2017

Results of the Safety and Security Audit

for the Fort Bend Independent School District

PREPARED AND SUBMITTED BY:

GIBSON

AN EDUCATION CONSULTING & RESEARCH GROUP

Content

Introduction

School facilities should be designed, operated, and maintained to provide a safe environment that supports an effective learning experience for students. From the transportation that takes students to and from school facilities to the classrooms, play areas, and assembly spaces they occupy, the underlying physical facility features, technology, processes, and personnel all play a part in ensuring safety and security on a daily basis.

This report presents the results of an internal audit of the Fort Bend Independent School District's (FBISD) safety and security functions with particular emphasis on the safety of school facilities. This audit was conducted by Gibson Consulting Group, Inc. (Gibson) of Austin, Texas and its facilities subcontractor Facilities Engineering Associates (FEA). PMCM^2, Gibson' subcontractor for construction management, assessed needed changes for construction design standards based on the results of the school safety and security assessments.

Audit Objectives and Approach

The objectives of the audit were to answer fundamental questions about the existing safety and security program including:

- Are facility and equipment needs for safety and security identified and met?
- Has the district obtained periodic safety and security audits of its facilities every three years as required by law?
- Does the district have board approved policies guiding the operations of a safety and security program?
- Is the district and its schools complying with board policy with respect to safety and security?
- Are safety and security practices consistent across schools?
- Is the safety and security function appropriately organized and staffed to provide effective and efficient service levels? How does the district police department interface with other safety and security staff?
- Do district staff receive appropriate professional development on safety and security matters?
- How does management use data to support its allocation of resources for safety and security? Is the data reliable?
- Does the district have documented procedures for safety and security, including emergency procedures?
- Does the district routinely measure perceptions of safety and security through surveys of students and staff?

The approach to this audit involved the analysis and triangulation of data from multiple sources, including district-provided data (see the data request list in Appendix A), facility safety assessments of selected schools, and interviews with school and central office staff.

At each school, staff interviews were conducted with the school principal and vice principal, administrative assistants, the receptionist, teachers, custodians, and the cafeteria manager (see the complete interview roster in Appendix B). A safety and security protocol was completed for each school visited based on observations by the audit team and interviews with school staff.

It is important to note that a convenience sample of schools sites were selected for this audit. As such, the results contained in this report are not intended to be comprehensive in nature but rather point to areas in need of improvement that should be addressed by district management.

The results of the school visits, along with district interviews, were used by the audit team to develop findings and recommendations contained in this audit report.

Background

With an estimated 71,000 students and 6,000 more expected by 2018, FBISD is the seventh largest public school system in the state of Texas and the largest employer in Fort Bend County, employing more than 9,000 district employees. The district spans 170 square miles. Across the district there are:

- 11 high schools
- 14 middle schools
- 48 elementary schools
- 3 specialized schools

FBISD issued a Safety and Security Master Plan Proposal dated July 22, 2014. The proposal was organized around the 2013 Best Practices Guide published by the Council of Educational Facilities Planners International. That guide was divided into four major components: infrastructure, crisis communication, staffing, and procedures. The FBISD Master Plan Proposal adopted these components into a specific plan that addressed the needs at each of the district's schools providing equipment and staffing needs and costs across the four major components.

Several FBISD Board policies govern the safety and security of the district. Below is an overview of the key policies. Legal policies are those required by state law; local policies are additional policies not required by law but adopted by the FBISD Board of Trustees.

- Policy BR (Legal) states that the district must conduct a safety and security audit at least once every three years and report the results to the Texas School Safety Center, under Education Code 37.108.

- Policy CK (Legal) outlines how the district should establish a school safety and security committee to develop and implement emergency plans consistent with the district multi-hazard emergency operations plan.
- Policy CK (Local) outlines that the Superintendent or designee shall be responsible for developing, implementing, and promoting the comprehensive safety programs.
- Policy CKC (Legal) states that the district shall adopt and implement a multi-hazard emergency operations plan for district facilities. The plan must address mitigation, preparedness, response, and recovery.
- Policy CKC (Local) states that the Superintendent shall ensure updating of the district's Emergency Operations Plan and ongoing staff training.
- Policy CKE (Legal) describes that the board may employ security personnel or commission peace officers and should determine the officer's jurisdiction.
- Policy CKE (Local) establishes that the Board authorizes the formation of the districts police department and shall employ and commission police officers with a jurisdiction within district boundaries.
- Policy CLA (Legal) states that the Board may adopt rules for the safety and welfare of students, employees, and property and other rules it considers necessary to protect and govern the district. This policy also outlines that identification may be required of any person on school property. The Board or its designee may refuse to allow persons on campus.
- Policy DMA (Legal) outlines the extracurricular safety training and documentation requirements for district employees.
- Policy GKC (Legal) states that the district may require persons who enter campuses to display a form of identification issued by the government. The district may establish an electronic database of visitors to be used for security purposes.
- Policy GKC (Local) states that notices must be posted at each campus requiring visitors to report to the administrative office. This applies to all visitors.
- Policy GRAA (Legal) describes that a principal or designee shall notify local law enforcement if the principal has reasonable grounds to believe that an illegal action or crime has taken place on school property or school-related activity.

FBISD Board policies and the Texas Education Code were used and referenced during the execution of this audit.

School Safety and Security Assessments

Security at a facility involves a combination of operational procedures, equipment, and situational factors that together create an environment that is difficult to overcome without deterrence, delay, and

detection. No single element in a security system will prevent a situation from occurring; however, layering of security elements creates an environment that promotes overall security.

The school specific assessments focused on physical building elements. Modular buildings used as classrooms were considered part of the main school building and were included on that building's score sheet. Safety and security assessments were conducted at the following 10 FBISD schools judgmentally selected by the audit team.

Table 1. Schools Assessed

School	Location
Colony Meadows Elementary	Sugar Land
Dulles Elementary	Sugar Land
Lakeview Elementary	Sugar Land
Madden Elementary	Richmond
Ridgegate Elementary	Houston
Ridgemont Elementary	Houston
Scanlan Oaks Elementary	Missouri City
Bowie Middle	Richmond
Sugar Land Middle	Sugar Land
Dulles High	Sugar Land

Source: Gibson Consulting Group, Inc.

The school specific security assessments were conducted using structured protocol developed by FEA. The assessments considered a total of 73 security elements associated with the physical buildings and site characteristics at each school. The security elements in the protocol were grouped into seven broad categories, organized in accordance with the uniform classification construction systems and assemblies (UniFormat™). These categories, along with the number of evaluation elements in each category, are presented in Table 2.

Table 2. Security Element Categorization

Designation	Security Category	Total Number of Elements
D7100	Locking Systems/Hardware	10
D7200	Access Control	17
D7300	Communication Systems	11
D7400	Site and Perimeter	10
D7500	Video Surveillance	6
D7600	Building Systems	10
D7700	Egress and Refuge	9

Source: FEA

The categories assessed were inclusive of the FBISD Division 28 Safety and Security construction standards. The FBISD standard has 5 sections: 28.00.00 Electronic Safety and Security, 28.10.00 Electronic Access and Intrusion Detection, 28.20.00 Electronic Surveillance, 28.30.00 Electronic Detection and Alarm, and 28.40.00 Electronic Monitoring and Control. In addition to the electronic security and safety elements considered under Division 28, the assessments evaluated elements of the site, the building systems, and areas of egress and refuge. Appendix C contains these assessments of the district's construction standards.

To perform the school specific security assessments, the audit team applied scoring procedures to each of the 73 security elements. The scores were developed to reflect both the presence and functionality of a particular security element. The general scoring approach, based on a ranking of 1 to 5, is described in Table 3.

Table 3. Security Element Scoring Protocol

Score	Adequacy Description	Level of Functionality
5	Excellent	100% present and functional
4	Good	< 100% and ≥ 75%
3	Fair	< 75% and ≥ 50%
2	Poor	< 50% and ≥ 25%
1	Failure/Crisis	< 25%

Source: FEA

Some of the security elements were not evaluated over the full grading scale where "yes" or "no" were the only clear and reasonable options. For example, the presence or absence of a law enforcement lock box at each facility was evaluated as either "5" present or "1" absent. In some instances, the scoring was developed for a "condition specific" scaling such as "5" for a single point of visitor entry, "3" for more than one visitor entry all of which are monitored, and "1" for one or more visitor entry that are not monitored. For this example, a score of 2 or 4 was not used.

Through performing these assessments, conducting interviews of district staff, and reviewing district provided data, the audit team identified several best practices as well as findings and recommendations, summarized in the section below.

Audit Summary

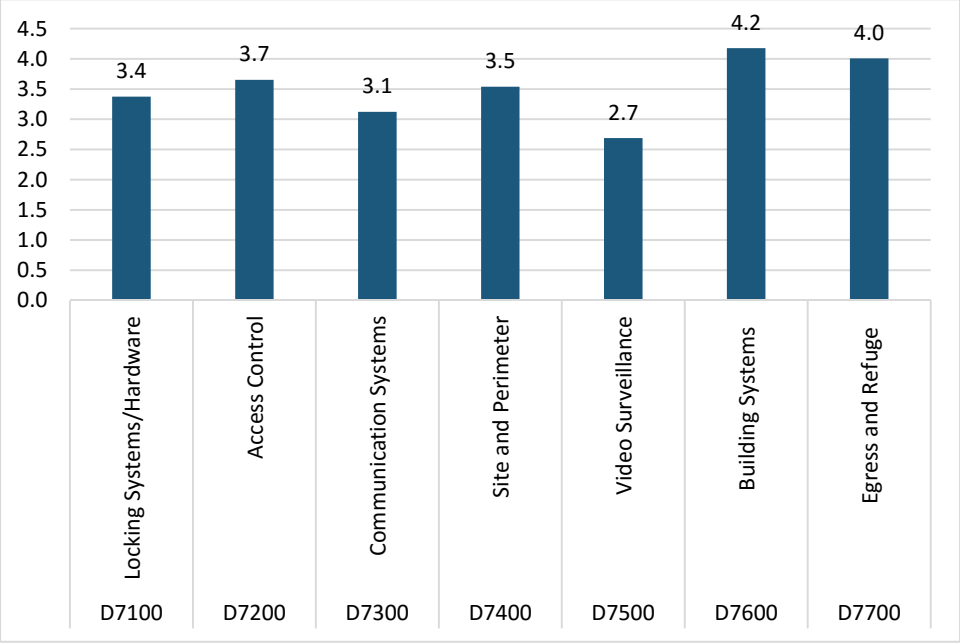
The audit identified several best practices in place in FBISD schools. Most of the schools visited:

- Had clear lines of sight and a high degree of visibility on school grounds through good site landscaping practices. This allows unobstructed surveillance by staff, neighbors, pedestrians, and patrol cars.
- Contained master ventilation switches that can be shut-off to limit potential damage in the event of a toxic gas release.

- Contained utility system master switches that can be used to shut-off water, gas and electricity, preventing potential damage from comprising other building systems.
- Had fresh air intake systems that are located out of reach, were removed from the system exhaust, and limited access through restrictive coverings. This helps to prevent a perpetrator from releasing a toxic substance into a ventilation system.
- Contained lockable areas adjacent to gathering places where students and staff can take refuge to give law enforcement time to respond during emergency situations.
- Contained push bar exit devices resistant to chaining. This helps ensure that such exposed features cannot be used to place a chain around and restrict the exiting of occupants.

Overall, the average scores for security categories ranged from 2.7 for video surveillance to 4.2 for building systems. Figure 1 below displays the average scores of the ten selected schools assessed for each of these security categories.

Figure 1. Average Scores by Security Category



Source: FEA

Video surveillance and communication systems were noted to be areas of security that could use the most improvement. For surveillance, comprehensive coverage was generally lacking at the building perimeter and parking areas; district plans to purchase additional surveillance equipment have been delayed due to funding constraints. Accordingly, no separate recommendations are made in this report with respect to these planned purchases of surveillance equipment.

In the category of communication systems, the office location of the security enforcement officer (where present) was often not positioned such that the officer had direct sight of main corridors or front entry.

Additionally, interior directional signage to key areas was generally not present. These are conditions that could be improved with minimal funding expenditures.

This report contains 17 recommendations to improve safety and security at FBISD. Table 4 presents the audit recommendations for school facilities (by security area), for management and organization of the district's safety and security function, and other recommendations relating to the safety and security function. The district may wish to assess other possible actions to improve safety and security based on the detailed assessments contained in this audit report.

The district should evaluate the cost of additional safety and security measures against the risk of not implementing the measure. Additional safety and security measures can always be implemented, but school systems including FBISD have limited funds to allocate for this purpose. The information contained in this audit report should help FBISD evaluate these risks.

Table 4. Summary of Recommendations

No.	Recommendation
	SCHOOL FACILITIES
Locking Systems Hardware	
1	Standardize locking systems and enhance door closure mechanisms at each facility.
2	Provide key lock boxes at each facility and access to the box for potential emergency responders.
Access Control	
3	Ensure secured vestibules are installed at all district facilities.
4	Enhance the processing of visitors at all district facilities.
5	Increase the means of securing outside areas by district staff during student activities.
6	Install fencing around all portable campus units so that access can only be gained through the main entrance.
Communication Systems	
7	Develop a comprehensive methodology plan and install external signaling devices at all schools to alert students and staff of an event.
8	Perform regular audits of the Raptor Software system to keep contact information up to date.
9	Update exterior door signage using a sequential numbering scheme so emergency responders can easily identify areas during an emergency.
Site and Perimeter Systems	
10	Add dedicated security parking to all campuses.
	MANAGEMENT AND ORGANIZATION
11	Implement an electronic system for reporting incidents in order to track and exchange information.
12	Develop and track key performance indicators to aid in the allocation of resources.
13	Increase police patrol staffing across campuses, specifically at elementary schools.
14	Implement safety and security trainings and briefings for all staff members.

No.	Recommendation
	OTHER
15	Perform drills for specific emergency situations.
16	Review and update the district Emergency Operations Plan (EOP).
17	Revise the district's Construction Standards.

Table note: Priorities were not assigned to recommendations made as a result of this audit as all recommendations should be considered a high priority for implementation planning.

The remainder of this report presents additional information about each of the above recommendations in the following sections:

Section 1 – School Facilities
Section 2 – Management and Organization
Section 3 – Other Findings and Recommendations

Section 1 – School Facilities

This section provides the detailed results of the safety and security audits conducted at the 10 FBISD schools. Results and applicable recommendations are presented for each of the security areas.

1 – Locking Systems Hardware (D7100)

Ten elements of locking system hardware were evaluated within this category. Table 5 contains a description of each element and the average score of all 10 schools assessed. Following the table is a summary of the results.

Table 5. Locking Systems/Hardware Elements

Locking Systems/Hardware Element	No.	Description	Average Score
Classroom Door Locks	D7101	Classroom doors have commercial grade locking mechanisms	4.3
Classroom Inside Locks	D7102	Classroom doors that lock from the inside with a key	1.4
Exterior Door Locks	D7103	Presence and functionality of exterior door locks	4.2
Exterior Window Latches	D7104	Latching capabilities to deter, delay, and/or prevent unauthorized building access	*
Door Keying Systems	D7105	Presence of a patented key system to prevent unauthorized individuals from duplicating keys	3.2
Exterior Door Position Switches	D7106	Door position switches present and send an electronic signal to assigned personnel	1.6
Exterior Window Position Switches	D7107	Window position switches present and send an electronic signal to assigned personnel	*
Law Enforcement Lock Box	D7108	Key lock box present to enable emergency responders to access building keys	3.0
Exterior Door Perimeter Lockdown	D7109	Electronic locking system that provides full perimeter lockdown of all electrified locks from a central location	5.0
Exterior Door Hinges	D7110	Presence of tamper resistant door hinges	4.3

Source: FEA

Table Note: *Elements were not scored due to the presence of sealed, non-operable windows

Classroom Door Locks: With the exception of one elementary school, all classroom doors had commercial lock sets. One elementary school had an open floor plan that combined some classes into a large overall area.

Classroom Inside Locks: Only one middle school assessed had classroom door lock sets that are capable of locking with a key from the inside.

Exterior Door Locks: Exterior door locks were found to be generally functional at all the schools assessed although most schools have one or more exterior doors that do not fully self-close when operated. This could be the result of misalignment or inadequate closure force.

Door Keying Systems: A mixture of locking systems were observed across the schools assessed. There is an on-going effort across the district to coordinate lock sets with a single vendor. The new key system will be a patented system.

Exterior Door Position Switches: Exterior door position switches[1] were used on most of the exterior doors at two elementary schools. All other schools assessed did not use exterior door position switches.

Law Enforcement Lock Box: Several of the schools assessed did not have an exterior lock box for law enforcement personnel.

Exterior Door Perimeter Lockdown: All schools were capable of locking electrified exterior doors from a central location.

Exterior Door Hinges: Only one elementary school had more than twenty-five percent of the exterior doors without tamper resistant door hinges. All other schools assessed had tamper resistant exterior door hinges.

Findings and Recommendations

Finding: Locking systems and door closure mechanisms are insufficient. As noted in the results above, exterior door locks and door positions switches received average scores of less than 2 out of 5. Only a few schools had above average scores for these security elements. In addition, the audit team identified instances where doors would not close under the force of the closure mechanisms.

Recommendation 1: Standardize locking systems and enhance door closure mechanisms at each facility.

Through conducting on site assessments the audit team noted that most classrooms have commercial grade manual or electronic locks on classroom doors; however, the lock sets predominantly lock only from the outside. This creates a potential situation where doors could be locked or unlocked unintentionally. There is also the potential for a teacher to be standing in an observable common area while attempting to lock the classroom door.

The audit team also noted that several doors do not close under the force of the closure mechanisms. This could occur as a result of poor alignment or insufficient power in the closer mechanism to overcome building air pressure. Since most doors are also not equipped with position switches, there is a potential for exterior doors to be ajar. Exterior door closure mechanisms and door alignment should be a high

[1] Exterior door position switches are used to detect the open or closed status of the door, and send a signal to a control panel indicating this status.

priority maintenance issue. All exterior doors should self-close and lock, as well as contain exterior position switches.

One of the district's upcoming initiatives is to standardize manual and electronic locks; however, a comprehensive plan has not yet been established. The district should create a detailed plan and standardize all locks, ensuring that doors properly lock from the inside and outside. Exterior door positions switches should be installed for all doors and door closure mechanisms should be operational. All of these locking policies should extend to the portable classroom units where they exist.

Management Response: *Staff agrees that classroom doors should remain in a locked position and either closed during instruction time, or slightly ajar due to HVAC air flow issues. A continually locked door allows any person to quickly pull the door shut from the inside without being exposed to a threat in the hallway. Exterior doors should be inspected by staff on a regular basis and those that do not close under the force of the closure mechanisms should be addressed through the work order system.*

A Request for Proposal (RFP) #17-020CC for District Rekeying Services will be released in February 2017 to solicit proposals for the replacement of all high security conventional cylinders with patented restricted small format interchangeable cylinders at existing FBISD facilities. The approximate total number of lock conversions is 3000 units and the contract period shall be for a period not to exceed two years from the day of executed contract. Presentation to the Board of Trustees and the award of the contract is expected in July 2017.

Finding: Exterior lock boxes for law enforcement personnel were missing from multiple schools assessed. The law enforcement lock box element of Locking Systems Hardware received an average score of 3 out of 5 as several schools observed did not have these exterior lock boxes.

Recommendation 2: Provide key lock boxes at each facility and access to the box for potential emergency responders.

A key lock box is important as it enables emergency responders to access building keys in a storage container at a strategic location (i.e., main entry) so they can quickly enter the facility in an emergency. The district should provide these lock boxes at all facilities.

Management Response: *Staff agrees with the recommendation that first responders need access to schools in an emergency. A plan to install lock boxes for first responders will be developed based on this recommendation. The Facilities Department estimates that all District facilities will have a lock box by September 2017.*

In the meantime, FBISD Police Dispatch has the ability to remotely unlock any exterior door that has electronic access control. Therefore, if any first responder is dispatched to a school, they can request to make entry into a building via the police radio and FBISD Dispatch can instantly unlock the electronic mechanism through our WinDSX Access Control Program.

2 – Access Control (D7200)

Seventeen elements related to building access were evaluated within this category. Table 6 contains a description of each element and the average score of all 10 schools assessed. Following the table is a summary of the results.

Table 6. Access Control Elements

Access Control Element	No.	Description	Average Score
Point of Entry	D7201	Single visitor point of entry is present and entering visitors are monitored	4.8
Secured Vestibule	D7202	A secured (lockable at the inside doors) vestibule present at main entry, observable by staff with communication	2.7
Entry Control Systems	D7203	Electronic access control system at the main entry consisting of a card swipe, key fob, or electronic key pad system capable of identifying the user	4.2
Visitor Management Systems	D7204	Management system in place with photographic identification held during the visitation, in exchange for issuance of a badge on a colored, breakaway lanyard. A record of the visit is kept.	3.0
Visitor Management Software	D7205	Presence of software system to record and check visitors against registered sex offender databases.	5.0
Entry Control Other Than Main Entry	D7206	Electronic access control system at all entry points other than the main entry	5.0
Main Office to Main Entry Visibility	D7207	Direct line of sight from main office to main entry	4.8
Office Visibility to Corridors & Stairs	D7208	Lines of site from the main office to the corridors and stairs	1.0
Office Counter Height	D7209	Main office counter provides an enclosed area for staff with secondary refuge	3.8
Bullet-Resistant Glass at Entry	D7210	Utilize bullet-resistant glass at main vestibule and interior classroom doors and windows	1.6
Interior Doors / Gates	D7211	Areas outside the main office/entry area can be isolated by lockable gates or interior door sets	2.6
Roof Level Accessibility	D7212	No overhanging landscaping, fencing, utilities, or unsecured equipment that allow access to roof	4.0
Fencing Surrounding Modular Units	D7213	Modular units enclosed by a secured perimeter fence that forces access through main entrance	1.0*

Access Control Element	No.	Description	Average Score
Upper Level Window Access	D7214	No overhanging landscaping, fencing, utilities, or unsecured equipment that allow access to upper level windows	5.0**
Basement Window Protection	D7215	Basement level windows are either inaccessible or have secured metal window guards	NA
Roof Hatch/Mech. Space Access	D7216	Access to all mechanical penthouse spaces and roof hatches is restricted	5.0
Elevator Access	D7217	Restricted access to all elevator equipment through mechanical or electronic key access	5.0***

Source: FEA

Table Notes:

*Average where modular classrooms were present

**Average where second level present

***Average where elevator present

Point of Entry: With the exception of one elementary school, all the schools assessed had a single point of entry where visitors to the schools are processed and monitored. One elementary school allowed entry through the extended day entrances; however, all visitors were monitored.

Secured Vestibule: A secured vestibule is considered most important when processing visitors to the school. The vestibule allows staff to control entry in a manner safe for staff until the visitor's identification and business at the school have been confirmed. Three of the ten schools assessed have secure vestibules in place. However, construction funding for secure vestibules has been appropriated for some schools. Photograph 1 displays a good example of a secured vestibule.

Photograph 1. Example of a Secured Vestibule

Source: FEA

Entry Control Systems: Two of the 10 schools assessed did not have a positive electronic control at the main entrance such as a key fob or key pad to record entry by those authorized.

Visitor Management Systems: The system of visitor management control was consistent throughout the district. Visitors must present photo identification such as a driver's license to obtain a visitor badge. The visitor badge provided is paper with adhesive backing that must be placed on the visitor's clothing. The photo identification is not retained while the visitor is in the building.

Visitor Management Software: Schools throughout the district used the Raptor Software database to record and check visitor's identification against a database of known sex offenders.

Entry Control Other Than Main Entry: All schools assessed had a system of access control at entrances used by staff other than the main entry.

Main Office to Main Entry Visibility: With the exception of one school, all of the schools assessed had a direct line of sight from the main office to the main entry.

Office Visibility to Corridors and Stairs: All of the schools assessed had less than 25% of the corridors and stairs visible from the main office.

Office Counter Height: Three of the 10 schools assessed did not have a main office counter area that provides protection and refuge for staff processing visitors.

Bullet-Resistant Glass at Entry: Bullet-resistant glass was not installed at the interior doors and windows of the vestibules and classrooms in the schools assessed.

Roof Level Accessibility: Two of the 10 schools assessed had areas where roof access could be obtained by climbing trees, piping, or other structures adjacent or attached to the building.

Fencing Surrounding Modular Units: The schools assessed that support modular classrooms did not provide sufficient security fencing around the units to direct visitors through the building main entrance.

Upper Level Window Access: The schools assessed with more than one level had restricted access to the upper level windows.

Roof Hatch/Mech. Space Access: All schools assessed restricted access to mechanical spaces.

Elevator Access: The schools assessed with elevators restricted access to the elevator through use of either a mechanical or electronic key.

Findings and Recommendations

Finding: There is a lack of secured vestibules at several schools assessed. As noted in the results above, the secured vestibules security element received a score of 2.7 out of 5. Only three schools assessed had secured vestibules in place.

Recommendation 3: Ensure secured vestibules are installed at all district facilities.

A secured vestibule is considered most important when processing visitors to the school, and is critical in performing safe and comprehensive visitor management. The vestibule allows staff to control entry in a manner safe for staff until the visitor's identification and business at the school have been confirmed. Funding has been appropriated for secure vestibules in some schools; however, the district should ensure that all schools have secured vestibules. This is particularly important for the elementary schools since these facilities do not have FBISD Police Department staff on site.

Management Response: *Staff agrees with this recommendation. The construction of secured vestibules for all schools was passed with the 2014 Bond. All schools will have a secured vestibule by the fall of 2018.*

Finding: The processing of visitors at District facilities is inadequate. Visitor access is generally restricted to a single main entry during the school day. Visitors are processed through the main office. Photographic identification, such as a driver's license or passport, is requested and verified through the Raptor software database for identification of sex offenders. Paper badges are printed with the individual's black and white photograph as it appears on the identification. The badges have adhesive backing and are to be affixed to the visitors clothing. There are several findings related to this system:

- The Raptor software was newly installed and configurations vary
- This process is not in place at the transportation facilities.
- The visitor scanning process is not utilized before main office staff arrive and after main office staff leave.
- The visitor scanning process is not enforced for the after school extended day programs. Parents and families often enter at a secondary entrance and have access to the facility where no physical restriction is present. This lack of visitor processing at certain times is not consistent with Board Policy GKC.
- Most schools allow vendors that service the cafeterias to access through a secondary entrance that only requires minimal staff interaction. A sign in/sign out procedure is used to process vendors; however, identification is not scanned and badges are not issued.

Recommendation 4: Enhance the processing of visitors at all district facilities.

The district should enforce visitor scanning for visitors to all facilities, including vendors that service cafeterias, and the transportation facilities. The procedures for processing visitors should be enforced throughout the normal work day and extended hours. In addition, the form of identification used for all

visitors should be retained throughout the duration of their visits. The form of identification would be returned when leaving the facility.

The district should also place visitor badges in a clear badge holder that hangs on a colored, breakaway lanyard around the neck. Specific colors should be used for staff, visitors, and vendors and the colors should be consistent throughout the district.

If the district decides not to process vendors and after-hour visitors through the scanning procedures in place for normal hours of operation, a consistent protocol to be used for these instances throughout the district should be established.

Management Response: *Staff agrees that established visitor procedures should be enforced in a standardized fashion districtwide. Standardized written visitor management procedures exist in the District's Emergency Operations Plan, Appendix 6 (FBISD Visitor Management System Procedures). The Raptor system has been used in FBISD for over 10 years. At least one Raptor terminal is installed at each campus, usually at the main entrance.*

The Emergency Operations Plan for each campus and facility that utilizes Raptor will be updated prior to the start of the 2017-2018 school year to reflect that visitor badges printed from the Raptor system will be placed in a clear badge holder and affixed to a lanyard. The visitor badge shall remain visible at all times.

Staff disagrees with the recommendation that school staff should retain visitor identification until the visitor leaves the facility. Security concerns include the misplacement, loss of, or theft of a driver's license, identification card, or passport while in custody of the staff. Additionally, there could be an opportunity for staff or students to copy or photograph personal identifying information from those forms of identification left behind.

Finding: There are inadequacies in the securing of outside areas by district staff during student activities. District staff are required to wear badges, although not all staff place their badges so they are visible at a distance. During outside student activities two to three staff members must be present; however, these staff do not consistently stand at perimeter positions around the students. Only one of these staff members, the designated team leader, is given a two-way radio. As a result the other staff may or may not have a means of communication or signaling device (whistle).

Recommendation 5: Increase the means of securing outside areas by district staff during student activities.

The district should require all staff escorts present during student outside activities to wear high visibility armbands, carry a signaling device, two-way radio, and stand at designated perimeter locations.

Management Response: *Staff agrees with the recommendation in that staff should prominently display their District identification badge at all times while on duty. Staff also agrees that campus staff members should be required to stand at designated perimeter locations while students are outside the building and they should have some type of signaling device to alert others of impending danger.*

This recommendation is more critical, and more feasible at the elementary school level where students are on a playground and may not be aware of their surroundings. This recommendation is less feasible for secondary campuses where students are outside for a structured physical education class or extracurricular band and sporting practice.

Finding: The district lacks fencing around portable units at most campuses. Fencing around portable units is minimal throughout the district. The average score for schools assessed was 2.6. The portable units on campuses are also not near the main entry or connected to the intrusion alarm system.

Recommendation 6: Install fencing around all portable campus units so that access can only be gained through the main entrance.

The district should install fencing around all portable units, specifically those that serve as classrooms. Portables and fencing should be configured to require access to be gained through the main entry where visitor screening is performed.

Portable classrooms pose a significant security risk and should be eliminated wherever possible. When portables must be utilized, they should be located in close proximity to the main building and fenced to force visitor access through the visitor management area.

Management Response: *Staff agrees that fencing may be an option to help secure portable buildings used as classrooms, however, neighborhood restrictions vary across the District so there are multiple fencing material options that must meet those requirements. Additionally, if there are no egress points as proposed in the recommendation, being fenced in creates evacuation issues for students and staff in emergency situations and drills. During the development of the District's Safety and Security Plan, it was determined that fencing should be installed at campuses on a case by case basis in order to best meet the needs of the campus.*

3 – Communication Systems (D7300)

Eleven elements concerning communication systems were evaluated within this category. Table 7 contains a description of each element and the average score of all ten schools assessed. Following the table is a summary of the results.

Table 7. Communication Systems Elements

Communication Systems Element	No.	Description	Average Score
Two-way Communications	D7301	Front entry communication device, classroom and support area telephones or intercoms, telephones with all-call feature, and two-way radios	3.6
Mass Notification Systems	D7302	PA system, security alarm system, panic button and external signaling device	3.3
Exterior Directional Signage	D7303	Presence of directional signage to main office, to visitor parking, and signage providing security procedures	4.4
Interior Directional Signage	D7304	Presence of signage located inside providing direction to main office, security office (if present), and nurse's office	1.5
Interior Door Signage	D7305	Interior doors and stairwells are labeled / numbered	4.6
Exterior Door Signage	D7306	Exterior doors are labeled / numbered	4.3
Exterior Window Signage	D7307	Exterior windows are labeled / numbered	1.0
Modular Classroom Signage	D7308	Modular classrooms are labeled / numbered	5.0*
Law Enforcement Office Location	D7309	Dedicated security office provided with direct view of the main office lobby, the main visitor entry point, and at least one central corridor	1.2
Law Enforcement Office Entry	D7310	Security office has a separate exterior entry	1.0**
Elevator Alarm / Communication	D7311	Elevators have alarm or communication features within the cab	4.2***

Source: FEA
Table Notes:
*Average for those schools with modular units
**Average for schools with SRO office on site
***Average for schools with elevator

Two way Communications: All of the schools assessed had forms of two-way communication available to the teachers in the classrooms and support areas. However, the all-call feature for telephones was often not present at schools. This feature allows the user to broadcast communication to all other phone sets.

Mass Notification Systems: All of the schools assessed had forms of mass notification systems such as the public address (PA) system; however, the PA system was not easily heard at all areas of the buildings and sites. Only a few schools had an external signaling device.

Exterior Directional Signage: The purpose of exterior signage is to project a strong presence of 'ownership' through the prominent display of signs on school grounds, discouraging undesirable activity from outsiders. Exterior directional signage was present at most schools assessed.

Interior Directional Signage: Interior signage directs visitors to specific locations indirectly restricting movements through the building. Internal directional signage was not present at most schools assessed.

Interior, Exterior, and Modular Door and Window Signage: Interior door signage and exterior door and window signage is most helpful for first responders. Exterior door numbering, when prominently displayed in numerical order around the building, provides direction to key areas in an emergency. Most interior and exterior doors assessed were labeled. Modular classrooms, where present, were also labeled. However, the audit team noted that the windows were not labeled in the schools assessed.

Law Enforcement Office Location and Entry: Law enforcement offices were provided at the high schools and middle schools. No officers were permanently located at elementary schools. Generally, the law enforcement offices at middle and high schools were not situated to provide direct line of sight to the main office, visitor entry, or main corridors. In addition, none of the law enforcement offices were provided with a direct exit out of the building.

Elevator Alarm/Communication: There was one school assessed with elevators that did not have an emergency call feature within the cab of the elevators.

Findings and Recommendations

Finding: The district lacks a comprehensive methodology plan and external signaling devices to notify students and staff of an event. In several schools assessed the audit team noted that external signaling devices such as a bell or light, separate from the fire alarm system, were not present.

An initiative to provide emergency message boards at each facility was recommended by FBISD Police Department in 2014; however, this recommendation was not implemented. This initiative would help reduce the time required to alert facilities of an impending severe weather threat. It also helps ensure that all rooms, building and exterior areas have audible coverage during PA announcements.

Recommendation 7: Develop a comprehensive methodology plan and install external signaling devices at all schools to alert students and staff of an event.

The district should develop a comprehensive methodology plan at every school for notifying students and staff of events. This methodology should be adapted to the unique operational schedule at Progressive High School.

With the exception of Progressive High School, all schools in FBISD are closed campuses; i.e., students are expected to remain at the schools throughout the school day. There are no policies that allow students to leave the campus for lunch or other activities without school escorts. At Progressive High School students have schedules adapted to personal needs; arrival and departure times vary among students, unlike a typical school schedule where students arrive and depart at a common time. At closed campuses, the notification system can be configured around a standard arrival and dismissal time. At Progressive High School, an open campus, a more specific system is needed to account for variations in arrival and dismissal

times. It is critical that all campuses have these notification systems to notify students and staff in the event of an emergency.

Management Response: *Staff agrees with this recommendation. A plan to install an emergency communication device at each campus was addressed in the District's Safety and Security Plan. We are continuing to explore ways to fund this needed expansion.*

Finding: There is a lack of annual audits of the Raptor software configurations to ensure student information is up to date. Currently information in the Raptor software is only audited if an issue is suspected. As a result of these infrequent audits, contact information in the system is likely to be outdated.

Although this outdated information may prevent notifications from being sent, there are other means of notification. Administrators are notified by school staff of any threats or incidents. In addition, a Text-a-Tip initiative has been implemented by the police department to allow individuals a method of anonymously reporting threats and incidents. This is monitored by FBISD police.

Lastly, intrusion alarms are used to notify individuals of intruders. The intrusion alarm reports are audited on a daily basis.

Recommendation 8: Perform regular audits of the Raptor Software system to keep contact information up to date.

Schools should perform regular audits of the Raptor software configurations to ensure that notification and contact information is consistent and up to date. School staff should work with Raptor representatives to update configurations as necessary. FBISD should confirm with schools annually that contact information for individuals to be notified is up to date.

Notifications to individuals should be by text rather than email, whenever possible, to increase the probability of immediate contact.

Management Response: *Staff agrees with this recommendation. Each campus is responsible for the addition, deletion, or update of those staff members who are expected to be notified when a Raptor alert is received. The Emergency Management Coordinator will perform a monthly audit of district facilities to ensure that notification and contact information for the proper personnel is up to date and correctly listed to receive a Raptor alert notification. A text message is the primary notification, while an email serves as a back-up notification.*

Finding: Sequential exterior security signage to direct emergency responders is minimal on most campuses. Most campuses assessed lack sequentially ordered signage in order to aid first responders during an emergency. Though most exterior doors are signed with a letter or number, the number scheme does not correspond with the campus floor plan.

Recommendation 9: Update exterior door signage using a sequential numbering scheme so emergency responders can easily identify areas during an emergency.

The district should re-number exterior doors in a sequential clockwise or counterclockwise direction around the building. This will assist staff members, and emergency responders that do not have knowledge of the building, to quickly orient their position relative to the building exterior. The building floor plan used for security purposes should reflect the door numbering scheme.

Management Response: *Staff disagrees with this recommendation. The current door numbering system has been in place for four (4) years. Every exterior door has a letter and number affixed to it in 4 inch high, reflective vinyl tape. This tape is visible at night with a flashlight from over 100 feet away. The numbering sequence is a standard sequence used by first responders across the county and across the country.*

The front entrance of every building is the "A" side of the building. On the A side, exterior doors are then labeled as A1, A2, A3, etc, in order from right to left while facing the building. The numbering system does follow a clockwise rotation. The left side of the building is the "B" side and the doors are then numbered B1, B2, B3, etc. The back of every building the "C" side with similarly numbered exterior doors and the "D" side follows.

This numbering system is consistent across the District, as opposed to numbering doors based on the various floor plans. If a first responder is sent to door "A1", immediately that person knows it is the furthest door to the right on the front side of the school, just like door "C2" is the second door on the backside of the building going clockwise.

4 – Site and Perimeter Systems (D7400)

Ten elements concerning site and perimeter systems were evaluated within this category. Table 8 contains a description of each element and the average score of all ten schools assessed. Following the table is a summary of the results.

Table 8. Site and Perimeter Elements

Site and Perimeter Element	No.	Description	Average Score
Site Landscaping	D7401	Entrances, parking lots, and walkways are visible without obstruction of site landscaping	4.5
Site Vehicle Barricades	D7402	Vehicular barriers are present at the main entry and entry to playgrounds or athletic fields	3.4
Site Buffer Zone	D7403	All of building perimeter has a minimum stand-off distance of 30 feet	3.1
Site Perimeter Fencing	D7404	The presence of fencing at the school property boundary	2.6
Site Perimeter Features	D7405	No instances of potential concealment within 30 feet of the building perimeter	4.2

Site and Perimeter Element	No.	Description	Average Score
Dedicated Security Parking	D7406	The presence of dedicated law enforcement parking with associated signage	1.4
Traffic Zone Designations	D7407	Bus, car, pedestrian, and fire zones are designated and clearly marked	4.6
Security Signage	D7408	Number of types of signs relating to security present on site	4.1
Concealment Within Building Perimeter	D7409	Avoidance of areas along the building perimeter where a perpetrator can hide from either visual or electronic surveillance	3.7
Site Lighting	D7410	Building parking, entrances, and walkways are lighted	3.8

Source: FEA

Site Landscaping: Clear lines of sight and a high degree of visibility on school grounds are cited by law enforcement as good contributors to safety. Most of the schools assessed practiced good site landscaping practices consisting of using low-growing vegetation, placed to allow unobstructed surveillance by staff, neighbors, pedestrians, and patrol cars. Tree branches were observed to be removed below 7 feet and shrubs trimmed to less than 3 feet.

Site Vehicle Barricades: Four of the 10 schools assessed had vehicle barriers (either natural or constructed) that protect students, staff, and visitors on athletic fields, in playground areas, near building entries, and at other pedestrian areas. Other schools had vehicle barriers at the main entrance but not at other key areas. Photograph 2 shows an example of vehicle barriers at one of the campuses.

Photograph 2. School Entrance

Source: FEA

Site Buffer Zone: The "stand-off distance" is the distance between the face of a building and the nearest point a vehicle can approach from any side. The score is based on the portion of the building perimeter

that has a stand-off distance of at least 30 feet consisting of: bollards, sculptural or seating barriers, walls, hardened street furniture, fences, topography, dry moats, collapsible surfaces, water, landscaping and plantings.

Site Perimeter Fencing: Perimeter fencing provides good border definition and can deter/delay unauthorized persons from accessing the property. Most schools assessed had less than 50 percent of the site perimeter fenced.

Site Perimeter Features: The audit team evaluated the number of instances of potential concealment within 30 feet of the building perimeter. Man-made obstacles should be situated to not create hiding spaces, and fencing, if used, should not be solid for the same reason. With the exception of one elementary school, the schools assessed had few instances of concealment.

Dedicated Security Parking: Of the schools assessed, only one school had dedicated security parking.

Traffic Zone Designations: With the exception of one elementary school, all of the schools assessed had areas for bus, car, and pedestrian activities well marked. Pavement marking and signing of loading, unloading, drop-off zones, pedestrian zones, and fire zones limits potential negative behavior and makes for easier site surveillance.

Security Signage: Security signage such as “No trespassing”; “Premises monitored by…”; “Vehicles are subject to search”; and “School grounds hours: …” not only provide rules under which a property should be accessed, but also helps establish the appearance of controlled property, as recommended by Crime Prevention Through Environmental Design (CPTED) principles. Most of the school sites assessed displayed two or more signs of this type.

Concealment within Building Perimeter: Jogs and niches in footprints of buildings create places along the outside of a building where a perpetrator can hide from either visual or electronic surveillance. Of the schools assessed, one school had excessive exposure related to this element.

Site Lighting: Parking, entrances and walkways that are well-lit aid in surveillance. The most common complaint voiced by teachers that arrive in the early morning or leave after dark is that portions of the parking areas are not well-lit. Parking areas and sidewalks should be illuminated to an average level of 0.5 foot candles to provide sufficient illumination for safety without glare.

Findings and Recommendations

Finding: There is a lack of dedicated security parking at district campuses. As noted in the results above, the dedicated security parking element received an average score of 1.4 out of 5, as only one of the schools assessed (Bowie MS) has dedicated security parking.

Recommendation 10: Add dedicated security parking to all campuses.

Security parking should be added to all campuses. Dedicated law enforcement parking and associated signage at the front of schools provides the obvious benefit of making accommodation for responding officers, but it also offers the perception of a more secure campus.

Management Response: *Officers are assigned to secondary campuses and each campus is assigned a marked police unit. Only three (3) of the 25 secondary campuses were visited by the audit team (Bowie MS, Sugar Land MS and Dulles HS). The audit team identified Bowie MS as the only campus having a dedicated security parking space, however, Dulles HS has two dedicated security parking spaces not identified by the audit team. Of the 26 secondary campuses, 16 have at least one dedicated parking space for a police vehicle.*

Dedicated law enforcement parking spaces at the remaining ten (10) secondary campuses and all elementary campuses will be identified and marked prior to the beginning of the 2017-2018 school year.

5 – Video Surveillance (D7500)

Six elements concerning the use of video surveillance were evaluated within this category. Table 9 contains a description of each element and the average score of all ten schools assessed. Following the table is a summary of the results.

Table 9. Video Surveillance Elements

Video Surveillance Element	No.	Description	Average Score
Main Entry	D7501	Video surveillance at main entrance with views of visitors coming and going	3.4
Key Exterior Areas	D7502	Building perimeter, parking area, entrances, and walkways are covered by video surveillance.	2.3
Key interior Areas	D7503	Building interior corridors, gathering areas, and open stairways are covered by video surveillance.	3.3
Enclosed Stairwell Areas	D7504	Enclosed stairwell area is covered by video surveillance.	2.3*
Video Surveillance Recording	D7505	Video recording capability is provided and all cameras are capable of recording at the same time.	3.8
Active Monitoring of Video Systems	D7506	Equipment and staff dedicated to active monitoring of school passing periods, lunch, athletic events, and assemblies.	1.0

Source: FEA

Table Note: *Average score where enclosed stairways are present

Main Entry: All of the schools assessed had video coverage at the main entrance. Two schools had coverage of visitors both coming to and leaving the facility. All other schools only had coverage either coming to or leaving the facility.

Key Exterior Areas: Video surveillance of key exterior areas is desired; however, practical considerations and particular geometries of school grounds will make implementation different for each school. Areas to be considered are secondary entrances, sidewalks, parking areas (i.e., portions of the building not readily visible). Most of the schools assessed covered approximately 50 percent of the building exterior with video surveillance. One school was particularly well covered.

Key Interior Areas: Video surveillance of key interior areas is also important, such as corridors, open stairways, and gathering areas (cafeterias, gymnasiums, auditorium lobbies). Based on the assessment, approximately 75 percent of school building interior key areas were covered by video surveillance.

Enclosed Stairwell Areas: Enclosed stairwells are often the scene of undesirable activity, given their inherent concealed nature. Therefore, if natural surveillance is not possible, video surveillance is recommended. Of the schools assessed, only three schools had enclosed stairways and two of them did not have video coverage in the enclosed stairs.

Video Surveillance Recording: For liability reasons, fake cameras should never be used. Functional cameras should have recording capabilities. The recording capabilities at three schools could not be confirmed. All other schools assessed used systems with recording capabilities.

Active Monitoring of Video Systems: Active monitoring of video systems during school hours or specific time periods can keep video surveillance from being strictly a forensic measure. Active monitoring requires dedicated staff to observe surveillance cameras during times such as passing periods, lunch, and athletic events. No active monitoring was conducted at the schools assessed.

Findings and Recommendations

The district is planning to purchase additional surveillance equipment as funding becomes available.

6 – Building Systems (D7600)

Ten elements concerning various building systems were evaluated within this category. Table 10 contains a description of each element and the average score of all 10 schools assessed. Following the table is a summary of the results.

Table 10. Building Systems Elements

Building Systems Element	No.	Description	Average Score
Access to Utility Systems	D7601	Power, gas, telephone, water, and data communications utilities have restricted access	4.6
Master Ventilation Switch	D7602	Presence of a master ventilation shut-off within the building	4.2
Utility System Master Shut-offs	D7603	Presence of master shutoffs for water, gas, and electricity	5.0
Protection of Well Systems	D7604	Access restriction is provided at all on-site water well heads	*
Interior Lighting Sensors	D7605	School rooms with exterior windows have occupancy lighting sensors	2.1
Battery Backup Systems	D7606	Presence of battery backup power for installed security systems	2.5
Fresh Air Intake Systems Access	D7607	Fresh air intakes have restrictive mesh covering to limit access	4.6
Fresh Air Intake Systems Height	D7608	Fresh air intakes were at least 12 feet above the adjacent ground level	4.6
Building Intake/Exhaust Systems	D7609	Exhaust air outlets separated from air intakes by maximum distance possible	5.0
Building Smoke Detectors	D7610	Smoke detectors present with vandal-resistant features	5.0

Source: FEA

Table Note: *None of the school assessed were provided with on-site well systems.

Access to Utility Systems: The means by which a perpetrator could shut off power, telephones, or other system feeds to a school building, putting the inhabitants at a great disadvantage, should be restricted. This could include having the systems not exposed above grade, or having a locked enclosure around the utility in question. Eight schools assessed provided restriction to the utility services. Two schools had some exposed systems, such a gas service and chiller controls.

Master Ventilation Switch: In the event of an attack on a school involving the release of a toxic gas, the school's ventilation system can spread the gas and endanger the occupants. A master shut-off switch can limit the potential damage in such a scenario. Eight schools assessed had a master shut-off switch, often through the building automation system. A master shut-off switch could not be confirmed at two schools.

Utility System Master Shut-offs: Easy accessibility to the master shutoffs within the building for water, gas, and electricity is a benefit to limit the damage from compromising other building systems. All the schools assessed provided easy access to utility system master shut-offs within the buildings. Photograph 5 below displays an example emergency HVAC shut-off.

Photograph 5. Emergency HVAC Shut-Down

Source: FEA

Interior Lighting Sensors: Occupancy sensors help alert responding authorities or other passers-by as to an intruder's location in the building. Out of the 10 schools assessed, only three had occupancy sensors in nearly all rooms with exterior windows.

Battery Backup Systems: Key security systems such as door hardware overrides, intrusion detection systems, two-way communication systems, one-way public address systems, and video surveillance systems should have emergency battery backup power in place. Of the 10 schools assessed, three schools confirmed battery backup power for all key systems.

Fresh Air Intake Systems Access and Height: Fresh air intakes should be located out of reach and have restrictive mesh coverings to limit access. These features limit the ability for a perpetrator to release a toxic substance into the school's ventilation system. Nine schools assessed met this criteria. Only one school had exposed fresh air intakes.

Building Intake/Exhaust Systems: All schools assessed had air intakes sufficiently removed from the system exhaust.

Building Smoke Detectors: Smoke detectors should have vandal-resistant features to make it difficult for someone to interfere with the proper functioning of the system. All schools assessed were observed to have a smoke detection system that would indicate malfunctioning detectors.

Findings and Recommendations

There are no findings or recommendations in this section to be reported by the audit team.

7 – Egress and Refuge (D7700)

Nine elements pertaining to egress and refuge were evaluated within this category. Table 11 contains a description of each element and the average score of all ten schools assessed. Following the table is a summary of the results.

Table 11. Egress and Refuge Elements

Egress and Refuge Element	No.	Description	Average Score
Classroom Door Construction	D7701	Classroom doors are either solid core or metal construction	4.7
Lockdown of Special Areas	D7702	Interior rooms such as libraries, gymnasiums, or other gathering spaces available for lockdown	4.4
Interior Window Coverage	D7703	Classroom interior windows have existing coverings	1.0
Exterior Exit Door Egress Hardware	D7704	Doors equipped with push bar exit devices are resistant to chaining	4.6
Retractable Partitions	D7705	Retractable partitions fully recess into locking niches	3.7*
Window Egress	D7706	Windows providing a secondary means of egress are easily unlatched from the inside	**
Shatter-Resistant Mirrors	D7707	Rooms have mirrors that are shatter-resistant	4.9
Interior Areas of Concealment	D7708	No corridor blind spots or niches	3.8
Interior Lighting	D7709	Main corridor areas have light levels above 10 foot-candles	5.0

Source: FEA

Table Notes:

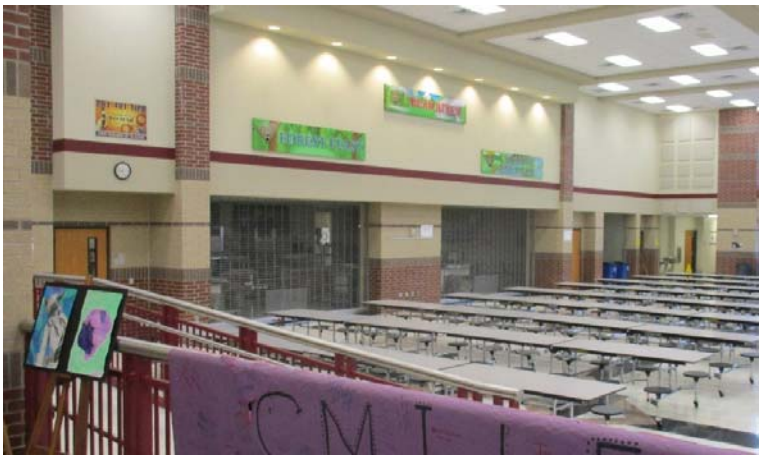
*Where present at school

**All schools were provided with fixed windows therefore the presence of egress windows was not evaluated

Classroom Door Construction: From a security standpoint, classroom doors should be constructed of durable material; either solid core wood doors or metal doors. This measure 'buys time' in the event an intruder attempts to force his or her way into a classroom. All schools assessed provided commercial grade doors for classrooms with the exception of one school that had an open classroom floor plan.

Lockdown of Special Areas: Special lockdown areas are interior rooms (outside of the classrooms) and lockable spaces where students and staff can take refuge (out of view) to give law enforcement time to respond. These are areas such as libraries, gymnasiums, cafeterias, or gathering places. For this element, the score is decreased based on the number of instances where gathering is possible without an adjacent lockable space. The majority of the schools assessed had lockable refuge areas adjacent to gathering places. The remainder of the schools had one or two instances of gathering places without an adjacent lockable space. Photograph 6 displays a good example of the cafeteria that has adjacent lockable refuge areas.

Photograph 6. Example Cafeteria Space



Source: FEA

Interior Window Coverage: Having the ability to cover interior window openings associated with a classroom may discourage an active shooter from attempting to access that room. The window covering could consist of a cloth curtain or blind permanently mounted and available to use. None of the schools assessed had interior window coverings.

Exterior Exit Door Egress Hardware: Doors equipped with push bar exit devices should be resistant to chaining. Exit hardware should not have exposed features that can be used to place a chain around and restrict the exiting of occupants. Some instances of chainable exit door hardware were observed at four schools. All other schools assessed did not have chainable hardware on the exit doors.

Retractable Partitions: If moveable partitions are used to divide classrooms or other areas, a recessed niche with a locked door should be provided into which the partition may be retracted when not used. This prevents the creation of potential hiding places for a perpetrator. Two of the three schools with moveable partitions had this recommended lockable storage area.

Shatter-Resistant Mirrors: Providing shatter-resistant mirrors throughout the facility prevents mirror shards from being used as weapons. The audit team identified very few instances of non-shatter-resistant mirrors in the schools assessed.

Interior Areas of Concealment: Visibility down corridors is a key part of an overall school security strategy. Avoiding niches as much as possible limits the creation of hiding spots for perpetrators. Only two schools had corridors with less than 75 percent visibility due to niches and door recesses.

Interior Lighting: Proper interior lighting levels can prevent shadowy spaces and eliminate potential hiding spots. During the audit team's assessment, light levels were measured within the main corridors. All schools had lighting levels above 10 foot-candles.

Findings and Recommendations

See related recommendations regarding design standards in *Section 3 – Other Findings and Recommendations.*

Section 2 – Management and Organization

In addition to the assessments performed over the seven security categories the audit team reviewed and analyzed the management and organization of the safety and security at FBISD. The resulting findings and recommendations are listed below.

Finding: An electronic incident reporting system is not in place to identify patterns and prevention measures. Currently patterns and trends regarding incidents on campuses are not being tracked through an electronic incident reporting system. Information is also not being exchanged between affected staff members.

Recommendation 11: Implement an electronic system for reporting incidents in order to track and exchange information.

From an operational standpoint, the Assistant Principal at each school is responsible for student discipline. This extends to instances that occur during student transit on buses. For instance, during the audit team interviews, bus drivers reported having to fill out paperwork when an incident occurs, however, there is a lack of feedback on the resolution of the incident.

The district should implement an electronic system for reporting incidents in order to identify patterns and trends, implement prevention and intervention measures, and expedite incident resolution. Information pertaining to incident resolutions should be shared electronically with affected staff.

Management Response: *Staff agrees with this recommendation. Staff will survey the campuses and gather data on what system campuses use to track, analyze, and monitor progress in reporting incidents. If a program is being utilized by the campuses that the transportation department can gain access to, then transportation will utilize the same program. If one does not exist FBISD will check with other districts to see what systems, they are utilizing. Anticipated completion is December 2018.*

Finding: The district's allocation of resources does not appear to be data driven. The allocation of resources in the district is not supported by data driven decisions. Key performance indicators are not being used to drive decisions and analysis is currently limited.

Recommendation 12: Develop and track key performance indicators to aid in the allocation of resources.

The district should develop performance indicators relating to facility resources and security operations. Examples of potential performance indicators would be:

- Existing exterior lighting standards at facilities and intrusion alarms incidents
- Trends relating discipline incidents and bus routes/travel times
- Incident resolution during school hours using video coverage
- Active video monitoring as a means of incident prevention

There is a desire to drive decisions to allocate resources based on data derived from facilities and operations. To date, data acquisition and analysis is limited. However, with the acquisition of new systems such as bus GPS and video cameras, enhanced video systems at schools, additional electronic locks, and enhanced visitor management systems, there are numerous opportunities to develop metrics that will aid in future resource decisions.

Management Response: *Staff agrees with a data driven approach to increase effectiveness and efficiency. Data that the FBISD Police collect is separate and apart from school discipline data. However, the current Record Management System (RMS) used by the FBISD Police is inadequate and lacks the ability to produce meaningful reports as suggested in this recommendation. A federal mandate requires FBISD Police to replace the current RMS with a more robust system by 2019. FBISD is in the planning stages of that project at this time with an anticipated completion date of September 2019.*

Finding: Police patrol operations for both day and night hours are lacking on elementary school campuses. Currently, elementary school campuses do not have designated police officers on campus. Emergency first responders also do not have access to these campuses after hours.

Recommendation 13: Increase police patrol staffing across campuses, specifically at elementary schools.

The district needs to provide staffing for police patrols for proactive prevention measures at elementary schools. Currently, incidents at elementary schools require the safety officers at middle schools and high schools to leave their assignments to respond. The addition of patrol officers could provide protection without compromising safety at other campuses. In addition, patrol officers could provide protection during extended day operations offered at some elementary schools. Similarly, patrol officers could provide response to intrusion alarms during the evening hours. Currently, the City or other police forces must respond. Those responders do not have access to the facilities.

Facilities do, however, have Emergency Management Liaisons and district staff have attended National Incident Management System (NIMS) training. In addition, the FBISD Police Department routinely communicates with parents and staff on a variety of initiatives and informational venues. They currently have a goal to complete 3,000 walk-throughs at elementary schools in the 180 day school year. There is also daily communication of officers with on site with school staff.

Management Response: *Staff agrees with this recommendation. Existing officer positions have been reallocated to create an evening patrol shift. We are also developing a plan to increase the number of police officers for day shift patrol and elementary campuses. Initial staffing requests for the first phase of implementation will be addressed in the 2017-18 budget process.*

Finding: There are concerns among staff members regarding safety and security procedures and training on campuses. Based on the interviews conducted with over 60 district staff members it was apparent that there are various levels of understanding pertaining to safety and security on campuses, including video cameras, door locks, and number of two-way radios. There was knowledge of defibrillator locations, but an overall lack of understanding on how to use the equipment properly. Staff overall thought that the

current safety and security training was partially effective; however, it lacks practices with situations other than lockdown, fire, and severe weather. In addition, district employees expressed concerns regarding the lack of security of portable units and the lack of consistent visitor management, particularly after school hours.

Recommendation 14: Implement safety and security trainings and briefings for all staff members.

The district should provide additional safety and security trainings so staff have the knowledge of the safety and security equipment and procedures on site and know how to maximize the value of these measures. The trainings should include procedures such as two way radio use, visitor processing after normal business hours, and access restrictions for after-hour visitors. Emergency Management Liaisons (EML) should also conduct regular meetings with staff to discuss emergency scenarios, responsibilities, and operational procedures for the use of equipment, such as emergency notification systems and defibrillators. The EMLs should discuss staff safety concerns to include lighting, exterior doors, and proximity card usage, as well.

Management Response: *Staff agrees with this recommendation. The District's Emergency Management Coordinator will work with the Department of Talent Development to develop and incorporate an annual safety and security training module for all staff, and a specialized training for staff designated to serve as the Emergency Management Liaison at each district campus and facility. We expect to complete this work and to implement these training modules by August 2018.*

Section 3 – Other Findings and Recommendations

The audit team identified other findings that do not fall into the categories listed above. These findings and the corresponding recommendations are listed below.

Finding: The district does not practice emergency procedures for specific situations. Currently district staff perform fire drills on a monthly basis, and lockdown/lockout and severe weather drills every semester. Emergency procedures are not practiced for specific situations other than these standard drills.

Recommendation 15: Perform drills for specific emergency situations.

The district should stage lockdown drills at times when some students are outside of the classrooms, in gathering areas, or outside of the facility.

Management Response: *Staff agrees with this recommendation. FBISD follows, and exceeds, the standards set by the Texas School Safety Center (TSSC). The TSSC recommends, and FBISD requires, one fire drill per month, and a lockdown drill, a lockout drill, and a severe weather drill each semester. Additionally, FBISD requires campuses to complete a shelter in place for medical emergency drill and a table top exercise each semester.*

FBISD has implemented the Standard Response Protocol at every campus. Standardized responses are used for a variety of emergency situations, eliminating the need to label one drill as a bomb threat and another drill as an active shooter. If both would result in a lockdown, then a lockdown drill is practiced and can be used for a variety of situations.

We agree that facilities should more frequently stage drills during times when some students are outside the classrooms, in gathering areas, and or outside of the facility. We will develop appropriate protocols and incorporate drills of this nature during the 2017-18 school year.

Finding: The district's Emergency Operations Plan (EOP) is outdated. The district published an Emergency Operations Plan (EOP) and Resource Guide that was revised through October of 2011. The EOP is thorough but generic and provides the basis for site specific safety plans. Since the document was last revised several years ago, some aspects of the plan have become dated, such as the Readiness Action Levels once promoted by the Department of Homeland Security and the Department of Education.

Recommendation 16: Review and update the district Emergency Operations Plan (EOP).

The district EOP should be reviewed and updated to follow the Guide for Developing High-Quality School Emergency Operations Plans, published in 2013 by the U. S. Department of Education in conjunction with USDHHS, USDHS, US Department of Justice, FBI, and FEMA. In addition, the audit plan should also be revised to reflect the elements of the updated EOP.

Management Response: *Staff agrees with this recommendation. The District's Emergency Management Coordinator (EMC), Judy Lefevers, is currently working to revise the District's EOP and the anticipated completion date is August 2017.*

Finding: District Construction Standards need to be revised. Based on the school specific safety and security assessment results, and the corresponding findings, the divisions of the district's construction standards need to be revised.

Recommendation 17: Revise the district's Construction Standards.

The audit team cross referenced the assessment results and findings presented in this report to the construction standards in place at the district. Appendix C provides guidance to revise the section (called divisions) of the district's construction standards based on these findings.

Management Response: *Staff agrees with this recommendation. The District's Emergency Management Coordinator, will work with Design & Construction to review, cross reference and revise the district's construction standards to mirror the District's Emergency Operations Plan. Anticipated completion is December 2018.*

Appendix A – Audit Data Request

Request No.	Request Description
1	Drawings (architectural floor plans for schools to be assessed)
2	Site plans (site boundaries, ingress/egress, bus loops, etc. for schools to be assessed)
3	Security plans, policies, guidelines, specifications
4	Safety plans, policies, guidelines, specifications (e.g. bullying, weapons, drugs, tobacco, locker use and access, plan/program for student movement between buildings, etc.)
5	Training requirements & records for security/safety related activities
6	Incident reports, truancy reports
7	Safety and security metrics and measures
8	Organization chart for those in safety & security
9	Community awareness/engagement plans
10	External communication plans (e.g. parents, school neighbors, community)
11	Campus access (e.g. open campus vs. closed campus)
12	Total safety and security expenditures for 2012-13 to date and amount budgeted for 2015-16
13	Completed interview forms for schools to be assessed
14	Number of School Resource Officers/Campus Police Officers, by campus
15	Contact information (email address and phone number) for campus principal and school resource officer for campuses selected for site visit
16	Design guidelines and/or specifications which would be different from anything 'security-specific' but might include security items.

Appendix B – Audit Interview Roster

Participant	Position
Charles Dupre	Superintendent of Schools for FBISD
Allen Bassham	Executive Director Facilities and School Services
Michael Brassfield	Director of Lake Olympia Transportation
Chief Rider	Chief of Police, FBISD
Judy Lefevers	Emergency Management Coordinator
Steve Dancer	Life Safety Systems Manager
Mary Ann Piña	Bus Driver, Cover Driver
Chantené Newman	Bus Driver, Cover Driver
Nathan Carey	Bus Driver, Trainer
Nicole Hand	Colony Meadows ES, 4th Grade Math & Science Teacher
Dana Meanor	Colony Meadows ES, 4th Grade Math & Science Teacher
John Andrews	Colony Meadows ES, PE Teacher
Jacqueline Boyd	Colony Meadows ES, Assistant Vice Principal
Sharon Hicks	Colony Meadows ES, Receiving Secretary
Shakeela Sheik	Colony Meadows ES, Assistant Manager, Cafeteria
Carol Young	Colony Meadows ES, District Aide
Van “June” Kieu	Colony Meadows ES, Head custodian
MaryAnn Spivey	Dulles ES, Secretary
Leticia Hollamon	Dulles ES, Receptionist, part-time
Connie Gonzalez	Dulles ES, Cafeteria Manager
Albert Hays	Dulles ES, Head Custodian
Kyella Griffin	Dulles ES, Principal
Lisa McCaslin	Lakeview ES, Secretary
Doug Davison	Lakeview ES, Head Custodian
Leigha Bishop	Lakeview ES, 4th Grade Teacher
Cindy Hachach	Lakeview ES, 2nd Grade Teacher
Sharon Atkinson	Lakeview ES, 1st Grade Teacher
Alena McClanahan	Lakeview ES, Assistant Principal
Beth Mullins	Lakeview ES, Counselor, Event Coordinator
Maria Barrington	Lakeview ES, Principal
Alice Crottie	Scanlan Oaks ES, Executive Assistant
Maria Pedraza	Scanlan Oaks ES, Cafeteria Manager
Kelly Guidry	Scanlan Oaks ES, District Aide
Dora LeBlanc	Scanlan Oaks ES, Receptionist
Jaimie Geis	Scanlan Oaks ES, Principal
Kathleen Jeremiassen	Scanlan Oaks ES, Assistant Principal
Jaimie Geis	Scanlan Oaks ES, Principal
Jenneane Cardenas	Scanlan Oaks ES, Special Ed teacher
Shelly Berry	Scanlan Oaks ES, Special Ed teacher
Megan Kasin	Scanlan Oaks ES, PE teacher

Participant	Position
Rosa Ramirez	Scanlan Oaks ES, Head Custodian
Able Fuentes	Scanlan Oaks ES, Assistant Lead, Custodial
Teresa Mason	Sugar Land MS, Secretary to Assistant Principal
Siran Allahverdian	Sugar Land MS, Receptionist
Mary Beth Lavergne	Sugar Land MS, Attendance Clerk
Vivian Getro	Sugar Land MS, Cafeteria Manager
Sylvia Flores	Sugar Land MS, Head Custodian
Len Brogan	Sugar Land MS, Principal

Appendix C – District Construction Standards

This appendix presents a correlation of recommended changes enhancing safety and security to current and planned schools in the Fort Bend Independent School District (FBISD). The recommendations provide guidance for modifying the Construction Standards (Revision 04 - February 04, 2016) document to reflect the findings of the Safety and Security Audit presented in this report.

Assuming that the district adopts these recommendations related to the design and installation of certain systems, there are operational impacts that accompany several of the design, construction, and technology recommendations. For example, there may be a recommendation for additional security cameras, but someone must watch the screens, issue badges, watch lines of site and other requirements. These functions should be taken into consideration in both new and existing schools while considering the recommendations.

Specific Cross Reference to the Design and Construction Standards

The audit team took the findings of the safety and security audit and cross referenced them to the uniform classification of construction systems and assemblies (UniFormat™) standards in place at the district. The "Construction Standards Revision 04- February 04, 2016" is organized into 33 divisions.

The tables below have been prepared by the audit team. The first three columns and the "D" numbers are taken directly from their Internal Audit of Safety and Security measures. The last column and the text following represent guidance for the district to revise several sections (called divisions) of the Construction Standards.

1 – Locking Systems Hardware (D7100)[2]

Locking Systems/Hardware Element	No.	Description	Reference
Classroom Door Locks	D7101	Classroom doors have commercial grade locking mechanisms	1-A
Classroom Inside Locks	D7102	Classroom doors that lock from the inside with a key	1-B
Exterior Door Locks	D7103	Presence and functionality of exterior door locks	1-C
Exterior Window Latches	D7104	Latching capabilities to deter, delay, and/or prevent unauthorized building access	1-D

[2] These seven tables are from the Internal Audit of Safety and Security by the audit team**.** The last column has been changed from "Average Score" to "Reference" indicating the letter assigned to each security element. The suggested revisions to the applicable Construction Standards divisions for each of these elements is explained below the table.

Locking Systems/Hardware Element	No.	Description	Reference
Door Keying Systems	D7105	Presence of a patented key system to prevent unauthorized individuals from duplicating keys	1-E
Exterior Door Position Switches	D7106	Door position switches present and send an electronic signal to assigned personnel	1-F
Exterior Window Position Switches	D7107	Window position switches present and send an electronic signal to assigned personnel	1-G
Law Enforcement Lock Box	D7108	Key lock box present to enable emergency responders to access building keys	1-H
Exterior Door Perimeter Lockdown	D7109	Electronic locking system that provides full perimeter lockdown of all electrified locks from a central location	1-I
Exterior Door Hinges	D7110	Presence of tamper resistant door hinges	1-J

1-A: No change required. In Finish Hardware Division 08 71 00 (Section 08710 part 2.3 A).

1-B: Add requirement "Classroom doors that lock from the inside with a key," to the extent that this does not conflict with building code, in Division 08 71 00. Also in Division 08 71 00 (Section 08710 2.3 A 4) "Thumbturns: accessible design not requiring pinching or twisting motions to operate."

1-C: No change required.

1-D: No change required provided all windows are in-operable.

1-E: Add to Division 08 70 10 (Part 2.4): "Presence of a patented key system to prevent unauthorized individuals from duplicating keys."

1-F: Add to Division 08 71 00 (Part 2.9): "Door position switches present and send an electronic signal to assigned personnel."

1-G: Add to Division 08 50 00 (if any windows are operable): "Window position switches present and send an electronic signal to assigned personnel."

1-H: Add to last paragraph in Division 08 70 00 "and local law enforcement department." Section 1.1 of Division 08 71 00 (Finish Hardware) says: "Ingersoll-Rand Security and Safety Consultants of Texas will develop the door hardware specification (Section 8710). Contact David Carter at (832) 418-9557." This should be changed to "Safety and Security issues have been integrated into this Construction Standards document."

1-I: Add to Division 08 70 00 and Division 08 70 10 Part 2.3 A 6: "Electronic locking system that provides full perimeter lockdown of all electrified locks from a central location."

1-J: No change required. Division 08 70 10 Part 2.2 B 4 says: "Out-swinging exterior doors: non-ferrous with non-removable (NRP) pins."

2 – Access Control (D7200)

Access Control Element	No.	Description	Reference
Point of Entry	D7201	Single visitor point of entry is present and entering visitors are monitored	2-A
Secured Vestibule	D7202	A secured (lockable at the inside doors) vestibule present at main entry, observable by staff with communication	2-B
Entry Control Systems	D7203	Electronic access control system at the main entry consisting of a card swipe, key fob, or electronic key pad system capable of identifying the user	2-C
Visitor Management Systems	D7204	Management system in place with photographic identification held during the visitation, in exchange for issuance of a badge on a colored, breakaway lanyard. A record of the visit is kept.	2-D
Visitor Management Software	D7205	Presence of software system to record and check visitors against registered sex offender databases.	2-E
Entry Control Other Than Main Entry	D7206	Electronic access control system at all entry points other than the main entry	2-F
Main Office to Main Entry Visibility	D7207	Direct line of sight from main office to main entry	2-G
Office Visibility to Corridors & Stairs	D7208	Lines of site from the main office to the corridors and stairs	2-H
Office Counter Height	D7209	Main office counter provides an enclosed area for staff with secondary refuge	2-I
Bullet-Resistant Glass at Entry	D7210	Utilize bullet-resistant glass at main vestibule and interior classroom doors and windows	2-J
Interior Doors / Gates	D7211	Areas outside the main office/entry area can be isolated by lockable gates or interior door sets	2-K
Roof Level Accessibility	D7212	No overhanging landscaping, fencing, utilities, or unsecured equipment that allow access to roof	2-L
Fencing Surrounding Modular Units	D7213	Modular units enclosed by a secured perimeter fence that forces access through main entrance	2-M
Upper Level Window Access	D7214	No overhanging landscaping, fencing, utilities, or unsecured equipment that allow access to upper level windows	2-N
Basement Window Protection	D7215	Basement level windows are either inaccessible or have secured metal window guards	2-O

Access Control Element	No.	Description	Reference
Roof Hatch/Mech. Space Access	D7216	Access to all mechanical penthouse spaces and roof hatches is restricted	2-P
Elevator Access	D7217	Restricted access to all elevator equipment through mechanical or electronic key access	2-Q

2-A: New. FBISD should write a new section in Division 28 (Safety and Security) that describes that there should be a single visitor point of entry that is present and entering visitors are monitored. The Intrusion Detection System is specified in Division 28 10 00.

2-B: New. FBISD should write a new section in Division 28 (Safety and Security) that a secured (lockable at the inside doors) vestibule be present at the main entry, observable by staff with communication. Also coordinate with Division 08 70 00 Exterior door and vestibule door hardware.

2-C: New. FBISD should write a new section in Division 28 (Safety and Security) that says that electronic access control system should be at the main entry consisting of a card swipe, key fob, or electronic key pad system capable of identifying the user. The electronic control system could be further augmented by having a chip or other GPS device in the visitor badge that is readable in real time and tells exactly where the visitor is.

2-D: New. FBISD should write a new section in Division 28 (Safety and Security) that says that the management system should be in place with photographic identification held during the visitation, in exchange for issuance of a badge on a colored, breakaway lanyard. A record of the visit is kept. Again, as with above, the Visitor Management System could have a chip or other GPS device in the visitor badge that is readable in real time and tells exactly where the visitor is.

2-E: New. FBISD should write a new section in Division 28 (Safety and Security) that says to provide a software system to record and check visitors against registered sex offender databases.

2-F: See 1-I (above). Add to Division 08 70 00 and Section 08710 Part 2.3 A 6: “Electronic access control system at all entry points other than the main entry.”

2-G: New. FBISD should write a new section in Division 28 (Safety and Security) that says that there should be a direct line of sight from main office to main entry.

2-H: New. FBISD should write a new section in Division 28 (Safety and Security) that says that there should be lines of site from the main office to the corridors and stairs.

2-I: New. FBISD should write a new section in Division 28 (Safety and Security) that says that the main office counter should provide an enclosed area for staff with secondary refuge.

2-J: Add to Division 08 80 00: “Utilize bullet-resistant glass at main vestibule and interior classroom doors and windows.”

2-K: New. FBISD should write a new section in Division 28 (Safety and Security) that says that areas outside the main office/entry area can be isolated by lockable gates or interior door sets.

2-L: New. FBISD should write a new section in Division 28 (Safety and Security) that says that no overhanging landscaping, fencing, utilities, or unsecured equipment that allow access to roof should be permitted.

2-M: New. FBISD should write a new section in Division 28 (Safety and Security) that says that modular units should be enclosed by a secured perimeter fence that forces access through main entrance.

2-N: New. FBISD should write a new section in Division 28 (Safety and Security) that says that no overhanging landscaping, fencing, utilities, or unsecured equipment that allow access to upper level windows should be permitted.

2-O: New. FBISD should write a new section in Division 28 (Safety and Security) that says that basement level windows should be either inaccessible or have secured metal window guards. Also add to Division 08 50 00 "Basement level windows are either inaccessible or have secured metal window guards."

2-P: No change required. Division 08 60 00 Hardware.

2-Q: No change required. Elevator (Conveying Equipment). Division 14 20 00. Restricted access to all elevator equipment through mechanical or electronic key access.

3 – Communication Systems (D7300)

Communication Systems Element	No.	Description	Reference
Two-way Communications	D7301	Front entry communication device, classroom and support area telephones or intercoms, telephones with all-call feature, and two-way radios	3-A
Mass Notification Systems	D7302	PA system, security alarm system, panic button and external signaling device	3-B
Exterior Directional Signage	D7303	Presence of directional signage to main office, to visitor parking, and signage providing security procedures	3-C
Interior Directional Signage	D7304	Presence of signage located inside providing direction to main office, security office (if present), and nurse's office	3-D
Interior Door Signage	D7305	Interior doors and stairwells are labeled / numbered	3-E
Exterior Door Signage	D7306	Exterior doors are labeled / numbered	3-F
Exterior Window Signage	D7307	Exterior windows are labeled / numbered	3-G
Modular Classroom Signage	D7308	Modular classrooms are labeled / numbered	3-H

Communication Systems Element	No.	Description	Reference
Law Enforcement Office Location	D7309	Dedicated security office provided with direct view of the main office lobby, the main visitor entry point, and at least one central corridor	3-I
Law Enforcement Office Entry	D7310	Security office has a separate exterior entry	3-J
Elevator Alarm / Communication	D7311	Elevators have alarm or communication features within the cab	3-K

3-A: Add to Division 27 the following requirement: "Front entry communication device, classroom and support area telephones or intercoms, telephones with all-call feature, and two-way radios."

3-B: Add to Division 27 the following requirement: "PA system, security alarm system, panic button and external signaling device."

3-C: Division 10 14 00 requires signage. Add the following requirement: "Presence of directional signage to main office, to visitor parking, and signage providing security procedures."

3-D: Division 10 14 00 requires signage. Add the following requirement: "Presence of signage located inside providing direction to main office, security office (if present), and nurse's office."

3-E: Division 10 14 00 requires such.

3-F: Division 10 14 00 requires signage. Add the following requirement: "Exterior doors are labeled / numbered."

3-G: Division 10 14 00 requires signage. Add the following requirement: "Exterior windows are labeled / numbered."

3-H: Division 10 14 00 requires signage. Add the following requirement: "Modular classrooms are labeled / numbered."

3-I: New. FBISD should write a new section in Division 28 (Safety and Security) that says that a dedicated security office should be provided with a direct view of the main office lobby, the main visitor entry point, and at least one central corridor.

3-J: New. FBISD should write a new section in Division 28 (Safety and Security) that says that the security office should have a separate exterior entry.

3-K: No change required. Division 14 20 00 requires such.

4 – Site and Perimeter Systems (D7400)

D7400 Site and Perimeter	No.	Description	Reference
Site Landscaping	D7401	Entrances, parking lots, and walkways are visible without obstruction of site landscaping	4-A
Site Vehicle Barricades	D7402	Vehicular barriers are present at the main entry and entry to playgrounds or athletic fields	4-B
Site Buffer Zone	D7403	All of building perimeter has a minimum stand-off distance of 30 feet	4-C
Site Perimeter Fencing	D7404	The presence of fencing at the school property boundary	4-D
Site Perimeter Features	D7405	No instances of potential concealment within 30 feet of the building perimeter	4-E
Dedicated Security Parking	D7406	The presence of dedicated law enforcement parking with associated signage	4-F
Traffic Zone Designations	D7407	Bus, car, pedestrian, and fire zones are designated and clearly marked	4-G
Security Signage	D7408	Number of types of signs relating to security present on site	4-H
Concealment Within Building Perimeter	D7409	Avoidance of areas along the building perimeter where a perpetrator can hide from either visual or electronic surveillance	4-I
Site Lighting	D7410	Building parking, entrances, and walkways are lighted	4-J

4-A: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that says that entrances, parking lots, and walkways should be visible without obstruction of site landscaping.

4-B: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that says that vehicular barriers should be present at the main entry and entry to playgrounds or athletic fields Also add this requirement to Division 32 30 00: “Vehicular barriers are present at the main entry and entry to playgrounds or athletic fields.”

4-C: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that says that all of building perimeter should have a minimum stand-off distance of 30 feet.

4-D: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that says that there should be fencing at the school property boundary.

4-E: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that says that no instances of potential concealment should exist within 30 feet of the building perimeter.

4-F: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that says that there should be dedicated law enforcement parking with associated signage.

4-G: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that says that. Add requirement to Division 32 16 00: "Bus, car, pedestrian, and fire zones are designated and clearly marked."

4-H: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that defines the number of types of signs relating to security present on site.

4-I: New. FBISD should write a new section in Division 28 (Safety and Security) or in Division 32 (Exterior Improvements) that says to avoid areas along the building perimeter where a perpetrator can hide from either visual or electronic surveillance.

4-J: Add requirement to Division 26 56 29: "Building parking, entrances, and walkways are lighted."

5 – Video Surveillance (D7500)

Video Surveillance Element	No.	Description	Reference
Main Entry	D7501	Video surveillance at main entrance with views of visitors coming and going	5-A
Key Exterior Areas	D7502	Building perimeter, parking area, entrances, and walkways are covered by video surveillance.	5-B
Key interior Areas	D7503	Building interior corridors, gathering areas, and open stairways are covered by video surveillance.	5-C
Enclosed Stairwell Areas	D7504	Enclosed stairwell area is covered by video surveillance.	5-D
Video Surveillance Recording	D7505	Video recording capability is provided and all cameras are capable of recording at the same time.	5-E
Dedicated Security Parking	D7406	Equipment and staff dedicated to active monitoring of school passing periods, lunch, athletic events, and assemblies.	5-F

5-A: Add specifics on Video Surveillance in Division 28 23 00 and possibly refer to it in Division 11 15 00.

5-B: Add specifics on Video Surveillance in Division 28 23 00 and possibly refer to it in Division 11 15 00.

5-C: Add specifics on Video Surveillance in Division 28 23 00 and possibly refer to it in Division 11 15 00.

5-D: Add specifics on Video Surveillance in Division 28 23 00 and possibly refer to it in Division 11 15 00.

5-E: Add specifics on Video Surveillance in Division 28 23 00 and possibly refer to it in Division 11 15 00.

5-F: Add specifics on Video Surveillance in Division 28 23 00 and possibly refer to it in Division 11 15 00.

6 – Building Systems (D7600)

Building Systems Element	No.	Description	Reference
Access to Utility Systems	D7601	Power, gas, telephone, water, and data communications utilities have restricted access	6-A
Master Ventilation Switch	D7602	Presence of a master ventilation shut-off within the building	6-B
Utility System Master Shut-offs	D7603	Presence of master shutoffs for water, gas, and electricity	6-C
Protection of Well Systems	D7604	Access restriction is provided at all on-site water well heads	6-D
Interior Lighting Sensors	D7605	School rooms with exterior windows have occupancy lighting sensors	6-E
Battery Backup Systems	D7606	Presence of battery backup power for installed security systems	6-F
Fresh Air Intake Systems Access	D7607	Fresh air intakes have restrictive mesh covering to limit access	6-G
Fresh Air Intake Systems Height	D7608	Fresh air intakes were at least 12 feet above the adjacent ground level	6-H
Building Intake/Exhaust Systems	D7609	Exhaust air outlets separated from air intakes by maximum distance possible	6-I
Building Smoke Detectors	D7610	Smoke detectors present with vandal-resistant features	6-J

6-A: Division 08 11 00 quality of doors on all mechanical rooms. I assume this is OK. Division 08 71 00 requires keyed access to all “mechanical rooms.” Add to ensure that: “power, gas, telephone, water, and data communications utilities have restricted access” and are in mechanical rooms.

6-B: Add requirement for master ventilation shut-off to Division 23 00 00, potentially in “System Design Requirements.”

6-C: Add requirement for master shut-offs for gas, water, and electricity in Division 22 00 00 (plumbing and gas) and in Division 26 09 00, electrical.

6-D: Add requirement “access restriction is provided at all on-site water well heads” to Division 22 00 00

6-E: No change required. Lighting controls are in Division 26 09 00. Interior Lighting is in Division 26 51 00 and Division 26 27 26.

6-F: Add requirement "presence of battery backup power for installed security systems" to Division 28 20 00

6-G: Add requirement "fresh air intakes have restrictive mesh covering to limit access" to Division 23 30 00

6-H: Add requirement "fresh air intakes were at least 12 feet above the adjacent ground level" to Division 23 37 00

6-I: Add requirement "exhaust air outlets separated from air intakes by maximum distance possible" to Division 23 37 00

6-J: Add requirement "smoke detectors present with vandal-resistant features" to Division 28 31 00

7 – Egress and Refuge (D7700)

Egress and Refuge Element	No.	Description	Reference
Classroom Door Construction	D7701	Classroom doors are either solid core or metal construction	7-A
Lockdown of Special Areas	D7702	Interior rooms such as libraries, gymnasiums, or other gathering spaces available for lockdown	7-B
Interior Window Coverage	D7703	Classroom interior windows have existing coverings	7-C
Exterior Exit Door Egress Hardware	D7704	Doors equipped with push bar exit devices are resistant to chaining	7-D
Retractable Partitions	D7705	Retractable partitions fully recess into locking niches	7-E
Window Egress	D7706	Windows providing a secondary means of egress are easily unlatched from the inside	7-F
Shatter-Resistant Mirrors	D7707	Rooms have mirrors that are shatter-resistant	7-G
Interior Areas of Concealment	D7708	No corridor blind spots or niches	7-H
Interior Lighting	D7709	Main corridor areas have light levels above 10 foot-candles	7-I

7-A: Change Division 08 11 00 to require "classroom doors are either solid core or metal construction."

7-B: New. FBISD should write a new section in Division 28 (Safety and Security) that says to ensure that "Interior rooms such as libraries, gymnasiums, or other gathering spaces available for lockdown" have locking abilities similar to classrooms.

7-C: Add requirement to Division 12 21 00: "classroom interior windows have [existing] coverings."

7-D: No change. Appropriate egress hardware is specified in “Exit Devices” following Division 08 71 00

7-E: Division 08 10 00 and Division 10 22 39. Confirm by adding sentence “retractable partitions fully recess into locking niches.”

7-F: Windows are generally required to be fixed. This is not relevant.

7-G: Division 10 20 00 includes most specialties, but doesn’t mention specifically toilet room mirrors. It should. Also, Display Cases (Division 10 12 00) and Dance Room mirrors (Division 08 83 00) – are made of glass and not mentioned in the safety and security report.

7-H: New. FBISD should write a new section in Division 28 (Safety and Security) that says that there should be no corridor blind spots or niches.

7-I: No change required. Lighting requirements (exceeding this threshold) are in Division 26 50 00 and the chart following.