AITECH
Accreditation of Innovative Technologies for Housing

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I. BACKGROUND

AITECH stands for Accreditation of Innovative Technologies for Housing. It is a system for accrediting innovative technologies for housing. AITECH was conceived as a result of the numerous building technologies that have been developed in the last few years using non-traditional or alternative materials and systems. Cognizant of their potential in reducing over-all housing costs, it has become imperative to accredit these innovative technologies for low-cost housing.

AITECH responds to queries and requests from private manufacturers of indigenous and innovative building materials/systems for technical and engineering evaluation leading to accreditation of these products. The AITECH Inter-Agency Committee reviews and accredits the technologies.

II. COMMITTEE MEMBERS

The AITECH Committee is composed of the following agencies:

- Housing and Urban Development Coordinating Council (HUDCC)
- National Housing Authority (NHA)
- Department of Science and Technology (DOST)
- Home Guaranty Corporation (HGC)
- Department of Public Works and Highways (DPWH)
- Housing and Land Use Regulatory Board (HLURB)
- Home Development Mutual Fund (HDMF)
- National Home Mortgage Finance Corporation (NHMFC)
- Construction Industry Authority of the Philippines (CIAP)
- Department of Trade and Industry – Bureau of Product Standards (DTI – BPS)
- University of the Philippines – Building Research Service (UP – BRS)

III. OBJECTIVES OF THE COMMITTEE

The AITECH Committee acts as a review and approving body for applications for accreditation of innovative technologies appropriate for housing. Its main objective is to assist producers of innovative technologies in securing acceptance of their products or systems in the
market as well as to make these technologies acceptable for funding under government housing loan programs.

The Committee also aims to encourage and promote the use of innovative technologies as an alternative to traditional housing construction system; and to develop standards, guidelines, and procedures for accreditation system.

**SCOPE OF WORK AND FUNCTIONS OF THE COMMITTEE**

The AITECH Committee reviews applications for accreditation of new and improved technologies which are appropriate for housing and can serve as alternatives to traditional or conventional building technologies.

The Committee performs the following functions:

1. Review and approve applications for materials testing and engineering and economic evaluation of local and/or foreign innovative housing technologies;
2. Provide services as testing, wherein evaluating agencies conduct the necessary validation on innovative technology systems / materials;
3. Issue certificates of validation and / or accreditation to manufacturers / owners of approved innovative technology systems / materials;
4. Issue implementing guidelines and procedures on the said accreditation system for public dissemination;
5. Determine the amount of processing fee to be charged by testing / evaluating agencies for the information of applicants;
6. Establish performance and cost standards and identify relevant tests for building materials / systems as the basis for evaluating and accrediting innovative technology systems / materials;
7. Review appropriate applications of new technologies and use of innovative building materials;
8. Provide a short-list of accredited building technologies to funding institutions and dissemination of information to other possible end-users; and
9. Undertake such other functions as may be necessary to disseminate information to support its primary functions.
IV. ROLES AND RESPONSIBILITIES OF PARTICIPATING AGENCIES

The roles and responsibilities of participating agencies are:

1. **HUDCC** – gives final approval for issuance of accreditation certificate. The HUDCC Chairman affixes his signature on the certificate.

2. **NHA** – evaluates applications based on checklist of requirements; refers to evaluating agencies (UP-BRS, DOST, DPWH); evaluates and validates costs and structural designs; and consolidates evaluation results. Also assigned as AITECH secretariat.

3. **DOST-PCIEERD** – evaluates materials properties (physical, mechanical behavior, etc); and conducts research and development of new technologies.

4. **HGC** – appraises housing unit.

5. **UP-BRS** – evaluates structural designs, properties of building materials, and overall technical feasibility of technologies, and conducts information dissemination.


7. **HDMF** – reviews and accepts accredited technologies for mortgage financing under UHLP and HDMF housing loan programs.

8. **NHMFC** – reviews and accepts accredited technologies for mortgage financing under UHLP.

9. **CIAP** – disseminates information; and includes applicable technologies in the Modular Coordination System.


11. **DTI-BPS** – monitors quality of production through regular inspection of local production plants; and takes charge of patenting technologies
V. DEFINITION OF TECHNOLOGY

The term “technology” refers to (1) new production processes of existing systems/materials; (2) new construction techniques applied or utilized in low-cost housing units; and (3) new building materials designed to serve as alternatives to traditional or conventional components.

The technologies considered for application are the following:
1. Locally developed and manufactured building systems / materials appropriated for housing including their construction techniques / systems; and
2. Building systems / materials developed in other countries, whether being introduced to the country or have been adopted and manufactured locally with or without modifications.

VI. CRITERIA FOR ACCREDITATION

Innovative technologies include local and international technologies that use non-traditional or alternative materials or systems with significant reductions in construction costs (thereby insuring affordability) as opposed to the use of conventional materials and systems (e.g. concrete hollow blocks). In addition, innovative technologies place emphasis on environmental considerations.

Evaluation of Committee member agencies are based on the following:

a) Compliance to housing standards based on BP 220, PD 957 and the National Building Code, Fire Code, BP344 & other applicable laws;

b) Structural evaluation / validation of submitted structural designs (based on design load and allowable applied stresses); Cost effectiveness based on the resulting construction costs (current cost estimates of housing construction inclusive of mark-up) as compared with housing units built with conventional building technologies. Use of special equipment and costs of transport shipment of materials should also be incorporated in cost estimates;
c) Appraisal / validation of housing units using the technology for mortgage acceptance by funding institutions;
d) Physical properties and structural soundness of technologies in relation to health consideration and suitability to local climactic and topographic conditions;
e) Locally available raw materials for the production / use of particular technologies; and
f) Consistency of required quality in mass production.

VII. STEPS IN ACCREDITATION

Technology evaluation shall be based on the information provided in all documents submitted to the AITECH Secretariat as well as on plant and site inspection conducted by the AITECH member-agencies. The steps in accreditation are as follows:

1. The proponent submits AITECH accreditation application.
2. AITECH Secretariat receives application and reviews attached documents if complete.
3. If documents are complete, AITECH Secretariat issues Order of Payment for Evaluation Fee.
4. NHA-HTDO evaluates compliance to standards, structural design, cost evaluation or seek assistance of support agencies. Forward to DPWH, ASEP for complicated structural analysis, and / or to UP – BRS / DPWH – BRS / DOST for testing.
5. Conduct of Site/Plant visit and Inspection.
6. AITECH Secretariat prepares Consolidated Report and Recommendation to be submitted to GM for endorsement to HUDCC Chair.
7. GM to endorse the recommendation for AITECH accreditation to HUDCC Chair. HUDCC Chair approves recommendation and signs AITECH accreditation certificate.
8. Secures approved AITECH accreditation certificate and informs proponent.
VIII. PROCESS FLOW CHART

PROCESS FLOW CHART
ACCREDITATION OF INNOVATIVE TECHNOLOGIES FOR HOUSING
(AITECH)

PROPOLENENT

Submits AITECH Accreditation Application

NHA

AITECH Secretariat receives application and reviews attached documents if complete.

If documents are complete

AITECH Secretariat issues Order of Payment for Evaluation Fee

NHA-HTDO evaluates structural design/cost evaluation or seek assistance of support agencies

AITECH Secretariat prepares Consolidated Report and Recommendation to be submitted to GM for endorsement to HUDCC Chair

GM to endorse the recommendation for AITECH Accreditation to HUDCC Chair

Secures approved AITECH Accreditation Certificate and informs Proponent

OTHER AGENCIES

Forward to DPWH, ASEP for complicated structural analysis, and/or to UP-BRS/DPWH-BRS/DOST for testing

HUDCC Chair approves recommendation and signs AITECH Accreditation Certificate

Receives signed/approved AITECH Accreditation Certificate*

* Yearly monitoring of the accredited technology is being conducted by AITECH Secretariat
# I. CHECKLIST OF REQUIREMENTS FOR ACCREDITATION

## BUILDING SYSTEM

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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<tbody>
<tr>
<td>Name of Proponent</td>
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<tr>
<td>Business Address</td>
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<td>Company/Corporate Head</td>
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<td>Contact Person</td>
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<td>Position</td>
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<td>Telephone/Fax Nos.</td>
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<tr>
<td>Name of Technical Material</td>
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<tr>
<td>Brief Description</td>
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</tbody>
</table>

***************Checklist of requirements (To be submitted in 3 sets) ***************

- [ ] Company Profile supported with Registration Certificate from SEC for corporations, DTI for sole proprietorship or CDA for cooperatives.
- [ ] Audited Financial Statements which shall include Accountants Statement and Income Tax Return stamped and duly received by the BIR.
- [ ] Technology Brochures
- [ ] Sample Material (1 only)
- [ ] Economic Life Span (signed and notarized warranty)
- [ ] Test Results – **Fire resistance test, Moisture resistance test, Compressive strength test and other tests deemed necessary**
- [ ] Copy of Title of Patent (if applicable)
- [ ] Technical Manual
- [ ] White/Blue print of signed and sealed Building Plans (3 sets-20” x 30” and and 3 sets-A3)
- [ ] Building Specifications signed and sealed
- [ ] Bill of Material / Cost Estimates (Direct Cost) and Selling Cost per unit signed and sealed
- [ ] Cost Comparison between the applied innovative technology, material and the conventional Structural Design Analysis and Computation in Metric System signed and sealed
- [ ] Photocopy of PRC ID of licensed Architect/Engineer
- [ ] Technology Power Point Presentation
- [ ] List of Completed and On-going Projects using the applied technology / material
- [ ] Ocular inspection of Plant, Completed and On-going Projects using the applied technology
- [ ] Others:
WALL PANEL/MATERIAL

Name of Proponent : ____________________________
Business Address : ____________________________
Company/Corporate Head : ____________________________
Position : ____________________________
Contact Person : ____________________________
Position : ____________________________
Telephone/Fax Nos. : ____________________________
Name of Technical Material : ____________________________
Brief Description : ____________________________

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☐ Company Profile supported with Registration Certificate from SEC for corporations, DTI for soles proprietorship or CDA for cooperatives.
☐ Audited Financial Statements which shall include Accountants Statement and Income Tax Return stamped and duly received by the BIR
☐ Technology Brochures
☐ Sample Material (1 only)
☐ Economic Life Span (signed warranty)
☐ Test Results – **Fire Test,** **Moisture Test, Compressive Test and other tests deemed necessary**
☐ Copy of Title of Patent (if applicable)
☐ Technical Manual
☐ Bill of Material / Cost Estimates (Direct Cost) and Selling Cost per unit signed and sealed
☐ Cost Comparison between the applied innovative technology, material and the conventional
☐ Photocopy of PRC ID of licensed Architect/Engineers
☐ Technology Power Point Presentation
☐ List of Completed and On-going Projects using the applied technology / material
☐ Ocular inspection of Plant, Completed and On-going Projects using the applied technology
☐ Others:
ROOFING

Name of Proponent: ________________________________
Business Address: ________________________________
Company/Corporate Head: __________________________
  Position: ________________________________
Contact Person: ________________________________
  Position: ________________________________
Telephone/Fax Nos.: ________________________________
Name of Technical Material: __________________________
  Brief Description: ________________________________

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***************Checklist of requirements (To be submitted in 3 sets) ***************

☐ Company Profile supported with Registration Certificate from SEC for corporations, DTI for sole proprietorship or CDA for cooperatives.
☐ Audited Financial Statements which shall include Accountants Statement and Income Tax Return stamped and duly received by the BIR
☐ Technology Brochures
☐ Sample Material (1 only)
☐ Economic Life Span (signed warranty)
☐ Test Results – Tensile Test and other tests deemed necessary
☐ Copy of Title of Patent (if applicable)
☐ Technical Manual

☐ Bill of Material / Cost Estimates (Direct Cost) and Selling Cost per unit signed and sealed

☐ Cost Comparison between the applied innovative technology (Building system/ material) and the conventional. Signed and sealed by Engineer / Architect
☐ Technology Power Point Presentation
☐ List of Completed and On-going Projects using the applied technology / material
☐ Ocular inspection of Plant, Completed and On-going Projects using the applied technology

☐ Others:
SEPTIC TANK

Name of Proponent: ______________________________
Business Address: ______________________________
Company/Corporate Head: _______________________
Position: ______________________________________
Contact Person: _________________________________
Position: ______________________________________
Telephone/Fax Nos.: _____________________________
Name of Technical Material: ______________________
Brief Description: ______________________________

***************Checklist of requirements (To be submitted in 3 sets) ***************

☐ Company Profile supported with Registration Certificate from SEC for corporations, DTI for soles proprietorship or CDA for cooperatives.
☐ Audited Financial Statements which shall include Accountants Statement and Income Tax Return stamped and duly received by the BIR
☐ Technology Brochures
☐ Sample Material (1 only)
☐ Economic Life Span (signed warranty)
☐ Bill of Material / Cost Estimates (Direct Cost) and Selling Cost per unit signed and sealed
☐ Cost Comparison between the applied innovative technology, material and the conventional
☐ Technology Power Point Presentation
☐ List of Completed and On-going Projects using the applied technology / material
☐ Completed and On-going Projects using the applied technology
☐ Ocular inspection of Plant, Completed and On-going Projects using the applied technology
☐ Others:

IX. SCHEDULE OF FEES (subject to change)
1. One (1) to Four (4) Storey P 20,403.72
2. Five (5) Storey and Above P 30,122.82
3. Materials Only P 20,403.72
LIST OF ACCREDITED TECHNOLOGIES (as of December 2017)

BUILDING SYSTEM

LOW RISE BUILDING (5 STOREY)

BEC SPECIALISTS PHILIPPINES INC.
Safe and Modular Housing Tech. (SAMHT)

It is a machine forming technology that enables manufacturing like applications to the construction industry. US patented technology is used to form seismically and typhoon-resistant reinforced concrete homes quickly and efficiently.

Contact Person : Mr. Patrick Oliver Gabriel
12/F Robinson's Summit Ctr, 6783 Ayala Ave., Makati City
M: 0915-3037117
Email add : pfgabriel@yahoo.com.ph
Validity: December 19, 2017 to December 19, 2018

ERGO EBLOCKS, INC.
Ergo Eblocks Integrated Building System

Ergo Eblocks Integrated Building System is a compressive set of modular housing components comprising of a proprietary foundation, wall panels, flooring and roof panels with accessories allowing construction of 5 floors much faster than conventional construction at a cost which is marginally lower than conventional construction.

Contact Person : Mr. Philip Ng, CEO
2634 Rockefeller St., Brgy. San Isidro, Makati City
T: (02) 843-1177 loc. 808
Validity: December 19, 2017 to December 19, 2020
LEXUS INDUSTRIAL ENTERPRISE CORPORATION  
**PPS Building Technology**

An advanced System for industrial building utilizing fabricated, post-tensioned modular elements, this system has been in use since 1955 worldwide on mass housing, multi-storey residential blocks projects and schools etc (2.5M square meters of projects to date) the system is fast (5-7 days per floor); economical (20-30% less materials used); cost effective (lighter structure more efficient foundation design plus lower material consumption=lower cost); safe (designed for Zone 4 seismic zones; Category 5 Super-typhoons of more than 24KMP wind).

Contact Person: Benjamin Go, Pres./CEO  
#19 San Ignacio St., Bo. Kapitolyo, Pasig City  
M: 09178866926  
Validity: September 8, 2015 to September 8, 2018

MEGAWIDE CONSTRUCTION CORP.  
**Alufix Formworks (Alufix: Walls & Slabs)**

Alufix is a hand-set formwork that covers walls and slabs in one and the same system. It is lightweight, crane-independent and flexible for walls and slabs. The frames are made of closed 3-chamber powder coated aluminium profile (double groove) or 2-chamber aluminium profile (single groove).

Contact Person: Engr. Edgar Saavedra, President  
20 N. Domingo Street, Brgy. Valencia, QC, 1112  
T: 655-1111 / 655-7958 / 655-9164 loc. 805 / F: 655-0974  
Validity: April 22, 2013 to April 22, 2018
In the early 90’s the method of construction of the housing units developed by the 8990 Group was by traditional or CHB piling wherein all walls are non-loadbearing and main structures were reinforced footings, columns and beams. The duration for house construction was between 45 to 60 days. In the late 90s the company developed its Cast-in-Place technology and shortened the construction period to 25 days. In 2003, the company started to invest in the development of its own precast technology that was perfected after one year. The Deca Homes Precast Technology can finish a house in 8 days for the townhouse model, 7 days for the single attached model, 18 days for the single attached loft type model and 30 days for the 80-unit walk up condominium units. All walls are made of reinforced concrete with a design of 3000 to 4000psi concrete strength. This enables the company to provide decent shelter with affordable prices to the Filipino community.

ARTY WORKS BUILDERS CORPORATION
Arty Light Energy Saving Wall

Arty Light and Energy Saving composite wall material is one of a kind composite panel which uses thin fiber cement or calcium silicate board as panels. The middle is filled with an expanded shale high strength, lightweight composite core material to form a non-load bearing inorganic composite sheet. The product has these characteristics; solid, light weight, thin bodied, high strength capacity and impact resistance, hanging strength heat insulation, sound insulation, fire-proof, waterproof easy cut.
BASE BAHAY FOUNDATION, INC.
*Cement-Bamboo Frame Technology*

Base advocates for the use of local renewable materials for construction embedded in resilient and sustainable building concepts in the Philippines. The building technology improves the local economies, is socially inclusive, provides disaster-resistant and comfortable homes and contributes to climate change mitigation and a cleaner environment – all at affordable costs. It can compete with conventional construction methods in terms of economy, technology, society and ecology. Moreover, construction duration is reduced and the technology can be easily learned by skilled workers.

Contact Person: Maricen Jalandoni, General Manager
HILTI Sea Training Center UPRC III Bldg., 2289 Pasong Tamo Extension Makati City, Metro Manila
Contact No. M: 09178744533
Validity: February 27, 2018 to February 27, 2021

BICOL STATE COLLEGE OF APPLIED SCIENCES AND TECHNOLOGY *Biscast Low Cost House Building System*

The BICAST Low-Cost House Building System is elaborated according to the Philippine Building Code Standard and takes into consideration the different earthquake zones within the Philippines. The following new technologies are introduced by the Low-Cost House Building System:
- New hollow block size – more economical, easier to handle;
- U-shaped block, same size as hollow block used for fabrication of lintels and beams;
- Reinforcement for columns inside of the hollow blocks – no formwork required for columns;
- Combined strip – and slab foundation – apt for any kind of soil;
- Pre-fabricated slab system (beams and hollow blocks) – no formwork required;
- Modular architectural system – adjusted to varying financial capabilities of beneficiaries;
- Designs to be adapted to any kind of soil and earthquake regions;
- Reduction of material wastage up to 30%; and
- Environmentally friendly approach as no wood is needed for formwork.
CAVITE FORM MODULES INC.

**JJM Wall Formtile**

The JJM Wall Formtile is a new type of wall system that is very versatile in nature making possible various types of wall construction with relative ease, high quality finishes, speed in construction with less cost. Said walls system uses JJM’s versatile interlocking pre-cast concrete wall panels that are generally rectangular in shape with varying wall finishes ranging from plain, tiled, plank, colored, and many other decorative design.

Contact Person: Mr. Jaime Mendoza, Owner  
3626 De Quiroz Compound Buhay na Tubig, Imus Cavite  
T: (046) 875-1371 / M: 0920-9460551 / 0918-9256281  
Email add: jjm_form@yahoo.com  
Validity: June 16, 2015 to June 16, 2018

CONNOVATE PHILIPPINES, INC.

**Connovate Precast Wall Panel**

The building technology is the first high-performance concrete (HPC) solution for the low-income housing mark aside from using low-carbon emission material, the technology’s construction time is two times faster than the traditional construction methods. Connovate wall panels has a strength of 100Mpa (three times stronger than the ordinary concrete). This building system can last up to 100 years.

Contact Person: Mary Ann Villagracia, Plan Manager  
1201 Alabang Business Tower, Acacia Avenue, MBP, Alabang, Muntinlupa  
T: 807-8405  
Validity: February 27, 2018 to February 27, 2019
**JACINTOCOLOR STEEL, INC.**

*Typhoon Resilient Pre-Fabricated Steel Frame Housing*

A typhoon resilient pre-fabricated steel frame housing adapted to be mounted to a floor slab which could be convenient, easy to install, and dismantle as well for purposes of transferring it to another site or location as desired that includes a plurality of pre-fabricated panelized wall frames removably connected along its longitudinal edges and having openings for its windows and door provisions and a plurality of pre-fabricated panelized roofs each removably secured on top of said plurality of pre-fabricated panelized wall frames.

Contact Person: Ricky M. Tañedo - Project Engineer
Jacinto Cmpnd, KM. 21 Quirino , Bgy. Pasong Putik, QC
T: (02) 930-1872   (02) 937-5867
Validity: May 11, 2017 to May 11, 2018

**LICIADA INNOVATIONS, INC.**

*FCS Interlocking Brick Building System*

FCS Bricks is an interlocking brick system. FCS Interlocking Brick system saves cost by eliminating formworks for reinforced concrete columns and beams, plastering and painting costs, reducing many workers, steels and cements. Constructing column and beam without the need of formworks as well as eliminating the plastering works, weather proof construction, are the key factors why it is constructed faster than conventional.

Contact Person: Alma Postrano, Head - Marketing Dep't.
9024 Barangay Liciada, Bustos, Bulacan
T: 584-0000  584-6868/ M: 0917-6272330
Validity: February 27, 2018 to February 27, 2019

**MANDO WINIA CONSTRUCTION CORP.**

*Steel Wall Sandwich Panel*

The Steel Wall Sandwich Panel System (SWSPS) is made up of steel wall sandwich panel, 100x100x1.0 mm Tubular Steel column, back to back U-Bar 75T 1.0mm thick column and roofing system. The steel sandwich panel is made of composite galvanized steel plates at both exterior sides...
and core insulation material at the interior that provides good sound and insulation and water proofing. It is also made of light materials and construction period is shorter compared to the conventional concrete or brick building and the assembly and disassembly is easier. It can be easily installed in any condition, regardless of product length, and various types of buildings can be constructed. The SWSPS can also be used for temporary houses that need fast installation. One unit can be erected in one day less foundation works.

MODULARIS INGENIAIRE INC

**Pre-cast Concrete Box System Modular Houses**

Modularis Ingeniaire's on-site precast concrete construction system delivers fast, inexpensive and superior modular housing solutions. It is ten times faster than regular construction, structurally stable and conforms to National Building Standards.

NEDSTEEL CONSTRUCTION AND DEVELOPMENT CORPORATION

**Light Gauge Steel Framing System**

Light Gauge Steel (LGS) Framing System is an innovative approach for building mass housing units. LGS Frames are fabricated out of lightweight high tensile steel coils. It is consistent material because it does not wave, split, sprinter, or burn. It’s cost effective and environment friendly because it is from 66% recycled steel. It is lightweight yet durable.
PALIGID DEVELOPMENT CORPORATION

*Eco-Key System (for 22 sq.m. and 26 sq.m. Housing)*

The board can be used for external and internal walls. Main ingredient: Calcium silica. Fire rating: A-level. Available size: 1220mm x 2440mm; Density: 0.90 t/m$^3$ – 1.40 t/m$^3$; Features: 100% Asbestos free, lightweight, moisture-resistant. Easy to work, fix and decorate.

Contact Person: Ms. Heaven Peñaflorida, Manager
210A, Orbit St. Bel-air Village Phase 2, Makati City
T: 833-0715 / M: 0936-8327363
Validity: October 9, 2015 to October 9, 2018

PHILIPPINE STEEL FRAMING CORPORATION

*Housetek*

Housetek is world class hybrid framing system that transforms into a strong steel framing system (Optimus Frame) with lightweight concrete (Teknocrete) walling to create an optimized steel building system for mass housing, residential, school, commercial, and agro-industrial structures. Optimus frame steel building system promises optimized strength, quality, speed, versatility, and cost savings.

Contact Person: Engr. Robby V. Teresa, Engr. Manager
Bgy. Del Rosario, San Fernando, Pampanga
M: 0917-5924669/0915-1521674
Validity: February 27, 2018 to February 27, 2020

PHILMETAL PRODUCTS, INC.

*Galvaframe*

Galvaframe is a technology using lightgauge steel framing for fast and cost efficient construction.

Contact Person: Francisco Evangelista Jr., Sales Manager
Philsteel Tower, 140 Amorsolo St., Legaspi Vill., Makati City
T: 813-8382   F: 840-2123
Validity: May 11, 2017 to May 11, 2018
REALM HOMEBUILDERS

Permaforms

Permaforms is a system that has a main component of double panel boards (Fiber Cement Board) and is adhesively separated by an adaptor that are glued at its inner surface. The adaptor is glued at pattern that would allow the flow of concrete inside the panel. This is in replacement or a better alternative than a conventional concrete hollow block wall or masonry wall. Concrete in-fill & reinforcement (by others) may vary depending on the design requirements by structural.

SKS CONSTRUCTION AND DEVELOPMENT CORPORATION

SKS Structural Steel Framing System

SKS Structural Steel Framing System is a unique framing made by feeding high tensile steel galvanized or zincalume coil to our machine which then forms the said steel framing profile. SKS Steel Framing is perfect for mass housing as its frames are pre-cut, pre-holed and pre-punched, making it not only cost-effective and builder efficient, but also structurally sound. Frames are screwed and riveted together, interlocked and erected together based on designs of a structural engineer.
**UNIMORE INTERNATIONAL TRADING COMPANY**  
*Pre-Engineered Housing System*

Pre-engineered Housing System using Steel Framing and Concrete materials. A pre-engineered house is a metal structure that consists of light frame metal standing seam roof panels on beam box/purlins spanning between ficem boards as frames and concrete wall.

![Image of pre-engineered housing system](image)

Contact Person: Fenton Chua – VP Operations  
18th Floor Unit C, The Eastwood, La Fayette 3, Eastwood City, Libis, Quezon City  
T: 718-5291  
Validity: November 24, 2016 to November 24, 2019

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**WALLCRETE COMPANY INC.**  
*Prefab Technology*

The prefab technology is a modular pre-fabricated concrete materials using interlocking wall panels, column, tie beam, slab and stairs with finished texture on both sides, structurally tested with 2500-3500 psi and exceeding simulated test witnessed by ASEP president year 2000. Comparing to conventional with less than 20-30% construction time and 15% project cost savings.

![Image of prefabricated concrete materials](image)

Contact Person: Ruben O. Briones  
No. 1269 EDSA Balintawak, Q. City  
T: 363-4545; 411-5400 / F: 361-4611  
Validity: December 19, 2017 to December 19, 2019
ZUMYRPHIL CONSTRUCTION INC.

Precast Concrete

The Concrete walls uses a tilt-Up technology. The Slab on grade has a strength of 2,500psi (17MPA). For the Precast wall panel, the strength is at 3000 psi (21MPA) altogether this strength should be achieved at a minimum of 28 days. The foundation should sit on at a minimum of 3000psf of soil bearing capacity.

Contact Person: Albert Lim/ President
201 Don Maraino Cui St., Caputol Site, Cebu City
M: 09176214159
Validity: December 19, 2017 - December 19, 2019
HIGH RISE BUILDING

MEGAWIDE CONSTRUCTION CORP.
Mammut Formworks

Mammut System has redefined standards in wall formworks consisting of versatile panels with complete accessories. It is crane dependent and its frames are made of closed steel profiles with special coating. It has an all-around grooves and assembly lock that guarantees a steepless, tight and perfectly aligned panel connection. It is ideal for every high and large structure with concrete load capacity of up to 100kN/m². It brings a superior concrete finish with it all plastic 100% wood free facing and the symmetrical tie holes and joint pattern.

Contact Person: Engr. Edgar Saavedra, President
20 N. Domingo Street, Brgy. Valencia, QC, 1112
T: 655-1111/655-7958/655-9164 loc. 805
Validity: April 22, 2013 to April 22, 2018

PHILIPPINE CONSTRUCTION CONSORTIUM CORPORATION
Foam Concrete Technologies (Using RBM Machine)

Foam Concrete Technology is a new method of casting partition and perimeter walls in place by using RBM formwork system (optional) or phenolic board and RBM machine for pumping mortar mix with foam and hardener additives.

Contact Person: Ms. Marie Antoinette Lim, Treasurer
1101 West Trade Center, West Avenue, Quezon City
T: 4561393 / 4116772 / 4124845
M: 09168890772 / 09255556590
Validity: February 16, 2012 to February 16, 2020
PHINMA PROPERTY HOLDING CORPORATION

*Phinma Tunnel Form System*

The technology utilizing Otinord Tunnel Form Works to cast walls and slabs of concrete structure in single operation which permits the realization of durable monolithic structure that will satisfy the construction codes of countries situated in seismic zones such as the Philippines.

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Mr. George Richard F. Siton, VP for Operations
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Validity: September 8, 2015 to September 8, 2018

PILIPINAS DONGYUE AUTOCLAVE AERATED CONCRETE MANUFACTURING INC.

*Autoclave Aerated Concrete*

Autoclave Aerated Concrete (AAC) is a pre-cast concrete construction material with very light weight, obtained by uniformly distributed, closed air bubbles. This structure is formed during the manufacturing process where microscopic air bubbles are formed by chemical reactions during its liquid phase. The air bubbles are uniformly distributed and are retained in the matrix on setting, hardening and subsequent curing with high pressure steam in an autoclave oven.

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8F Metrobank Plaza Osmeña Blvd., Cebu City
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Validity: February 27, 2018 - February 27, 2019
AAC LIGHTWEIGHT BLOCK CORPORATION  
*AAC by Lightstrong Blocks*

AAC by Lightstrong Block, an autoclaved aerated concrete, is produced from all-natural ingredients such as sand and/or fly ash, quicklime, cement, gypsum, aeration agent and water. It provides transcendent features and advantages that provides a fast and easier construction. It is lightweight, durable and most specially, cost-saving.

Contact Person: Jennifer H. Latoga, General Manager  
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Validity: December 19, 2017 - December 19, 2020

CARVITT WORLDWIDE IMPORT CORP.  
*Autoclaved Aerated Concrete (AAC)*

Autoclaved Aerated Concrete or AAC is a lightweight, precast concrete building material that comes into two forms: blocks and panels. It was developed in Sweden during 1920’s. AAC offers structural strength, heat and sound insulation, and fire resistance in one material. Unlike other concrete products, it may be sawn, drilled, chiselled, nailed or screwed using conventional carpentry or electric power tools. Thin bed mortar is used as adhesive to join blocks or panel together. Being aerated, AAC contains 50-60% air and has a density of 750kgs/cbm. Although it weighs only about 40% of conventional CHB, the compressive strength averages 4.2 Mpa which is twice as Type II non-load bearing CHB.

Contact Person: Czar A. Garcia, Operations Manager  
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Validity: August 16, 2017 to August 16, 2018
GARDNER Fiber Cement

GARDNER fiber cement products are made with the latest German hatscheck machine and technology. It is made from a combination of cellulose fiber, sand, and premium quality Portland cement which are autoclaved to produce high quality, durable fiber cement board, wood and PFC. As such Gardner products are strong, does not shrink, and are impressively flexible. They are fire, water, moisture, weather, termite, insect and rot resistant; does not contain asbestos and are environment friendly.

CORPORATE HOLDINGS MANAGEMENT, INC.
Panel Blocks

A couple of 25mm x 350mm x 400mm split face weld connected by two 6mm Ø rebar protruded at four sides of the panel in rough surface. The panel is roughly finished internally and smoothly finished externally with a minimum of 50mm cavity where the concrete or mortar is being filled.

Contact Person: Mr. Jeffrey Sinco, CEO, President
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Validity: October 9, 2015 to October 9, 2018

Contact Person: Mr. Lawrence Chua - Batangas Bus. Dev’t. Officer
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Validity: May 11, 2017 to May 11, 2018
HAUSLAND DEV’T CORP./FIESTA COMMUNITIES INC.

*Load Bearing CHB*

The Hausland Load Bearing Wall are load bearing concrete hollow blocks system designed as shear wall. The load-bearing concrete hollow blocks are laid in a single layer after which, the vertical hollows are filled with mortar up to the top surface thereby creating micro-columns. The reinforcements are welded together and blocks are locked at the end corners for a more stable structure.

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Validity: June 23, 2016 to June 23, 2019

NEXT CENTURY BUILDING SYSTEMS

*M2 Panel Systems*

Polystyrene Panels Sandwiched by 2.75mm G.I wire mesh and 3mm cross connecting wires. Used for internal and external wall partitions with load bearing properties and others such as acoustic and heat insulation, fire retardant, seismic resistant and rust free metals.

Contact Person: Anna Kristina Cura
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Validity: June 23, 2016 to June 23, 2019

PHILIPPINE STEEL FRAMING CORPORATION

*Teknocrete*

Teknocrete is also known as foam concrete, cellular concrete, cellular lightweight concrete, or aerated lightweight concrete. It is technically a type of mortar, as it has no aggregate used in its production. It is produced by diluting a foaming agent with water and expanding it with air within a foam generator. This harmless foam is then mixed into a cementitious slurry. Teknocrete is used as filling material for walls of housetek, schooltek and PABS building systems. It is not for structural applications.
**SCG SMART BOARD**

**SCG Smart Board**

SCG Smart Board is a non-asbestos fiber cement board made of SCG Portland cement with silica, sand and cellulose fiber through autoclave process specially designed for various internal and external wall, ceiling and floor applications.

**SPEEDSTEEL DEVELOPMENT CORPORATION**

**Structural Steel Frame System**

Continuous Zincalume or galvanized steel coils are fed into a computer controlled roll forming machine which converts the computer model into light gauge steel frames quickly, accurately and efficiently. These gauges #24 with dimensions 38mm x 90mm x any length light steel frames are pre-cut, pre-punched zinc-coated, rolled formed galvanized aluminum. They just need to be riveted and tekscrewed together.

**SRC INT’L PANEL SYSTEM, INC.**

**SRC Steel Reinforced Concrete Panel**

The Panel System is a wire space frame constructed similar to a truss, with a 39mm thick expanded polystyrene (EPS) core. The faces of the three-dimensional wire frame are wires with welded intersection spaced 50mm apart.
in both directions. The wire fabrics are held 75mm apart by 2.3mm diameter spreader wires pierced diagonally through the foam core and welded 50mm apart on every longitudinal wire on both the wire fabrics in a staggered arrangement.

Sterling Construction and Dev’t Corp.

Plaswall

Plaswall is a permanent formwork comprising a spacer and fiber cement boards that serve as the finished wall surface. No plastering is needed when filled with concrete where a monolithic structural bearing and shear wall is formed. It is faster than any conventional masonry construction and eliminates time consuming practices. Plaswall provides considerable savings in construction time thus reducing labor cost. The system can meet all design requirements. If needed, additional load capacity can be obtained by providing additional reinforcing bars and/or increasing the grade of the concrete as per discretion of structural engineer.

Contact Person: Myrna Montaos
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Validity: June 23, 2016 to June 23, 2019

The Thai Olympic Fiber-Cement Company, Ltd.

Fiber Cement Building Material

Fiber cement board composed of Portland cement, sand and cellulose fiber. Economic lifespan is 50 years.

Contact Person: Mr. Isabelo Dingal, Sr Marketing Manager
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Validity: June 16, 2015 to June 16, 2018
UNIMASTER’S CONGLOMERATION INC.
Ecopid Wall Panels

Ecopid Wall Panel is a lightweight aggregate concrete wall panel with a 5mm fiber cement board on both sides with filler made of concrete and perlites making it a light material.

Contact Person: Mr. Ernesto L. Uy, Manager/ Office Engr.
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Validity: February 16, 2017 to February 16, 2020

VICENTE T. LAO CONSTRUCTION
Shandong Yitong Autoclave Aerated Concrete Panel

Yitong AAC Panel is manufactured from sand, lime and cement to which a gas-foaming agent is added during manufacture. The liberated gas expands the mixture forming extremely small, finely dispersed air pockets resulting in the finished aerated concrete that boasts benefits unmatched by traditional concrete building products. AAC Panel are also steel reinforced during manufacture for additional strength. Reinforcement ensures structural safety adding to the benefits of AAC in terms of strength adding to its numerous advantages such as insulating properties and lightweight.

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Validity: December 19, 2017 - December 19, 2018
ARCHITECKS METAL SYSTEMS
Concrete Floor Steel Decking

Architecks Metal Systems Inc. specializes in manufacturing and marketing of concrete floor decking. These are high tensile materials that provide strong reinforcements and permanent floor works for concrete slab to be used for residential, commercial and industrial structures. It saves manpower, materials, time and cost.

CONCRETE VENTURES GROUP, INC.
Precast Prestressed Concrete C-Joist

C-Joist is a precast, prestressed, concrete joist used as floor and roof slab system. It is a concrete product with pre-tensioned tendons as its reinforcement. Basically, a concrete joist supports a suspended flooring and form part as a slab system. C-Joist was laid on top of the beams with a minimum of 4 inches seating clearance on concrete beams and at least 3 inches bearing capacity for the steel I-beams. Reinforced Permanent Concrete Forms (PRF) was placed on top of the C-Joist shoulder in between distances. Panel bars on beams are required on shear connectors. It requires minimum of 2 inches concrete on top of C-Joist to a maximum of 3 inches structural slab. It is an alternative method from conventional wooden joist and helps to speed up construction.
JACKBILT INDUSTRIES, INC.
*T-Joist Floor and Roof Deck System*

T-Joist floor and roof deck slab consist of poured-in-place concrete slab and precast pre-stressed inverted T-Beams called T-Joist. T-Joist is mass produced at a controlled factory setting with the use of slip former, cured and cut to client's specification. The system eliminates the use of forms which directly translates to savings in time and money.

Contact Person: Engr. Adrian Gonzales
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Validity: May 11, 2017 to May 11, 2020

UNITED STEEL TECHNOLOGY INTERNATIONAL CORP.

*Steeltech Metal Decking*

STEELTECH METAL DECKING is locally manufactured galvanized sheets integrated in formworks to speed up floor construction.

Contact Person: Ms. Paula Dulalia, Marketing Manager
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Email add: info@steeltech.com.ph
Validity Date: 09 October 2015 to 09 October 2018
ROOF FRAMING / ROOFING

PHILIPPINE STEEL FRAMING CORPORATION
Galva Steel Truss

The proposed technology is a roof framing system that utilizes specially-designed and innovative steel sections manufactured using roll forming machines. It utilizes Hot Rolled Coil (HRC) with metal primer finish or galvanized Cold Rolled Coil (CRC) with thickness ranging from 1.5-2.0mm for its S-sections and web member sections and 1.0-1.5mm for its purlin.

Contact Person: Robby V. Teresa
Brgy. Del Rosario, CSFP
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Validity: August 16, 2017 to August 16, 2020

PHILMETAL PRODUCTS INC.
Spandek Roofing System

The Spandek Roofing System is a pre-painted rib type roofing system made from galvalume 55 substrate with double oven baked Polyester top coat paint, fixed firmly thru the use of pierce fasteners, J-bolt anchor or a combination of both. The roofing system materials are guaranteed hot dip process coated and oven-baked top coat for a guaranteed consistent quality. Hookbolts and self-drilling screws are more efficient in terms of holding capacity. Roof panels have significant effective coverage so fewer panels are required enhancing efficiency in cost and speed.

Contact Person: Mr. Francisco Evangelista, Sales Manager/Mr. Jerremie Paraz, Sales Supervisor
Philsteel Tower, 140 Amorsolo St., Makati City
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Validity: August 16, 2017 to August 16, 2020
UNITED STEEL TECHNOLOGY INTERNATIONAL CORP.
Steeltech Pre-Painted G.I. Roofing

Steeltech products include colored roofing materials catering to residential and industrial requirements. Imported raw materials and paints are used in producing coils and tested vigorously comparable to international standards to assure high quality products.

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Validity: June 16, 2015 to June 16, 2018
SEPTIC TANK

STONEWORKS SPECIALIST INT’L CORP
Fiberglass Septic Tank
Fiberglass Septic Tank has Two chambers: the decomposing chamber (anaerobic section), and the filtering strainer. The design and construction is generally a cylindrical body (straight type) with a totally closed bottom portion thus avoiding fowling and poisoning of the soil. The design includes a filtering basket with a spacedly arranged apertures, located at the wall segregating the digestion chamber and bacterial filtration. Charcoal and limestone gravel are used as filtration media to filter the sludge from the digestion chamber.

Contact Person: Mr. Jesus SJ. Felipe, President/COO
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Validity: November 11, 2013 to November 11, 2018

TANAY INDUSTRIES CORPORATION
Lucky HDPE Septic Tank
Lucky HDPE Septic Tank uses an advance technology in purifying and deodorizing the sewage water before disposal. Consist of 3-Chamber System in vertical orientation to conserve installation space on the site.

Contact Person: Mr. Monte Carlo B. Chua
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Validity: August 16, 2017 to August 16, 2018
YOONNI GREENTECH CORPORATION

Yoonni Septic Tank

Yoonni Septic Tank is recycled three chamber purifying septic tank made from LDPE plastic. It is composed of a tank body having an associated cover mounted on the top position. The cover has a vertically disposed vent while the tank has an inlet and outlet post. The septic tank has a reinforcement consisting of lateral and longitudinal plastic ribs making it durable and easy to install.

GREENWAY TOILET SOLUTIONS

Greenway Eco-Toilet System

A water saving device that when installed in bathrooms will allow water already used for bathing to be re-used for toilet flushing purposes thus helping households to save 30 to 40% on their water consumption/bills.

Contact Person: Mr. Daniel A. Camacho, Inventor
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Validity: December 19, 2017 - December 19, 2019
**FENCE**

**WALLCRETE COMPANY INC.**  
*Prefab Fences*

Wallcrete Prefab Fences is a modular concrete fence system using interlocking wall panels, columns and tie beams designed with versatility that gives a warm, aesthetic and clean appearance while providing strength and security well beyond CHB. With finished texture on both sides, the tongue and groove system has a quick, clean and efficient installation even during rainy days. Its assembly is clean unlike messy hollow block laying and plastering.

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