

The Challenge

- Existing roof system on one of our client's buildings was at the **end of its service life** and beginning to have numerous roof leaks.
- IRSC was contacted to provide evaluation, design, bidding, project management, and quality compliance observation services on a building at their Deerfield, IL Campus.

Diagnosis and Solution

- The 40,000 square foot building has a **unique cable supported roof structure**. Two concrete-filled steel tube columns with 98 structural cables and turnbuckle connections provide support of the 6" thick, long-span metal roof deck.
- The roof evaluation **provided the owner with several design solutions** to consider. Once the desired design solution was selected, IRSC designed a new 20-year thermoplastic roof system with a pre-engineered metal roof edge system. Custom detailing was also required at all of the turn-buckle support locations.

Results

- By providing a roof evaluation prior to design, the owner was able to consider a roof recovery design solution. This also provided a long-term design solution with approximately a 35% cost savings over a complete removal and replacement option.
- This option had a construction cost of approximately \$450,000 compared to the estimated cost of \$700,000 for a complete replacement. **This represented a cost savings of approximately \$250,000 to the owner.**

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