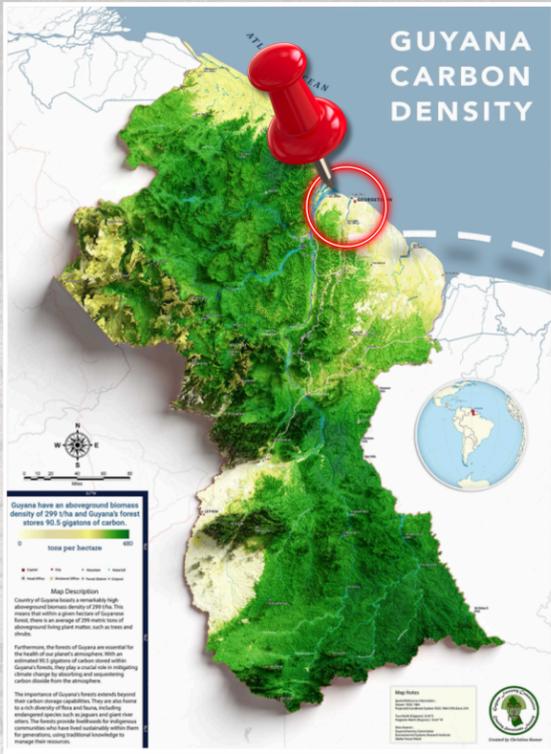
The Council has no objection in relation to the proposed residential development by Gordon Housing Development Inc. located at Parcel 251, 4355 4367 Block III Plantation Providence.

This no objection is granted subject to the Developer seeking and obtaining the necessary permit from the relevant Authorities for the development of the establishment.

All for your information and guidance.

ECCLES / RAMSBURG NEIGHBOURHOOD	
DEMOCRATIC COUNCIL	
PETER'S HALL EAST BANK DEMERARA	
CHAIRMAN.....	
DATE.....	14/02/2025
Ramesh Persaud	

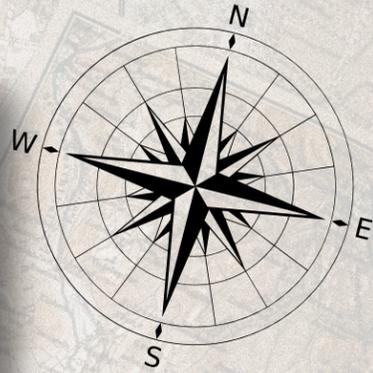
Chairman (Ag)



# LOCATION MAP

EXISTING PARCEL 4355, 4367 & 251, BLOCK NO. III, PROVIDENCE, EAST BANK DEMERARA, GUYANA, SOUTH AMERICA

**Ai Architects**  
CONSULT . DESIGN . MANAGE . BUILD



## LEGEND



MAIN ACCESS ROAD



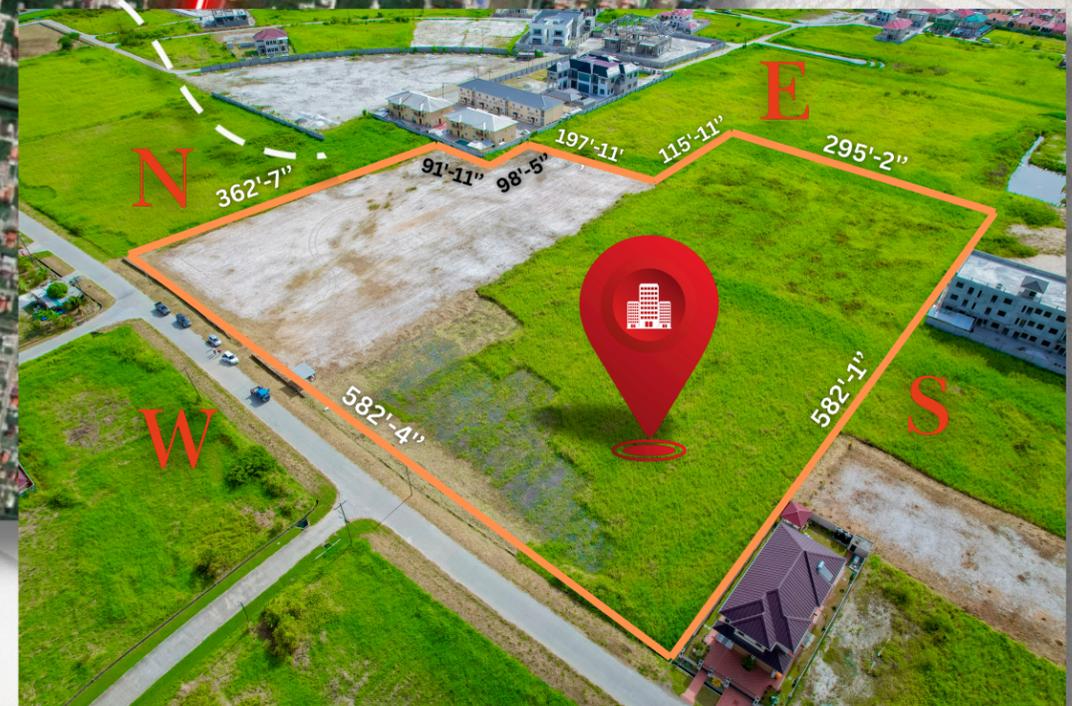
ACCESS ROAD



LOCATION OF LAND

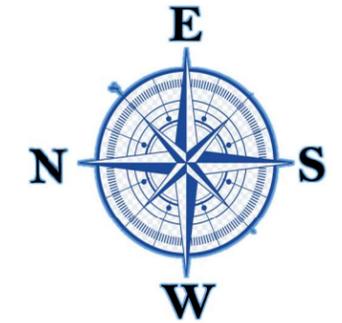
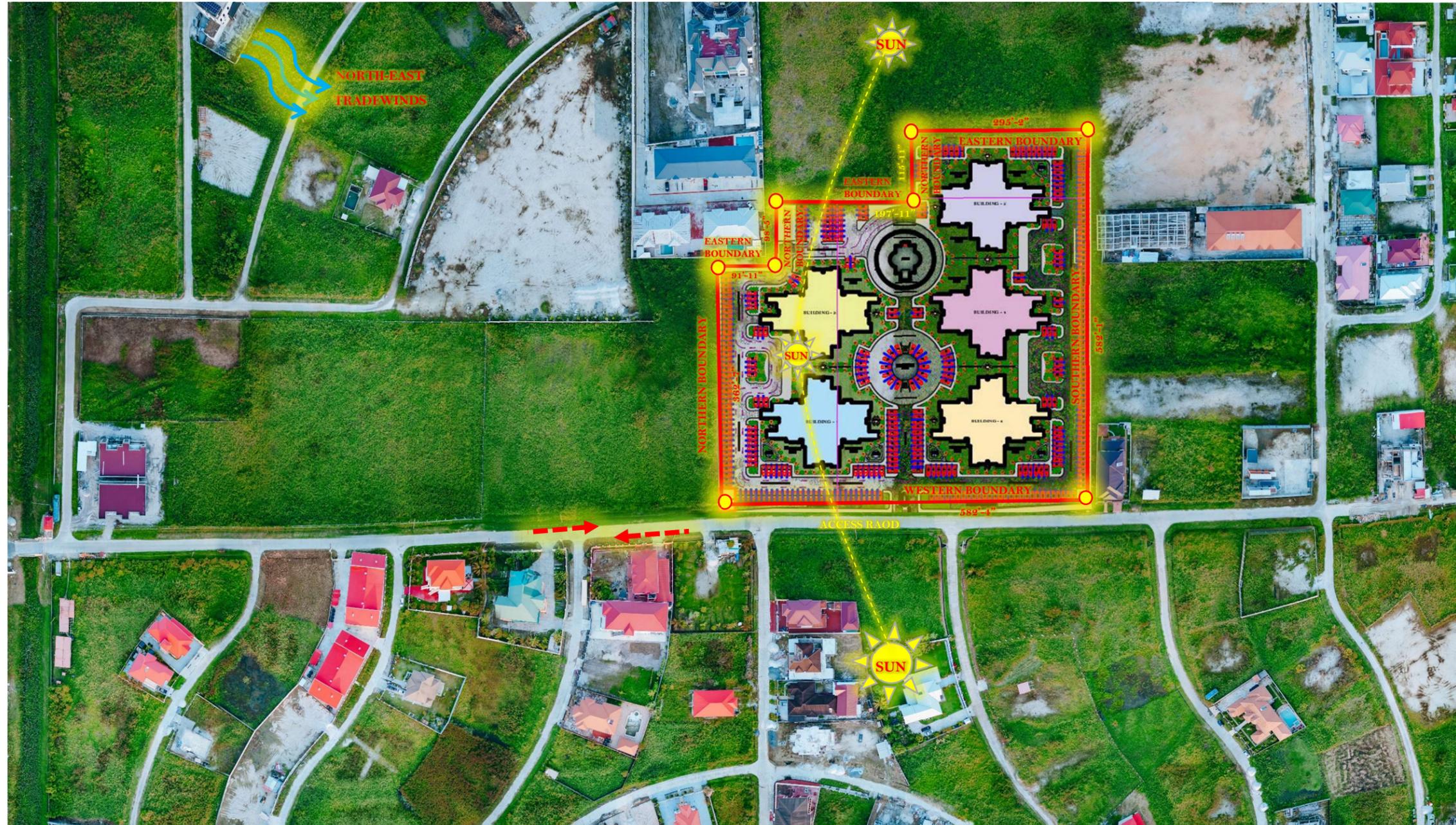


PROVIDENCE CRICKET STADIUM



 ELAINEVILLE

**SITE COORDINATES:**  
 6° 45' 00" N 58° 10' 30" W



**LEGEND**

SYMBOL	DESCRIPTION
	WIND DIRECTION
	TRAFFIC FLOW
	SUN PATH
	BOUNDARY LINES

Aerial View Showing Existing Parcel 4355, 4367 & 251, Block No. III, Providence, East Bank Demerara, Guyana, South America – Suggested Site Plan

Aerial View Showing Existing Parcel 251, 4355 & 4367, Block No. III, Plantation Providence, East Bank Demerara, Guyana, South America

**Ai Architects**  
 Consult. Design. Manage. Build.  
 85 Annandale West, E.C.D.  
 Contact # 592-686-2072  
 # 592-626-0120

Date: 2024-12-06



**LEGEND**

SYMBOL	DESCRIPTION
	TRAFFIC FLOW
	BOUNDARY LINES

Aerial View Showing Existing Parcel 4355, 4367 & 251, Block No. III, Providence, East Bank Demerara, Guyana, South America – Northern & Eastern Boundaries

Aerial View Showing Existing Parcel 251, 4355 & 4367, Block No. III, Plantation Providence, East Bank Demerara, Guyana, South America

**Ai Architects**  
 Consult. Design. Manage. Build.  
 85 Annandale West, E.C.D.  
 Contact # 592-686-2072  
 # 592-626-0120



**LEGEND**

SYMBOL	DESCRIPTION
	TRAFFIC FLOW
	BOUNDARY LINES

Aerial View Showing Existing Parcel 4355, 4367 & 251, Block No. III, Providence, East Bank Demerara, Guyana, South America – Northern & Western Boundaries

Aerial View Showing Existing Parcel 251, 4355 & 4367, Block No. III, Plantation Providence, East Bank Demerara, Guyana, South America

**Ai Architects**  
 Consult. Design. Manage. Build.  
 85 Annandale West, E.C.D.  
 Contact # 592-686-2072  
 # 592-626-0120

Date: 2024-12-06



**LEGEND**

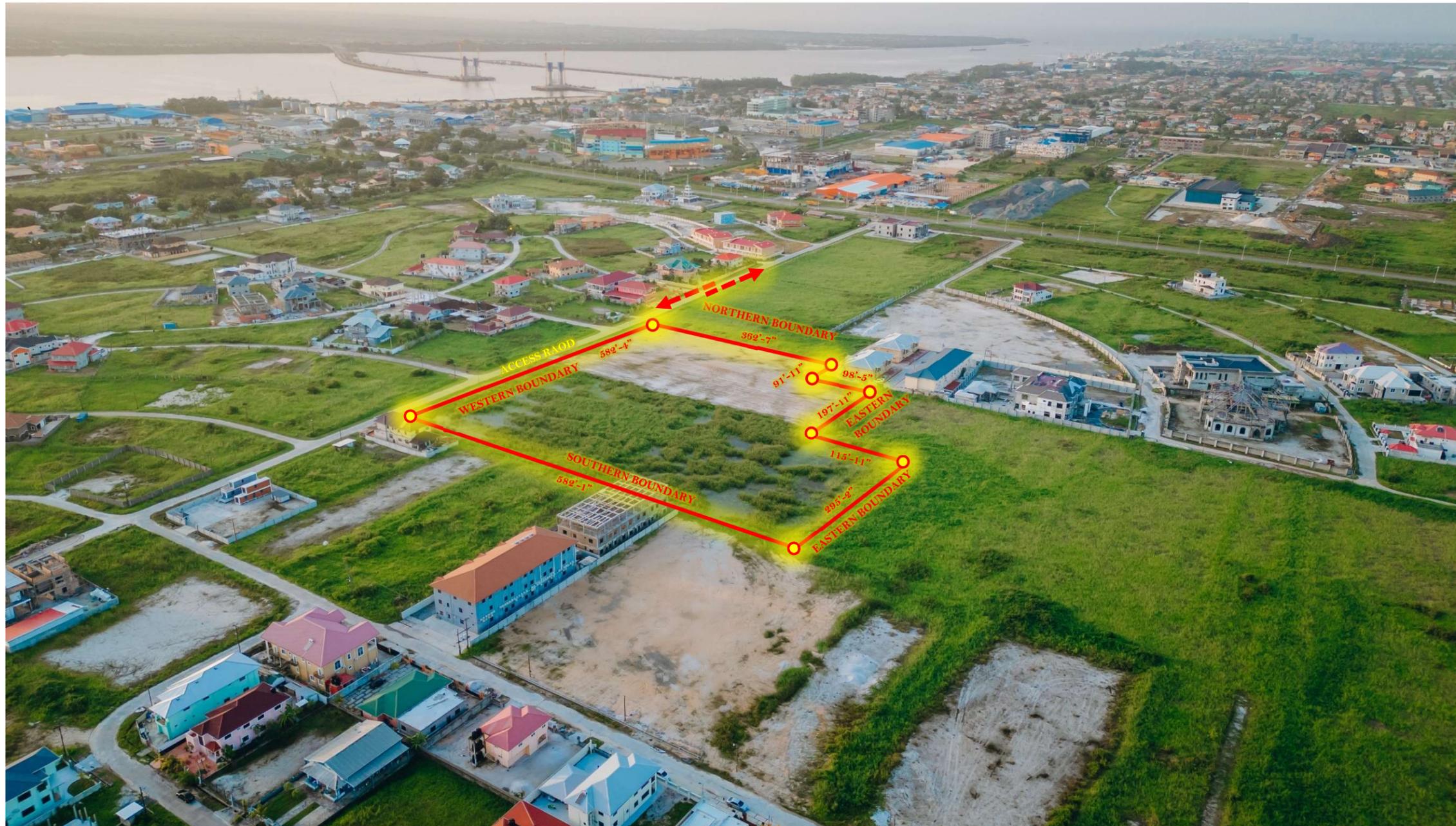
SYMBOL	DESCRIPTION
	TRAFFIC FLOW
	BOUNDARY LINES

Aerial View Showing Existing Parcel 4355, 4367 & 251, Block No. III, Providence, East Bank Demerara, Guyana, South America –Western & Southern Boundaries

Aerial View Showing Existing Parcel 251, 4355 & 4367, Block No. III, Plantation Providence, East Bank Demerara, Guyana, South America

**Ai Architects**  
 Consult. Design. Manage. Build.  
 85 Annandale West, E.C.D.  
 Contact # 592-686-2072  
 # 592-626-0120

Date: 2024-12-06



**LEGEND**

SYMBOL	DESCRIPTION
	TRAFFIC FLOW
	BOUNDARY LINES

Aerial View Showing Existing Parcel 4355, 4367 & 251, Block No. III, Providence, East Bank Demerara, Guyana, South America –Southern & Eastern Boundaries

Aerial View Showing Existing Parcel 251, 4355 & 4367, Block No. III, Plantation Providence, East Bank Demerara, Guyana, South America

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 85 Annandale West, E.C.D.  
 Contact # 592-686-2072  
 # 592-626-0120

Date: 2024-12-06

FINAL DESIGN-COORDINATES FOR EACH HIGH RISE

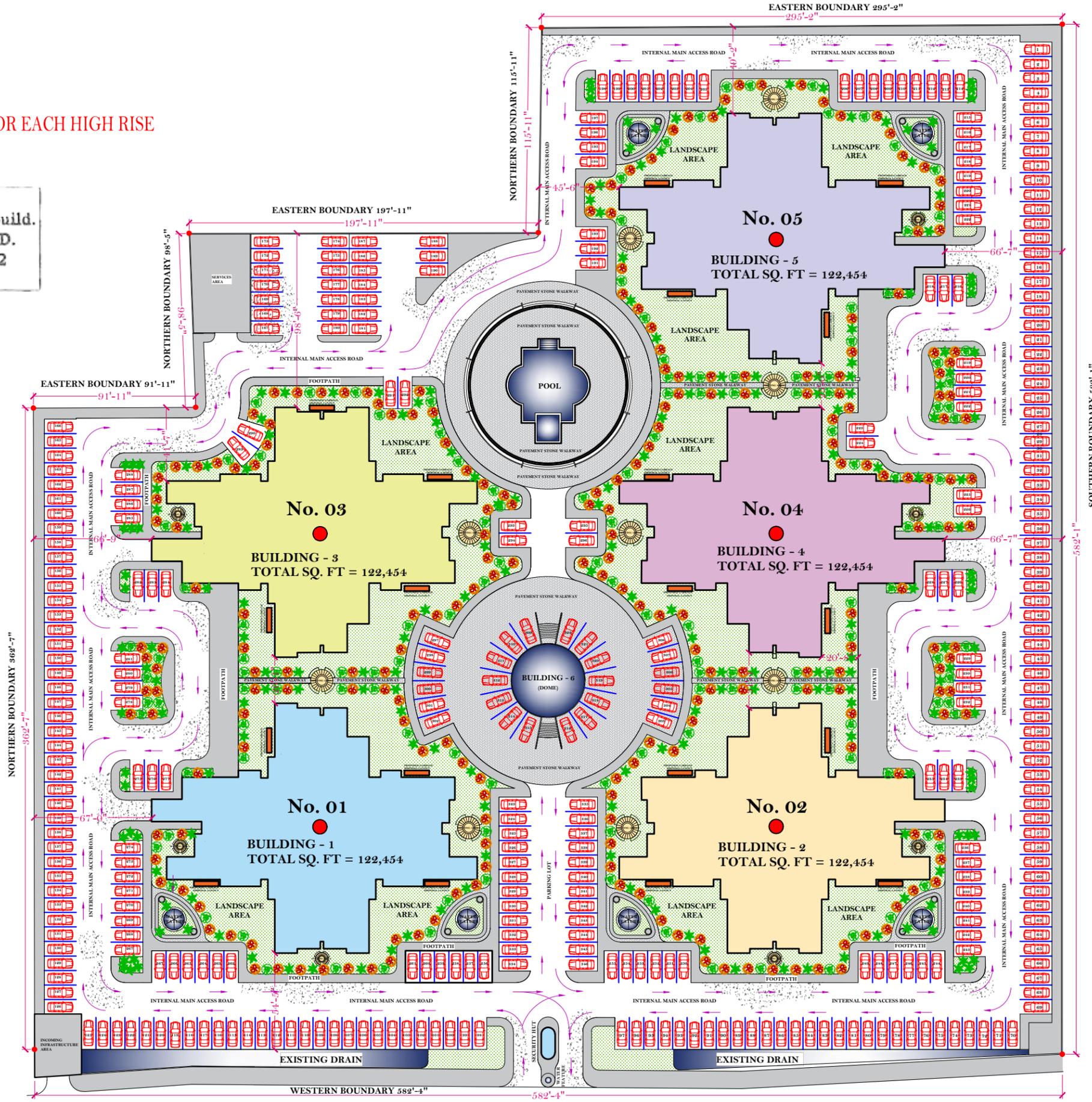
DATE: 2024-12-06



Ai Architects  
 Consult. Design. Manage. Build.  
 55 Annandale West, E.C.D.  
 Contact # 592-686-2072  
 # 592-626-0120

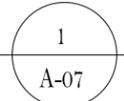
BUILDINGS	LATITUDE	LONGITUDE
No. 01	6°45'03.37551" N	58°10'30.15481" W
No. 02	6°45'00.88562" N	58°10'30.77385" W
No. 03	6°45'02.97720" N	58°10'28.55969" W
No. 04	6°45'00.48810" N	58°10'29.17852" W
No. 05	6°45'00.08860" N	58°10'27.57880" W

BUILDINGS	ELEVATION MSL (meters)- MEAN SEA LEVEL	ELEVATION GD (meters) - GEORGETOWN DATUM
No. 01	1.506	17.057
No. 02	0.807	16.358
No. 03	1.584	17.135
No. 04	0.875	16.426
No. 05	0.749	16.300



COORDINATES FOR EACH HIGH RISE

SCALE: N.T.S



**PLAN**  
 SHOWING  
**PARCELS 4355, 4367 AND 251**  
 ALL BEING PARTS OF  
**BLOCK No. III**  
 LAND REGISTRATION AREA  
**PLN. PROVIDENCE** (REAR OF NEW PROVIDENCE)  
 ZONE: E.B.D.R  
 EAST BANK DEMERARA  
**GUYANA**  
 SURVEYED AND PAAL AT THE REQUEST OF  
**THE COMPANY SECRETARY OF**  
**GORDON HOUSING DEVELOPMENT INC.**  
 BY

DATE: 18-10-2023

**JERRY C. MELVILLE**  
 (SWORN LAND SURVEYOR)



**MEMORANDUM**

1. NOTICE OF INTENDED SURVEY WAS SERVED ON THE CHAIRMAN OF ECCLES/ RAMSBURG NDC AND ELAINE VILLE HOUSING DEVELOPMENT INC.
2. THE SURVEY COMMENCED ON THE 27-09-2023 AND WAS COMPLETED ON THE 28-09-2023.
3. NO ONE ATTENDED THE SURVEY, THERE WAS NO OBJECTION.
4. REFERENCE WAS MADE TO THE FOLLOWING PLAN ON RECORD AT THE GUYANA LANDS AND SURVEYS COMMISSION:-  
 (a) PLAN # 51776 BY L.L. RUTHERFORD, S.L.S, DATED 22-12-2011.
5. (a) PARCEL 251 IS HELD VIDE CERTIFICATE OF TITLE # 2014/ 3436 BY GORDON HOUSING DEVELOPMENT INC.  
 (b) PARCEL 4367 IS HELD VIDE CERTIFICATE OF TITLE # 2022/ 3866 BY GORDON HOUSING DEVELOPMENT INC.  
 (c) PARCEL 4355 IS HELD VIDE CERTIFICATE OF TITLE # 2022/ 3867 BY GORDON HOUSING DEVELOPMENT INC.
6. THE PURPOSE OF THIS SURVEY WAS TO RE-SURVEY THE BOUNDARIES OF PARCELS 251, 4367 AND 4355.

**SCHEDULE#1**

LINE	REMARKS
A-B	WAS FOUND TO BE 182.54' INSTEAD OF 182.22'
B-C	WAS FOUND TO BE 114.78' INSTEAD OF 115.10'
C-D	WAS FOUND TO BE 589.59' INSTEAD OF 558.48'
E-A	WAS FOUND TO BE 581.72' INSTEAD OF 549.94'

**SCHEDULE#2**

PARCEL	REMARKS
4355	WAS FOUND TO BE 2.12 ACRES INSTEAD OF 2.233 ACRES

**LEGEND**

	DENOTES STEEL IN CONCRETE PAAL	J.C.M
	DENOTES PIPE IN CONCRETE PAAL (FOUND) L.L.R	
	DENOTES ROAD	
	DENOTES DRAIN	

**SCALE**



**1 INCH REPRESENT 70 FEET**

