

# **GUIDANCE NOTES FOR THE DEVELOPMENT OF GAS/ SERVICE STATIONS**



**PLANNING AND SETTLEMENT DEVELOPMENT DEPARTMENT  
MAY 2008**

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# 1 INTRODUCTION

The Planning and Settlement Development (P&SDD), in processing development applications has seen an increase in the amount of applications being submitted for gas/service stations. Consequently there was a need to establish site development standards unique to the development of service stations in order to assure that service stations are functionally and aesthetically compatible with adjacent uses; provide adequate traffic circulation and parking facilities; minimize visual/noise/air pollution; and reduce pedestrian-vehicular conflict.

This report was also prepared to assist Officers of the Department in appraising these types of applications since the report outlines standards that should be adhered to when establishing service stations. These standards can be used as a basis for deciding if a development will be given planning permission and it can also be used to provide information and recommendations to developers for the orderly development of service stations.

Further, since most of these developments are located where other land-uses occur e.g. residential, institutional, it is imperative that these standards be adhered to in order to protect these sensitive developments. Additionally, due to the nature of this type of development, the state of the environment must also be protected; hence strict adherence to these standards must be advocated.

## 2 DEFINITIONS

**Canopy** – a roof-like projection or shelter.

**Service station** – shop (building or part of a building where goods or services are sold) for the sale of petroleum and petroleum products and where motor vehicles are washed, lubricated or otherwise serviced.

**Setback** – the distance by which a building is set back from the property line.

**Bund** – concrete container normally around a storage tank that is used primarily for containment of spillage.

### **3 GENERAL SITE DEVELOPMENT STANDARDS FOR GAS/SERVICE STATIONS**

The site chosen for service stations shall be spacious enough (at least 0.2 ha/0.5 acs) to maximize the safety of any person in or around the station from the potential dangers of petroleum fuels. Layout and design shall conform to the latest edition of GYS 209 “Specification for Design, Construction, Modification and Maintenance of Petrol Filling Stations”<sup>1</sup>.

Notwithstanding the foregoing, no building, structure or land shall be used and no building or structure shall be erected, enlarged or established for any gas station unless approved by the Central Housing and Planning Authority and any other agency such as the Environmental Protection Agency and the Guyana Fire Service.

With regards to the importation and actual licensing to sell petroleum and petroleum products all developers must also apply to the Guyana Revenue Authority (GRA) and the Guyana Energy Authority (GEA) respectively as the competent authorities in these areas.

Failure to comply with the above can be constituted as an illegal act and developer(s) can be prosecuted.

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<sup>1</sup> GYS 209 is a document used by the Guyana Bureau of Standards for regulating gas/service stations.

The following are the requirements that all gas/service stations shall comply with:

### **3.1.1 Design**

- a. The design of the service station shall be appropriate for the site and the surrounding development.
- b. Sufficient space shall be provided to service vehicles and to ensure the safe movement of vehicles and pedestrians on and around the site.
- c. Structures, islands, parking and landscaping shall be so located as to best serve the service station and least adversely affect adjacent properties and the surrounding community.

### **3.1.2 Site Drainage**

- a. Drains (internal or oil separation ) of at least 2m in size shall be provided and so designed that water is not discharged across adjacent public or private property. It is preferred that all drains be concreted.
- b. Drainage system and petrol and oil separators shall be installed at the point where the internal drainage system discharges into the public drainage system so as to prevent the drainage of petrol spillages or water contaminated with petrol from entering water courses, public drains or sewers.
- c. Water draining from car wash facilities shall not be made to pass through the petrol separators as detergents inhibits oil separation.
- d. Clean water from roof and canopies should not be routed through petrol separators but may be discharged directly into public surface water sewers or drains.

### **3.1.3 Dispensing Equipment**

- a. It is recommended that dispensers not be located within 4m (13.12ft.) of the public thoroughfare or property boundary so as to minimize the likelihood of an off-site activity creating an ignition risk.
- b. Dispensing equipment shall be appropriately installed on site to prevent servicing of motor vehicles on the public thoroughfare. Also, the location of tanks and other equipment shall be such that the effect of fire upon nearby property should be minimized. All tanks should be sited a minimum of 4m from a building.

- c. Dispensers shall be located in open air to provide adequate ventilation.
- d. Dispensers shall be located such that hoses do not have to be stretched and are not likely to be damaged by any obstructions.

### **3.1.4 Location of buildings**

- a. For occupied buildings either on site or at the site boundary, a minimum separation distance of 3m (9.84ft.) is recommended, provided there are openings in the wall within 4m (13.12ft.) of the dispenser which could allow flammable concentrations of vapors to enter the building.
- b. In case of domestic premises, or premises housing vulnerable populations, a minimum separation distance of 9m (29.5ft) is recommended unless the building is protected against the entry of fire.

### **3.1.5 Height of fence/walls around the site**

All walls shall be at least 2m (6.6ft.) in height and constructed of a fire resisting material (concrete blocks).

### **3.1.6 Positioning of Signage**

- a. Notices displaying the words, **PETROLEUM SPRIT, HIGHLY FLAMMABLE, NO SMOKING and SWITCH OFF ENGINE** should be installed in the vicinity of dispensers. They need to be positioned so that warnings and instructions are brought to the attention of customers immediately on their arrival at the dispensers.
- b. No signage must be placed in such a manner so as to obscure the vision of drivers entering or leaving a service station.
- c. The use of signs which have flashing or intermittent illumination should be avoided.

### **3.1.7 Parking**

- a. One on-site parking space shall be provided for at least each 27.9 square meter (300 square feet) of gross floor area.
- b. Roadside parking within the vicinity of the service station shall be discouraged and is undesirable since this may impede vehicular movement in and out of the station.

### **3.1.8 Access (Ingress/Egress)**

- a. These shall be designed to ensure a safe and efficient operation, and so located that traffic may move on and off the site from the lane of traffic nearest the curve of a street.
- b. There shall be no more than two (2) vehicular access ways to any one street for each development site.
- c. The width of each access shall not be less than 4.3m (14ft.) or should not normally exceed 7.6 meters (24ft.).
- d. No access shall be located less than 1.5m (5 ft.) to the beginning of a curve of a street corner or edge of the road.
- e. No parking area shall block ingress to or egress from dispensers or service bays.

### **3.1.9 Waste Disposal**

- a. Refuse storage and of sufficient size (at least 240 liters) shall be provided on the site and shall be located in such a manner as to be accessible to refuse collection vehicles.
- b. Waste oil collection facilities should be provided where ever possible.

### **3.1.10 Setbacks**

Buildings shall not be less than 32.8m (10 ft.) from any property line. Canopies shall be sited at least 4m (13.12ft.) from the public thoroughfare, or property boundary. Consideration can be given for canopies extending up to the front boundary of a plot in cases where there is a wide road reserve (4m/13.12ft. or more from property line to carriageway).

### **3.1.11 Paving**

All areas other than planting areas/landscaped areas shall be paved with asphalted or reinforced concrete.

### **3.1.12 Lighting**

Area lighters used to illuminate the lot shall be so arranged as to substantially deflect light away from and avoid undue annoyance to any residential properties and shall not constitute a hazard to vehicle operators on the public thoroughfare or those entering or leaving the gas/service station.



### **3.1.13 Location of storage tanks**

- a. Tanks shall be made of either steel, reinforced plastic or composite material and are usually cylindrical and mounted horizontally; however vertical tanks are sometimes installed.
- b. The walls of bund may be constructed of reinforced concrete, steel or other suitable material and should be designed to be liquid tight and able to withhold the weight of the tank when filled.
- c. There should be no holes or drainage outlet through the bund. Spilled fuel and rain water accumulated may be disposed of by the use of a pump which must be discharged through an oil separator. This can be facilitated by providing a sloped area within the bund which is sited away from the tank.
- d. Tank vents pipes should be directed downwards into the bund to collect any overflows.

### **3.1.14 Hours of operation**

- a. Hours of operation for service stations shall be compatible with adjacent land uses.

## SPECIMEN

### **4 GUYANA FIRE SERVICE REQUIREMENTS FOR SERVICE STATIONS**

The Guyana Fire Service under the Fire Prevention and Petroleum Acts, Chapters 22:01 and 92:01 Laws of Guyana prescribe the following requirements for service stations in order to “reduce the risk of fire, arrest the progress of any fire, or provide adequate means of escape from fire”.

#### **4.1.1 Storage tanks**

- a. Each tank must be given a protective coating of paint to minimize corrosion
- b. All fuel (gasoline, dieselene and kerosene) tanks must be installed underground, set on firm foundations, secured or anchored to prevent buoyancy and surrounded with sand or earth well tamp in place.
- c. Each tank must have its top no less than 60cm below the surface of the ground and covered with a layer of reinforced concrete no less than 15cm thick and at least 30cm from the outer edges of the tanks in all directions.
- d. Each tank must be provided with a vent pipe not less than 30mm in diameter. The lowest end of the pipe must extend through the top into the tank for a depth of not more than 25mm and fitted with a diaphragm of strong wire gauge or an approved vale of the outlet.
- e. Each tank must be connected to approved and fixed dispensers so designed as to allow control of flow and prevent any leakages or accidental discharge of fuel.
- f. All electrical wiring that would service the dispensers, lighting and ancillary equipment must be done in metal conduit piping and provided with flame proof fittings.

#### **4.1.2 Dispensing equipment**

- a. The dispensers must be installed in such a manner that vehicles can be parked easily along side without restricting the movement of other vehicles.
- b. The dispensers must be installed in open air at least 3m from occupied building and sited on concrete islands at least 15cm high.
- c. Dispensers must be installed that the hose do not have to be stretched and are not likely to be damaged by contact with canopy stanchions or other obstructions.

- d. Dispensers should not be located within 4m of the public thoroughfare or property boundary in order to prevent off site activities creating ignition risk.
- e. Rain water from roofs and canopies must not be discharged through petrol separators.

#### **4.1.3 Wash bays**

- a. Water draining from car wash facilities must not pass through petrol separators as detergents inhibits oil separation.

#### **4.1.4 Fire fighting equipment**

- a. Three 6kg Dry Chemical Fire Extinguishers and four fire buckets filled with clean dry sand must be provided and sited on each near the various dispensers.

#### **4.1.5 Fuel floating barge**

- a. The fuel lines which will be connected from the storage tanks to the dispensers on the barge must be installed underground at least 152mm in depth. Shut off valves must be provided and sited at least 10m away so as to control the flow of fuel to this facility.
- b. The lines must be connected to approved and fixed dispensers so designed as to allow control of flow and prevent any leakage or accidental discharge of fuel.
- c. The dispensers must be mounted to minimize the risks of boats colliding with them.
- d. The nozzle which will be used to deliver the gasoline must be equipped with a self-closing control valve that will shut off the flow of fuel when the operator's hand is removed from the nozzle.
- e. Two 6kg Dry Chemical Fire Extinguishers must be provided and sited one each near dispensing equipment.
- f. No other items such as Liquefied Petroleum Gas (LPG) cylinders must be stored on this facility.

#### **4.1.6 Road (fuel) tanker delivery stand**

- a. Fuel tanker delivery stand must be in the open, away from buildings, dispensers and emergency escape routes.
- b. It must be large enough to allow a fuel tanker to be positioned wholly within during delivery i.e. not less than 15m long and 5m wide at any point.
- c. The location chosen shall allow for the fuel tanker to gain access without the need to reverse onto the site and must also provide a clear exit route in a forward direction.
- d. The discharge area must be level and incorporate a drainage system capable of accepting any amount of spillage from the tanker.

## 5 REFERENCES

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## 6 Appendices

### 6.1.1 Plans to accompany building application

Building applications shall be accompanied by three (3) copies of the plan including a plan of the site, floor plans and two elevations (1 front and 1 side). These drawings should clearly show the following:

- a) The external dimensions of existing and/or proposed buildings.
- b) The precise location of all existing buildings, including the identification of buildings to be demolished or any additions to be made.
- c) The existing and proposed building setback distances.

#### **Building plans:**

- a) Site plans accompanying the application shall be to a scale of 1/16" and will show:
  - boundaries of lot
  - position of lot in relation to a street or any other access
  - All existing and proposed buildings, pump islands, tanks, landscaping, bunds and parking facilities.
- b) Building plans accompanying the application shall be drawn on a scale of 1/8" and will show:
  - Two elevations (1 front and 1 side)
  - For extensions of existing buildings, the side elevation which will be affected by the expansion.
  - Floor plans showing the location, size and the use of rooms.

#### **Other document to accompany plans:**

- a) Legal evidence showing proof of ownership and/ or authority of applicant, if not owner.

### **6.1.2 Samples of the site plans for service stations**

### **6.1.3 Specimen of an Environmental Permit**