**PROPOSAL TO BUTUAN CITY FOR A DEMONSTRATION MODEL HOME AS PART OF THE SUSTAINABLE VILLAGE DNA (SVDNA) PROJECT**

**and**

**A PRODUCTION FACILITY FOR DISASTER MATERIALS**

**Submitted Thru: Professor Efren N. Padilla**

**To: Mayor Ferdinand M. Amante, Jr , M.D. of Butuan City**

**By:** **Sustainable Village DNA, LLC**

**EXECUTIVE SUMMARY:** To implement Mayor Amante's vision of creating enduring sustainable villages that meet the challenges in the Philippines of increasingly destructive storm forces occurring more frequently due to climate change and other factors; and, in doing so, preserving and furthering the nurturing of the advances contributed to society by the inhabitants of Butuan City throughout history.

**SCOPE OF WORK:** The Sustainable Village DNA (SVDNA) project shall provide the citizens of Butuan City with the security of homes that could withstand the forces of Nature (typhoons, seismic, and floods); thus, allowing for an environment in this village that can focus on achieving a balance with Nature.  This focus on balance shall result in the growth and development of bonding among its residents through cooperation, collaboration, and coordination in the **preparation for survival** in meeting the extreme natural forces, **quickly responding**to these challenging events, and having an **orderly process of recovering** from the effects of these natural events, allowing for progressive and long-term growth.

Just as Butuan has fulfilled a role in history through the balangay boats of nurturing the growth of the Philippines, so shall the SVDNA project reinforce the pathway for the building of Butuan as the foundation to renew the country today.  Most important for the SVDNA project is that it shall continue Butuan's legacy by providing a model for the recovery of the areas devastated by the Yolanda Super Storm. And finally, the SVDNA shall provide the seeds for renewal of the country.

The SVDNA shall be "built better than before” using the latest code to have **physical resilience; but, more importantly, it** shall be developed to have **community resilience.**This means that the SVDNA shall include building of livelihood through the use of microfinance to provide tools and equipment for the construction trades work force that is essential in the rebuilding and renewal efforts.  The core feature of the SVDNA shall be the Emergency Operations and Community Center (EOCC) that shall be organized to provide for emergency operations, command and control during disaster events; and, which shall serve as the gathering center of the residents for the other aspects of **community resilience during normal times:**social, cultural, and training activities for physical and mental well-being, informal education, and activities to continually track and measure the forward progress of the community.

**OBJECTIVES:** To have a village that:

      Contains the traits and characteristics (the DNA) of villages enduring through history including compassion as an underlying foundation of its existence;

      Sized at 100 units (with a population of approximately 500) so that it can be more easily sponsored and supported by a greater number of groups and organizations; more easily replicated; and, more easily guided and managed by local professionals and contractors; and, most important, be of a size in which the villagers can achieve and sustain cooperation, collaboration, and coordination to achieve positive momentum towards renewal;

      Shall be “built better than before” using the latest code to withstand the increasing forces resulting from climate change;

      Develops Community Resilience through activities and programs in the Emergency Operations Community Center (EOCC) to deal with the consequences of climate change and other natural disasters;

      Is sustainable with respect to natural resources and livelihood in its growth and development through bonding, bridging, and linkage activities of the villagers.

The EOCC shall have the primary functions of survival education, health wellbeing and healing, livelihood, and periodic ongoing review of the improvement projects of the village that focus on growth and developing community resilience.  It shall be where the community shall cooperate, collaborate and coordinate the worldwide support and sponsorships received in order to create permanent shelters designed to be capable of adapting and evolving as the family units grow and matures.

SVDNA, LLC shall implement the SVDNA that its staff of professionals have been developing on the FASAE website ([www.fasaeonline.org](http://www.fasaeonline.org/) ) for some period of time even before Haiyan (Yolanda).  The Team of professional architects and engineers shall serve the roles of Program Manager, Project Engineers of various disciplines, designers and drafters.  A Regional Planner professor, who also provides consultation services, has been selected as a resource for this group.

An onsite SVDNA, LLC Program/Project Manager in the Philippines shall integrate its efforts with the professional staff of Butuan and/or local architects, engineers and other construction professionals.  Local professionals shall have the role and responsibilities of participating in the planning, design, and contract preparation of construction drawings.  Overall management of the project shall be performed by the SVDNA, LLC Program/Project Manager and staff.

The proposed SVDNA, LLC Master Plan, a draft of which is attached to this proposal, shall be tailored and finalized in coordination with local authorities and professionals for the selected site.  Staff of SVDNA, LLC has already begun preliminary assessments with the LGU authority.

**IMPLEMENTATION STEPS** within the eighteen to twenty four months timespan for this project are as follows:

1. Design and construction documents shall be prepared in conjunction with LGU professional staff per latest building code;

2. Construction documents for major infrastructure shall be submitted to governmental departments for funding; and, for the SVDNA project facilities to seek funding from corporation, foundation, diaspora, and philanthropic funders;

3. Construction of facilities shall be performed and inspected per latest building code by local contractors and authorities in coordination with SVDNA, LLC staff;

4. **Phase I** **Construction** of SVDNA that includes the Plant Production Facility and the model two bedrooms shall be scheduled to be completed in six to eight months;

5. The construction process shall be used as an education and on-the-job training for livelihood in the construction industry trades.

a.  An affiliated micro financing company shall provide support / sponsorship of construction tradesmen with the tools and equipment necessary for their respective expertise; enabling them to develop livelihood with which they can participate long-term with the rebuilding and renewal of the many devastated areas in the Philippines;

b. The construction process shall be a vehicle for local authorities, contractors, and families to benefit from actually observing the application of latest building code requirements, first-hand in order to create a new mindset in observing the best available practice to improve the preparedness of these vulnerable communities;

c. To begin the process of enabling the academic sector to participate in the renewal program of Butuan, of the devastated areas, and of the Philippines, the University of San Francisco Department of Architecture shall be including the Butuan Project as a subject in its Community Design Outreach Studio Course for the Spring Semester 2015.  This course provides students an opportunity to give back to the community while gaining real world experience in the fields of Environmental Design.  A senior architectural student has scheduled a two weeks immersion trip with an informal settler family in January 2015 to gather the needs and desires of informal settlers for consideration in the design of the demonstration village.  She is seeking sponsorship, preferring a home-stay experience with a local informal settler family, for this immersion trip.

6.  **Phase II** shall implement the Attached Draft Master Plan for Sustainable Village DNA Project that proposes the construction of one hundred housing units and the Emergency Operations and Community Center (EOCC) over the succeeding eighteen months as funding is available by the City of Butuan and/or as sponsoring organizations and corporations come on board with funding, as necessary; providing continuing training, participation, and livelihood of the local population; and, allowing for discovering and meeting the evolving needs of the population during the progress of the development. Phasing of this construction shall allow this beneficial evolution to occur.

7.  Financial responsibilities and obligations of homes shall be transferred from construction funders to bankers and other financial institutions for return of investments.

**ANTICIPATED OUTPUTS, OUTCOMES, RESULTS AND IMPACTS** are as follows:

      Build a demonstration village that can be used as a model for the continued grow and development of Butuan;

      The Butuan demonstration SVDNA designed for tailoring to site specific conditions and replicated to provide shelter for the over four million displaced people in the devastated areas with shelters that are “built better than before,” improving the resilience of the physical facilities to minimize loss of life and reduce property damage in future events;

      Provide on-the-job livelihood training for construction trades workers to increase the work force necessary to rebuild and renew the over one million homes that were destroyed by the typhoon; using micro financing to provide the tools and equipment for villagers and the local population to become self-sustaining;

      Improve the preparedness of the community to deal with future natural disasters through the continuous training and activities in the EOCC;

      Develop bonding, bridging, and linkage relationships of the villagers, the surrounding population, and the diaspora to build relationships of cooperation and collaboration that shall strengthen the population’s resilience in meeting the increasing challenges of climate change;

      Establish best available design and construction practices that shall increase the knowledge, abilities, and skills of those in the construction industry to bring improvements to reliability, performance, and continuing added value to the nation’s physical facilities and infrastructure.

**ROLES AND RESPONSIBILITIES** of the core partners that shall work in conjunction with the Butuan staff are as follows:

1. Program and Project Management: (The Team of SVDNA, LLC)

2. Private Sector Professional Architectural and Engineering Services: Confederation of Filipino Consulting Organization, Inc (CoFilCo) an Umbrella Organization of Consultants (UOC) that includes ninety (90) member consulting companies with expertise in the categories of Disaster, Environment, Infrastructure, and Management as certified by the Philippine Government Procurement Policy Board;

3. Life Bank Foundation, a micro financing financial institution with 350,000 clients, is actively engaged in providing for the needs to build livelihoods throughout the Philippines and already has its presence in Butuan;

4. Silliman University and UP, Visayas, Tacloban shall have the role and responsibility of using their educational resources to increase the capabilities and capacities of the local architects and engineers and their technical staff to upgrade the knowledge, abilities, and skills of these local professionals to meet the latest building code to produce the contract documents required to get funding from government agencies for rebuilding and renewal.  Silliman University has pioneered the use of container vans on its campus for their resilience characteristics in meeting the challenges of climate change.

**Monitoring and Evaluation Approach:**

SVDNA, LLC Project and Construction Managers shall prepare standard industry project documents recording the progress during all phases of the project. Reports shall be prepared and copied to Butuan Project Manager as desired on a weekly, monthly, and/or quarterly basis; with final reports prepared.  Pictures, video, and other media shall be used to record progress.  Reports of materials testing and inspections shall be filed on site and electronically where possible and made accessible.

Attachment: DRAFT MASTER PLAN for SUSTAINABLE VILLAGE DNA PROJECT: <https://drive.google.com/file/d/0B2z9z6CfnmLTMGh6M1JqSVZwMEU/view?usp=sharing>

**Estimated Cost:**

***Phase I Budget****To complete Production Plant and Two Bedroom Model Home;*

*(Scheduled to be completed within the first 6 months– Funds needed)*

      Start-Up:

* $25,000.00 USD – SVDNA, LLC (Program and Project Mgtmt and Admin Fees)

      Production Plant (Phase 1)

* Building Only: $90/sf X 30’ x 100’ = $270,000 USD
* Equipment: Forklift, welding equipment, etc: $100,000 USD

      Two bedrooms Model Home

* $10,000 USD {Ranges from Php 500,000 for one story to

Php 800,000 two stories}

***Phase II Budget*** to complete construction of EOCC and 100 units of housing (Scheduled to be completed within 18 months)

**TBD (To Be Determined based on House Models selected by government Workers)**

Includes Coordination with City representatives to tailor Attached Proposed Master Plan, including collecting input from potential residents from government employees:

**Estimate Components: (USD)**

      A/E Fees (Planning, design, and contract prep)      $\_\_\_\_\_\_\_\_

      Site work, access roadways, utilities:   $\_\_\_\_\_\_\_\_

      Emergency Operations & Community Center ***(EOCC)*** $***\_\_\_\_\_\_\_\_***

***(Designed to be shared with 5 to 6 SVDNAs***

***within a barangay)***

      Housing – 100 units @ $10,000 each:   $\_\_\_\_\_\_\_\_

(Could range from $6,000 for a loft

to $25,000 for a 3-bdrm)

      Miscellaneous:                       $\_\_\_\_\_\_\_\_

Total:  $\_\_\_\_\_\_\_\_\_ USD

Extended roadway access, farm to market roadways and utilities infrastructure and public facilities funded by Philippine Government should be considered for proper integration of the SVDNA into the overall City or Regional Master Plan.}