



# Commissioning Case Study Forensic Sciences Building Retrofit Program Hauppauge, NY

## Background

The Forensic Sciences Building at Suffolk County Department of Public Works (SCDPW) underwent a retrofit program that included the replacement the centrifugal chillers, cooling towers and pumps with upgrades of motors including variable frequency drives (VFD's).

Under the LIPA Commercial Construction Program, SCDPW sought rebates and financial incentives by upgrading to qualified energy-efficient equipment. The chillers were part of a larger comprehensive rebate that was worth \$400,000, which included \$40,000 for Building Commissioning services. LIPA assigned and fully funded a pre-qualified commissioning agent, Horizon Engineering Associates, LLP (HEA), to provide the required services.



## Description

The scope of work included commissioning the chilled water system, condenser water system and the replacement of motor/VFD's throughout the facility. A plan was developed to review the project design, participate with the system installation and verify the overall performance for each new system and related components. During the functional testing procedures, significant deficiencies were found throughout the facility, most notably deficient water-flow to the chillers, incorrect differential by-pass valve pressure set point and VFDs operating in by-pass mode or with incorrect set-points.

## Solution

Commissioning of the Forensics Sciences Building resulted in a number of energy, maintenance and operational related cost savings and potential savings. The performance verification of these components and systems identified significant performance related deficiencies and prompted strong recommendations for corrective action to the project team and the facility owner. Overall, the commissioning of this facility demonstrated a significant value to the owner both in future maintenance costs, operating expenses and an increased overall knowledge of the building operation.

As a result of the performance verification and recommended changes, the facility has a potential energy savings of \$43,000.

Commissioning Provider:  
Horizon Engineering Associates, LLP  
Customer Name:  
Suffolk County Dept. of Public Works  
Location: Hauppauge, NY  
Project Type: Chiller Replacement  
Commissioning Fee: \$40,000  
LIPA Cx Funding: \$40,000  
Annual Savings: \$43,000