

# GEATAIN ENGINEERING

## CASE STUDY-DAMASCUS BAKERY



### BACKGROUND

The Damascus Bakery is located at 60 McClellan Street near the Newark International Airport. The factory has loading bays that are located along McClellan St with pallet storage. The packaging area is located further to the north, then the ovens and finally, the ingredients are mixed at the northernmost part of the building. The bakery has been going through rapid expansion in the past few years and is mass producing many different types of products. Some challenges include the extreme loss of heat due to the loading bays and other areas of the bakery.

### HOW GEATAIN ENGINEERING HELPED

- Worked closely with manufacturer and contractor to dovetail electrification solutions to property characteristics.
- Quantified thermal capacity of building envelope to retain more winter heat and summer air conditioning.
- Kept the owner abreast of all project stages to ensure chief concerns remained focal points throughout the project.

### BENEFITS

- Revising operating schedules leads to significant carbon reductions.
- Natural daylighting supplements the need for artificial lighting and improves occupant health-wellness.



### CHALLENGES

- The bakery has been going through rapid expansion in the past few years so it is very difficult to estimate the actual savings amounts.

### SOLUTIONS

- Solar system.
- Alternative rates.
- Light level adjustments.
- Air recirculation schedules.
- Thermal storage.
- Reactive power mitigation.
- Insulating loading dock.
- Reclaim heat from ovens.

### ANNUAL SAVINGS

\$ 187,500

\*Savings with returns of less than five years over the next five years.

**For more information,  
email [tjm@geatain.com](mailto:tjm@geatain.com)**