

Revit takes Leong Architects and team to the cutting edge of design.

Studies in Success

Company: Leong Architects, Inc., Architect of Record. Dominic Leong formerly of Para-Project, Project Designer.

Software on Board: Autodesk® Revit®, Rhinoceros® – Nurbs Modeling for Windows. Consultants assisting with the project also provided AutoCAD® data.

Summary

“The concept of a project always comes out of a conversation both internally and externally with the client. We have our own architectural agenda and the client has their specific needs and desires. Phillip is an amazing person to work with. He has a unique combination of clarity and rigor mixed with a certain ease that allowed us to explore many possibilities within a specific conceptual framework. He was very hands-on but also very open-minded... he’s an ideal collaborator-client.” —*Dominic Leong*

Ideate, Inc. client Leong Architects, Inc. was architect of record for an unconventional renovation project on an extremely fast track: the flagship 3.1 Phillip Lim fashion boutique in West Hollywood, California. The team dedicated to the project used Revit to model the curved pyramid wall textures, construction documents and actual field layout. They would not have been able to design, revise and manage this project in the short timeframe without using Revit.

The project is featured in:

Interior Design Magazine, November 2008 – cover story

Frame, January-February, 2009 – 8 page feature

Los Angeles Times, July 13, 2008 – “World-class designers are changing the geography of L.A.”

About the Architects

Leong Architects is the collaboration of Wayne, Christopher and Dominic Leong with offices in the Napa Valley and New York.

Wayne Leong, Principal, Leong Architects, Inc., Napa Valley, CA

Wayne was educated at Santa Clara University and Massachusetts Institute of Technology where he researched system design and artificial intelligence. His education in engineering, photography and art combined with his experience as a builder form the foundation of his architecture.

Christopher Leong, Partner, Office Leong, New York, NY

Christopher Leong has worked in both California and New York City since 2000. Prior to founding Office Leong, he worked at SHoP Architects and Gluckman Mayner Architects. He graduated from UC Berkeley in 2000 and received his Master’s of Architecture from Princeton in 2006 where he was the recipient of the Princeton Graduate Fellowship. He has been a guest critic at Columbia University, Pratt Institute School of Architecture, and The New Jersey Institute of Technology.

Dominic Leong, Partner, Office Leong, New York, NY

Dominic holds the Master of Science in Advanced Architectural Design from Columbia University’s Graduate School of Planning and Preservation graduating with Honors and a Bachelor of Architecture from Cal-Poly, San Luis Obispo. He was recently a finalist for the MOMA/ PS1 Warm-up Young Architects Programs. In addition, he was awarded by the Young Architects Forum from the Architectural League of New York in 2007. He has taught and lectured at Columbia Graduate School of Architecture Planning and Preservation and Pratt Institute.



“This project required us to create a completely non-conventional space in an existing one.”

The Challenge

“Aside from the typical requirements of a fashion boutique and showroom, we discussed specific ideas with Phillip Lim to formulate an attitude toward the store. Instead of trying to literally translate the sensibility of the clothing, we explored ways to create novel atmospheres in which to discover the clothing. Lightness and texture are obvious issues that interested both us and Phillip. But from an architectural standpoint, we are interested in the directness of a single big move... in this case it was the thick curving wall. The question became how the irreducible element of a curving wall can produce a variety of ambiances. In other words, how to generate maximum effect with minimal means – a conceptual economy of means. In mathematics they would call it “elegance.” This was accomplished both in the curving geometry (which allowed us to introduce the continuous light membrane and eliminate track lighting) and the material strategy to line the wall with different materials. The result is an architecture that both challenges and compliments the clothing rather than mimicking it. This dynamic would also describe how we work with Phillip.” —*Dominic Leong*



The existing space was a once-upon-a-time auto repair shop complete with a rear courtyard. It's a freestanding, single-story, 5,000-square-foot building in a trendy Los Angeles area shopping district. The 3.1 Phillip Lim fashion gallery to occupy the

space would have high visibility on one of West Hollywood's premier shopping streets. The work at hand was on a seven month fast track from design to opening day.

The Solution

The architects needed a complete building information modeling (BIM) system to meet the time and aesthetic demands of the project. As Wayne Leong says, “Somehow Revit is right in between architecture workflow and construction workflow.” Over time, he has become a highly adept Revit user, and saw Revit as his solution.

A complete BIM system, something “right in between architecture workflow and construction workflow.”

“For me, before Revit, I knew the product was around, but it was unfamiliar, uncomfortable,” Leong says. He acknowledges that Ideate, Inc. has been at the forefront of helping users get started and that Ideate “does a great job of providing a network, like through the forums and user groups. It sheds light on the product for people who are getting used to it.”

“Your imagination needs to be free.”

Wayne Leong, Revit user for projects across a wide spectrum of size and complexity, sees himself as an advocate, one who can provide people who are new to the product with inspiration.

Wayne Leong looks at each of his projects, including this one, as a whole, advising, “You don't need or want to be encumbered by the reality of the project when you are conceptualizing. Your imagination needs to be free.”

In this project, the conceptualization inputs were implemented through Rhino 3D images, because as Leong says “It's quick.”

“And then Revit starts to work with the interface in the real world. Once you have a physical place, then you start building the virtual reality,” Leong says. He likes the fact that Revit works well this way. Because it's 4D, time is included, so you can phase the project. As he explains, “You tell Revit what you have that is existing. Then, when you start to work on the design, you tell Revit what aspects are new. You can create views of what's there, including what's demolished. Revit also has the ability to be as precise as you want to be.”

“Then Revit starts to work with the interface in the real world.”

As Wayne Leong says, “Revit gives us the ability to not need a prototype. You mold the model from conceptual to reality, and then you have a document you can use to take into the physical building process.” The other option, according to Leong, would be to do a real world model. “With architecture you have to get it right the first time. You don't want to do things over and over at extreme cost to the client,” he continues, acknowledging,

“This product is way beyond simple CAD drawings. You couldn’t draw the shapes and room spaces any other way. The walls actually move at late stages in the design process.

“If you did it in any other traditional design system you would throw your hands up. It would become a nightmare. If you didn’t have a virtual reality that understood what you were doing and could adjust things as you were working. To a fraction of an inch, you have to tell the contractor where things go so the contractor can know what he is ordering. It is a very fluid process all modeled in the computer.

“The beauty of the system is that you can move back and forth from computer to the field. You are informed all the way as you move between different realities in different phases of the project.

“The building industry is complex and immense. In many instances, one member of a large team does one aspect of a project, one floor. His work gets put together by another person who coordinates with another person. No one person experiences the entire project from concept to execution to final product. This project is different. One person can describe the entire process from conception to finish.”

“When we were modeling the curved pyramid wall textures, the remarkable thing was using the Revit curtain wall system. What Revit gave us was an amazing visual image of how the place would actually look,” Leong adds. “We had a visual model that was really easy to build. It mimicked how the material would behave.

“We wanted curved walls. In Revit, these would usually be a curtain wall, most commonly glass, but Revit doesn’t care what you make them out of. You can create a wall out of anything. Revit can connect each of the two-foot by two-foot panels, show them in place, and then the material starts to behave as it would in the real world.”

The architects also wanted a model accurate enough to create the niches where merchandise would hang. Again, the tolerances were tight.

Wayne Leong especially appreciates Revit precision, explaining, “Where you spend the most time is in intersections. It’s always a challenge where things come together.”

The building for the 3.1 Phillip Lim Los Angeles flagship store was a typical gabled roof building. The ceiling now appears as a depthless artificial sky. “It all started with a Revit layout,” says Leong. “It’s a sheet of PVC, very thin, two layers. It is like a light box turned upside down and put on the ceiling. The tolerances were tight, within an eighth of an inch. We were able to get measurements from Los Angeles to New York to France where the film for the ceiling was cut, and then the product came back to Los Angeles.”

The ceiling is secured by a steel rail. The components, all created apart from each other, fit perfectly. “The builders got consistently accurate information,” Leong says. “That’s how we see the future. The days of building custom in the field are gone. It’s too costly. Everything’s is prebuilt somewhere else. There’s a level of precision we have to have now.”

As for construction documents, Wayne Leong is convinced it would have been impossible to develop a set of documents without Revit. It would have taken too much manpower and the time constraints wouldn’t allow it.

From Leong’s perspective, “The actual field layout has to do with how Revit looks at the coordinate system. In AutoCAD you work in a global coordinate

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“In Revit, you can create a wall out of anything.”



“The program is precise, but it does have a mind of its own.”

“In Revit, when you change one wall, everything changes accordingly.”



system. Revit doesn't. It is sophisticated and flexible. You can establish the origin of the coordinate system. You pick the point. You decide what's zero. In Revit, when you change one wall, everything else changes accordingly.”

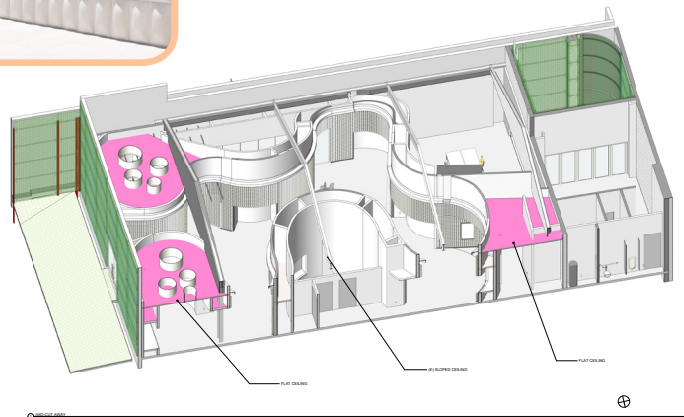
Conclusion

The 3.1 Phillip Lim fashion gallery in West Hollywood, California has captured the attention of the media and shoppers alike. Its street-front façade presents a mystery cloaked in gray convex concrete tiles without a single display window. Only a small stainless steel plaque bearing the 3.1 Phillip Lim signature indicates what might be inside.

The interior also lets shoppers know that something unexpected is likely to be found here. The continuous curving wall is swathed with uniform pyramid-shaped 'spikes.' It is made from 24" x 24" acoustical foam panels painted with coat after coat of white tinted elastomer paint to withstand the retail environment.

Niches for clothing display also had to be incorporated in the design and build, with the same precision tolerances as the ceiling. The original concrete flooring was retained throughout, polished to glistening shine. In the niches and some of the other areas, textures such as bamboo are introduced to balance the natural against the artificial.

The design echoes themes in the sculptures of Richard Serra. Scale plays with perception. The curves evoke the natural world while the contrasting textures add complexity of dimension that rivets the visitor's attention. Wayne Leong needed a complete building information modeling (BIM) system to meet the time and aesthetic demands of the project. He got it, thanks to Revit.



About Ideate, Inc.

Ideate, Inc., a leading U.S. West Coast Autodesk® Value Added Reseller, provides software and hardware, implementation services, training, support, and consulting services for the Architecture, Engineering and Construction (AEC), civil, GIS and multimedia industries. Established in 1992 and headquartered in San Francisco, California, Ideate, Inc. is recognized as an Autodesk® Premier Solutions Provider (PSP) – Building Architecture, Autodesk's highest level of authorization. Employing top architects and structural, mechanical, and civil engineers, Ideate, Inc. provides its clients with the knowledge and technical resources to make the most productive, efficient use of their software and staff so that they can achieve their optimal competitive advantage.

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With a specific focus on Building Information Modeling (BIM), Ideate is also developer of Ideate Explorer for Revit®, the simple, powerful tool that helps Revit users explore, quantify and manage the 10,000+ building elements in a Revit building information model. For complete information or to purchase Ideate Explorer for Revit, visit ideateexplorer.com or email: sales@ideateinc.com or phone toll-free: 888.662.7238.

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