

DENVER POLICE DEPARTMENT CRIME LAB DENVER, CO

STATISTICS

Occupant Name | Denver Police Dept.
Owner | Denver Police Dept.
Type | Laboratory
Classification | B, A-3
Size | 60,000 GSF
Number of Stories | 3
Dates of Construction | Mar. 2011 – Jul. 2012
Actual Cost Information | \$28 million
Project Delivery Method | CM at Risk

ARCHITECTURE

The lab utilizes a contemporary approach to architecture, with pieces of the building boldly extruding from the façade and an elevation that undulates. The materials that make up the exterior are a combination of metal and glass curtain walls, as well as concrete panels. The interior of the building is broken up into a variety of laboratories, meeting spaces, and offices. One room doubles as an emergency command center if the occasion arises. The ceilings are composed of metal, wood, and acoustic ceiling tiles while the flooring is either terrazzo or rubber tiles.

MECHANICAL

Air distribution throughout the building is performed by two air-handling units located in the penthouse on the top level. These units supply a total of 90,000 CFM to the Crime Lab. There is also an exhaust energy recovery system. These systems are all variable air volume.

STRUCTURAL

The Crime Lab comprises of retaining walls, slab on grade, and a steel frame. Primarily, the lab is constructed with wide-flange and hollow structural steel columns. The main wind force resisting system is braced frames.

PROJECT TEAM

GC & CM | JE Dunn
Architect | Durrant
Design A&E | SmithGroupJJR
Electrical | Scanlon Szynskie Group
Mechanical | Gehring and Associates
Structural | MNA
Civil Engineer | S.A. Miro, Inc.

SUSTAINABILITY

Falling under LEED Gold for New Construction, the Denver Police Department Crime Lab has multiple sustainable facets. Water usage in the building was reduced by using low-flow fixtures. In addition to this, 20% of the materials in the building are recycled. The Crime Lab also has features like light pollution reduction, water efficient landscaping, and construction waste management.

LIGHTING | ELECTRICAL

The lighting throughout the building is mainly fluorescent T8 recessed fixtures, either linear or parabolic. Downlights are predominantly compact fluorescent. Occupancy sensors, zoned, and low voltage switches are present in most of the labs.

Power is supplied through Xcel Energy, a utility provider in Colorado. Three 750 kVA, 480/277V 3φ secondary transformers are located at the service entrance to feed the rest of the building. A 500 kilowatt diesel-fueled generator serves as emergency power for the building and can be accessed through automatic transfer switches.

NORTHEAST CORNER
EXTERIOR VIEW



JACKIE EURY
LIGHTING || ELECTRICAL
SHAWN GOOD

Image courtesy of SmithGroupJJR
Check it out online!
<https://www.engr.psu.edu/ae/thesis/portfolios/2015/jze5059>