



PROJECT OVERVIEW

Maravilla Los Cabos is an oceanfront private residential community and club on the sparkling waters of the Sea of Cortez between San Jose del Cabo and Cabo San Lucas in southern Baja, Mexico, on the site of the former Hotel Twin Dolphin. Owner-developer Ohana Real Estate Investors (OREI) broke ground in 2015 on the 1,400-acre property.

The 122-guestroom resort and 52 whole-ownership residences provide world-class amenities while being sensitive to the surrounding environment. Built environments are positioned to fold seamlessly into the natural landscape, smart systems and natural cooling techniques work to conserve energy, and an onsite plant nursery — established prior to grading the entire site — has preserved more than 40,000 plants on the property.

TEAM EXPERIENCE

Shortly after construction was completed on two building areas, facility managers started noticing moisture infiltrations occurring, especially at rooftop terrace levels. OREI and the general contractor realized this might be the start of significant problems and needed to determine the cause.

Addison, Texas-based building envelope consultants Arnold & Associates, Inc., (AAI) was retained to assess the roofing and waterproofing systems. After a comprehensive evaluation, AAI determined the existing waterproofing membranes failed due to several factors, including membrane breakdown and rigidity from using improper material, membranes installed over dead-level structural components with no provision for positive drainage slope, inadequately detailed penetration and drainage connections at the existing waterproofing line, and a lack of proper drainage that was tied to non-existent slope coupled with improper drain bodies and connections at the terraces. Located on the Sea of Cortez, this development is in a very humid, hot climate. Additionally, many of the buildings' concrete surfaces and tiled terrace decks are next to pools and submerged in water for long periods of time. Because it was not feasible for these existing pool and spa areas to be demolished and rebuilt, it was critical to find a waterproofing solution that could terminate the adjacent remaining waterproofing system. Finding a waterproofing specifier with experience in these challenging transitions was essential.



Photo 1



Photo 2



Photo 3



Photo 4

PROBLEMS / SOLUTIONS

Lyle J. Shive, AAI senior consultant and project manager for Maravilla Los Cabos turned to California-based Polycoat Products, a company with extensive chemical-based coating experience. AAI previously worked with the Polycoat Products team to successfully coat commercial projects throughout North America. Shive knew that because of the company's manufacturing expertise, rigorous testing of materials during the manufacturing process, industry knowledge and myriad waterproofing products they would be able to supply the right product for the job, stop the leak problems and work on the new construction developments through to completion.

Shive reached out to Anthony Perez, Polycoat Products regional manager, to bring him up to speed, discuss the project scope, which includes approximately 200,000 square feet of waterproofing, and determine the best solutions.

Perez flew to Baja, Mexico and met with Shive, the general contractor, and OREI representatives. After walking through the project, Perez and Shive recommended using PC IM-129, 120 dry mils fully reinforced, coupled with PC-FMB vapor barrier and topped with PC-Drain HD ¼ dimpled drainage mat.

AAI determined the need to remove and replace the existing waterproofing membrane with a new membrane. This required completely removing all finish tile surfaces, setting beds, old waterproofing membranes, drain bodies, and related materials to prepare the surfaces for a new waterproofing system with new drainage components. Installation of bi-level drains were needed for all split-slab conditions of the high-end exterior floor finish designs to provide long-term performance and protection.

During the new installation work, additional deficient conditions were identified within the rooftop planters. This required redesign and relocation of some plumbing and electrical components, and modifications to the planters to properly enclose multiple exhaust ductwork. A raised floor slab within the planters was added to provide positive drainage, proper drain body terminations and detailing, and to allow for the new waterproofing membrane system to be installed continuously to the planters' interior surfaces. This corrected several problems that previously contributed to the chronic water infiltration issues.

"When Anthony explained the coating system's properties, I knew this submersible, seamless, monolithic coating would be durable and perform under these harsh conditions," commented Shive.

PRODUCTS USED

- PC IM-129
- PC-IM-120

RESULTS

Polycoat Products believes in supporting local labor and the communities in which they're working. Over the past 18 months, two Baja-based waterproofing companies, Imper Baja Sur and Keffer, have addressed the problems on the first two building areas and have been installing the waterproofing system throughout the development's other buildings. This work is scheduled to last another two years. The project is so large and so many workers are needed, two companies were subcontracted. Polycoat Products bilingual personnel fluently communicate with the work crews during training and follow-up site reviews, which has been critical to the project's success.



Photo 5



Photo 6