

Access Control

CCTV

Construction Budgets

Construction Support

Control Room Design

Design Standards

Engineering Documentation

Fire/Life Safety

Management Assistance



SECURITY BY DESIGN

Master Plan Development

Security Surveys

Systems Integration

Vulnerability Studies

Security By Design, Inc. is an independent security consulting and engineering firm located in Pacheco, California. The firm has been in business since 1974 and was originally known as the Easter Company. It was incorporated in 1982 as Asset Protection Consultants, Inc. and filed a name change to Security By Design, Inc. (SBD) in 1997.

The objective of the company has always been to provide professional security management consultation and physical security design engineering to corporate, industrial, and institutional clients to satisfy their security objectives. It is a fundamental belief in SBD that the services provided can be appropriately tailored to the needs of each client. The ultimate goal of our services is to improve safety, control access, and reduce controllable losses.

Edmonds H. Chandler, Jr., CPP and Lorna L. Chandler, CPP head this team of professionals who provide vulnerability analyses, accomplish feasibility studies, and design and specify state-of-the-art security systems. Included in the designs are: security alarms; access control; fire detection, suppression, and annunciation; water detection; closed circuit television; intercom; computer center facility alarm monitoring; and total design management of data centers emergency responses.

In addition to the obvious security systems, we examine passive security measures such as how pathing and lighting interact with the concept of security. The concepts espoused in CPTED (Crime Prevention Through Environmental Design) are used when performing these evaluations. Areas of knowledge include the uses of video analytics and biometric screening. SBD also provides complete support services including standards manuals, procedure manuals, specialized training, contractor interface, and technology interpretation.

“The ultimate goal of our services is to improve safety, control access, and reduce controllable losses.”

SBD has achieved success and growth by combining expertise in the security, engineering, and business disciplines. Thus, SBD has a unique representation on staff of members who hold Certified Protection Professional (CPP) designations, engineering and installation expertise, and an in-house CAD department to provide the first class quality our clients expect.

Security By Design does not install systems nor sell equipment.

CLIENT LIST

AIRPORTS

Monterey Peninsula Airport
Oakland International
Ontario International
San Francisco International
San Jose International

BRIDGES

Golden Gate Bridge

CORPORATIONS

3Com Worldwide
3M Company
Adobe Systems
Agilent Technologies
Airtouch Communications
American Bell
American Forest Productions, Inc.
Amgen
Apple Computer, Inc.
Applied Materials
Arbitron Ratings, Inc.
Aspect Communications
Bechtel Corporation
Boeing - Puget Sound Division
California Portland Cement
CASI-RUSCO
Chevron Corporation
Chrysler Corporation
Cisco Systems
Citadel Industries
Contraves Italiana Oerlikon Buhrle
Control Data Corporation
Cooley Godward LLP
Del Monte Foods
DFS, Ltd.
Dolby Laboratories, Inc.
East Bay Municipal Utility District
Electronic Arts
Epson America
ESL
Esmark, Inc.
Exxon Corporation
F. Korbel Champagne Cellars
Ferranti International Defense Systems, Inc.
Fidelity/ADD, Inc.

Flextronic/Solectron
GE Corporation
Google
GTE MobilNet
Gunderson Dettmer Law Offices
Hewlett Packard
Hitachi America
Honeywell
Huffman Manufacturing Company
Hughes Aircraft Company
IBM
Information Storage Systems, Inc.
Kilroy Industries, Inc.
Levi Strauss and Company
Link Technology
Lockheed Aeronautical Systems
Lockheed Missiles & Space Company
Manville Corporation
Marathon Electric Motor Mfg. Company
McCaw Communications
McKesson Chemical
Microsoft
Mosinee Paper Company
National Semiconductor
NCR Corporation
Nellcor, Inc.
Newport Offshore Ltd.
Northrop Grumman Corp. Aircraft Division
Nuance Communications
NUMMI
Optical Coating Laboratories, Inc.
Oracle Corporation
Pacific Gas & Electric Company
Pacific Telephone & Telegraph
PacTel
PLANT Builders
Potlatch Corporation
Quantel
Rand Corporation
RCM Capital Management
Riverbed
Rockwell International
Shaklee
Siebel Systems, Inc.
SiliconGraphics
Sony Corporation
SRI International
Sun Microsystems
Synoptics



CLIENT LIST

Syntex Corporation
Teknowledge, Inc.
The Weyerhaeuser Company
TRW Defense Systems
Ultradata
Union Oil Company of California
United Technology
USCS International
Utah Power & Light Company
Varian Associates
Visa International
VMWare
Wesgo Metals
Wy'East
Zeneca, Inc.
Zhone

COURT & JAIL FACILITIES

Alameda County Superior Court, ECHOJ
Arizona Supreme Court Building
Bakersfield Municipal Court
Kern County Jail & Court Building
Philip Burton Federal Building, SF
Spring Street Courthouse, Los Angeles
Washoe County Courts Complex, Nevada
U.S. Federal Court House, San Jose

DATA CENTERS

Barnett Bank
Chevron Concord Data Center
Chevron Park
Oracle Corporation
Teale Data Center
Wells Fargo Data Center

EDUCATIONAL INSTITUTIONS

Taube-Koret Campus for Jewish Life
Chabot College
College of the Desert
Compton School District
CSUEB
Exploratorium
Hayward School District
Holy Names College
Lodi Unified School District
Mt. Diablo Unified School District

Oregon Health Sciences University
Peralta School District
Riverside Community College District
San Ramon Valley Unified School District
UC Berkeley
UC Davis Medical Center
UCLA
UCSD
University of Iowa
University of Wisconsin
Walnut Creek School District

ENTERTAINMENT/GAMING

Artichoke Joe's
California State Lottery
Isleta Gaming Palace
Menominee Nation Casino
Monterey Bay Aquarium
San Jose Sharks Arena
Table Mountain Casino
Teller House, The
Walt Disney Studios

EXECUTIVE PROTECTION

3Com
Apple
Chevron
Entergy
Genentech
McCaw Cellular
McKesson
Microsoft
Oracle

EXECUTIVE RESIDENCES

Sites ranging from 8,000 sq/ft to 60,000 sq/ft

FINANCIAL

American National Bank & Trust Co.
AT&T Universal Card Services
Bank of America NT&SA
Barnett Bank
Citicorp
Eureka Federal Savings & Loan



CLIENT LIST

Federal Reserve Bank of San Francisco
Fidelity/ADD, Inc.
Industrial Indemnity
Lloyds Bank of California
Marsh-McLennan, Inc.
Placer County Credit Union
Prudential Insurance Company
RCM Capitol Management
Safeco Insurance Company
Transamerica Corporation
Valley Bank of Nevada
Visa International
Wells Fargo Bank
Western States Bankcard Association
World Savings & Loan

GOVERNMENT AGENCIES

12th US Naval District
Ames Research Center – NASA
Argonne National Laboratory, Chicago
Arizona State Dept. Administration
B.F. Sisk Federal Building
California Dept. of Rehabilitation, Sacramento
California State Lottery
City of Fremont, California
City of San Jose
City of San Mateo
City of Walnut Creek, California
Golden Gate Bridge & Transportation District
Golden Gate Transit
Golden Gate Ferry
GTE Government Systems
Kern County Public Works Department
King County Metro Transit
Millbrae Police Department
Monterey County Admin Bldg.
Philip Burton Federal Building
Port of Oakland
Richmond Housing Authority
San Francisco Redevelopment Agency
Seattle Housing Authority
Social Security Administration
State of California –

- Archives/Secretary of State's Office
- Cal Tech – Jet Propulsion Lab
- Controller's Office
- Department of Health Services
- Department of Justice

- Department of Rehabilitation
- Department of Water Resources
- Employment Development Dept.

The Panama Canal Commission – Balboa
U.S. Coast Guard – Yerba Buena Island
U.S. Naval Weapons Center - China Lake
U.S. Postal Service

- Oakland
- Richmond-BMC
- San Diego-P&DC
- San Francisco-EPC
- San Francisco-P&DC
- San Jose-P&DC
- San Mateo-ACIT
- Santa Ana-P&DC

Wisconsin Governor's Offices

HEALTH CARE FACILITIES

Children's Hospital of the East Bay
East Valley Medical Center, Santa Clara
East Valley Medical Clinic
Eden Hospital Medical Center
Highland General Hospital
Kaiser Moanalua Medical Center - Hawaii
Kaiser Permanente Medical Centers–

- Hayward
- Oakland
- Santa Rosa
- Vacaville

Peninsula Medical Center - Burlingame
Roseville Community Hospital
Samuel Merritt Hospital
St. Francis Medical Center - Lynwood
St. Vincent Medical Center - Los Angeles
St. Vincent's Hospital - Portland, OR
UCLA Hospital & Clinics
Verdugo Hills Hospital - Glendale

HOTELS

Huntington Hotel

CLIENT LIST

LIBRARIES/ MUSEUMS

California State Archives
City of Mountain View Library
San Francisco New Main Library
San Jose Museum of Modern Art
Teller House, The
UC Berkeley Doe & Moffitt Libraries
University of San Francisco Library
Wells Fargo Bank Museum

MULTI-TENANT BUILDINGS

Catellus Development – East Bay Bridge Center
Fillmore Center, SF
One Market Plaza, SF
Pembroke Real Estate
Sunnyvale Town Center

PARKS/GARDENS

Golden Gate National Recreation Area
Yerba Buena Gardens, San Francisco

PETROLEUM/CHEMICAL

Chevron
Chevron Chemical
Dow Chemical
McKesson Corporation
Receptors Offshore Oil Flow

PORTS

Port of Long Beach
Port of Los Angeles
Port of Oakland
Port of Seattle

PROPERTY MANAGEMENT COMPANIES

C.B. Richard Ellis
Coldwell Banker/One Market Plaza
Compass Management
Cushman Wakefield
JM Properties
Pembroke Real Estate

Shorenstein
Sobrato
SRM Associates
Wilson Cornerstone

RESEARCH CENTERS

Buck Center for Research in Aging
Chevron Chemical, Hilltop Center
Nellcor
UC Davis Contained Research Facility
Zeneca, Inc.

RESIDENTIAL DEVELOPMENTS

366 Market Street Condos - San Francisco
Aldersley Retirement Community
Campbell Village
Taube-Koret Campus for Jewish Life
Clock Tower Condominiums
Cushman-Wakefield
Fillmore Center
McCandless Development Company
Saint Marks Square
Seattle Housing Authority
Telegraph Terrace
The Keys, Walnut Creek

SHOPPING MALLS

Stanford Shopping Center
Sunnyvale Town Center

SPORT ARENAS

San Jose Multi-Purpose Arena
Taube-Koret Campus for Jewish Life

STUDIOS

Lucas Film
Skywalker Ranch
Walt Disney Studios

TRANSPORTATION

CalTrain
Golden Gate Bridge, Highway & Transportation District



CLIENT LIST

King County Metropolitan Transit District
San Mateo Transit District (SamTrans)
Southern California Rapid Transit District

UTILITIES

Alameda County Water District
Contra Costa Water District
East Bay Municipal Utility District (EBMUD)
Metropolitan Water District of Southern California
Pacific Gas & Electric
Sacramento Municipal Utilities District
Seattle City Lighting
Sierra Pacific
Southern California Edison

SERVICES

AREAS OF EXPERTISE

Design Standards

Architectural Security Design Standards
Electronic Design Standards
Security Systems Design Standards

Security Management

Emergency Procedures
Policies and Procedure Development
Risk Analysis
Security Plan
Executive Security Review – IRS 1.132-5
Vulnerability Study

General System Development

Central System Integration
Isolated Site Communications
Security Network Design
Site Communication Criteria
Signal Path Definition
Technical Software Definition

Data Center Coordination

Emergency Response Systems Coordination
Critical Support System Integration
Application of Special Area Detection
Special Access Auditing Procedures
Water Detection

Executive Homes

Security Plan
Security Systems Design
Fire Design
Integration with Home Automation

Security Design

Access Control
Alarm Monitoring
Closed Circuit Television
Emergency Call and Notification
Intercom
Space/Area Protection

Control Room Development

Ergonomically Effective Console Configuration
Workstation Layouts In Lieu Of Console
Security Equipment Room Layouts
Power/Cooling Calculations and Design
Critical Systems Survival Power Design
Emergency Central System Cooling Procedures

Fire

Early Warning Detection
Suppression & Annunciation
Special Area Detection
Supplementary Action Scenarios



Conceptual Definition

- 1. Define objectives**
 - a) Philosophies
 - i) Management
 - ii) Security
 - b) Constraints
 - i) Existing site conditions
 - ii) Budgetary limitations
 - iii) Existing security policy & procedures
 - c) Objectives list
- 2. Conduct study to determine present status**
 - a) Types of studies (as appropriate)
 - i) Vulnerability
 - ii) Feasibility
 - iii) Loading
 - b) Report
- 3. Submit and review study findings & objectives**
- 4. Conceptual design to provide general direction**
 - a) Description
 - b) Budgetary estimates
 - c) Conceptual design report
 - i) Report including the results of i and ii
 - ii) Executive summary
- 5. Submit conceptual design for review and approval**

Schematic Design

- 1. Create scenarios utilizing the data from the conceptual design**
- 2. Identify potential systems to satisfy the scenarios**
- 3. Detail the scenarios with systems**
 - a) Objectives satisfied
 - b) Block diagrams
 - c) Rough budgetary estimates
 - d) Inter-relationships
 - e) Special conditions
- 4. Produce the report**
 - a) Viable options
 - b) Recommendations
- 5. Submit report for review and option selection**

Design Development

- 1. Detail the selected option**
 - a) Typical detail definition
 - b) Space requirements
 - c) Communications issues
 - d) Employee flow and impact considerations
 - e) Security staffing impact
- 2. Confirm compliance with the stated corporate objectives**
- 3. Confirm compliance with the stated security philosophy**
- 4. Review standards and codes**
- 5. Review the conceptual design study to determine if minor modifications in the design will allow satisfaction of additional objectives**
 - a) Create design documents
 - b) Typical details
 - c) Typical floor plans
 - d) Block diagrams of each system
 - e) Written overview of the design
- 6. Develop preliminary construction budget (+/- 20%)**
- 7. Submit and review for approval to proceed with the contracts documents**

Contract Documents

- 1. Produce design documents**
 - a) Drawings
 - b) Details
 - c) Specifications
- 2. Submit for review and approval**
- 3. Develop the engineer's construction budget**
- 4. Produce final drawings, details & specifications**
- 5. Develop preliminary installation and testing schedule**
- 6. Distribute documents**

Bid Support

1. Provide contract selection and award support

- a) Bidders questions
- b) Site walk
- c) Addenda

2. Review bids

- a) Product substitutions
- b) Compliance
- c) Recommendations

Construction Support

1. Review system installation

- a) General construction management
- b) Contractor submittal review
- c) Progress meetings - meeting notes
- d) Contractor invoicing review
- e) Factory test & system installation
- f) Respond to RFIs

2. Participate in system testing

- a) Document review
 - i) As-built drawings
 - ii) Operation and maintenance manuals
 - iii) Test form review
- b) Database support
 - i) Develop database modeling
 - ii) Develop emergency shut down/start
 - iii) Observation testing
 - iv) Field reports

3. Assist in system activation

- a) Final acceptance testing and punch list
- b) System turn on and database start up
- c) Activation of system warranties and guarantees

System Implementation

- 1. Assist in the development of new revised policies and procedure**
- 2. Produce documents (project dependent)**
 - a) Job descriptions
 - b) Policy and/or procedure support documents
 - c) Procedure manual
 - d) Failure mode document
 - e) Operational summary
 - f) Database elements
- 3. Assist with management coordination**
 - a) User briefings
 - b) Operator training
- 4. Assist with the interactive growth process**
 - a) Facilities
 - b) Operations
 - c) Applications
 - d) System utilization

SERVICES

ARCHITECTURAL DESIGN STANDARDS

Architectural Design Standards provide a basis for savings. Imagine an opportunity to **reduce** your outlay by **30%** over the ten years just in the security design budget alone, with a potential for a one-year return on investment.

It is possible to achieve such a goal! The approach is to conceptually program security for all of the organization's facilities. Defining the criteria allows for efficiency while providing for site variations based on actual conditions. In essence, the best of both worlds, while reducing construction costs!

Historically, organizations have treated most construction projects independently. Many times, each portion of a project is treated as a unique and separate part of the overall. Standards allow security decisions, once made, to become tools for future development.

Even larger savings can accrue from the architectural process because, as each architect starts to develop a building design, the security criteria for each aspect is defined in the **Architectural Design Standards** for security.

Areas that can be addressed include:

- Public to private boundaries
- Lighting
- Parking
- Landscaping
- Lobbies
- Perimeters
- Each type of interior space

Lobby standards may include the desk, exterior door, interior control, CCTV, access to restrooms, phones, lighting, and conference rooms exterior to the interior boundary.

When **Security Architectural Design Standards** are used, operational consistencies will create efficiencies. Programs can effectively utilize the consistent infrastructure. Renovation projects also benefit, although identifying the economic benefit is more challenging because of varying site conditions.

Electronic Design Standards provide a basis for savings in many ways. Imagine the ability to select one or more installation teams around the world and know that the systems will be wired to function in the same way at each location. Imagine the opportunity to issue national purchase agreements for equipment and service. Imagine stocking a limited quantity of critical parts because each location uses the same equipment. Imagine that when your systems support personnel are trained, they can actually back each other up because the systems are the same.

The elements that are included in Electronic Design Standards include:

- Descriptions for each type of device location for coordination with managers of the work units and architects who are preparing building designs. This ensures the right functionality when the construction is complete.
 - Door and hardware lists to coordinate and program the correct hardware into the project from the beginning.
 - Network requirements to coordinate with the network infrastructure personnel, ensuring a secure, resilient WAN based system.
 - Specifications for each type of system to be incorporated into a new or renovation project.
 - System testing criteria to verify the installation has been performed correctly.
- Security Details for each type of device location showing the plan view and functionality, point-to-point wiring diagram, ladder diagram, and equipment list are created once, not each time a new project commences. New configurations are only created as new projects occur, adding to the library of standards. Essentially, much of the as-built information is created prior to installation. Only actual field conditions must be documented.
 - Detailed point list.
 - Acceptable cables and wires.
 - Wire and panel labeling.
 - System programming.
 - Submittal, training, and performance.

For each project there are elements that must always be custom. The site and floor plans show are created to show where each detail configuration is located. Project specific notes are written on the plans.

This process allows decisions to be made once. The bid process can be streamlined by having a pre-determined unit price for each detail, which also provides for tighter budgeting.

This process saves time and cost during a construction project AND streamlines the support process.



Description Of Site

Global. All building & suites occupied by Cisco. Leased spaces, sole tenant buildings and Cisco owned buildings, including sales offices, data centers, customer support, manufacturing, etc.

Includes sites in:

Africa
Asia
Australia
Europe
Latin America
Middle East
North America

Security By Design Involvement

Provided expert advice in the creation of a Crisis Operations Center. The center enabled Cisco to respond quickly to global events with regards to the safety and security of their employees and facilities.

Effective communication spaces required scalability for different locations, video walls, secure wireless communication, and user-specific customization.

Previous Cisco projects included global Y2K preparedness. This was a three-year-long project involving government regulations and equipment availability around the world.

Of Special Interest

- Video Walls
- Wireless networking

EXPERIENCE

SAN FRANCISCO INTERNATIONAL AIRPORT

San Francisco International Airport

San Francisco, CA

Description Of Site

Existing 2,621,000 square foot, 80-gate terminal on 5,200 acres adjacent to San Francisco Bay.



SF International Airport
San Francisco, CA

Security By Design Involvement

Provided professional services for the investigation and evaluation, design, and construction supervision for improvements to the physical security systems at the Airport to meet FAR 107.14 requirements. The project was completed in five phases.

Also investigated the existing physical security and determined threats, conducted vulnerability analysis, assessed effectiveness of current systems, evaluated and identified alternative solutions and developed strategy for meeting threats.

Developed criteria for selection of an access control system for their terminal buildings and land-side perimeter fence, evaluated and ranked potential systems, and prepared preliminary plans and specifications.

Prepared working drawings and specifications, assisted the Airport during administration of the construction contract, conducted site visits, reviewed submittals and monitored job progress.

Of Special Interest

Biometric authentication technologies and fiber optic communication.

EXPERIENCE

ADOBE



ADOBE Buildings
San Jose, CA

Security By Design's work with Adobe began in 2004 with a request to create global security standards. Adobe's goal was to achieve uniformity in its security systems worldwide. Security By Design proposed an approach to include the standardization of products and systems not only in the US, but also in Europe, the Middle East and Asia. Such a standardization is ambitious since not all systems are available in all countries. Further, power requirements and life-safety codes differ from region to region.

Despite those challenges, SBD succeeded in creating standards for specifications and details so that Adobe can now issue its own RFP packages. This resulted in huge cost savings for Adobe because the equipment design work needs to be done only once.

Now, Adobe facilities and security staff around the world can plan and design their own security equipment configurations simply by consulting the standards manual.

SBD also provided consulting assistance to Adobe for its facilities in Ottawa, Ontario, Canada. This project entailed security video systems and access control (including elevators) design for seven floors in the Preston Square building.



EXPERIENCE

DOLBY LABORATORIES



DOLBY Laboratories Office
San Francisco, CA

Description of Site

Global.

Security By Design Involvement

Work with Dolby Labs began in 2007 with a request to perform security survey and code compliance verification. Requested to create global security standards. Dolby's goal was to achieve uniformity in its security systems worldwide. Proposed an approach to include the standardization of products and systems not only in the US, but also in Europe, the Middle East and Asia. Such standardization is ambitious since not all systems are available in all countries.

Further, power requirements and life-safety codes differ from region to region.

Despite those challenges, SBD succeeded in creating standards for specifications and details so that Dolby can now issue its own RFP packages. This resulted in huge cost savings for Dolby because the equipment design work needs to be done only once.

Now, Dolby facilities and security staff around the world can plan and design their own security equipment configurations simply by consulting the standards manual.

Worked with Dolby to identify the best match for an enterprise access control system, security video system, and select an access card format.

Also provided consulting and engineering assistance to Dolby for their facilities in Vancouver, Canada; Sydney, Australia; and Burbank, CA. These projects entailed security video surveillance and access control systems.



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