PARKCAD 2 AND BECA - PARTNERS IN PROJECTS

Tessa Irving, a civil engineer from Beca Infrastructure Ltd. New Zealand, had this to say about - ParkCAD 2 and how the software helped overcome their design challenges.

Beca has had ParkCAD 2 up and running for the last two weeks and already we have used it on three projects. We purchased ParkCAD 2 to design a series of linked multi-storey car park buildings with a total of 2,500 spaces for an airport project. With a public transportation forecourt on the ground floor and four levels for car parking above, these buildings have been challenging to design efficiently because we had to provide for bus turning movements and separate entrances and exits for the different vehicle types.

Using ParkCAD 2, we have been able to optimize the size of these buildings to provide a cost-effective design, in terms of land required and column spacing. As with all projects, the exact requirements have changed several times so far, and it has been a straightforward process to redesign the parking layout using ParkCAD 2. However, one of these buildings was designed on a circular grid which presented its own set of unique problems. But by using the 'row from elements' function, we were able to generate a parking lot in a very short amount of time.

Additionally, we have designed a smaller 320-park carpark as part of the temporary works for an inner-city motorway realignment. As we were obliged to provide an exact number of parks to meet resource consent requirements, the stall-numbering tool in ParkCAD 2 was very useful, not only to come up with an accurate design, but to also show the client and (city) council that our proposal was compliant. Being able to edit the New Zealand Standard was essential for this job, as the local council has their own standard parking dimensions that were specified in the project requirements.

About Beca:
Beca is one of Asia Pacific's largest engineering consultancies with over 1,500 employees located in 13 countries worldwide.

FORT PARKING: SOFTWARE HELPS DEVELOP CITY OF THE FUTURE

Bonifacio Center is Metro Manila's newest business district with an exciting, vibrant and convenient urban core. The Fort Bonifacio project is a world-class city of the future, combining the best elements in urban design, site planning, zoning, density management, pedestrian systems, infrastructure and aesthetic guidelines.

Led by Ayala Land Inc. (ALI) the team included master planners, ROMA design group of San Francisco and Parson Brinckerhoff Philippines Inc. as traffic consultants. The result was Fort Bonifacio's award-winning master plan. One of the tools used by the team was ParkCAD, a CAD program developed by Transoft Solutions Inc. The software allowed Fort Bonifacio designers to generate conceptual parking lot designs and quickly test “what-if” scenarios.

Considering the large geographic scope of this project, designers felt that the provision of ample parking represented a significant investment. Salvador Tan (Arch., AICP, EnP) of Ayala Land, used ParkCAD early in the planning process to determine public parking requirements. Tan works in ALI's Planning Department and wears multiple hats as architect, urban planner and transportation planner.

One particularly challenging aspect of the parking layout came while estimating off-street surface public parking facilities in the unique crescent-shaped lots. These lots were a result of the original overall design, which featured large concentric circles, with parking lots ranging in size between 200 to 1,000 stalls. “We used ParkCAD extensively for generating parking capacity estimates in these crescent-shaped lots,” said Tan “Without the use of ParkCAD, it would have been difficult and time consuming to layout these parking lots.”