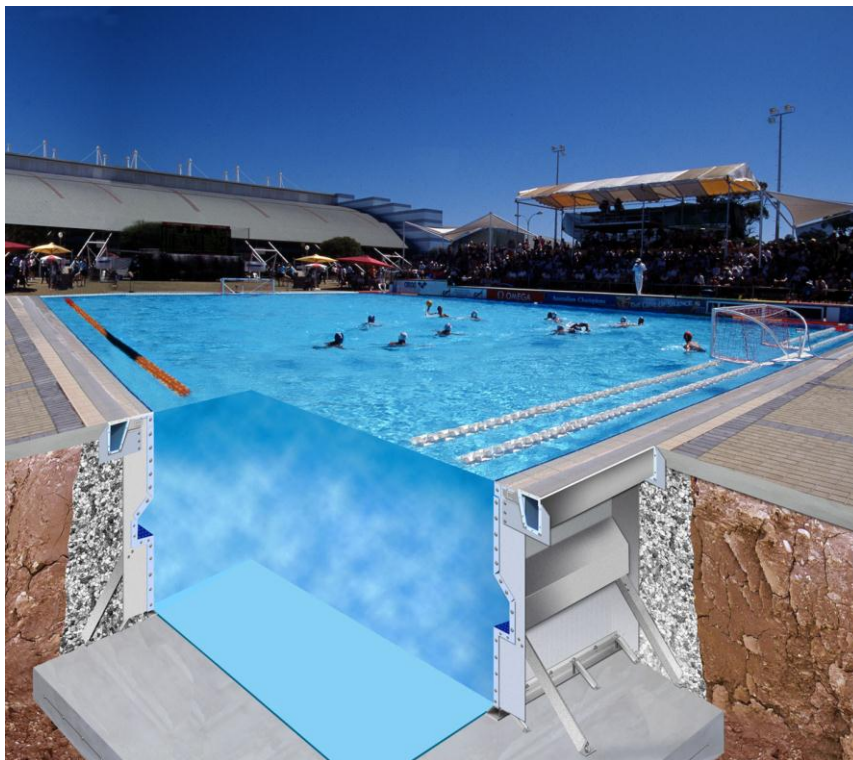


PRODUCT BOOKLET



LEED® Leadership in Energy & Environmental Design

Myrtha Pools® - Piscine Castiglione product mapping with respect to the **LEED®** standard



Italia

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Habitech Distretto Tecnologico Trentino is Green Building Council Italia’s founding partner and member.

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November 2011

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Table 1 - LEED® Check List for New Construction and Major Renovation

1. THE PRODUCT BOOKLET IN REGARDS TO THE LEED® STANDARD

Habitech Distretto Tecnologico Trentino initiated a project targeting the system of building companies, and aimed at providing them with assistance in verifying the positioning of their products with regards to LEED® certification.

This project has been developed with the collaboration of TÜV Italia, which, in order to promote a “sustainable construction” through its services in the field of LEED® standard certification, supports businesses interested in LEED® Certification of buildings and, in regard to construction materials and Certification of Recycled Material Content.

The present document has been drafted in conformity with the document developed in collaboration with TÜV Italia, entitled “Guidelines for the interpretation and application of LEED® credits to construction products”, which provides the method by which Habitech and TÜV Italia analyse construction material with respect to contribution to LEED® credits.

LEED® is a certification system for the sustainability of buildings and takes into consideration energy efficiency, water management, the site where the building is constructed, the materials and resources with which it is built, and the quality of internal environments. It is therefore important that the products constituting the structure and fittings of the building clearly demonstrate their conformity to the standard criteria and/or the contributions that they can make towards meeting those criteria (in some cases it is simply a question of verifying information and parameters already in the company’s possession).

Introduction

The LEED® certification involves the building as a whole, not just the individual product, but it’s easy to understand the fundamental role that products play in final tally of points. All the products involved in a project can therefore contribute to the attainment of credits as long as they’re in conformity with the requirements.

Anyone participating in a LEED® project will look for supplier partners who offer products which conform to the required parameters and who are able to communicate all the information, documentation and certification that qualify the performance of their product.

Habitech Distretto Tecnologico Trentino offers consulting services to businesses, allowing them to position their product in terms of environmental and energy sustainability with respect to the LEED® standard.

Product positioning consultation began with a first meeting, during which the Habitech consultants described the LEED® standard and the credit requirements with respect to the products under review; they then conducted a more in-depth study of the products with company representatives and technicians in order to determine the credits to which the products could contribute. On the basis of the documentation provided by company representatives, an analysis of the products was conducted with respect to LEED® credit requirements.

The next step was identifying the actions the company could undertake in order to better satisfy the requirements of the chosen credits. Company representatives then redeveloped and optimized the analysed product lines such that their attributes would fall fully within the limits indicated in the chosen credits.

Finally, a method was developed for communicating the possible contribution of the analysed products with respect to the credits and the standard.

The advantage the company gains from this positioning activity is that of having a concrete opportunity reinvent itself and its product with respect to LEED® certification in the sustainable construction market.

The final goal of product positioning is to allow the company to develop the capacity to respond autonomously to LEED® requirements when the market so requires.

LEED® – Leadership in Energy & Environmental Design
The standard of environmental energy certification for LEED® buildings (Leadership in Energy &

Environmental Design) is voluntary, and regulates the management, planning and construction of sustainable buildings from the social, environmental, and economic perspective and in terms of the well-being of the user. Created in the United States by the US Green Building Council in 1993, the standard is unique in its consideration of all the elements involved in the planning of a building, from the choice of the building location, to the management of the construction site, to the limited consumption of potable water, to the efficiency of the building envelope and the fittings, to the use of renewable energy, to the use of recycled materials, to the quality and comfort of the internal environment. In Italy, LEED® was introduced by Habitech Distretto Tecnologico Trentino in 2006, which subsequently founded and promoted the Italian Green Building Council, with the goal of disseminating the standard in Italy and working towards the establishment of LEED® Italy for New Construction and Major Renovation, based on the American LEED® for New Construction and Major Renovation, v3 (2009).

LEED® Italy for New Construction and Major Renovation applies to commercial buildings, including offices, institutional buildings (libraries, museums, churches, etc.) and residential buildings of at least four storeys.

There are other LEED® USA standards concerning:

- renovation of existing buildings (EB, Existing Buildings);
- small homes (LEED® for Homes).
- the interiors of commercial projects (CI, Commercial Interiors); the GBC Italia, on April 14, 2010, launched LEED® Italy, which is based on Italian and European norms, but with the same principles and criteria as the American version.

LEED® Italy certification of buildings is based on a credit structure that includes seven thematic areas:

1. Site Sustainability (SS)
2. Water Management (GA)
3. Energy and Atmosphere (EA)
4. Materials and Resources (MR)

5. Quality of Internal Environment (QI)
6. Innovation in Planning (IP)
7. Regional Priority (PR)

Credits are categorized as: prerequisites, central credits and credits for innovation.

In the certification phase, a project must satisfy the prerequisites, which are mandatory, while points are granted on the basis of the level of satisfaction of the requirements under consideration, which are evaluated according to established criteria.

The final score, which is calculated by adding the points granted in each thematic area, determines the level of certification obtained:

- Certified (40 – 49 points)
- Silver (50 – 59 points)
- Gold (60 – 79 points)
- Platinum (80 points or higher)

LEED® is a certification system for buildings, as such construction products cannot be guaranteed or certified according to the LEED® system, since the requirements for single credits consider the characteristics and performance of all the materials used in the building, and are not based on a single product. The role of construction material in LEED® certification is therefore that of contributing or, in some cases, conforming to credit prerequisites.

The US Green Building Council provides specific policies that regulate the use of the USGBC brand and the correct statements with which to communicate the fact that one's products contribute to the LEED® standard.

At the drafting of this document, the Italian GBC had developed a document that regulates the use of the GBC Italy logo, an important instrument of communication, and property of the GBC Italia community.

Use of the logo is regulated by the finalized guidelines protecting the rights of GBC Italia. GBC Italy partners who fail to respect these guidelines may be the subject of legal proceedings, suspension or expulsion.

The Check Lists for LEED® Italy for New Construction and Major Renovation and for LEED® for New Construction and Major Renovation are provided below.

2. Company information

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Fax +39 0376631482

info@myrthapools.com

info@piscinecastiglione.it

3. Summary of the Meetings Conducted and their Participants

Individuals present at the meeting with the company on 2011/04/26				
Name	Surname	Role	Tel.	E-mail
Alberto	Acerbi	Research Innovation	0376 94261	Alberto.Acerbi@piscinecastiglione.it
Innocenzo	Pochini	Technical Dept. Manager	0376 94261	Innocenzo.pochini@myrthapools.com
Alessandro	Orio	Research Innovation	0376 94261	Alessandro.orio@piscinecastiglione.it
Carlo	Battisti	Product Mapping Services	0464 443470	carlo.battisti@dttn.it
Erika	Endrizzi	Product Mapping Services	0464 443 470	erika.endrizzi@dttn.it

4. Description of Company Activities

Piscine Castiglione® is a well renowned pool sector brand in Italy, and Myrtha Pools®, a famous trade market brand internationally, are both commercial divisions of A&T Europe Inc., and company whose growth has been emblematic: only a few years after its foundation, A&T became the leader in its sector.

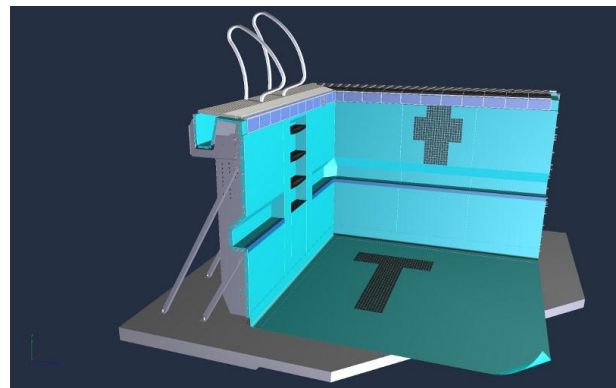
It was founded in Castiglione delle Stiviere (Mantova) in 1961, where it continues to be based. It began operations at the national level, and then expanded to the rest of the world. Thanks to its exclusive patents and continued research into advanced and reliable technologies, the Company prompted a technological revolution in the pool industry, catapulting itself into exponential growth on a global scale which led, among other things, to the opening of a subsidiary in the US, in Sarasota, Florida.

The success it enjoys today worldwide is the result of experience that has been developing since 1961 and of a business plan that aimed to span the entire pool market. The Company closely follows production and manufactures of the majority of its own components in a Manufacturing Unit of more than 3500 square meters. They also train the pool installation teams, who operate around the globe, in their own training centre the Pool Academy, which was created in the vicinity of the head office. Finally, they dedicate particular attention to post-sales assistance, guaranteed by more than 100 Pool Service centres in Italy and elsewhere throughout the world. They, too, are trained at the Pool Academy.

5. Description of Myrtha® Technology

To produce their pools, Myrtha Pools® and Piscine Castiglione® use Myrtha® Technology, which represents a true revolution in the world of prefabricated pools. The Technology consists of a patented modular system, based on the use of stainless steel panels onto which a hard, thick PVC layer is laminated at a high temperature, and enriched with a high-value finish of water-resistant ceramic and glass mosaics. This is an elite and exclusive technology which is perfectly designed to respond to every type of public use (hotels, camp

grounds, recreation centres), sporting competition and private pool. They rely on technical solutions and a level of finishing that is without equal in the pool market. The Myrtha® technology was created as an alternative to traditional structures in concrete and lesser standard prefabricated pools. They have greatly surpassed the limits of such solutions and have taken over the national and international markets thanks to its unique qualities: product guarantees. These qualities and guarantees not only include the materials, but also the company's pre-engineer, quality controls, precision down to the millimetre during the installation phase, the possibility of construction in any type of space, limited maintenance, product duration and environmental sustainability recognized through official studies.



6. List of MYRTHA POOLS® - CASTIGLIONE POOLS Products and Production Sites

The following table refers to a pool 50mx25mxh2m

	PRODUCT	RAW MATERIAL	MANUFACTURER NAME AND LOCATION	MANUFACTURER LOCATION (ZIP CODE)
Code	SPILLWAY BORDER GRID			
1104209	GRID 00 AV 248X25X333	Polypropylene	Trioplast – 53049 Torrita di Siena	53049 Torrita di Siena - ITALY
1104223	GRID 00 AV C/PIAST.M.P.GLASS			
1104216	GRID 00 AV 90^INCLINED			
Code	STRUCTURE – Panels+SW Border+Buttress			
Z001879	LONG.QI C80 270	Stainless Steel AISI 441 LI	OUTOKUMPU Piazza Piccapietra, 9 16121 GENOVA - ITALY	OUTOKUMPU 95490 Tornio - FINLAND
Z001894	STRAIGHT QI C80 JOINT			
Z001895	QI C80 ANG.90^ JOINT			
Z001885	STRUT QI X LONG.BASE DFR/C.80			
X033835	PA.QI AZ C2000 188,5 FULL			
X018520	ANGLED.QI AZ C/00 H.188,5 90^			
Z102822	BUTTRESS.QI STAMP.135 S/SALD.			
Z102826	BUTTRESS.QI STAMP.200 S/SALD.			
Z102814	SQD QI CTR STAMP 200 C/00 DFR			
X016001	BSF QI AZ C1/00 180 FULL			
X016009	BSF QI AZ C1/00 180 C/P.90-110			
X016007	7 BSF QI AZ C1/00 45X45-90^			
Z102801	SUPPORT QI BSF C1/00 CTR STAMP			
Z016008	SET SQUARE IRR.QI BSF C1/00			
Code	BOLTS+SCREWS+WASHERS+THIN BARS			
1420039	THIN BAR.M 12X250-45^A2 C/NUTS	Stainless Steel AISI 304	Fiminox Inc. 20077 Melegnano (Mi) - ITALY	20077 Melegnano (Mi) - ITALY
1420038	THIN BAR.M 12X140-45^A2 C/ NUTS			
1240173	CONF. 50 SCREWS TE 12X30 A2 D933U5739			
1240147	CONF. 50 SCREWS M 12 A2 + ZINC. D934			
1240149	CONF. 50 ROND.PIANE DM 12 INOX D125			
1420040	THIN BAR.M 16X165-45^A2 C/ NUTS			
1240277	WASHER.I AD ASOLA D.17 BUTTRESS/STAMP.			
1240270	SCREW TE 16X 30 A2 D933 U5739			
1260061	NUT M 16 A2 UNI 5588 DIN 934			
1240289	WASHER.SPECIALE 16X45X3 A2 BUTTRESS/STAMP			
1240266	CONF. 50 SCREWS TE 8X25 A2			
1240146	CONF. 50 SCREWS TPSEI 8X25A2 T16 D7991			
1240228	SCREW TE 8X 50 A2 D933 U5739			
1240148	CONF. 50 BOLTS M8 MEDI A2 +ZINC.D934			
1240150	CONF. 50 WASHER.GREMB.8X24X2 A2 D9021			
1240183	CAGED NUT M 8 A2 - 1238B			

	PRODUCT	RAW MATERIAL	MANUFACTURER NAME AND LOCATION	MANUFACTURER LOCATION (ZIP CODE)
Code	CHEMICAL DOWELS	Chemical Dowels	Hilti Italy 20099 Sesto San Giovanni	86916 Kaufering (Ger)
1260051	CHEM. DOWEL M12X110 HVU 256693			
1260022	CHEM. DOWEL M16X125 HVU 256694			
Code	PVC ON MYRTHA WALL	Coiled PVC	Wardle Storeys BB186UT Grove Mill Earby	BB186UT Grove Mill Earby (GB)
1431034	PVC ON MYRTHA PANEL			
Code	PVC ON POOL BOTTOM	Coiled PVC	Renolit Belgium 9700 Oudenaarde	Barcelona (Spain)
1103333	STRIP AZZ H 250 T2000*35216 221*			
1103247	MEMBR AZZ 2050x1,5 T2			
Code	CERAMICS	Clinker	Sire, 12062 Roreto (CN) - ITALY	12062 Roreto (CN) - ITALY
1204173	PIASTRL BLUB 12X24,5 *4SC5724512			
1204236	PIASTRL C1 AV/BLUB *B52PIB17SC57*			
1204238	COPP.PIAS.AV/BLUB 90^*I52PIB17SC57			
Code	SEALANT FOR PVC MYRTHA WALL	Liquid PVC	Renolit Belgium 9700 Oudenaarde	Barcelona (Spain)
1103008	SEALANT MYR KG 1 AZZ*81050 001*			
Code	COLORANT FOR PVC POOL FLOOR MEMBRANE	Liquid PVC	Renolit Belgium 9700 Oudenaarde	Barcelona (Spain)
1103224	COLORANT KG 1 AZZ T5			
Code	CERAMIC GLUE – CERAMIC SEALANT		Mapei 20158 Milano- ITALY	20060 Mediglia (MI) - ITALY
1489380	KERALASTIC T (5 KG)	Bicomponent Adhesive		
1489265	ULTRACOLOR PLUS 111 GRI/ARG.(5 KG)	Cement Mortar		

Table of Reference for Contributions to Credit MRc4 – Recycled content

The following table refers to a pool 50mx25mxh2m.

Data was obtained for the following materials. The company is able to demonstrate the certifiable calculation attested to by the supplier.

PRODUCT	RAW MATERIAL	u.m.	WHEIGHT	% POST-CONSUMER	% PRE-CONSUMER	APPENDIX
STRUCTURE – Panels+SW Border+Buttress	Stainless Steel 441 LI	Kg	12534	34,25	52,45	B
PVC ON MYRTHA WALL	Coiled PVC	Kg	330	0	5	C
PVC ON POOL BOTTOM	Coiled PVC	Kg	2440	0	20	D
CERAMICS	Klinker	Kg	1107	22	0	E

7. LEED® Credits to which MYRTHA POOLS® - CASTIGLIONE POOLS Products can contribute

EAp2 – MINIMUM ENERGY PERFORMANCE	
Intent: To establish the minimum level of energy efficiency for the proposed building and systems to reduce environmental and economic impacts associated with excessive energy use.	
Reason for contribution	The system used by Myrtha Pools® and by Castiglione Pools® facilitates energy savings through efficient and innovative equipment systems.
Reference standard	The ASHRAE 90.1-2004 user manual contains several modules that can be used to document conformity to this prerequisite.
Documentation (certifications, etc.)	Technical sheets.

Recirculation of water as an energy-saving parameter.

Reintroduction of water in a pool can be achieved through openings located at the bottom of the pool (traditional distribution) or through opening located along the walls of the pool (STRAHLENTURBULENZ distribution).

TRADITIONAL DISTRIBUTION occurs through openings installed in the bottom of the pool that allow for homogeneous distribution and is accepted by local regulations. The STRAHLTURBULENZ system is an evolution of traditional systems and is based on the Venturi effect of controlled turbulence. It allows for the elimination of tubes in the base of the pool, thus reducing the risk that they break, and inserts the openings along the walls of the pool: it is currently the most efficient and effective system, thanks to its ability to circulate the entire fluid mass of the pool in a homogeneous manner.

MR c4 RECYCLED CONTENT

Intent: To increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

Postconsumer recycled content is the percentage of material in a product that was consumer waste. The recycled material was generated by household, commercial, industrial, or institutional end-users and can no longer be used for its intended purpose. It includes returns of materials from the distribution chain (ISO 14021). Examples include construction and demolition debris, materials collected through recycling programs, discarded products (e.g., furniture, cabinetry, decking), and landscaping waste (e.g., leaves, grass clippings, tree trimmings).

Pre-consumer recycled content, formerly known as postindustrial content, is the percentage of material in a product that is recycled from manufacturing waste. Examples include planer shavings, sawdust, bagasse, walnut shells, culls, trimmed materials, over issue publications, and obsolete inventories. Excluded are rework, regrind, or scrap materials capable of being reclaimed within the same process that generated them (ISO 14021).

Recycled content is the proportion, by mass, of pre-consumer or postconsumer recycled material in a product (ISO 14021).

Mechanical and electrical components are not considered for this credit. Hydraulic and anti-incendiary systems can be considered.

The materials with recycled content must be defined according to the definitions of standard ISO 14021.

Next, the products and the percentages of their weight constituted by pre-consumption and post-consumption recycled material must be indicated, along with supporting documentation (primary certification, etc.).

Requirements satisfied by the product	The structure (panels, SW border, buttresses), the PVC, the ceramics contain recycled material; these products therefore contribute to satisfying the credit requirements.
% Post- Consumer recycled content (by weight)	Indicate the percentage of post - consumer recycled content by weight.
% Pre- Consumer recycled content (by weight)	Indicate the percentage of pre - consumer recycled content by weight.
Documentation (certifications, etc.)	International Standard ISO 14021–1999, Environmental Labels and Declarations—Self-Declared Environmental Claims (Type II Environmental Labeling)

MR c5 REGIONAL MATERIALS

Intent: To increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

Manufacturing refers to the final assembly of components into the building product that is furnished and installed by the trade's workers.

Regionally extracted materials are raw materials taken from within a 500-mile radius of the project site.

Regionally manufactured materials are assembled as finished products within a 500-mile radius of the project site. Assembly does not include on-site assembly, erection, or installation of finished components.

Mechanical, electrical and plumbing components, and specialty items such as elevators and equipment must not be included in this calculation.

Requirements satisfied by the product	Depending on where the LEED building is located, Myrtha Pools® And Piscine Castiglione® are able to list the place of production and processing of all products and raw materials that provides on site. The contribution to this credit is variable and should be evaluated case by case basis.
Manufacturer Site (ZIP code)	Indicate the manufacturer site, specifying the ZIP code.
Extraction Site (ZIP code)	Indicate the extraction site, specifying the ZIP code
Harvest Site (ZIP code)	Indicate the harvest site, specifying the ZIP code.
Documentation (certifications, etc.)	Manufacturer letter

IPc1 – INNOVAZIONE NELLA PROGETTAZIONE

Intent: To provide design teams and projects the opportunity to achieve exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System.

Requirements satisfied by the product	Myrtha Pools® and Piscine Castiglione® have conducted an analysis of the environmental impact of Myrtha pools with respect to cement pools, demonstrating a 42% reduction in CO2 emissions for a pool measuring 50mx25mx2m
Documentation (certifications, etc.)	Technical form and product analysis

The innovative solutions that contribute to obtaining this credit are those that are not included in LEED credits. Only strategies that demonstrate a complete and exhaustive approach and which result in significant and measurable environmental benefits can be included in this category. In other words, in order to earn this credit one must propose a planning strategy focused on sustainability that has not already been specified in the LEED manual.

This is possible in one of the following three situations:

1. The project must demonstrate a quantitative increase in environmental performance (through identification of a minimum base performance with which to compare the result obtained by the final project).
2. The process and/or the specifications must be complete and exhaustive. For example, a planning group that is considering requesting an innovation credit for application of a sustainable building management program must demonstrate that the program addresses the entire LEED certification project, and not merely a part thereof. In other words, solutions that concern only one part of a

project or that do not have an integrated and complete approach cannot be considered for this category.

3. The criteria developed in the project must be applicable to other projects and must demonstrate significant improvements as compared with the normal practices of sustainable construction. For example, proposing the use of a significant quantity of materials, products, or an entire system on the basis of Life-Cycle analyses of the products, as indicated in reference regulations UNI EN ISO 14040.

Myrtha Pools® and Piscine Castiglione® have commissioned from ACOR Consultants (www.acor.com.au), a well-known Australian engineering company, the development of a method of measuring the energy necessary to produce the materials used in building a pool. That amount of energy is then expressed as a carbon footprint, which is the amount of CO₂ that corresponds to the energy necessary for production. This can be calculated for various pool construction techniques (concrete, Myrtha technology, other prefabrications) and thus allows for an analysis by the relevant manager, which could be based on a detailed and scientific comparison to measure the environmental impact of production. Myrtha technology has a carbon footprint that is considerably less than traditional pools built with concrete and tiles.

8. Synopsis of Credits to which the Analysed Products can Contribute. The following table refers to a pool 50mx25mx2m.

PRODUCT	RAW MATERIAL	CREDITS TO WHICH THE PRODUCT CAN CONTRIBUTE
SPILLWAY BORDER GRID	Polypropylene	MRc4, MRc5
GRID 00 AV 248X25X333		
GRID 00 AV C/PIAST.M.P.VETRO		
GRID 00 AV 90^INCLINATA		
STRUCTURE - Panels+SW Border+Buttress	Stainless Steel 441 LI - AISI	MRc4, MRc5
LONG.QI C80 270		
STRAIGHT QI C80 JOINT		
QI C80 ANG.90^ JOINT		
STRUT QI X LONG.BASE DFR/C.80		
PA.QI AZ C2000 188,5 FULL		
ANGLED.QI AZ C/00 H.188,5 90^		
BUTTRESS.QI STAMP.135 S/SALD.		
BUTTRESS.QI STAMP.200 S/SALD.		
SQD QI CTR STAMP 200 C/00 DFR		
BSF QI AZ C1/00 180 FULL		
BSF QI AZ C1/00 180 C/P.90-110		
7 BSF QI AZ C1/00 45X45-90^		
SUPPORT QI BSF C1/00 CTR STAMP		
SET SQUARE IRR.QI BSF C1/00		
BOLTS+SCREWS+WASHERS+THIN BARS	Stainless Steel AISI 304	MRc5
THIN BAR.M 12X250-45^A2 C/NUTS		
THIN BAR.M 12X140-45^A2 C/ NUTS		
CONF. 50 SCREWS TE 12X30 A2 D933U5739		
CONF. 50 SCREWS M 12 A2 + ZINC. D934		
CONF. 50 ROND.PIANE DM 12 INOX D125		
THIN BAR.M 16X165-45^A2 C/ NUTS		
WASHER.I AD ASOLA D.17 BUTTRESS/STAMP.		
SCREW TE 16X 30 A2 D933 U5739		
NUT M 16 A2 UNI 5588 DIN 934		
WASHER.SPECIALE 16X45X3 A2 BUTTRESS/STAMP		
CONF. 50 SCREWS TE 8X25 A2		
CONF. 50 SCREWS TPSEI 8X25A2 T16 D7991		
SCREW TE 8X 50 A2 D933 U5739		
CONF. 50 BOLTS M8 MEDI A2 +ZINC.D934		
CONF. 50 WASHER.GREMB.8X24X2 A2 D9021		
CAGED NUT M 8 A2 - 1238B		
CHEMICAL DOWELS		
CHEM. DOWEL M12X110 HVU 256693		
CHEM. DOWEL M16X125 HVU 256694		

PRODUCT	RAW MATERIAL	CREDITS TO WHICH THE PRODUCT CAN CONTRIBUTE
PVC ON MYRTHA WALL	Chemical Dowels	MRc4, MRc5
PVC ON MYRTHA PANEL		
PVC ON POOL BOTTOM	Coiled PVC	MRc5
STRIP AZZ H 250 T2000*35216 221*		
MEMBR AZZ 2050x1,5 T2		
CERAMICS	Coiled PVC	MRc5
PIASTRL BLUB 12X24,5 *4SC5724512		
PIASTRL C1 AV/BLUB *B52PIB17SC57*		
COPP.PIAS.AV/BLUB 90^*I52PIB17SC57	Klinker	
SEALANT FOR PVC MYRTHA WALL		MRc5
SEALANT MYR KG 1 AZZ*81050 001*		
COLORANT FOR PVC POOL BOTTOM	Liquid PVC	MRc5
COLORANT KG 1 AZZ T5		
CERAMIC GLUE – CERAMIC SEALANT		MRc5
KERALASTIC T (5 KG)	Liquid PVC	
ULTRACOLOR PLUS 111 GRI/ARG. (5 KG)		

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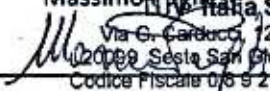
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9. ATTACHMENT

TABEL 1 –LEED® for New Construction and Major Renovation CHECK LIST

D/C		Area	Points
	SS	Sustainable Sites	26 Points
C	Prerequisite 1	Construction Activity Pollution Prevention To reduce pollution from construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.	Required
D	Credit 1	Site Selection To avoid the development of inappropriate sites and reduce the environmental impact from the location of a building on a site.	1
D	Credit 2	Development Density & Community Connectivity To channel development to urban areas with existing infrastructure, protect greenfields, and preserve habitat and natural resources.	5
D	Credit 3	Brownfield Redevelopment To rehabilitate damaged sites where development is complicated by environmental contamination and to reduce pressure on undeveloped land.	1
D	Credit 4.1	Alternative Transportation, Public Transportation Access To reduce pollution and land development impacts from automobile use.	6
D	Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms To reduce pollution and land development impacts from automobile use.	1
D	Credit 4.3	Alternative Transportation, Low-Emitting and Fuel-Efficient Vehicles To reduce pollution and land development impacts from automobile use.	3
D	Credit 4.4	Alternative Transportation, Parking Capacity To reduce pollution and land development impacts from automobile use.	2
C	Credit 5.1	Site Development, Protect of Restore Habitat To conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.	1
D	Credit 5.2	Site Development, Maximize Open Space To promote biodiversity by providing a high ratio of open space to development footprint.	1
D	Credit 6.1	Stormwater Design, Quantity Control To limit disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration, reducing or eliminating pollution from stormwater runoff and eliminating contaminants.	1
D	Credit 6.2	Stormwater Design, Quality Control To limit disruption and pollution of natural water flows by managing stormwater runoff.	1
C	Credit 7.1	Heat Island Effect, Non-Roof To reduce heat islands ¹ to minimize impacts on microclimates and human and wildlife habitats.	1
D	Credit 7.2	Heat Island Effect, Roof To reduce heat islands ¹ to minimize impacts on microclimates and human and wildlife habitats.	1
D	Credit 8	Light Pollution Reduction To minimize light trespass from the building and site, reduce sky-glow to increase night sky access, improve nighttime visibility through glare reduction and reduce development impact from lighting on nocturnal environments.	1

D/C		Area	Points
		WE	Water Efficiency
			10 Points
D	Prerequisite 1	Water Use Reduction To increase water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.	Required
D	Credit 1	Water Efficient Landscaping To limit or eliminate the use of potable water or other natural surface or subsurface water resources available on or near the project site for landscape irrigation.	From 2 to 4
D	Credit 2	Innovative Wastewater Technologies To reduce wastewater generation and potable water demand while increasing the local aquifer recharge.	2
D	Credit 3	Water Use Reduction To further increase water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.	From 2 to 4
		EA	Energy & Atmosphere
			35 Points
C	Prerequisite 1	Fundamental Commissioning of the Building Energy Systems To verify that the project's energy-related systems are installed, and calibrated to perform according to the owner's project requirements, basis of design and construction documents.	Required
D	Prerequisite 2	Minimum Energy Performance To establish the minimum level of energy efficiency for the proposed building and systems to reduce environmental and economic impacts associated with excessive energy use.	Required
D	Prerequisite 3	Fundamental Refrigerant Management To reduce stratospheric ozone depletion.	Required
D	Credit 1	Optimize Energy Performance To achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.	From 1 to 19
D	Credit 2	On-Site Renewable Energy To encourage and recognize increasing levels of on-site renewable energy self-supply to reduce environmental and economic impacts associated with fossil fuel energy use.	From 1 to 7
D	Credit 3	Enhanced Commissioning To begin the commissioning process early in the design process and execute additional activities after systems performance verification is completed.	2
D	Credit 4	Enhanced Refrigerant Management To reduce ozone depletion and support early compliance with the Montreal Protocol while minimizing direct contributions to climate change.	2
C	Credit 5	Measurement & Verification To provide for the ongoing accountability of building energy consumption over time.	3
C	Credit 6	Green Power To encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis.	2
		MR	Materials & Resources
			14 Points
D	Prerequisite 1	Storage & Collection of Recyclables To facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills.	Required

D/C		Area	Points
C	Credit 1.1	Building Reuse, Maintain Existing Walls, Floors & Roof To extend the lifecycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport	From 1 to 3
C	Credit 1.2	Building Reuse, Maintain Interior Non-Structural Elements To extend the lifecycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport.	1
C	Credit 2	Construction Waste Management To divert construction and demolition debris from disposal in landfills and incineration facilities. Redirect recyclable recovered resources back to the manufacturing process and reusable materials to appropriate sites.	From 1 to 2
C	Credit 3	Materials Reuse To reuse building materials and products to reduce demand for virgin materials and reduce waste, thereby lessening impacts associated with the extraction and processing of virgin resources.	From 1 to 2
C	Credit 4	Recycled Content To increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.	From 1 to 2
C	Credit 5	Regional Materials To increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.	From 1 to 2
C	Credit 6	Rapidly Renewable Materials To reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials.	1
C	Credit 7	Certified Wood To encourage environmentally responsible forest management.	1
	IEQ	Indoor Environmental Quality	15 Punti
D	Prerequisite 1	Minimum IAQ Performance To establish minimum indoor air quality (IAQ) performance to enhance indoor air quality in buildings, thus contributing to the comfort and well-being of the occupants.	Required
D	Prerequisite 2	Environmental Tobacco Smoke Control To prevent or minimize exposure of building occupants, indoor surfaces and ventilation air distribution systems to environmental tobacco smoke (ETS).	Required
D	Prerequisite 3	Minimum Acoustical Performance To provide capacity for ventilation system monitoring to help promote occupant comfort and well-being.	Required
D	Credit 1	Outdoor Air Delivery Monitoring To provide additional outdoor air ventilation to improve indoor air quality (IAQ) and promote occupant comfort, well-being and productivity.	1
D	Credit 2	Increased Ventilation To reduce indoor air quality (IAQ) problems resulting from construction or renovation and promote the comfort and well-being of construction workers and building occupants.	1
C	Credit 3.1	Construction IAQ Management Plan, During Construction To reduce indoor air quality (IAQ) problems resulting from construction or renovation to promote the comfort and well-being of construction workers and building occupants. To reduce indoor air quality (IAQ) problems resulting from construction or renovation to promote the comfort and well-being of	1

D/C		Area	Points
		construction workers and building occupants.	
C	Credit 3.2	Construction IAQ Management Plan, Before Occupancy To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	1
C	Credit 4.1	Low-Emitting Materials, Adhesives & Sealants To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	1
C	Credit 4.2	Low-Emitting Materials, Paints & Coatings To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	1
C	Credit 4.3	Low-Emitting Materials, Flooring Systems To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	1
C	Credit 4.4	Low-Emitting Materials, Composite Wood & Agrifiber Products To minimize building occupant exposure to potentially hazardous particulates and chemical pollutants.	1
D	Credit 5	Indoor Chemical & Pollutant Source Control To provide a high level of lighting system control by individual occupants or groups in multi-occupant spaces (e.g., classrooms and conference areas) and promote their productivity, comfort and well-being.	1
D	Credit 6.1	Controllability of Systems, Lighting To provide a high level of thermal comfort system control ¹ by individual occupants or groups in multi-occupant spaces (e.g., classrooms or conference areas) and promote their productivity, comfort and well-being.	1
D	Credit 6.2	Controllability of Systems, Thermal Comfort To provide a comfortable thermal environment that promotes occupant productivity and well-being.	1
D	Credit 7.1	Thermal Comfort, Design To provide for the assessment of building occupant thermal comfort over time.	1
D	Credit 7.2	Thermal Comfort, Verification To provide building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.	1
D	Credit 8.1	Daylight & Views, Daylight 75% of Spaces To provide building occupants a connection to the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.	1
	ID	Innovation in Design	6 Points
D	Credit 1	Innovation in Design To provide design teams and projects the opportunity to achieve exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System.	From 1 to 5
C	Credit 2	LEED Accredited Professional To support and encourage the design integration required by LEED to streamline the application and certification process.	1
	RP	Regional Priority	4 Points
	Credit 1	Regional Priority To provide an incentive for the achievement of credits that address geographically-specific environmental priorities.	From 1 to 4

D/C		Area	Points
	Total		110 points

LEGEND:**D: Design Phase****C: Construction Phase**