Organization of Eastern Caribbean States (Draft) Minimum Property Standards

DOMINICA

Prepared by the United Nations Development Programme UNDP), and the United Nations Center for Human Settlements (UNCHS)

CONTENTS

PREFACE

Information for this booklet was obtained in part from a manual prepared for the Organization of Eastern Caribbean States (OECS), by the United Nations Development Programme and the United Nations Centre for Human Settlements, as a guide to planners in the OECS.

The source material for the manual has been generally taken from development manuals of regional States, including some OECS States. Technical Information, where appropriate, has been taken from the draft OECS Building Codes and Building Guidelines. This information is inserted to provide to planners an outline of the technical requirements for studies needed for the appraisal of most large developments.

Every attempt has been made to make use of existing standards as it is recognised that the infrastructure standard must relate to the environment, geography and level of development of the OECS. Hence for example, in the standard for the layout of roads, traffic speeds have been kept reasonably low although there are circumstances where higher speeds may obtain.

The manual does not attempt to restrict the planner's decision making with regards to new developments, but provides yardsticks for making such decisions

GLOSSARY

The following glossary of terms provides brief definitions of terms used in this document.

Accessory	In relation to the use of land or a structure, ancillary or subsidiary.
Amenity Area	An area or areas within the boundaries or a project intended for leisure purposes which may include landscaped areas, communal lounges, swimming pools etc.
Apartment Building	A multiple dwelling comprising three or more dwelling units with shared entrances and shared exits provided for dwelling units located above the first storey.
Applicant	Any person who applies for permission to carry out development.
Board	Physical Planning Board or other Authority appointed pursuant to the relevant Act or Ordinance in force.
Builder	Person engaged in erection, construction, alteration, improvement, maintenance or repair of a building.
Building	Structure with a roof.
Building Area	The total area occupied by a building at ground level excluding terraces, steps and ramps.
Carriageway	The paved surface of a road used by vehicular traffic.
Commercial Development	Development which involves the construction of shops and offices
Commercial Facilities	Development for the provision of goods and services on a retail basis, including offices.
Community Facilities	Buildings and land for social, recreational or service activities.

Condominium	A scheme in which any complex buildings is developed so that each unit is attached to or dependent to a substantial degree on the other units in the scheme for support, shelter or easement for services.
Conservation Area	Area designated by Government for special protection and Management by virtue of their ecological, scientific land-scape or built heritage value.
Crown Land	Land owned or leased by the Crown.
Development	The carrying out of building, engineering, mining or other operations in on, over or under any land, the making of any material change in the use of any building or land or the subdivision of any land.
Development Permission	Permission for development which is given under the provision of the relevant ordinance.
Dwelling Unit/House	Self-contained entity capable of human habitation consisting of one or more rooms and having its own cooking, living and sanitary facilities.
Dwelling House/ Multi-Family	A residential building or group of attached buildings, other than a hotel.
Dwelling House/Single Family	A building containing one dwelling, designed for and used exclusively as a residence for one household
Dwelling House/Detached	A dwelling free standing on its lot with set-backs from all lot boundaries.
Dwelling House/Semi-Detached	A building containing two units, separated by a boundary wall and with each section having a separate lot.
Dwelling House/Duplex	Two dwelling units one above the other or side by side on the same lot.
Eaves	The portion of the roof of a structure which projects beyond the exterior building wall or line.
Engineering Works	Includes the construction and maintenance of roads, run-

	ways and bridges, drainage facilities, marine works, clearing, excavation, dredging, filling of land and water courses, and similar works.
Facilities (Social)	Buildings and land for social, recreational or service activities.
Garage	Place where motor vehicles are housed, repaired or Maintained.
Gradient	Relationship of the vertical distance of a slope to its horizontal distance.
Gross Density (Housing)	The number of units per unit area in residential areas including schools, public open space, roads and other facilities.
Habitable Room	Area in a structure for living, sleeping, eating or cooking. Maintenance or utility space, parking garages and similar areas are not considered habitable space.
Hard Surfacing	Surfacing with a hard material such as wood, stone, asphalt or concrete not occurring naturally on the land.
Land Area (Net)	The total land area minus the area allocated to streets, public parking, play grounds and other non-residential facilities.
Light Industrial Development	Development which involves manufacturing processes which do not affect the amenity of an area by way of the creation of noise, vibrations, fumes, dust, soot, ash, offensive odours, traffic generation, etc. It also includes warehousing.
Heavy Industrial Development	Development which is incompatible with residential development due to noise, vibrations, fumes, dust, smoke, soot, grit, offensive odours or excessive traffic generation. It also includes industries where materials are stored, used or created may be potentially combustible or toxic.
Hotel	Any building containing ten or more rooms intended or designed to be used or which are used, rented or hired out to be occupied, or which are occupied for sleeping purposes by paying guests.

Infrastructure	Roads, water, sewerage, solid waste disposal system electricity, telephone, basic installations on which urban development depends.
Landscaping	The provision and maintenance of trees shrubs and plants in prescribed areas.
Neighbourhood	An area whose inhabitants share certain social facilities. They are usually designed to minimize walking distances to school and avoid the crossing of major roads by children.
Net Density (Housing)	The number of units per acre in residential areas exclusive of schools, public open space and other facilities.
Non-habitable room	A room designed for sanitary facilities, storage or other uses not intended for human occupancy.
Open Land Development	Development of land so that it remains open to the atmosphere and wholly or substantially preserved in its natural state, including but limited to parkland, arable land woodland, water conservation area and beach land.
Plot Coverage	The proportion of a plot's area (net) occupied by buildings expressed as a percentage, including the area of main buildings, out buildings and garages.
Plot Development	The carrying out of construction work within plot boundaries.
Plot Ratio (Floor Area Ratio)	The ratio of the total building area to the net plot area.
Private Outdoor Living Area	Area provided for the enjoyment of the residents of a dwelling unit in the form of, for instance, a private garden, courtyard, patio, terrace or balcony.
Privacy Zone	Buffer zone which provides privacy from passers by for use of occupants of apartments or row houses (town houses) and may be counted as part of required set back.
Public Facilities	Services, such as, schools, health clinics, places of workshop, community centres, required by the community.

Public Way	Any street, alley, pedestrian way, bridge, easement, or other way in which the public has a right of use for passage.
Right-of-Way	The total width of a road and its associated pavements or sidewalks and reservations.
Seeding and Phasing	Number of lots that are to be developed within a given time period in a specific subdivision.
Set-Back	The distance of the forward most part of the building from any of the property boundaries which is to kept free of buildings for purposes of road widening, privacy, light and air, fire prevention etc.
Service Station	Shop for sale of petroleum and petroleum products, and where motor vehicles are washed, lubricated.
Shop	Building used for the carrying on of any retail trade or retail business wherein the primary purpose is the selling of goods by retail and includes a building used for the purpose of a hairdresser, travel agency, or as the reception office for goods to be washed , cleaned or repaired, but does not include a building used for the purposes of a funeral pariour, garage service station, office, bank, betting shop, restaurant or other place for the sale of prepared food hotel or premises for the sale of intoxicating liquors for consumption on the premises, lumber yard or premises for sale of building material or motor vehicle parts or accessories.
Sidewalk	Raised portion of the road constructed as a pedestrian way and having a barrier-type kerb wall adjacent to the carriageway.
Street Cul-de-sac	A street which is designed to remain permanently closed at one end, with the closed end terminated by a vehicular tune-around. The length of a cul-de-sac street shall be measured from center line of the intersecting street to the center of the circle of the turn-around.
Street Furniture	Fittings and fixtures installed in streets such as lamp posts, fire hydrants, street signs, benches, etc.

Storey	Single floor or level of use within a building.
Structure	Anything constructed or erected with a fixed location on the ground, or attached to something having or requiring a fixed location on the ground.
Subdivision	In relation to land means the division of any land other than buildings held under a single ownership into two or more parts, whether the subdivision is by ownership, transfer, or partition, or for the purpose of sale, gift, lease, or any other purpose; and subdivide has a corresponding meaning.
Tee-Junction	A junction at which one road ends on another (usually a more important road) in the form of a "T".
Utilities	Physical services, such as water, sewerage and electricity but excluding roads.
Upgrading	The provision of amenities, utilities and proper road and surface drainage in informal settlements (slums and shanties.
Yard	Total lot space not occupied by buildings; back, front aid side yards refer to parts of the yard in relation to the main building.
Y-Junction	Roadway in which all three legs are of equal importance.

SECTION 1

DEVELOPMENT STANARDS

SECTION 1

DEVELOPMENT STANDARDS

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SECTION 1

DEVELOPMENT STANDARDS

1.1 SCOPE

This section provides information on and standards for the development of land to be used for residential, commercial and industrial purposes and including the development of community facilities, which are needed to support the settlements.

1.2 DEVELOPMENT INTENSITY STANDARDS

1.2.1 General

a) A consistent set of development is necessary for the efficient control and use of land. The Planning Authority will exercise a degree of flexibility in the implementation of the standard development guidelines, but the minimum standards established are generally the platforms on which the developments can be constructed to provide a quality of environment acceptable to the population.

b) No site shall be approved for building or for public use which:

- May have been used as a dump site, or soaked with, or filled with any unsafe or offensive material until the situation has been corrected by removing the unacceptable material and filling with clean, sound material to the approval of the Planning Authority.
- Is below the level of the adjacent street or land, and is actually liable to be in a swampy condition, until the site shall have been filled or drained satisfactorily. Such site require to be leveled, drained or filled with such material and to such compaction that it becomes suitable for building purposes.
- Is a steep and unstable slope which is vulnerable to erosion, slippage or require extraordinarily costly precautions to safeguard existing buildings or public amenities.

c) The intensity standards described in 1.2.2 and 1.2.3 are the Floor Area Ratio and Site Coverage.

1.2.2 Floor Area Ratio (Plate 1-1A)

a) Floor Area Ratio is a measure of development intensity, which is expressed as a ratio of the gross floor area of a building to its total land area (net). The purpose of this ratio is to control the bulk of a building and intensity of

activity to a level, which is consonant with the level of existing or proposed infrastructure facilities. The floor area ratio is generally used to control commercial developments within town centres. For example, if the land on which the building stands is 16,000 sq. ft. the allowable floor area of the building with a floor area ratio of 1:2 is 32,000 sq. ft.

b) While the floor area ratio may vary, the design of residential buildings should be so arranged as to enable the required floor space to be provided along with the consequent car parking arrangement, where appropriate, within this limit. (See parking schedule Table 3-4)

c) The recommended floor area ratios are:

Residential-	**1:1 (high density)**
Commercial-	**1:3.0**
Industrial-	**1:0.75**
Community facilities-	**1-0.75**

d) It is recommended that for developments outside of the town center, the Planning Authority may wish to vary the floor area ratios given above after examining the location and nature of the proposed development.

1.2.3 Site Coverage and Building Coverage (Plates1-2A and 1-2B)

a) Site Coverage is the degree to which the net site area is covered by a building or buildings and paved areas, while building coverage is the degree to which a building (the walls of the building or building) covers the site. The standards are usually expressed as percentages of the net site area.

b) The maximum allowable site coverage standard is designed to ensure that there is adequate available space of site to:

- Facilitate natural drainage and infiltration to water recharge areas, and
- Allow for satisfactory landscaping.

c) In no location should lot coverage for residential purposes exceed 40 percent of the net site area. The maximum allowable coverage for commercial and industrial developments shall be 50% of the net site coverage.

d) Plate 1-2A shows the calculation of the site coverage.

1.3 RESIDENTIAL DEVELOPMENTS

1.3.1 Residential Density

a) Residential Density is the measure of the residential development on a specific site or within a specified geographic area. This is usually expressed in terms of either the number of dwelling units or the number of bedrooms per unit of land area. Residential density may be calculated on the basis of gross or net land area.

b) The use of standards governing residential density is to control the amount of residential development so that the resulting level of development can be:

- Accommodated on the land without the destruction of the physical or environmental character of the area;
- Serviced adequately by the existing and planned infrastructure and social facilities;
- Provided with adequate open space;
- In balance with the function of the particular area;
- Respectful of the rights of residents to enjoy adequate light, ventilation, views, and privacy.

c) The actual gross or net density which is permitted on a particular site depends on the size of that site, the physical characteristics of the site and the general density standard established in relevant area plans and policies for the area in which the site is located.

d) **The permitted maximum residential densities are as follows**:

Low Density:	**5 lots/units per acre**
Medium Density:	**10 lots/units per acre**
High Density:	**17 lots/units per acre**

1.3.2 Lot Sizes

a) The lot area for individual buildings must be sufficient to allow space for the building and other essential activities. In addition there must be provision for convenient access for pedestrians, natural light, privacy, ventilation and

b) Minimum lot sizes for multi-storey apartment complexes are subject to a) above and to the general topography of the site. The developer should discuss the proposed project with the Planning Authorities to ascertain the lot sizes allowable.

b) Minimum lot sizes for a detached, semi-detached or duplex house with ground level access shall, subject to satisfactory arrangements for disposal of sewage and to general amenity, be as shown in table 1-1.

Table 1-1
Minimum Lot Sizes

Area	**Lot Sizes**
High Density	2,500 to 4,000 square feet for internal lots 3,000 to 4,500 square feet for corner lots.
Medium Density	4,000 to 7,000 square feet
Low Density	8,000 square feet

1.3.3 Setback (Plate 1-3)

1.3.3.1 General

a) As a general rule, it is proposed that residential buildings within the densest area in the centre of towns should be a minimum distance from front and rear boundaries to permit a light angle of 30 degrees. The light angle is measured between a vertical line from ground at the front (or back) fence and a line joining the highest point of the eaves (or parapet) to the same point at ground level.

b) The distance to front and back fences should be a minimum 0f 1/3 the height of the building. The road width has to be added if a road runs between the buildings. Light angles are used here as measurement of distance and not to secure a minimum quantity of light. As the sun stands high all year round the problem is not to provide light, but adequate ventilation and to avoid crowding and overlooking

c) Guidelines for setbacks from roads are as follows:
- **Side yards where provided, should be not less than 10 ft. measured from the property boundary to the furthermost projection of the building.**

- **Rear yards where provided, should not be less than 15 ft. measured from the nearest point of the main wall of the building to the rear lot line.**
- **For high-density developments these standards may have to be modified.**

d) Table 1-2 gives the recommended building setback from the adjoining roads.

Table 1-2
Building Setbacks

Type of Road	Road Reservation (ft)	Building Setback From road centerline (ft)
Main Road (Highway)	**75**	**60**
Main Road (Primary)	**50**	**45**
Secondary Road	**35**	**30**
Residential Collector	**31**	**25**
Residential Access	**29**	**25**

1.3.3.2 Encroachment or Overhanging of Setbacks

The encroachment or overhanging of setbacks by parts of buildings may be permitted in certain cases as follows:

a) Upper storey (minimum 19 ft above ground) – 6 ft maximum beyond the building line, provided that such projections do not interfere with the planting of trees.

b) Open fire escape – 6 ft into side or rear yards.

c) Eaves, awnings, sun canopies – 8 ft maximum beyond building lines.

d) Uncovered steps and porches – 3 ft maximum beyond building lines.

1.3.4. **Building Heights (Plate 1-1B)**

a) General

The standards for heights indicate the maximum elevations to which buildings will be permitted, and is expressed as a linear measure or in the number of

storeys permitted. The height is measured from the lowest level of the ground from which the building stands. Where the land slopes downwards from the road or roads adjoining the building, the height of the building is taken as the vertical distance from the adjoining road to the top of the building.

Height standards are used in planning to:

- Achieve compatibility in the size and scale of buildings in any area
- Ensure adequate natural light and ventilation of all buildings in the area
- Preserve important views

For any site, the height is a function of the existing building heights, site condition, particularly slopes) and the other standards for site control, such as Floor Area Ratio and plot coverage allowed.

b) A maximum of four storeys may be allowed. However in approving an application proposing developments with buildings in excess of two storeys or 25 feet, the Planning Authority shall be satisfied that the development does not have a detrimental impact on:

- The levels of privacy and amenity presently employed on neighbouring lots
- The visual amenity of any ridgeline.

c) The setbacks from any lot line may be increased at the discretion of the Board in order to protect the features of privacy and visual amenity. However, in earthquake prone zones the Planning Authority may mandate that the setbacks of multi-storey buildings be such that in the event of a total collapse of the building the adjoining roads will not be blocked by debris. The premise is that the roads must be kept clear for emergency vehicles.

1.3.5 **Apartments**

a) This sub-section applies to multi-storey buildings being used for residential apartments, and deals with the siting of the buildings on the plots.

b) Minimum distance between apartment buildings should be twice the height of the building measured on the side of the front (or back) elevation. The minimum distance between two end elevations of two apartment buildings should be four feet plus one foot for each additional or partial storey at ground level, to a maximum of 12 feet. This is not applicable if the end elevation has the only window of a habitable room. If so the distance should be a minimum

of 25 feet. Along either the front or back elevation there should be a privacy zone of appropriate length.

c) For the calculation of the minimum distance between buildings at different heights; the height of the highest one dictates the distance.

1.3.6 **Multiple Housing**

a) This Sub-section applies to town houses (row or terrace houses) or other forms of grouping of units;

b) Each dwelling unit in horizontal multiple housing shall have one yard, which serves a private outdoor living area. This yard is normally associated with the living room, but to allow flexibility in design, the private outdoor living area. This yard is normally associated with the living room, but to allow flexibility in design, the private outdoor living area may alternatively be located adjacent to a dining room, study, lounge or a kitchen, which is combined with one of the above uses.

c) A privacy zone should normally be not less than 15 feet deep. Outside a window of a habitable room the minimum distance to a wall or building should be 25 feet. The minimum distance between the font (or back) elevation of one storey buildings is 25 feet provided that a minimum distance of 50 feet is kept between the back (or front) elevations of buildings in the same grouping;

d) The minimum distance between two storey building front (or back) elevation is 35 feet with the condition of 70 feet distance to the next two storey building from its opposite back (or front) elevation. The distance between two and one storey buildings should be same as that between two storey buildings. A yard adjacent to a non-habitable room shall have a minimum depth of 4 feet plus 2 feet for each storey above the storey or partial storey at ground level.

1.4 **NON-RESIDENTIAL DEVELOPMENTS**

1.4.1 **Additional Standards Relating to Non-Residential Development**

1.4.1.1 **Community Facilities**

a) General

i) All residential developments require support facilities which range from schools, churches, playing facilities to commercial services

are provided on the basis of the number of residential units being developed. In order to provide these facilities, adequate amounts of land should be provided as party of the Development plan.

The planning of community facilities such as schools, churches, community centres and theatres, require special attention. All such facilities must be to a large extent be resistant to natural disasters of floods and hurricanes as they will be used as hurricane shelters. In the earthquake prone areas, special structural design provisions must be taken to ensure that community facilities will not collapse under the forces generated by earthquakes.

Designers are expected to consult the relevant Building Codes and Building Guidelines when submitting applications for the construction of community facilities.

ii) The following standards are recommended: -

Size of Residential Development (lots)	**Required Facility**
20 – 200	Shops, Primary School, play areas
600 – 1000	Primary School, Commercial area, play areas
1,000 – 30,000 lots	Primary school and day care center, commercial area, administrative center, church, sports fields, playground.

b) **Recreational Space**

To facilitate recreational uses, all subdivisions of over 20 lots should reserve a minimum of 200 sq.ft. per dwelling unit for this recreational purposes. The area reserved should be properly located with respect to the residential lots and be adequately landscaped. In larger developments large open spaces should be provided rather than small ones.

For multi-family residential developments, a suitable area should be provided as communal; space amenity and recreational areas for residents. This space should be generated at a rate of 100 sq. ft. per apartment unit and 300 sq.ft. for semi detached/town house units.

c) Schools

A primary school should be accessible from all sections of the development. However, a primary school should not front on a major thoroughfare because this would expose the children to hazards of heavy traffic and the school to traffic noises. A primary school should be located within close proximity to a neighbourhood so that it will be within one – half-mile walking distance of the farthest home.

For schools, the minimum required area is as follows: -

- **High school: - 7 acres of fairly level ground to include football field, running track etc., and other sport facilities;**
- **Primary schools: - 3 – 5 acres of fairly level ground including a playing field.**

The applicant should consult the Ministry of Education and the Planning Authorities at the design stage to determine the need for a private school.

d) Churches

Churches may be located in most areas depending on their acceptability by the community. Each application will be considered on its own merit. Factors affecting development decisions will include lot size, proximity to residential dwellings, traffic and parking requirements, level of noise transmission and the external appearance to the structure.

e) **Health Facilities**

The Ministry of Health has responsibility for Planning of health service. Usually the minimum lot area is ½ acre for a Health Clinic. If maternity care is considered, the requirement is one acre. Clinics should be located within the service center of settlements and in proximity to other public facilities.

f) Other Public Facilities

i) Sites should be reserved for public uses in large-scale residential development. Such uses should be related to the community center and can be planned to make partial use of commercial parking facilities where these exist.

ii) In small development where the need for such community facilities exist, consideration should be given to the provision of multipurpose buildings to house theses various activities.

1.4.2. **Commercial Facilities**

a) **General**

i) Usually, commercial development takes place within three types of shopping areas: neigbourhood, community and town center. The neighbourhood shopping is the smallest and provides for the scale of convenience goods (food, drugs, and sundries) and personal services (laundry, dry cleaning shoe repairing etc) to serve daily community needs.

ii) Community shopping in addition to convenience goods and personal services provides a wider range of goods, clothes, hardware and appliances. Town center shopping areas provide for general merchandise, apparel and furniture, etc.

iii) It is generally convenient for both shoppers and traders that commercial activities should be concentrated in this way and specific area should be allocated for this purpose in development plans. Planning control aims to steer new shops to these areas, having regard to the shopping needs of the people.

iv) In large subdivisions, however, shops will be needed usually singly or in small groups to serve neighbourhood needs. The type and size of shopping facilities will depend on the scale of development, and will require careful location and planning in relation to adjacent residential areas and local amenities. An attractive and lively shopping area can add considerably to a residential area and can create a focus to the community especially when other institutional uses are located nearby.

b) The following Table 1 – 3 gives development standards for commercial facilities:

Table 1-3
Development Standards for Commercial Facilities

	Neighbourhood/Community/ Commercial	**Town Centre**
Site Coverage	60%	75%
Building height	2 storeys or 25 ft	3 storeys or 35 ft.
Building Setbacks		
Front	20ft	20ft
Side	10ft	6 ft.
Rear	15ft	10ft.
Parking	See Schedule of Vehicle	Parking within site boundaries

Note: Greater Setbacks may be required on major highways

1.4.3. **Hotels**

a) It is important that applicants discuss their proposals with the Planning Authorities at the very earliest stage to ensure that any special problems or requirements are dealt with before the application is made.

b) Whatever the type of hotel or its location, it is important that:

- It blends with its surroundings by reason of its siting, design, scale and landscaping;

- It has no adverse effect upon the environment by reason of noise, traffic congestion or by destroying features of interest in the area;

c) Hotels should have a lot area of a minimum of one acre for 20 bedrooms;

d) Car parking standards should comply with those in the "Schedule of Vehicle Parking Requirements Within Site Boundaries and access points should be so sited as to minimize turning movements across traffic.

e) Special arrangements must be made for: -

i) Construction of access roads and parking;

ii) Disposal of sewage. For larger hotels (50 rooms or more) a package sewage system is recommended. If the facility is not connected to a public system. The Planning Authority will not permit discharge of untreated sewage into the sea.

iii) Maintenance of swimming pools. The water in the pool must be tested regularly and be maintained to the standards established by the health authorities.

1.4.4. **Marinas**

a) Before any marina development is undertaken, engineering and economic feasibility studies and environmental impact assessments must be conducted.

b) Expansion of existing marinas, including new moorings and the construction of additional rooms in adjacent hotels should be accompanied by a management plan which ensures a high level of water quality maintenance. The construction of dead end canals will not be allowed because of the adverse impact on water quality.

c) The developer must make adequate arrangements to the approval of the Planning Authorities, for the disposal of solid and liquid waste emanating from the marina or from the ships, which use the

facility. The Planning Authorities will not approve the disposal of waste in the marina or in the inshore waters.

1.4.5 **Office Buildings**

i. Generally, offices should be centrally located in close proximity or within the commercial district of settlements and towns. Professional offices, such as doctor's office will be allowed to locate in outlying locations for better service to patients. Shopping/apartment/office complexes will also be allowed in outlying areas.

ii. Parking requirements for office will comply with the standards set out in the Schedule of Vehicle Parking Requirements within Site Boundaries.

1.4.6 **Industry**

a) In selecting sites for industrial development the land chosen should be: -

   i) Earmarked in development plans for industrial activity;

   ii) Reasonably level, floor free, well – drained and capable of bearing heavy loads;

   iii) Accessible to transportation facilities – main roads, airports and ports, (if required);

   iv) Served by, or capable of being provided with all utilities;

   v) Compatible with residential and other neighbours;

b) Light industries (those that do not generate, noise, traffic, fumes or smell) may be located in areas, including residential areas, other than those areas zoned in Development Plans. When permission is given for a light industrial establishment to be located in residential areas, the following conditions will be imposed on granting of development;

   (i) Restricting the type of machinery to be used or prohibiting operations after a certain hour in the evenings and at weekends.

(ii) Prohibiting the storage of materials on the site of the building;

(iii) Protecting the residential character of the area.

c) Heavy and noxious industries, those which generate noise, fumes, odors, dust, etc. will only be allowed to locate in areas demarcated for industrial development. Generally, they will not be located near residential areas.

d) Warehousing and storage will be located only in areas zones for industrial purposes;

e) The following should be the general requirements for the siting of facilities for industry: -

i) The minimum lot size should be 120' x 200'. Plot coverage should be 50% generally with 35% for high technology industries. Car parking and loading bays as per Section 3 of this manual.

ii) The building line should be a minimum of 40ft from the center line of the carriageway;

iii) The minimum width of the carriageway should be 20ft.

iv) A sidewalk should be constructed on at least one side of the road and should be a minimum of 5 ft. wide;

v) There should be provision for a bus lay by;

vi) The design of the grounds should include a well landscaped open space provided with seating;

vii) There should be restaurant/canteen facilities provided;

viii) Sanitary convenience are to be provided as per Annex C;

1.5 UTILITIES

1.5.1 General

a) Where it is feasible and desirable, service lines, cables and pipes should be laid underground to improve visual amenities and to reduce the vulnerable to natural hazards. They should be laid out in such a manner as not to obstruct the planting of trees.

b) In the laying of such service facilities, road verges, pedestrian ways and median strips should be utilized so as to minimize disturbance to vehicular traffic flows for repair and maintenance purposes.

c) The developer should discuss the proposals with the utility companies/authorities and with the Planning Authorities in the early stages of the conceptual design of the development.

1.5.2 Electricity (including Street Lighting) and Telephones

The applicant is required to satisfy the Planning Authorities that:

- Adequate provision has been made for the supply of electricity and telephones, where service is available;

- Poles are sited so as to allow easy means of road improvement and not obstruct pedestrian movement;

- Ancillary utility services are located in such a way that they do not obstruct sidewalks.

1.5.3 Service Stations

Service stations are of special interest as they are usually located on main roads. Service buildings or other structures should not be allowed too near to the road, hence special attention will be to: -

- Access and egress from roads, and the relation of these to traffic intersection;

- The design, appearance and location on the site of building and structures, including signs and advertisements;

- The location of the proposed petrol filling station in relation to existing or proposed development.

- The planting or protection of grass, trees and shrubs;

- Safe storage of inflammable materials;

1.6 HILLSIDE DEVELOPMENT

1.6.1 General

Any development on a hillside is potentially a hazard to the stability of the land and to the ecology of the area. Such developments inevitable in almost all of the OECS, but it is necessary to effect some controls to limit the effects of the destruction of trees and construction of hard paving leading to increased run-off and soil erosion.

1.6.2 Planning Requirements

For large developments, the Planning Authorities will require an environmental assessment of the area. This assessment of the area should provide the following:

a) A detailed description of the project from inception to operational Phase.
b) A description of the physical, economic and cultural environment of the project area.
c) A contour plan of the area at a maximum vertical interval of 5 feet.
d) Cross-sections indicating the finished levels of all development including roads, parks, and the ground floor of all buildings.
e) Proposed design considerations to limit erosion and to ensure slope stability.
f) A geological plan showing the rock and soil types. The test must be carried out by experienced geological and soil engineers and a complete laboratory report of the soils must be provided.
g) Details of the drainage system proposed and means of disposing of storm waters.

In addition the Planning Authorities may require the developer to provide further information on the impact of the development as follows:

- Measures that will be undertaken by the developer to mitigate the negative effect of the development.
- The availability of community services accessible to the development.

- The availability of adequate water and sewage treatment facilities.
- In the case of residential developments, access to employment opportunities within a reasonable distance from the development.

1.6.3 Minimum Acceptable Standards

a) The Planning authorities will require that a minimum of 50% of the vegetative cover and trees must be preserved.
b) The design of the lots must conform as much as possible to the natural contours of the land.
c) The area must be properly landscaped.

d) During the construction of phase, trees and vegetation must be removed in stages and soil cover must be carefully stored for eventual replacement.
e) All natural watercourses are to be preserved. Where it is proposed to divert a natural water course the developer must provide the Planning Authorities with all plans and calculations to show the proposed works will not adversely affect the lands through which the watercourse runs and which are presently drained by the watercourse.
f) Anti-erosion devices are to be installed where required. The devices are to be designed and constructed to the satisfaction of the Planning Authorities.

1.7 COASTAL DEVELOPMENT

1.7.1 General

Coastal zones are environmentally sensitive areas and development within these zones requires careful examination. The negative effects of development in the coastal zone include pollution of the inshore waters, destruction of protecting reefs, erosion of and accretion to beaches. The Planning Authorities will therefore, require an environmental impact statement, which would examine the development fully, and the effects of the development on the stability of the beaches and the inshore waters.

1.7.2 Minimum Standards

Development which includes reclamation of land from the sea, should conform to the requirements of Sub-section 7.2

No approval shall be given for construction within the coastal zone without the studies listed in 6.2.3

Setbacks from high water mark shall be as follows: -

- **Slopes less than 1:20 100ft.**
- **Slopes 1:40 to 1:20 50ft**
- **Coastal cliffs 1:1 or steeper 25ft.**

1.8 ADVERTISEMENTS

a) No sign will be permitted (except for purely directional signs needed to advertise a hidden business), if it is unrelated to the property on which it is to be sited.

b) Advertisements should not be sited within the road reserve and should be carefully located at road junctions to maintain road safety. They should ideally be 3 to four feet by 1 foot and be a maximum height of 5 feet above the concrete base if free- standing or a minimum of 7 ft. 6 in. if attached to a building.

c) Signs may be externally illuminated by spotlights but only in a commercial area. No illuminated signs will be allowed in a residential area.

d) The maximum size of projecting signs should be 3ft x 4ft. No lettering may be more than 2ft high and no sign affixed to a building shall be displayed, so that the highest part is greater than 14ft 6in above the ground. The base of freestanding signs should be firmly fixed in concrete and hanging signs, should be suspended by chains for strength. Such signs must be removed in the event of high winds.

e) Fascia signs should be designed so that they are flushed against the building. The lower edge of the sign should not be placed higher than 12ft above the ground. The design of the building will be taken into account when assessing such signs.

f) No signs shall be placed in such a manner as to obscure or hinder any road traffic sign or cause any distraction to drivers.

SECTION 2

SUBDIVISIONS

SECTION 2
SUBDIVISIONS

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SECTION 2

SUBDIVISIONS

2.1 SUBDIVISION OF LAND

h) Subdivision of land is a form of development recognised in existing planning legislation. The location, design and functionality of subdivisions influence the efficiency and effectiveness of settlement and land use activities and the eventual form of urban and rural areas. During the subdivision process, land is divided into convenient individual blocks for particular purposes, properly laid out and serviced.

i) Subdivisions may either be new settlements or extensions to existing communities.

j) Residential use is one of the single largest land uses in most communities. Successful design of these areas is important for them to function efficiently, be affordable to the target population and to be aesthetically pleasing.

k) In the design of residential subdivisions the main elements are lot sizes and configuration, the layout roads, general circulation, provision of services (mainly water, electricity, waste water disposal), open space provision for parks and playgrounds and community support facilities where necessary.

l) The provision of landscaped areas is an important aspect of good subdivision design and the Planning Division will ensure that such provision is made.

2.2.1 Layout of Subdivisions – (Plate 2-1)

The design of the subdivision should be simple, clear and the roads easy to follow. The road patterns in general are: -

- The **Grid System**, which produces parallel streets with junctions at right angle to each other. This system is suitable for flat or gently rolling land.

- The **Radial System** in which traffic are concentrated on centres with the consequent high concentration of traffic and activity.

- The **Curvilinear System** in which the roads follow closely the contours of the land.

- The **Planned Unit Development** of the Land in which the roads follow the land contours but the introduction of cul-de-sacs creates discrete clusters of houses and mixtures of housing types. This development type is suitable for large sites.

2.1.2 Lot Layout – (Plates 2-3 and 2-4)

a) Plot arrangements must be sensitive to topography, environmental conditions, road patterns and the size of the lots proposed. (Plate 1-2). Plots must be capable of being used for the purpose for which they are designed.

b) Plots should be laid out to take advantage of the topography and should minimize changes to the natural topography through the needs for large land formation, excavation and filling. The design must therefore, take into account the existing drain patterns and seek to preserve to the extent possible, the existing patterns of storm water flows.

c) Plots must have a frontage on the access roads. The frontage must be wide enough to allow the access of vehicles.

d) The creation of double frontage must be avoided. Where this is unavoidable, the plots must be large enough to allow the stipulated building setbacks.

e) Plot line should preferably be perpendicular to the street. This avoids the creation of irregular shaped lots. Such lots would have to be relatively large to allow the required setbacks and to provide enough land for the building.

f) Corner lots should in general be larger than other standard lots in the development. No fence or other structure should be constructed which would impede the visibility at the corners. The building lines at corner lots are shown on Plate 2-5.

2.1.3 Lot Sizes and Dimensions

a) The minimum lot sizes for different classes of development are given in Table 1-1 and the building Setbacks are defined in 1.3.3 and in Table 1-2.

b) In general, the size of the lots varies with: -

- The use to which the lot is to be put;
- The desired intensity of the development;
- The physical characteristics of the land and the surrounding area;
- The capacity of the existing infrastructure.

c) The width of the lot shall not be less than 40ft.;

d) The length of a lot should not be more t6han 2 to 5 times the width.

SECTION 3

ROADS & PARKING

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SECTION 3

ROADS AND PARKING

3.1 SCOPE

a) This section deals with the road and pedestrian standards which should be applied to the design of roads in the OECS. Guidance is provided on the layout of roads and pedestrian facilities, and on the preliminary layout of vertical and horizontal curves required to provide safe driving conditions.

b) Annex A provides Tables for the layout of curves. This information is provided for preliminary guidance only, and to assist planners in determining the amount of land required for road construction.

c) The structural design of roads is not discussed in this document and designers are recommended to refer to any standard text on road and highway design to determine the structure of the road suitable for the traffic, topography, and local soil conditions. Designers must also be aware that many roads traverse areas where deep side hill cuts and significant fills are inevitable. It is recommended that such problems be referred to a specialist soils engineer for guidance on the appropriate side slopes to be constructed for the embankments and for the cuts.

d) Care must be taken in the layout of all roads in the hilly terrain of the OECS so as to avoid damage to the road structure resulting from storm waters using the road surface as the main channel. Arrangements for proper drainage are essential. Storm water drainage is dealt with in Section 2 of this document.

e) Standards for provisions for access by handicapped persons to roads and parking facilities are given in Section 6.

3.2 ROAD CLASSIFICATION AND RIGHT OF WAY (ROAD RESERVE)

Roads are classified into five main categories for which the minimum right of way dimensions are: -

- **Main Roads (Highways)** There are the main roads which are designed to carry large traffic volumes and heavy vehicles. These roads have limited or controlled access and skirt rather than penetrate small settlements. These roads may be constructed as dual highways with a median strip usually 10ft. wide. A minimum road reserve of 75 ft. is recommended. A minimum road reserve of 75 ft. is recommended. However, the

right of way width may vary depending on the topography of the areas (Plate 3-1).

- **Secondary Roads** — These are main roads between towns and villages which are frequently traveled traffic routes. A right of way of 50 ft. is recommended. (Plate 3-2).

- **Secondary Roads** — These are intermediate collector roads for traffic generated by service roads. Minimum right of way recommended is 35ft.

- **Residential/Commercial Access** — These are used for direct access to individual lots within a residential area or for access to commercial premises. Minimum right of way recommended is 31ft. (Plate 3-4).

- **Agricultural Feeder Roads** — These roads provide access to agricultural areas. They generally penetrate the hilly country and consequently have steep slopes and sharp bends. Because of the generally low volumes of vehicular traffic using these roads, the economic justification for the roads does not allow the construction to be at the accepted standards of gradients or sight distances for such traffic. The structure of the roads and drainage provisions must be sound as as to avoid complete destruction from heavy rainfall. It is recommended that the minimum paved width be 14ft. with 4ft. shoulders and the right of way 28 ft. (Plate 3-6.)

These reserve widths are minimums and do not include any out of the ordinary drainage requirements, or side slopes for roads on steep terrain which may be required by local topographic conditions.

Table 3-1 summarizes the recommended right of way and carriageway widths of various classes of roads.

TABLE 3.1
Recommended Right of Way and Carriageway Widths (ft.)

Road Type	Minimum Right of way	Carriageway	Reserved on each side for shoulder, sidewalks, etc.
Main (Highway)	75	24(may be dual with 5 ft median strip)	23*
Main (Primary)	50	24	13
Secondary	35	20	7.5
Residential Collector	31	18	6.5
Residential Access	29	16	6.0
Agricultural Feeder Roads	28	14	7.0

* Sidewalks are not normally constructed on dual carriage way main roads except when required by the volume of pedestrian traffic.

3.3 ROAD DESIGN

3.3.1 General

a) Road design is dictated by the topography and volume of traffic expected to use the road. Economical road layout is essential to allow for ease of access, to allow for future expansion of the transportation network. Main roads should skirt rather than penetrate a residential or commercial development.

b) The hierarchy of streets in a development should ensure that traffic on a particular element is compatible with adjacent land uses. For example, through traffic should be catered for on main or secondary roads, and access should be arranged so that through traffic is deterred from using them.

c) Plate 3-2 shows the suggested cross-section layout for a main road. Note that the utility services should be placed away from the road pavement (carriageway) as far as possible. Where medians are constructed for a dual carriageway, the right of way will be increased accordingly. Such a road design is required where the traffic volumes are expected to be high and where it is possible and economical to increase traffic speeds. The dual highway with a median is inherently safer for high speed traffic than the double lane highway. The construction of medians also allows the easy introduction of turning lanes, besides allowing for future widening of the road.

3.3.2 Residential and Commercial Access Roads (Plates 3-4 & 3-5)

a) These roads collect traffic from individual lots within a residential or commercial area. The layout and design of these roads should be determined after examination of the topography and the need to access the main roads at convenient intervals.

b) Considerable problems have occurred where accesses have been created in an ad hoc fashion in hilly areas, thereby causing damage to the main road due to inadequate arrangements for dealing with storm water running down the access road from the main roads, or running down the main roads from the access roads. Traffic accidents also occur due to poorly planned intersections with the main road.

c) The following guidelines apply where new accesses are being created off main roads:

- All residential, commercial and industrial accesses to be properly constructed to a minimum carriageway width of 16 feet with a well compact fill and concrete or bitumen surface. Minimum turning radius to be 25 feet.

- Minimum visibility to and from the accesses to be 300 feet in both directions along the main road (safe stopping distance for a vehicle traveling at 40 mph). Where the topography prohibits minimum sight distance, the posted speed limits should be reduced and warning signals placed on the main road. In any event, vehicles entering a main road must come to a complete stop before entering the main road.

- Drainage ditches and culverts must be constructed to prevent the storm water from damaging the road. (See Section 2)

3.3.3 Layout of Access Roads

Access roads are normally seen in the following arrangements:

a) Grid (Plate 3-7)

This is the traditional layout which developed before the automobile. Although this form may be appropriate in some of the older urban areas, care must be taken to determine if a grid layout is suitable for new developments. The topography of the site may not permit this type of road layout to be constructed at acceptable costs; also the traffic pattern and traffic controls must be such that potential hazards are reduced to

minimum. Where a grid or modified grid is considered to be appropriate the following factors should be taken into consideration:

- As few houses as possible should front onto the linking roads which should normally be about 200 feet in length;

- Continuous road lengths without street intersections should not exceed 1,200 ft. This distance can be increased to a maximum of 1,600 ft. if a public pedestrian access way with a minimum width of 10 ft. is provided near th e mid-point of the access road. The public pedestrian access must be developed in a right-of way leading from the access road to the adjacent road.

b) Other Road Systems

Roads systems may utilize other forms of layouts including cul-de-sacs, loop roads and P-loops. In the use of these access ways, the following factors should be considered:

- **Cul de Sacs.** (Plate 3-9), When a cul-de-sac is used in residential development it should be provided with a curved turning circle of sufficient width to facilitate easy access and the turning of not only cars but trucks and other heavy vehicles. The recommended minimum radius is 33ft. The cul de sac should serve no more than 20 dwellings.

- The maximum length of a cul de sac should be 350 ft to the turning circle. This distance may however be increased to 600 ft if any emergency vehicular access and pedestrian walkway of a maximum width of 10 ft is provided from the turning circle of the cul de sac, giving direct access to an adjacent road. A cul de sac should not be located as a direct extension of a local road.

- **P- Loops. (Plate 3-8**). These roads are defined as loop roads from a single access point. They should have an entrance leg not exceeding 700 ft and should have an emergency vehicular access way with a minimum width of 10 ft. from the loop giving direct access to an adjacent road. The loop should have a road length not exceeding 1,400 ft.

3.3.4 Horizontal and Vertical Curves

a) Horizontal curves connect two straight stretches of roadway and vertical curves connect two straight stretches of sloping roads. In general, the tighter the horizontal curve, the greater the pavement widening that is required to provide for safe handling of vehicles.

b) In the topography of the OECS islands, it may be difficult and too costly to provide horizontal curves of radii greater than 500 feet, hence the sight distance required for safe driving at the designated speeds may not be obtained. In such circumstances, the posted speeds should be lowered and warning speeds installed.

c) The appropriate radii of the horizontal and vertical curves on main and secondary roads are functions of the desired traffic speed and of the required unobstructed sight distance required for safe driving. He minimum radii required, the pavement width at curves and the required sight distance for safe driving are functions of the required minimum speed of the traffic.

d) Annex 1 provides information for the calculation of minimum radii and length of curves required for safe driving at the designated speeds.

3.3.5 Road Gradient

Road gradients are normally dictated by the topography and costs of earthworks. However the following guidelines should be considered in the design of new roads:

a) Minimum Slopes - 0.5% (6"in a 100 feet). This facilitates drainage in flat terrain.

b) Maximum Slopes - 10% for long stretches. 15 % possible for stretches not exceeding 200 ft.

c) Cross Slopes - For paved roads, 1" in 8 ft
For unpaved roads, 1" in 4 ft.

3.3.6 Intersections

The topography of most of the OECS islands, preclude the placing of intersections at areas where adequate visibility is assured. However the following guidelines should be followed as far as it is possible to do so.

a) All road intersections should be designed to reduce traffic conflicts. Ideally the intersections should be T-junctions at right angles to the main road (Plate 3-10). This alignment should be maintained for a distance of at least 100 feet from the intersection.

b) The minimum radius for intersections should be as follows:
- **for entrance or exits to and from main roads, 35 feet**
- **for entrance or exits to and from secondary roads, 25 feet**

c) Cross road junctions are permissible in residential areas where the junction may be controlled by traffic lights or if the traffic density permits by four way

stop signs. For junctions of access roads or secondary roads with main roads, every effort should be taken to avoid cross over intersections. Such intersections should be staggered and a minimum distance of about 130 feet maintained between junctions.

d) Intersections on the inside curves of through roads should be avoided if possible.

e) **Y** intersections on the inside curves of through roads should be avoided.

f) Junctions of any kind should be avoided near the brow of a hill or where the driver's vision is obstructed by the natural topography or by buildings, fences etc.

g) Stop signs should be placed at the junction of all roads where the minor road meets the major road. For streets where both roads are equally important, it may be desirable to have four-way stop signs or to determine by traffic counts, the road which should be given priority.

3.3.7 Shoulders (Plate 3-11)

a) Shoulders are required to support the paved surface of the road and to provide areas for safe emergency stopping of vehicles. Shoulders should never be used as permanent parking places for vehicles.

b) The construction of shoulders should be done as carefully as the construction of the main paved area of the road except that shoulders on access roads would not normally be paved. It is recommended that shoulders on main roads be paved with at least one course of asphalt surface dressing.

c) Unpaved shoulders should be properly grassed and maintained. Shoulders not maintained may allow storm water to enter the base and affect the stability of the road.

d) The recommended widths and cross slopes of shoulder are given in table 3-6. It is assumed that all shoulders are properly compacted and grassed.

Table 3-1
Recommended Right of way and Carriageway Widths (ft)

Road Type	Width of Shoulder (ft)	Cross Slope (inches per ft.)
Main (Highway)	8	½
Main (Primary)	6	½
Secondary	5	¾
Residential Collector	4	¾
Agricultural Feeder Road	4	7/8

3.3.8 Visibility at Junctions (Plate 3-12)

a) Intersections of more than two roads should be avoided where possible as they represent potential collision points and unless clearly marked the classifications of roads will not be apparent. Y-junctions can also misleading unless one route is given obvious precedence over that adjoining it.
T-junctions should be avoided on the inside curves of through roads.

b) Roads forming an intersection should meet one another at an angle of 90 degrees plus or minus a tolerance of 10 degrees. This alignment should be maintained for a distance of 100 ft. measured from the center point of the intersection.

c) As stated (in 3.3.6f), driver's visibility at junctions near the brow of the hill is impaired.

d) Visibility splays (Plate 3-13) i.e. the angles of visibility at road junctions are show below in relation to road type. They are intended to facilitate the unobstructed vision of motorists from one street to another thus reducing the risk of accidents.

Table 3-3
Visibility Splay

Road Type	Visibility Splay Angle (degrees)	Splay Distance (feet)
Main Road	30	12
Secondary Road	30	10
Residential Collector	45	10
Residential Access	45	6

3.4 PARKING REQUIREMENTS (PLATE 3 – 14)

Provision should be made within the boundaries of the site of all new and extended buildings for the parking of customers' vehicles in accordance with the standards set out in the schedule below provided that:

- Special consideration can be given to dual use of parking areas where the uses alternate in terms of time scale;

- Where the use of any building is not specially mentioned in the schedule or more than one use is involved, the Board shall determine the parking provision;

- For each car a standard of approximately 300 sq.ft. of parking site area (inclusive of driveways) should be made.

- The areas in which parking spaces are provided should be of practical shapes, which allow for the parking and manoeuvring of vehicles. Narrow and obstructed spaces however large in area are of no value for this purpose.

- Provision should also be made within the site boundaries for loading of trucks and goods vehicles. In accordance with the standard set out in the schedule. The Board may, however, waive this requirement when the building area is too small, the frontage of the site is short and service is not possible from the rear.

b) For both enclosed and unenclosed parking, an obstructed rectangular space 18ft. by 18ft. minimum shall be provided for each car except that: -

- Where parking is parallel to the kerb, the length of the car parking space shall be increased to 22ft.

- Where circumstance allow a vehicle to overhang the kerb by 2 ft. and such overhanging does not seriously limit the use of a sidewalk or other access, the length of the car parking space may be reduced to 16ft.

- Where the use of one car parking space is limited on both sides by a wall or column, the unobstructed width (face to face obstruction) of the parking space shall be 10ft. or if a door opens into the parking space on its long side 11ft.

- Where the use of one parking space is limited on one side by a wall or column, the unobstructed width (face to face obstruction) of the parking space shall be 10ft.

- The minimum width of a parking aisle shall be 18ft. except where parking is provided at a lesser angle to the aisle than 60 degrees and access in one way only, in which case the following aisle widths will apply.

c) Table 3-4 and 3-6 provide guidance on the parking requirements for various developments.

TABLE 3-4
Schedule of Vehicle Parking Requirements with Site Boundaries

Type of Development	Minimum of Vehicles Parking Space Required
Shops, inclusive of Store rooms	1 for each 500 sq.ft. of gross floor area
Officer, Banks	1 for each 700sq.ft gross floor area inclusive of passages, toilets, circulation spaces, etc.
Restaurants	1 for each 50 sq.ft. of public dining room
Industrial Buildings	1 for each building up to 5,000 sq.ft.
Warehouses/Storage	1 for each 1000 sq.ft. in area in excess of 5, 000 sq.ft.
Hospitals	1 for each 4 beds
Gallery, Museum, Library	1 for each 700sq.ft. of gross floor area including passages, toilets, circulation space, etc.
Exhibition Hall, Games Hall, Discos	1 for each 100 sq.ft. of area
Lecture Halls, Meeting Halls, Cinema, Theatre, Churches	1 for each 10 seats
Clinic/Doctor's Office	3 for each practitioner
Apartment Buildings	1.25 for each individual unit, whether of one, two of three bedrooms and one (1) for studio units. These standards may be modified in special areas.
Hotel	1 for each 3-guest bedrooms plus 1 for each 50 sq.ft. of public dining room area.

TABLE 3-5
VEHICLE LOADING REQUIREMENTS WITHIN SITE BOUNDARIES

Types of Building	Number of Loading or Off Loading Bays Required
Shops	1 for each building up to 10,000 sq. ft. plus
Hospitals	1 for each 20,000 sq. ft. of floor area in excess of 10,000 sq,ft. to a total of 3; one for each 10,000sq.ft. thereafter
Storage Warehouse/Industry	1 for each building up to 5,000 sq.ft. plus 1 for each 10,000 sq. ft. of floor area in excess of 5,000 sq.ft. to a total of 3; one for each 50,000 sq.ft. thereafter

TABLE 3-6
PARKIING WIDTHS

Angle of Parking	Aisle Width Minimum
30 degrees	11 feet
45 degrees	13 feet

3.5 PEDESTRIAN REQUIREMENTS

The major types of pedestrians' access ways are footpaths and sidewalks.

a) **Footpaths**

Footpaths are paved pedestrian access ways designed to accommodate heavy volumes of pedestrian traffic. They do not necessarily run parallel or alongside a road as in the case with sidewalks, but they must:

i) Be connected to public thoroughfare;
ii) Be limited in length to allow for servicing (fire, health, utilities)
iii) Allow easy garbage disposal
iv) Be so designed as to allow future upgrading;
v) Have a maximum gradient of 1 in 16 (approximate 6%). Where gradients are in excess of 6%, steps of at least 3 flights with handrails must be constructed at suitable intervals. See Section 6 for provision for handicapped persons)
vi) Have a minimum width of 4'-0"

b) **Sidewalks**

i) Sidewalks are part of the road right-of-way- (reservation) used for pedestrian movement. Sidewalks vary in width depending on the volume of pedestrian traffic to be accommodated. Widths of 3'-6" to 6'-0" are recommended;
ii) They should wherever possible be complemented with planted verges and be landscaped with flowering and ornamental shrubs.
iii) Sidewalks are usually constructed of concreted or asphalt. Where asphalt sidewalks are constructed, concrete curbs must be installed to support the edge of the road.
iv) Table 3 – 1 gives the recommended widths (within the right-of-way) to be reserved for construction of sidewalks and other facilities.

3.6 STREET FURNITURE (Plate 3-15)

Street Furniture is an essential feature of the environment. Special consideration should be given to its location, design and maintenance. It should be sensitively designed, sturdily constructed and functionally appropriate. The more common examples of street furniture are: benches, modular seats, public telephone booths, bulletin kiosks, picnic tables, planters, mail boxes, rest rooms, refuse bins, small shelters and street lighting fixtures.

ANNEXES

Annex 1

SETBACKS STANDARDS TO BE OBSERVED IN RESPECT OF DEVELOPMENTS IN BUILT-UP AREAS OUTSIDE OF APPROVED SUBDIVISIONS

Area/Settlements to which standards are applicable: -

Central Roseau, Newtown, Loubiere, Pointe Michel, Soufriere, Scotts Head, Massacre, Mahaut, Layou, St. Joseph, Mero, Salisbury, Coulibistrie, Dublanc, Bioche, Central Portsmouth and Lagon.

1. The Minimum distance to be maintained between a proposed building/extension and the front boundary of the lot to which such building relates shall be determined by the existing building line of permanent structures along such street/road.

2. The distance between a proposed building or extension and the side boundary of lot to which it relates shall not be less than 2'-8" for lots with frontage of 40 feet or less; and 3'-0" for lots with frontage of more than 40 feet.

3. The distance between a proposed building/extension and the back boundary of the lot to which it relates shall not be less than:

    i. 5'6" in the case of single and two floor single and two family residential or residential/commercial buildings;

    ii 7'-6" in the case of multi-family one and two storey residential or residential/commercial buildings, and three or more storey residential or residential/commercial buildings;

    iii 4'-0" in the case of one and two storey 'commercial buildings";

    iv 6'-0" in the case of three or more storey 'commercial buildings';

4. The Committee may, after considering the opinion/comments of the adjoining property owner(s) permit a building/extension to be erected less than 2'-8" from only one of the side boundaries of the lot to which it relates.

5. At least one side boundary setback space which shall not be less than 2'-8" wide at any point shall be left free of obstruction through-out.

6. Only a step or part of the roof structure shall be permitted on or over the space around a building. In the case of side boundary spaces, such steps shall be permitted on one side only; one such roof overhang (eave) shall not exceed 15" and 36" on the sides and back boundary spaces respectively;

7. All setback shall be measured along straight lines which are perpendicular to the exterior wall of the proposed building/extension;

   Recommendations are based on the fact that in the majority of cases the size of the lots in the said built-up areas are much smaller than those obtained in the approved subdivisions. Consequently, the current setbacks for sub-division planning cannot be enforced/adopted in those areas.

Annex 2

STEPS IN PREPARATION OF A SUBDIVISION DEVELOPMENT

1. Obtain a Survey Plan of the plot and Certificate of Title.

2. Discuss intention with family members.

3. Discuss the Subdivision Plan with your surveyor.

4. Think long term, and prepare a Comprehensive Plan of your property.

5. Check with Physical Planning Division for Development Plan of that area.

6. Consult with Physical Planning Division for advice on:

    - The kind of uses suitable for that particular area.
    - The type of subdivision recommended for that particular area.
    - Lot density applicable to the area (Low, Medium or High density)
    - Minimum lot size which is determined by:
        1. Soil type (percolation capability of soil) which determines the sewerage system suitable for area.
        2. Character of the area.

7. Prepare Subdivision Plan. The plan should include:
    - Different uses (eg Commercial, Institutional, Recreational relevant to the area and size of development)
    - Dimension of lots
    - Lot numbers
    - Roads
    - Cross-section of road
    - Contours which indicate slope of land
    - Existing and proposed Water lines (Water Reticulation Plan prepared by a qualified engineer and certified by DOWASCO)
    - Existing and proposed electricity poles)
    - Location of garbage disposal

8. Plan must be checked by relevant agencies for recommendation:
    - Environmental Health
    - DOWASCO
    - DOMLECT
    - Agricultural Department
    - Forestry Division
    - Fisheries Division

Annex 3

CHECKLIST FOR REVIEWING BUILDING PLANS GUIDELINES FOR DEVELOPMENT CONTROL OFFICERS AND DRAFTSPERSONS.

A completed development application for Planning permission in respect of new buildings and extensions should contain the following information.

1. **The completed Application Form supplied by the Planning Division.**
2. **Proof of Ownership Document**
   This may be in the form of:-
   a. A copy of a Certificate of Title
   b. A copy of receipt
   c. Note from a solicitor confirming that application is being made for a Certificate of Title in favour of applicant possessing the land to which the plan relates,
   d. Note from the owner of the land, witnessed by someone for example, the Chairman of a Village Council or a Justice of the Peace confirming that the land to which the plans relates, has been given to the applicant for development.

3 **One copy of the Survey Plan of the land to which the plans relates**.
If a Survey Plan is not available then the Draftsperson must state on the plans or the sheet containing the site plan, whether or not the dimensions given on the site plan are based on measurements taken on site.

4. **Plans**
   - All plans must be submitted in triplicate.
   - All drawing, with the exception of the Location Plan must be drawn to scale.

5. **Location Plan**
   This plan does not have to be drawn to scale. It purpose is to assist the field officers in finding the site. It should show;
   - Site in relation to easily identifiable landmark or features – eg, a bridge, ravine, street, corner, shop etc.
   - Approximate distance to nearest landmark of feature;
   - North point.

6. **Site Plan**
   This plan should show;
   - Distance between all survey points;
   - All existing buildings on the site and indicate which ones are to be demolished and those to be retained;

- Front, sides and back setbacks using dimension lines;
- Distance between the proposed building and existing buildings on the site;
- Proposed location of septic tank/soakaway;
- Names of adjoining property owners;
- North point;
- Access to site;
- Any other relevant information/specifications

7. **Floor Plan (a)**

This plan should show:

- Overall dimension of building in respect of each floor;
- Width and length of all spaces using dimension lines
- Thickness of walls;
- Type of material of main external walls/partitions;
- Door swings;
- Width of windows and length of intermediate exterior wall sections, using dimensions lines
- Location of columns and/or stiffeners;
- Position of staircases;
- Any other relevant information/specification.

8. **Foundation Plan**

This plan should show:

- Spacing of columns, if any, at centres;
- Means of tying columns to each other;
- Size of columns;
- Size of column pads;
- Size of footings;
- Width of foundation walls;
- Spacing of foundation walls;
- Overall dimensions of foundation;
- Any other relevant information/specification.

9. **Elevations**

Observations of at least three (3) facades of the building.

- Elevations of floor relative to existing and/or finished ground level;
- Slope of land
- Position, height and width of windows and doors relative to floor plan(s);
- Position and form of external steps and handrail where applicable;
- Roof finish material;
- Length of overhangs.

10. **Roof Plan**

- Overall dimensions of roof;
- Size, type and spacing of roof members,
- Size and position of main beams;
- Slope of roof sections
- Length of overhangs.

11. **Cross Sections**

- At least one cross section through the proposed building must be provided;
- Depth of foundation/columns;
- Height of floors;
- Depth of floor slabs;
- Height of roof from plate to ridge;
- Slope of roof;
- Depth of beam
- Material and thickness of walls;
- Roof truss system;
- Slope of ground;
- Any other necessary information/specification.

12. **Beams Framing Plan**

- Arrangement of floor beams relative to foundation;
- Column layout/floor plan;
- Reinforcement plans/specification of floor slab;

13. **Details**

To be taken at all critical sections of buildings.

(i) **Foundation and Retaining Walls**

- Depth, thickness, width, material, arrangement, size and
- Spacing of reinforcement in foundation wall and footings;
- Method of tying footings to foundation wall to floor slab and wall;
- Height of retaining wall;
- Any other relevant information/specification.

(ii) **Floor Slab on Grade**

- Height of slab above ground;
- Thickness of slab;
- Reinforcement in slab;
- Support of slab at point of details;
- Thickness of blinding;
- Damp-proofing material;
- Thickness of hardcore;

- Method of tying slab to wall;
- Any other necessary information/specification

(iii) **Columns**

- Size of columns;
- Depth of pads, including thickness;
- Size of spacing of reinforcement in column and pads

(iv) **Beams**

- Depth of bean including slab thickness
- Size and arrangement of reinforcement at mid-spans support
- Cantilever section;
- Spacing of ties

(v) **Stiffeners**

- Size;
- Arrangement and size of reinforcements

(vi) **Roof**

- Size of members
- Spacing of members
- Size of tie beams
- Roofing materials
- Method of tying roof to plate/tie-beam/walls;
- Length of caves;
- Ceiling material and method of support;
- Any other necessary information/specification

(viii) **Suspended Slabs**

- Slab thickness;
- Position of beams in slab section
- Arrangement, size and spacing of reinforcements at mid-span,
- Supports and cantilever section;
- Any other necessary information/specification

(viii) **Ring Beam**

- Width and depth of beam;
- Size of reinforcement;
- Spacing of ties

(ix) **Steps**

- Number of risers and landings;
- Height or risers;
- Width of tread;
- Waist thickness;

- Size, arrangement and spacing of reinforcement
- Depth size of footing below grade;
- Height, material and method of support to handrail;
- Means of support;

14. **Electricity Plan**
    - Type and location of lighting fixtures and switches;
    - Location of sockets;
    - Type and location of switches to each lightings fixture;
    - Door swings;
    - Location of main switch;
    - Location of meter;
    - Any other necessary information/specification.

15. **Plumbing Plan**
    - Arrangement/type of fixture in washrooms and kitchen;
    - Water line to all fixtures;
    - Waste line from all fixtures;
    - Size of water line and waste lines;
    - Sources of supply;
    - Any other necessary information/specification.

16. **Drainage Plan**
    - Size and arrangement of soil pipes;
    - Location/size of manholes;
    - Location of septic tank if any;
    - Location of effluent disposal field/soakaway;
    - Size, type and arrangement of storm/surface water drainage channels;
    - Disposal point of storm/surface water in draining channels.

17. **Special Information**

(i) Septic Tank

- Plan, section and size of septic tank, (if applicable) approved by

Chief Environmental Health Officer

(ii) **Soakaway**
- Type and dimensions of soakaway recommended by the Chief Environmental Health Officer, (if applicable).

(iii) **Engineer's Certificate`**

Required for but not limited to the following:

- Buildings which are three floors or more
- Change of use from residential to commercial, industrial or institutional;
- Pre-fabricated buildings;
- Non-conventional roof truss systems;
- Two storey buildings with continuous spans in excess of 16 feet;
- Two storey multi-unit residential buildings with 6 units or more;
- Commercial, institutional, industrial or mix-use buildings with a gross floor area of 5,000 sq. ft. or more.

(Provided that, the plans in respect of the aforementioned buildings were not prepared by a Civil or Structural Engineer.)

Annex 4

CHECKLIST FOR REVIEWING OUTLINE PLANS

A completed development application for Planning permission in respect of new buildings and extensions should contain the following information.

3. **The completed Application Form supplied by the Planning Division.**
4. **Proof of Ownership Document**
   This may be in the form of:-
   a. A copy of a Certificate of Title
   b. A copy of receipt
   c. Note from a solicitor confirming that application is being made for a Certificate of Title in favour of applicant possessing the land to which the plan relates,
   d. Note from the owner of the land, witnessed by someone for example, the Chairman of a Village Council or a Justice of the Peace confirming that the land to which the plans relates, has been given to the applicant for development.

3 One copy of the Survey Plan of the land to which the plans relates.
If a Survey Plan is not available then the Draftsperson must state on the plans or the sheet containing the site plan, whether or not the dimensions given on the site plan are based on measurements taken on site.

4. **Plans**
   - All plans must be submitted in triplicate.
   - All drawing, with the exception of the Location Plan must be drawn to scale.

5. **Location Plan**
   This plan does not have to be drawn to scale. It purpose is to assist the field officers in finding the site. It should show;
   - Site in relation to easily identifiable landmark or features – eg, a bridge, ravine, street, corner, shop etc.
   - Approximate distance to nearest landmark of feature;
   - North point.

6. **Conceptual/Overall Plan.**
   The plan should include:
   - Contours lines
   - Proposed location of buildings and their various uses
   - Any existing buildings on the site and indicate which ones are to be demolished and those to be retained;
   - Distance between buildings and their setbacks from roads and footpaths.
   - Proposed network of road and footpath and their width.
   - Other land uses proposed for the development

- Landscaping plan, indicating existing trees to be preserved or new areas to be planted.
- Slope stabilization measures
- Parking areas
- Proposed Water Reticulation Plan prepared by a qualified engineer
- Proposed Electricity Distribution Plan
- Proposed Garbage Disposal System
- Names of adjoining property owners;
- North point;
- Access to site;
- Any other relevant information/specifications

8. **Typical Floor Plan (s)**

This plan should show:

- Overall dimension of building in respect of each floor;
- Width and length of all spaces using dimension lines
- Thickness of walls;
- Type of material of main external walls/partitions;
- Door swings;
- Width of windows and length of intermediate exterior wall sections, using dimensions lines
- Location of columns and/or stiffeners;
- Position of staircases;
- Any other relevant information/specification.

9. **<u>Elevations</u>**

Observations of at least three (3) facades of the building.

- Elevations of floor relative to existing and/or finished ground level;
- Slope of land
- Position, height and width of windows and doors relative to floor plan(s);
- Position and form of external steps and handrail where applicable;
- Roof finish material;
- Length of overhangs.

16. **<u>Drainage/Sewage Disposal Plan</u>**

- Size and arrangement of soil pipes;
- Location/size of manholes;
- Location of effluent disposal field/soakaway;
- Size, type and arrangement of storm/surface water drainage channels;
- Disposal point of storm/surface water in draining channels.

Due to the nature and size of the development, an Environmental Impact Assessment (EIA) is required.