



## BULLETIN 4

### 1. INTRODUCTION

Bulletins are issued as supplemental directions as necessary between complete Design Guideline revisions. Revisions made by bulletin will be incorporated into the next revised issue of the Guidelines.

### 2. DIRECTIONS

Bulletin 4 is issued to revise requirements for Section 28 of the Design Guidelines. The HISD [Facilities Design](#) Department has been informed by HISD Security Maintenance that the Speco replacement camera models listed in bulletin 3 have changed. Attached are the two (2) replacement cameras to be used in lieu of the Speco cameras. This revision takes effect immediately for all projects that can accommodate this change.

Items deleted by this revision are struck through, ~~ITEM~~ and new items will be underlined, ITEM. A new Guideline issue will remove struck through items and remove underlines from the previous issue. The new issue will then follow the strike through, underline process listed above.

### 3. ATTACHMENT(S)

Section 28 23 00



BUILDING EXCELLENCE

SECTION 28 23 00

SECURITY CAMERA SYSTEMS

GENERAL

1.1 DESCRIPTION OF WORK

- A. Provide a complete system of surveillance cameras for all HISD facilities.

PRODUCTS

2.1 GENERAL

- A. Security Camera System Equipment
1. Cameras
    - a. Do not install any IP Cameras or pan/tilt/zoom (PTZ) cameras, fixed only.
    - b. Indoor cameras vandal proof Interlogix Truvision : TVD4404.INDOOR DOME, TVD 4406 OUTDOOR DOME, TVD-M2-WM WALL MOUNT.
    - c. Avycon : AVCDT91VLT INDOOR DOME, AVC VT91VLT OUTDOOR VANDEL DOME
    - d. All cameras mounted less than 9'-0" shall be installed in vandal resistant housings and wall mounted.
    - e. All office areas to receive dome ceiling mounted cameras.
    - f. Stairs, elevators and multi-purpose rooms shall use vandal resistant domes.
  2. Camera Power Supplies shall be 24v AC to support 16 cameras and be installed in BCR room location, Altronix AL1624.
  3. HISD will provide and install digital video recording equipment-remote PC-based.
  4. Local DVR looping shall be mounted in BCR as standard and can be mounted in FCR locations with approval from HISD to reduce cabling distances. Mount DVR in standard 19" rack. Final patching from local DVR to remote DVR will be done by HISD.
  5. HISD will provide and install UPS equipment.
  6. The installation of a weatherproof surface mounted single gang service box is required on all outside cameras (installed below camera) and on the inside cameras (installed above camera) where there is not a dropped ceiling. This service box is for testing of video and power cables.
  7. ***For all canopy and exterior cameras and cabling, use outdoor-rated cables in conduit.***
- B. Typical Camera Quantities (based on building design and layout) per Building Type
1. Numbers listed below are the typical number of cameras based on school type. ***Specific number of cameras should be designed for specific site conditions and are deemed necessary by HISD Program Manager.*** Design of camera layout must comply with areas of coverage listed below and depend on overall school layout and function of campus. Review placement and number of cameras with Owner prior to project being issued.
    2. Elementary and Pre-Kindergarten Centers – ~~32~~ 64 cameras.
    3. Middle Schools – ~~64~~ 96 cameras.
    4. High Schools – ~~96~~ 180 cameras.
- C. Areas Requiring Video Surveillance
1. All Building entrances from exterior into corridors, provide interior camera near entrance to focus on face of person entering, with additional corridor camera viewing door and length of corridor from a distance.



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2. Corridors to be covered with camera layout overlapping 75' maximum per camera.
  3. Student Dining Commons and Multi-Purpose Rooms area shall receive two (2) cameras minimum in tamper resistant housing.
  4. Restroom entrance/exits shall be covered from both sides of corridor longitudinally to view faces of persons entering or exiting restrooms.
  5. Computer labs to receive cameras to monitor equipment in case of theft.
  6. Video Conferencing Lab to receive camera to monitor workstation, podium and related A/V equipment.
  7. Gymnasiums shall receive two (2) cameras minimum, one (1) on each end, installed in opposite corners of gym.
  8. Provide camera in the main reception area.
  9. Learning Commons shall receive cameras to view circulation desk, entry/exit to Learning Commons and media area.
  10. Exterior cameras to monitor parking areas, playground areas, bus loading/unloading and kitchen delivery entrance.
  11. Each campus shall be allowed to select placement of 10% of the total camera count to address specific items related to that campus.
- D. Security Camera Cabling- **verify with HISD the latest cabling technology to be installed.**
1. ~~Cat 6 UTP for video cabling to camera for runs over 500 feet and Standard RG cabling up to 500 1000 feet. Violet in color and plenum rated. Berk-tek and Draka acceptable manufacturers.~~
  2. Camera power cable shall be 18 gauge, 2 conductor unshielded stranded plenum rated white in color. West Penn, General and Coleman are acceptable manufacturers.
  3. Contractor to provide and install coax patch cables from multiplexers to DVR equipment (both sets).
  4. Terminate all camera coax cables at BCR on wall mounted patch panel behind camera DVR rack at 64" aff.
  5. Within 10'-0 of each end of security video cabling, contractor to install plenum rated, RG59 white in color to convert UTP device to coaxial connection. Install BNC connectors on each end.
  6. In cases where cat 5 cabling is used, provide individual videobalun (BL4865 or BL3265) at camera and at head end.
- E. All final walkthrough's of complete installation and delivery of spare or accessory products must be scheduled and signed off by HISD Alarm Communications. All final delivery of products must have a sign off receipt from contractor to HISD Alarm Communications and signed receipt of delivery included in the close out documents.

## EXECUTION

### 3.1 INSTALLATION

- A. Cable Support: all wire not installed inside conduit or a designated cable tray system shall be installed in a dedicated cable support system for the entire run of each cable.
- B. Do not install wall mounted cameras into metal fascia. Ensure they are mounted into brick, and sealed top and sides (not bottom).
- C. Cabling between wiring closet and camera locations shall be made as individual home runs. No intermediate splices may be installed or utilized between the wiring closet and the camera location.
- D. Contractor is responsible to run and connect cable to DMR.
- E. All video cables shall be run to a BNC wall bracket before connecting to DMR.



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3.2 CABLE TESTING – BY MANUFACTURER’S REQUIREMENTS

- A. Notification: The Owner/Architect/Engineer shall be notified one week prior to any testing so that the testing may be witnessed.
- B. Final Acceptance: Before requesting a final acceptance, the Contractor shall perform a series of end-to-end installation performance tests. The Contractor shall submit for approval a proposal describing the test procedures, test result forms and time table for all copper and fiber optic cabling.
- C. Procedures: Trained personnel shall perform all testing. Acceptance of the test procedures discussed below is predicated on the Contractor’s use of the recommended products and adherence to the inspection requirements and practices set forth. Acceptance of the completed installation shall be evaluated in the context of each of these factors.
- D. Errors: When errors are found, the source of each error shall be determined, corrected and the cable retested. All defective components shall be replaced and retested. Retest results must be entered on the test results form. All corrections shall be made prior to final acceptance test.

**END OF SECTION**