On the above date, a core group meeting was held at the Dover Area School District Offices to review the technology systems requirements for the Dover Area High School project. Pertinent issues and items of discussion are as follows.

1. Door access control systems were reviewed and the following pertinent items discussed.
   a. Provide card readers for all exterior doors, data rooms, and one door of each public use spaces (Auditorium, Natatorium, Gymnasium, Auxiliary Gymnasium, Wight Room, Cardio Room).
   b. At the main front entrance, a card reader should be installed on the exterior door of the vestibule. Additionally, all exit doors from Waiting/Reception into the interior of the school should be card reader controlled.
   c. An audio/visual intercom exterior door stations should be installed at the main vestibule door, loading dock receiving door and Alt Education. The door stations should communicate with the master station with remote door release installed in Waiting/Reception.
   d. Another master station with door release should be provided in the larger Alt Ed Classroom with remote door release of only the exterior Alt Ed exterior door.
   e. Additional card reader locations to be provided by DASD.
   f. All exterior doors to have door position indicators. System to integrate notification/alarm when open a set amount of time.
   g. DSX Access Systems is the access control manufacturer used throughout the district and should be the basis of design. Specifications shall require system to be tied into the district wide system and be compatible with the existing proximity readers.
   h. Electric strikes are preferred electronic locking method. Maglocks are not to be used unless no other electrified solution is available.
   i. Keying system to be Sargent signature series. Grand Master Key to incorporate Dover ES and Weigelstown ES.
   j. DASD utilizes an Identikid visitor registration and monitoring system. This will involve a wall mounted kiosk, most likely located in Waiting/Reception.
   k. Building lock down locations within the building still need to be coordinated.
2. The security system was reviewed and the following pertinent items discussed.
   a. Radionics Security System setup by Vector Security is the system most commonly used in the district.
   b. The specifications shall require that the system be compatible with the other systems throughout the district.
   c. Provide motion sensors in all first floor spaces with exterior glazing or doors (including those off of the courtyard). Provide motion sensors for all spaces adjacent to a lower roof with exterior glazing.
   d. System to tie into exterior doors with position indicators.
   e. It was noted that the courtyard doors will need to swing into the space for exiting requirements and cannot be locked. A future discussion will occur on the options for securing these doors.
   f. Break glass sensors are not required.

3. CCTV systems were reviewed and the following pertinent items discussed.
   a. Cameras and head end system to be provided and installed by DASD vendor. Conduit, cabling, back boxes, and jacks to be provided by EC.
   b. Cameras to be on IP system with separate patch panels.
   c. All interior cameras to be POE. Exterior camera to be POE where distance permits.
   d. MEC to develop a camera layout for DASD review.
   e. Cameras to be provided at the following interior locations: Entrances, Corridors, Stairs, Restroom Entrances, Cafeteria, Food Court (including cashiers), Gymnasium, Auxiliary Gymnasium, Weight Room, Cardio Room, Auditorium, Natatorium, LGI, ILC, Alternative Education classrooms, School Store, School Bank, Administration Waiting/Reception, and open Collaboration Classrooms.
   f. Cameras to be provided at the following exterior locations: Entrances, loading dock, Service Drive, Rear of building (adjacent to woods), CTC yard, Parking Lots, Fields, and at 3 entrance drive locations (license plate recognition).
   g. A discussion was held on 360 degree camera as an option.

4. Telecom/Data systems were reviewed and the following pertinent items discussed.
   a. The district wide MDF will remain at the existing High School.
   b. The High School MDF will be located within the administrative suite. Fiber DEMARC will be located within the MDF.
   c. A new fiber line (2-pair) will be run in the existing conduit from the existing High School to the new High School. For the new conduit path it will be determined if a new manhole will be located along the existing line or if the existing manhole will be utilized.
   d. The districts IT vendor is Business Information Group.
   e. Servers, WAPs, and active electronics will be provided and installed by the district.
   f. Wi-Fi shall be provided throughout the building, including exterior parking lots and fields.
   g. Wi-Fi capacity shall be planned for 1500 students & faculty with 1 to 2 devices for each.
   h. A WAP study will be conducted by the Districts IT vendor and locations will be provided to the design team.
   i. Racks are to be provided and installed by the Electrical Contractor (EC).
   j. Wiring, patch panels, and final termination shall be by the EC.
   k. All drops to be stubbed out into ceiling 1’-0” above wall.
   l. Wiring to be plenum rated where located within plenum return ceilings.
m. Provide wire basket cable tray in all corridors. No separation of low voltage wiring is required. J-Hooks are to be utilized above rooms.

n. Separate patch panels shall be provided per DASD requirements.

o. The copper cabling infrastructure shall be a shielded Category 6 cabling solution.

p. IDF rooms are anticipated to have one rack for Data and one rack for AV.

q. A discussion was held regarding charging of student devices. Provide charging stations in ILC and Cafeteria. Further discussion to occur.

r. Telephone system is Cisco VOIP. All equipment to be provided by the district’s vendor.

5. Two-Way Communication systems were reviewed and the following pertinent items discussed.

   a. The district’s staff communication method is via UHF radio.
   b. County first responders use UFH, 700, and 800. State Police use 900.
   c. A discussion was held on extended radio frequency coverage within the building. It has not been determined if this will be provided. Further discussion to occur.
   d. A discussion was held on extended cell phone coverage within the building. It has not been determined if this will be provided. Further discussion to occur.

6. A typical classroom technology configuration was reviewed and the following pertinent items discussed.

   a. DASD to use ‘Bretford Explorer Interactive Whiteboard’ which is a mobile presenter station consisting of a marker board, projector, speakers, and presenter input on laptop stand with VGA to the projector. The projector is also Wi-Fi capable.
   b. No hard wired A/V inputs are required.
   c. Plan for multiple receptacle locations for multiple connection points of the presenter station.
   d. Provide data drop on each wall for presenter station Ethernet connection for the purpose of streaming video.
   e. Provide additional data drops for printers and other hard wired devices as needed (to be determined during faculty layout review meetings).
   f. Provide wall phone located by the door (side of alcove away from corridor view).
   g. Computer labs to be all hard wired.

7. Audio Visual systems were reviewed and the following pertinent items discussed.

   a. All components of the AV systems shall be provided and installed by the EC.
   b. AV solutions is district preferred vendor. Sage is acceptable.
   c. A central AV storage room is needed.
   d. Video will be broadcast over Ethernet.
   e. Gymnasium – Projector with projection screen and sound system
   f. Auxiliary Gymnasium – Sound system
   g. Natatorium – Sound system
   h. Cafeteria – Video display (type and configuration TBD) and sound system. Video display to also be used for ‘digital trophy case’
   i. LGI – Video display (type and configuration TBD) and sound system. Functions may include black box theater and board room.
   j. Auditorium – To be discussed at a later date
   k. Instrumental Music & Choral classrooms – Sound systems
   l. Sound systems to include wireless microphones.
8. The paging system was reviewed and the following pertinent items discussed.
   a. Prefer Bogand or Rauland systems.
   b. Paging will be integrated with phone system so that any page can be made or
      head over any phone in the building.
   c. Provide speaker and call switch (in addition to phone paging) in all classrooms.
   d. DASD to locate additional call switch locations.
   e. Paging coverage to be provided throughout the interior of the building.
   f. Exterior paging to be provided for parking lots, fields, CTE yard, and courtyards.
   g. Zone paging system per district requirements.

9. The clock system was reviewed and the following pertinent items discussed.
   a. DASD to determine if clocks will be provided in classrooms and if so, whether
      they will be hard wired or battery powered (atomic time).
   b. Provide digital clocks in corridors.
   c. DASD to provide additional locations for clocks.
   d. Color of digital clocks to be red.
   e. DASD has no preference on manufacturer.

10. The fire alarm system was reviewed and the following pertinent items discussed.
    a. System to be very basic.
    b. DASD will utilize a remote monitor location for the fire alarm system.
    c. Fire alarm to be tone (no voice). All voice warnings/actions to be given over
        paging system.
    d. Do not provide pull stations.
    e. Provide specialty alarm systems for science and CTE labs (emergency shutoff
        with notification).
    f. Due to the proprietary nature of the parts and service, do not specify Simplex.

11. HVAC and lighting to be on occupancy sensors.

12. A vehicle gate shall be added to the service drive (past the loading dock).

Respectfully submitted,
CRABTREE, ROHRBAUGH & ASSOCIATES

Scott Cousin
Project Manger

cc: Core Group