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BUILDING BACK BETTER – THE CHALLENGES

OAS STAKEHOLDER’S WORKSHOP – 8 September 2005

Good morning ladies and gentlemen and welcome to today’s proceedings. My job is to set the stage, identify the challenges, and provide food for thought.

Ivan happened. It was a strong category 3 hurricane, and it did a lot of damage. Emily came. It was a category 1 hurricane and it did considerable damage.

What went right? What went wrong? What lessons have we learned? What can we do better? What are the challenges?

Let me first ask a rhetorical question. If every building in Grenada had been built in accordance with the Grenada Building Code what would the level of damage been?

I suggest that the damage to buildings from Emily would have been very minor and would mostly have been related to consequential damage from flying debris, tree limbs falling on building etc. The damage from Ivan would have been greater, but would still have been a fraction of what occurred.

So the challenge is “how do we make every building in Grenada comply with the Grenada Building Code?”

Let me digress for a moment. When hurricane Andrew hit Florida on August 24th 1992 it destroyed a lot of houses. I quote from a website created on the 10th anniversary of the hurricane. “*Andrew did more than devastate South Florida: It exposed dangerous shortcomings in construction and inspection. It took 10 years, but a new statewide building code is finally in place.*” And it was not just a weak code, but a lack of enforcement of the code in effect in 1992. I remember looking at a photograph of a large

housing subdivision in which almost every house had suffered major damage. Most had been completely flattened. In the middle of the subdivision was a house that was intact save for a few dents from flying debris. It was a Habitat for Humanity House. Built by volunteers, but built to code. It was the only house in the entire subdivision built to code. Where were the building inspectors?

Now let's not take this the wrong way. I am not suggesting that if the mighty United States can't get it right what small chance do we have? No, that is not the attitude. But let us not underestimate the magnitude of the challenge.

So what am I saying? The building code is OK; we just need to enforce it. Well not necessarily. The Building Code is a good starting point, but codes need constant updating and revision, so let's not lose sight of that challenge, but by far the biggest challenge is compliance and enforcement.

So if compliance with and enforcement of the Building Code is the biggest and most important challenge, let's look in a little more detail at the issues.

The Building Code has two sections:

1. That requiring design to be undertaken by an architect or an engineer, and
2. That which falls under the Grenada Building Guidelines, which generally is residential buildings of less than 2,500 square feet and not more than two storeys.

The first should be easy. If a professional is responsible for the design, then let the professional take responsibility for compliance with the Code. That sounds like a simple solution, but unfortunately engineers and architects are unregulated in Grenada, which means that any draftsman, builder or housewife can call themselves an architect or an engineer and they are not breaking any law or violating any regulation.

So, first step: Pass acts regulating architects and engineers. This must be done. Grenada is one of only three countries in the English speaking Caribbean that has not done this.

Once that has been done then let's make sure the regulations require the engineer or architect to certify that their project was built in accordance with their design and in compliance with the Code. The professional **must** stay on board through the construction, and cannot be allowed to design a building and walk away.

There are other issues around this practice, but they are specific and are best dealt with by the respective professional associations, once they are legally recognized.

I would like to make an observation regarding the number of major buildings that were damaged by the hurricanes, including hotels, commercial buildings and public buildings. Some of them may predate the building code, but regardless of the code, there is something called good engineering design and designing to internationally accepted standards. For the professional, it should not matter if there is a Grenada Building Code or not. I suggest that if this were North America there would be a number of professionals who would be under investigation by their professional associations and who would almost certainly lose their license to practice. Further than that, there would be law suits galore. I do not like the litigious ways of North America, but when I see the damage to major buildings with no apparent consequences to designers it leaves me shaking my head.

So that brings us to the bigger challenge of the small building which does not require any input from an engineer or an architect, but which must still comply with the Building Guidelines.

First, plans must be reviewed for compliance with the code. I have seen some of the approved drawings, which should never had been approved. This is the first and a very serious problem. I have heard stories that staff members from Physical Planning offer

their services to prepare plans for people. If this is happening it is a conflict of interest and should not be allowed.

We need to have better trained and more competent plan reviewers. What is reviewed should also be expanded. The Ministry of Works is assisting with the review of plans for issues regarding site access, drainage, hazard vulnerability etc. This is a good first step, but there should be some formal training for the staff at the Ministry as well as those at Physical Planning, and the plans should be reviewed for broader issues of compliance with the draft national Physical Plan, the new National Environmental Policy and Management Strategy and other applicable legislation and regulations.

So once we have improved the plan review process what are the challenges to ensuring what is built is what is on the plan? These are many and difficult to deal with.

1. Not enough inspectors to do the job.
2. Those inspectors we do have are not adequately trained.
3. The regulations empowering the inspectors need to be reviewed.
4. Many small contractors do not have a copy of the Building Guidelines, could not understand it if they had, and even if they have a copy and could understand it they don't bother.
5. Some contractors are barely literate and have such poor numeracy skills that if you asked them to lay a pipe to a 1 in 40 slope, they would not have a clue how to do it.
6. Some owners hire a builder to put an addition on their house and never even submit an application for approval.

And I suspect others in the room can come up with other challenges during construction. So what are the solutions and what role do the various organizations represented here have to play in meeting these challenges. Well I do not want to do your work for you, but let me throw out some ideas.

To solve **number 1**, not enough inspectors, hire more inspectors. Not so easy. Government has a zero growth policy for staff.

Privatize inspection. OK, but who pays for it. Solution – charge inspection fees that will cover the full cost of the inspections. In that case you could probably persuade Cabinet to permit the hiring of additional staff on the basis that it would be revenue neutral.

Challenge number 2, the Inspectors are not adequately trained. So train them. OK, who trains them, how often, to what standard? Do they have to take examinations to be certified? I'm hoping you can provide some answers to these questions today.

There is another issue I would like to hear your views on, because it is contentious. If the Physical Planning Unit is reviewing plans for small buildings and inspecting the construction, and a building is completed that clearly does not comply with the approved plan or does not comply with the building guidelines then who takes responsibility? Who is on the hook? What recourse does the homeowner have if the house is damaged by a hurricane or a flood?

I hope you are taking notes of all these issues I want answered.

Challenge number 3 was the regulations, well we are about to hire a consultant to update the regulations, and there will be an opportunity for stakeholder review and comment once a first draft has been completed, so as the saying goes, “watch this space”.

Challenge number 4 refers to the failure of builders to have, understand or use the Building Guidelines. Now we are talking about dealing with the contractors themselves. Currently an unregulated group, anyone can call himself a contractor. Two initiatives are underway. A new association has been formed for contractors. Their aims and objectives are based on the concept of building better, and they already have a code of ethics which if they follow it will of itself result in tremendous improvements. This new association needs your support if it is going to succeed and truly make a difference.

Having just started there is lots of enthusiasm, but they are faced with many of the same challenges that we are talking about, and their task will not be easy.

The other initiative which is underway is the mandatory registration and licensing of all tradespersons and contractors by the Government. Mr. Cecil Frederick is leading this initiative which has the potential to help solve some of our challenges. My understanding is that to obtain a license, a contractor will have to demonstrate by taking an examination that he knows and can use the Building Guidelines.

We will have to beware of the politicians who will say that the small contractor has been marginalized because he cannot comply with the new requirements. What we have to do is provide the training opportunities for everyone, so that they have an opportunity to be licensed, and then stand firm and say those who cannot pass the exam should not be contractors. Do you want a contractor building your home who cannot understand the building guidelines?

Well I have already started to address **challenge number 5** which is to deal with the illiterate or poorly educated contractor. His options are

- to educate himself so that he can get a license
- to hire someone who can act as company manager who is capable of passing the exam, or
- to retire from being a contractor, and go back to being a carpenter or a mason.

And for **challenge number 6**, the homeowner who cannot be bothered to apply for a permit, and who hires a contractor to build his addition, well there are two people to be punished. To build without a permit has to be a punishable offence for the homeowner, so he should face a fine. But the contractor who undertook a job which had no planning approval, he should lose his contractor's license.

Am I being too tough? I don't think so. Just take a walk outside and see the consequences of the lack of enforcement. We cannot afford not to be tough.

Yesterday I was asked to provide a brief address at a workshop on building hurricane resistant wooden houses. I would like to repeat those remarks here, as I believe they are also relevant to our goals today. I spoke about attitude and culture.

The attitude that prevails that “that’s good enough”

And the culture of accepting things that are not done the way they should be.

I arrived in Grenada at the end of October 2002, and had skinned my knuckles in the first 48 hours. Can anyone guess why or how I skinned my knuckles? Well it was on a door frame where a contractor had installed a round handle on a bolt designed to accept a lever type handle. The result is that the door handle is too close to the edge of the door, and when it opens away from you, you skin your knuckles on the door frame.

I take a shower in my house, and there is a pool of water in the corner of the shower when I have finished because the drain is not at the lowest point of the shower floor! Why not? This is not rocket science. Why did the contractor do it that way? Because it was good enough. And why did the owner accept it and not insist that it be ripped up and redone.

There are examples of this everywhere we turn, and it is **not good enough**.

I listened to an expert on tourism recently who told us that if Grenada wants a share of the lucrative tourist market, our facilities must meet international standards. That means that showers cannot have standing water in them, guests cannot be skinning their knuckles when they open a door.

These examples may be considered cosmetic, but the attitude extends to much more critical elements of a building. How many times have I seen drain pipes laid to too flat a gradient? The answer is too many. What are the consequences of not mixing the concrete with enough cement? Oh, that’s good enough!!!! (and by the way there is significant evidence that Grenada recently received a batch of bad cement, as a whole slew of test failures have occurred pointing to a serious problem. There is another challenge to deal with.) And what are the consequences of not

fixing the roof on a house in accordance with the Grenada Building Code. I think we all know that.

There are many aspects to this problem. Learning to build back better will result in stronger buildings that will not fall apart during the first tropical storm to pass this way, but more than that, learning to do it right will have an overall benefit to the country's economy, and will also prepare us for CSME. We keep talking about it, and it is coming.

Those were my comments yesterday, and they are still valid today.

And with all this focus on building hurricane resistant buildings, what about that other hazard they may occur some day, the earthquake. Have you seen all the houses on long skinny stilts? Do you live in one? Do you think they will stand up if we have an earthquake? Well I don't, and furthermore, do not invite me to supper if your house is on tall skinny stilts.

We need to have procedures in place to ensure that columns are properly designed, that the steel is checked before the concrete is poured, and that the concrete is tested to ensure it has adequate compressive strength.

What about the contractor who builds a 12 foot high retaining walls using concrete blocks, and puts it on a two foot wide foundation? I've seen it happen. I even stopped at one site and told the builder he had a problem, and then wrote to the Physical Planning Unit and informed them of the problem. The wall was completed, 12 feet high, on a two foot wide base, and with a half million dollar house on top of it. It is just a matter of time before that house finishes up in the middle of the road. In Canada the design of any earth retaining structure more than 4 feet high must be designed by a professional engineer. I suggest you consider something similar here, and enforce it.

So what are the roles of the people here? We have bankers, insurers, engineers, architects, government staff, contractors, and NGOs. I believe many of you can play a significant role in helping us meet some of these challenges. Our solutions have to be realistic, implementable, and must fit Grenada. We must recognize that we are a small country with limited resources and a country where everyone knows everyone else. That makes it difficult to say NO when someone wants to get approval to build there dream home. But we have to do

something to ensure that the havoc created by Ivan never happens to us again. There is your challenge ladies and gentlemen.