

NOTIFICATION

Addendum

The following communication, dated 16 April 2007, is being circulated at the request of the Delegation of Jamaica.

I. SUMMARY OF IPC APPLICATION DOCUMENT CONTENTS

The IPC Application Document embraces over 99% of the International Plumbing Code (IPC) because all the plumbing issues dealt with are entirely relevant to Jamaica.

The IPC deals with issues such as trenching, excavation and backfill; protection of pipes and plumbing system components; toilets for workers; tests and inspections; fixtures, faucets and fixture fittings; water heaters; water supply and distribution; sanitary drainage; indirect/special waste; vents; traps, interceptors and separators; storm drainage; special piping and storage systems and sizing of water piping system.

The IPC Application Document has indicated that freezing temperatures do not occur in Jamaica and therefore water, soil and waste pipes can be installed:

- In external building walls, crawl spaces and attics;
- Without adding insulation cladding and heating;
- Closer to ground levels since there is no frost line to avoid.

This Application Document disallows the use of lead jointing materials and lead pipes unlike the IMC. This decision is based on the health dangers associated with the handling of lead and the distant possibility that waste water will have to be processed and re-circulated.

The IPC Application Document adds three paragraphs to the section on Trenching, Excavation and Backfill that deals with the:

- Prevention of the ingress of dirt into pipes when being laid;
- Need to ensure that pipe coatings are not damaged while being laid;
- Need for restraints to be installed to prevent pipe movement during operational thrusts.

This Application Document requires plumbing contractors to give minimum advance notice of 2 days to the Local Authority for plumbing work to be inspected and approved for covering-up, unlike the IPC which requires that the contractor “give reasonable advance notice to the code official”.

On the issue of the fluid to be used in the testing of plastic pipes the IPC Application Document, unlike the IPC, allows air as a testing fluid on the basis that the onus is on the contractor to assure the code official of the safety of personnel and property during testing.

This Application Document does not allow the unrestricted use of tankless water heaters as the IPC does. It allows installation of only tankless water heaters tested and approved by the Bureau of Standards, Jamaica and requires the circuits supplying approved tankless water heaters to offer protection to users against leakage currents above 7.milliamps. These measures will prevent Jamaicans from getting fatal shocks while using the heater.

The IMP Application Document has added to the chapter on “General Section of the Water Supply and Distribution” the following requirements:

- Water economy and energy conservation must be a consideration in the design of plumbing systems;
- The need for pumps to be protected against water ingress by pump room floors being constructed to drain away water spillage, pumps being raised 450 mm (18 inches) off the floor in basements and pumps being disallowed in well pits;
- Data on which pumping system designs should be based;
- Methods to alleviate the water hammer effect in water distribution systems;
- The need to avoid or reduce noise and vibrations in pipes by not attaching pipes to light objects, making sudden and drastic changes in pipe directions or minimal pressures at the seat of certain plumbing fixtures;
- The maximum temperature at which hot water should be stored in residential buildings as well as the basis for arriving at storage capacity;
- The maintenance requirements for water distribution systems based on 6-monthly and yearly intervals;
- The most cost effective water heating systems and reasons why.

This Application Document reinforces the need for every building available to the public sewer system to be connected and requires that:

- Roof drain water not to be put into the sewer drainage system;
- Storm drain water be kept from incursion into the sewer system;
- Hand-holes and manholes shall continue to be used in sanitary sewer systems for accepting and channelling flow from multiple sources as well as changing flow direction drastically. At the same time the Application Document has accepted the “Cleanout” piping system for sanitary sewer drainage.

The IPC Application Document requires in Chapter 8 “Indirect/Special Waste that:

- No P-trap shall be installed under floor for washing machines outlet pipe;
- Backwash from a swimming pool to be connected to the sanitary sewer system.

This Application Document in chapter 11 “Storm Drainage”:

- Does not allow for combination storm and sewer drains as the IPC does.
- Include 100-year return, 24 hour rainfall data map for Jamaica. This will enable more accurate storm drainage design throughout Jamaica.

Under chapter 12 “Special Piping and Storage Systems” this Application Document requires that medical gas system installers be Grade 1 Plumbers and their company be registered with the Government Contracts Committee. System acceptance testing shall be done by certified agents to NFPA 99C standard.

This Application Document has accepted as binding in Jamaica all referenced standards in the IPC except those intended for lead products.

Finally this Application Document puts in chapter 14 on irrigation systems the intent of which is to encourage the proper design and layout of those systems in order to get the most cost efficient operation from them.

II. SUMMARY OF IECC APPLICATION DOCUMENT CONTENTS

The IECC Application Document addresses energy efficiency or conservation in all types of commercial, office, hotel, high rise residential and for the first time low rise, detached multi-family residential buildings. In short apart from industrial plants and special purpose buildings it covers all building types.

The IECC Application Document draws information not only from the IECC but from ASHRAE’s 2004 Advanced Energy Design Guide for Small Commercial and Residential Buildings as well as the Jamaican Energy Efficiency Building Code.

Unlike the IECC which applies only to conditioned buildings (buildings with heating and / or cooling) the IECC Application Document applies to both conditioned and unconditioned buildings (buildings with neither heating nor air-conditioning).

The IECC Application Document is structured into two parts. Part 1 which deals with energy saving requirements for 3 sizes of unconditioned buildings while Part 2 has two sections that deal with conditioned Residential Buildings and Commercial / High Rise Residential Buildings.

The IECC Application Document seek to prevent the continued used of energy efficient room air-conditioners (split units, cassettes and to a lesser extent window air-conditioners) in inappropriate places such as high density occupancy areas, rooms requiring air changes to prevent the build-up of pathogens, viruses, germs, bacteria, etc..

This Application Document outlines the three climate zones in the island and define their temperature characteristics in terms that designers can utilize to save on energy consumption in that climatic zone. Some data is still outstanding and we are awaiting the Meteorology Office to supply this information.

The unconditioned building size stratification corresponds roughly with low, middle and upper income strata energy requirements with energy saving requirements increasing as you go from the smaller to the larger size building category.

For unconditioned buildings the prescriptive method is used for compliance. Here the designer is not only given the energy goals to be achieved but the strategies for achieving the goals are given followed by the practical step for achieving the goals. Examples of the requirements to be satisfied are:

- Low Income – energy efficiency lighting, insulated roof, keeping direct radiation out of building, maximizing cross ventilation and openable window space of 10%;

- Middle Income – all the above plus maximizing the use of daylight, use of glass with low solar heat gain, use of solar or gas water heaters and openable window space of 12½%;
- Upper Income – All the Low and Middle income requirements plus better lighting and power controls as well as openable window space of 15%.

The residential section of Conditioned Buildings (Part 2) gives the designer the following three methods or options for arriving at acceptable energy efficient designs:

- Residential Building Design by Systems Analysis and Design of Buildings Utilizing Renewable Energy Sources;
- Residential Building Design by Component Performance Approach;
- Energy Design by the Advanced Prescriptive Method for Residential and Small Commercial Buildings.

The designer is given advice on when to use a particular method and is required to declare the method used for his design so the compliance evaluator can know what to check for.

The energy design by Advanced Prescriptive Method will ensure the greatest energy saving, in fact some 30% more than the other two methods.

The IECC Chapter 7 on the Design of Energy Efficient Commercial Buildings have been excluded. In its place is Chapter 8 that deals with Design by Acceptable Practice for Commercial and Conditioned High-rise Residential Buildings. This section of Part 2 is the Jamaica Energy Efficiency Building Code of 1994. The section underwent minor changes to reflect the technological changes that have occurred since 1994 and contains the following:

- Three proposed methods for designing to meet this section of the code:
 - Prescriptive requirements;
 - System Performance requirements;
 - Whole Building Analysis Methods.

The targeted values to be met for the prescriptive and performance requirements to be met.

- The design approaches to be followed in the Whole Building Analysis Methods of Cost by Energy Consumption and Energy Cost budget;
- The effect on building energy consumption by maximizing the use daylight;
- The 5 areas of a building (building envelop, electrical power, lighting, air-conditioning and maintenance) that must be targeted to save energy within a building.

III. SUMMARY OF THE INTERNATIONAL FUEL GAS CODE (IFGC) APPLICATION DOCUMENT

The International Fuel Gas Code (IFGC) comprehensively covers the requirements for elements of centralized gas distribution systems ranging from large citywide systems to on compound multifamily building systems. However the requirements for discrete single family systems used extensively throughout Jamaica are not overtly defined although they can be gleaned from various code sections such as gas appliances and equipment installation.

The IFGC is an extremely well written document with current and future relevance to Jamaica and therefore nearly all its requirements were accepted. Areas of future relevance include Gaseous Hydrogen Systems and various types gas heating equipment.

Some of the issues dealt with in the IFGC include gas piping installation, chimneys and vents, requirements for the proper installation of a wide range of gas appliances, venting of gas heating equipment, referenced standards and Appendices that demonstrate how to size piping, vents and appliances.

The IFGC is silent on the issues of gas storage equipment design, sizing, installation, maintenance and inspection preferring to reference standards that deal with these matters. These matters were considered too important to be excluded from the code and so a chapter has been added in the Application Document to cover these issues.

There are a number of equipment and systems such as chimneys, vents and space heaters which while not enjoying widespread use in Jamaica have had limited usage in the temperate climate zones. These have been left in the code so possible future installation of this equipment can be done to an acceptable standard.

The legal requirements of the IFGC have been scrutinized to separate issues which under Jamaican jurisprudence belong to the New National Building Act and Regulations instead of the code.

The IFGC Application Document recognizes the BSJ as the body with responsibility for approving materials to be used in the installation of gas systems, equipment and appliances. In arriving at the systems, equipment or appliances that merit approval the Application Document allows the BSJ the freedom to conduct its own tests or accept the testing or certification of bodies it recognize.

Finally the issues of metrication and the referencing of standards has followed the identical line outlined at the defence of the first four Application Documents.

IV. SUMMARY OF IMC APPLICATION DOCUMENT CONTENTS

The IMC Application Document embraces over 99.9% of the International Mechanical Code (IMC) because it is an excellent document that is entirely relevant to Jamaica despite having sections with very limited application to the island.

The IMC deals with issues such as condensate disposal, temperature control, hydrogen generating and refueling operations, building ventilation, exhaust systems, duct systems, requirements for combustion air; chimneys and vents; fireplaces and solid burning equipment; boilers, water heaters and pressure vessels; refrigeration including refrigerant classification; hydronic piping; fuel oil piping and solar systems.

The issue of hydrogen generating and refueling operations is somewhat futuristic for Jamaica but in view of:

- The worldwide pressure for environmentally friendly fuels;
- The worldwide push for energy diversification;
- Hydrogen being the ideal fuel and recent technological breakthroughs that has brought hydrogen close to being a fuel for the transport sector;
- The expected rapid embrace of hydrogen worldwide including Jamaica;
- This aspect of the IMC has been heartily embraced.

The issues of residential chimneys and vents, fireplaces and solid burning equipment, boilers for space and water heating has limited application in Jamaica at this time but with the potential for

greater use. To ensure that those in the cooler climate zones of Jamaica who wish to use these facilities install them properly, we have retained these areas of the IMC.

The Review Working Group and Sub-Committee has found it necessary to add to some sections of the IMC in order to correct problems of equipment misuse or solving problems / improving practices that are important to Jamaica but on which the IMC is silent.

On the issue of equipment misuse room air-conditioners are the source of major concern since it has implications for building occupants health.

This Application Document specify the proper use of room air-conditioning unit types to halt the widespread misuse in Jamaica with its consequential ill effects on building occupants' health. Specifically the Application Document requires the code official to reject the following air-conditioning designs that are submitted for construction approval:

- Room air-conditioning units that do not change the air in the conditioned space that are used to cool rooms or spaces which by their nature require air-changes to avoid the build up and transmission of pathogens, bacteria, viruses, germs, gases or other harmful air bourn products;
- Units that do not change the air in the conditioned space that are used for cooling rooms that will normally have an occupancy density of less than 4.5 m² (50 ft²) per person;
- Units that do not change the air in the conditioned space that are ganged up to cool large spaces that by its nature will have an occupancy density of less than 4.5 m² per person;
- Unit type usage that does not generally conform to section 409 including table 409.1 of this Application Document.

On the issue of solving problems / improving practice that plague the quality of our mechanical installations, this Application Document requires that:

- Floor mounted mechanical equipment be mounted on a concrete or other suitable material base or platform at least 75mm (3") above surrounding floor level or suspended 150mm (6") above surrounding floor. This will avoid water incursion damages.

This Application Document requires that mechanical equipment mounted in restricted spaces such as attics are given adequate access or clearance space to facilitate hassle free repairs or removal. Dimensions have been recommended to ensure hassle free handling.

The proper mounting of Mechanical Equipment on roofs (both flat and slope) has been outlined and special requirements for its maintenance such as an electrical outlet and access ladder or catwalk specified.

The IMC Application Document goes way beyond the notional IMC requirement for condensation to be conveyed from the cooling coils and evaporators drain pans to an approved place of disposal to specifying four (4) ways of acceptable disposal.

This Application Document improves on the IMC requirement for drain pipes to have a minimum diameter of 19 mm and produces a table showing various size refrigeration units and the minimum drain pipe diameter they require.

The Application Document introduces the requirement for condensation disposal to be visible to maintenance staff / building operators so drain pipe blockages can be picked up easily. At the same time the Application Document requires that the visibility of condensation disposal shall not be at the expense of building user safety from the introduction of slippery surfaces.

On the topic of ventilation the Application Document introduces improvements on the IMC by outlining the purpose of ventilation in buildings, the choice of ventilation strategy, introduces issues for the user to better understand natural ventilation and how it can be maximized in buildings. The Application Document changes the IMC requirement for every bathroom to be fitted with mechanical ventilation (forced ventilation) to one where:

- Bathrooms in residential buildings with outside wall openable windows $\geq 7.5\%$ of floor space to require no forced ventilation;
- Bathrooms in non residential buildings with outside wall openable windows $\geq 15\%$ of floor area to have the option of having no forced ventilation;
- Bathrooms in all types of buildings without any external wall to have forced ventilation.

This Application Document introduces three new paragraphs in the ventilation chapter on issues that the IMC is silent:

- The concept of comfort cooling and air-conditioning;
- Mixed mode conditioning systems;
- Misuse of air-conditioning types.

This Application Document has added a section on the “Requirements for Commissioning” refrigeration systems. This section details the information the contractor/consultant should supply an independent system commissioning agent for a comprehensive assessment of the installed system.

The IMC Application Document has added a section on “Conditions where there is a risk of oil pollution” in the chapter on “Fuel Oil Piping and Storage.” Having outlined the risks it has proposed a section on “Secondary Containment.” These paragraphs have drastically increased the environmental friendliness of oil piping and storage systems outlined in the Application Document.

The Application Document has added a section on LPG storage at buildings. This paragraph indicates that LPG must be stored in well ventilated areas outside of buildings on concreted slabs and tied together.

Finally this Application Document improves upon the “Solar Systems” chapter through:

- Improved specification for the solar collector transfer fluid;
- Improved material specification for the collector;
- The introduction of a paragraph on “Pipework and Controls”.

V. SUMMARY OF INTERNATIONAL PRIVATE SEWAGE DISPOSAL CODE APPLICATION DOCUMENT

The International Private Sewage Disposal Code (IPSDC) deals with on-site sewage disposal systems as against centralized sewage distribution systems covering towns and cities. The IPSDC recognizes and allows in the appropriate location all forms of on site sewage disposal systems permitted in Jamaica except for the Pit Latrines.

The IPSDC outlines regulatory requirements, site evaluation and requirements, materials, soil absorption system, pressure distribution systems, tanks, mound systems, cesspools, residential waste water systems, inspections, non- liquid saturated treatment systems, Referenced standards and system layout illustrations. These topics and the information contained therein are generally very informative and relevant to Jamaica and little wonder that approximately 70 % of the document has been adopted.

The areas of the IPSDC where Jamaican conditions and acceptable local practices did not allow for adoption has been captured by the Application Document.

In Jamaica central sewage disposal systems usually begin as private systems operated sometimes for years, by the developers of the housing scheme they serve before they are taken over by the National Water Commission (NWC). This common practice coupled with the fact that there are some large private developments operating what amounts to a central sewage system has led to the addition of a chapter (Chapter 13A) on this system in the Application Document.

The Application Document took note of the fact that the legal requirements that will govern the use of this Sewage Disposal Code lies in both the National Building and Public Health Acts and have referenced them both as necessary. In addition the Application Document has taken on board the relevant issues contained in the recently published policy paper on sewage disposal for development put out by the Office of the Prime Minister.

There are significant terminological differences between terms used in the IPSDC and those used in the sewage construction trade in Jamaica. To avoid confusion and facilitate the proper understanding of the IPSDC a list of IPSDC terms and their Jamaican equivalent was compiled and put into the Application Document.

The Application Document requires that all waste and sewage derived from living uses be put into a septic tank or treatment plant unless otherwise exempt by the Code Official. The effluent arising from these treatment methods shall be disposed of by one of the following:

- Liquid discharge treatment facilities such as packaged plants, ponds or constructed wetland systems;
- Evaporation and/or transpiration systems with no liquid discharge;
- Dry gully or surface water source(s) for effluent processed to clear-water stages by packaged treatment plants. The effluent water quality must meet the Natural Resources Conservation Authority (NRCA) standards outlined.

Pit Latrines shall be allowed only in rural areas approved of by the Environmental Health Unit (EHU) of the Ministry of Health and the Local Authority.

The list of private sewage treatment and disposal systems that may be approved by the EHU are as follows:

- Ventilated Improved Double-vault Pit Latrine (VIDP)
- Ventilated Improved Pit Latrine (VIP)
- Absorption Pit
- Soak-away Pit
- Septic Tank
- Aerated Septic Tank
- Tile Field
- Evapo-transpiration Bed
- Reed Bed (constructed wetland)
- Mound System
- Intermittent Sand Filter
- Re-circulating Sand Filter
- Biodigester Septic Tank

- Mechanical systems (Oxidation Ditch, Contact Stabilization Tank, Rotary Biological Contactor, Trickling Filter, Aerated Sludge Systems and Anaerobic systems).

The Application Document requires that a permit be obtained from the EHU/Local Authority for the following:

- Surface discharge of treated liquid effluent;
- Construction of all types of sewage treatment and disposal units specified as acceptable in Jamaica;
- Modification or expansion to an existing sewage facility;
- Use of new sewage treatment technologies.

The Application Document requires that the following tests be done in the absence of tests data developed and published by the Water Resources Authority for the area in which a sewage system is proposed:

- Soil percolation rate where absorption systems are proposed;
- Ground water depth from the bottom of ant proposed soak-away pit;
- High water table depth for areas prone to flooding and in which absorption systems are proposed;
- Soil strata composition for sites on which the soil characteristics are unknown.

The Application Document does not allow the construction of soil absorption systems in flood prone areas unless convincing evidence is supplied to show that the worse expected conditions and /or the construction techniques to be used will prevent flooding of the system if built.

The Application Document specifies a maximum housing density of 7 units per acre or a maximum of 300 persons per development for on site sewage disposal systems. Beyond these limits a central sewage disposal system must be used unless convincing data can be presented to justify the onsite system.

The IPSDC / Application Document recommends minimum separation distance between absorption facilities and important site features such as building foundations, lot boundaries, between soak-away pits, etc

The IPSDC/Application Document specifies the size of various sewage system elements or provides a basis for size calculation as well as specifies detailed construction approaches.

The IPSDC / Application Document require detailed inspection by Code Officials for crucial areas of sewage systems before cover up.

The Application Document allows for the construction of 4 types of Pit Latrines (Regular, ventilated improved, ventilated improved double vault and biodigester) and specifies detailed construction requirements.

The Application Document requires that central sewage systems be constructed to the standard required by the NWC so that take over if required can be smooth and problem free.

The Application Document endorses the use of non-liquid saturated treatment systems (portable toilets) referenced by standards in the IPSDC.

VI. SUMMARY OF IPMC APPLICATION DOCUMENT CONTENTS

The IPMC Application Document embraces over 99% of the International Property Maintenance Code (IPMC) because it is a very good document that is entirely relevant to Jamaica. This IPMC Application Document adds to the requirements of the IPMC rather than change or remove provisions.

The IPMC deals with maintenance issues for exterior property areas; swimming pools, spas and hot tubs; exterior structure; interior structure; handrail and guardrails; rubbish and garbage; extermination; light, ventilation and occupancy limitations; plumbing facilities and fixture requirements, water systems, sanitary drainage, storm drainage, electrical systems and equipment, mechanical systems and equipment as well as fire safety equipments.

The intent of the IMPC and this Application Document is to ensure that public health, safety and welfare are not jeopardized or negatively affected by the continued occupancy and maintenance of structures and premises

This Application Document outlines some of the legal requirements that govern the use and administration of the Property Maintenance Code of Jamaica. For legal areas which properly belong to the Jamaica National Building Act and or Regulations it refers users to these documents.

This Application Document require that vacant lots or buildings be maintained in a clean, safe, secure and sanitary condition so as not to cause urban decay and its consequential depressing effect on surrounding property values, public health, or safety. All premises and exterior properties are required to be maintained free from weeds or plants in excess of 450 mm (18"). All noxious weeds shall be prohibited. Failure of property owners to abide by these requirements will result in notice of violation, prosecution if there is no remedial action and finally the local authority undertaking the cleanup at the expense of the owner.

This Application Document requires designers of building services to ensure that equipment and systems are capable of being operated in accordance with the design parameters and can be efficiently and safely maintained. In addition to this they are required to ensure that written guidelines for operation and maintenance of equipment and systems are clear and easily understood by potential operators. Designers are also required to ensure either by specification or written recommendation, that general requirements for maintenance of their installation is passed on to potential operators.

This Application Document requires all residential buildings except one and two family ones to have all common hall and stairway areas lighted continuously. Non-residential buildings shall have continuous lighting in all areas leading to egress.

Escape or emergency lighting is required in egress areas by this Application Document to ensure that persons can find their way out of buildings in case of power outage or natural disasters that cause building power failure. Escape or emergency lighting is required to be activated within 5 – 10 seconds.

Where direct sight of an exit or emergency exit is not possible and there could be any doubt as to the direction of the appropriate exit, this Application Document requires that a directional sign or series of signs shall be provided and so placed that a person moving towards each sign will progress towards an exit or emergency exit.

This Application Document requires that buildings shall be designed and constructed so that there are appropriate provisions for early warnings of fire, and appropriate means of escape from fire to a place of safety outside the building.

All the standards referenced by the IPMC have been adopted by this Application Document since no local updated equivalent exist for referencing.

VII. SUMMARY OF THE INTERNATIONAL EXISTING BUILDING CODE (IEBC) APPLICATION DOCUMENT

The International Existing Building Code (IEBC) prescribes the approach which designers and contractors should take for the modification, repair and addition of existing buildings. The intent of this code is to maximize the safety and health of the workers involved with the building modifications, repairs or additions as well as building users and those whose proximity to the building could be affected by its failure.

The IEBC classifies work on existing buildings into alteration levels 1, 2 and 3; change of occupancy; additions; historic buildings and relocated buildings. Specific requirements for each class of work is outlined under the headings of Special Use & Occupancy; Building Elements and Materials; Fire Protection; Means of Egress; Accessibility; Structural, Electrical, Mechanical, Plumbing and Other Requirements

The IEBC is very comprehensive, relevant and well written and therefore very little changes were needed for this code to be adopted. The differences between the IEBC Application Document and the IEBC lies almost exclusively in the Historic Building category of work and the Appendices chapters dealing with Seismic Retrofit, Earthquake Hazard Reduction and Supplementary Accessibility Requirements. The differences between the two documents can be categorized as follows:

- Definitions;
- Jurisprudential differences;
- Additional technical requirements.

Under definitions the following were the main issues of note:

- “Building Official” / “Code Official” were redefined to reflect the multiplicity of organizations (National Environment and Planning Agency, Local Authorities, Government Electrical Inspectorate and Ministry of Health) that will be involved in the approval of existing building work in Jamaica;
- “Historic Buildings” was redefined to reflect the Jamaican Act, organizations and procedure involved in the declaration of historic buildings. The redefinition gave rise to the additional definitions of “Historic Authenticity”, “Historic Fabric”, “Historic Building Repairs”, “Historic and Cultural Significance”;
- ‘Historic Authenticity’ extends beyond age alone to embrace conserving the value or quality, or character of the building by applying sensible principles to ensure that the conservation works maintain the creative genius of the building as a representative in the development of parts or all of the architecture or design, or workmanship, or archaeology, or artistic merit, or bearing an exceptional testimony to a cultural tradition, or an outstanding example of a type, or being directly or tangibly associated with past events;
- “Historic Building Repairs” are extremely important to us in Jamaica and involves the hierarchical approaches of “Preservation”, “Rehabilitation”, “Restoration” and “Reconstruction” which are activities meriting definition;
- “Historic and Cultural Significance” applies to buildings that have value on account of traditional techniques and practices associated with, and or derived from early African practices and or prehistoric practices existing in times antedating written history, prior to approximately 1494 AD from the Taino civilization or combinations of these practices that have been retained and or still

practiced today. The concept of “Historic and Cultural Significance” has given rise to terms such as “Historic Integrity” and “Historic Structures Report”.

Jurisprudential differences are based on the dissimilarities between the legal systems of the US and Jamaica. The IEBC is adoptable by Ordinance in the US while in Jamaica the IEBC adoption requires a building Act and Regulations. Bearing this in mind the main jurisprudential differences are:

- Provisions in the legal chapter of the IEBC (Administration) have been segregated into what belongs to the New National Building Act, Regulations and Application Document.
- Local responsible organizations, Acts and procedures replace American ones.
- A historic building undergoing repair, alteration, change of occupancy or relocation shall be investigated and evaluated by a registered preservation design professional when deemed necessary by the Code Official and a “historic structures report” prepared and filed with the Code Official and the Jamaica National Heritage Trust. The report shall identify each required safety feature that is in compliance with this code and where required restoration work for areas not in compliance are likely to damage the historic features of the building. The report shall specify how the defects should be corrected and shall be cleared by the Code Official before work can commence.

When compared with the IEBC the most important technical differences in this Application Document are:

- Alterations and additions to existing buildings should be designed to minimize material loss and integrity to the historic fabric (original or old building materials). Any visual change that may affect the integrity of a historic building should be carried out where possible, as a Reversible Intervention.
- A Historic Structures Report may assume that the building being evaluated and analyzed is of cultural, social, aesthetic, or artistic significance, and shall make recommendations for the type of repair treatment, whether Preservation, Rehabilitation, Restoration or Reconstruction. This should serve as a documentation plan for any conservation work to be undertaken.
- The qualification and experience of registered preservation design professionals are outlined.
- Any alteration, addition, demolition, new construction or other material change that modifies the visual aspect, authenticity, and integrity of the exterior or designated interior of a historic building or historic district Preservation Scheme shall be prohibited as against the IEBC that allows changes in conformity to the code. Repairs to a historic building or district must fall within the ambit of Preservation, Rehabilitation, Restoration or Reconstruction, the details of which shall follow the guidelines outlined in this Application Document;
- The repair of “Dangerous Buildings” has been more fulsomely outlined and its sub-topics of “Severity of Deterioration” and “Deteriorated Historic Features” are outlined;
- The section on “Relocated Buildings” has been amplified to include two sub-paragraphs dealing with “Relocation and Reconstruction” and “Relocation and Archaeology Heritage”;
- The Historic Buildings sub-paragraph 1003.5 on “Interior finishes” has been amplified with the additional sub-paragraph on “Interior features” that requires fixtures having special historical, architectural, cultural or aesthetic interest or values for their features to be defined and logged so work done under Preservation, Rehabilitation, Restoration or Reconstruction may retain its historic integrity;
- The Historic Buildings sub-paragraph on “Alterations” has been amplified to include sub-paragraphs on “Minor alterations”, “Major alterations”, “Removal” and “New works to historic buildings”. These paragraphs specify the repair details and approaches possible;
- The Historic Buildings sub-paragraphs on “Change of Occupancy” and “Structural” have also been amplified to ensure that historic buildings undergoing change of use or structural improvements do not lose their historic integrity;

- This Application Document under the chapter dealing with “Construction safeguards” has modified the section dealing with “Barrier design” so that acceptable locally used materials can be utilized in existing building alteration projects;
 - The compressive strength of masonry including concrete blocks has been lowered by 20% to allow the best of local manufacturers to comply with the code requirements;
 - The date of applicability for earthquake hazard reduction methods to take effect in existing reinforced concrete and reinforced masonry wall buildings with flexible diaphragms has been defined as the date when this code becomes legally mandatory;
 - Appendix B has been modified to specify the local organizations, acts and procedures needed for the supplementary accessibility requirements for existing buildings and facilities to be relevant to Jamaica.
-