# **Everest Cold Storage**

Montreal, Quebec, Canada

Opened April 3rd, 2009







## **Everest Cold Storage Facility**



- 4.5 million cubic feet of temperature-controlled space at -20 $^{\circ}$ C
- •Refrigerated loading dock
- •15,000 pallet positions
- •14 dock doors
- •Single deep racking
- •Linde man-up lift equipment
- •Cross dock
- •Canadian Food Inspection Agency approved
- •HACCP approved
- •Video surveillance system
- •24 hour service









#### **Cold Storage Facility comprised of four main areas:**

- 1. Freezer
- 2. Refrigerated loading dock
- 3. Dock Office Building
- 4. Engine Room







# **STRUCTURE**





- •Always cold structure meaning it is within the refrigerated space
- •Reduces problems arising from cold bridging













## **STRUCTURE**

- •Structure consists of network of extruded steel columns, girders and open web joists supporting the galvanized metal deck
- •All freezer columns sit on hardwood blocks (to prevent cold bridging) and are anchored to the concrete piers.

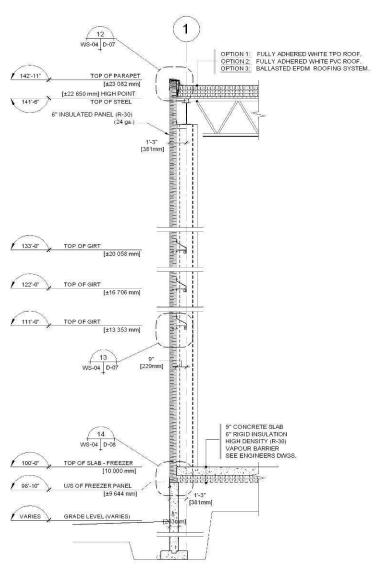








## FREEZER PANEL























UNDER FLOOR HEATING
INSULATION
SUPERFLAT FREEZER
FLOOR





#### REFRIGERATED DOCK



#### $Temperature \ 0\text{-}4^{\circ}$

#### **Refrigerated Loading Dock Contains:**

- 1. Dock Doors and Levellers
- 2. Maintenance Area for Lift Trucks
- 3. Lift Truck Charging Stations
- 4. Storage Space for Empty Pallets
- 5. Suspended Sprinkler Room
- 6. Ample Area for Easy Product Staging





# REFRIGERATED LOADING DOCK UNDER CONSTRUCTION







# REFRIGERATED LOADING DOCK



Refrigerated loading dock has access to and from dock office, employee welfare area and inspection room (required by local food inspection agency).





# LOADING DOCK EQUIPMENT





- Dock Levellers
- •Dock Doors with inflatable cushions and truck restraints
- •Functioning of inflatable cushions, truck restraints & dock levellers are interconnected to permit accident free operations
- •Vertical dock levellers & continuous pit permits truck doors to be opened in the cold environment, easier maintenance and greater control of exterior air infiltration

## **BOLLARD PROTECTION**



- •Bollards are provided on the dock to protect walkways, dock door, freezer doors and stairs from being accidentally it by lift trucks
- •All interior bollards are 6" around and filled with concrete and have protective PVC sleeves





#### **DOCK OFFICE BUILDING**



- Employee welfare area, dock office, inspection room, trucker's lounge and lunch room for employees
- Dock office, welfare and trucker's lounge are located at the same level as the loading dock
- The food inspection room is located on the mezzanine along with employee's lunch room and administrative office area



#### TRANSACTION WINDOWS FROM DOCK OFFICE





Trucker's lounge has a separate secured entrance with no access to other parts of the freezer / dock office.

Dock office has two transaction windows for paperwork. One opens into the trucker's lounge and the other opens into a corridor leading to the employee welfare area





# **ENGINE ROOM**



#### **Engine Room consists of:**

- 1. Machine Room containing ammonia compressors
- 2. Evaporator units on the roof
- 3. Sprinkler Room
- 4. Electrical Room





#### **ENGINE ROOM**



- Refrigeration system is ammonia based and two penthouses on the roof located centrally
- Insulated supply lines carry chilled ammonia from the engine room to the roof top penthouse units for the freezer and dock
- Penthouses have condenser units which blow cold air sideways and take in warm air from the middle



#### FREEZER WAREHOUSE - COLUMN PROTECTION



- •All in-rack columns in the freezers have 48" high concrete filled steel sleeves to protect from lift truck damage
- In accordance with local fire code, 2 hour sprayed on fire protection is applied to all structural columns





#### FREEZER WAREHOUSE



- Narrow aisle racking section
- Front cross-aisle with additional staging area and truck charging stations
- Lighting system designed for low energy consumption using motion sensor controls to maximize energy savings.





# **RACKING**



- Racking is narrow aisle and single deep
- $\bullet$  Racking is 8 pallet positions high using structural steel components and designed for zone 4 seismic loading





## **RACKING**



Every alternate aisle is a pick aisle with cantilevered racking which is a unique design feature of the racking system

This avoids rack leg damage by conventional dock equipment, while in narrow aisles the wire guidance system controls the truck travel





# **END OF AISLE RACKING - PROTECTION**



Robust steel guards are installed for rack protection at all aisle ends







## **LOADING DOCK YARD**



- Loading dock yard is lit by projector lights on the dock roof and has surveillance cameras constantly recording the activity in the yard
- The yard sizing is designed to easily accommodate the requirements of today's truck design





## **SECURITY**



- The facility is secured with chain link fence and 24 hour surveillance cameras
- ullet The site is gated and has controlled access using fingerprint scanners











