

Hydro Mobile

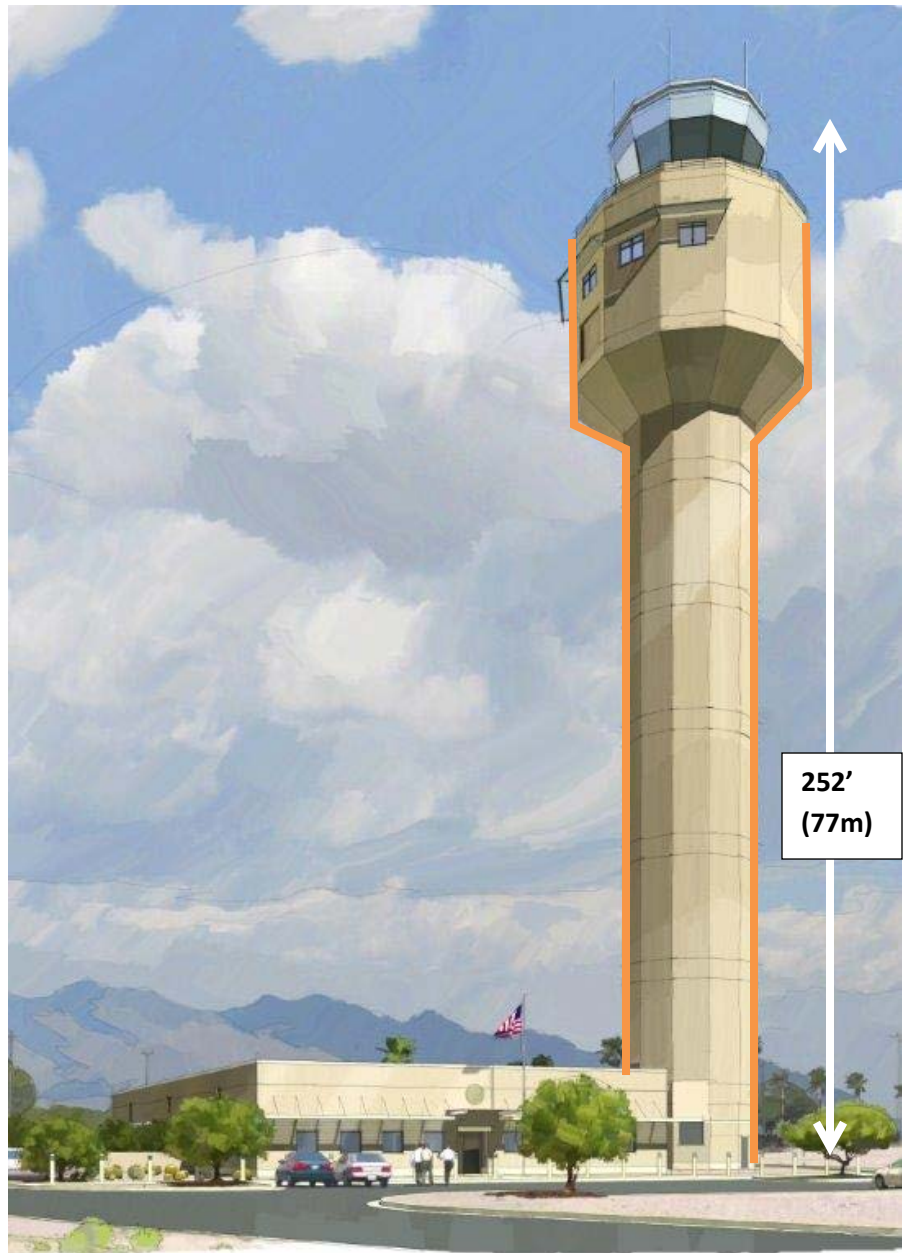
Project: New FAA Control Tower, Tucson Airport Az.

The Tucson Airport control tower is, at 55 years old, the second oldest control tower in the United States. The FAA recently appointed Hensel Phelps to manage a \$42m project to build a new tower.

The new tower will be 252' (77m) and is designed with a core made up of Pre-cast concrete and structural steel panels.

The main challenges in the project were:

- Access was required INSIDE the tower to build the supporting structure.
- The mast climbers needed to be used externally on the main tower but also had to be able to access the façade of the control room at the top which is 30' (9m) wider than the main tower, as shown by the orange line.
- At the end of the construction of the tower the mast climbers which were being used for the construction of the inside of tower had to be removed through a standard door opening.
- Multi trades required to use the equipment, and capacities were required to be sufficient for concrete work.
- The mast climbers had to be set up 16' away from the façade of the tower so they would pass the wider control room at the top.
- The units had to be built up progressively along with the control tower so as the pre-cast tower panels were attached, the units couldn't be anchored to the structure until the pre-cast panels were secured and grouted.

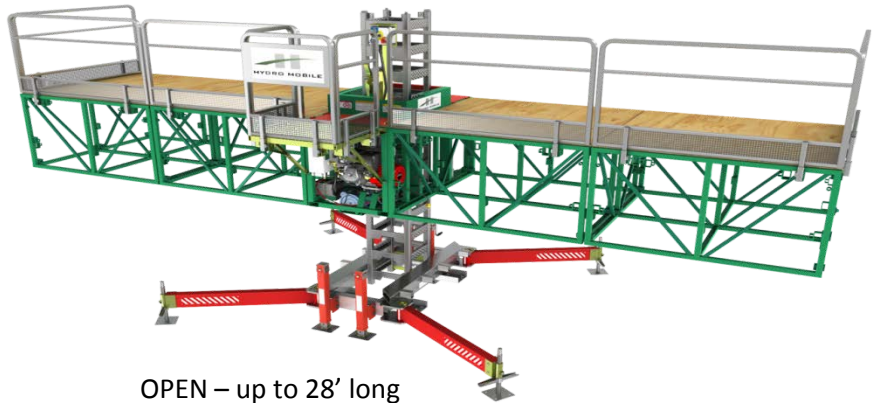


Randy Tuinder, Hydro Mobile's Denver branch manager spent many hours analyzing the best solution and eventually a plan of action was decided:

1. Hydro Mobile P Series units would be used on the inside construction because when the tower is complete they can be easily dismantled, and the unit folds up into a shape that will allow it to pass through a standard door at the base of the tower.



CLOSED – can get through a standard doorway



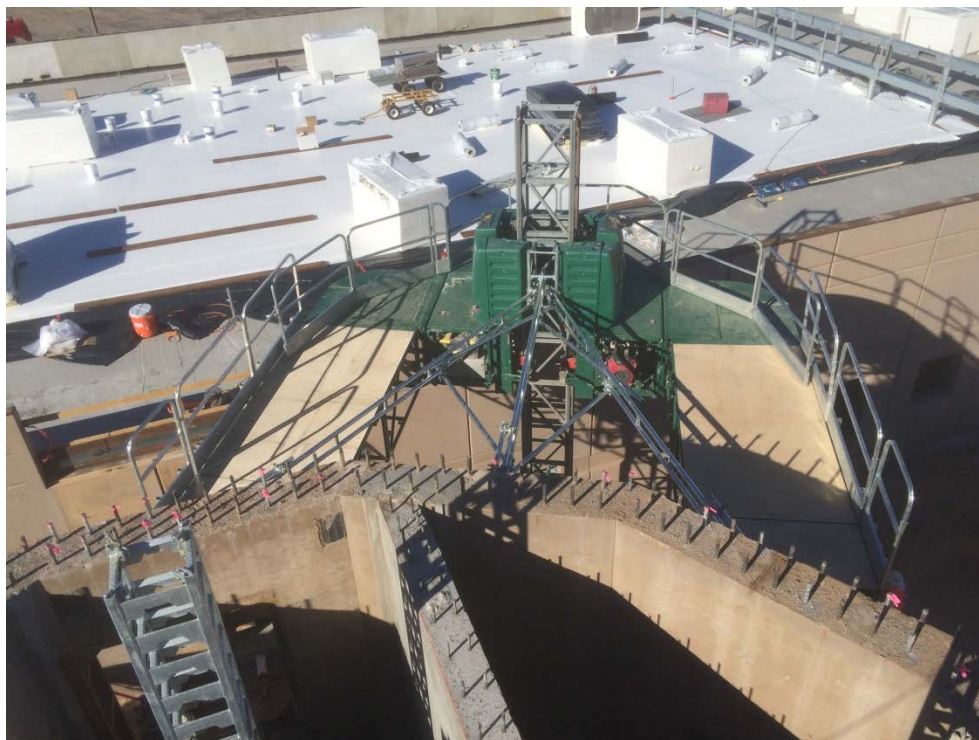
OPEN – up to 28' long

2. The units would be attached to the tower 16' away from the vertical surface to let them pass the wider control tower above, this would necessitate specially designed anchoring systems.
3. Special mast climber platforms would be constructed to get access to the tower façade for workers, and these platforms would be removed once at the control tower.
4. The units and the control tower building would be constructed simultaneously, one level at a time.
5. Special consideration would also be necessary for the 'internal' units with regard to confined space working and task lighting.

INSTALLATION



SPECIAL 16' TIE-BACKS WERE DESIGNED TO ATTACH TO THE TOWER FAÇADE



A VIEW OF THE TOWER WITH ONE ON THE MASTS FROM THE INTERNAL UNITS SHOWING



PLAN VIEW SHOWING THE MASTS OF THE THREE INTERNAL UNITS

FULL CONSTRUCTION SET-UP SHOWING FOR EXTERNAL AND THREE INTERNAL UNITS

