TMI Case Study No. 13027

Always looking to get into “communities that are underserved in terms of jobs and access to fresh, afford food,” Senior Director of Community Affairs for Walmart Steve Restivo looked to open its first grocery store in LA County. Walmart signed a lease to open a store at Cesar Chavez and Grand Ave in Chinatown. This 33,000 sq. ft. space occupies the ground floor of the Grand Plaza, a senior housing complex. Walmart liked the opportunity to revive a vacant property and hoped to provide an “economic boost” to the LA County area that will complement existing businesses.

Walmart faced a few challenges with the cooling system first installed. The original chiller was set on the roof and would have been too loud and left condensate on the senior housing residents’ balconies. One solution considered placing the chiller next to the store at ground level. However, the noise level would still have been too loud for the senior housing complex. Walmart contracted with TMI Climate Solutions to resolve these issues. TMI, being a custom solution company, developed the perfect solution—an 115 ton Air Cooled Chiller.
TMI designed the unit to be low sound and low exhaust, fitting into a parking space in the parking garage and containing special duct and fan system to serve the store. Providing energy efficiency and cost savings, our variable capacity unit was achieved by using three scroll compressors with VFDs (Variable Frequency Drive). With our design, capacity control was from 35-100% per circuit, or approximately 12% of total capacity. This equated to cost reductions while allowing the unit to fully load during peak cooling hours and unload during the slower times. TMI also used small, quiet, direct drive vertical airflow fans with premium efficiency motors.

With six condensing fans and three compressors, TMI kept the noise well below that of our competitors. Our competitor’s typical air cooled chiller sound of 78 dBA @ 10 feet did not compare to the TMI unit of 43 dBA @ 10 feet. This unit for Walmart maximized performance and capacity within a small footprint.

Building anything always has its challenges. For Walmart, their original chiller system failed to serve them properly. Partnering with TMI Climate Solutions to resolve this issue, Walmart received a custom unit which met all of their needs and those of the senior housing complex above the store. Doing what TMI does best, fulfilling our customers unique needs, TMI Climate Solutions was delighted to be called on by Walmart to help achieve their goals.