



SARCO Architects
Costa Rica

Project name: **Casa Magayon**
Type: **Residential**
Location: **Guanacaste, Costa Rica**
Year: **2015**
Size: **13,900 ft² / 1290 m²**
Software used:
GRAPHISOFT ARCHICAD,
GRAPHISOFT BIMx

Complete BIM residential project

SARCO Architects Costa Rica wins Central & South America Property Award for Casa Magayon

SARCO Architects Costa Rica employs solid BIM solution for their residential projects from the initial design to construction.



sarcoarchitects.com
photo: Andrés García Lachner



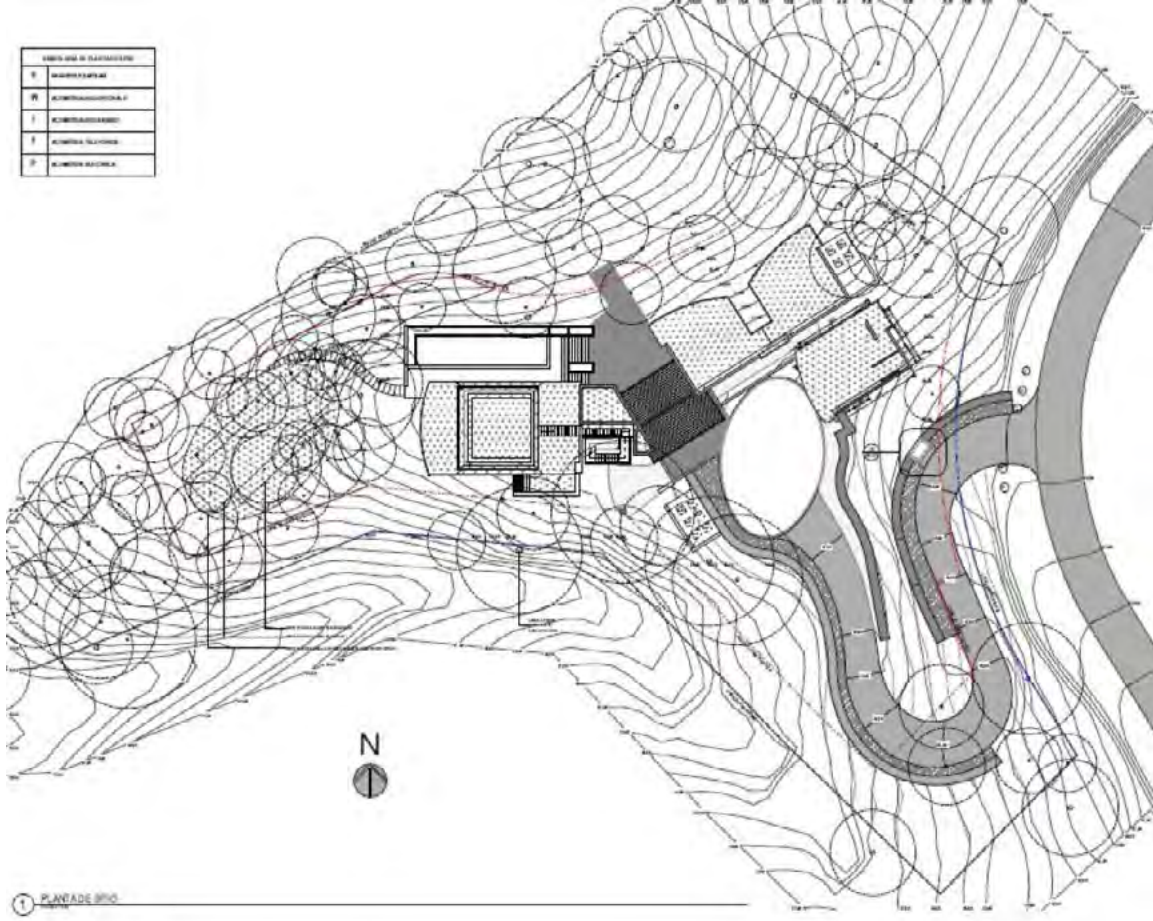
Award-winning Casa Magayon is located in the Península Papagayo Resort, Guanacaste, Costa Rica, with a construction area of 1,290m². The residence is a tropical interpretation of the classic “Glass House” by Philip Johnson. Basically, the design was structured in a modular way, based on independent cubes with large, floor-to-ceiling glazed surfaces, and connected to each other by bridges that form open-air passageways, allowing constant contact with the environment. This strategy was also used as a sustainable element, since it reduces the amount of air conditioning, and allows it to operate in a modular way, consuming energy only in the spaces being used.

The project is a luxury residence for vacation and to rent when the owner is not there. The residence minimizes energy consumption compared to many other examples within the resort, without compromising on luxury and finishings.

The award-winning design integrates a palette of green-gray and light gray stucco wall surfaces, with accents of dark gray volcanic stone plaster; large, glazed surfaces with curtain walls with its

special green tone structure inspired by the colors of the jungle around it; and accents on exposed steel surfaces, painted in light orange, inspired by the colors of the flowers of some trees native to the area.

Architectural Plans



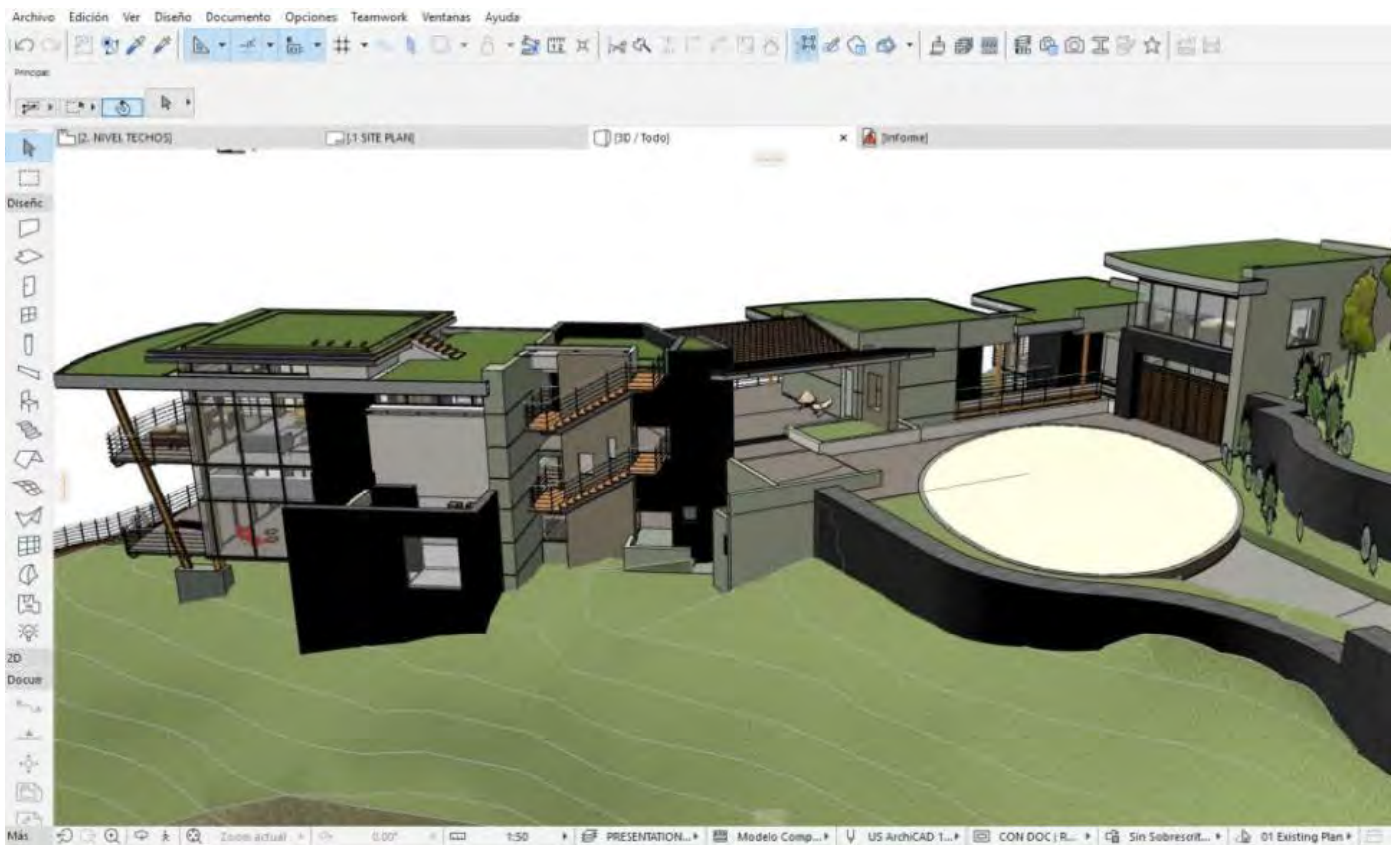
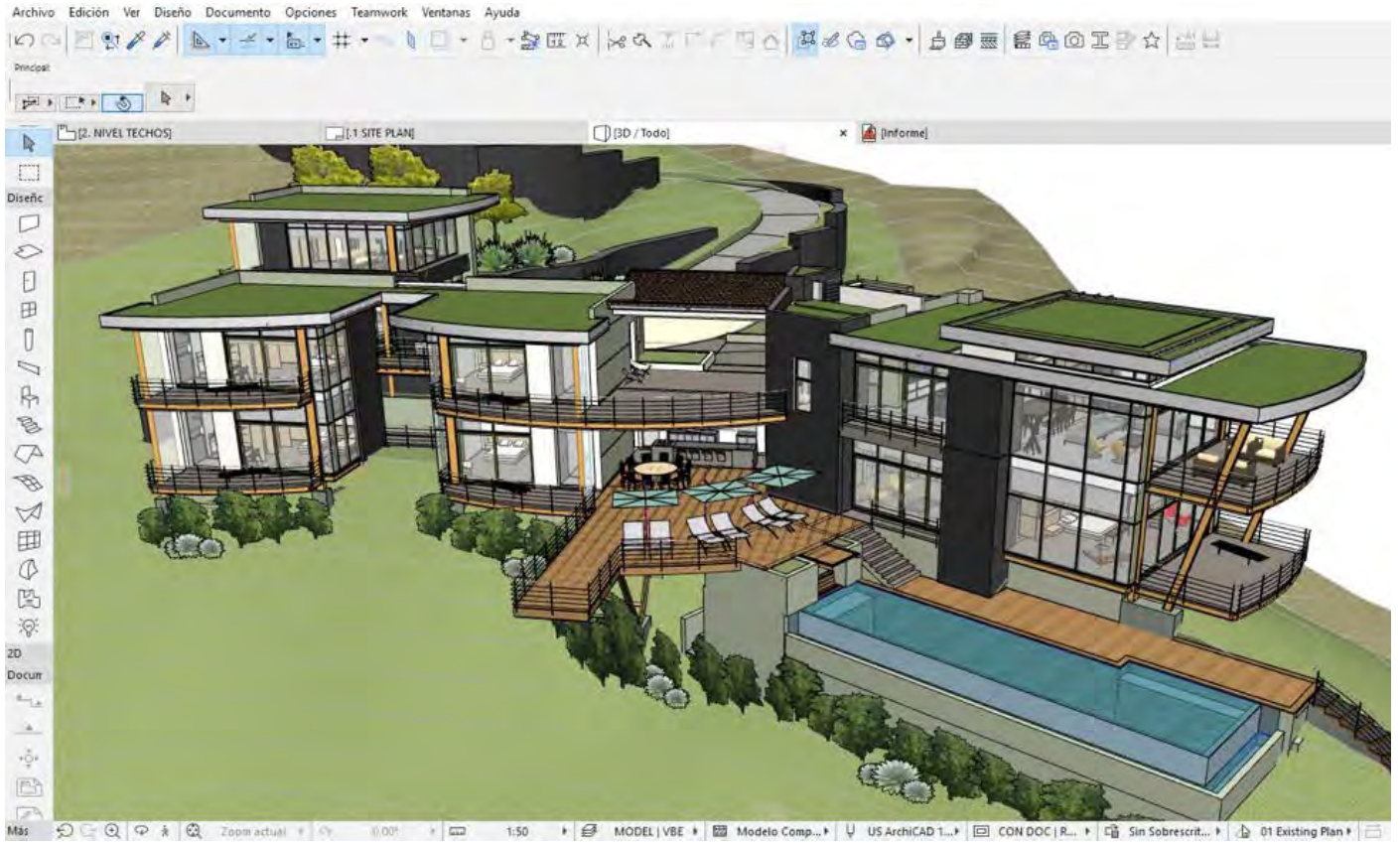


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Casa Magayon modeled in ARCHICAD

Casa Magayon was modeled entirely using ARCHICAD, from its initial concept; the entire 2D documentation process was generated from the “live” ARCHICAD model, with absolutely no content drawn in 2D. During the process, MEP was also incorporated to model the air conditioning and storm drains to confirm that there were no collisions. All the built-in furniture is modeled entirely in ARCHICAD, with the assistance of the Cadimage Cabinets tool. Teamwork was incorporated throughout its development process, and BIMx was used as an essential communication tool with the client during the construction process and on site.

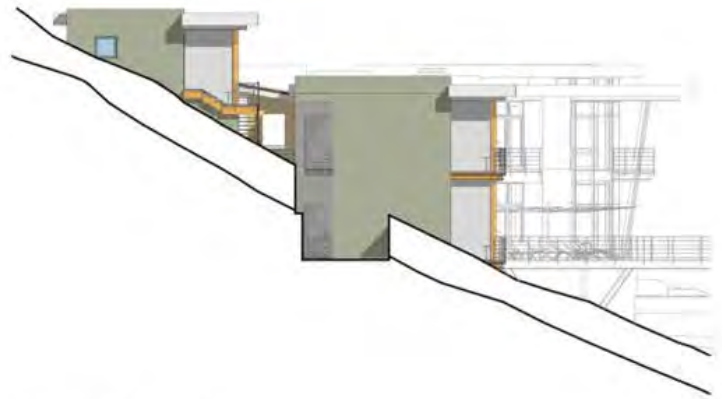
Models in ARCHICAD



Architectural Elevations extracted from the model



PE-2 ARCHITECTURAL ELEVATION



PE-6 ARCHITECTURAL ELEVATION

0 1 2 3 4 5



PE-4 ARCHITECTURAL ELEVATION

0 1 2 3 4 5



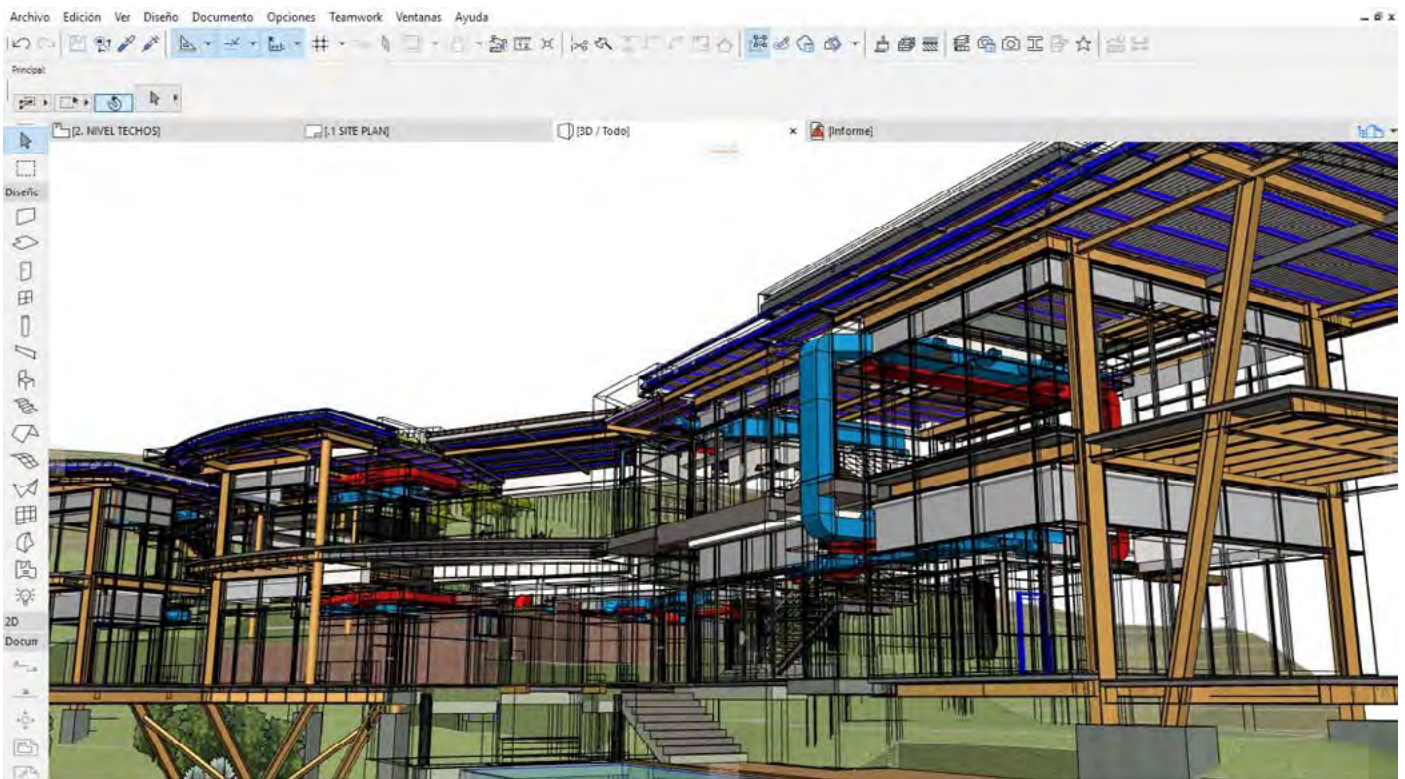
PE-3 ARCHITECTURAL ELEVATION

0 1 2 3 4 5

Facilities

ARCHICAD's MEP modeler tool facilitated the integration of plant trajectories, as well as analysis and planning from the design stage, offering integral solutions not only to the HVAC component but also, to correctly coordinate integrated solutions of furniture or ceiling design, etc.

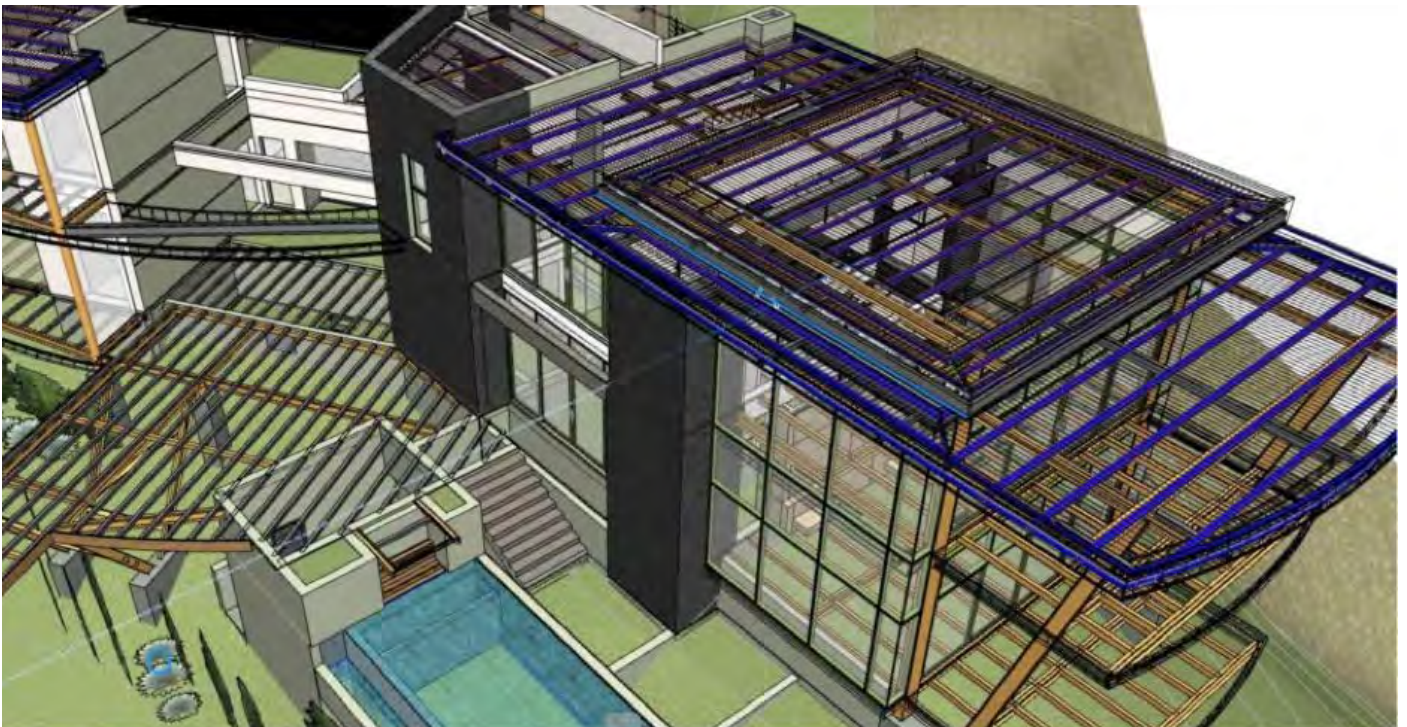
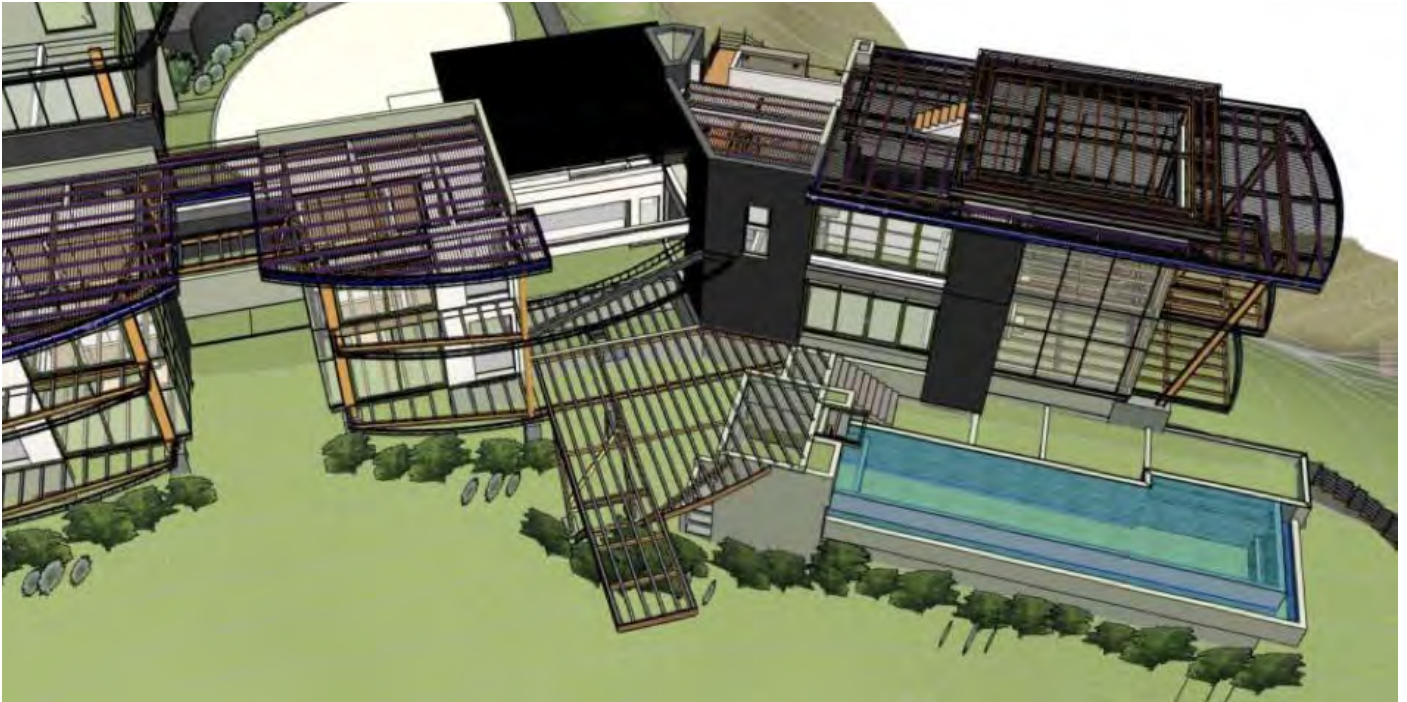
MEP models in MEP modeler



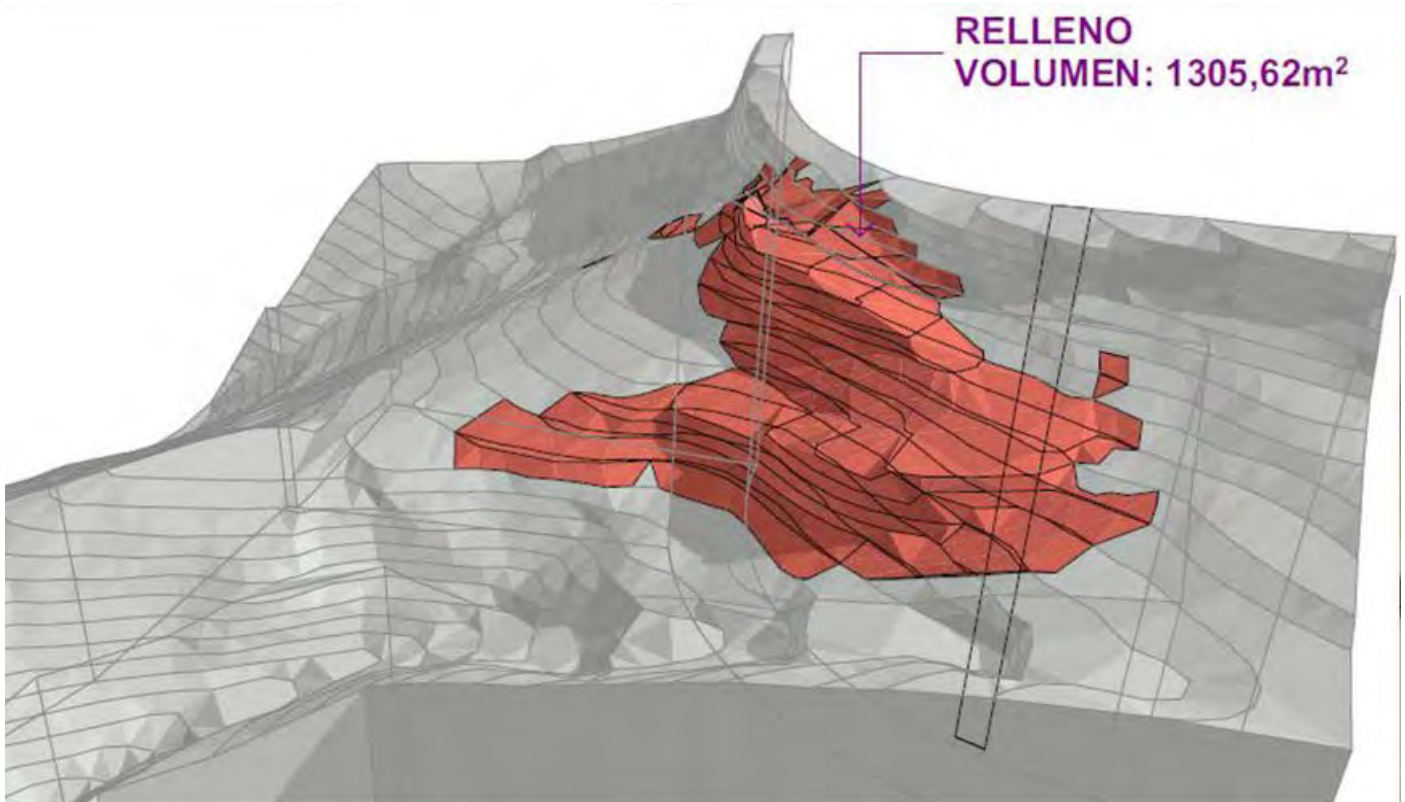
Structure

Using an automated quantification, SARCO Architects Costa Rica was able to generate several lists and schemes of structure, foundation, elements, components and zones, which are integrated as an essential part of the documentation set in the delivery of projects.

Structure model in ARCHICAD



Terrain Filling

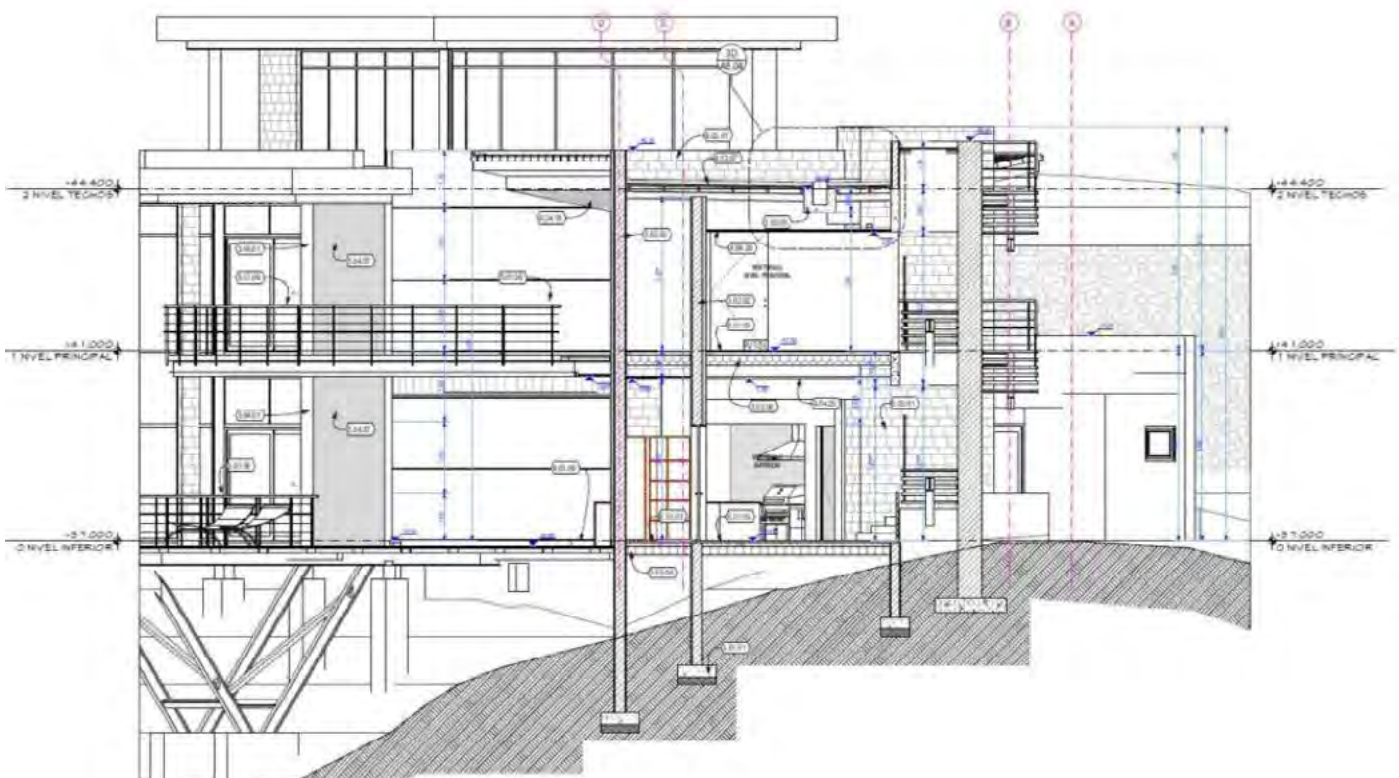
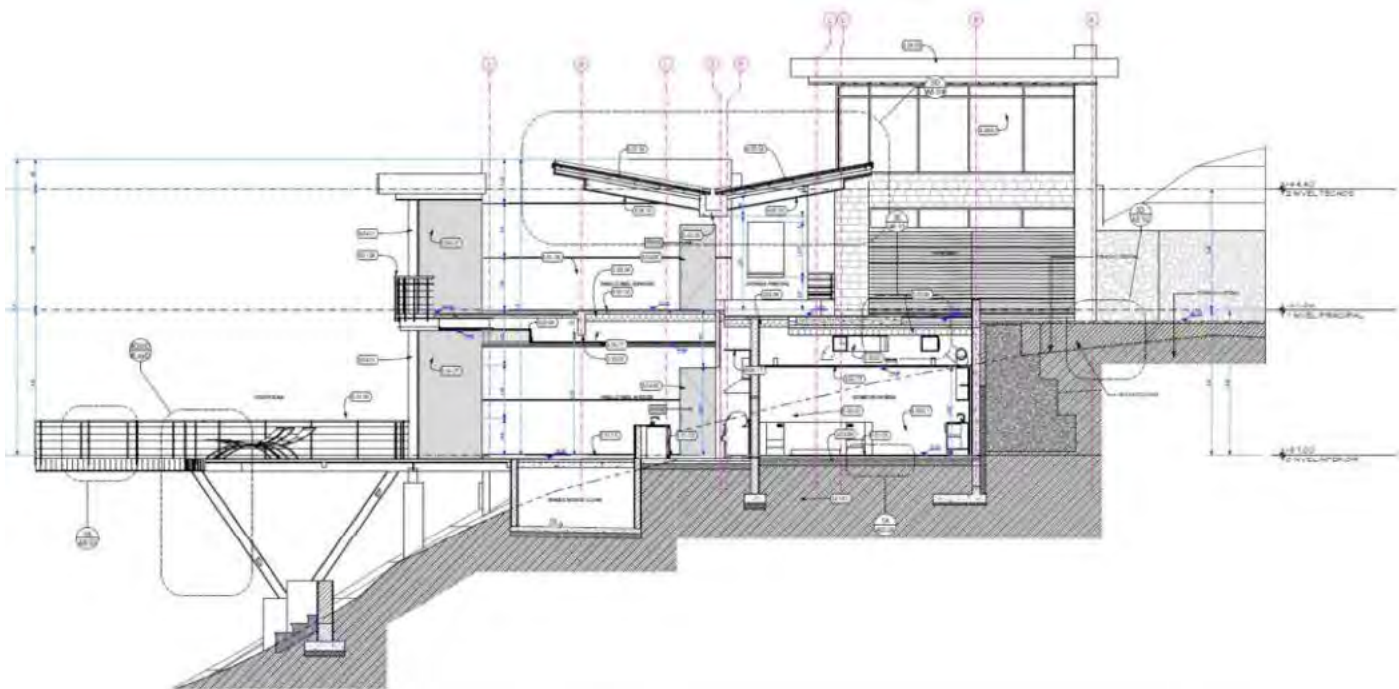


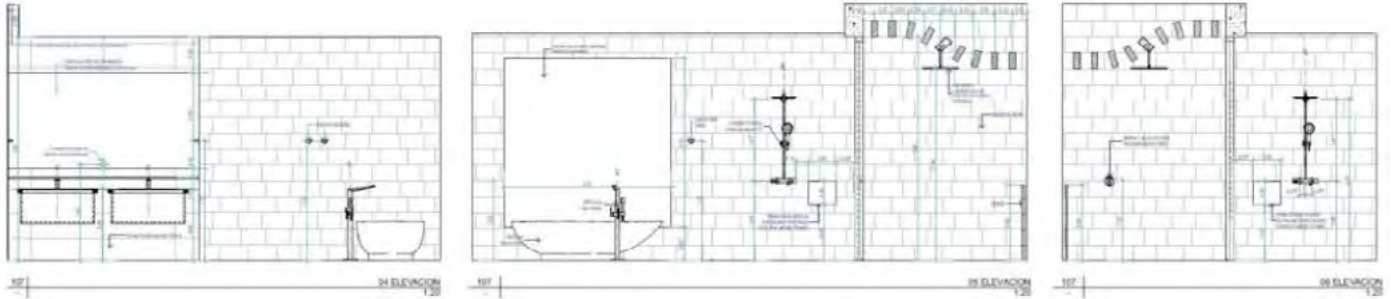
“The results of working with ARCHICAD as a BIM tool are surprising, since throughout the life cycle of a project we can accompany it in its different stages, witnessing that the model is identical to reality as our project begins to take shape.”

Roderick Anderson
CEO & Design Director,
SARCO Architects Costa Rica

Project Execution

SARCO Architects Costa Rica managed the development of the project within ARCHICAD. The entire project was generated using “layer combinations” and the “Viewmap,” which allowed them to save views and layers that are passed directly to the documentation without having different BIM models for the different stages of the workflow. Likewise, all the quantification of elements, materials, carpentry, etc., was handled automatically, with all the necessary technical sheets with its suppliers, allowing the project to advance much faster, more efficiently and without errors.





L-107 TABLA LOZA Y GRIFERIA BAÑO PRINCIPAL																
ID	107 001	107 002	107 003	107 004	107 005	107 007	107 008	107 009	107 010	107 011	107 012	107 013	107 014	107 015	107 016	107 017
Home Story	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR	NIVEL INFERIOR
Zone Name	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	DUCHA EXTERIOR	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL	BAÑO PRINCIPAL
TIPO DE ELEMENTO	GRIFERIA LAVATORIO - TIPO SOBREPORTE	GRIFERIA LAVATORIO - TIPO SOBREPORTE	GRIFERIA BIDET PARA TUBO	SISTEMA DE DUCHA TERMOESTÁTICA EXPUESTA	SISTEMA DE DUCHA TERMOESTÁTICA EXPUESTA	DUCHA EXTERIOR	TUBO FREESTANDING	LAVATORIO TIPO SOBRE	LAVATORIO TIPO SOBRE	DEFENSANA REDONDO DE PARED	ACTUADOR PARA OSTERIA	MODULO DE PARED	ASIENTO	MUEBLE ALTO	MUEBLE PARA LAVATORIO	MUEBLE PARA LAVATORIO
MARCA	GROHE	GROHE	GROHE	GROHE	GROHE	GROHE	VICTORIA ALBERT	DURAVIT	DURAVIT	GROHE	GROHE	DURAVIT	DURAVIT	DURAVIT	DURAVIT	DURAVIT
MODELO	ALLURE BRELVAU	ALLURE BRELVAU	ALLURE BRELVAU	SHOWER SYSTEM	SHOWER SYSTEM	FINISHER COBAMPERLA 01111	NAPOLI	DURASTYLE	DURASTYLE	DURASTYLE	SAUCE COSMOPOLITAN	24281	24241	21104 R	23 582	24 582
ACABADO	CRÓMO	CRÓMO	CRÓMO	CRÓMO	CRÓMO	CRÓMO	BLANCO	BLANCO	BLANCO	BLANCO	CRÓMO	BLANCO	BLANCO	BLANCO	BLANCO	BLANCO
NUMERO PARTE	230400	200400	211100	279400	279400	260700	NAPOLI	23870	23870	23870	180400	307200	24281	24241	21104 R	23 582
OBSERVACIONES			MUY ALTA DE PISO (2.800)													
ACCESORIO																
Length (M)	1.01	1.01	0.28	0.22	0.22	0.47	1.01	0.67	0.67	0.67	0.22	0.57	0.57	0.58	0.28	0.28
Width (M)	1.01	1.01	0.17	0.21	0.21	0.67	0.67	1.01	1.01	1.01	0.22	0.57	0.57	0.58	0.28	0.28
3D Family Assembly																

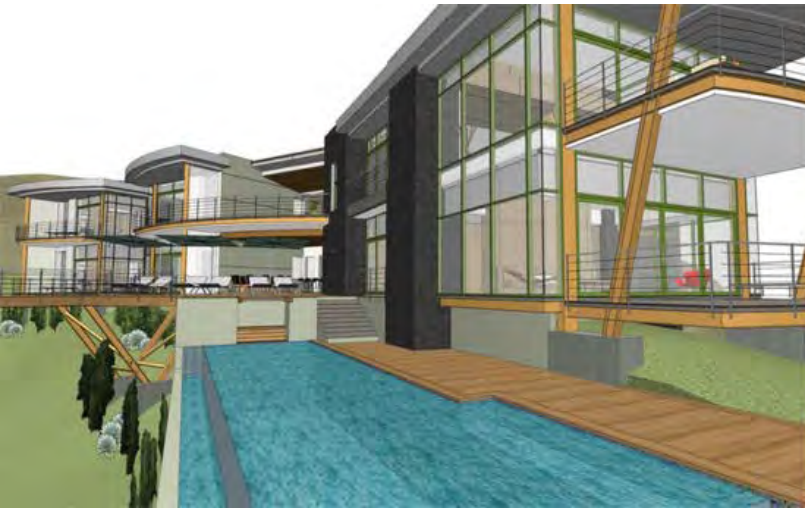
L-107 | TABLA LOZA Y GRIFERIA BAÑO PRINCIPAL | 1:1

	PM00	PM01	PM02	PM04	PM05	PM07	PM08	PM09	PM10
VISTA EN PLANTA									
VISTA FRONTAL									
NUMERO DE ZONA	207	207	206	202	207	207	206	209	212
NOMBRE DE LA ZONA	BAÑO VISITAS	DORMITORIO DE VISITAS #1	DORMITORIO DE VISITAS #2	PASILLO INTERIOR	BAÑO PRINCIPAL	BAÑO CUARTO MULTIFUNCIÓN	PASILLO DORMITORIOS ANTERIORES	DORMITORIO DE VISITAS #4	DORMITORIO INTERNA
DIMENSIONES DE BUQUE									
ANCHO	0.87	1.27	1.27	0.87	0.81	0.80	1.27	1.27	0.87
ALTO	2.47	2.47	2.47	2.47	2.10	2.41	2.47	2.47	2.47
GROSOR DE LA HOJA	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
ANCHO DEL MARCO (mm)	0.16	0.16	0.16	0.16	0.17	0.16	0.16	0.16	0.16
GROSOR DEL MARCO (mm)	0.05	0.05	0.05	0.05	0.04	0.05	0.05	0.05	0.05
TIPO DE OPERACION	IZQUIERDA	ABATIR - DERECHA	ABATIR - IZQUIERDA	ABATIR - IZQUIERDA	ABATIR - IZQUIERDA	ABATIR - IZQUIERDA	ABATIR - IZQUIERDA	ABATIR - DERECHA	ABATIR - DERECHA
PROVEEDOR	UNIGELLES	UNIGELLES	UNIGELLES	UNIGELLES	UNIGELLES	UNIGELLES	UNIGELLES	UNIGELLES	UNIGELLES
TIPO DE MADERA	MADERA LAUREL	MADERA LAUREL	MADERA LAUREL	MADERA LAUREL	MADERA LAUREL	MADERA LAUREL	MADERA LAUREL	MADERA LAUREL	MADERA LAUREL
ALTURA DE LLAVIN	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ACABADO	POLIRETANO SATINADO TINTA A ESCOGER	POLIRETANO SATINADO TINTA A ESCOGER	POLIRETANO SATINADO TINTA A ESCOGER	POLIRETANO SATINADO TINTA A ESCOGER	POLIRETANO SATINADO TINTA A ESCOGER	POLIRETANO SATINADO TINTA A ESCOGER	POLIRETANO SATINADO TINTA A ESCOGER	POLIRETANO SATINADO TINTA A ESCOGER	POLIRETANO SATINADO TINTA A ESCOGER
CERRAJERIA - FUNCION	PRIVACIDAD	LLAVE	LLAVE	LLAVE	PRIVACIDAD	PRIVACIDAD	LLAVE	LLAVE	PRIVACIDAD
CERRADURA - MARCA/ MODELO	MORTISE PARA PUERTA DE DORMER HAFEL E 111 20 004	HAFEL MANKA 903 02 006	HAFEL MANKA 903 02 006	HAFEL MANKA 903 02 006	HAFEL MANKA 903 02 006	HAFEL MANKA 903 02 006	HAFEL MANKA 903 02 006	HAFEL MANKA 903 02 006	HAFEL MANKA 903 02 006
TOPES DE PISO		INOX DESK2	INOX DESK2	INOX DESK2	INOX DESK2	INOX DESK2	INOX DESK2	INOX DESK2	INOX DESK2
BISAGRAS	4 BISAGRAS HAFEL 903 02 006	4 BISAGRAS HAFEL 903 02 006	4 BISAGRAS HAFEL 903 02 006	4 BISAGRAS HAFEL 903 02 006	4 BISAGRAS HAFEL 903 02 006	4 BISAGRAS HAFEL 903 02 006	4 BISAGRAS HAFEL 903 02 006	4 BISAGRAS HAFEL 903 02 006	4 BISAGRAS HAFEL 903 02 006
OTROS ACCESORIOS		CAJA MORTISE HAFEL E11 07 113	CAJA MORTISE HAFEL E11 07 113	CAJA MORTISE HAFEL E11 07 113	CAJA MORTISE HAFEL E11 07 113	CAJA MORTISE HAFEL E11 07 113	CAJA MORTISE HAFEL E11 07 113	CAJA MORTISE HAFEL E11 07 113	CAJA MORTISE HAFEL E11 07 113
COMENTARIOS	CON 5 1/2 DOOR SEAL 960 10 394	LLAVE MORTISE - CON 6 1/4 DOOR SEAL 960 10 394	LLAVE MORTISE - CON 6 1/4 DOOR SEAL 960 10 394	LLAVE MORTISE - CON 6 1/4 DOOR SEAL 960 10 394	LLAVE MORTISE - CON 6 1/4 DOOR SEAL 960 10 394	LLAVE MORTISE - CON 6 1/4 DOOR SEAL 960 10 394	LLAVE MORTISE - CON 6 1/4 DOOR SEAL 960 10 394	LLAVE MORTISE - CON 6 1/4 DOOR SEAL 960 10 394	LLAVE MORTISE - CON 6 1/4 DOOR SEAL 960 10 394

Construction Process on Site



ARCHICAD VS Reality



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BIMx



[Click on the picture and download the complete Casa Magayon BIMx Hyper-model!](#)

“It would be impossible to tackle complex projects without a comprehensive tool like ARCHICAD.”

Roderick Anderson
CEO & Design Director,
SARCO Architects Costa Rica

For SARCO Architects Costa Rica, the BIMx application opened up the possibility to incorporate Hyper-models, combining 3D with 2D content on mobile devices, which changed the logic of graphical representation of the plans. During the preliminary presentations, the application was essential to show the customer the level of precision. They further incorporated the use of color in the final documentation, since BIMx became a central communication and visualization element for SARCO Architects Costa Rica throughout the work process -- in the preliminary design stage, in the visualization of complex projects, and as an essential element for discussions in meetings with suppliers, etc.

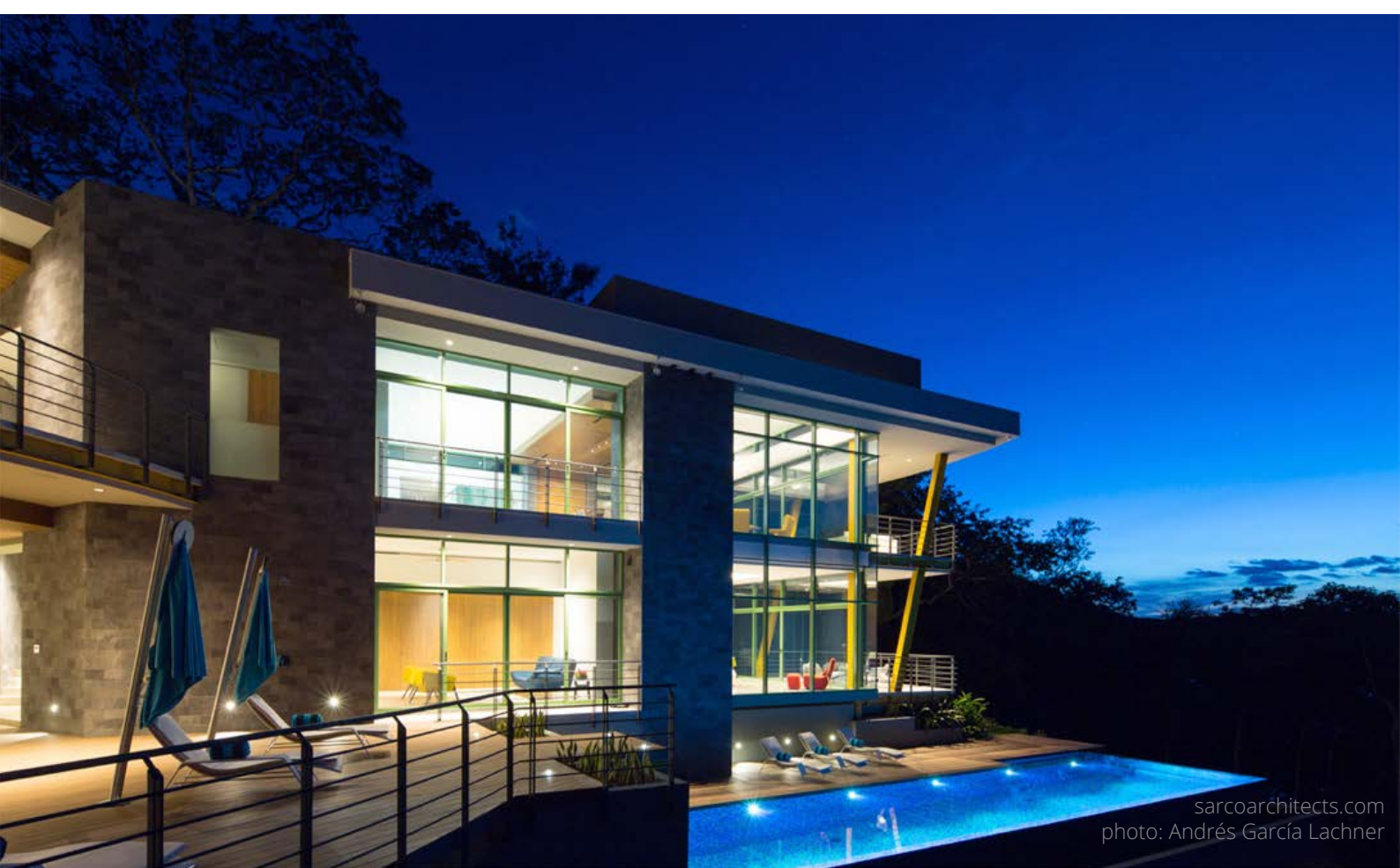
Central & South America Property Awards recognizes Casa Magayon by SARCO Architects Costa Rica

The project was “5-Star, Best Architecture Single Residence Costa Rica 2016-2017” award by the International Property Awards, sponsored by The Telegraph Newspaper, in London, UK.



sarcoarchitects.com
photo: Andrés García Lachner

The International Property Awards are aimed at professionals in residential and commercial properties around the world. Since 1994, they have celebrated the highest levels of success achieved by companies operating in all sectors of the real estate industry. The Americas Property Awards are divided into four geographic regions: Canada, Caribbean, United States, and Central and South America. The prizes are awarded to the most impressive architecture in the region, in various categories such as: high-rise buildings, recreational facilities, shopping centers, public service buildings, office complexes, apartments and residences.



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photo: Andrés García Lachner

The panel of judges consists of approximately 70 professionals in various sectors of the property industry, including Andrew Painting, Director of Operations for the British Property Federation; Peter Bolton King, Global Residential Director of the Royal Institute of Chartered Surveyors (RICS); And Christian Morris, Director and Owner of the architectural firm Yotomo Ltda.

Casa Magayon Interiors



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“It would be impossible to tackle complex projects without a comprehensive tool like ARCHICAD.” Roderick Anderson, CEO & Design Director, SARCO Architects Costa Rica

The implementation of BIM software has had a strategic impact on the company, resulting in significant savings in construction costs, by preventing errors throughout the construction process.

The firm has designed approximately 65-70 projects using ARCHICAD. It is also supported by other software that complements its work, such as Artlantis Render for photo-realistic rendering and Twinmotion for presentation animations.

SARCO Architects Costa Rica strongly recommends the implementation of ARCHICAD for architectural firms. It is a tool that boosts work capacity, increases productivity, improves workflow and guides professional business consolidation.

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SARCO Architects Costa Rica

SARCO Architects Costa Rica is a leading architectural firm dedicated to design and construction, focused mainly on the development of luxury residences for a market of high-level foreign clients; the firm has also carried out several multi-family residential projects. Outstanding clients from multiple locations in the United States, Great Britain, Germany, Austria, Switzerland, Australia, etc. The firm is Headquartered in San Jose, Costa Rica the firm serves the areas of Costa Rica, Panama, Nicaragua and The Caribbean.

About GRAPHISOFT

GRAPHISOFT® ignited the BIM revolution in 1984 with ARCHICAD®, the industry-first BIM software for architects. GRAPHISOFT continues to lead the industry with innovative solutions such as its revolutionary BIMcloud®, the world's first real-time BIM collaboration environment; EcoDesigner™, the world's first fully BIM-integrated "GREEN" design solution; and BIMx®, the world's leading mobile app for BIM visualization. GRAPHISOFT is part of the Nemetschek Group.

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