

# shotcrete

A quarterly publication of the  
American Shotcrete Association  
**MAGAZINE**

VOLUME 19, NUMBER 1 • WINTER 2017

[www.shotcrete.org](http://www.shotcrete.org)

# Outstanding Shotcrete Project Awards



american  
shotcrete  
association

ASCA

2016 Honorable Mention

# Ayla Golf Resort Comfort Stations

By Beat Huesler

Looking to the natural dunescapes and mountains of the surrounding desert—an unadorned local architectural heritage and the ancient Bedouin traditions as primary design references—Oppenheim Architecture’s

innovative design for the Ayla Golf Resort Comfort Stations, or on-course rest areas, is intended to achieve consistency with the firm’s concept and technique for the Ayla Golf Academy & Clubhouse design. Both projects are part of an



*Framing the Ayla Golf Comfort Stations*  
Photo credit: Oppenheim Architecture



*Completed Ayla Golf Comfort Station structural framework*  
Photo credit: Oppenheim Architecture



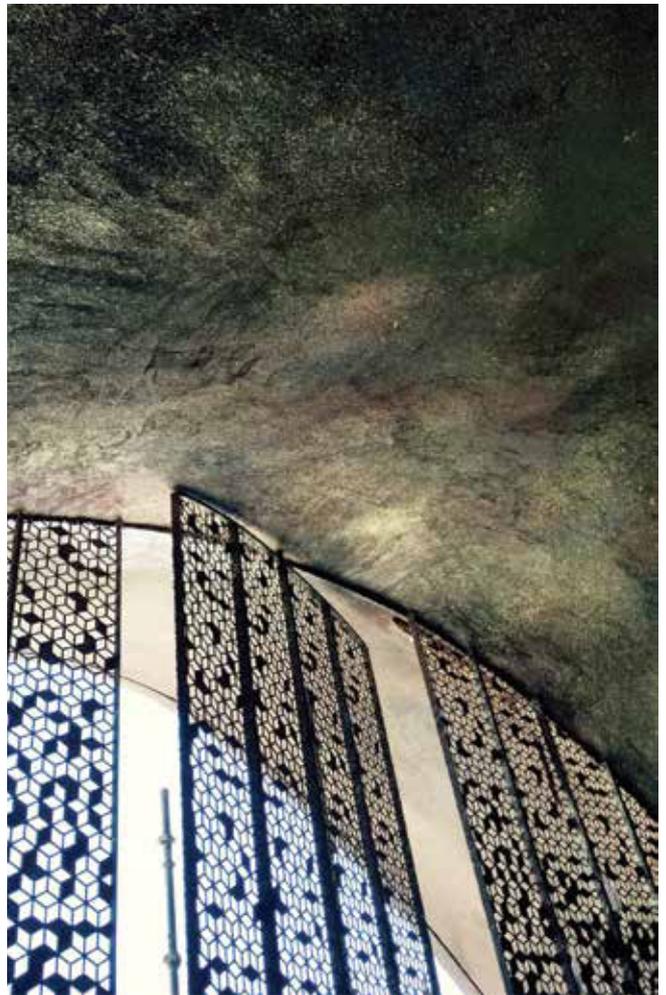
*Ayla Golf Comfort Station shotcrete application*  
Photo credit: Oppenheim Architecture

approximately 17 mile<sup>2</sup> (44 km<sup>2</sup>) leisure development currently under construction in Aqaba, Jordan—the Ayla Golf Resort. The architecture of the 40,000 ft<sup>2</sup> (3700 m<sup>2</sup>) Golf Academy & Clubhouse and accompanying Comfort Stations are sure to become a primary focus and iconic symbol of this highly anticipated mixed-use resort, not to mention the region.

The distinct architectural form of each structure is shaped by a massive concrete shell that precisely drapes over the programmed areas. Once programmatic elements are modeled spatially based on specific client requirements, bringing the shells from Oppenheim’s computer-generated model to the built environment is achieved through a process of individual sectional cuts, which are first built on-site with flexible thin-gauge steel ribbons, then adding reinforcing bars and an outer steel mesh. An adjustable “blanket” mesh is laid over the top, enveloping each independent volume, followed by a layer of insulation. Shotcrete is then applied to both the interior and exterior walls to serve as the final shell finish, achieving the raw, unadorned look that stays true to its context and inspiration.

The Project Owner, Arab Supply & Trading Company, and the Project Team demonstrated an unwavering commitment to the use of local resources in creating these magnificent structures. Native raw materials and additives were incorporated wherever possible, particularly to achieve the desired appearance and texture of the façade. Additionally, the shotcrete contractor, Switzerland-based Greuter AG, recruited and trained local Bedouin laborers on site at the Comfort Stations, with the objective of employing them through completion of the Academy and Clubhouse.

The overall development will eventually encompass residential, hotel, and commercial space, all centered around an 18-hole, Greg Norman-designed, USPG tournament-rated



*Completed Ayla Golf Comfort Station interior detail*  
Photo credit: Oppenheim Architecture



*Completed Ayla Golf Comfort Station*  
Photo credit: Oppenheim Architecture

golf course (Jordan's first). Once completed, the Clubhouse will feature retail, dining, bar/lounge, banquet, fitness, and spa components; the Golf Academy will include retail, dining, and indoor/outdoor swing analysis studio components; and the two on-course Comfort Stations will include a snack/refreshment kiosk and restroom facilities.

## ABOUT THE ARCHITECT/ENGINEER

Oppenheim Architecture (OA) is a full-service architecture, interior design, and planning firm with offices in Miami, FL; New York, NY; and Basel, Switzerland. Oppenheim's design strategy is to extract the contextual essence from each program, creating an experience that is dramatic and powerful, yet pragmatic and constructible. The firm's award-winning work, throughout 25 countries worldwide, is based on both a physical and spiritual contextual sensitivity, supported by evocative and economic design solutions. The firm leverages its green design expertise to minimize the impact on the environment and maximize the end-user experience and overall project performance. It is Oppenheim Architecture's intent to create landmark architecture that is highly sensitive and responsive to its context and climate.



**Beat Huesler**, Director of European Operations for Oppenheim Architecture, is a licensed architect with over 26 years of industry experience. He developed his professional training at firms in New York, NY, and Basel, Switzerland, and his extensive experience in the modern and sensitive intervention of historic structures won him the Gutes Bauen in Kanton Baselstadt and Baselland Award 2002. Huesler is the European partner of Chad Oppenheim who, together in 2009, founded Oppenheim Architecture Europe based in Basel/Muttenz, Switzerland. Huesler's relationship with Oppenheim extends back to their joint studies at Cornell University in New York, where Huesler received his Bachelors and Masters of Architecture. Huesler has coordinated many Oppenheim Architecture project efforts, including the Ayla Golf Academy & Clubhouse and Comfort Stations, which recently received the Leisure Led Development Future Projects category award at World Architecture Festival (2016) in Berlin, Germany.

## HONORABLE MENTION

*Project Name*  
**Ayla Golf Resort Comfort Stations**

*Project Location*  
**Aqaba, Jordan**

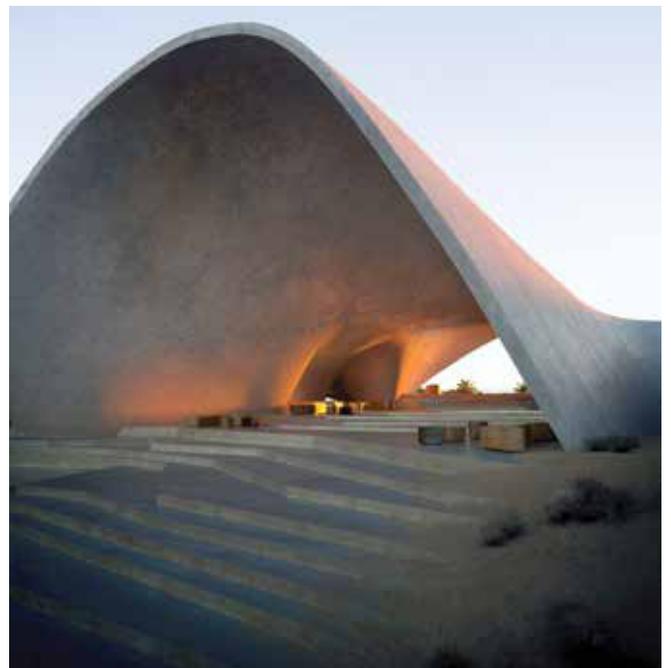
*Shotcrete Contractor*  
**Greuter AG – Zurich, Switzerland**

*General Contractor*  
**NINO Constructional Engineers & Contractors – Amman, Jordan**

*Architect/Engineer*  
**Oppenheim Architecture**

*Material Supplier/Manufacturer*  
**Arab Supply & Trading Company (ASTRA)**

*Project Owner*  
**Arab Supply & Trading Company (ASTRA)**



Ayla Golf Academy & Clubhouse Entrance (Rendering credit: MIF)



Ayla Golf Academy & Clubhouse (Rendering credit: Luxigon)