

# Lessons Learned from Site Visit to Seattle Federal Courthouse 5 June 2008

## A. Loading Dock

The loading dock for the Seattle courthouse contains only two (2) berths. One is always occupied by the dumpsters. The remaining one is insufficient for the incoming and outgoing deliveries. The delivery trucks must backup to the loading dock which was unacceptable to the US Postal Service. For the first four (4) months of occupancy the mail was not delivered to the building. The lesson learned here is that the programming and designing for loading dock applications needs more emphasis.

## B. Garage entrance problem

Two short videos were shown regarding problems with the garage entrance to the building. One had to do with the timing issue of the gate and the roll up doors and one referred to a problem with the bollards coming up and puncturing the underside of a car entering the garage. Lessons Learned: 1) design changes needed to improve control rate of entrance of a series of cars through the access gate; 2) stronger communications needed with occupants regarding physical consequences of not complying with controlled rate of entrance.

## C. Energy reduced from 90 - 78 kBtu/GSF

When the building was delivered it used more energy than other buildings in inventory in the region. Though it has reduced its energy the building still consumes more energy than originally modeled and expected during design.

## D. Water features

(Reflecting pond - installed at suggestion of judges - for security)

Without continuous maintenance, the reflecting pond adds risk of microbial exposure to occupants. Once you have a water feature chemicals are needed to treat the water. This creates another risk that needs to be addressed regarding the occupants. In this building, bromide is the chemical of choice. Though this is a better choice than chloride, it still results in a risk of chemical exposure. The reflecting pond also adds control issues on maintaining interior humidity and challenges water consumption targets regarding EISA 07 and EO 13423.

E. Direct/ indirect evaporative cooling of outside air

This issue refers to the concept of evaporative cooling of the outside air intake to units on the roof. These evaporative cooling devices have been deactivated because they do not work. Because of the Seattle environment/ weather, these units can only function a few days each year. This was a misapplication of this psychrometric process. They over-humidified the spaces and were deactivated. Now, these deactivated devices are causing unneeded pressure drops which affect the energy usage of the building. The Design Engineers should have known this. The GSA HVAC Excellence Reviews have been created to prevent these misapplications in the future. Question asked: Will these devices be removed? And the pointed lesson learned....Who evaluated the psychometrics for this application?