

## REINFORCED CONCRETE COUNTERFLOW COOLING TOWER



*Recommendation for all Reinforced Concrete Structural design shall provide nominal 2" (51mm) cover over reinforced steel per ACI 318, and for 5000 psi (35 MPa) compressive strength at 28 days. Reinforcing bars shall be deformed and shall comply with ASTM A615 Grade 60 or equivalent. All concrete shall use Type II Portland Cement and shall be air entrained. Cement mix density shall be 390kg/m<sup>3</sup> of concrete. The use of flyash or curing agents shall be as approved by the Owner / Local Authority. Higher sulfate levels may dictate Type IV, and brackish water may require condensed silica fume.*



*Transverse and Longitudinal column spacing shall not exceed 40 feet (12190mm). Structural Support Beams may be cast-in-place or precast. Precast, if used, shall be rest on neoprene bearing pads to avoid abrasion and localized stresses. Pre-stressed members shall not be used in wetted area of the tower. Where pre-stressed members are used, tendon anchorage protection shall be provided. Torch Cutting of pre-stressed tendons at the concrete face will not be allowed. Whether pre-stressed or cast-in-place, the fan deck shall act as a working platform for operation and maintenance personnel. It shall have a broom finish for skid resistance.*



*Access to the plenum chamber and fill/distribution area is provided by one 30" X 30" entrance hatch per cell on the fan deck with a ladder extending down to the top of the fill. A local platform is installed directly under the deck access hatch at drift eliminator level to provide a viewing access for the plenum chamber, and down to the spray system and top of fill area.*