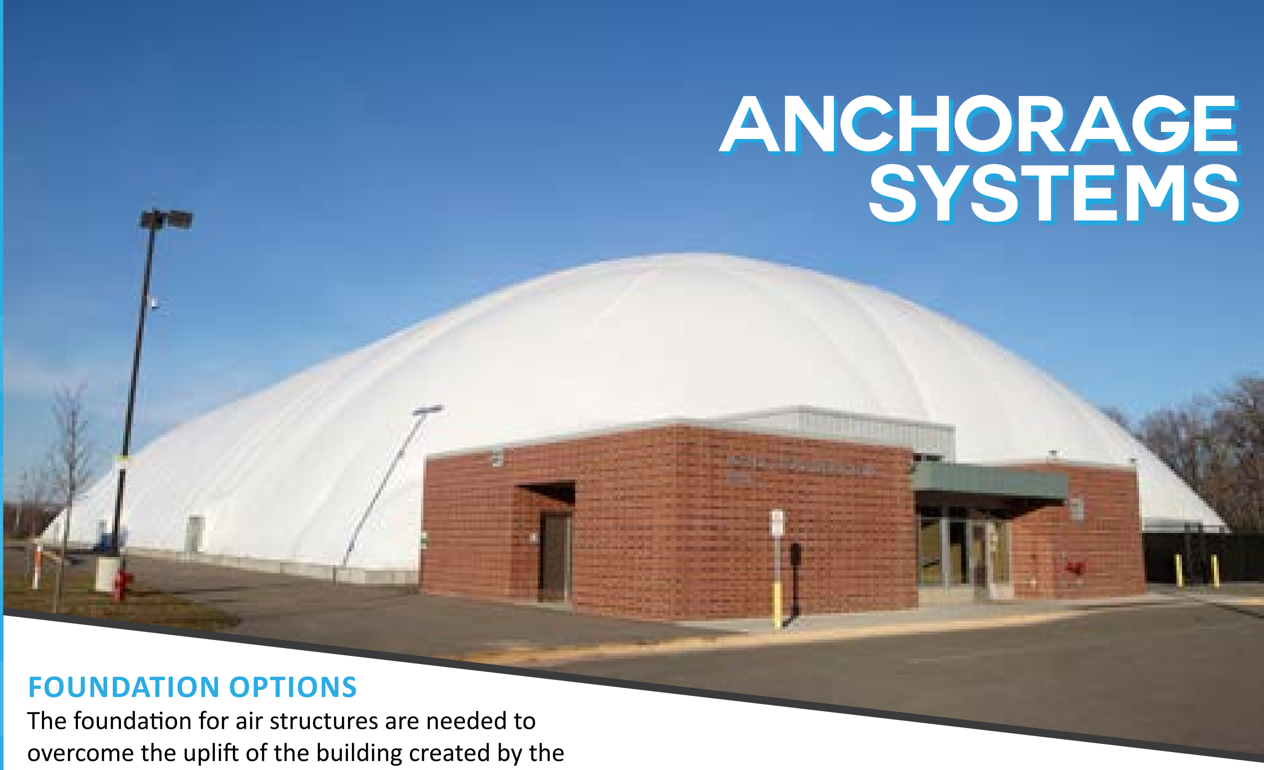
ANCHORAGE
ANCHORAGE SYSTEMS



ANCHORAGE SYSTEMS

FOUNDATION OPTIONS

The foundation for air structures are needed to overcome the uplift of the building created by the building's internal air pressure. Usually, the foundation is a continuous concrete grade beam. The grade beam includes imbedded anchors to tie down the cable grid and fabric. Reinforcement within the grade beam helps distribute the point anchor loads throughout the beam.

Sealing the bottom edge of the fabric envelope to the grade beam is done with either a continuous steel angle on top of the beam, or a specialized aluminum extrusion which must be imbedded into the grade beam during its pour.

Perimeter structure anchorage can be done in a variety of ways, but the standard method is to use j-rods imbedded into the grade beam, leaving about 2 ½" of exposed thread. The perimeter steel angle or cable clips are bolted down to the j-rods after the fabric and cables have been rolled out.

FABRIC CONNECTION OPTIONS

The most common types of fabric connections are aluminum extrusion "channel," continuous clamp steel angle and the catenary system.

ALUMINUM EXTRUSION "CHANNEL" ANCHORAGE:

A continuous concrete grade beam, designed by Arizon, with an imbedded aluminum channel to anchor and seal the building envelope.

STEEL ANGLE SYSTEM:

A continuous concrete grade beam, designed by Arizon, with anchor rods extended above the beam for a structural steel angle to anchor and seal the building envelope to the grade beam.

CATENARY SYSTEM:

A cable-imbedded catenary system along the base of the envelope, if specified, is anchored to a grade beam or other earth anchor system. The air structure will include an exterior flap to cover the catenaries and an interior flap for use in sealing to the ground in order to maintain building pressure.

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