

10. Security

Overview

The Security site visits were performed from February 9 through February 12, 2009 on all floors of the building to include the roof and the parking garage. The security team visually assessed these areas for physical security issues (stand-off and clear zones; accessibility to the site and building; vehicle ram barriers; lighting for security; perimeter barriers to access the buildings and structures; exterior utilities feeds to the structures; bullet resistant protection; internal room and area security; doors and locks; internal administrative controls relating to the foregoing) as well as electronic protection (card access; cameras; electric door strikes; duress or panic buttons; video recording equipment; intercoms; Security control room; head-in/main electronic equipment). A threat and vulnerability assessment for the site and building was conducted. The type of occupancy, its use, the surrounding area and what is there determines the level and type of security needed and what is appropriate. However, what is in place should in all cases be performing at a level as designed by the manufacturer to meet those needs and objectives required for the protection level.

The protection level provided here was considered in light of these threats, vulnerabilities, occupancy, use and surrounding area.

The infrastructure for the BOE security system is acceptable for a building of its type and use. The following major concerns were found:

- 1) The keying system has been compromised.
- 2) Security cameras are either missing or should be replaced with mini-dome cameras.
- 3) A buffer zone should be provided around the building. For example, the main entrance on the corner of "N" and 5th Street has ramps leading into the building. This configuration allows unimpeded access for a vehicle to drive into the lobby from the adjacent streets.
- 4) Utility vaults and utility room doors are not adequately secured.
- 5) The garage has no "emergency help call stations" located on any of its floors for pedestrian use or summoning assistance.
- 6) The garage is open to pedestrian traffic without any type of restriction.
- 7) Lighting in the garage is minimal from a security perspective.

A. Threats

The building and site is first evaluated on the basis of what is its current use and occupancy and then on its location in relationship to the area demographics. The following observations and/or concerns were found:

Demographic Study - CAP Basic CRIMECAST@ report

The CRIMECAST@ score is an evaluation system designed to identify the potential risk of personal and property crimes at any location in the United States based on a variety of demographic information. The CRIMECAST@ model is based upon the strong

relationship that exists between a neighborhood's "social disorder" and the amount of crime that is perpetrated there.

1. The CAP Index for BOE Building site, is viewed from a population of 100,000 / within a 3 mile range. In performing a map analysis, a view develops that while the immediate area reflects a high score it is influenced or skewed by neighboring areas with lower or higher individual scores just blocks away. The examination of surrounding areas reveals that a higher than normal criminal environment exists. Accordingly, the site at 450 N Street National Current CAP Index range is 447 which means the site is almost four and half times more likely to have criminal activity occur here than other places nationally (See Appendix 3-A).
2. Comparing it against the State of California as a whole, its score is 285 which mean the site is almost three times more likely to have criminal activity occur here than other places in the state (See Appendix 3-A).
3. Comparing it against other places in the county of Sacramento as a whole, its score is 343 which means the site is almost three and half times more likely to have criminal activity occur here than other places in the county (See Appendix 3-A).
4. It is unknown to the surveyors as to any specific threats or actual incidents that regularly occur against the occupants or the building itself as interviewing the security team responsible for the building and occupants is outside the scope of this Limited Physical Security Threat and Vulnerability Assessment.
5. One notable event did occur at the BOE Building on Friday morning, March 26, 1993 when an armed gunman (despondent over receiving tax bills for his deceased wife) blasted his way in with a shotgun and other firearms through the glass doors and shot up the glass enclosed security post. In the ensuing panic and confusion, the armed man (James R. Holloway) rode the elevator to the eighteenth floor and held a large number of workers hostage. The Police SWAT later shot and killed the armed man. There were no other fatalities from this incident.

General Threats

Threat to	Threats (Loss Events)	Agent/Cause
PEOPLE	Killing or crucially wounding many persons	Bomb, terrorist act, high casualty incident of violence, contamination
	Biological or chemical attack	Agents converted for terrorist use as weapons
	Kidnapping or assassination	Extortionist, getting even or terrorist, separated parental, disarranged person
	Workplace violence – human casualties	Disaffected employee, former employee, or violent spouse
	Armed robbery/attack	Same as above, rapist, robber
	Random assault	Gang, homeless person, discovered trespasser
	Workplace violence/fighting	Disaffected employee, customer, homeless person, visitor or spouse
	Threats, intimidation	Any of above

	Burglary	Criminal
	Vehicle accident causing injury	Employee driver or visitor driver
	Hazmat incident, e.g., chem. /bio hazard	Intentional, accident or disgruntled worker
	Fire, flash flood, wind, hail storm	Natural disaster or arson
PROPERTY	Destruction of multiple facilities, equipment	Bombings, multiple fires or arson attacks, airplane crash
	Destruction of key facility	Attacker, severe disaster
	Major damage to facility	Earthquake, bomb, incendiary attack
	Long term denial of use of facility	Criminal, stalker, vandal
	Bomb/contamination threats	Criminal, disgruntled worker or citizen of community
	Vandalism	Juveniles, college students, gangs, criminals
	Maintenance failure loss, liability	Conflicting priorities, costs
	Incidental denial of use	Protestors, danger from nearby facilities, homeless
	Loss of privacy	Media, activists
	Pretext entry	Criminal casing a site, terrorist,
CREDIBILITY/ REPUTATION	Scandal or publicized inappropriate action which results in loss of confidence	Disgruntled workers and, citizens, terrorists, hackers, prank callers,

Specific threats potentials

After carefully considering the range of possible threats, four threat vectors have been identified with the highest degree of applicability to the 450 “N” Street Property and tenants and staff (NOTE: This does NOT mean that only these four types of threats could or will occur, rather, it is anticipated that these four could be most likely). These potential threats are:

6. Criminal activity – assault, employee theft, document or evidence manipulation, workplace violence, disgruntled customers, vandalism and/or sabotage. Criminal activity in and around the perimeter area of the site is possible. Per the CAP index, it appears that aggravated assaults, crimes against persons, rape, robbery, larceny crimes against property are approximately 3-4 times more likely to occur here versus other county locations and about 1 ½ to 3 times more than the state as a whole. Projections appear to have only a minimal decline over the next four years to 2013. As with any area where numbers of people come together in a work or social environment, the close proximity to others, company property left unattended for common use and personal property not properly secured provides a formula for individuals desiring others property. The BOE Building, semi-public space and common areas are no different.
7. Delivery of hazard material. The building’s current use and possible future use includes an on-site mail room for opening envelopes and packages. The delivery

- of packages directly from a carrier to this facility for opening and distribution allows for contamination of this area.
8. Kidnapping at child care center. The co-location of a child care center at the site and on its perimeter creates the potential for a domestic spousal kidnapping situation or a targeted kidnapping.
 9. Terrorist type activity with delivery of an explosive device or chemical, biological, radiological substance by vehicle or hand carried into or adjacent to the building. Due to the activities performed by the state employees located here and past criminal experience at the building, it would appear that the potential for the same or similar type of action against the building and inhabitants could occur again. The events of the Oklahoma Bombing of the Federal Building by domestic terrorist Timothy McVey could easily be duplicated and accomplished at this site.

B. Vulnerabilities and present conditions

The building is evaluated on its vulnerabilities for various types of known threats that could be penetrated against it and its occupants. The following observations and/or concerns were found:

Perimeter

1. The BOE Building and site operates for the most part in an “open environment” as the building is surrounded on four sides by public sidewalks and public streets. There is sufficient space (approximately 15 feet) between the curb and the building to illegally drive a vehicle as well as illegally park it against the building, dismissing the ability of having any standoff distance from an explosive device. The building itself is at the perimeter of the site at all four sides and provides an open access to the shell of the building or underbody of the parking garage. The avenues or approaches to the property are “open” as a possible route for vehicles as well as pedestrian traffic. This includes the perimeter of the building itself as well as the lobby. In fact, there is uninhibited access by individuals to the perimeter of the building structure and all parts of the garage depending on the time of day or day of the week. Vehicle parking is allowed on all four sides within 15 feet of the structure allowing for no standoff distance. This site arrangement is similar in some respects to the Alfred P. Murrah federal building in Oklahoma City before the bombing. While the current tenant of the site is a public entity there is no posted restriction required under California law to restrict the "Right to pass by permission and subject to control of owner" Sect. 1008, CA Civil Code, thus providing notice to those who enter thereon. ***The lack of a controlled perimeter, having set-off distance creates a major vulnerability to the building.***
2. The use of explosives is always a potential in every community. Bombings not only cause destruction at the point of detonation but the blast wave generated causes over-pressures followed by under pressure. These forces impact on glass that is especially evident in this high rise and causes it to bend and break with great force. ***A vulnerability exists with all the glass present in this high rise to cause serious injury to those occupying floors in direct line with the blast.***

3. At the main entrance on the NE corner, both the “N” Street entrance and the 5th Street entrance have ramps leading up to the primary visitor and employee entry doors and into the lobby. ***This creates an vulnerability in that it allows for the brute force driving of a vehicle into and the follow-up denotation of an explosive device within and under the very confines of the high rise structure itself.***



4. Along the East side (5th Street) are Sacramento Municipal Utility District (SMUD) vaults for delivery of service to the building. The open grates are secured with manufacture’s bolt screws; however, one of the two is missing from one of access grates. ***The vulnerability here is that there is no physical security type device on these grates nor was there any electronic intrusion sensor or camera coverage of area. The area allows for concealment of explosives.***



5. This area also has the building’s “Knox Box” located on the back side of a pillar. It is unknown if the “Knox Box” is locally monitored by the security panel. ***This is a vulnerability if the box is not monitored as it is subject to undiscovered removal, opening at another location, retrieval of the entry door key and masters key that allow access to the building’s perimeter and interior doors.***



6. The SW corner (“O” Street and 4th Street) of the site has vehicle and pedestrian access to the ground level parking garage and to various points depending on the day of the week and time of day. However, there is always some unlimited access to certain portions of the ground level of the garage at all times.



7. The SMUD Vaults for the building's water and electric power vaults are located on the open space between the sidewalks and curb on 4th Street near this intersection. The cover grates are not secured except for the normal privacy bolts to hold them in place. The rooms for the Generator, Diesel fuel, Fire pump, Water distribution are located adjacent these vaults. It appears that the aluminum door vent slats have been forcefully tampered with. The doors to these rooms are metal, with open exterior non-security hinges and no latch protectors. These rooms are not monitored with any electronic intrusion sensors. ***The current security protection for these utilities and activities are extremely vulnerable to unauthorized access and contamination and/or destruction. Direct placement of an explosive device would probably result in the feeder line being severed and will affect the building being occupied for normal business.***



8. An overhead, metal grated door that is approximately 14 feet by 12 feet is utilized for trucks too high to enter through the south side ("O" Street) entrance way going to the loading dock. This door was in the raised position even though no vehicles were at the dock. ***This creates a vulnerability in that free access is granted to either vehicles or pedestrians to the loading dock and upper levels of the garage.***



9. An employee pedestrian entrance door is located on the West side adjacent the metal, overhead, roll-up door for the trash compactor that has a card access reader, an intercom, a latch protector and exposed, non-security exterior hinges. There is no exterior camera covering the exterior of this entryway, however, there is an interior camera that views those who may come in through this doorway. Entry through this door by piggy-backing on an authorized user can be accomplished with only the scrutiny applied by an alert authorized user.

10. The child care center is located on the west side and NW corner of the site. The primary entry door is glass, has a card access door with an electric strike and an intercom. An exterior camera monitors the back of an individual entering the building and front of people exiting the door. The intercom goes to the office area and there is no intercom station at the door itself. The child care center play yard located on the site's extreme NW corner ("N" Street and 4th Street) has a 6 foot, wooden fence that has 6 inch diameter, 3 foot high pipe bollards located on portions of the perimeter. These bollards become climbing aids to jump into the yard. The yard is equipped with 3 external pedestrian gates for emergency egress out of the yard, two of which are located on this corner. These gates allow fast exiting from the yard in the case of a potential spousal or other type kidnapping. Access into the parking garage and positing at its NW corner on floors 2 and 3 allows for discrete viewing of the yard and its activities. ***Vulnerabilities are created in that the door may be opened to hear comments from someone immediately outside the door and access given by force. The fence wall is also too low to keep intruders out and the roof viewing allows for undetected observation of the children.***



11. Approximately midpoint along the north side ("N" Street) is an open area (approximately 40 feet long by 30 feet wide) next to the building with four pedestrian doorways. These doorways serve primarily as emergency routes for egress from the building. Two of the doors have keyways that allow access from the outside for those having a key. The other two doors lead into the cafeteria and are manually opened and secured for exterior entry when the cafeteria is in operation. There are outside tables located here for use by cafeteria patrons. ***The walkway leading to the exit routes allows for a vehicle to get under the high rise building structure for explosive placement.***



12. The parking garage has a parking attendant present in a booth approximately 50 feet inside the garage to assist vehicles entering from the “O” Street entrance. Parking is available for those who have been authorized to park there and possess an access card to certify that the card is an authorized one. The attendant is also there to assist delivery personnel. Signage is present as well as camera coverage. It is unknown whether the attendant has a duress switch to call for assistance if needed. It is also unknown if there is any validation of the access card to an actual person or if anyone who finds the card can use it to gain parking. The parking attendant booth cannot view the entry/exit drive off of 4th street or any entry/exit of people or vehicles. ***Vulnerabilities are created in not having total knowledge of the identity of those entering and what else is coming into this area. The lack of knowledge can place the complex in a negative position from the standpoint of premise liability avoidance and provides less than reasonable security protection.***



13. Vehicle's trunks or cargo areas are not inspected. The potential exists for explosives to be delivered by vehicles that are brought into or parked in the parking areas. This action may occur with or without the vehicle driver's knowledge or willing cooperation. It may also take place through the loading dock via commandeered delivery vehicles and unauthorized cargo being added to the delivery and dropped at the loading dock. ***The non-inspection of vehicles can place the complex in a negative position from the standpoint of premise liability avoidance and provides less than reasonable security protection.***
14. After operating hours, there is a pedestrian gate that has card reader access from the “O” street side within the parking garage and adjacent to the parking garage passenger elevators.
15. Access to the high rise inner work areas, loading dock interior and/or mail processing from the parking garage can be obtained with the use of an authorized access card. The interior of the parking garage has three points (loading dock, mail processing and the high rise building) at the ground level. Each has a card reader and intercom but no camera coverage.
16. On the 2nd floor of the garage is an electrical distribution room for the site and is marked as the SMUD room. The room has a lever handle with a keyway, open exterior non-security hinges and no latch protector on the door. The room is not monitored with any intrusion sensors. ***Vulnerability exists as to the ability to***

- maintain the integrity of the room and the protection of the electrical distribution system.*
17. On the SE corner, access to the ramp for exiting vehicles allows for individuals to enter the garage unobserved and for unknown purposes. The garage's 2nd floor, 3rd floor and garage roof exits on the SE and SW corners are configured so that the access doors are not in plain view and allow for the concealment of individuals. There is no camera monitoring of these access points. The center emergency stairwells adjacent the central elevator also has no camera monitoring. ***Vulnerability exists to the safety and well being of individuals that may have to use these stairwells. This lack of control over what appears to be a controlled parking garage can place the complex in a negative position from the standpoint of premises liability avoidance and provides less than reasonable security protection.***
 18. The garage has no "emergency help call stations" located on any of its floors for pedestrian use or summoning assistance. ***Vulnerability exists to the safety and well being of individual that may have a medical or other emergency and need to call for help.***
 19. Lighting in the garage is minimal from a security perspective. The ceilings are gray in color and are not painted to reflect the lighting sources that were present and bulbs were burned out. It is unknown if there is a regular maintenance program for replacement and servicing.
 20. All card access equipped doors allow for the "piggy backing" of non-card holders with an individual carrying an authorized access card or the door has not properly closed and secured. The using of card readers and electric door strikes while giving a degree of control, can and often are rendered useless if individuals are allowed to "piggy back" (an unauthorized individual following right behind an individual having an authorized card) or if the door doesn't close properly (i.e. improper air balance, weak auto closure). ***The vulnerability is that unauthorized individual(s) may gain entry while there is an appearance of everything being secure.***
 21. It is unknown as to what actions or patrol techniques, if any, are conducted by the current security officers or guard force on the perimeter of the building or in parking garage. None were observed. ***The vulnerability is that while there may be physical and electronic barriers in place, some adversarial activities need only the simple placement of an item that would in most likelihood be discovered by an alert, properly trained and functioning security officer. Also, the security officer represents a "human response" to a situation that can directly assist, evaluate and/or obtain additional support or resources.***
 22. There is signage present at the main entrance that states "NO FIREARMS" and the legal reference.
 23. The lock and key system currently being utilized at the BOE Building is manufactured by "Russwin". The system was installed in 1993 and is maintained by the engineering department which is provided by an outsourced firm. The keyway uses a five pin series with keys made by the engineering staff upon notification to provide keys for certain individuals to certain areas. There is no key control software in use to track who has what keys. There are currently three

engineers that may cut keys. It is unknown how many individuals have been cutting keys since the system was established, how many master keys have been issued and to whom. The area where keys are made is an unsecured room on the Penthouse floor that is also utilized as a break room. The manual for the building system plate and key cut codes is lying openly in the room on a coffee table. Wall mounted key boxes with key blanks and sample keys stored in them have only cabinet privacy locks. This system is not a high security system. ***The vulnerability created by this process, the lack of maintenance of the records allows for unknown access that results in the compromised and integrity of the building keying system. Thus, from a security perspective the current key and lock system in use is rendered useless as a security safeguard. This lack of control over the lock and keying system can place the complex in a negative position from the standpoint of premises liability avoidance and provides less than reasonable security protection.***



Interior

24. The lobby is located on the ground level or 1st floor. There are multiple routes to the lobby area from the perimeter with general access given to the public outside an inner controlled area. The areas for general public access include the Reception Office, the Cafeteria, the Board Room and the elevators to the garage.

Also located in the lobby are four controlled exit points, two controlled entry points which are separated by the Main Lobby Guard Station.

Access to the interior high rise portion of the building (and certain first floor areas) is controlled through the use of access cards issued to authorized users and/or with an escort. Regular staff members are issued a photo ID card that is incorporated into an access card for specified access into the various areas of the building. Visitors, contractors, and vendors are directed to the Building Reception Office to have their identity verified, their contact called, an appropriate temporary building name tag produced (pink for Visitors and lime green for Contractors) and an escort/sponsor required to be with them while they are in the controlled portion of the building. Regular staff that have lost their ID or forgot it must also go through this process to obtain a temporary building name tag (Blue).

Regular photo ID and access cards are issued and printed by the agency security team located within the building. Authorized building tenants and their staff as well as other designated individuals are granted certain types of access to various locations within the building.

This first floor lobby area was renovated after the 1993 shooting incident. Special attention was given to the main lobby guard station and entry/exit ways into the core high rise elevators leading to the upper floors. Basically, a floor to ceiling barrier was created consisting of bullet resistant glass panes, doors and a marble lower wall around the guard station. The ability to open a door to gain entry is controlled by an electric strike activated by an access card presented at a card reader positioned next to the door. If the card is authorized, by presenting it at the card reader, it will release the latch to the door and allow the holder of the card to enter. The doors also act as exit doors and simply require the pushing of the exit hardware to open the door in order to leave.



The UL classification of the bullet resistant glass is unknown so the determination of the ability to stop the various caliber of firearm is also unknown. It is also unknown if the lower wall around the main lobby guard station has any bullet resistant rating. The guard present in the main lobby guard station has the ability to press a button to release the door's electric strike, which by-passes the card reader, should they have a reason to do so (i.e. an employee has a temporary badge or an authorized card holder they recognize has their hands full). ***Multiple vulnerabilities are created at this point. The bullet resistant glass protects***

primarily against different levels of firearms, so the higher the caliber the higher the cost of the glass and installation. The glass may not provide the intended protection that was originally called for in the installation. It is unknown whether the lower wall around the main lobby guard station is protected in the same manner. The use of doors allows for the “piggy backing” of individuals. Confusion over individuals exiting and individuals waiting to enter allows for someone to use an exiting door for entry. An access card works for whoever has it in their possession, thus allowing for a stolen or found card to be used to gain a fraudulent unauthorized access. The ability for a guard to bypass the system overrides the safeguard that has been put in place.

25. Employees, visitors, contractors are allowed to carry in items in their hands, backpack, briefcase or on small drag along lap top like briefcases. These items are not screened nor are they inspected.
26. The security system main control panel is an area where the wiring comes together and is processed, recorded and stored. While it may be in a semi-secured cabinet or storage rack, the room where this equipment is located and access to it should be considered a sensitive location for the operation and on-going activities of the electronic security plan for the site and building. ***Currently a vulnerability exists in not having controlled access (card reader) to this room and a visual recording (camera) of activities going on in this room.***
27. The computer room is located on the fifth floor. The room has card access control with raised floor. There is no video coverage of who enters this area. While the area is not directly identified as the computer room, warning signs on the outside wall and door regarding the potential discharge of Halon Gas if alarm is sounding identifies what is within. Inside the computer room are stored Class A combustible materials adding to the potential fire loading of this sensitive area. An adjacent room has additional equipment stored that can be pilfered. This storage room has only a key lock on it. There is no video coverage of who enters this area. ***Currently a vulnerability exists in not having a visual recording (camera) of activities going on in this room. A second vulnerability exists in not having controlled access (card reader) to the storage room.***
28. Currently several of the floors are identified as “sensitive floors” for the activities being carried out there. Access to these floors is limited and further controls exist on the internal corridors with the use of card reader controlled access. Within these areas, the activities are carried out in a relative “open manner”, files are left open on desks, lateral files and wall cabinets are open and unsecured. Areas include legal department, personnel management, tax payer records, audits, and cashier - mail processing. Cleaning personnel have free access to all materials that were on these sensitive floors. By not securing the cabinets and files, security issues are created in the protection of documents that are created by earthquakes and their reoccurring aftershocks, not to mention the administrative production issues. Some sensitive and secured rooms having card readers have not secured the ceiling. Two rooms were identified that are very sensitive that have no walls above the false ceilings, allowing for surreptitious access into the secured area for whatever reason. The use of cameras and intrusion alarm points are absent from

most of these areas. *Multiple vulnerabilities are present in these areas mentioned above and the opportunity for compromise is readily available.*

Compromise in some of these areas due to lack of physical security protection could result in the ability to prosecute legal cases, personnel actions, and possibly legal proceedings against BOE management for nonfeasance, not to mention the possibility of legislative investigations and loss of public confidence in BOE.



C. Security Electronics

The limited security assessment of the electronic security systems in the BOE building and garage indicates that, since their original installation, the systems have undergone one or more rounds of upgrades. These upgrades have addressed different needs such as increased security coverage and adoption of newer technologies. Not all upgrades are identified in the as-built documentation, this lack of documentation not only complicated and took away from the inspection, but will also make upgrades, service and maintenance of these systems more difficult in the future.

Closed Circuit Television System (CCTV)

The existing CCTV system is an analog system. Cameras are cabled to a rack located in the electrical room on the first floor. Video signals from these cameras are connected to both a digital video recording system (DVR's) and to a video matrix switching system that switches cameras to the different monitors. The Main Lobby Guard Station security console houses a number of monitors that display the video signals from the cameras. It also has a joystick controller that controls the display of cameras on these monitors. As such, live video that is displayed on the monitors, can be controlled while also recording digitized video on the DVR's.

1. Cameras: The existing system, with the exception of two cameras that need repair, at the time of this assessment were functional and displayed adequate video at the console.
2. The existing CCTV system makes use of 64 analog cameras. Exterior cameras are housed in traditional housings while most interior cameras are mounted on

- brackets. With few exceptions, most of the cameras were functional and displayed acceptable video.
3. Matrix Switcher and Joystick Controllers: The existing CCTV system utilizes a Pelco 9760 series video matrix switcher. This security system main control panel is located inside the electrical room on the first floor (adjacent to the ATM machine). The security equipment is housed inside two Middle Atlantic locking electronic storage racks.
 4. DVR & Storage Devices:
 5. Four 16 channel American Dynamics (Tyco) Intellex Ultra DVRs are currently used to record video from the 64 cameras. Each DVR has its own RAID storage device.
 6. Monitors: Analog color CCTV monitors are deployed at the Main Lobby Guard Station security console located in the lobby. These monitors are connected to the Pelco video matrix switcher and controlled by the Pelco Joystick Controller.

Access Control System

7. System: The existing access control system is a Software House (Tyco) CCure 800 system that is one of the best systems on the market. It employs the older APC panels that are “hardwired” (as opposed to the newer I-star panels that are network based). It also uses proximity card readers to control access through doors and the service elevator.
8. The system architecture includes a server, a client with report printers and a badging client with a camera and a badge printer physically located on the 17th floor. There are also client computers at the parking office on the 4th floor and clients at the console and reception on the first floor. Hubs on the 4th and 17th floors interconnect these clients and the server.
9. The APC panels distributed on the different floors are connected to the server through a serial multi-drop connection (RS-485) which terminates on the server serial port after passing through an RS-232 to RS-485 converter. The server, the clients, the converters and the network hubs (that interconnect the Clients with the server) are connected to UPS. The low voltage power supplies, that power the APC panels and the access control devices, are backed by batteries and their associated chargers.
10. Reader control cards are irregularly distributed. Some are mounted inside the floor panels located inside the Telecom room on each floors. Others could not be located and are believed to be mounted near some of the readers to minimize the cable runs.
11. Readers: The readers are manufactured by HID Proxpro and Miniprox and they are proximity readers. Some of the floor boxes had old coax translation boards. On some of the floors, there were old Receptors panels and that are believed to be abandoned and no longer utilized.
12. Turnstiles: Turnstiles are located on either side of the Main Lobby Guard Station and are used to control employee, visitors and contractors entry into the building.

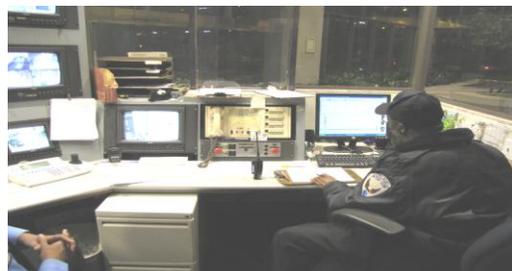
13. Locks: The system makes use of different types of locks. Some use mortise electric locks, others use electric strikes, and some other doors like the stairs use Hi-Tower locks. Bolt locks were also observed during the assessment.
14. Interfaces: The as-built documentation showed buttons at the console that are connected to the Software House system to initiate a lockdown of the building perimeter doors as well as Lobby / Cafeteria doors. They also show a button for Elevator Riot Recall. Additionally they show connections to disable "Request-To-Enter" and "Request-to-Exit" motion detectors that control the lobby automatic doors.
15. The As-Built documentation shows fire alarm and fire trouble connections that serve as the interface with the access control system.
16. There are two connections between the access control and the energy management system (Low building water pressure and Computer room high temperature).

Alarm System including Duress

17. The security system at the BOE Building includes intrusion detection devices such as glass break detectors, motion detectors and door position sensors deployed around the perimeter of the building. These devices report intrusion to the building security system when these devices are armed and activated. Battery powered local alarms are also in use on certain floors.
18. During the assessment, Bosch arming stations in office areas were observed. This indicates that there are separate alarm panels and intrusion detection devices that provide monitoring of interior spaces. This is over and above the building alarm system.
19. In addition to intrusion detection devices, the alarm system also includes wired and wireless duress (help, panic) buttons that report to the building security system.

Intercom

20. Intercom: At various perimeter locations and around the interior of the building there are Intercom door stations installed. These stations report to an Aiphone "NEM" series intercom master located at the Main Lobby Guard Station security console. The door stations are Aiphone LE-D series plastic stations and they are starting to deteriorate and fall apart at some locations.
21. Console: The Main Lobby Guard Station security console is located inside the building lobby. It has bullet resistant windows overlooking the lobby. It also has a transaction window. The console is located between the windows and it is comprised of color video monitors at the top and control equipment such as computers, video matrix joystick, intercom master, telephones, radio equipment and elevator control panel down below.



D. Proposed Action Plans (PAP's)

The following proposed action plan presents both a general reference and specific action in response to the findings from the site Limited Physical Security Threat and Vulnerability Assessment process. Depending on current business activities or future occupancies, some of the actions could be avoided. The type of activities conducted influence the level of protection needed. Added focus on two primary areas of a security program being physical security and electronic security will make a significant difference in the effectiveness of security and safety at this building.

Physical Security

The physical security of the building site while being in an urban area presents vulnerabilities by the nature of the business activities carried out at this location. Those activities reflect what is considered a high profile activity. As a government building and a business function that many find intrusive, the building becomes a target with higher than normal probabilities of attack. Having had a prior major deadly incident at the site also raises the bar from an historical and foreseeability perspective. This location is currently on notice that bad things can happen here and appropriate countermeasures need to be in place.

1. A “set-off” distance where vehicles cannot get close to the buildings needs to be created especially on the corner of “N” Street and 5th Street. This action should also be considered for the corner of 4th Street and “O” Street but not at the same high priority. This “set-off” distance can be accomplished by converting the vehicle parking lane into an additional clear area. This would necessitate the removal of parking and the area would need to be properly landscaped and have installed vehicle anti-ram bollards along the regular vehicle travel lane and accessible points to the “set-off” area. The entire area between the street traveling lane and the building should also be a clear zone with landscaping berms included along with US Department of States (DOS) rated K-8 vehicle anti-ram barriers (See Appendix 3-B).
2. The exterior glass shell of the building presents a hazard from an explosive blast as well as a potential for shattering from the effects of an earthquake. The use of

- protective film or glazing is a method to reduce the potential harm from this type of vulnerability. The use of this protection should be considered for implementation (See Appendix 3-D).
3. The perimeter of the parking garage should be closed-off at the sidewalk line. This can be accomplished by the use of 9 gauge, steel mesh from the ground to the ceiling and with the use of high-speed, overhead, vehicle door or grate for exiting vehicles (See Appendix 3-E). A high-speed, overhead door at the entry points controlled by the security officer will allow for entry. External card readers and intercoms at the street access point can provide authorized activation prior to entry into the garage. A vehicle bollard system should be installed at the entry points of at least a K-4 rating. The enclosure would need to be form fitted around the SW emergency stairwell.
 4. The existing wall around the child care play yard should be replaced with at least a 10 foot high wall and have no viewing into the yard from ground level.
 5. The ground level area where the SMUD connections are located on 4th Street near the SW corner on the clear area and on the East side need to have building locks on them.
 6. The ground level perimeter doors on the 4th Street side need to have the hinges welded, and the aluminum door vents replaced with steel vent blades.
 7. All entries into the high rise building and other secured controlled areas need to be filtered through the lobby area. All other employee access points should be removed from card access profiles except for security and maintenance personnel.
 8. The loading dock area access door needs to be utilized only for allowing truck drivers into the loading dock. Dock and mailroom operations personnel need to enter and leave via the lobby. Reconfiguring the washrooms adjacent the mail processing room and external access to it via a card reader adjacent the 1st floor garage elevator bank with a corridor wall needs to occur. The current card reader door and access to the washroom would be for truck driver use only.
 9. The 2nd floor, parking garage access point into the building by the exclusionary work area, cashiers unit where mail is brought in for processing of the paperwork and accompanying payment instruments needs to have a secondary control. A man-trap with a two step process whereby one door will not open until a second door is secured with the operation controlled via the main lobby guard station needs to be constructed.
 10. Access into the Loading Dock and Parking Garage from 4th Street is protected by a metal, overhead, roll up/down gate. The speed at which this gate proceeds either upward or downward allows for the piggy-backing of vehicles or pedestrians into the interior of the building. This gate needs to be replaced with a high-speed door and left in the closed position when no vehicle is moving in or out of it (See Appendix 3-E).
 11. The egress out of the 2nd level of the garage via a ramp that is always open when the garage is operating also allows for unobserved access into the garage. This overhead grate needs to be replaced with a high-speed door at the perimeter of the building opening on "O" Street (See Appendix 3-E). NOTE: This location is dependant on #3 above being implemented.

12. Access into the Parking Garage from “O” Street is currently open at the building line at all times. The door being removed in #10 above could be relocated here as the opening/closing process is not as critical due to direct observation of the opening by the parking attendant.
13. The relocation of the security attendant booth to a point immediately adjacent the entrance into the garage should be accomplished.
14. The installation of a wood gate barrier arm should be placed inside the garage entrance and controlled via a card reader that allows authorized user of the garage to raise upon presenting their access card.
15. The installation of two retractable vehicle anti-ram bollards should be installed at a point 20 feet inside the garage entrance. These both would be operated as one and controlled remotely by the parking lot attendant.
16. The lock and key system used for the BOE Building that is manufactured by “Russwin” and installed at the time the building was built has been compromised. Identifying who has what keys, where are all the keys, how many master keys have been made are unknown as well as the process/codes to make keys has been stored in an unsecured area. The exterior and interior lock and key system needs to be replaced.
17. A lock and key system software needs to be put in place after the building has been re-keyed for administrative maintenance of the keys produced, issued, recovered, lost or stolen. An annual audit process of keys and their assignments versus those manufactured and on-hand needs to be established with responsibility fixed. A process for replacing the sub-master and corresponding keys needs to be put in place for changing sub-systems that potentially are compromised.
18. The lobby entryway doors into the secured area (elevator banks and core support offices) needs to be modified. Currently, the use of a door for entry and exiting allows for the “piggy backing”, simply entering a door that an individual has exited through or rushing forcefully through during the entry or exit. These doors on each side of the Main Lobby Guard Station need to be replaced with security revolving turn-stiles equipped with card readers (SEE APPENDIX 3-C).
19. A working alternate process for issuing temporary access cards needs to be instituted. This would allow for the issuance of a special limited access card that would be issued to all those currently receiving a temporary paper ID. This would then ID who went through the secured area.
20. The main lobby guard station needs to have the HVAC support for this room modified so as to create a workable climate controlled environment without the need to leave its security door open.

Electronics Security

Main Lobby Guard Station Security Console

21. The console is not ergonomically configured but it is functional. Reconfiguration of the CCTV equipment at the console to overcome the ergonomic concerns with the current CCTV monitor layout should occur. Additionally, an increased level of integration between the CCTV, alarm and access control systems will help reduce the monitoring load.

Security CCTV System

22. Interior cameras mounted without housings inside the building are easy targets. They can be removed, disconnected or turned away from its target. As cameras fail, they need to be replaced with vandal resistant mini-dome cameras. Exterior cameras that are mounted fairly low (such as the ones in the parking structure) are mounted inside traditional housings that can also be turned away from the direction it is pointed and as such can be easily defeated. These need to be replaced with vandal and weather resistant dome cameras for these areas. The existing cameras are cost effective cameras and deliver acceptable video.
23. The inconsistent placement of cameras and the non-uniform lighting within the parking were noticeable. For example, in the parking structure, on the lower floors, some cameras were pointed to the stair doors, while at the roof level they were not. On the tower side, elevator lobbies had one camera at each level, while none were monitoring the stair doors.
24. The existing matrix switcher is functional and it is considered one of the best on the market. Continue usage of this switcher until such time it is decided to upgrade the system to an I.P. based video system.
25. The DVR's are functional and their usage should continue until they fail or until an I.P. based video system is adopted at which point they will be replaced with network video recorders (NVR).
26. Continue usage of the monitors is appropriate until there is an upgrade to an I.P. based system.
27. Newer CCTV systems deploy IP cameras and Network Video Recorders (NVR) which makes use of the corporate data network. These systems leverage the existing data network backbone, reduce system deployment costs and move system away from proprietary platforms into the "open" IP platform. The existing system, despite being a generation old from a technology perspective, is functional. If and when it does fail, an end to end I.P. video system should be adopted. I.P. video systems include "native" I.P. cameras, NVRs with storage devices from recording video, Gigabit POE switches and client computers to control and display live or recorded video. Newer systems also make use of higher resolution Megapixel cameras and higher resolution monitors for better identification and recognition.
28. The replacement of interior cameras with mini-dome type cameras and repair of two cameras that could not be displayed at the console during the assessment need to occur. Otherwise, the continued use of the existing CCTV system is adequate for an "office building" environment.

Security Access Control System

29. The access control system, CCURE platform, is one of the best security access control platforms on the market. The existing system does not make use of the latest hardware and software that the manufacturer produces, but it is still a good functional product. The readers and cards used in this system are not the most secure formats, but they are the industry standard and if managed well, could be fairly secure. The system does not have any built in redundancies but then most office buildings do not.
30. A large populated building of this size should consider a back-up server, a sophisticated back-up system along with a sophisticated archive maintenance program and smart card technology going forward. Based on availability of funding, an automated visitor management system should also be included.
31. Additional areas that might be considered for adding card readers to close security gaps are:
 - Garage Level 2 - At the new proposed man-trap configuration where mail is received internally and the follow-up on-going processing and payment receipts.
 - Computer Room - Within the Computer Room on the door leading into where the storage of sensitive equipment is maintained.
 - First Floor – Security System Rack and panel room door.
32. Service Elevator -The service elevator reader mounting height is not ADA compliant.
33. Turnstiles - The turnstile top directional indicator and the housing is falling apart and needs replacement.
34. Bolt Locks - Bolt locks are not compliant with current life safety codes since they do not provide a mechanical way of egress and need to be replaced with approved alternate hardware.

Intrusion Sensors

35. Many areas throughout the building's exterior and interior are unprotected from unauthorized entry and have NO intrusion sensors protecting them.
36. A determination needs to be made if the "Knox Box" is being monitored by the alarm system. If it is not, the box needs to be attached to an intrusion alarm point.
37. The ground level area where the SMUD connections are located on 4th Street near the SW corner on the clear area and on the East side need to intrusion contacts installed.
38. The ground level perimeter doors on the 4th Street side need to have to intrusion contacts installed.
39. Multiple sensitive areas and/or offices exist within the building that should have additional intrusion sensors placed on them for monitoring. BOE Internal security is aware of those areas.

Remote Call Stations

40. The parking garage is an isolated space and the potential exists for users of the space to need assistance from time-to-time whether it is a medical emergency, a

suspicious person, an assault, or something else. Remote call stations should be installed on floors each floor with floors 2, 3 and 4 having at least four on each of the floors (SEE APPENDIX 3-F)..

Electronic Maintenance

A quarterly maintenance program should be instituted to prevent the security systems from becoming ineffective.

41. The current security system be tested and repaired in accordance with the equipment manufactures literature and manuals or as required due to functioning issues.
42. During the assessment, there were missing alarm contacts; glass break detectors, that appeared to be out-of-order; door locks that were not latching or locking properly; cameras that were not displaying any video. All these are maintenance and repair issues need to be addressed separately before looking into system enhancements and upgrades as these deficiencies create electronic security system coverage gaps.

Concluding Electronic Security Systems Observations

43. The existing electronic security systems, if fully maintained, are adequate for the type of building they are installed in. The equipment in all cases is not the latest technology but is functional. In addition to the repairs and suggested system enhancements, if implemented, should provide the kind of security commensurate with the environment and industry standards.

APPENDIX 3-A

CAPbasic

SITE REPORT 1:3

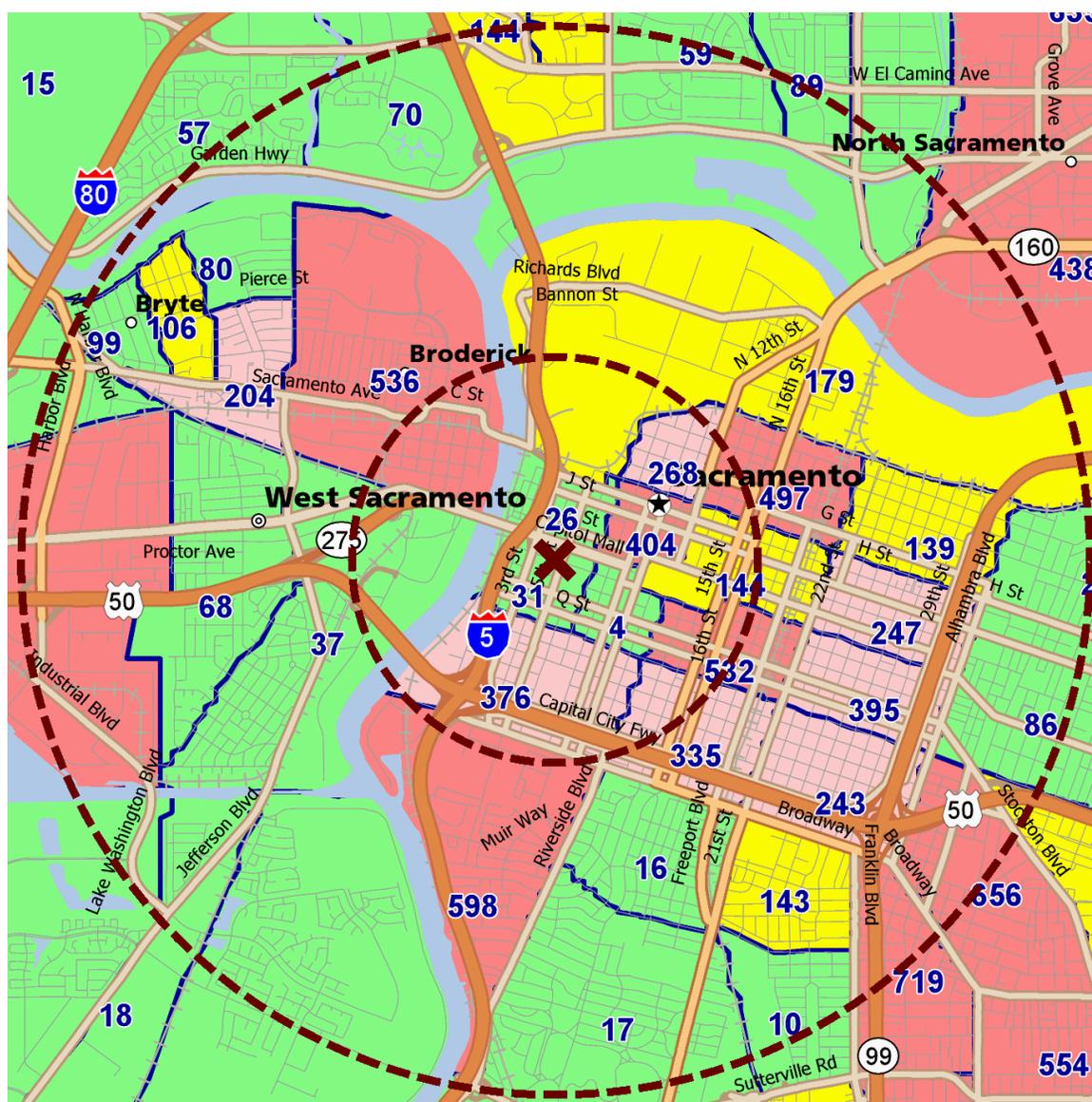
Site Report Map

Marquis Systems, Inc
450 N Street
Sacramento, CA 95814-4311

This Site's National CAP Index

Lat: 38.5778, Lon: -121.5027

477



APPENDIX 3-A continued

Marquis Systems, Inc
450 N Street
Sacramento, CA 95814-4311

Lat: 38.5778, Lon: -121.5027

This Site's National CAP Index 477

Current Scores (2008)	National	State	County
CAP Index	447	285	343
Homicide	137	125	185
Rape	298	206	378
Robbery	505	313	349
Aggravated Assault	336	218	380
Crimes Against Persons	355	229	341
Burglary	423	179	356
Larceny	394	268	366
Motor Vehicle Theft	190	138	172
Crimes Against Property	371	225	336

Past Scores (2000)	National	State	County
CAP Index	456	298	352
Homicide	128	117	169
Rape	272	192	336
Robbery	520	330	362
Aggravated Assault	321	215	361
Crimes Against Persons	358	237	344
Burglary	425	173	344
Larceny	397	272	361
Motor Vehicle Theft	184	139	172
Crimes Against Property	376	227	334

CAP Index	National	State	County
Past - 2000	456	298	352
Present - 2008	447	285	343
Projected - 2013	445	279	336

Future Scores (2013)	National	State	County
CAP Index	445	279	336
Homicide	140	125	186
Rape	311	211	392
Robbery	515	314	350
Aggravated Assault	342	218	397
Crimes Against Persons	365	231	353
Burglary	424	181	361
Larceny	391	264	369
Motor Vehicle Theft	197	140	177
Crimes Against Property	373	226	342

CRIMECAST scores range from 0 to 2000 and indicate the risk of crime at a site compared to an average of 100. A score of 400 means that the risk is 4 times the average and a score of 50 means the risk is half the average.

Notes:

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CRIMECAST®

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APPENDIX – 3-B BOLLARDS

EXAMPLE ONLY



Delta Scientific Corporation

Corporate Headquarters
Delta Scientific Corporation
24901 West Avenue Stanford
Valencia, CA 91355
Phone (661) 257-1800
Fax: (661) 257-0617
info@DeltaScientific.com



APPENDIX – 3-C REVOLVING DOOR

EXAMPLE ONLY



The High Security Revolving Door



- Automatic operation**
- Anti-Tailgating**
- Anti-Piggybacking**
- Simultaneous 2-way Traffic**
- Pedestal for mounting of external card**
- External control panel for integration in the reception desk**
- Fail-Safe**
- Battery Backup**
- Bullet Resistant (U.L. 1 or 3)**
- Ceiling lighting with halogen lamps, 4 lights for the Tourlock**
- Matwell trim for mounting in the floor, or surface mounted**
- Fire Alarm Operation**
- Remote Control Panel**

APPENDIX – 3-D BOMB RESISTANT FILM

EXAMPLE ONLY



Scotchshield™ Ultra Safety and Security Window Films

These safety and security window films are made using the patented micro-layered polyester film from 3M. They offer significantly more tear and penetration resistance strength than conventional PET films.

Physical Properties

	SCLARL150	Ultra 400 Series *	ULTRA600
Film Thickness	.002 inches nominal (.051 mm)	.004 inches nominal (.1 mm)	.006 inches nominal (.152 mm)
Micro-layers	13	26	39
Graves Area Tear¹	> 340 Lbs. % (> 155 kg %)	> 780 Lbs. % (> 355 kg %)	> 1,150 Lbs. % (> 523 kg %)
Young's Modulus²	> 500k PSI (> 3.45x10 ⁹ pascals)	> 500k PSI (> 3.45 x10 ⁹ pascals)	> 500k PSI (> 3.45 x10 ⁹ pascals)
Tensile Strength	30,000 PSI (2.07x10 ⁸ pascals)	30,000 PSI (2.07x10 ⁸ pascals)	30,000 PSI (2.07x10 ⁸ pascals)
Break Strength	60 Lbs. per inch width (10.7 kg/cm)	120 Lbs. per inch width (21.4 kg/cm)	180 Lbs. Per inch width (32.1 kg/cm)
Elongation (Stretch)	140%	140%	140%
PPT (Puncture Propagation Tear)³	2.0 Lbs. (.91 kg)	8.7 Lbs. (4.0 kg)	19.2 Lbs. (8.7 kg)
Safety Impact Tests CPSC 16CFR ANSI Z97.1	Category I (150 ft. lbs.) Unlimited	Category II (400 ft. lbs.) Unlimited	Category II (400 ft. lbs.) Unlimited
Adhesive Strength After Weathering⁴	> 2,500 grams per inch (>984 gr/cm) > 3,500 grams per inch (>1,378 gr/cm)	> 2,500 grams per inch (>984 gr/cm) > 3,500 grams per inch (>1,378 gr/cm)	> 2,500 grams per inch (>984 gr/cm) > 3,500 grams per inch (>1,378 gr/cm)
Abrasion Resistance⁵ (100 cycles)	< 6% Change in Haze	< 6% Change in Haze	< 6% Change in Haze
Surface Burn Characteristics⁶	Class A Interior Use	Class A Interior Use	Class A Interior Use
Building Code Compliance	BOCA	BOCA	NA

* The Ultra 400 Series includes the following films:
SCLARL400, S20SIAR400, S35NEAR400, & S50NEAR400

APPENDIX – 3-E HIGH SPEED DOOR

EXAMPLE ONLY



RapidRoll® 3000

**THE FASTEST ROLLING METAL
HIGH PERFORMANCE DOOR ON
THE MARKET**

- Fast opening and closing speeds save on utility costs by reducing loss of heating and cooling energy.
- Patented DiscDrive technology prevents metal to metal contact reducing excessive wear, vibration and noise in high-cycle door operations.
- Contactless Safety Edge® detects an object in the door path and reverses the door before the bottom edge can make contact.
- The sleek aluminum door design and additional color choices give the door a pleasing appearance.

**RELIABLE PERFORMANCE!
RapidRoll® 3000!**

The image shows a white, horizontally-slatted rolling metal door partially open, revealing a glimpse of a store interior with shelves. The door is set within a metal frame. To the right of the door is a blue informational panel with white text.

<http://www.albanydoors.com/admin/files/20061012210538.pdf>

Albany Door Systems
975-A Old Norcross Road
Lawrenceville, Georgia 30045
Tel 800-252-2691
Fax 770-338-5024

APPENDIX - F EMERGENCY PHONE

EXAMPLE ONLY



ETP-WM Emergency Wall Mount (shown with [ETP-400D](#))

Features

- Attention-getting blue light/strobe included and mounted behind polycarbonate window: blue light is continuously lit, strobe is activated when Emergency button is pressed and flashes for duration of call.
- Faceplate is lit at all times by ultrabright LEDs
- Radius front corners provide contemporary architectural styling
- Talk-A-Phone 400-Series flush mounting Emergency/Information Phone is recessed into unit (order separately).
- ADA-compliant

Mailing Address: 5013 N. Kedzie Ave. Chicago, IL 60625-4988

Phone Number: 773-539-1100

Fax Number: 773-539-1241

E-Mail Address: info@talkaphone.com

