

Important Cost Factors to Consider for a Metal Cold Storage Warehouse

What You Should Know When Building

Society has long demonized cold storage warehouses. Pop culture depicts them as perfect grounds for mob gunplay, torture, and good, old-fashioned slasher movies — but the truth is far from such exaggerated imagery. The fact of the matter is, we rely on cold storage every day to keep our food refrigerated and safe to consume.

The supply chain for perishable goods is an ever-changing landscape due to increased demand and competition. But some things, such as the need for cold storage warehousing, never change. In fact, in recent years, [CBRE](#) projects that demand for cold storage in the US will rise by 100 million square feet within the next five years.

Anyone dealing with perishable goods knows the importance of well-maintained, air-conditioned storage. They're also familiar with how expensive it can be. Warehouse construction costs come loaded with various mitigating factors that will increase your perceived budget in ways you may not have anticipated.

Thankfully, with over 20 years of experience in the industry and an A+ rating with the BBB, [Brand Name] is here to help you through the hassles of constructing a cold storage steel warehouse.

Costs to Consider

As mentioned, one should be aware of the plethora of cost concerns when building a cold storage steel warehouse. They're all important and can change on a dime depending on your location and budget. You should know going in that every factor affects the structure's overall performance, and any decisions made should reflect your needs.

Size and Space

You need to know what you're going to be working with when planning a cold storage warehouse. The best way to think about space is to plan ahead — how much space will you need in five years? Ten?

Most critical to determining your size is what return you can expect on investment. This will vary depending on what you're storing, but you will want to maximize your return in any way possible.

Once you decide upon a suitably sized space and what kind of cooling unit you'd house, the next step would be to plot out your access. A storage space is of no use if you can't easily access the items you need to move and store — thankfully, planning for this can be cost-efficient. You'd be surprised how much minimizing the amount of time it takes to get around your warehouse saves you in the long run.

Food Quality

It should go without saying that the food stored in your cold storage warehouse should be of the highest quality. Most of that is taken care of in the farming end, but location and transportation can also affect food quality. Placing your site on or near transportation lines would only further ensure the best food comes out of your warehouse.

Energy Consumption

It should not come as a surprise that running a cold storage steel warehouse can rake up thousands in energy costs within just a few months. You can mitigate this by installing under-floor heating systems, providing ample insulation, and using the best energy-efficient LED lights.

Refrigeration

Refrigeration consists of four central units – a condenser, a compressor evaporator, a variable frequency drive, and a motor. This is likely ultimately going to be a pricier investment, but it will help preserve your food better in the long run.

Refrigeration Controls

It's recommended you get automated refrigeration controls to increase efficiency levels and get the most out of your energy consumption. Engineers provide data management, as well as trending and real-time reports. If any changes are necessary, they can be completed in ample time to ensure you're running at the highest efficiency possible.

Electrical Utilities

You don't want to get caught with sudden power loss, which can hit you on all fronts financially. This is why you want all your electrical design to include the correct operating voltages, with a reliable power supply and backup generator. It's also wise to have easy access to the structure's electrical distribution center should anything occur.

Roofing and Insulation

We mentioned how appropriate insulation could save you on power costs, but properly sealed panels will save you a bundle as well. The building's roof and walls should also be adequately thick and coated with reflective materials to deflect the sun's harmful rays.

Suspended Ceilings

Setting up suspended ceilings at strategic areas near drainage pipes can efficiently remove water buildup, but it's also essential to ensure the material is strong enough to bear it.

Structural Supports

You can design your structures to not interrupt daily operational activities, with no columns blocking access.

Airflow

Installing evaporators at crucial places within the steel warehouse will help reduce snow and ice formation. These locations can grow to be quite chilly, so install roller doors in areas where employees are actively working.

Flooring Systems

The floor of a steel cold storage warehouse should be concrete and free of cracks. Vapor barriers may be needed to maintain your insulation over the long term.

Amenities

Let it never be forgotten that this is not just an industry of food, but also one of people working on shipping, house, and storing our everyday products. They should have access to the best amenities a cold storage warehouse can offer.

Beyond Construction: Costs That Factor in Running a Cold Storage Warehouse

There are costs beyond just building that you'll likely only start to see the effects of when it's too late. To ensure you don't get caught off guard, [Brand Name] has compiled a list of factors to consider when operating a cold storage steel warehouse.

Location, Location, Location

The purpose of your warehouse should determine its location. Surrounding infrastructure is one of the most important factors to keep in mind when choosing a prospective site.

You factor the rental rate of a storage facility by square footage, and we recommend checking www.loopnet.com for real-time cost updates. Other factors can relate to location, such as regulatory requirements and logistics. As we've mentioned, it's wise to keep your warehouse near direct transportation ways. We recommend checking with an RSMeans database can also help you find the best construction costs estimates.

Utilization

The size of your warehouse will depend on what you're storing, so you should keep this in mind when mapping out your structure. You can use your space poorly, but thankfully you can also

maximize its potential. It's when you find yourself taking the extra ten minutes to navigate your warehouse that you'll understand the benefits of smart planning.

Freight

Once again, transportation is one of the most important factors to consider when deciding on a location. For instance, if most of your shipping is by air, it might be ideal to anchor your storage warehouse near a large airport hub.

Customizations

Your warehouse should be somewhat customizable. Commonly, this involves tilt-up construction because it's easier to build the required panels with local ready-mix instead of outsourced fabricated steel.

Local Codes and Permits

It can be easy to lose track of costs that don't factor directly into construction and operation, like the local zoning laws and necessary permits. Be sure to do the proper research when creating an estimate for your budget.

Site Preparation

Prepping your site before building will save you in costs that otherwise might sneak up on you. This will also help make the construction phase of the project much more manageable.

Special Considerations or Certifications

Depending on your location, you will need to earn specific certifications to run your metal storage warehouse. Be sure and check all that may apply.

HVAC System

An anhydrous ammonia unit produces cold air. Any costs that come with refrigeration should be taken into account to help you build most effectively.

Insulation

Apart from the HVAC, cold storage are maintained with thick, strong insulation. Make sure your entire warehouse is sealed tightly to forego any spoiled food costs or energy waste.

Power Supply and Backup

Cold storage facilities naturally use a lot of power. Most of this is spent on refrigeration and lighting, though other costs like roller doors, security monitors, and other amenities will factor in as well.

Energy Saving Elements

You're going to have to spend a little to save a lot in the long run, as energy-saving elements such as LED lighting and automated mechanical systems tend to be more expensive. When you see the savings these efficient items can provide, you won't regret it.

Is A Cold Storage Warehouse Right For Me?

As you can see, there's a lot to consider when financing a cold storage steel warehouse. If you pay special attention to each need, your warehouse will be state-of-the-art.

[Brand Name] is here to walk with you through the entire process. With over 20 years in the business, we know the ins and outs of warehouse construction. Contact us today and see why we're the perfect pick for you!