

JEFFERSON COUNTY SCHOOL DISTRICT, R-1

High School Educational Specifications

2006

Facility and Site Planning Standards for
Grades 9 - 12

Department of Facilities Planning and Design

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OVERVIEW

Jefferson County School District, R-1 recognizes the important role of the physical environment in accomplishing our stated mission. We are committed to the principle that excellence in education is inseparable from excellence in the learning environment. These Educational Specifications are intended to support the mission by defining the physical environments necessary to deliver the instructional program.

Facilities are too expensive to be taken for granted. In 2006, the total physical plant replacement value of the Jefferson County School District, R-1 physical plant is approximately \$1.5 billion. It is the intent of these Educational Specifications to optimize capital investment through wise planning and design.

The High School Educational Specifications are the model standard for planning and designing new, and remodeling and modernizing existing high schools. The Educational Specifications describe the facility and site requirements to accommodate the instructional program, activities and support functions. This document is a tool that is used to communicate basic facility design requirements and guidelines to design professionals, staff, community, and the Design Advisory Group.

The Educational Specifications establish goals and parameters for activity areas, rooms, school buildings, and site development, including:

- Amenities
- Capacities
- Configurations
- Environments
- Features
- Functions
- Materials
- Performance criteria
- Relationships
- Sizes
- Systems
- Utilities

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BACKGROUND

Numerous people have dedicated uncountable hours toward the development of these educational specifications. Contributors and participants have included District leadership, administrators, teachers, support personnel, staff, community members, parents, specialists, and volunteers.

These Educational Specifications are also the result of:

- Feedback from nearly \$1 billion in capital construction since 1992
- Formal and informal post-occupancy evaluations
- Ongoing conversations with design advisory groups (DAG) for high school projects included in the 2005-2010 capital improvement program
- 2001 electronic survey of all K-12 principals
- 2002 follow up facility assessment interviews with all K-12 principals
- Staff involvement with professional organizations such as the Council of Educational Facility Planners International (CEFPI), and the American Institute of Architects (AIA)
- Board of Education policies and regulations
- Developing trends in educational facility design, including classroom acoustics, daylighting, and indoor air quality

Historically, Jeffco Schools Facilities Planning and Design has maintained three separate educational specifications: Elementary, Middle, and High School. In an attempt to better address increasing varieties of instructional programs, grade configurations, and enrollment levels, the 2006 Educational Specifications are reorganized to be more flexible. The major improvements are:

- Formatting for on-line rather than hardcopy reference
- Less repetition
- Applicability to a wider variety of grade configurations and enrollments
- Applicability for phased construction
- Applicability to a wider variety of school types, including option, alternative, and charter schools

These Educational Specifications are not intended to be static. The goal is for school environments to evolve along with occupant needs, community concerns, developing educational trends, and pedagogical research. Feedback from students, teachers, parents, administrators, and community members is an essential ingredient for success. Your comments and suggestions are encouraged. Please direct them to: Peter Doherty, Executive Director, Facilities Planning and Design, 303 982-2374 or email to: pdoherty@jeffco.k12.co.us

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APPLICATION GUIDE

The Educational Specifications are only one portion of the Jeffco Public Schools planning, design, and construction parameters, which are intended to be used together:

- Educational Specifications
- Technical Guidelines
- Data, Communications, and Alarm Diagram (DCAD)

The 2006 Jeffco Schools Educational Specifications are organized as follows:

- Introductory statements and overviews provide general information about the basic school types and grade configurations.
- A capacity summary provides a general guideline as to the overall building size for a given grade configuration and enrollment.
- Design criteria provide specific detailed design information for each activity space, program area, or room in the school and on the school site.
- Space Programs provide a detailed break down of room types and sizes for a given grade configuration and enrollment.

The underlying concept is that individual rooms are elements that can be combined to form any number of school configurations and that any given school configuration has minimum requirements for specific rooms and elements.

Although drafted with new school construction in mind, educational specifications have a larger purpose. By establishing a threshold of educational adequacy, educational specifications can be a tool for evaluating adequacy and implementing equity in existing educational environments. They can be applied to assess the rooms, areas, amenities, configurations, and other physical attributes of schools of various ages to objectively evaluate existing construction and identify opportunities for future capital investment.

These Educational Specifications can be used in any number of ways:

- Evaluate a school site
- Plan and design a new school
- Plan and design a new room or suite of rooms within an existing school
- Evaluate an existing school, area, or room
- Assess, identify, and quantify capital needs at existing facilities
- Calculate the permanent student capacity of a new or existing school

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CAPACITY

School capacity is a critical component of educational facility planning. This can be a complex topic because there is no single formula that encompasses all of the many variables that can affect the maximum number of students appropriate for a given building and site. Consider some of the variables:

- Grade level
- Curriculum
- Class schedule
- Class size
- Student ergonomics

Facility Planners also need to consider physical parameters such as:

- Gross square feet (gsf) of building per student
- Net square feet (nsf) per student
- Site acreage
- Total number of classrooms
- Size of classrooms
- Utilization of classrooms
- Food service
- Cafeteria seating
- Building codes
- Parking spaces
- Safety and security
- Costs of construction
- Lifecycle (operation and maintenance) costs

The Jeffco Public Schools Educational Specifications are written around specific program requirements, not general formulas such as space allocations per student.

High school curriculum is diverse. The types and sizes of classes vary greatly. To address these variables, high school student capacity is determined by the class sizes of each individual course, class schedules, and “teaching stations,” instead of “classrooms.”

High school capacity would be simple to calculate if every teaching station were at full capacity for each period of the day, but this is not the case. No teacher teaches all periods in a school day, and many courses enroll only a limited number of students. Studios, laboratories, and specialized classrooms simply cannot be scheduled at all times.

Therefore, a “utilization factor” is assigned to each teaching station according to the class schedule. Utilization factors for a single teaching station can range from 100% (7 of 7 periods) down to 14% (1 of 7 periods). Aggregate utilization for an entire high school building is expected to reach at least 80%.

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Each high school teaching station has a capacity based on class size and schedule.

Example high school capacity calculation:

25 teaching stations x 28 students @ 100% utilization = 700

15 teaching stations x 28 students @ 85% utilization = 357

15 teaching stations x 20 students @ 85% utilization = 255

10 teaching stations x 28 students @ 71% utilization = 199

5 teaching stations x 28 students @ 57% utilization = 80

3 teaching stations x 15 students @ 43% utilization = 19

Total: 73 teaching stations = 1610 capacity

At 100% utilization, the 73 teaching stations have a capacity of 1885 students

$1610 / 1885 = 85\%$ overall building utilization

These concepts apply equally to “block” and other scheduling variations.

Since high school capacities are based upon so many variables, they are typically presented as a range.

Offices for teaching staff have been found to be a worthwhile investment to improve building utilization. Typically, each teacher can only teach 5 periods a day. If the classroom doubles as the teacher’s office, the utilization of the classroom is limited to 5/7 or 71%. If a separate semi-private office is made available to the teacher and is used during off periods, the classroom is potentially available 100% of the time for instruction.

The example building above assumes offices are available for the 55 teaching stations utilized more than 71% of the time. If offices were eliminated, no teaching station would have utilization greater than 71% and the building capacity would be reduced to 1306 for an overall building utilization of 69%. As a result, either the student capacity of the building would have to be reduced or a larger building would need to be constructed.

Under-utilized buildings are less efficient, resulting in higher construction and operation costs.

This educational specification assumes a predominantly “open campus” schedule, where students in grades 12, 11, and perhaps 10, are free to leave the campus during non-instructional periods. “Closed campus” scheduling requires a building that is 5% to 10% larger, particularly in the Cafeteria/Commons, Library, and Athletic areas.

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INSTRUCTIONAL AREAS

General – March 1, 2006

- General
 1. The Instructional Area is the basic unit for delivery of the high school curriculum.
 2. Configuration should maximize flexibility and interaction within and among instructional areas for development of teaching teams, student learning, and a variety of related functions.
- Flooring: Carpet throughout
- Instructional Technology
 1. See Data, Communications, and Alarm Diagram.
 2. Dedicated computer labs are no longer considered to be instructionally viable.
 3. TV monitors in classrooms are being phased out. This technology should be provided in not more than 50% of new and remodeled instructional spaces.
 4. Digital projection is recommended; Ceiling mount with power outlet and data/audio/video jacks.
 5. Audio/Video jacks to connect computer/VCR/DVD with ceiling projector/TV monitor and speakers.
 6. Telephone
 7. New construction and major renovations should include a minimum of one interactive whiteboard (a.k.a. “smart board”) per building.
 8. Wireless network technology is optional.
 9. Electrical receptacles

General Classrooms – March 1, 2006

- General
 1. Rectangular in shape
 2. Optimum short side to long side ratio of 1:1.33
 3. Minimum 9’6” inch ceiling height; Higher for daylighting
- Windows
 1. Daylighting is preferred.
 2. Blinds or other form of light control are mandatory.
 3. Minimum of one operable sash per room with screen in the lower portion of the window.
 4. Minimum sill height is 36” above finished floor.
 5. Glazed openings are mandatory in or adjacent to all classroom doors.
- Doors
 1. General classroom doors opening directly to the exterior are prohibited.

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- Cabinets and Casework
 1. Twelve lineal feet of base and wall cabinets
 2. One 84” high x 24” wide x 24” deep locking cabinet with adjustable shelving for instructional materials and storage
- Operable Walls
 1. Not recommended
 2. May be provided between classroom pairs to provide the option of team teaching or to provide a larger single classroom
 3. Special consideration should be given to control of sound transmission through the operable wall and the ceiling space above the operable wall.
- Equipment
 1. Whiteboards: minimum 16 lineal feet with marker tray and tack strip with map hooks and flag bracket
 2. Tackboards: minimum 16 lineal feet
 3. Projection screen
- Lighting
 1. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.

Publications Classroom - March 1, 2006

- General
 1. Classroom / workroom dedicated to newspaper and yearbook publication activities.
 2. Typically, this is a General Classroom with supplemental casework, storage, and technology.
 3. Adjacent or direct access to:
 - a. General classrooms
 - b. Library Information Center
 - c. 2D Art studio
 4. Closet space may be substituted for or augment designated casework.
- Furnishings
 1. Layout tables
- Cabinets and Casework
 1. Thirty lineal feet of base and wall cabinets
 2. One 24 inches deep x 24 inches wide x 84 inches high locking cabinet with adjustable shelving for instructional materials and storage
 3. Storage cabinets for supplies and materials
 4. Ten computer workstations
- Plumbing
 1. Utility sink
- Telecommunications
 1. Ten computers

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Teacher Offices - March 1, 2006

- General
 1. Semi-private administrative work spaces distributed throughout the Instructional Area for 4 to 12 teachers to prepare lesson plans and meet.
- Windows
 1. Except for General Classroom areas, Teacher Offices require view lites into adjacent instructional classrooms/studios/workshops/labs for supervision.
- Doors
 1. Except for General Classroom areas, Teacher Offices require direct access into adjacent instructional classrooms/studios/workshops/labs.
- Equipment
 1. Residential or under counter refrigerator; size appropriate to occupant load
 2. Markerboard(s) with trays
 3. Tackboard(s)
- Furnishings
 1. Systems furniture (preferred)
 2. Include wardrobe cabinet
- Casework
 1. Eight lineal feet of base and wall cabinets
 2. One 84" high x 24" wide x 24" deep locking cabinet for each teacher for coats and personal items
- Plumbing
 1. Residential kitchen sink
- Telecommunications
 1. Per Data, Communications, and Alarm Diagram (DCAD)
 2. One telephone jack serves up to 4 workstations.

Departmental Storage - March 1, 2006

- General
 1. Separate storage rooms equally distributed throughout the instructional areas for use in shared storage of instructional materials.
 2. Provide a combination of adjustable and fixed wall-mounted shelving.
 3. Clear wall space may be necessary for map storage brackets.
 4. Clear floor space may be necessary for large format flat file drawer storage units.

END INSTRUCTIONAL AREAS

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SCIENCE

General - March 1, 2006

- General
 1. The High School Science Program is a laboratory-oriented, inquiry program
 2. Curriculum includes Earth Science, Biology, Chemistry, Physics, Unified Science and advanced courses.
 3. Instruction encompasses both hands-on and computerized virtual experimentation.
 4. Instruction in the Science program is built around 7 work groups of 4 students for a total optimum class size of 28.
 5. Configuration should maximize interaction within and among science areas.
 6. To maximize utilization and flexibility, the Science area should include both dedicated laboratories and combination laboratory/classrooms.
 7. General classrooms need to be either included in or immediately accessible from the Science area.
 8. Ralston Valley HS is considered to be a model for high school Science area configuration in Jeffco Public Schools.
- Finishes
 1. Flooring: Resilient
 2. Ceiling: Acoustically treated to reduce above average sound level of laboratory activities
- Safety
 1. See Jeffco Public Schools *Science Safety Guide*.
 2. Fire extinguishers
 3. Depending upon curriculum and proposed program activities, safety items such as emergency eye wash, emergency shower, fire blanket, and cabinet may be required by CDPHE regulations.
- Security
 1. The value and nature of contents requires the Science area to be secure.
 2. Locking door hardware with a common key is required throughout the Science area.

Earth Science / Physics Lab - March 1, 2006

- General
 1. The Earth Science/Physics Lab is a general purpose lab with perimeter project work surfaces and an open area in the center of the room for student desks.
 2. Orient students toward a teaching station such that students can view whiteboard or projection screen from a direct angle.
- Equipment
 1. Whiteboard: Minimum 16' with marker tray, tack strip, and map hooks
 2. Tackboard: Minimum 16'
 3. Projection screen
 4. Paper towel and soap dispensers at each sink
 5. Wall mounted flag bracket
 6. Two ceiling hooks from building structure
 7. Blackout curtains or shades

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- Cabinets and Casework
 1. Perimeter countertop with lockable base cabinets with adjustable shelf storage
 2. Teacher demonstration station can be either casework or furniture.
 3. Perimeter lockable glass front display wall cabinets and closed shelving
 4. Key rack
 5. Notebook cabinet
 6. Chemical resistant laminate is permitted.
- Mechanical
 1. Manually controlled independent HVAC system that provides 8 to ten 10 air changes per hour with 100% outside air
- Plumbing
 1. Minimum 4 student plus 1 teacher stainless steel sinks 28" long x 16" wide x 7" deep with fixed gooseneck faucet, hot and cold water
 2. Eye wash at one sink
 3. One floor drain is recommended.
 4. Natural gas is not a requirement, but stub-in is recommended.
- Electrical
 1. Electrical outlets are required at:
 - a. Teacher station
 - b. At the perimeter countertop (student work stations)
 - c. Eight duplex or pendant receptacles in the ceiling above the general open area of the room
 2. Keyed master power control
- Lighting
 1. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.
 2. Under-cabinet task lighting is recommended at perimeter countertops.
- Telecommunications
 1. See Data, Communications, and Alarm Diagram (DCAD).
 2. Eight data drops (7 student plus 1 teacher)

Chemistry / Biology Lab - March 1, 2006

- General
 1. The Chemistry / Biology Lab is a demonstration/experimentation lab with permanent project work stations in one of five configurations:
 - a. Perimeter
 - b. Peninsula
 - c. Island
 - d. Flex
 - e. Combination

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2. Space for student desks is required in:
 - a. An open area within the Chemistry/Biology lab
 - b. Dedicated Science classroom
 - c. Shared General Classroom
 - d. Combination
3. Orient students lab stations toward a teaching station such that students can view whiteboard or projection screen from a direct angle.
4. Chemical resistant materials are mandatory throughout.
- Equipment
 1. Per Earth Science/Physics Lab
 - a. EXCEPT: Ceiling hooks and blackout capability are optional.
 2. Fire extinguisher/cabinet(s) per Technical Guideline 10 44 00
 3. Fire blanket cabinet
- Cabinets and Casework
 1. Laboratory quality wood manufactured casework with locking doors and drawers throughout
 2. Solid monolithic countertops
 3. One instructor demonstration station
 4. Seven 4 student lab stations at 24 s.f. each
 5. Perimeter base cabinets and lockable glass front display wall cabinets with closed shelving as space permits; Includes lockable cabinet(s) for storage of 15 microscopes
 6. Individual locking 1 cubic foot capacity storage drawer for each student
 7. Goggle storage and cleaning cabinet
- Mechanical
 1. See Earth Science/Physics Lab
 2. Fume hood: One unit per Chemistry/Biology lab; Locate near Lab Prep/ Storage and remote from exits.
- Plumbing
 1. Eight (7 student plus 1 teacher) duplex gas cocks with a single keyed-on pushbutton-off emergency switch at the room exit
 2. Eight (7 student plus 1 teacher) chemical resistant sinks 28 inches long x 16 inches wide x 7 inches deep with fixed gooseneck faucet; hot and cold water
 3. Combination eye wash/emergency shower with floor drain
 4. Acid neutralization and chemical resistant waste lines are not required past the p-trap.
- Electrical
 1. Eight (7 student plus 1 teacher) duplex 120V receptacles
 2. Keyed-on pushbutton-off emergency switch at the room exit
- Lighting
 1. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.
 2. Under-cabinet task lighting is recommended at perimeter countertops.
- Telecommunications
 1. See Data, Communications, and Alarm Diagram (DCAD).
 2. Eight data drops (7 student plus 1 teacher)

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Lab Prep / Storage - March 1, 2006

- General
 1. Immediately adjacent to at least one pair of science lab classrooms
 2. Preferred configuration is a single “backstage” work area that permits direct teacher access to all instructional science labs.
 3. Chemical resistant materials are mandatory throughout Lab Prep/Storage areas that serve Chemistry/Biology Labs.
- Doors: Self-locking hardware
- Equipment
 1. Paper towel and soap dispensers at each sink
 2. Fire extinguisher/cabinet(s) per Technical Guideline 10 44 00
- Equipment for Lab Prep/Storage areas that serve Chemistry/Biology Labs:
 1. Sixteen-eighteen cubic foot upright residential refrigerator with icemaker
 2. Thirty inch residential electric range top; No hood
 3. Full size residential dishwasher
 4. Autoclave (countertop appliance)
- Shelving
 1. Earth Science, Physics and Biology: 18” adjustable; Minimum 16 linear feet of shelf per instructional lab served
 2. Chemistry: 12” adjustable with lip; Minimum 12 linear feet of shelf per instructional lab served
- Cabinets and Casework
 1. Laboratory quality wood manufactured casework with locking doors and drawers throughout
 2. Solid monolithic chemical resistant countertops are required for Lab Prep/Storage areas that serve Chemistry/Biology Labs.
 3. Minimum 5 linear feet base and wall cabinet for each instructional lab served
 4. Lockable glass front display wall cabinets and closed shelving
 5. Locking 1 cubic foot capacity storage drawers for teachers
- Mechanical
 1. See Earth Science/Physics Lab
 2. Fume hood: One unit per Lab/Prep Room that serves Chemistry/Biology Labs
 - a. Locate remote from exits.
- Plumbing
 1. One duplex gas cock for each 4 instructional labs served; With single keyed-on pushbutton-off switch at the room exit
 2. One sink 28” long x 16” wide x 7” deep with gooseneck faucet, hot and cold water, and for each 4 instructional labs served
 - a. Chemical resistant for Lab Prep/Storage areas that serve Chemistry/ Biology Labs
 - b. Stainless steel is acceptable elsewhere.
 3. Combination eye wash/emergency shower with floor drain
 4. Acid neutralization and chemical resistant waste lines are not required past the p-trap.
- Lighting
 1. Under-cabinet task lighting is recommended at perimeter countertops.

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Chemical Storage - March 1, 2006

- General
 1. The Chemical Storage is a separate closet with code compliant ventilation.
 2. There is only 1 Chemical Storage room per building, regardless of how many Lab Prep / Storage areas are provided.
 3. Locate within or adjacent to Chemistry/Biology Lab Prep / Storage.
 4. Chemical resistant materials are mandatory.
- Doors: Self-locking hardware
- Floor: Sealed concrete
 - a. Basin design ramped to threshold level is recommended
- Equipment
 1. Acid storage cabinet with integral exhaust
 2. Flammable materials cabinet with flame arrestor
 3. Active metals cabinet
- Mechanical
 1. 24/7/365 exhaust
- Electrical
 1. Receptacles are prohibited.
 2. Explosion proof luminaire(s)

END SCIENCE

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TECHNOLOGY

General - March 1, 2006

- Because technologies and curricula are rapidly changing, the high school Technology Suite is less defined than other instructional areas.
- The Design Advisory Group (DAG) is expected to collaborate with District instructional support staff to develop physical facilities that will support the most current visions for the instruction and applications of high school technology.
- Technology Education is an integral part of the high school educational program in Jefferson County. It correlates with and supports other disciplines such as Science, Business, Art, Language Arts, Mathematics, Social Studies, and Family and Consumer Sciences.
- After hours use can be anticipated for most Technology activities.
- Glazed openings are recommended between all spaces in the Technology suite to permit observation and supervision of multiple activities by a single teacher.
- Doors: Large enough to accommodate the largest piece of equipment or instructional project to be moved in or out of the facility. Direct access paths and open floor space at doors reduces congestion.
- HVAC: Design to address equipment and workstation loads.
- Safety: Depending upon curriculum and proposed program activities, safety items such as emergency eye wash, emergency shower, fire blanket, and cabinet may be required by CDPHE regulations.

CAD Drafting Lab - March 1, 2006

- General
 1. Interior, windowless space
 2. Near; not necessarily adjacent to the Technology Lab
 3. Teacher station plus 28 student stations for drafting and graphics
- Flooring: Resilient
- Casework
 1. Built-in perimeter base cabinets with shelving and drawers large enough to accommodate drawings and supplies
- Furnishings
 1. Fixed CAD workstations for 28 students
 2. Bookcase unit or shelves for reference books and catalogs
- Plumbing
 1. Utility sink (optional)

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Electrical

1. Duplex outlets at each student station and teacher station
2. 28 +1 data drops
3. Standard classroom audio/visual
- Lighting
 1. Non-glare indirect lighting is preferred.
 2. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.

CAD Lab Storage - March 1, 2006

- General: Storage room with shelving only, to accommodate instructional hardware, software, materials and student projects

Technology Lab - March 1, 2006

- General
 1. The Technology Lab is a hybrid computer/fabrication lab, equipped with computers and multi-use workstations.
 2. Width: 30 feet minimum, excluding auxiliary areas such as storage
 3. The optimum ratio of width to length should be 1 to 1 (square plan).
 4. All areas of the laboratory should be visible to the Teacher Workroom.
 5. Design for free flow of traffic between all areas and points of common use, such as auxiliary rooms, tool panels and common machine areas.
 6. Spacing between benches, machinery and other equipment: 42 inches minimum
 7. Layout to permit cleaning around the base
- Ceiling: Unfinished; height: 10'-0" to 12'-0" preferred
- Flooring: Resilient
- Projection Screen
- Casework
 1. One demonstration table, minimum 12' long, with sink and hot/cold water at one end.
 2. Continuous countertops along two walls with locking storage cabinets, 24' minimum
 3. Wall cabinets are optional.
- Furnishings: Modular workstations
- Plumbing
 1. Utility sink
- Electrical
 1. Outlets, minimum 4' apart, above the countertop
 2. Additional outlets for workstations based on the proposed hardware, peripherals, and equipment.

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Fabrication Room - March 1, 2006

- General
 1. Fabrication Room is for students to build prototypes of projects designed and engineered in the Technology Lab.
 2. The Fabrication Room is used for teaching tool use and safety and will contain both power and hand tools for student use.
 3. All areas of the Fabrication Room should be visible from the Teacher Workroom.
- Location: Adjoins the Technology Lab Flooring: Resilient
- Equipment
 1. Safety goggle cabinet
- Furnishings
 1. Work bench(es)

Multipurpose Lab - March 1, 2006

- General
 1. The Multipurpose lab is used to fabricate and demonstrate student projects.
 2. Instruction and laboratory work will include electronics, fiber optics, laser and microcomputer technology.
 3. Full size lab space with flexibility to adapt to a variety of educational programs
- Doors: This lab should have direct access from the exterior with a pair of doors and/or an overhead door.
- Flooring: Resilient.
- Casework
 1. Built-in perimeter base cabinets
- Electrical
 1. Duplex outlets at each student station and teacher station
 2. Standard classroom audio/visual

File Server Room - March 1, 2006

- General
 1. Separate space to house file servers and related peripherals for the Technology Education complex
 2. The File Server Room is not intended for storage.
 3. Minimum 8'-0" ceiling height
- Finishes
 1. Floor: Resilient
 2. Walls: Typical classroom finish
- HVAC
 1. Self-contained air conditioning
- Electrical: Four 120v duplex outlets

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Materials Storage - March 1, 2006

- General
 1. Storage to secure and control valuable portable equipment and tools
 2. A secondary purpose is to provide secure storage for student projects.
 3. Located conveniently for the unloading of delivery trucks and for issuing materials to the students throughout the Technology Education suite
 4. Maximize wall area for racks and shelving.
- Flooring: Resilient
- Furnishings
 1. Racks and Shelving - Racks, shelving, drawers and closed cabinets for supplies and tools

Teacher Workroom - March 1, 2006

- General: Space for 3 teacher workstations with desks and file cabinets
- Openings: Extensive glazing is required to permit visual observation of the Technology Lab, Fabrication Room, and Multipurpose Lab.
- Flooring: Resilient
- Equipment: Markerboard with tray
- Casework: Optional; Wall, base, and wardrobe
- Furnishings
 1. Open office furniture systems
 2. Bookcase unit or shelves for reference books and catalogs
- Electrical
 1. Duplex outlets at each teacher station
 2. Data drops
- Telecommunications
 1. One telephone jack serves up to 4 workstations.

END TECHNOLOGY

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FAMILY AND CONSUMER SCIENCES (FACS)

General - March 1, 2006

- FACS instruction is multi-functional, including traditional classroom instruction, demonstration, small group, and individual hands-on activities.
- Location
 1. Vehicle access to facilitate grocery delivery
 2. Kitchen activities are associated with the Student Store and Commons.
 3. Other FACS activities interrelate with Art and Technology.
 4. Proximity to Food Services kitchen is recommended.
 5. Student kitchens
- Safety
 1. Depending upon curriculum and proposed program activities, safety items such as emergency eye wash, emergency shower, fire blanket, and cabinet may be required by CDPHE regulations.

Foods Lab - February 29, 2008

- General
 1. Curriculum includes domestic and commercial food preparation, catering, nutrition, hospitality, and management.
 2. Comparable to Biology/Chemistry Labs in both size and configuration
 3. Components:
 - a. Open instruction/demonstration area
 - b. Student kitchens
 - c. Pantry
 4. The school's preparation/serving kitchen is also used for instructional purposes in the FACS curriculum.
 5. Successful models of this suite can be found at: Arvada West, Columbine, Dakota Ridge, and Green Mountain high schools.
 6. A designated or shared outdoor "bistro" area for barbecue and entertaining is suggested.
- General instruction area
 1. Open classroom/demonstration area in the center or at one end of the space
 2. Unobstructed open space for 7 student/food service tables and 30 chairs.
- Demonstration kitchen
 1. Fixed or mobile island demonstration table with ceiling mounted tilting mirror or video camera/projector
 2. Adequate space is required for students to participate in demonstrations.
- Student kitchens
 1. Six "U" or "L" configured kitchen lab stations at perimeter walls serve 24 to 28 students.
 2. Tables for student use can be moved into place at each kitchen unit to divide the unit and supplement available counter space.

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- **Pantry**
 1. A large, secure closet with adjustable perimeter shelves is required in the Foods Lab for storage of groceries, food supplies, small appliances and portable equipment.
- **Equipment**
 1. Whiteboard(s)
 2. Tackboard(s)
 3. Optional: Portable risers for individual desks
- **Equipment**
 1. Residential electric cooktop and wall oven at demonstration area
 2. Thirty inch residential electric range and oven at student kitchens
 3. Two upright 52” wide 2-door commercial refrigerators serve all kitchens.
 4. One upright 52” wide 2-door commercial freezer serves all kitchens.
 5. Microwave oven at demonstration and each student kitchen
 6. Dishwasher at demonstration area only
- **Furniture**
 1. Dining room tables and chairs
 2. Teacher desk / workstation.
- **Casework**
 1. Nine lineal feet of base cabinet and counter at demo and each lab
 2. Wall and peninsula cabinets
- **HVAC**
 1. Range hood at each range
- **Plumbing**
 1. Two-compartment residential sink at demonstration area and at each student lab, all with garbage disposals
- **Electrical**
 1. Minimum 4 receptacles at each student kitchen and demonstration kitchen
- **Lighting**
 1. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.
 2. Under-cabinet task lighting is recommended at perimeter countertops.
- **Telecommunications**
 1. Digital video and display may supplement or replace the demonstration mirror.

Multi Use Lab / Classroom - March 1, 2006

- **General**
 1. Curriculum includes clothing/fashion design, sewing, interior design, family and child studies, career orientation, and conventional instruction.
 2. Open, flexible classroom with perimeter casework permits standard classroom lecture and small group activities.
 3. Interactive “preschool atmosphere”
 4. Separate area for ironing
 5. Arvada, Arvada West, Bear Creek, Columbine, Dakota Ridge, and Standley Lake high schools are considered to be models for high school FACS configuration in Jeffco Public Schools.

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2006 High School Educational Specifications

- Wardrobe area
- Specialties
 1. Tackboard
 2. Whiteboard
 3. Triple mirror, shelf and rod at fitting room
 4. Two built-in ironing boards at ironing area
- Furniture and Equipment
 1. Large worktables; no individual desks
 2. Mirrors – triple
 3. Teacher table or desk
 4. One rectangular table per 4 students - minimum work surface
 5. One worktable, extra - minimum work surface
 6. Sewing machine heads (2 for each 3 students)
- Casework
 1. Perimeter counters for sitting/standing activities, including sewing
- Plumbing
 1. General purpose residential sink with hot and cold water and bubbler
- Lighting
 1. Color correct lighting is recommended.
 2. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.
 3. Under-cabinet task lighting is recommended at perimeter countertops.
- Telecommunications
 1. Laptop computers or workstations on carts are integral to the curriculum.

Teacher Work Room - March 1, 2006

- General
 1. Locate between Foods Lab and Multi Use Lab / Classroom with glazed openings for visual supervision of both
- Furnishings
 1. Up to 4 teacher desks, computer workstations, file cabinets, and shelving for books and electronic media
- Telecommunications
 1. One telephone jack serves up to 4 workstations.
 2. Per Data, Communications, and Alarm Diagram (DCAD)

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

Storage - March 1, 2006

- General
 1. FACS storage can be a dedicated central room, large closets, casework, or combination.
 2. Storage includes a laundry area.
- General Storage
 1. Projects
 2. Books, magazines, and instructional media
 3. Ventilating fans
 4. Utility cart(s)
- Foods Lab Storage
 1. Countertop appliances
 2. Dishes for place settings - service for 7 classroom sets
 3. Tableware (silver) - service for 7 classroom sets
 4. Glassware - service for 7 classroom sets
 5. Serving dishes
 6. Small appliances - can opener, mixer
 7. Cookware - for 7 classroom sets
 8. Staple groceries and supplies
 9. Mixing and measuring equipment
 10. Linens, including tablecloths, towels, placemats, aprons
- Multi Use Lab / Classroom Storage
 1. Sewing machines
 2. Large equipment for child development curriculum
 3. Fabric, carpet, and wallpaper sample books for housing and interior design classes
 4. Ironing apparatus
 5. Illustrative materials – child development models, posters, etc.
 6. Tote-tray; 1 per student @ 14” x 20”
- Equipment:
 1. Residential washer and dryer
- Casework
 1. Base and wall cabinets at laundry area

END FAMILY AND CONSUMER SCIENCES

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

BUSINESS

General - March 1, 2006

- The Business/Marketing Education curriculum is subject to rapid change to meet ever-changing needs in the marketplace. Thus, the instructional area should be designed to accommodate ongoing changes.
- The business area may be located anywhere within the building, but proximity to the following is preferred:
 1. School store
 2. Publications
 3. Art
- Flooring: Carpet throughout
- Casework
 1. Twenty-four inch deep locking storage cabinets with adjustable shelves along one entire sidewall of each instructional space
- Equipment
 1. Whiteboards and Tackboards: One each, 4' x 8', in each instructional space
 2. Projection screen

Computer Classroom - March 1, 2006

- General
 1. The business computer lab should be located centrally in the instructional area in order to maximize use of the computers by all disciplines.
 2. The computer lab will house workstations and/or laptop computers and related peripherals which will be used by students taking courses in both the Computer Science strand and the Applications strand of the District's computer curriculum.
 3. Interior, windowless space is preferred.
 4. For security purposes, the ceiling must be secured or the walls around the room must extend to the underside of structural deck.
 5. The computer lab will house the desktop PCs and related peripherals which will be used by students taking courses in both the Computer Science strand and the Applications strand of the District's computer curriculum.
 6. Room arrangement should accommodate 30 students, 15 microcomputer systems, an area for lectures/demonstrations and an area for deskwork.
 7. A glazed opening between the lab and adjacent business classroom is required for simultaneous supervision of both spaces from either space.
- Equipment and furnishings
 1. 15 networked computer workstations (14 students + 1 instructor)
 2. Option: Laptop computers on wireless network
 3. One printer for each 2 to 5 workstations
 4. Two TV monitors or one overhead digital projector
 5. One 72" x 72" wall mount projection screen

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- Electrical
 1. Separate 120V circuits @ 20 amperes per 5 workstations and key switched near the instructor's station
 2. Electrical wiring for TV monitors should be 120V; Key switched at the wall near the instructor's station
- Lighting
 1. Low glare luminaires on a dimmer switch with controls near the instructor's work station
 2. Indirect illumination is preferred.
 3. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.

Business Classroom - March 1, 2006

- General
 1. Typical classroom with additional electrical, data, and communications infrastructure
 2. Locate adjacent to the business computer lab with a glazed opening between the two for simultaneous supervision of both spaces from either space.

Teacher Workroom - March 1, 2006

- General
 1. Space for five teachers
- Casework
 1. Built-in workstations with file cabinets
 2. Twenty-four inch deep lockable storage cabinets with adjustable shelves across one wall of the classroom.
- Telecommunications
 1. One telephone jack serves up to 4 workstations.

END BUSINESS

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

MUSIC

General - March 1, 2006

- The Music curriculum engages students in a wide range of classroom activities that include performing, singing, composing, listening, viewing, demonstrating, reading, moving, and writing.
- The music program also provides students with opportunities to participate in concerts, exchange assemblies, musicals, marching band, solo and ensemble work.
- Instruction is by means of musical instruments, audio-visual equipment, films, video, audio CDs, tapes, books, and sheet music.
- The majority of regular class periods are spent in large group instruction.
- Vocal and instrumental class sizes range from 20 to 150 students.
- The vocal and instrumental music instructional programs are integrated and therefore, contiguous.
- Proximity to the stage is mandatory.
- Openings
 1. Large instruments require extra-width doors or pairs of doors without a mullion
 2. Door widths should be of sufficient size to allow passage of a grand piano from vocal and instrumental music rooms to the stage of the auditorium.
 3. Separate or shared overhead door access to a loading area
- The interior finishes for the music program are less important than functional area, volume, and acoustical performance of the spaces.
- Flooring: No requirements. Carpet and resilient flooring each have advantages.
- All components required for specified acoustical performance, including items such as draperies, are required to be included in the general construction contract.
- Schools can own and operate a semi tractor trailer to transport music apparatus to off site performance venues.

Vocal Music - March 1, 2006

- Acoustics
 1. Vocal music is an acoustically controlled and isolated space.
 2. Acoustical treatment is required to optimize acoustical separation, audibility, and eliminate dead spots.
 3. Comply with OSHA guidelines regarding prolonged staff exposure to high dB levels.
 4. Lower frequency absorption/dispersion materials are required.
 5. The instructor must be able to hear the individual and the balance within the vocal or instrumental ensemble.
 6. Avoid reflective parallel surfaces
 7. Ceiling treatment should alternate reflective and absorbent surfaces.

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- Minimum ceiling height: 16 feet
- Floor
 1. Level
 2. Built-in risers are prohibited.
 3. Modular risers are optional.
- Openings
 1. Exterior openings should be minimized or avoided for acoustical reasons.
 2. Drapes or blinds are required at existing exterior windows.
- Equipment
 1. Whiteboard with tray: 16 lineal feet, half with music staff lines
 2. Tackboard or strip
 3. Wall-mounted flag bracket
 4. Pull down projection screen
- Casework
 1. Thirty inch deep cabinet for sound system
- Plumbing
 1. One general purpose, stainless steel sink for cleaning instruments
 2. Gooseneck, single lever faucet with hot and cold water
 3. A bubbler drinking fountain attachment
- HVAC and Controls
 1. Ventilation should be proportional to high levels of physical exertion involved with the activities of the program.
 2. Independent control is preferred.
 3. Ambient sound of the heating, cooling and ventilating system should not exceed a preferred noise criterion (PNC) of 25.
- Lighting
 1. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.
 2. Minimum 50 foot-candles maintained at low level
 3. High level of 100 foot-candles maintained
- Illumination issues
 1. Legibility of sheet music due to lack of uniformity in music manuscript, inks, paper, music symbol sizes, and printing methods
 2. Wide variety of seating and standing arrangements change the angle of view from students to teacher.
 3. Different relationships of students to ceiling light sources when risers are used versus students standing at floor level

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- Electrical
 1. Learning from recorded music is a part of the teaching program.
 2. The instructional program requires a self-contained component stereo system including tuner, amplifier, microphones, built-in speakers, and input jacks to connect portable components.
 3. Outlets are required for a variety of audio-visual technologies, recording equipment, and electric instruments.
 - a. Minimum of 5 quadplex outlets, each on a dedicated 20-amp circuit
 - b. One duplex outlet for sound system
- Telecommunications
 1. Data outlet at each quadplex outlet

Instrumental Music - March 1, 2006

- General
 1. Criteria for the Vocal Music room apply equally to Instrumental Music.
 2. Large instruments, such as grand pianos, are typically stored in the rear of the Instrumental Music Room.
- Openings: Convenient access to the play fields is required for the marching band.

Ensemble Room - March 1, 2006

- General
 1. Small group practice area
 2. Acoustical criteria for the Vocal Music room apply to the Ensemble room.
- Equipment: One 4' x 8' whiteboard
- Electrical
 1. Computers require data ports

Practice Rooms - March 1, 2006

- General
 1. Sound isolated enclosures of multiple sizes between 50 and 100 s.f. to be occupied by an instructor plus 1 to 6 students with instruments
 2. Prefabricated/modular units are permitted.
- Openings
 1. Sound isolation hardware and view lite are mandatory

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

Music Workroom - March 1, 2006

- General
 1. Adjacent to the Vocal and Instrumental Music rooms with unobstructed views of both rooms
- Casework
 1. Standard work stations for three teachers
 2. Lockable wardrobe cabinet(s) for teacher coats and personal items
- Telecommunications
 1. One telephone jack serves up to 4 workstations.
 2. Per Data, Communications, and Alarm Diagram (DCAD)

Music Storage - March 1, 2006

- General
 1. File cabinets or casework for files, sheet music
 2. Instrument storage for at least 150 instruments of varying sizes. Pupil traffic patterns should be considered in locating the storage cabinets and the doors on the cabinets. Shelving for storage of instruments should have a metal edge.
 3. Attire Storage - Storage for at least 100 choir robes or formal performance attire
 4. Uniform Storage - Storage is required for 150 band uniforms, including hats.
 5. Space in the Outside Equipment Storage Building can be used for electrical generator and fuel sometimes used by the band for outdoor performances.

END MUSIC

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

ART

General - March 1, 2006

- General
 1. The High School Art Program is an experiential, exploration program. Studio instruction is provided in drawing, painting, printmaking, ceramics, sculpture, jewelry design and fabrication, and digital multimedia.
 2. The Art area should be designed as a cohesive unit.
 3. Art activities relate to most other school programs.
 4. Instructional areas should be designed for functional and safe occupancy by 30 students.
 5. Locate Art areas with access to a service drive for delivery of supplies and materials to Ceramics Studio.
 6. Noise generating apparatus and workshop activities require acoustical ceiling and wall treatments.
 7. Standley Lake High School is considered to be a model for high school Art configuration in Jeffco Public Schools.
- Safety: Depending upon curriculum and proposed program activities, safety items such as emergency eye wash, emergency shower, fire blanket, and cabinet may be required by CDPHE regulations.
- Doors: Lockable doors throughout, including doors from storage rooms and support areas
- Equipment
 1. Eight lineal feet of whiteboard with marker trays, tack strip with map hooks
 2. Wall mounted flag bracket
 3. Paper towel and soap dispensers at each sink
 4. Teacher desk area
 - a. Computer
 - b. Printer
 - c. Projector
 - d. Phone
 - e. Personal storage
 5. Projection Screen
 6. Safety signage appropriate to each space
 - a. No students allowed in this area
 - b. Exhaust fan must be on when spraying
 - c. Protect your eyes....wear safety glasses (3 each)
 - d. Danger – Consider the kiln to be hot at all times
 - e. Danger – Facial protection will be worn; Hair and clothing must be secured
 - f. Danger – Keep hands and clothing out of pug mill
 - g. Caution – Acid area; Rubber gloves and face shield must be worn
 - h. Inhalation of dust can be hazardous

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- Mechanical
 1. Compressed air manifold system distribution to all the art studios with individual air hookups throughout each room for pneumatic tools and spray booth
- Plumbing
 1. Clay traps at all waste lines
 - a. With sieve to prevent the need for daily maintenance
- Electrical
 1. Outlets are required above the countertop along all casework counters and at teacher station. Continuous strip outlets are acceptable.
- Lighting
 1. Natural north light is preferred in studios.
 2. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.
- Telecommunications
 1. At teacher desk area
 2. Per Data, Communications, and Alarm Diagram (DCAD)

2-D Studio - March 1, 2006

- General
 1. Instructional studio space for drawing, painting and printmaking
 2. Display space: Tackable surface or finish on one entire wall
- Flooring: Resilient or sealed concrete
- Walls: High performance coating
- Ceiling: No requirements
- Equipment (countertop)
 1. Print press
 2. Scanner(s)
 3. Printer(s)
 4. Mat cutter
 5. Paper cutter
- Cabinets, Casework, and Shelving
 1. Twelve linear feet of floor to ceiling lockable storage
 - a. Three sections, 4' wide x 30" deep
 - b. Adjustable shelves for large drawing paper storage, mat board, paint, oils, inks, and instructional materials
 2. Counter Space
 - a. Base cabinets with mix of large flat file type drawers and adjustable shelves
 - b. Wall cabinets above
 - c. Work and layout space for itemized equipment
 3. Vertical Storage Cabinet
 - a. Two levels of slot storage
 - (1) Four foot high slots, 3' wide x 36" deep
 - (2) Twelve to sixteen linear feet

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

4. Shelving
 - a. Flat, doorless storage for drawings and paintings
 - (1) Accommodate 28" x 32" paper
 - (2) Eight sections of flat storage, 7' high
 - (a) Each section divided by shelves
 - b. Twenty linear feet of adjustable shelf storage
 - (1) Dimensions: 4' wide x 32" deep
5. Casework Door Finish: White writing surface
- Plumbing
 1. Two stainless steel double sinks in countertop
 - a. Separation: 8'-0"
 - b. Sink bowls 16" x 22" x 12" deep
 - c. Standard residential kitchen faucets
 - d. Hot and cold water
 2. Two double compartment scullery sinks
 - a. Dimensions: 24" x 21"
 - b. Twelve inch high integral backsplash
 - c. Twenty-four inch square drainboard on each side
 - d. Goose neck swing faucet with single lever control each compartment
 - e. Hot and cold water
- Mechanical
 1. Exhaust Fan and hood over printmaking station
- Electrical
 1. Electrical outlets near all cabinet tops and walls
 - a. Strip type acceptable
- Lighting
 1. Hanging adjustable lighting at display wall; Dimmer control

3-D Studio - March 1, 2006

- General
 1. Instructional workshop for ceramics and sculpture
 2. Control of dirt and dust residue from clay and plaster activities is critical.
 3. Pug Mill activities need to be isolated. A separate room is recommended.
 4. Glaze mixing activities may occur within the 3D Studio, Kiln Room, or Storage area.
 5. Acoustical separation from academic areas
- Display
 1. Eight l.f. tackboard
 2. Unistrut display structure for hanging mobiles and three-dimensional sculptures
 3. Illuminated and lockable display case
 - a. Dimensions: 5' long x 2' deep x 3' high
 - (1) On a stand to make top of case at 6' high
 - b. Four tempered glass shelves of varying lengths.
- Flooring: Resilient or sealed concrete
- Walls: High performance coating

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- Ceiling: No requirements
- Cabinets and Casework
 1. Counter space
 - a. Base cabinets along one wall
 - (1) Mix of doors and drawers
 - (2) Lockable
 2. Two wall storage cabinets
 - a. Dimensions: 3' x 10" x 3'
 - b. Pegboard lining
 3. Student Project Storage
 - a. Eight cabinets
 - (1) Dimensions: 7' high x 36" wide x 24" deep
 - (2) Seven adjustable shelves, ¾" thick, in each cabinet
 - (3) Double doors
 - (4) Lockable
 4. Cabinets: 60 to 100 individual 1 cubic foot volume locking storage cabinets for students' personal tools, supplies, smocks, etc.
 5. Casework Door Finish: White writing surfaces
- Equipment
 1. Spray Booth (1)
 - a. Countertop model; 5' high x 3' wide x 2' deep
 - b. With exhaust system
 2. Wedging boards (2)
 - a. Dimensions: 36" wide x 24" deep
 - b. Standard cabinet height (concrete slab top)
 3. Clay boxes (3)
 - a. Dimensions: 7' high x 8' wide x 2' deep
 - (1) Galvanized lining throughout
 - (2) Lockable doors
 - (3) Minimum 150 adjustable metal screen or vented shelves 24" high x 24" wide x 18" deep, to accommodate a variety of 3D projects
 4. Work Benches (4)
 - a. Heavy duty
 - b. Four feet square
 - c. With vises
 - d. Supported on metal locker bases
 5. Work tables
 - a. With individual padlock student storage compartments
 - b. Size and quantity per program
 6. Slab roller and Extruder area near clay storage
 7. Potter's Wheels (10-15 total); manual or electric
 8. Pug mill

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

9. Welding bench (Optional)
 - a. Five feet wide
 - b. Free standing
 - c. Firebrick surface
 - d. Enclosed on three sides from bench top to ceiling
- Plumbing
 1. Three or four double compartment scullery sinks
 - a. Dimensions: 24" x 21"
 - b. Twelve inch high integral backsplash
 - c. Twenty-four inch drainboard on each side
 - d. Goose neck swing faucet with single lever control each compartment
 2. Floor drain
 - a. Dimensions: 12' long x 12" wide with grate cover
 - b. Grate type cover
- Mechanical
 1. Industrial type system to remove fumes and dust particles from the air
 2. Hood over pug mill
 3. Spray booth system
- Electrical
 1. Engineering should assume simultaneous operation of all equipment items.
 2. Emergency power shutoff
 3. Receptacles at teacher desk, countertops, tops and walls; Strip type acceptable
 4. Drop cord duplex outlets over wheel throwing area, pug mill, and glaze area.
- Lighting
 1. General classroom lighting
 2. Hanging, adjustable and dimming display lighting at:
 - a. Tackboards
 - b. Unistrut
 - c. Display case (if not integral)

Jewelry Studio - November 15, 2007

- General
 1. This studio may be part of a 2D or 3D studio, depending on size of the school and design variables.
 2. Acoustical separation from academic areas.
- Flooring: Resilient or sealed concrete
- Walls:
 1. Durable substrate; cleanable finish
 2. Pegboard above counter
- Ceiling: No Requirements

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- Cabinets and Casework
 1. Base cabinet and countertop along one wall with adjustable shelves and lockable drawers and doors for jewelry materials storage
 2. Built-in adjustable open shelving
 3. Jewelry Display Case
 - a. Dimensions: 4' high x 4' wide x 6" deep
 - b. Wall mounted or pass through into hall
 - c. Lockable
 - d. Glass with adjustable glass shelves
 - e. Tackable surface under backing
 - f. Lighted
 4. Solder Stations (6)
 - a. Twenty four lineal feet
 - b. Each station is 30" square, with 30" tall side dividers
 - c. Four torch compartments with fireproof surfaces
 - d. Lockable wall cabinets above for equipment storage
 5. Centrifugal Casting Area
 - a. Dimensions: 4' wide x 3' deep counter next to casting machine
 - b. For one enameling kiln and one burn out kiln
 6. Buffing Wheel Area
 - a. Counter accommodates eight stations 30" square.
 - b. Locking drawers below each station
 7. Lapidary area
 - a. Counter 3' wide x 2' deep
 8. Power Area
 - a. Dimensions: 4' x 12'
 - b. To mount power and metal working tools
 - c. Bolt to table tops to the greatest extent possible
 9. Wall storage cabinets (2)
 - a. Dimensions: 3' high x 3' wide x 10" deep
 - (1) With pegboard
 10. Tool cabinets (2)
 - a. Dimensions: 7' high x 3' wide x 18" deep
 - b. Pegboard lining for storage
- Furnishings
 1. Work Benches (2)
 - a. Heavy duty
 - b. Four feet square
 - c. For attachment of vises, bench plates, rolling mills, squaring shear, etc.
 - d. Supported on metal locker bases
 2. Work tables
 - a. With individual padlock student storage compartments
 - b. Size and total number is determined by room size and need

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- Equipment
 1. Casting machine at Centrifugal Casting Area
 2. Enameling kiln at Centrifugal Casting Area
 3. Burn out kiln at Centrifugal Casting Area
 4. Buffing Wheel
 5. Buffing Wheel Safety shield
 - a. One 4' x 4' x ¼" plexiglass
 - b. Hang 2 feet behind each wheel
- Plumbing
 1. One (1) double compartment scullery sink
 - a. Dimensions: 24" x 21"
 - b. Twelve inch high integral backsplash
 - c. Twenty four inch drainboard on each side
 - d. Goose neck swing faucet with single lever control each compartment
 2. Lapidary Counter faucet and drain connection to scullery sink
 3. Eye wash station
 4. Floor Drain
- Manifold System
 1. To provide oxygen and acetylene to solder stations
 - a. Freestanding tanks must have appropriate restraints to prevent tipping.
 2. Utility layout is critical to prevent accidental flame to hose crossover.
 3. Gas pipes should run under the front of solder stations.
 4. Oxygen must run through oxygen clean copper pipe with silver solder.
 5. Gas torches
 6. Compressed air connections for air brush and spray booth
- Mechanical
 1. Slot hood ventilation and dedicated exhaust at solder stations
 2. Exhaust system at buffer/grinder for removal of particulates
 - a. Interlock of grinder to exhaust system
 - b. Automatic from current switch sensing grinder current to activate exhaust system
- Electrical
 1. Solder Stations: Continuous electrical outlets above the countertop
 2. Centrifugal Casting Area: Power for itemized equipment
 3. Power Area: Drop cords/receptacles for power tools

Electric Kiln Room with Storage - March 1, 2006

- General
 1. Directly accessible from Ceramics Studio
 2. If Glaze mixing area is included in storage area, space is required for ten gallon glaze buckets
- Door: Dutch door with shelf between storage room and studio
- Finishes: Minimal
- Cabinets and Casework
 1. Glaze formulation counter or table
 - a. With dry chemical bins
 - b. Approximately 100 square feet required

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2006 High School Educational Specifications

- Furnishings
 1. Storage and shelving for green ware
- Equipment
 1. Electric Kilns (2)
 - a. Minimum 7 cubic foot size
 - b. Clearances as recommended by manufacturer
- Mechanical and Electrical
 1. Proprietary kiln exhaust system: Skutt “Envirovent”
 2. See Technical Guidelines and Data, Communications, and Alarm Diagram (DCAD).

Gas Kiln Building with Storage - March 1, 2006

- General
 1. For code compliance, safety, and security, the gas kiln is housed in a separate building directly accessible from the 3D/Ceramics Studio.
 2. If glaze mixing area is included in storage area, space is required for ten gallon glaze buckets.
 3. Easy and direct route with level surface is required for transport of green and glazed ware between Kiln Building and 3D/Ceramics Studio.
 4. The area should be surrounded by a safety fence with lockable gate.
- Finishes: None; Unfinished space
- Furnishings
 1. Optional: Storage and shelving for green ware
- Equipment
 1. Gas Kiln
 - a. Typically designed and site fabricated by a District-approved specialty contractor
 - c. Minimum capacity: 12 cubic feet
 - d. Clearances as recommended by manufacturer
- Mechanical
 1. Emergency gas shut off valve outside the kiln room
 2. Provide controllable combustion air, ventilation, and exhaust for the kiln room to:
 - a. Control “reduction” firings
 - b. Provide air for kiln operator
 - c. Remove toxic fumes
- Electrical
 1. Minimal lighting and power
 2. Explosion proof luminaire(s)

END ART

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

SPECIAL EDUCATION AND RELATED SERVICES

General - February 29, 2008

- The standard special education suite is programmed space to “pull-out” students from their regular classroom for one-on-one or small group instruction. Staff that usually travels between sites on a weekly or daily basis and is at a particular school only part time to provide this program.
- Center schools will have additional space for the Challenge and/or SLIC program students. These students have severe physical, mental and/or emotional disabilities. They are not “pull-out” students and spend the majority of their day in the challenge suite.
- Beginning in 2005, all high schools are to be designed and constructed as “center schools” to accommodate the various Challenge, SIED, SLIC or PC/CC/CAC programs currently provided by the district. More extensive special education will be provided for students with more severe physical and/or mental disabilities.
- Locate the special education suite to be convenient to both instructional and administrative areas.
- A direct accessible entrance from the outside is desirable but not required.
- Should be located on the ground floor
- Gifted and Talented (GT) student programs are provided in standard classrooms.

Definitions

- Challenge (CHAL) – various programs for students with physical and/or mental disabilities
 1. CHAL (ASD) – Autistic Spectrum Disorder
 2. CHAL (CB) – Communication and Behavior
 3. CHAL (DEV) – Developmental
 4. CHAL (S/P) – Severe / Profound
- DDSB – Developmentally Delayed Significant Behavior
- D/HD – Deaf/Hearing Disabled
- EH – (Students who are) Educationally Handicapped
- IB – International Baccalaureate
- PC/CC/CAC – Perceptual Communication/Communication Center/Communication Academic Cognitive
- SERS – Special Education and Related Services
- SIED – (Students with) Significantly Identifiable Emotional Disorders
- SLIC – (Students with) Significantly Limited Intellectual Capacity
- TE – Twice Exceptional

EH Classroom - March 1, 2006

- General
 1. Serves 15 - 20 students
 2. A markerboard and tackboard should be provided on one wall.
- Furniture will consist of desks for each student and a small table with 4 – 6 chairs.
- Educational Technology:
 1. Same as General Classrooms

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Challenge/SLIC Classroom (with “quiet” alcove) - February 29, 2008

- General
 1. Multi-use general classroom for 12 to 15 students with a defined alcove for a “quiet” or “time-out” space
- Flooring
 1. Carpet
 2. Resilient flooring at kitchen area
- Equipment
 1. Whiteboards:
 - a. 16 lineal feet with marker tray
 - b. Tack strip with map hooks and flag bracket
 - c. School may opt for “Smartboard” as portion of required length of board
 2. Tackboards:
 - a. 8 lineal feet
 3. Countertop microwave oven
 4. Full size refrigerator (icemaker optional)
 5. Range with recirculating vent hood
 6. Residential washer / dryer
 - a. Stackable if ADA compliant
 - b. Located in kitchen teaching area (preferred)
(1) Alternate location in Accessible restroom
 7. Residential dishwasher (optional)
 - a. If school does not install a dishwasher during construction, provide a 24” base cabinet adjacent to the sink to allow future installation.
 8. Kitchen configuration
 - a. L shape preferred
 - b. Appliances spaced apart for teaching multiple small groups simultaneously.
- Casework
 1. Twenty four lineal feet of base cabinet with countertop
 2. Twenty four lineal feet of wall cabinet
 3. Four lineal feet full height cabinet
 4. Locking doors and drawers throughout
- Plumbing
 1. General purpose sink and ADA faucet
 - a. With garbage disposer
- Educational Technology:
 - a. Same as General Classroom

Accessible Toilet - February 29, 2008

- General
 1. Directly adjacent to and access from the classrooms
 2. Can be shared with more than one classroom
- Finishes
 1. Per Health Department requirements
- Equipment

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1. Changing platform: 4' x 7' wall-mounted fold-down type with leg(s) to floor for additional support
2. Storage location for mobile transfer lift equipment
- HVAC
 1. Changing diapered students requires ventilation and exhaust that exceed normal design standards for this type of room.
- Plumbing
 1. Toilet
 2. Urinal
 3. Hand held shower wand near the toilet
 4. Lavatory
 5. Floor drain

SERS Team Office/Workroom - March 1, 2006

- General
 1. Houses 4 to 6 itinerant teachers and professionals on a part-time basis
 2. The workroom can be shared if more than one classroom is provided.
 3. Locate directly adjacent to the classroom with glass lites to monitor classroom activity.
 4. Locking file cabinets contain confidential record storage.
 5. Two computer workstations with network capability and a printer
 6. Telephone and a fax line

EH Assessment/Testing Room - March 1, 2006

- General
 1. Small room for individual testing
 2. Locate directly adjacent to the classroom.
 3. The testing room can be shared with more than one classroom.
 4. Furniture will consist of one student desk and 2 chairs.
 5. Provide a door with a window or a glass sidelight to monitor the room.

Conference Room - March 1, 2006

- General
 1. Meeting space for staff and/or parent conferences of 2 to 8 people
 2. Adjacent to the classroom and the office/workroom
 3. If the standard special education suite and the challenge suite are adjacent to each other, a single conference room can be shared.
 4. Can be shared with more than one classroom
 5. Telephone for conference calling consultation with parents or other professionals

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Storage - March 1, 2006

- General
 1. Separate or shared spaces serve both staff office/workroom and classrooms.
 2. One 4' wide full height storage unit
 3. Adjustable shelving elsewhere

END SPECIAL EDUCATION

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LIBRARY INFORMATION CENTER (LIC)

General - March 1, 2006

- General
 1. The Library Information Center (LIC) is the hub of the school and occupies a central physical and visual position in the building.
 2. The LIC and its resources are an integral part of each school instructional program and is therefore considered a “Teaching Station.”
 3. The LIC serves to teach students information gathering skills. It is used for individual research, individual and group study, group instruction, and conferences.
 4. Community use of the LIC is a vital aspect of its mission. After hours meetings of 100 or more persons are typical.
 5. Coordination is critical between the general contract and separate contracts for furniture/ equipment/ circulation desk/ shelving and high density mobile shelving.
 6. LIC functions and areas are separated into two categories:
 - a. Instructional Spaces (for students and public)
 - b. Management Spaces (for LIC staff)
- Acoustical Considerations
 1. Minimize reverberations to avoid disturbance caused by multiple simultaneous activities.
 2. Do not use angled or vaulted ceilings without acoustical absorptive covering on all angled surfaces.

Book Stacks / Seating Areas - March 1, 2006

- General
 1. The instructional component of the LIC is used by students, teachers and parents for research, reading, group study sessions, special events, staff meetings and after-hour community meetings.
 2. Components
 - a. Book Stacks
 - b. Large group instructional area(s)
 - c. Small group instructional area(s)
 - d. Computerized Public Access Catalog Areas
 3. Book stacks are dispersed throughout the open instructional component of the LIC:
 - a. Stacks include a mix of wall-mounted and freestanding book cases and/or bins.
 - b. The majority of the collection should be in perimeter shelving.
 - c. Design stacks to provide good visual supervision from the Circulation Desk Area.
 4. Large Group Instructional Areas are open areas for table and chair seating for two large groups of up to thirty five students each.

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5. Individual and Small Group Activity Areas provide open, semi-enclosed, or enclosed space for listening and viewing, independent study and reference, research, quiet reading, presentations, student productions, and guest speakers.
 6. Computerized Public Access Catalog stations are dispersed throughout the open space instructional component.
 - a. Approximately 30 multi-media computers
 - b. Some computers are networked to central printers
 - c. Opportunity exists for architecturally creative items to create cozy, inviting and comfortable reading spaces.
 - d. Thirty-six inch minimum depth for computer terminals
 - e. Design for ADA accessibility, either sitting or standing use
- Layout
 1. Generally rectangular in shape
 2. One or two double door entrances from the main corridor
 3. The Circulation Desk is the hub of the LIC and requires high visibility and direct access to and from all library activities.
 4. Configuration should not encourage use of the LIC as a "shortcut" through the building.
 5. Traffic patterns in this space should be structured to allow movement with the least disturbance to people in study areas.
 6. Clearances
 - a. Sixty inches between furniture and shelving in traffic areas
 - b. Forty four inches between stacks.
 - c. Sixty inches at traffic lanes and shelving or seating areas
 - Flooring: Carpet
 - Minimum 9'-6" ceiling height.
 - Equipment
 1. Whiteboard
 2. One ceiling mounted power projection screen for each large group instructional area
 - Shelving
 1. Metal library shelving is standardized in all schools.
 2. Custom shelving, without exception, is not permitted.
 3. Open adjustable steel shelving to accommodate 12,000 to 15,000 titles in the following combinations:
 - a. Wall space for all wall shelving shall be blank; Windows, mechanical, electrical, phone, fire, and security items are not permitted on this wall space.
 - Display Cases
 1. Locate near the main LIC entrance.
 2. Visible from inside and outside the LIC
 3. Built-in sliding glass door cases with adjustable glass shelves
 4. Illuminated
 - Lighting
 1. Minimum 50 foot-candles at each reading station
 2. Separate lighting control for each instructional areas and display cases
 3. Control of natural and artificial lighting is required to accommodate A/V presentations. Dual level switching is preferred.

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- Electrical
 1. Receptacles in permanent columns and architectural features are preferred.
 2. Floor outlets are prohibited.
 3. Pendant outlets are discouraged.
 4. Floor outlets are not recommended.
 5. Alternate electrical receptacles above wall shelving and in casework toe kick.
 6. Receptacles to accommodate student activities for each instructional area.
 7. Power and concealed wiring for each Public Access Catalog computer terminal
 8. Book security device
- Instructional Technology
 1. See Data, Communications, and Alarm Diagram (DCAD).
 2. Public Access Catalog workstations
 3. Countertop television monitors or digital projection from a mobile cart
 - a. Power outlet and data/audio/video jacks are required for either technology.
 4. One interactive whiteboard (a.k.a. “smart board”) is recommended in the LIC.
 5. Telephone

Circulation Desk Area - March 1, 2006

- General
 1. The Circulation Desk Area is the interface between the instructional/public and management/private components of the LIC.
 2. Serves to check-in and check-out all learning resources:
 - a. Books
 - b. Non-print material
 - c. Textbooks
 - d. Other curriculum supportive material
 3. Work area behind the Circulation Desk provides space for LIC personnel:
 - a. To prepare library learning resources for inclusion into the LIC collection
 - b. To identify materials needing repair
 - c. To store items placed on hold for students and teachers
 4. Clerical tasks are performed at the desk area:
 - a. Typing
 - b. Filing
 - c. Computing
 - d. Record keeping
 5. Should accommodate 8 to 10 students and up to 3 adults.
- Layout
 1. Central location:
 - a. Direct, easy access to the main LIC entrance
 - b. Visibility to all other LIC areas
 - c. Adjacent to Equipment Storage and LIC Office

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2. Circulation Desk
 - a. Custom design by the Consulting Architect, not systems furniture or prefabricated casework
 - b. Provided and installed by separate prequalified subcontractor (NIC)
 - c. Natural oak finish
 - d. Review the design with the Coordinator of Library Services to ensure functionality.
3. Book theft devices may require distance or physical shielding to prevent disruption of other electronic and telecommunications devices.
4. Provide space for 2 or 3 computer workstations for use with shared printer, circulation records, and book checkout security (desensitizer).
- Flooring: Carpet
- Casework
 1. One or two 30" high base cabinet workstations with countertop and wall cabinets at the work area
 2. Option: Systems furniture
 3. Adjustable, built-in wall shelving above casework behind Circulation Desk
- Electrical
 1. General receptacles
 2. Office equipment
 3. Data

Library Office - March 1, 2006

- General
 1. Houses LIC Specialist, aides and volunteers
 2. Serves LIC support functions including storage of LIC files, curriculum guides, manuals or other professional resources
 - a. Instructional planning, team meetings and consultations may be held in the office.
 3. Minimum 8'-0" ceiling height
- Layout
 1. Locate adjacent to the Circulation Desk Area.
 2. Visual supervision of the entire LIC is required from the office.
- Flooring: Carpet
- Furnishings
 1. Workstations can be furnished with systems furniture (FF&E budget).

Processing / Workroom - March 1, 2006

- General
 1. Accommodates materials production tasks such as dry mounting, laminating.
 2. Accommodates clerical tasks:
 - a. Typing
 - b. Copying
 - c. Duplicating
 - d. Collating
 - e. Publishing activities

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3. Is the main processing area for preparation of learning resources
 4. Toilet facility for LIC staff is recommended only if common facilities are not convenient.
- Flooring: Resilient
 - Equipment:
 1. One large copier (approximately 4'-0" x 7'-0")
 2. Dry mounting machine
 3. Laminating machine
 4. Computer(s)
 5. Printer(s)
 6. Twenty linear feet of adjustable shelving
 - Casework
 1. Base Cabinets:
 - a. Must accommodate 30" high sit-down workstations with drawers.
 - b. A 36" high peninsula or island
 - c. Drawers
 2. Wall Cabinets:
 - a. Above workstations and equipment counter
 - b. Vertical slot storage for poster board
 3. Shelving
 - Plumbing
 1. One work sink with hot and cold water.
 - Electrical
 1. One dedicated 240V outlet
 2. Equipment
 - Lighting
 1. Under-cabinet task lighting is recommended at perimeter countertops.

AV Storage / File Server - March 1, 2006

- General:
 1. Provides central storage and retrieval for books, learning resources, curriculum materials and equipment, including:
 - a. Includes audiovisual and non-print materials.
 - b. Oversized materials such as flat and roller type maps, charts, and posters
 - c. Large equipment items (VCRs, monitors and computers)
 - d. Small equipment items (tape recorders, CD players, microphones and digital cameras)
 - e. Supplies (bulbs, cords, headphones and jack boxes)
 2. Work space accommodates minor equipment repair and maintenance functions:
 - a. Holding area for pickup and delivery of equipment needing repair
- Layout
 1. Direct access to LIC Circulation Desk Area and the main corridor
 2. Rectangular room configuration is preferred.
- Flooring: Resilient

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- Furniture and Equipment
 1. Small workbench.
 2. Wall shelving near the workbench is used for processing, repair and reserve of learning resources.
- Fixed Equipment
 1. Floor space for a high density shelving system:
 - a. Storage for print and non-print media
 - b. Shelving is paid for from the construction budget.
 - c. Purchase and installation of the system is coordinated by the District.
 - d. High density rolling shelving is recommended.
 - e. Fixed end units are 12" deep x 84" high x length in whole feet (e.g., not 7'-9", either 7'-0" or 8'-0").
 - f. Rolling units are 24" deep x 84" high x length in whole feet.
- Casework
 1. Base Cabinets
 - a. Provide 30" high counter space for a computer workstation and space for storage of materials
 - b. Optional 36" high counter space for preview of materials and for additional work stations for aides and volunteers
 2. Wall Cabinets
 - a. Optional.
 3. Shelving
 - a. Specialized storage for flat maps and charts
 - b. Oversized shelves
 - c. Vertical slot shelving
 - d. Pegboard hooks for storage of roller -type maps
- Cabinets and casework for equipment
 1. Base cabinet: 36" high counter/work
 2. Wall cabinet: Full height units with shelves and drawers
 3. Adjustable shelving: Open with varying depths
 4. The Construction Project Manager and Interior Design Coordinator coordinate installation requirements.
- Lighting
 1. Overhead lighting
 2. Task lighting at work bench
 3. Under-cabinet task lighting is recommended at perimeter countertops.
- Electrical
 1. Quadplex receptacles or plug mold
 2. Receptacles to support charging 2 carts of laptop computers (20 per cart).

END LIBRARY INFORMATION CENTER

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AUDITORIUM

General - March 1, 2006

- The auditorium is utilized for a wide variety of school and public activities.
- The auditorium is a unique area that must be configured to allow multiple use to the greatest extent possible. In addition to serving as the primary public performance space, it must also be suitable for assemblies, theater, films, special speakers and large group meeting, instruction, and testing.
- Flexibility should be inherent in all systems to allow optimum utilization for both educational and performance purposes.
- For many visitors, the auditorium provides their only contact with the school, so it is important that this facility be designed to instill a favorable impression.
- Sound, light, acoustics, finishes, and stage apparatus are to be appropriate for semi-professional instruction and production, not legitimate/commercial theatre.
- Flylofts are categorically prohibited.
- The auditorium complex should be located in the public section of the high school, directly accessible to the exterior or main entrance lobby.
- The Student Commons/Cafeteria area can serve as the auditorium lobby, utilizing the food service infrastructure for concessions.
- The auditorium entry vestibule should be located adjacent to the ticket office and the student commons area.

Seating (House) - March 1, 2006

- General
 1. Total seating capacity should be in the range of 1/3 of the built-out permanent design capacity projected for the school.
 2. Unobstructed sight lines and audibility are required from all seats.
- Lighting
 1. Variable house light levels: From 0 to 35 foot-candles at chair height
 2. Since this space can also be used as a teaching station, classroom illumination levels or task lighting may be required as an option.
 3. Control is shared between the Stage and the Control/Projection Booth.
 4. Accessible for maintenance

Orchestra Pit - March 1, 2006

- General
 1. Located to the front of the stage, below sight lines
 2. ADA accessibility is mandatory.
 3. Design with removable prefabricated stage-level cover to serve as thrust stage.

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Stage - March 1, 2006

- General
 1. The Stage should be located near the music area of the school with direct access to the Stagecraft Workroom/Storage.
 2. The Stage is a hardwood or painted plywood platform area that provides full vertical and horizontal production space, configuration and components for semi-professional performances.
 3. A 30'-0" minimum depth and 50'-0" minimum proscenium opening width with tormentors that are adjustable from side to side.
- Lighting
 1. Theatrical quality adjustable/relocatable component system with interchangeable gels
 2. Control is shared between the Stage and the Control/Projection Booth.
 3. Since this space is typically used as a teaching station and work space, supplemental lighting to classroom illumination levels is recommended.
 4. Override switch to permit stage blackout

Control/Projection Booth - March 1, 2006

- General
 1. The control booth houses the projection room and observation deck above the entry/lobby area in the rear of the auditorium space.
 2. Functions may be stacked, depending on available space and building code.
- Openings
 1. Openings facing the stage should be operable windows.
- Lighting
 1. Control of house and performance lighting is shared between the Stage and the Control/Projection Booth.

Director's Office - March 1, 2006

- General
 1. The director's office should be located at the main entry vestibule, adjacent to the ticket office and student commons area.
 2. Direct access to the control booth is preferred.

Ticket Sales - August 18, 2005

- General
 1. Preferred location: Student store
 2. Option: Separate booth adjacent to director's office

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Dressing Rooms - March 1, 2006

- General
 1. One for each sex
 2. May be incorporated into other spaces such as restrooms or music practice rooms
 3. Ten lineal feet of counter space
 4. Two lavatories
 5. Full counter length mirror
 6. Incandescent make-up lighting
 7. Minimum of 5 lineal feet of space for hanging clothes.

Stagecraft Workroom/Storage - March 1, 2006

- General
 1. Location convenient to stage, Music, and Tech Arts, with direct access to the school loading area by means of an overhead door
 2. Balcony storage is also acceptable.

Support and Miscellaneous - March 1, 2006

- A catwalk or other approved access is required in the ceiling cavity to service lighting, fire detection devices, and mechanical equipment.
 1. Ladder access is not recommended. Ideally, access to the catwalk should be from an adjacent upper level ancillary space.

END AUDITORIUM

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PHYSICAL EDUCATION (P.E.) / ATHLETICS / MULTI-USE
General - March 1, 2006

- Comply with requirements, recommendations, and dimensions of the Colorado High School Sports Activities Association (CHSSAA).
- Large, reverberant spaces require acoustical design and treatment.
- Activities served by these facilities include:
 1. Aerobics
 2. Basketball
 3. Cheerleading
 4. Cross country
 5. Field Hockey
 6. Football
 7. Golf (off-site)
 8. Gymnastics
 9. Ice Hockey (off site)
 10. Lacrosse
 11. Marching Band
 12. Poms
 13. Rugby
 14. Skiing (off site)
 15. Soccer
 16. Softball
 17. Swimming (off site)
 18. Tennis
 19. Track and Field
 20. Volleyball
 21. Weight Lifting
 22. Wrestling

Main Gymnasium - March 1, 2006

- General
 1. The gymnasium area should be a simple, uncluttered box.
 2. The goal is to provide a multi-use area that is almost 100 percent usable space.
 3. Special review with the athletics and P.E. personnel are required before final alignment of equipment and court layout.
 4. Balcony designs are not recommended
- Adjacencies
 1. Locate adjacent to outdoor physical education facilities
 2. Convenient to parking and service drive
 3. Direct access to the main corridor and outdoor activity areas
 4. Openings, doors, or glazing are prohibited behind the main basketball goals.

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- Height
 1. Minimum clear ceiling height of 25' within court boundaries
- Floor
 1. Hardwood
 2. Markings per Jeffco Public Schools Athletics Department
 3. Maintain functional clearances between sidelines and seating.
- Walls
 1. Solid and acoustical masonry with high performance finishes
 2. The walls are used for the physical education program.
 - a. Avoid or minimize projections and obstructions such as braces, columns, and windows.
 - b. Design for future climbing wall apparatus loads
- Ceiling
 1. Unfinished
 2. Acoustical roof decking is mandatory for steel deck construction.
- Divider Curtain
 1. Electrically operated vinyl/net drop curtain; open at the top and solid at least 10' from the floor
 2. Minimum clearance of 23' to the floor when in raised position
 3. Door or opening is needed at both ends.
- Scoreboards
 1. Two scoreboards, capable of dual and individual operation with central console locations as identified in the bleacher section and automatic time-out clock
 2. Control console to be connected by appropriate extension cable to an outlet in the wall behind the bleachers
- Fixed Equipment
 1. Basketball backboards: Minimum 6 electrically operated, glass swing-up basketball backboards with break away rims and safety brakes
 2. Climbing ropes
 3. Floor inserts for volleyball
- Operable Equipment
 1. Gymnastic mats, crash pads
 2. Batting cage on pulley system
 3. Wrestling mat hoist (optional)
- Bleachers
 1. Telescoping, motorized bleachers with wall mounted controls on two walls to seat 120% of the build-out student capacity
 2. Primary event seating should be equipped with an appropriate attachable score-keeper/timer bench.
- HVAC: No requirements
- Plumbing: No requirements
- Lighting
 1. Controlled from a keyed switching bank
 2. Minimum of 50 foot-candles, maintained at 36" above finished floor
 3. Protect all fixtures from damage by balls

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- Electrical
 1. Recessed duplex outlets with heavy duty covers
 2. Recessed data outlets with heavy duty covers
- Public Address system
- Cable TV

Auxiliary Gymnasium - March 1, 2006

- General
 1. Configuration and materials should be comparable to the main gym.
- Adjacencies
 1. Adjacent and directly accessible to main gymnasium and locker rooms
- Height
 1. Minimum clear ceiling height of 25'
- Floor
 1. Resilient sport flooring
 2. Hardwood floor when intended for competition
- Ceiling
 1. Unfinished
- Scoreboards
 1. One scoreboard capable of dual and individual operation with central console locations as identified in the bleacher section and automatic time-out clock.
- Fixed Equipment
 1. Basketball backboards
 2. Floor inserts for volleyball and gymnastics apparatus
- Bleachers
 1. Telescoping, motorized bleachers with wall mounted controls on two walls to seat 10% to 20% of the build-out student capacity
- HVAC: No requirements
- Plumbing: No requirements
- Lighting
 1. Minimum of 50 foot-candles, maintained at 36" above finished floor
 2. Protect all fixtures from damage by balls
- Electrical
 1. Recessed duplex outlets with heavy duty covers
 2. Recessed data outlets with heavy duty covers
- Public Address system
- Cable TV

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Fitness / Weight Room - February 29, 2008

- General
 1. Adjacent and directly accessible to main gymnasium and Wrestling / Gymnastics room
- Height
 1. Minimum clear ceiling height: 10'-0"
- Floor
 1. Interlocking rubber flooring is placed on sealed concrete, over the entire floor area.
 - a. If any contact sport is practiced in the Fitness Room, mirrors must be covered with appropriate protective wall mats.
- Walls
 1. Durable material and finish
 2. Floor to ceiling mirrors at one wall
- Ceiling
 1. No requirements
- Fixed Equipment
 1. None
- HVAC: No requirements
- Plumbing: No requirements
- Lighting
 1. Typical classroom lighting
- Electrical
 1. Recessed duplex outlets
 2. Recessed data outlets
- Cable TV

Wrestling / Gymnastics Room - February 29, 2008

- General
 1. Adjacent and directly accessible to main gymnasium and Wrestling / Gymnastics room
- Height
 1. Minimum clear ceiling height: 15' – 0"
- Floor:
 1. Moveable mats are placed on sealed concrete
- Walls
 1. Durable material and finish
 2. Protective wall hung mats on all walls
- Ceiling
 1. No requirements
- Fixed Equipment
 1. None
- HVAC: No requirements

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- Plumbing: No requirements
- Lighting
 1. Typical classroom lighting
- Electrical
 1. Recessed duplex outlets
 2. Recessed data outlets
- Cable TV

Locker Rooms, Team Room, Training Room, and Offices - March 1, 2006

- General
 1. The basic design should be a large room for each sex, divisible to separate Athletics/home team from Physical Education/visiting team areas.
 2. Office(s) in each locker room require direct access and supervision of the locker room(s) with convenient access to the main gymnasium.
 3. The Team room is a large classroom common to both locker rooms.
 4. The Training room is a small area for therapy equipment, common to both locker rooms
 5. Showers: Privacy is preferred over gang configurations.
 6. Design for visual supervision throughout
 7. Prototype: D'Evelyn Junior/Senior High School
- Component spaces
 1. Boy's and Girl's PE and Athletic Lockers
 2. Showers
 3. Training Room
 4. Athletic Offices: Private office, shower and dressing space in each locker room for coaches
- Adjacencies
 1. Adjacent and directly accessible to main and auxiliary gymnasiums
 2. The PE office should have direct access to both gymnasium and locker room.
- Height
 1. Minimum clear ceiling height: 10'-0"
- Floor
 1. Sealed concrete or seamless
- Walls
 1. Durable material and finish
- Ceiling
 1. Monolithic surface for sanitation
 2. Lay-in grid ceilings are prohibited.
- Toilet accessories

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
2006 High School Educational Specifications

- Lockers
 1. Physical education lockers
 - a. Triple tier 24" high x 24" wide x 18" deep
 - b. Quantity: 25% to 35% of the build-out student capacity
 2. Athletic team lockers
 - a. Double tier 36" high x 24" wide x 18" deep
 - b. Quantity: 10% to 25% of the build-out student capacity for each sex.
 3. Football lockers
 - a. Full height 72" high x 24" wide x 18" deep
 - b. Quantity: 100 to 200 total
 4. Physical Education Office
 - a. Full height lockers 72" high x 12" wide x 12" deep
 - b. Quantity: 5 to 10 total
 5. Athletic Offices
 - a. Full height lockers 72" high x 12" wide x 12" deep
 - b. Quantity: 20 to 50 total
- Whiteboard and tackboard are recommended in Team Room, Training Room, and Offices
- Fixed Equipment
 1. Benches in dressing areas
 2. Whirlpool in Training Room
 3. Ice machine in Training Room
- Casework
 1. Athletic Offices: Built in counter(s)
- HVAC: No requirements
- Plumbing
 1. Student showers. Option: Rough-in only
 2. Toilets
 3. Urinals
 4. Lavatories
 5. Staff showers
- Lighting
 1. Typical classroom lighting
- Electrical
 1. Recessed duplex outlets
 2. Recessed data outlets
- Cable TV
- Telephone
 1. Required at offices

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Equipment Storage - March 1, 2006

- General
 1. Storage for large, team sport apparatus is critical and this area should not be compromised.
 2. Storage for pit mats
 3. Storage should be accessible to both gyms.
 4. Option: Uniform and physical education may be accommodated within locker rooms.
- Storage Cages
 1. Floor to ceiling chain link dividers and gates with hasps for padlocks
 2. Dimensions: 5' x 10'; Approximately 1 per 100 students of the build-out student capacity
 3. Dimensions: 5' x 20'; One for football
 4. One cage 600 sq. ft. for general storage
- Mat storage
- Should accommodate mat sizes up to 20'-5" x 10' x 1", laid or hung flat
- Doors must be lockable, if a separate area is provided.

END PHYSICAL EDUCATION (P.E.) / ATHLETICS / MULTI-USE

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ADMINISTRATION

General - March 1, 2006

- The Administration area is integral to the day to day operation of the school. It is both the center of students' non-instructional needs and the initial interface of the school to the public. Administration serves as a buffer between external and internal, instructional and non-instructional activities.
- No delivery and receiving functions are allowed through the front entrance. See Building Support.
- Location
 1. Administration is at or near the main building entrance, with obvious access.
 2. Administration has a direct relationship to core instructional and non-instructional facilities, particularly those with after-hours community use.
- Security
 1. Good external visibility is required to the parking area, main lobby and corridors.
 2. An open and flexible layout allows office staff to visually supervise and control the entire administration complex, particularly the Reception/Waiting area, Clinic, and private office areas.
 3. Glazed openings are mandatory in or adjacent to all private office doors in the administration complex.
- Furnishings
 1. To maximize flexibility, it is strongly recommended that administration areas be designed as open space, using the District's approved systems furniture vendor.
 2. The systems furniture is paid for from the FF&E budget; coordinate colors, materials
 3. Coordinate locations of electrical, telecommunications, thermostat(s) and fire alarm annunciator panels.
 4. A built-in service counter and aisle separates the Reception/Waiting area from the secretarial work stations.
 5. Other casework and permanent obstructions should be minimized or avoided.

Reception / Waiting Area - March 1, 2006

- General
 1. Reception / Waiting Area will be receiving point for students, parents and visitors to the administrative complex.
 2. Receptionist may double as a secretary so the reception counter needs to be adjacent to and visible from the general secretarial area.
 3. This area should seat as many as 12 people.
- Systems
 1. Central control panels for fire alarm, public address, and telephone systems are located in the Reception/Waiting area.

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Secretarial Work Area - March 1, 2006

- General
 1. Two to four secretarial work stations, depending upon size of school
 2. Each secretarial work station should have a standard secretarial desk to accommodate a computer, 4 four-drawer legal files and a telephone.
- Secretarial work stations should be located to provide:
 1. General supervision of the Reception / Waiting Area
 2. Back-up to the Clinic
 3. Direct communication to principal and assistant principals
 4. Access to Business Office, Mail Center, Conference Room, Attendance Office, Work Room, Staff Toilets, and storage areas

Principal's Office - March 1, 2006

- General
 1. Locate in a prominent location but privacy is critical.
 2. Adjacent to administrative Conference Room.
 3. Ideally there should be 2 exits from the Principal's Office, one opening directly into the principal's secretary's area and the other opening into an interior hallway leading to the exterior or a door directly to the exterior.
 4. Small locking closet (optional)
- Furnishings
 1. Preferred: Systems furniture
 2. Optional: Executive desk and credenza, side table and 4 chairs and bookshelves along one wall

Assistant Principal Offices - March 1, 2006

- General
 1. Assistant Principal Offices should be in close proximity to the Principals' Office and accessible from the Reception / Waiting Area and Secretarial Work Area.
- Furnishings
 1. Preferred: Systems furniture
 2. Optional: Executive desk, side table and 3 chairs, bookshelves and 2 four-drawer legal files
- Student Suspension Area (Optional)
 1. Small workstations or rooms for isolating in-house suspended students
 2. Visual supervision from AP Offices

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Business Office - March 1, 2006

- General
 1. Business Office is a contact point for students to pay fees.
 2. Student access should be confined to a service window to reduce congestion at the Reception / Waiting Area.
 3. Employee access to Business Office should be from the administration office area.
- Layout:
 1. Service window to corridor
 2. Counter and base cabinets under service window
 3. Space for safe (consult with Purchasing Department on current model number and size being supplied to schools)
 4. Space for 2 desks, one with typing return, 2 four-drawer legal files and computer with printer
- Furnishings
 1. Preferred: Systems furniture
- Equipment
 1. Safe

Attendance Office - March 1, 2006

- General
 1. Attendance Office should be located adjacent to Reception / Waiting and Secretarial Work Area.
 2. Student access should be confined to a corridor service window and employee access through the Secretarial Work Area.
 3. Service window to corridor
 4. Counter and base cabinets under service window
 5. Space for vault (consult with Purchasing Department on current model number and size being supplied to schools)
 6. Space for 2 secretarial workstations and 4 four-drawer legal files

Athletic Office - March 1, 2006

- General
 1. Serves the Athletic Department with a secretary to keep records and collect fees.
 2. Can be separate from Administration with direct access to the corridor

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Clinic / Health Center - March 1, 2006

- General
 1. The Clinic is used as a staging area to provide support for acute student injury/illness as well as management of chronic illnesses and associated medical interventions, including mental health concerns.
 2. The Clinic provides for controlled distribution of student medications.
 3. Direct access to both Administration and corridor is preferred.
- Layout
 1. Reception area with display space for health publications
 2. Office area for nurse aide, large enough to seat 4 people and accommodate a separate desk. It should provide adequate sound separation for confidentiality.
 3. Cot area with ceiling-track privacy curtains. The number of cots is determined by enrollment and state regulation.
 4. Accessible toilet room
- Security
 1. Visual supervision from Secretarial Work Area is critical for times when the nurse is not scheduled to be at the school.
- Finishes
 1. Non-absorbent, cleanable.
- Equipment
 1. Refrigerator (under counter)
 2. Scale
 3. Changing table (optional)
- Casework
 1. Lockable base and wall cabinets for medications and first aid supplies
 2. Wardrobe closet (optional)
- Furnishings
 1. Desk/computer workstation
 2. Cots
 3. File cabinet(s)
 4. Desk
 5. Chairs
- Plumbing
 1. Utility sink with a gooseneck faucet and blade handles
 2. Optional: Hand held shower and floor drain near toilet

Work Room - March 1, 2006

- General
 1. Locate adjacent to the Secretarial Work Area and Mail Center.
 2. More than 1 door is desirable.
 3. Closet for administration staff, with lockable door
 4. Can be staffed by student volunteers or part-time volunteers

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- Finishes
 1. Non-absorbent, cleanable
- Equipment
 1. Large multi-function copier
 - a. Requires a special electrical outlet and dedicated circuit
 2. Printers
 3. Fax machine
 4. Other specialized equipment as identified by DAG.
- Casework and Cabinets
 1. Twenty lineal feet of upper and lower cabinets for supply storage
 2. Lockable key cabinet
 3. One utility sink with hot and cold water
- HVAC
 1. Supplemental ventilation to dissipate equipment heat loads
- Lighting
 1. Under-cabinet task lighting is recommended at perimeter countertops.

Mail Center - March 1, 2006

- General
 1. For staff use only
 2. Accessible from the main corridor and adjacent to the Work Room
 - a. Ability to load from Work Room side
 3. Mailbox slots 15" deep x 11" wide x 4" high; the total number of slots should not be less than one 1 per 10 students of school permanent design capacity.
 4. Tack surface for messages and announcements

Conference Room - March 1, 2006

- General
 1. Seating for up to 20 adults
 2. Folding partition is recommended to accommodate smaller groupings.
- Location
 1. Centrally located to Principal's Office and Assistant Principal Offices
 2. Accessible from both the Administration area and a corridor
 3. Away from high activity areas, such as the Secretarial Work Area and Reception / Waiting Area
- Equipment
 1. Projection screen(s)
- Casework (Optional)
 1. Base and wall cabinets

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- Plumbing (Optional)
 1. Residential kitchen sink and fittings with disposal
- Electrical
 1. Variable lighting levels are required for presentations.
 2. Receptacles at countertop

Office Storage / Supplies - March 1, 2006

- General:
 1. Central to the Administration complex
 2. Lockable and secure

Staff Toilets - March 1, 2006

- General
 1. One unisex, handicapped accessible toilet room
- Finishes
 1. Non-absorbent, cleanable

Campus Supervisor's Office - March 1, 2006

- General
 1. Location options:
 - a. Main entrance/Administration
 - b. Commons
 - c. Gymnasium/Auditorium area

School Resource Officer's Office - March 1, 2006

- General
 1. Office for School Resource Officer and/or Police/Sheriff sub-station
 2. Located remote from main entry lobby and Administration

END ADMINISTRATION

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2006 High School Educational Specifications

GUIDANCE / COUNSELING

General - March 1, 2006

- The Guidance / Counseling area delivers support services that are essential for student performance and well-being.
- Location
 1. Adjacent to or contiguous with Administration
- Security
 1. Glazed openings are mandatory in or adjacent to all private office doors in the Guidance / Counseling complex.
- Furnishings
 1. District's approved systems furniture is recommended to maximize flexibility.

Reception - March 1, 2006

- General
 1. Direct access from main corridor
 2. Space for a receptionist and a secretary
 3. Casual seating area for up to 20 students.
 4. Shelf and display space for information on vocations, colleges, technical and business schools

College / Career Information Center - March 1, 2006

- General
 1. Adjacent to Reception
 2. Counter space for college/military representatives to talk with students, accommodate computers, and DVD/VHS audio/video
 3. Bulletin boards to display college and career information
- Furnishings
 1. Preferred: Systems furniture
 2. Shelf and display space for college and career information related to postsecondary training, military options, and job entry positions
 3. Space for student reading tables

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Counselor Offices - March 1, 2006

- General
 1. Privacy is critical.
- Casework
 1. No requirements
- Furnishings
 1. Preferred: Systems furniture
 2. Optional: 5' desk and executive chair, 1 four-drawer legal file and 3 side chairs

Conference / Testing Room - March 1, 2006

- General
 1. Accessible from Reception area
 2. Table seating for up to 10 people.
 3. Operable partition is recommended to subdivide the space.

Records and Storage - March 1, 2006

- General
 1. Locate to be convenient to both Guidance/Counseling and Administration.
 2. Includes space for a secured storage system for permanent records

END GUIDANCE / COUNSELING

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CAFETERIA / COMMONS

General - March 1, 2006

- General
 1. The Cafeteria/Commons area serves (in approximate descending order of frequency):
 - a. Lunch room
 - b. Student social area
 - c. Rehearsal space
 - d. Indoor group activities
 - e. Large and small meetings and conferences
 - f. After school meetings and presentations
 - g. Independent club/organization functions
 - h. Support space and services for intermissions in Gymnasium and Auditorium events

Cafeteria / Commons - March 1, 2006

- General
 1. Open, unobstructed, multi-use area
 2. Room volume enhances acoustical performance.
 3. Exterior windows are mandatory.
 4. Large enough to accommodate 35% of the total school build-out capacity at one time in cafeteria seating configuration
 5. Alcoves for storage of tables and chairs
- Location:
 1. Adjacent to the kitchen
 2. Near or adjacent to gymnasium
 3. Direct access to the main corridor
 4. Adjacency to the main lobby enhances social interactions and provides overflow capacity.
 5. Direct access to building exterior for overflow dining and after hours functions
- Circulation is critical to functionality
 1. Flow: Corridor to queue to food serving to table seating to tray return to outdoors
 2. Entrance should be directly to the kitchen serving line from the main corridor.
 3. Dish return circulation should not cross the serving line.
 4. Locate a separate exit to the outdoor activity areas as far as possible from the serving line.
- Finishes
 1. Ceiling height: 9'-6" minimum
 2. Low reverberation, high absorption acoustical treatments are critical above 8'.
 3. Non-absorbent, smooth surface, cleanable walls and floors

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- Furnishings
 1. Coordinate with Jeffco Public Schools Purchasing Department regarding specifications for modular tables/seats necessary to achieve the target serving capacity.
- Plumbing
 1. Locate a drinking fountain within or near the Cafeteria/Commons.

Kitchen - March 1, 2006

- General
 1. Coordinate prototypical Kitchen layout, design, and construction with Jeffco Schools Food and Nutritional Services Department.
 2. The kitchen provides space for personnel, delivery, storage, preparation, serving and cleanup of school food services.
 3. The kitchen can be a preparation/cooking kitchen for 2 elementary schools as well as a cooking and serving kitchen for the high school.
 4. The kitchen should be provided with a minimum of 3 serving areas that relate to scramble configuration serving areas that open directly onto the cafeteria / commons.
 5. Each kitchen should be designed to serve 35% of the student population.
 6. Locate the kitchen contiguous with the cafeteria.
 7. Acoustical sound isolation is required.
 8. Provide a loading area with unobstructed vertical and horizontal clearance for delivery truck access from the service drive.
- Layout
 1. Kitchen
 2. One unisex, ADA compliant staff restroom
 3. Employee locker area
 4. Custodial closet with floor mounted service sink
- Finishes
 1. Minimum 9'-6" ceiling height
 2. Non-absorbent, cleanable walls and floors
 3. Floors: Slip-resistant quarry tile is recommended.
- Furnishings
 1. Computer workstation
- Equipment
 1. Built in and modular kitchen appliances for storing, preparing, and cleaning
 2. Washer and dryer
 3. Hot tables

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- Plumbing
 1. Hand sink
 2. Pot sinks
 3. Preparation sinks with garbage disposal
 4. Dishwashing area with garbage disposal
 5. Floor drains
 6. Floor sink(s)

Staff Lounge - March 1, 2006

- General
 1. Separate room for 1/3 to 1/2 of the school's staff members to eat lunch and hold meetings.
 2. The faculty lounge should have a kitchenette with a sink equipped with a disposal and a full-size refrigerator.
 3. Pair of unisex toilets for faculty use
 4. Locate adjacent to the cafeteria / commons.
- Equipment
 1. Whiteboard
- Technology
 1. Similar to General Classroom

Public Toilets - March 1, 2006

- General
 1. Minimum of 1 facility for each sex
 - a. Fixture ratios should be provided according to applicable codes.
 2. Assume 50% ratio for each sex.
 3. Locate adjacent to cafeteria / commons.

Custodial Closet / Supplies - March 1, 2006

- General
 1. Provide a custodial closet adjacent to public toilet facilities for storage of supplies and equipment required for custodial services for the cafeteria / commons and public toilets.

Student Store - March 1, 2006

- General
 1. The student store is used to sell clothing, supplies and prepackaged food items.
 2. A hand wash sink should be provided for this area.
 3. This room should be directly accessible to the cafeteria / commons.
 4. Depending upon building configuration, a ticket sales office for Gymnasium and/or Auditorium events can also be included.

END CAFETERIA / COMMONS

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BUILDING SUPPORT
General - March 1, 2006

- Conceal all utility systems in public areas, classrooms and finished spaces
- Space Included:
 1. Technologist Office/Workroom
 2. Facility Manager Office
 3. Receiving and Storage
 4. Custodial Storage
 5. Custodial Rooms
 6. Outside Equipment Storage
 7. Mechanical Room(s)
 8. Telecommunication Room(s) (MDF, IDF)
 9. MDC and Electrical Closets
 10. Corridors and Stairs
 11. Elevator
 12. Student Lockers
 13. Restrooms
 14. Drinking fountains

Technologist Office/Workroom - March 1, 2006

- General
 1. Office/workspace for the school technologist to perform in-school hardware maintenance, repair, and programming.
 2. Holding area for pickup and delivery of equipment needing repair
 3. A rectangular room configuration is preferred.
- Location
 1. Direct access to LIC Circulation area and the main corridor
 2. Near the Library Information Center (LIC)
- Casework
 1. Six lineal feet of workbench/countertop at 36" high
 2. Base cabinets
 3. Wall cabinets: Full height units with shelves and drawers
 4. Adjustable shelving: Open, sturdy, with varying depths
- Electrical
 1. Three duplex outlets at workbench
- Lighting
 1. Under-cabinet task lighting is recommended at perimeter countertops.
- Telecommunications
 1. One telephone jack serves up to 4 workstations.
 2. Per Data, Communications, and Alarm Diagram (DCAD)

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Facility Manager Office - March 1, 2006

- General
 1. Office for administrative functions of the Facility Manager
 2. Locate adjacent to Receiving and Storage / Service entrance and Custodial Storage
 3. Locate to be convenient to Commons, Kitchen, Gymnasium, Auditorium, Administration, and Outside equipment storage
 4. Area for several desks
- Equipment
 1. Lockers for personal items; 15" minimum width
 2. One 4'-0" high x 6'-0" long markerboard with tray
 3. One 4'-0" high x 6'-0" long tackboard
- Electrical
 1. Task Lighting
 2. Three duplex outlets at workbench
- Communications
 1. Data drops

Receiving and Storage - March 1, 2006

- General
 1. Central loading dock and holding vestibule area for school supplies and equipment
 2. Direct access to Facility Manager Office and Custodial Storage
 3. Convenient to Music, Stagecraft, Technology, and Art
 4. Locate directly onto the service drive with access for delivery vehicles.
 5. Access to the building interior is mandatory; direct access to the corridor system is strongly recommended.
 6. Option: Shared with Kitchen receiving and storage.
 7. Steps are required to connect loading dock and service drive.
 8. High abuse, water resistant substrate with durable, cleanable finish
- Doors
 1. Overhead door and adjacent passage door at dock/floor level
- Electrical
 1. Duplex outlet

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Custodial Storage - March 1, 2006

- General
 1. Storage room for indoor floor cleaning equipment (extractors, vacuum cleaners, buffers, etc.) cleaning materials, and general janitorial supplies
 - a. Electrical transformers and breaker sub panels are prohibited in the custodial storage room and vice versa.
 2. Roof access hatch and built-in ladder are typically located in this space.
 3. Floor level should be at grade.
 4. Direct exterior access for service vehicles
 5. Direct corridor access is required.
- Electrical
 1. One duplex outlet
 2. Thirty foot-candles of lighting at 36" above the floor, maintained

Custodial Rooms - March 1, 2006

- General
 1. Equally distributed throughout the building in tandem with student/public restrooms
 2. Minimum of 1 custodial room per 20,000 gsf of building area
 3. One per Instructional Area or 12 general classrooms
 4. One dedicated Custodial Room to serve each of the following areas:
 - a. Gymnasium
 - b. Locker Room
 - c. Cafeteria/ Commons
 - d. Science
 - e. Auditorium
 - f. Music
 - g. Art
 - h. Kitchen (also see the Kitchen section for special requirements)
- Finishes
 1. Walls and ceiling: High abuse, water resistant substrate with durable, cleanable finish
 2. Forty eight inches high RFP (reinforced fiber panel) wainscot at service sink
 3. Floor: Seamless floor integral base
- Equipment
 1. Twenty lineal feet of adjustable metal shelving (NIC)
- Plumbing
 1. Floor mounted service sink 24" square (minimum) in each closet
 - a. Maximum lip height of 6" above the floor
 - b. Industrial braced faucet, supplying hot and cold water
- Electrical
 1. Lighting: 30 fc minimum
 2. Duplex receptacle(s)
 3. Transformers and breaker sub-panels are prohibited in custodial rooms.

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Outside Equipment Storage - March 1, 2006

- General
 1. Storage for hand tools, site maintenance equipment, gasoline powered tractors, mowers, spreaders, ladders, paint, fertilizer, insecticide, and flammable materials
 2. Service, repair, and preparatory activities also occur in this space.
 3. Automatic irrigation controller is typically located here.
 4. Locate to open directly onto the service drive with minimum back up distance.
 5. Noise generating activities require separation from instructional areas of the building.
 6. Depth should be sufficient to accommodate a tractor with a snowplow or mowing device attached.
 7. Minimum 10'-0" ceiling height
 8. An attached room is preferred in new construction, but a separate structure, remote from the main building, is acceptable in renovation projects.
- Doors
 1. One pair of doors or overhead door at grade level with a level threshold to the building exterior
 2. Doors directly from the storage room into the school building are prohibited.
- HVAC
 1. Minimal heat is required to prevent equipment freeze-up.
 2. Natural/gravity ventilation
- Plumbing
 1. Service sink with hot and cold water
- Electrical
 1. 120V 20A duplex receptacles, GFCI
 2. Two minimum 20 amp circuits if the building is attached to the main building
 3. Four 20 amp outlets if the building is free standing

Mechanical Room(s) - March 1, 2006

- General
 1. Mechanical rooms can include any combination of rooms to house the boilers, chillers, air handlers, water heaters, pumps, and related apparatus.
 2. Locate at grade to open directly onto the service drive with access for service vehicles.
 3. Access to the building interior is mandatory; Direct access to the corridor system is strongly recommended.
 4. Maximize acoustical isolation and sound attenuation
 5. Unfinished space; Ceiling grid is prohibited.
 6. Clearances: 30" w x 72" h (minimum 24" w x 66") clearances around equipment items, pumps pipes, supports, etc.

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- Doors
 1. Minimum 4' – 0" width
 2. Removable wall section of adequate width and height may be required to permit passage of the largest module of equipment contained in the room.
- Plumbing
 1. Mop sink with hot and cold water
- Electrical
 1. Multiple (at least one per wall) 120V duplex outlets, GFCI
 2. Design lighting around equipment and pipes to minimize shadows.
 - a. Thirty foot-candles of lighting at 36" above the floor, maintained.
- Telecommunications
 1. One data drop

Telecommunications Room(s) (MDF, IDF) - March 1, 2006

- General
 1. Main Distribution Frame (MDF) and Intermediate Distribution Frame (IDF) rooms house infrastructure for data telecommunications, video, cable TV, satellite transmissions, controls, detection, alarm, and other special systems.
 2. See Data, Communications, and Alarm Diagram (DCAD).
 3. National Electric Code (NEC) applies.
 4. Storage is categorically prohibited in Telecommunications Rooms.
 5. Minimum 8'-0" ceiling height
- Finishes
 1. Wall finish: ¾", noncombustible unpainted plywood throughout
 2. Ceiling and floor: No requirements
- Adjacencies
 1. MDF room should be central to the geometry of the building, preferably near the LIC.
 2. IDF rooms are satellites to MDF, established by cable run limits.
- Doors
 1. Size door to permit passage of the largest equipment item.
 2. Access is limited to specific site personnel.
- HVAC
 1. MDF requires independent 24/7/365 room cooling and controls (thermostat and space sensor).
 2. IDF: No requirements at this time
- Electrical
 1. Provide electrical power for specialized equipment.
 2. One 110V duplex outlet
 3. Thirty foot-candles of lighting at 36" above the floor, maintained

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MDC and Electrical Closets - March 1, 2006

- General
 1. Main Distribution Center (MDC) houses the main electrical switch gear.
 2. Electrical Closets are distributed throughout the building.
 3. Requirements of the National Electric Code (NEC) apply.
 4. See Data, Communications, and Alarm Diagram (DCAD).
 5. MDC floor level should be at grade with direct exterior access for service vehicles.
 6. Maximize MDC acoustical isolation and sound attenuation.
- Doors
 1. MDC room should have one exterior door only.
 2. Size to permit passage of the largest piece of equipment.
 3. Direct access to the corridor system is required only for Electrical Closets, not MDC.
- HVAC/ventilation: Exhaust fan, motorized damper, and thermostat
- MDC Electrical:
 1. One duplex outlet; GFCI @ 48" above floor
 2. Fifty foot-candles, maintained with 100% backup from the generator circuit
 3. One battery type EM luminaire
- Electrical Closet Electrical
 1. One duplex outlet; GFCI @ 18" above floor

Corridors and Stairs - March 1, 2006

- General
 1. Safety and security are paramount. The corridor and stair system must facilitate visual adult supervision and be sized to avoid congestion.
 2. Durability, abuse resistance, and ease of maintenance are critical.
 3. Compartmentalization of the corridor system by means of gates, screens, or doors is mandatory to isolate the building into security zones during after hours activities.
 4. Acoustics are important
 - a. Minimize reverberation times to avoid disturbance caused by multiple simultaneous activities
 - b. Angled or vaulted ceilings are prohibited without full acoustical absorptive material covering.
 5. Ceiling height should be in proportion to corridor width and sufficient to promote safe circulation during passing periods.
 6. Areas of refuge are required at stairs, per building code.
 7. Vestibules are required at high use entrances and exits.
- Flooring
 1. No requirements
 2. Typically, carpet is preferred near administrative and instructional areas for acoustical reasons.

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- Walls
 1. Masonry is preferred in main corridors, athletic, and public areas, and other high traffic and high abuse locations.
 2. Other corridor wall finishes may be high impact gypsum board covering the entire wall finished with heavy mil-thickness, multi-colored coating or other finish as approved by Facilities Planning & Design.
 3. Option: 48" high wainscot veneer finished with high performance multi-color coating with high impact gypsum board above.
 4. Full-height high-impact corner guards are required at all exterior gypsum board corners
- Doors
 1. Rated classroom doors shall have electro-magnetic hold open devices
 - a. Hold open devices are required to maintain integrity of the exit system, when classroom doors are kept open
- Windows / Daylighting
 1. Windows into the classrooms from the corridors are not permitted, except as sidelights beside doors, or windows within the door
 2. Natural light - Natural light through exterior windows and/or clerestories is desirable in corridors.
 - a. Consider incorporation of sustainable daylighting techniques. Provide means to avoid direct sun glare and heat build-up in space.
- Cabinets and Casework
 1. Lockable display cabinets are for display of trophies, awards, artwork, school store items, etc distributed throughout public areas of the corridor system.
 2. Dimensions: 8'-0" x 4'-0" high display cases with tackboard and/or shelves with lockable sliding glass or rear access doors
 - a. Place at 3 or 4 prominent locations equally distributed throughout the school, preferably in public corridors.
- Signage
 1. Directional signs in the Lobby to the main areas of the building
 2. Room name, number and replaceable teacher name plaques at each classroom doorway
 3. A dedication plaque
- Electrical
 1. 120V, general use duplex receptacles at 50' maximum spacing throughout the corridor system
- Lighting
 1. Thirty foot-candles at 36" above the floor maintained
- Telecommunications
 1. Paging system

Elevator - March 1, 2006

- General
 1. One elevator is required per building to provide disabled access to all levels.
 2. Locate in high visibility area for safety and security.

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Student Lockers - March 1, 2006

- General
 1. Student Academic Lockers are optional based on recommendations of the Design Advisory Group.
 2. Distributed locker arrangements are preferred over concentrated arrangements such as locker bays.
 3. Locate in high visibility area for safety and security.
 4. Locker size: 12" or 15" wide x 15" deep x 36" high minimum
 5. Option: Full height lockers with equivalent volume
 6. Quantity: One per student per permanent design capacity with space to increase to 110% of capacity in the future

Restrooms - March 1, 2006

- General
 1. Durability, abuse resistance, and ease of maintenance are critical.
 2. Acoustics are important.
 3. Fixture ratios and accessibility per applicable codes
 4. Distribute toilet facilities throughout the building per code requirements.
 5. Assume maximum building or instructional area capacity according to the formula contained in the Educational Specifications and assume 50% each sex.
- Student Restrooms
 1. Safety and security are paramount. Student restrooms must facilitate adult supervision and be sized to avoid congestion.
 2. Locate convenient to instructional area classrooms
 3. One per 8 classrooms
 4. Recommended layout: Enclosed space for toilets and urinals with a common lavatory bank shared by both sexes.
- Staff Restrooms
 1. Locate convenient to teacher work rooms and instructional areas
 2. Unisex staff restrooms are permitted.
 3. Also see Administration
- Public Restrooms
 1. Locate at public access areas of the building, particularly the Commons, Athletic and Auditorium areas.
 2. Recommend dual use public and student restrooms rather than dedicated public restrooms.
 3. Family/unisex restrooms are optional.
- Openings
 1. Doorless entry layout is preferred for multiple occupant restrooms.

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- Finishes
 1. Floor: Seamless with integral base
 2. Walls: High abuse, water resistant substrate with durable, cleanable finish.
 3. Ceiling: Lay-in/grid ceilings are prohibited.
- Casework
 1. Lavatory counter
- Equipment
 1. Book shelf: Preferred for all restrooms
 2. Coat hooks: Preferred for all restrooms
 3. Diaper changing station: Required at public restrooms only
 4. Electric hand dryer: Preferred at student restrooms; optional elsewhere
 5. Grab bar: As required by ADA
 6. Mirror: Required for all restrooms
 7. Paper towel dispenser: Prohibited in student restrooms; Preferred elsewhere
 8. Partitions with privacy doors: Preferred for all multiple occupant restrooms
 9. Sanitary napkin dispenser: Required in all women's and unisex restrooms
 10. Soap dispenser: Required at all lavatories; may be shared
 11. Toilet tissue: Required at all toilets
- Plumbing
 1. Toilet
 2. Urinal
 3. Lavatory
- Electrical
 1. One duplex GFCI receptacle at each area or space
 2. Outlets are prohibited within student restrooms.

Drinking Fountains - March 1, 2006

- General
 1. Fixture ratios and accessibility per applicable codes
- Locations
 1. Minimum of 1 for each instructional area
 2. Commons
 3. Auditorium vestibule
 4. Athletic areas
 5. Administration
- Finishes
 1. Flooring: Resilient; Carpet is prohibited within 24" radius of Drinking Fountains.
 2. Walls: High abuse, water resistant substrate with durable, cleanable finish.

END BUILDING SUPPORT

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SPECIAL SYSTEMS

General - March 1, 2006

- Building systems which support the educational program and have special requirements for installation and operation
- Required Systems
 1. Cable TV (CATV)
 2. Central Energy Management System (CEMS)
 3. Clock System
 4. Data Systems
 5. Fire Alarm System
 6. Public Address System
 7. Security System
 8. Stereo Systems
 9. Telephone System
 10. Temporary Building Systems
- Optional System(s)
 1. Audio Enhancement System

Video - March 1, 2006

- General
 1. Video outlet locations
 - a. One per classroom; ceiling projector or TV monitor cabinet
 - b. Two in the Library Information Center
 - c. One drop each in the Gymnasium, Cafeteria and / or Multi-Use Room
 - (1) If area is to be used for school TV broadcast studio, increase to 2 video drops.
 - (2) Locate one at 84" above floor for monitor and one at approximately 18" above floor to accommodate video camera.
 - d. One in each multi-teacher workroom (up to a maximum of 5)
 - e. One in administrative office
 - f. One in the Principal's office or administrative conference room
 2. Cable TV (CATV) is being phased out in Jeffco facilities.
 3. See Data, Communications, and Alarm Diagram (DCAD).

Central Energy Management System (CEMS) - March 1, 2006

- General
 1. CEMS monitors the heating, ventilating and air conditioning (HVAC) system and reports status information to a District central monitor location
 2. Installation responsibilities
 - a. The system is supplied and installed as part of the construction contract.
 - b. CEMS control equipment is located in the Communications Room.

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Clock System - March 1, 2006

- General
 1. School clocks are on a master, self-adjusting electrical system.
 2. Refer to the Data, Communications, and Alarm Diagram (DCAD).
 3. Locate the master control in the Communications Room.
 4. Bells are being phased out. See Audio Systems.

Data Systems - March 1, 2006

- General
 1. A computer network will be installed throughout the school.
 2. Refer to the Data, Communications, and Alarm Diagram (DCAD) for specific quantities and outlet locations.
 3. Control equipment is located in the Communications Room.
 4. Three per classroom, except temporary classrooms
 - a. One data outlet should be located near or below the video outlet for use with video camera(s)
 5. One per administrator and/or in each room in office area
 6. Facility Manager office
 7. Cafeteria/Commons
 - a. Coordinate location with Food Services representative.
 - b. Locate near or below video outlet for use with video camera(s).
 8. Library Information Center
 - a. Two for circulation desk
 - b. One for Library Information Specialist's office
 - c. Five locations within LIC
 9. Gymnasium
 - a. Locate near or below video outlet for use with video camera.
 10. One in each assembly area
 11. If two-piece Wiremold strips are required for installation, Wiremold must meet shielding requirements for Category 5 data cable.
 - a. Duplex back boxes are required for use with Wiremold.

Fire Alarm System - March 1, 2006

- General
 1. A fire alarm system will be installed throughout the school.
 2. Locate a fire alarm status panel in the administrative area.
 3. Control equipment is located in the Communications Room.

Security System - March 1, 2006

- General
 1. Security detection devices are located in corridors, the Administration Area and LIC.
 2. System control equipment is located in the Communications Room.
 3. Video surveillance cameras are located in accordance with the Data, Communications, and Alarm Diagram (DCAD).

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Access Control System - March 1, 2006

- General
 1. At designated exterior doors only
 2. Separate contract (NIC)
 3. See Data, Communications, and Alarm Diagram (DCAD).

Video Surveillance System - March 1, 2006

- General
 1. At designated exterior locations only
 2. Separate contract (NIC)
 3. See Data, Communications, and Alarm Diagram (DCAD).

Audio Systems - March 1, 2006

- General
 1. Paging System
 - a. School-wide stereo system is part of the telephone system.
 - b. Interior and exterior speakers can replace bell system.
 2. Music Room system
 - a. System consists of an amplifier, CD player, tuner, tape recorder, two remote speakers and one wired microphone.
 - b. The portable stereo system is purchased from the school budget.
 3. Also see Auditorium.

Public Address System - March 1, 2006

- General
 1. A public address system will be provided in the Gymnasium.
 2. Operation controls are located in the Gymnasium offices.

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Telephone Systems - March 1, 2006

- General
 1. A programmable phone / paging system will be installed.
 2. Refer to the Data, Communications, and Alarm Diagram for device locations.
 3. Telephone control equipment is located in the Communications Room.
 4. Voice (telephone) outlet locations:
 - a. One per classroom
 - b. One per Library Information Center
 - c. One per Library office or Library media production area
 - d. Two per administrative office support staff
 - e. One for the school FAX machine
 - f. One for Gymnasium
 - g. One in Cafeteria
 - h. One per 4 workstations in teacher workrooms
 - i. One per Administrator or full-time staff
 - j. One per special program
 5. If two-piece Wiremold strips are required for installation, the Wiremold must meet shielding requirements for Category 5 data cable.
 6. Duplex back boxes are required for use with Wiremold.

Audio Enhancement System (Optional) - March 1, 2006

- General
 1. The system allows use of a hands-free, wireless microphone to enhance voice projection.
 2. The system consists of a base unit, four speakers and a wireless microphone.
 3. One unit is installed for each teaching station.

Temporary Building Wiring Requirements - March 1, 2006

- General
 1. One video outlet
 2. Three data outlets and three telephone outlets located in same back box
 3. One wall telephone outlet located near the entrance door

END OF SPECIAL SYSTEMS

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
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SITE DEVELOPMENT STANDARDS

General - March 1, 2006

- To accommodate the site functions and amenities itemized in this section, the recommended minimum net usable land area for a high school is 50 acres, for new schools regardless of projected build-out capacity of the school.
 1. The number and sizes of high school site components tend to be determined more by extracurricular activity schedules than by school enrollment.
 2. Since most existing high school properties are undersized by these standards, the site design process at these facilities will involve compromises, multiple use, off-site venues, and possible elimination of some itemized components.
- Building entrances and exits are to be at grade.
- Site development should incorporate sustainable design concepts and techniques.
- All site amenities, including athletic fields, parking lots, pedestrian walks, and building entries require barrier-free accessibility to the extent required by ADA.
- Arrange buildings and grounds to provide maximum safety and visual observation opportunities for all site components.
 1. Minimize areas hidden from general public view.
 2. The main school entrance should be visible from the street with direct access from vehicle areas.
- Pavement
 1. Flexible/Asphalt
 - a. Parking lots
 - b. Driveways, bus loops
 - c. Secondary pedestrian/bicycle paths and walks which abut undeveloped neighboring property
 - d. Game courts
 2. Rigid/Concrete
 - a. Main sidewalks and entrance plaza
 - b. Service drives
 - c. Emergency access lane(s)
 3. Crushed concrete, gravel, or crusher fines may be considered for rural / less developed areas.

JEFFERSON COUNTY SCHOOL DISTRICT, R-1
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- Components of a high school site:
 1. Site Utilities
 2. Drainage
 3. Site Circulation
 4. Student Activity Areas
 5. Temporary Classroom area
 6. Field Sports
 7. Track and Field
 8. Game Courts
 9. Out Buildings and Amenities
 10. Exterior Improvements
 11. Miscellaneous site improvements

Site Utilities - March 1, 2006

- Electrical
 1. Power via buried conduit is required to:
 - a. Batting cages
 - b. Pitching machines
 - c. Tennis serving machine
 - d. Scoreboards
 - e. Out Buildings
 - f. Pressbox/Concessions building
 - g. Weatherproof outlet at each baseball and softball backstop
 2. Site lighting is required for parking, and facility entrances used after-hours, such as Gymnasium and Performance areas.
 3. Athletic fields will not be lighted.
- Domestic Water
 1. Fire hydrants per Fire Marshal
 2. Routes and types of easements per water utility
 3. Irrigation systems typically require a separate tap and meter.
- Initial site development is to include underground vaults for utility extensions to temporary buildings:
 1. Electrical power
 2. Gas
 3. Water
 4. Sewer
 5. Fire and Security alarms
 6. Telephones
 7. Clocks
 8. Paging system
 9. Cable TV
 10. Computer network systems for future expansion
- Other utilities per Technical Guideline Division 33

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Drainage - March 1, 2006

- Positive drainage is paramount, from the highest roof level to the lowest elevation of the site.
- Storm water management per applicable regulations
- Provide structures to control erosion wherever quantities of water are discharged to earth surfaces.
- On-site retention ponds are not recommended.
- Provide appropriate planting features or safety structures to ensure child safety near headwalls.

Site Circulation - March 1, 2006

- Safety
 1. Minimize pedestrian, bicycle and vehicle intersections.
 2. Separate bus loading/unloading area from parent/visitor loading/unloading.
 3. Combined parking with pickup/dropoff is not recommended.
 4. Isolate service vehicle routes from student/parent, and bus traffic.
 5. Vehicle areas and main entrance require visual supervision from the Administration complex of the building.
 6. Design paved areas for snow removal and stockpiling.
- Pedestrian
 1. Paved pathways and/or sidewalks are required to connect all building exits with fire refuge areas, parking lots, service areas, game courts, site pedestrian access points, bicycle enclosures and along street frontages.
 2. Width: 8'-0" preferred; Minimum: 6'-0"
 3. Pedestrian route from the Cafeteria/Commons and Gymnasium to outdoor activity areas should not cross nor pass near vehicle areas or mechanical room.
- Bike Pad and Enclosure
 1. Paved, fenced bicycle enclosure with bike racks to serve 2% to 5% of student capacity
 2. Optional for schools above 6000 ft. elevation
 3. Locate to maximize visual supervision and safety
- School Bus Circulation
 1. Bus loading should be off-street with a counter-clockwise circulation
 2. Bus length: 40 feet average.
 3. Bus lane width
 - a. One way traffic: 15'-0" minimum, 20'-0" preferred
 - b. Two way traffic: 24'-0" minimum
 4. Bus turning radius
 - a. Inside turning radius: 35'-0" minimum
 - b. Outside turning radius (1 way traffic): 50'-0" minimum
 - c. Outside turning radius (2 way traffic): 65'-0" minimum

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- Bus Loading and Unloading
 1. Sidewalk/platform width = 9'-0" minimum to permit safe circulation around operating bus wheelchair lifts
 2. The number of buses serving the school can range from 1 to 20.
 3. Coordinate specific requirements through Jeffco Boundaries and Transportation departments.
- Automobile parking
 1. Parking quantities can vary according to the availability of on-street parking and public transportation.
 2. Staff/Visitor/Volunteer/Itinerant: One paved, staff/visitor parking space per 11 to 12 students
 3. Student: One paved student parking space per 3 students.
- Parking lot design
 1. Parking is the lowest priority in the allocation of site acreage.
 - a. Parking should not be provided at the expense of other site amenities.
 2. Structured parking is prohibited.
 3. Islands are not recommended (snow removal issue).
 4. Preferred configuration: 90° parking stalls
 5. Parking spaces for 90° configuration:
 - a. Preferred (minimum of 75% of total spaces): 9'-0" wide by 18'-0" long
 - b. Minimum: 8'-6" wide by 16'-6" long
 - c. Parallel to curb: 9'-0" by 25'-0"
 - d. Drive aisle width for double loaded 90° configuration: 24'-0" minimum.
 6. Provide a ratio of accessible parking per ADAAG. Preferred configuration is two adjacent spaces with center (shared) wheelchair aisle.
 7. The recommendations of the current edition of *Architectural Graphic Standards* apply to layouts other than 90°.
 8. A parking area for a marching band trailer is recommended.
- Service Drive(s)
 1. Truck access is required to the Loading Area, Dumpster Enclosure, Kitchen, Custodial Facilities, Family and Consumer Sciences, Art, Tech Arts, Gymnasium, Auditorium Backstage, Music, and Athletic/Physical Education fields and structures.
 2. Turn around space is required for dead-end drives over 150 lineal feet.
- Emergency Access
 1. Coordination with the local fire department is required to assure fire vehicle access to the site and proper vehicle circulation once on-site.
 2. Fire vehicles can normally utilize the same circulation drives as service vehicles.
 3. Verification of width and turning radii is required for these areas.

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Student Activity Areas - March 1, 2006

- Outdoor School/Community Area
 1. Adjacent to Commons/Cafeteria
 2. Landscape to provide protection from sun and wind
 3. Seating on retaining walls or raised planters to accommodate 5% to 10% of student capacity.
- Ecology Area
 1. Natural streams and drainage areas, rock outcroppings, native grass and trees for student study and passive areas are desirable features.
 2. If no natural area with these amenities exists, construct areas with planting and fencing.
 3. Development such as benches and garden areas are optional.
 4. The ecology area may be off-site.

Temporary Classroom Area - March 1, 2006

- General
 1. Space for relocatable/modular 24'-0" x 40'-0" wood-frame classroom buildings
 2. Plan for 1 temporary classroom for each 200 students of permanent design capacity.
 3. Locate to facilitate transport and placement with minimal site disruption.
 4. Locate to minimize distances to core and support facilities.
 5. Landscape the area to minimize visual impact on adjacent residential properties.
 6. See "Utilities" for additional information pertaining to temporary classrooms.

Field Sports - February 6, 2007

- General
 1. Locate physical education and athletic fields to be directly accessible to both the gymnasium and student parking areas.
 2. Design to minimize errant balls landing on neighboring property, parking lots, building roofs and glazed areas.
 3. Unless noted otherwise, all athletic field layouts shall conform to the recommended standards of the National Federation of State High School Associations (NFHS) never to be less than the NFHS "minimum" standards.
 4. Athletic fields should be planted to allow for at least one full growing season prior to first use. Two growing seasons preferred.

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- Baseball Field
 1. Grass infield with skinned base paths
 2. Recommended orientation: Northeast or northwest axis with home plate in SE or SW corner
 3. Recommended dimensions: 325' foul lines and 375' center field
 4. Backstop: 30'-0" high x 20'-0" wide with 20'-0" x 10'-0" high wings, located 45'-0" from home plate
 - a. Outlet for pitching machine
 5. Wing extensions: 100' long x 10' high
 6. Outfield perimeter fence: 8'-0" high
 7. Foul line poles and fence gates are required for players and mowers.
 8. Scoreboard: Rough-in conduit only
- Softball Field(s)
 1. Design to standards for girls' fast pitch
 2. "Skinned" infield with covered dugouts
 3. Backstop: 20'-0" wide x 18'-0" high with 10'-0" wings, located 20'-0" from home plate
 4. Recommended dimension: 200' outfield fence arc
 5. Where possible, group backstops for ease in supervision.
 6. Perimeter fence: 8'-0" high
 7. Scoreboard: Rough-in conduit only
- Football Field
 1. Locate in running track infield.
 2. Preferred orientation is north/south.
 3. "Football only" goals
 4. Scoreboard: Rough-in conduit only
- Soccer field
 1. Standard size is 195'-0" x 330'-0" but other dimensions are permissible
 2. Orientation is not critical.
 3. Portable goals are preferred.
 4. Scoreboard: Rough-in conduit only
- Marching Band/Multi-Use field
 1. Dimensions: 150'-0" by 150'-0" minimum
 2. Option: Configure baseball outfield to dual use
- Field Hockey / Lacrosse field
 1. Optional
 2. Multi-use field may be used for these activities.

Track and Field - February 6, 2007

- Running Track
 1. Four hundred meter layout to comply with the recommended standards of the National Federation of State High School Associations (NFHS).
 2. An 18'-0" wide backstretch and curves, 24'-0" foot wide straightaway with extension(s)
 3. Scoria surface with concrete curbs with scuppers

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- a. All-weather tracks are optional; Supplemental funding is mandatory for both initial construction and life-cycle maintenance.
- Pole Vault (optional)
 - 1. Paved runway with fiberglass planting pit set in concrete, with removable cover
 - 2. Asphalt pad to receive foam “landing pit”
 - 3. Orient runway with prevailing winds, if possible.
- Long/Triple Jump
 - 1. Two or one end-to-end asphalt runway with redwood edged landing pits and cedar takeoff boards
 - 2. Continue the runway to the pit.
- High Jump
 - 1. 16’-0” x 8’-0” pad for “foam pit”
 - 2. 50’-0” radius approach pad
- Discus
 - 1. Locate outside of and adjacent to track area.
 - 2. Sixty degree throwing sector, 160’-0” to 200’-0” distance and 10’-0” square concrete pad with markings per NFHS requirements
 - 3. Safety screen per NFHS standards
- Shot Put
 - 1. Locate outside of and adjacent to track area.
 - 2. A 10’-0” square concrete pad with painted 7’-0” diameter circle, safety area, and screen per NFHS requirements
 - 3. Manufactured wood or fiberglass stop board.

Game Courts - February 6, 2007

- Tennis Courts
 - 1. Single grouping of 4 courts @ 60’-0” x 120’-0” each.
 - 2. North-South orientation is mandatory.
 - 3. Slope per Technical Guidelines
 - 4. Post-tensioned concrete
 - 5. Surfacing and lines to comply to “Laykold” standard specifications
 - 6. Fabric nets and posts with concealed take-up mechanism
 - 7. For exposed location subject to winds, provide vinyl fabric wind screen attached to chain link fencing.
 - 8. No basketball courts are allowed within tennis enclosure.
 - 9. All courts to be in same area for coach’s supervision.
 - 10. Enclosure: 12’-0” high chain link fence
- Multi-Use Courts (Optional)
 - 1. Stripe for volleyball, handball, racquetball, half-court basketball and tennis serving.
 - 2. Center wall oriented north/south
 - 3. Basketball goals and inserts for volleyball standards
 - 4. All basketball goals to be sturdy 4’-0” cantilever type with chain nets.
 - 5. Inserts to be set in concrete and have safety type covers
 - 6. Perimeter of courts to be enclosed with 6’-0” chain link fence with two 3’-0” limited swing gates at each side

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Out Buildings and Amenities - February 6, 2007

- Bleachers
 1. Provide level crusher fines or concrete pad for school provided bleachers.
 2. Pad is required at softball, baseball, soccer and football fields.
- Athletic Storage Buildings (2)
- Fire resistant, constructed of fully grouted reinforced masonry or precast concrete.
 - a. Option: Include storage at school building perimeter
 1. One pair of 4'-0" by 7'-0" steel doors
 2. Electrical service is necessary.
 3. Locate one building adjacent to football/track area to store hurdles, vaulting and high jump equipment.
 4. Locate one building adjacent to baseball/softball area.
- Press box/Concessions
 1. Shared facility located between baseball and softball fields
 2. Two level open-air design with security shutters/doors
 3. Non combustible construction
 4. Casework
 5. Electrical power and lighting
 6. Public Address
 7. Data outlets
 8. Scoreboard controls
 9. No HVAC or plumbing
- Dugouts
 1. Covered chain link structures at grade at baseball and softball fields
 2. Built in benches
- Batting Cages
 1. Crusher fines pad for school provided cages
 2. Shared or separate baseball and softball batting cages
- Paved pad(s) with tie downs for portable toilets
 1. With chain link enclosure
- Dumpster Enclosure
 1. Enclosure for three trash dumpsters (80" high x 72" wide x 66" deep)
 1. Confirm requirements with trash removal contractor.
 2. Consider that trash trucks may be front or rear loading and provide the appropriate approach space.
 3. Trash compactor trucks require a concrete loading pad with minimum grade and no curbs.
- Marching Band Trailer Pad
 1. Asphalt or concrete pad for parking marching band trailer

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Exterior Improvements - March 1, 2006

- Landscaping
 1. Provide a complete landscape design.
 2. Use of turf grasses or sod is restricted to designated play fields and high traffic areas.
 3. Native drought-resistant grasses and plant materials ("Xeriscape") are preferred for unpaved and unassigned decorative and utility areas of the site.
 4. Landscape materials should be appropriate to the microclimate of the area.
 5. Plantings such as shade and ornamental trees, shrubbery and ground covers shall be used judiciously to provide shading, visual screening and wind protection for the building.
- Irrigation
 1. Provide automatic irrigation system to cover play fields, lawns and planting areas.
 2. Maximize water saving measures, such as drip systems.
 3. Provide quick-connect hose couplers to allow for remedial watering.
 4. On sites where irrigation water rights exist, develop the system to utilize these rights to the fullest extent possible.
- Fencing
 1. Chain link fencing is required at all property lines, along existing or future private development, and where portions of active play fields are adjacent to street frontages or parking areas.
 2. Fencing is required to prevent student movement through private property to prevent dangerous accidental running into hazardous areas, to restrict foot traffic up steep banks, control balls from running down banks, and to prevent access of horses or non-authorized motor vehicles onto the play fields.
 3. Fencing is usually not required where school property abuts public park land.
 4. Pedestrian access is required for public use of the grounds.
 5. Use of fence posts or bollards spaced to prevent entry by horses and motor vehicles
 6. Gates are required for passage of grounds equipment, service vehicles and snowplows.
 7. Ornamental wood fencing may be considered for site-specific purposes such as protection of planting and lawn areas from damaging foot traffic.

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Miscellaneous Site Improvements - March 1, 2006

- Flagpole
- Informal seating on patios and at main entrances
- Fire and weather resistant, fixed trash receptacles at the main building entrances
- Sturdy masonry, concrete or chain link enclosures for meters, transformers and trash dumpsters
- Knox box
- Exterior Signage
 1. Building identification
 2. Directional
 3. Traffic control
 4. Marquee (illuminated)

END SITE DEVELOPMENT STANDARDS