



Sunshine Coast University Private Hospital

We all take using a mobile phone for granted but like many commodity services there is a back-story. In this case the story is about the complexity of technology to make sure that phone users have uninterrupted coverage. Mobile communications involves a full array of interconnecting items. Switches, software, billing, cables and connection to the world's vast telecommunications network. It would seem that putting up the aerial, the antennae on a building would be the easy part in an otherwise intricate arrangement.

Sometimes the simplest part of the service can be the trickiest to install. And so it was the case when Comserv set out to install a communications antenna on the newly completed Sunshine Coast University Private Hospital near Caloundra in Queensland.

The Challenge

The antennae location was at the back of a 'U' shaped building. The 'U' faces the road but the antennae location was too far away from the road for a Force Travel Tower to reach from the stable surface of the road way. The only way to reach the antennae location was to position the Travel Tower inside the 'U' which forms the hospital courtyard. And there was no direct driveway into the setup pad.

The Force Solution

Force takes great pride in supplying elevated work platforms every day on a wide variety of jobs across projects big and small in Australia. But when it comes to complex projects with complicated solutions a whole team of Force experts becomes involved.

Planning:

This was no straightforward positioning of a large piece of equipment. This would require a complicated lift involving a large 200 tonne crane, geo technic engineers, lifting plans, manufacturing specifications and a briefing based primarily on safety.

The job itself of erecting and fastening the aerials was likely to be a 2 to 3 hour job but the planning was a 2 to 3 month process.

First there was an engineer's evaluation of the load bearing capability of the pad inside the children's hospital. The uneven surface of both grass and concrete, so the evaluation and eventual solution was complicated. Overall load bearing together with surface load spread were taken into account.



Force is the leading provider of safe, reliable, working at height solutions

Force experts then collaborated on the best machine type to satisfy both the engineers guidelines and the elevation requirements. The Force range of equipment meant that no compromise was contemplated. The best work platform was somewhere in the Force product list. Several obvious choices like large knuckle booms were discounted early given their weight and a truck mounted travel tower quickly became the considered option. But truck mounted travel towers, while lighter, are more bulky than some of the straight and knuckle booms in the Force fleet.

The Travel Tower's manufacturer was involved in advising on exactly the correct lifting method, the right lifting points and the weight distribution.

A sling plan and lifting frame were designed and manufactured. Counter-intuitively an even weight distribution around the lifting points produced an angled truck on the lift with the cabin end angling closer to the ground. While slightly ungainly in appearance the engineered approach was the only concern.

Determining the crane specification was made easier as the site already had available a 210 tonne crane completing other parts of the construction project. This crane was easily able to fulfil the engineer's requirements and was pressed into service.

The lifting plan was next - setting out precisely the order of events on the day, determining the roles of all concerned and planning the sequence of events was vital in ensuring a safe and successful lift. And like the rest of the plan attention to detail was vital.

Carrying out the plan:

With traffic management lined up, council approvals in hand all the parties gathered in the road on the morning of the lift the final safety was conducted.

And unsurprisingly the lift proceeded smoothly and to plan. Following the on-site safety briefing the truck was attached, the lifting frame was carefully

positioned, the dog-man's guideline was attached and the all clear was sounded.

The crane carefully took up the weight and held the front heavy truck a metre off the ground to test all was in order.

Doctors and nurses lined the windows of the multi-storeyed hospital to witness the unusual event of a truck passing by outside several stories high. Even for a hospital this was an unusual operation.

With careful placing, swinging the truck into position, setting up the out riggers and raising the boom went to plan. And after only a small number of hours the truck was ready to be lifted out again. Job done safely.

With careful planning involving a number of experts Force supplied a solution that helped the hospital, local residents and Comserv have state of the art communications capability.

"The job was a complex one, which required months of planning. By collaborating with Force we were able to identify a solution which meant the project could be completed safely and on time."

– Ben Zunker, Comserv



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