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ABSTRACT

The Jefferson County School District (Denver, Colorado) has published this model standard for the planning and designing of new elementary schools, and the remodeling and modernizing existing schools. It describes the facility requirements to accommodate the instructional program, activities, and support functions to assist architects, school staffs, and the Design Advisory Group. Areas examined include specifications for core areas such as administration, cafeteria, computer labs, kitchens, and libraries; and support areas such as building and wiring standards, corridors, custodial, and plumbing facilities. Also included are site development standards and the elementary education assignable space allocations for 650 pupils. An appendix provides specifications, plans, and standards for various building features and equipment. (GR)

Elementary Educational Specifications

Facilities Planning Standards

Edition III
January 1998

Facilities Planning and Design Department
Jefferson County Public Schools
Colorado

http://www.jeffconet.jeffco.k12.co.us/cm/specguides/edspecs1.html

ELEMENTARY SCHOOL EDUCATIONAL SPECIFICATIONS

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COLORADO

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INTRODUCTION

The Elementary Level Educational Specification is a model standard for the District in planning and designing new and remodeling and modernizing existing elementary schools. The Educational Specification describes the facility 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 architects, school staffs and the Design Advisory Group.

The educational specification is intended to be a dynamic document that allows for amendment as required to accommodate educational program changes.

The educational specifications have periodically gone through a committee review and update process in this District. The last new edition was in 1990 amended 1993 before that 1981, revised in 1985.

The members of the planning committee involved during 1997 in preparing this Elementary Level Educational Specification are listed below in alphabetical order:

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Linda Bolles	Arvada West Preschool	Teacher
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Jenny Weimer	Semper ES	Physical Educ/Music

JEFFERSON COUNTY SCHOOL DISTRICT R-1: STRATEGIC PLAN

Our Mission:
To provide a quality education that prepares all children for a successful future.

We believe:

- All children can learn basic skills and achieve high standards.
- Our public schools are essential institutions that reflect community values and prepare students to participate fully in our democratic society.
- We recognize that student learning is impacted by life circumstances that are beyond the control of the school district; however we are committed to all children achieving high standards and becoming successful, contributing members of society.
- Our schools, as part of a community system, must work collaboratively with families, other human service institutions, businesses and higher education to prepare students for future success.
- Schools are primarily responsible for ensuring that students learn; however, as students mature, they must assume increasingly greater responsibility for their own learning.
- Respect includes valuing differences among people, honoring people as our greatest resource, and giving people quality choices.
- Parents are responsible for working in partnership with the school and community to support, encourage and participate in their child's learning.
- We are committed to continuous improvement and lifelong learning.

Our community requires that we:

1. Make a commitment to all students being successful, safe, and well disciplined.
2. Deliver a high quality, consistent curriculum, designed to ensure that all students in every school master basic skills in reading, writing, mathematics, and the application of such skills to lie situations.
3. Set high standards and ensure that students can be successful in the next phase of their lives whether they go to college, attend technical school, begin an entry-level job, and/or serve as community members.
4. Measure student progress toward meeting standards and report results to students, staff, parents and the community on a regular basis.
5. Ensure that the K-12 standards are understood and supported by students, staff, parents, and community members.

6. Employ highly skilled, caring staff members who are committed to and held

accountable for the success of each student.

7. Provide students and parents with quality choices.
8. Work in partnership with parents and others in the community to ensure that all students thrive.
9. Provide strong central leadership for the district's schools and assume responsibility for sound fiscal management.
10. Provide access to state-of-the-art learning, resources, including technology, which support increased student learning.

ELEMENTARY SCHOOL EDUCATIONAL PHILOSOPHY

Teaching and learning are cooperative communicative activities that can be affected by the classroom environment. A variety of classroom organizations, large groups, small groups and independent study are necessary to accommodate various kinds of learning styles and activities including physical movement, long term projects, cooperative learning groups, work with manipulatives, learning centers, and process learning. The school should provide the child with essential facts, experiences, skills and sources of information. Because of the thoroughly developed curriculum programs, space for specific materials and equipment to support those programs must be appropriately designed.

The educational facility is an integral part of the educational program. The facility has an influence on learning, the performance of staff and students, and indirectly influences attitudes and behavior. The facility serves a greater purpose than merely housing students or the educational program. The following factors are to be considered in the design of elementary schools:

The educational facility should reflect the value placed on education by the residents, staff and Board of Education of this District. The facility also reflects the goals and aspirations of the educational community and the community at large in educating our young people.

The educational facility should create a setting that is conducive to optimal learning and human performance. The materials, textures, colors, lighting climate, and fixtures should be considered vital to the learning process and should be scaled throughout to the social-emotional needs and developmental level of the elementary student.

The educational facility should be designed to provide flexibility in accommodating a variety of teaching and learning styles. The facility should allow for changing program needs with spaces that are conducive to restructuring without major impact on building systems or requiring major renovation.

Technological changes in our society are occurring at an ever-accelerating pace. The educational facility must be designed to accommodate current technologies such as computers, computer networking, internet, distant learning, teleconferencing, telecommunications, television and video. The facilities design should be flexible to accommodate the installation of emerging new technologies.

The educational facility should foster communication between and among students, teachers, administrators, counselors, support staff and parents.

The design of the school should encourage the development of community, both within the school and with the surrounding neighborhood. It should provide meeting and display spaces that foster constructive interactions and pride among children in both academic and social situations. It should provide the flexibility for a broad utilization of the school building and site by a variety of community groups.

The educational facility should provide a humane, stimulating, roomy environment that is inviting to students, staff and parents.

The educational facility should provide an environment that encourages the staff to perform in a professional manner.

Full accommodations for the disabled are required in all new facilities. Continuing remodel and renovation of older facilities requires accommodations be made, where readily achievable and structurally practical. When accommodations cannot be made in older buildings then the district will offer program accessibility by providing the same service or program in an accessible facility elsewhere.

The educational facility is to be efficiently designed to minimize energy usage, provide maximum assignable space/utilization, be easily maintained/operated and provide maximum life cycle value.

The optimal capacity for elementary schools in Jefferson County for over 20 years has been 650 students. This capacity is based on the following factors:

- Balancing size of the school between the desire to maintain the advantages of smaller schools and the economies of scale resulting from larger schools.
- Provide enough classrooms to accommodate 3 classes at each grade level and additional classrooms to accommodate special education and other special programs.
- Maximize utilization of Art, Music and Gymnasium spaces without the need to add a fourth special, limit access to these programs, or duplicate the spaces.
- Provide a school size that maximizes walk-in area for the population served.

ADMINISTRATION

SPACE DESCRIPTION:

The administrative area provides space for personnel concerned with the day to day operation of the school.

A. Administration Spaces:

1. Reception/Waiting Area
2. Secretaries Work Area
3. Principal's office
4. Clinic
5. Administration Workroom
6. Mail Center
7. Conference room
8. Storage Room
9. Staff restroom
10. Asst. Principal
11. Staff Lounge

DESIGN CRITERIA:

A. Administration Spaces:

1. **Reception/Waiting Area:**
   This area should comfortably hold 4 seated parents/adults and 10 students standing. A receptionist/secretary handles contact with the public, faculty and students. Locate the area near or adjacent to the main building entrance. The area is a buffer between external and instructional functions. There is also a direct relationship to core instructional and non-instructional facilities, particularly those with after-hours community use.
2. **Secretaries Work Area:**
   Provide for 3 desk/computer workstations and 6 to 12 filing cabinets. The general office needs to be open and flexible for easy supervision by administrative and secretarial staff. If a front counter is provided, it should be designed from reconfigurable systems furniture. The layout should accommodate an aisle between the counter and the secretarial stations and provide good visibility to the corridor, clinic and the principal's office and outside to the entry/parking area. Visibility of the main lobby and corridors is necessary for supervision of instructional and core areas. Attendance functions also take place in the work area. An outside transaction window is required where 30 to 40 students can wait in line from the corridor to use it. The general office should also be near the administrative workroom. Wall space is required for the school fire/security alarm panel. Delivery and receiving functions should be separated from main public entrance.
3. **Principal's Office:**
   Provide general office space with conference area for 8 seated people. Provide a door into the general office and one directly to the corridor. The main school entrance should be visible from the principal's office. Provide a small locking closet.
4. **Clinic:**
   The clinic is used to provide care for ill, injured, or upset children and contains storage for

health supplies and records. The design should recognize the conflicting requirements of accessibility and privacy. Provide direct access from both from the main office and the corridor. To provide supervision, secretaries in the main office must be able to easily view the clinic from the general office area. Provide desk space for a nurse's aide and two beds with screening curtains on tracks that can be pulled for visual separation.

Casework should consist of base and wall cabinets. One base cabinet shall be a 3-drawer unit. Provide a 24-inch deep x 18 inch wide x 84-inch high wardrobe cabinet. All cabinets and drawers may contain medical supplies and must be lockable. Provide a single hot and cold water utility sink in a base cabinet fitted with a flexible gooseneck fitting and bubblier. Provide space for an under counter refrigerator.

A handicapped accessible toilet room with an out swinging door is required. Provide a fold down changing table room, 2'-6" deep by 5'-0" long by 36" high. Provide a hand held shower mounted 48" above the floor with a single lever faucet on the wall behind the toilet, and a floor drain.

5. **Workroom:**
   The workroom should be located adjacent to the general office area for convenience of the office staff. Provide approximately 20 linear feet of upper and lower cabinets for storage of supplies. A small safe will be installed in one base cabinet. More than one room door is desirable. A copier requiring a special outlet, printers, a fax machine, and other specialized equipment will be located in the room. Provide a utility sink with hot and cold water and supplemental ventilation to dissipate equipment heat loads. Provide a closet for administration staff and a lockable key cabinet.
6. **Mail Room:**
   A mailroom for staff use only should be accessible from a main corridor door and be located adjacent to the workroom. Provide a pigeonhole mailbox with 48 slots 15" deep by 11" wide by 2" high that can be loaded from the workroom side. A tack surface for messages is required. It can be combined with the Workroom.
7. **Conference Room:**
   The conference room requires seating for 12 to 14 and should be located near the principal's office. It may be remote but close to the Administration. The room may be used for additional offices. Consider a folding wall to divide the room. Portable systems furniture partitions might also be used to subdivide the space.
8. **Storage Room:**
   The Storage Room must be central to all administrative areas and be lockable and secure. Provide approximately 15 linear feet of upper and lower cabinets for storage of supplies.
9. **Staff Toilets:**
   Provide one unisex handicapped accessible toilet room.
10. **Assistant Principal Office**
    The AP office requires area for office furniture and conferences with at least four visitors. Room entry is to be provided through the general office.

11. **Staff Lounge:**
    The lounge provides staff break, lunch and meeting space. The lounge should be

accessible but not necessarily contiguous to other Administration areas. Exterior windows are preferred. Provide two 4' x 4' tack boards, a single stainless steel kitchen sink with hot and cold water, a garbage disposal and 15 linear feet of base and wall cabinets. One wall cabinet must be lockable. Provide space and utilities for a dishwasher, microwave and full size refrigerator. Within the lounge provide a 4'-0" x 5'-0" phone room and phone.

SQUARE FEET SUMMARY:

A. Administration Spaces:

1. Reception/Waiting Area	150 sf
2. Secretaries Work Area	250
3. Principal's office	180
4. Clinic	200
Handicapped accessible toilet	55
5. Workroom	200
6. Mail Center	35
7. Conference room	450
8. Storage Room	150
9. Staff restroom	45
10. Assistant Principal Office	150
11. Staff Lounge	400
Administration Complex Total	**2,265 sf**

ART

SPACE DESCRIPTION:

The art area is a combined workroom, studio and storage room. The room is sometimes messy, dirty, and noisy and should be designed to fit the function. Art activities include drawing, painting, crafts, clay, sculpture, plaster, batik, wood and paper construction, weaving, stitchery, art appreciation, art history, and display.

Students engage in independent reading and research, particularly upon completion of studio activities, in the resource area.

Art Room Spaces:

- **A. Studio**
  1. Studio Area
  2. Teacher Work/Planning Area
  3. Resource Area
  4. Kiln Area
- **B.** Material Storage Room
- **C.** Exterior Area

DESIGN CRITERIA:

A. Studio:

The Studio contains student work area, a teacher work/planning area, resource area, and kiln space.

1. The studio room should be rectangular with the short side to long side ratio of 1:1.33 +/- 5% with a minimum ceiling height of 9'-0".
2. Exterior windows with sill heights of 36" above the floor are required. A minimum of one operable sash should be provided. If awning or hopper sashes are used the open frame must be protected to prevent occupant injury.
3. Walls shall be gypsum board with paint or vinyl wall covering for self-healing stapling and pinning. The studio is one of only two spaces where vinyl wall covering is permitted.
4. Casework for Studio Area Storage:
   a. Base Cabinet: 20 linear feet 30" high
   b. Shelving: 20 linear feet of adjustable shelving 48"w x 32"d for still life, dry clay, plaster and buckets. Provide 25 linear feet of adjustable shelving 32"w x 28"d x 72"h for student project storage. Shelving should be non-rusting, non-warping, and cleanable, without sliding doors. About forty percent of the shelving should be located in a lockable area.
   c. Storage Cabinet: Provide a 24-inch deep x 12-inch wide x 84-inch high lockable wardrobe cabinet for teacher personal items.
   d. Student project storage: 6 units containing 8 shelves 28"d x 38"w x 84"h.
5. The art studio shall have two-4'-0" feet high by 6'-0" long white boards with marker trays, a tack strip with map hooks and a wall mounted flag bracket.

6. Utilities:

a. Sinks: provide one stainless steel unit with double sinks and integral drain boards at each end. The unit is 8'-0"long by 24"deep with a 28" rim height and contains two 20" x 24" x 14" deep sinks with a 6" backslash. Hot and cold single lever swing-type gooseneck faucets are required. Locate the sinks away from the room entry. Pipe all sinks into an easily accessible plaster/clay trap in the floor, but not under the sink. 2" drain lines are required. Provide one floor drain in front of the sinks.
b. Lighting: provide a minimum level of 50-foot candles maintained and color correct with a single switch at the corridor door. Provide a separately switched ceiling mounted "Unistrut"grid 20'-0" by 15'-0" in the room center mounted 6" below the ceiling for 3-D hanging displays and two 10'-0" lengths of track lighting with 8 adjustable-heads and color-correct flood bulbs. Locate the tracks to highlight student display walls.
c. Electrical outlets: provide a minimum of 3 quadplex and 3 duplex outlets with each quadplex on a dedicated 20 amp circuit. Locate data outlets close to the quadplex outlets. Provide plug-mold over each base cabinet counter and removable safety netted dropcords suspended from the ceiling over student work tables and pottery wheels. Provide a 220v detected circuit for a kiln and a 110v circuit for the kiln "Enviro-Vent".

7. Equipment provided from the school's budget generally includes:
   a. Clay wedging station: 24" x 24" with concrete countertop and open area beneath for carts and buckets.
   b. Clay cutter: piano wire type with tension adjusting turnbuckles 32" above floor with a 30" back-splash. A hinged cabinet top conceals the cutting wire when not in use.
   c. Student tables: 42" x 60" with maple butcher block or plastic laminate counter tops.
   d. Damp box for wet clay storage.
   e. Wheeled green ware drying rack: 24"x x32" x 64"
   f. Jewelry table with vice: 48' x 36'
   g. Brent SR 20 Slab Roller requiring 32"x 72" of floor space
   h. Wall mounted Brent Hand Extruder

Teacher Work/Planning Area:

1. Area (part of Art Studio) with space for a teacher desk, large paper cutter, and mat cutter.

Resource Area:

1. Area (part of Art Studio) with space for flat files and quiet work area.

Kiln Area:

1. Area (part of Art Studio) should be separated from main area with a half wall. Locate away from high traffic patterns.
2. Kiln area casework: 4-units, 24"d x 36"w x 84"h, with adjustable washable shelves for storage of 36 projects each of green-ware, bisque-ware and glaze-ware.
3. Supplemental ventilation/exhaust is required.
4. Provide kiln (model: Skutt Automatic KM1027), and "Enviro-Vent" exhaust system.

B. Material Storage Room

1. The lockable room provides storage for art materials and is accessible only from the art studio.
2. Provide built-in adjustable floor to ceiling shelving on all entire perimeter walls for paper sized 12" x 18", 18" x 24", 24" x 36", and 36" x 40". Provide some vertical slotted poster board storage.

C. Exterior Art Area:

1. Provide an outdoor hard-surfaced multi-use area close to the art room for student use.

SQUARE FEET SUMMARY:

A. Art Room Spaces: 28 to 32 students		
1. Studio Area	35 sf x 30 students =	1,050 sf
2. Teacher Work/Planning Area		75
3. Resource Area		75
4. Kiln Area		50
		1,250
B. Material Storage Room		150
C. Exterior Art Area (See Site Standards)		---
Total Art Square Feet		**1,400**

CAFETERIA/MULTI-USE ROOM

SPACE DESCRIPTION:
The Cafeteria/Multiuse area which serves (in approximate descending order of frequency):

- Lunch Room
- Rehearsal
- Indoor Group Activities
- Large and Small Meeting and Conferences
- Before/After School Daycare
- Preschool
- After School Meeting and Presentations
- Independent Club/Organization Functions

Cafeteria/Multi-use Room Spaces:

A. Cafeteria/multi-use room
B. Special programs storage rooms

DESIGN CRITERIA:
Cafeteria/Multi-use Room Spaces:

A. Cafeteria/Multi-use Room

1. Provide flexible area for cafeteria seating for 160 students at one time located adjacent to the kitchen with direct access to the main corridor and outdoor activity areas. Ceiling height minimum 9'-0". Provide a table storage alcoves.
2. Exterior windows are required. Provide a minimum of 2 operable sashes. If awning or hopper sashes are used the open frame must be protected to prevent occupant injury. Sill heights should not be less than 12 inches above the floor.
3. Door configuration is critical for efficient traffic flow. The entrance should be from the main corridor directly to the kitchen serving line. Dish return circulation should not cross the serving line. A separate exit to the playground should be as far as possible from the serving line. The walkway from the cafeteria to the playground should not cross or pass close to the kitchen service drive or mechanical room.
4. Acoustical treatments are critical. Use materials that produce low reverberation and provide high absorption.
5. Utilities:
   Provide a drinking fountain in the corridor within 25 feet of the cafeteria entry door.

B. Special Programs Storage Rooms (3 required)

1. The spaces provide basic storage for school and outside programs.

SQUARE FEET SUMMARY:

Cafeteria/Multi-use Room Spaces:

A. Cafeteria/Multi-use Room	1 x 1,700 =	1,700 sf	
Chair and Table Alcove			300
B. Special Programs Storage Room	3 x 50 =		150
Total square feet for Cafeteria/Multi-use Room			**2,150 sf**

COMPUTER LABORATORY

SPACE DESCRIPTION:

The Computer Laboratory provides a central location for instruction and mastery of computer technology skills. It houses microcomputers and related peripherals used to teach software programs. Locate the laboratory close to the LIC and Student Multi-Media Production Studio.

DESIGN CRITERIA:

1. The Computer Room, containing space for 32 workstations, should be rectangular with the short side to long side ratio of 1:1.33 +/- 5%. The minimum ceiling height should be 8'-6". Raised platform floors and built-in computer workstations are prohibited.

2. Windows to the exterior are not allowed; however windows to the corridor are encouraged. A minimum sill height of 36 inches above the floor is required.

3. Locate the Computer Laboratory to provide convenient access from the classroom pods and with direct access from the Library Information Center.

4. The floor material should be carpet.

5. Lighting: Locate dual level three-way switching by the corridor door and the door from the LIC. One level should provide 30-foot candles maintained; the second level should provide 50-foot candles maintained. There should be no glare on the computer screens and video displays.

6. Electrical Receptacles: provide 110V power supplied from wall mounted plug-mold for student station microcomputer systems in seven dedicated circuits of 20 amps each with surge protection. Two dedicated printer outlets and two general convenience outlets should be located near the teacher station. Student computer station power should be switched at the wall near the teach station. All computers will be connected to the school computer network.

7. Storage: provide one 48"w x 24"d x 84"h lockable base cabinet with adjustable shelves.

SQUARE FEET SUMMARY:

Total Computer Lab Square Feet	**700**

KITCHEN

SPACE DESCRIPTION:

The kitchen, providing space for personnel, delivery, storage, preparation, serving and cleanup of school food services, contains the following components:

1. Receiving Area
2. Dry Storage
3. Cooler/Freezer
4. Management Area
5. Preparation Kitchen Area
6. Serving Kitchen Area
7. Dishwashing
8. Toilet/Locker Room
9. Custodial/Laundry Room

DESIGN CRITERIA:

The type of kitchen within an elementary school may be either a satellite serving kitchen or a preparation kitchen. Each kitchen is the same square feet, however the amount of equipment will change. The District Food and Nutritional Service Department determines the kitchen type appropriate for each facility. A District prototypical design shall be followed. Plans and equipment lists are available from the District Coordinating Architect.

A. Kitchen Spaces:

A maximum of 160 meals each is served in four seatings. Locate the kitchen contiguous with the Cafeteria. Provide a loading dock with ramp and unobstructed outside access from the service drive. The ceiling height should be 9'-0" minimum. Acoustical sound isolation is required between the kitchen and cafeteria as well as instructional areas.

SQUARE FEET SUMMARY:

Total Square Feet for Kitchen	**1,030**

LIBRARY INFORMATION CENTER (LIC)

SPACE DESCRIPTION:

The Library Information Center (LIC) is the hub of the school and occupies a central physical and visual position in the building. The LIC and its resources are an integral part of each school instructional program and serves as an extension of each classroom.

A. Instructional Component of LIC Spaces:

1. Stack Area
2. Large Group Instructional Area
3. Individual and Small Group Activity Area
4. Computer Public Access Catalogue
5. Student Multi-Media Production Area

B. Management Component of LIC Spaces:

1. Circulation Desk Area
2. Office
3. Equipment Storage
4. Staff Processing/Production Room
5. Learning Resources Storage

DESIGN CRITERIA:

A. Instructional Component of LIC Spaces:

The instructional component of the LIC, used by students, teachers and parents, is the main "open" area and includes space for individual, large group and small group activities, book stacks and a computer access catalogue. It should adjoin the Multi-Media Production Area. Provide seating area for 65 people that is easily supervised from the Circulation Area.

Maintain 60" minimum clearances between furniture and shelving in traffic areas. Maintain minimum aisle widths of 44" between stacks and 60" at traffic lanes and shelving or seating areas.

Locate see-through display cases near the main LIC entrance for announcements, student projects, and other exhibits.

Ceiling heights of 9'-0"minimum should be maintained.

1. **Stack Area:**
   The stack area contains the LIC book collection of 10,000 items including fiction, non-fiction, paperback, reference, and large picture books. Book stacks are dispersed throughout the open instructional component of the LIC in wall-mounted and freestanding bookcases and book bins. A majority of the collection should be contained in perimeter shelving. Design stacks to provide good visual supervision from the Circulation Area.

2. **Large Group Instructional Area:**
   The generally rectangular area is provided for general student reference activities and can also be used for group study sessions, special events, staff meetings, and after hour community meetings. Seating space is required for up to 35 students at tables. Locate the area centrally within the LIC to provide easy access from the main entrance, computer access catalogs, reference materials, and circulation desk. Cable television outlets, data outlets, white board and power projector screen are required.

3. **Individual and Small Group Activity Area:**
   The area provides space for story time, listening and viewing, independent study, and reference, research, quiet reading, presentations, student productions, puppet shows, and guest speakers. The opportunity exists for architecturally creative items such as window seats, alcoves, nooks, or tiers for cozy, inviting, and comfortable reading spaces. Provide space for 30 to 35 students seated on the floor with easy access to the main entrance and near the "picture book bins" location. Locate the area away from Large Group Instruction and other student traffic. Cable television access and data outlets are required.

4. **Computer Public Access Catalog Areas:**
   The areas should be located to provide good access and visibility from the main entrance and circulation desk. Approximately 10 computer stations will be dispersed through out the open space. Meet ADA accessibility requirements for students or other patrons seated in a wheelchair.

5. **Student Multi-Media Production Room:**
   Provide a separate room with good acoustical treatment that will be equipped for student video production. The room will be used by from three to15 students with a staff member. Possible other uses will be for the school daily announcements and student project productions. Locate the space to be accessible from the LIC and main corridor. Provide utilities for operation of cameras, production lighting, videodisk players and a television. Furniture is generally placed along one wall for five computer workstations, two printers and two scanners. Direct visual supervision from the circulation desk is preferred.

   Provide dual level lighting of 50 and 20-foot candles and ceiling hung spotlights on a dedicated circuit for the production area. Ceiling heights should be 9'-0" minimum. Provide a storage closet with door within the room.

General LIC Open Area requirements:

1. **Doors and windows and skylights:**
   Provide one or two entrances from the main corridor with direct access and visibility from the circulation desk. Double doors with large glass lights and sidelights are preferred. Sidelights should not be placed lower than 12 inches above the floor. The configuration should not encourage use of the LIC as a "shortcut" through the building. All windows shall have a minimum sill height of 44". Skylights are discouraged; however, if one is used blackout capability is necessary.

2. **Acoustical Considerations:**
   Minimize reverberation to avoid disturbance caused by multiple simultaneous activities. Do not use angled or vaulted ceilings without acoustical absorptive covering on all angled surfaces.
3. **Display Case:**
   Provide built-in sliding glass door cases with 3 adjustable glass shelves and display lighting near the main entrance. Cases should be a see-through type visible from inside and outside the LIC.
4. **Computerized Public Access Catalogue:**
   The counter should be an island-style with 36" minimum counter depth for computer terminals. Design for ADA accessibility for either sitting or standing use.
5. **Shelving:**
   Open adjustable steel shelving will be used to accommodate 10,000 titles in the following combinations:
   a. Book Bins 6 bins 24" wide x 48" long. Contains 2,000 items
   b. Range shelving 15 3'-0" long sections of freestanding 48-inch high double-sided bookcases with plastic laminate or wood and fabric end panels and tops. Contains 4,050 volumes.
   c. Wall-mounted single face adjustable shelving. 36" wide by 76" high metal frames with top shelf not higher than 66" inch. Provide 19 3'-0" long sections to hold 4,150 volumes. The wall space for all wall shelving shall be blank. Windows, white boards, mechanical, electrical, phone, fire and security items are not permitted on this wall space.

   All metal shelving is provided from the Construction Budget. Accessory end panels and tops are purchased from the school's budget. The Consultant Architect is required to provide a floor plan that will be coordinated with the District Coordinating Architect, Furnishings and Equipment Coordinator, and LIC Specialist. Purchasing, installation and delivery order of both the metal shelving and end panels and tops will be coordinated by the Furnishings and Equipment Coordinator.
6. **Lighting:**
   A 50 foot candle minimum should be provided at each reading station. Separate lighting control is required for each of three activity areas as well as for display cases.
7. **Electrical requirements:**
   a. Activities in the LIC will be electrically intensive. Floor outlets are prohibited and pendant outlets are discouraged, however, power poles are permitted. Receptacles in permanent columns and architectural features are preferred.
   b. Computerized Public Access Catalogue: 110V duplex receptacles are required for computer terminals. Provide for concealed computer wiring.
   c. Large Group Instruction Area: provide eight 110Velectrical duplex receptacles to accommodate student activities.
   d. Individual/Small Group Activity Area: provide eight 110V duplex receptacles for student listening and viewing activities.
   e. Wall Stacks: Provide alternating electrical receptacles above the 66" shelf and in the toe kick at 12 feet intervals.
   f. Provide electrical and data outlets at the Computerized Public Access Catalogue,

g. Circulation Desk and Large and Small Group areas. Provide additional data outlet and Electrical power for two cable television outlets at a location selected by the DAG in a corner of the Large and Small Group Instruction Areas.
h. In the Large Group Instruction Area provide one ceiling mounted power projection screen.

B. Management Component of LIC Spaces:
Staff and adults use the LIC Management Component. It includes the circulation and processing areas, staff production/processing workroom, storage areas for learning resources, equipment, and the LIC office.

1. **Circulation Desk Area:**
The Circulation Area serves to check-in/out all learning resources such as books, non-print material, textbooks, audiovisual equipment, and other curriculum supportive material. Circulation-related clerical tasks such as typing, computing, filing, record keeping are also performed.

The Work Area behind the circulation desk provides space for LIC personnel such as the library information specialist, clerks, aides, volunteers and student assistants to prepare library learning resources for inclusion into the LIC collection, to identify materials needing repair, and to store items on-hold for students, and teachers.

The Circulation Area should accommodate 8 to 10 students and 1 to 3 adults. Provide a central location with visibility to all other LIC areas as well as direct easy access to the main LIC entrance. Locate the Circulation Area adjacent to other LIC Management Component areas such as Student Multimedia Production Room, Learning Resources Storage, Equipment Storage, and the LIC Office.

See the Appendix for "Circulation Desk Standard Design". The desk is to be designed by the Consulting Architect using the standard design. The unit is to be provided and installed by the General Contractor.

Casework:
Base Cabinet: 1 or 2-30" high workstations at Processing Area
Wall Cabinet: 1 or 2 above Processing Area workstations
Built-in shelving: adjustable wall shelving above casework behind circulation desk

2. **Office:**
The Office, located adjacent to the circulation area, provides workspace for the LIC Specialist, aides and volunteers. It serves a number of LIC support functions including storage of LIC files, curriculum guides, manuals and other professional resources. Instructional planning, team meetings, and consultations may be held in the office. Visible supervision of the entire LIC is required from the office. A minimum 8'-0" ceiling height is required.

3. **Equipment Storage**
The Equipment Storage room provides storage and retrieval for large equipment items such as VCRs, monitors, and computers as well as small items such as tape recorders, CD players, microphones, and digital cameras. Supplies such as bulbs, cords, headphones, and jack boxes are also stored.

The space accommodates minor equipment repair and maintenance functions and provides a holding area for pickup and delivery of equipment needing repair. Provide a small workbench with overhead lighting and double duplex electrical outlets.

Provide direct access to LIC Circulation Area and the main corridor. A rectangular room configuration is preferred.

Base Cabinet: 36" high counter/work
Wall Cabinet: full height units with shelves and drawers
Adjustable shelving: open, sturdy, with varying depths

4. **Staff Processing/Production Room**
The Staff Processing/Production Room accommodates all materials production tasks such as dry mounting and laminating as well as clerical tasks such as typing, copying, duplicating, collating, and publishing activities. It is the main processing area for preparation of learning resources. Provide floor space for a copier requiring approximately 4'-0" by 7'-0" and a dedicated 220v outlet with specialized plug configuration.

Base Cabinets: must accommodate 30" high sit-down workstations with drawers and a 36" high peninsula or island with drawers and a work sink with hot and cold water.
Wall Cabinets: provide above workstations and equipment counter. Vertical slot storage for poster board is also required.
Shelving: 20 linear feet adjustable shelving

5. **Learning Resources Storage**
The room provides central storage and retrieval for books and learning resources including audiovisual and non-print materials. Other curriculum materials such as social studies kits, globes, math manipulatives and oversized materials such as flat and roller-type maps, posters, charts will also be stored. Wall shelving is required near the workstation for processing, repair and reserve of learning resources.

Base Cabinets: Provide 30" high counter space for a computer workstation and space for storage of materials, and an optional 36" high counter space for preview of materials and for additional work stations for aides and volunteers.
Wall Cabinets: optional.
Specialized storage for flat maps and charts: provide oversized shelves, vertical slot shelving, and cubbyhole storage for rolled charts, maps, and posters. Provide pegboard hooks for storage of roller-type maps.

Fixed Equipment: provide floor space for a high-density shelving system to accommodate storage of various types of print and non-print media. The shelving is paid for from the construction budget. The District Furnishings and Equipment Coordinator will coordinate purchase and installation of the system.

SQUARE FEET SUMMARY:

A. Instructional Components of LMC Spaces:

1. Instructional/Open Area: Stack Area Large Group Instructional Area Individual and Small Group Activity Area Computerized Public Access Catalogue	2,100
2. Student Multi-Media Production Area	300
Subtotal Instructional Components of LIC	2,400

B. Management Component of LIC Spaces:

1. Circulation Desk Area	300
2. Office	120
3. Equipment Storage	200
4. Staff Processing/Production Room	300
5. Learning Resources Storage	300
Subtotal Management Component of LIC	1,360
Total Square Feet for Library Information Center	**3,620**

MUSIC/PERFORMANCE

SPACE DESCRIPTION:

General Music students engage in creative, high noise level activities in large and small groups. Music instruction and activities include moving to music in a creative manner and in formal folk dance. Students perform on percussion instruments (Orff), wind instruments (recorders), string instruments and piano. For assemblies, plays, presentations and other performances the general music room becomes the stage area by opening the operable wall and extending the curtains. The wall opens into the gym, which becomes the audience seating area

Instrumental Music activities involve students in groups of varying sizes performing on percussion, wind and string instruments. The Instrumental Music program is an occasional activity, usually occurring 8 to 16 hours per week. Office functions, meetings, and instructional activities utilize the space at other times. Despite the multiple uses, the space should be designed primarily as a music space that will accommodate other uses.

Instrument storage is provided for security purposes and for the protection of instruments that, if damaged, are costly to repair or replace. The room is used for daily as well as permanent storage.

A. Music/Performance Room Spaces:

1. General Music/Performance Room
2. Instrumental Music/ Conference Room
   a. Instrument Storage Room
   b. Chair and Table Storage Room

DESIGN CRITERIA:

1. **General Music/Performance Area**
   a. 30 to 35 students with occasional choral groups of up to 100. Provide 10,900 cubic feet minimum room volume based on 350 cubic feet x 30 students. The preferred ceiling height should be 12 to 14 feet. A net area of approximately 1200-sq. ft. is recommended for new construction. Provide square feet for renovations as needed to make the room function as intended.
   b. No windows are preferred, but if exterior windows are existing then they must have blinds.
   c. A door to the corridor and to the gym space is required. A door to the exterior may be included depending upon the corridor fire rating design, budget or the DAG decision to add one.
   d. The performance opening into the gym should be on the short side of the gym in order to provide for the best audience sight lines.
   e. Operable walls between Music Room (Performance Space) and Gym (Audience Seating): provide double sound walls of a minimum 52 STC. The double wall configuration is mandatory because a single wall will not perform adequately. Noise transfer from both the PE class and the Music class will result in both spaces becoming

less than appropriate learning spaces. Provide stacking area for the operable walls.

f. Acoustical Treatments: Construction of the music room requires the use of lower frequency absorption materials. The teacher must be able to hear the individual as well as the balance within the ensemble. Reflective parallel surfaces should be avoided. The ceiling treatment should alternate reflective and absorbent surfaces to allow the sound to blend and to keep the average noise levels below OSHA guidelines. 1,000 to 2,000 square feet of acoustically absorptive material should be incorporated into the room design. Design and construction should maximize the acoustical isolation of music activities from other quiet activities in the building.

g. Casework shall consist of 8 to 16 linear feet of base and wall cabinets. Part of the casework shall be a 24-inch deep x 12-inch wide x 84-inch high lockable wardrobe cabinet for teacher coats and personal items. Provide lockable storage facilities for Orff instruments, books, records, tapes, visual aids and other classroom instruments. Provide 35 to 40 lineal feet of 30"d x 7'-0"h adjustable shelving cabinets with doors and locks and 8 to 12 lineal feet of 24"d x 7'-0"h adjustable shelving cabinets with doors and locks. If cabinets are located facing the classroom the cabinet doors should be laminated with white marker board surfacing. If this is done, the white board required below is eliminated.

h. The music room shall have one 4-feet high by 8-feet long white board with a marker tray and a tack strip with map hooks. Provide a wall-mounted flag bracket and a pull down projection screen.

i. Curtain and track: Provide counterweighted backdrop curtains positioned as close as possible to the proscenium opening to hide backstage activity and to define an approximately 800 square feet performance area. Provide a curtain stacking area.

j. The music room shall have a sign next to the corridor door with room name and removable module for the teacher name that meets ADA requirements.

k. Utilities:

   1. Sink: provide a general-purpose stainless steel sink for cleaning instruments. Include a gooseneck single lever faucet with hot and cold water and a bubblier drinking fountain attachment.
   2. Lighting: Provide a single switch located by the corridor door with lighting providing 50-foot candles maintained. Important issues to consider: lack of uniformity in music manuscripts, inks, paper, music symbol sizes and printing methods add to reading difficulty without proper illumination. Students must have proper lighting to read rapidly and accurately, manipulate their bodies and music and follow the teacher's motions. Irregular seating and standing arrangements cause students to face the teacher from various angles. When risers are used, students sitting or standing on the top levels have a different relationship with ceiling light sources than do students sitting or standing at floor level. Avoid lighting systems that produce a sixty-cycle hum.
   3. Performance Lighting: provide two separate clusters with six lights in each cluster. Lights should have removable gels so that lighting is easily changed and white light is available if needed. Position light clusters at audience (gymnasium) side of the performance platform within heavy-duty cages so that they may be left up at all times. Lighting should be capable of position adjustment that is 360-degrees

horizontal and 180-degrees vertical. Switching should occur from the stage side so lighting can be operated during a performance.

4. Emergency Lighting: Provide an override switch to permit stage blackout.
5. Electrical outlets: provide a minimum of three quadplex outlets, each on its own 20-amp circuit, and three general duplex outlets. Provide one duplex outlet inside a 30"deep storage cabinet for the sound system. Provide five data outlets close to the quad outlets.
6. Sound System: provide stereo speakers with jacks for connection to portable components located in lockable casework.
7. Public Address: the system is separate from the gymnasium system and music room sound system. Provide input jacks at the stage front and ceiling for a microphone and audio/video amplifier to be housed in the sound system cabinet.
8. HVAC and Controls: Ventilation should be proportional to high levels of physical exertion involved with proposed activities. Independent control is preferred.

2. Instrumental Music/ Conference Room

The school band meets twice a week with a limited number of students in the instrumental room. The remainder of the week the space is used as a conference room, for small group meetings such as PTA, or break out space for students. It is preferred to have this space open into the cafeteria by using an operable partition.

a. Net area of 500-sq. ft. is recommended for new construction. The room is optional for renovations. Ceiling height of 8'-6" minimum is recommended.
b. Windows are not recommended, but if exterior windows exist blinds must be installed.
c. A door to the corridor and to the Music Room is required.
d. Acoustical Treatments: Low frequency absorptive materials are required.
e. 600 to 1,000 square feet of acoustically absorptive material should be incorporated into the room design.
f. Design and construction should maximize the acoustical isolation of music activities from other quiet activities in the building.
g. Utilities:
    1. Lighting: Locate dual level switching by the corridor door which provides a low level of 50 foot candles maintained and a high level of 100 foot candles maintained.
    2. Avoid lighting systems that produce a sixty-cycle hum.
    3. The ambient sound of the heating/cooling/ventilating system should not exceed a preferred noise criteria of 25.
h. Instrument Storage Room: provide 150 sq. ft. with a minimum 8'-0" ceiling height, a locking 3'-6" wide door and 30 linear feet of full height adjustable 24-inch deep shelving.
i. Chair and Table Storage Room: provide 150 sq. ft. with a minimum 8'-0" ceiling height and locking 3'-6" wide door.

SQUARE FEET SUMMARY:

A. Music/Performance Room Spaces:

1. General Music/Performance Area	1,200 sf
2. Instrumental Music/ Conference Room	500
a. Instrument Storage Room	150
b. Chair and Table Storage Room	150
Music/Performance Room square feet total	**2,000**

PHYSICAL EDUCATION

SPACE DESCRIPTION:

The space is a multi use area. The goal is to provide a multi-use area that is almost 100 percent useable space for physical education and for the presentation of performance activities and programs. During physical education classes all students are kept actively engaged at all times. Total involvement requires complete flexibility and adaptability of the physical space. The gym area should be a simple, uncluttered box.

Gym Spaces:

1. Gym
2. P.E. Equipment Storage Room
3. P.E. Office
4. Mat Storage Area
5. Performance Chair Storage
6. Outdoor Areas

DESIGN CRITERIA:

A. Physical Education Spaces:

1. Gym

a. The gym requires a direct relationship to outdoor physical education facilities. The narrow end of the gym should open to create the performance seating area. Risers/stairs from the gymnasium floor to underneath the stage floor are prohibited. Provide stairs through a corner door to the side of the stage opening. Do not locate doors under or near basketball baskets. The wall area behind baskets requires protective mats.

b. Floor area required is 3,250 square feet (50'-0"' x 65'-0"). A clear ceiling height of 20 feet (minimum) is required

c. Floor: Carpet with activity stripe patterns

d. Walls are used to help develop skills. Walls should be flat, straight, smooth and easily cleaned. The required wall material is solid masonry in order to provide for wear and tear from physical education activities.

e. Acoustical Considerations: Acoustical roof deck and sound absorbing masonry is required.

f. Provide one 4'-0" x 8'-0" whiteboard without tray

g. Utilities:

1. Lighting should be controlled from a keyed switching bank and be designed to provide a minimum of 50-foot candles, maintained at 36 inches above the floor. Protect all fixtures from ball damage. Metal halide illumination is required. Fluorescent, incandescent or high-pressure sodium lighting is prohibited.
2. Electrical outlets: provide near the office and storage room a minimum of three recessed duplex outlets with heavy-duty covers and two recessed data outlets with heavy-duty covers located near the outlets.

3. Provide a public address system with wireless microphones for PE teacher use during class. The system is independent of the performance system.
4. Provide CATV outlets at each end of the gymnasium location15 inches above the floor and close to an electrical outlet.

h. Fixed Equipment: provide two-standard duty steel power folding, adjustable main basketball goals at eight to ten feet high at end walls. Provide four fixed, lightweight adjustable secondary basketball goals at sidewalls and climbing rope.

2. P.E. Equipment Storage Room

a. Provide a storage room with a pair of 3'-0" doors and appropriate lighting for physical education equipment. There are no special requirements for room finishes.

3. P.E. Office

a. Provide a general use office with a window into the gymnasium.

4. Mat Storage Area

a. Provide recessed storage area, accessible from the gym side, under the music room floor for storing "Ensolite" mats up to 20'-5' x 10' x 1"laid flat. Doors must be locking.

5. Performance Chair Storage

a. Provide storage for folding chairs for performances. There are no particular requirements for finishes. Provide a pair of 3'-0" minimum width doors and appropriate lighting.

6. Outdoor Areas

a. Play fields for softball and soccer fields, a long jump pit, physical fitness course, and areas on the intermediate play pad are part of the physical education component. See Site Development Standards for requirements.

SQUARE FEET SUMMARY:

Physical Education Spaces:

1. 1. Gym	1 x 3,250	=	3,250
2. 2. P.E. Equipment Storage Room	1 x 200	=	200
3. P.E. Office	1 x 100	=	100
4. Mat Storage Area	(under part of music room floor)		
5. Performance Chair Storage	1 x 150	=	150
6. Outside Areas			--

Total Physical Education Component square feet			**3,700 SF**

INSTRUCTIONAL SUITE "POD"

SPACE DESCRIPTION:

The instructional suite, or pod, is the basic unit of the instructional program. It allows for development of teaching teams to utilize the instructional area to accommodate student needs and program functions.

All student learning activities except art, music and physical education occur within these instructional suites. Kindergarten and Special Education are integrated into the K-6 program and take place within the instructional suites.

Preschool is an important part of our educational program. A funding source for the program has not been determined as of January 1998 although there is a commitment to make preschool part of the elementary school. The future preschool program included in this educational specification is for information purposes only and is not part of the 650 student K-6 design.

A. Instructional Suite Spaces:

1. Classrooms
2. Multi use Room
3. Girls and Boys Restrooms
4. Staff Restroom
5. Custodial Closet (See Support Areas)
6. Playground Equipment Closet (locate one in pod closest to the playground)
7. Special Education and Related Services (SERS) team office

DESIGN CRITERIA:

A 650-student design requires a total of 24 classrooms. Suites or Pods are configured with six or eight classrooms. The site constraints, budget, and total number of classrooms needed are items for review by the Design Advisory Group in determining the number of classrooms per pod. Odd number classrooms such as a five- classroom addition could become a pod, although odd number classroom pods are not as conducive to team teaching.

Classrooms surround or abut a suite support core containing a Multi-use Room and Restrooms. The configuration should maximize interaction within and among instructional suites. A strong relationship is needed with the LIC and other core instructional areas.

A. Instructional Suite Spaces:

1. **Classroom**
   a. All classrooms shall be 900 net sq. ft. +/_ 2% and rectangular in shape with the short side to long side ratio of 1:1.33 +/- 5%. A minimum ceiling height of 9'-0" is required.
   b. Exterior windows with blinds and screens are required. As a minimum one sash should be operable in the lower half of the window if awning or hopper sashes are used the open frame must be protected to prevent injury to the occupants. Sill heights of at least 36 inches above the floor are preferred. For a single strip window a minimum sill height of 12" above the finished floor should be used.

c. A classroom door directly to the exterior is desirable depending upon site constraints and the budget. The DAG should review the advantages and disadvantages of doors before making a final decision.
   Advantages:
   1. Distributes traffic, reduces congestion, improves circulation
   2. Permits non-rated corridor construction
   Disadvantage:
   1. Increased custodial care due to tracked in dirt and mud
   2. Less security
   3. Loss of net floor area, wall space and flexibility.

d. Casework shall consist of 8 to 16 linear feet of base and wall cabinets. Part of the casework shall be a 24-inch deep x 12-inch wide x 84-inch high locking wardrobe cabinet for teacher coats and personal items.

e. Team teaching requires the ability to open the wall between two classrooms. Portable partitions providing a minimum of 12 linear feet of opening shall be provided between each pair of adjoining classrooms. The amount of movable partition beyond the minimum prescribed and whether more than two classrooms can open into each other shall be determined by the DAG based on available budget.

f. Special considerations should be given to control of sound transmission through the ceiling space above the portable partitions.

g. Coat hooks with a contiguous shelf above shall be located in the classroom. Provide for 30 hooks at 2 hooks per foot staggered 4 inches front to back.

h. Sink: A sink is desirable depending upon the site constrains and the budget. The sink shall be stainless steel with a goose neck faucet and bubblier. Only cold water shall be provided to the sink unless the room is designated as a Center Classroom for disabled students. The district shall determine if and which classroom may be designated as a "Center" classroom.

2. **Multi-Use Room**
   a. The space contains the teacher planning area, pod storage, small group teaching area, workspace for teachers, students, aides, and a staff restroom.
   b. Provide one room per pod of 600 net sq ft +/_ 5% for a 6-classroom pod and 800 sf for an 8-classroom pod.
   c. Windows with blinds into the corridor are required. No doors to the exterior are permitted.
   d. Casework: Provide open and closed storage for books and instructional materials. Closed storage shall consist of one 30-inch wide by 24-inch deep by 84-inch high locking wardrobe for coats and personal items. Provide 24 inch deep base cabinets with adjustable shelves that contain a total of 42 cubic feet of storage for each

   classroom in the pod. Do not provide built-in sit down spaces. Heavy metal open shelves will be purchased from the FFE budget. Provide an area to contain 20 linear feet of 12-inch deep by 84-inch high shelving.

3. **Girls and Boys Restrooms** (See Support Areas description):
   ADA compliant children's restrooms: the size and number of fixtures depends upon the

number of classrooms per pod.

4. **Staff Restroom** (See Support Areas description):
   Provide a unisex single adult restroom that is ADA compliant.
5. **Custodial Closet** (See Support Areas description):
   The closet will be used for pod maintenance equipment, supplies and storage.
6. **Playground Equipment Closet** (locate one in pod closest to the playground):
   Playground equipment will be stored on a 48-inch wide by 16-inch deep by 84-inch high ball rack. Provide a pair of locking 3'-0" doors accessible from the corridor. Locate the closet in the corridor exit to the playground.
7. **Special Education and Related Services (SERS) team office**:
   A 300 square feet Special Education and Related Services (SERS) team office shall be provided to house up to four itinerant team members. Locate the room in the instructional core area convenient to the pods. Provide only one SERS office for the school, not one for each pod. The room should have a folding wall to divide the room for use as a conference/meeting room. Provide two doors to the room from the corridor.

SQUARE FEET SUMMARY:

A. Instructional Suite Spaces (example is a 6 classroom pod):

1.	**Classroom**	900 SF x 6 cr.	5,400 net sf
2.	**Multi use Room**	600 sf x 1	600
3.	**Girls and Boys Restrooms**	400 sf x 1	400
	See Support Plumbing Facilities		
4.	**Staff Restroom**	45 sf x 1	45
	See Support Plumbing Facilities		
5.	**Custodial Closets**	75 sf x 1	75
	See Support Plumbing Facilities		
6.	**Playground Equipment Closet**	10 sf	not in total
	Only 1 in the pod closest to the playground		
7.	**Special Education and Related Services**		
	SERS team offices	2 @ 150 = 300	not in total
	Total Net Sq. Ft (for 6 Classroom Pod)		**6,520**

FUTURE PRESCHOOL/DAY CARE SUITE

EDUCATIONAL CRITERA:

Young children have enormous capacities for learning. The early years are optimum times for learning and those who have not participated in an early education program may be entering elementary school having already lost ground. Parents, Educators and Policymakers have come to recognize the positive effects of early learning opportunities for children who are at risk of being socially and /or cognitively unprepared for elementary school. Kindergarten teachers estimate that one in three children enters the classroom not well prepared to meet the challenges of kindergarden.2

Preschools with an appropriately trained staff and a high-quality developmental curriculum have long since proven their worth in promoting cognitive, social, and emotional development in young children. With some effects persisting well into a child's adult years. A substantial body of evidence gathered from decades of research and the experience of the many successful preschool programs documents this fact. Many studies of the impact of high-quality preschool programs on disadvantaged children confirm that they significantly develop children's social and coping skills, reduce referrals to special education and retention rates, and improve children's learning during the early elementary grades. All are crucial factors in establishing a trajectory towards achievement.3

Success in the elementary grades depends heavily on whether children have been taught certain social and cognitive skills. These include the comprehension and use of new words; a basic understanding of the relationship of print to spoken language; the understanding of numerical concepts; the ability to draw representative symbols and pictures; the ability to express feelings, including anger or frustration, through words rather than actions; the capacity to be curious, inventive, and creative; and the ability to cooperate with others and appreciate the qualities of peers who are from backgrounds different from theirs.1

Early education pays off over the long term, not just for the individuals but for society.1

Preschool is known to be an important part of our educational program. A public funding mechanism for this program needs to be found and a commitment to make preschool part of public schools has to be made. As of January 1998 these issues are not solved. This Future Preschool component is included in this educational specification to raise awareness and provide programming information, but is not part of the present 650 student K-6 design.

SPACE DESCRIPTION:

When preschools are made a part of the elementary program the initial concept would start with preschools in one or two elementary schools in each articulation area. As the programs grow additional preschools would be added.

If a preschool pod is added to the present K-6 650 elementary school a larger site will be needed. Or if the elementary program was K-5 then the addition of preschool would keep the building and site as is described for a normal 650 design.

Preschool Suite Spaces:

1. Classrooms
2. Multi-use Room
3. Day Care and Material Storage Closets
4. Director's Office
5. Girls and Boys Restrooms
6. Staff Restroom
7. Custodial Closet (See support spaces for requirements)
8. Playground Equipment Closet

DESIGN CRITERIA:

An outdoor play areas must be close to this pod. Primary playground equipment will be sufficient for the preschool size child.

A. Preschool Suite Spaces:

1. **Classroom (4 total in a pod)**
   a. All classrooms shall be 1,000 net sq. ft. +/_ 2%, rectangular with the short side to long side ratio of 1:1.33 +/- 5%, Minimum ceiling height 9'-0".
   b. Each Classroom shall have a 75-sf storage room adjacent to the classroom.
   c. Windows to the exterior with blinds are required. Provide a minimum of one operable sash. If awning or hopper sashes are used the open frame must be protected to prevent injury to the occupants. Screens on the operable sash are required. Sill height 36 inches or more preferred above the finished floor. For a single strip window, minimum sill height of 12" above the finished floor is required.
   d. A classroom door directly to the exterior is mandatory. The door shall exit directly into the preschool play area.
   e. Flooring: carpet 600 sf, VCT tile used at wet areas shall not cover more than 400 sf.
   f. Casework and Sink: A sink is required. The sink shall be stainless steel with a goose neck faucet and bubblier. Only cold water shall be provided to the sink. Casework shall consist of 8 to 16 lineal feet of base and wall cabinets. Part of the casework shall be a 24-inch deep x 12-inch wide x 84-inch high lockable wardrobe cabinet for teachers' coats and personal items.
   g. Classrooms are to be paired and each pair shall contain a boys and girls ADA restroom. Team teaching requires the ability to open the wall between two classrooms. Portable partitions providing a minimum of 12 lineal feet of opening shall be between each pair of

adjoining classrooms. Portable partitions providing direct opening from the classrooms into the Multi-Use Room is permitted. The amount of movable partition beyond the minimum prescribed and if more than two classrooms can open into each other shall be a determined by the DAG considering the budget.

h. Special considerations should be given to control sound transmission through the ceiling space above the portable partitions.
i. Coat hooks with a contiguous shelf above shall be located in the classroom. Provide for 30 hooks at 2 hooks per foot staggered 4 inches front to back.

2. Multi-Use Room

a. This space is to be used as flex space for the preschool and is the space for before and after school day care. The space contains 2 storage closets at 75 sf each, and a group teaching area of 950-sf. +/_ 5%.
b. Casework: Provide storage for instructional materials. Closed storage shall consist of one 24 inch wide by 30 inches deep by 84 inches high, lockable wardrobe for aid coats and personal items. Provide cabinets 24 inch deep x 84 inches high, 60 cubic feet for each classroom in the pod, with adjustable shelving. No built-in sit down spaces are permitted. Provide 8 - 10 lf of base and wall cabinets with a sink with hot and cold water and a bubblier.

3. Day Care and Material Storage Closets:

Locate off of the Multi-Use Room. Each closet shall be 75 sf. Each closet shall have 20 lineal feet of 16" deep 72" high heavy metal shelving purchased from the FFE budget.

4. Director's Office:

Office for the director to work and meet with parents. Located at the suite entry door from the parking lot. This office could be close to the main school entry but not in the administration office, it must be located in the preschool pod.

5. Girl's and Boy's Restrooms:

ADA Children Restrooms, one for each sex to be shared between a pair of classrooms. Each restroom shall have one toilet and one lavatory.

6. Staff Restroom:

ADA Unisex single adult restroom. Access off of the corridor.

7. Custodial Closet

The Suite Custodial Closet is for maintenance of the suite with some storage for maintenance supplies. (See Support Areas for complete requirements).

8. Playground Equipment Closet

Playground equipment will be stored on a 48 inch wide x 16" deep x 84-inch high ball rack. Provide a pair of 3'-0" doors, lockable, accessible from the corridor. Locate next to the corridor exit to the playground. Provide a sign.

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SQUARE FEET SUMMARY:

A. Preschool Suite Spaces:

Classrooms:	1,000 sf x 4 cr.	4,000 net sf
Storage Closets	75 sf x 4	300
Multi-use Room	950 sf x 1	950
Day Care and Material Storage Closets	75 sf x 2	150
Director's Office	120 sf x 1	120
Girl's and Boy's Restrooms	45 sf x 4	180
Staff Restroom	45 sf x 1	45
Custodial Closet	75 sf x 1	75
Playground Equipment Closet	10 sf x 1	10
Total Net Square Feet		**5,830 net sf**

BUILDING WIRING STANDARDS

Purpose:
The purpose of building wiring standards is to ensure conformance in all District buildings with the School District Technology Plan. The plan was approved by the District Technology Committee and implemented October 11, 1996.

General:
Information and graphic representation of the standards from the plan is shown in the School District Data Diagram. The data diagram is available from the Offices of Facilities Planning and Design and Construction Management.

The construction contract provides project funds for design and construction of a Communications Room and for the installation of video, voice and data outlet boxes, conduits, and conduit stub-ups within the spaces listed below.

The District hires a communications contractor under separate contract and from a separate technology budget to install and terminate cable for video, voice and data devices. Also included are data cabinets and electronics necessary to support the standards. Ethernet/token ring hubs, work station cables and data patch cables will be installed to support the number of computers currently in use plus a 20% growth factor at the time of installation. Additional hubs will be installed once the 20% growth factor is reached.

A school may choose to upgrade above the standards outlined below. The cost of outlet boxes, conduits, conduit stub ups, cable and cable terminations must be paid for from the school budget.

A. Video Standards:

Video Outlet Locations:

1. One per classroom
2. Two in the Library Information Center
3. One drop each in the gymnasium, cafeteria and or assembly area (Auditeria)*
4. One drop in high school auditorium*
5. One in each multi-teacher workroom (up to a limit of five)
6. One in administrative office
7. One in the Principal's office or administrative conference room.

*If area is to be used for school TV broadcast studio, increase to two video drops. Locate one at 84" above floor for monitor and one at approximately 18" above floor to accommodate video camera.

B. Voice Standards: **

Voice (telephone) Outlet Locations:

1. One per classroom
2. One per Library Information Center
3. One per library office or library media production area

4. Two per administrative office support staff
5. One for school FAX machine
6. One for gymnasium
7. One in cafeteria
8. One in teacher workrooms
9. One per Administrator or full time staff
10. One per Special Program

** If two-piece wiremold strips are required for installation, the wiremold must meet shielding requirements for Category 5 data cable. Duplex backboxes are required for use with wiremold.

C. Data Standards: **

Data Outlet Standards:

1. Three* per classroom, except temporary classrooms. One data outlet should be located near or below the video outlet for use with video camera. (*Revised from 5 outlets 10/99.)
2. One per administrator and/or in each room in office area
3. One in Building Engineer office
4. One in the elementary school cafeteria; two in secondary school cafeterias (auditerias). Coordinate location with Food Services representative.
5. Library Information Centers:
   a. Two for circulation desk
   b. One for Library Information Specialists office
   c. Five locations within library
6. One in gymnasium near or below video outlet for use with video camera
7. One in cafeteria near or below video outlet for use with video camera
8. One in assembly area (auditerias)
9. One in high school auditorium
10. Fifteen to thirty drops for rooms used as computer labs

**If two-piece wiremold strips are required for installation, the wiremold must meet shielding requirements for Category 5 data cable. Duplex backboxes are required for use with wiremold.

D. Temporary Building Wiring Requirements:

1. One video outlet
2. Three data outlets and three telephone outlets located in same backbox.
3. One wall telephone outlet located near entrance door.

CORRIDORS

SPACE DESRIPTION:

Corridor Spaces:

1. Lobby and Main Corridors
2. Instructional Suite Corridors

DESIGN CRITERIA:

The design and materials selected should result in corridors that are durable, easily maintained, attractive, warm and non-institutional in appearance. Corridors should be direct, simple and logical as a way-finding system into and through the building.

1. Vestibules are required at high use entrances and exits.
2. Floor: The lobby floor may contain hard surfaces, but carpet is preferred. All entries should have mats.
3. Walls: The preferred corridor wall is a 48-inch high masonry wainscot veneer with gypsum board walls above finished with a heavy mil thickness multi-colored vinyl paint. The optional wall finish will be high impact gypsum board on the lower 48-inches with the remainder of the wall finished with standard drywall finished with heavy mil-thickness multicolored vinyl paint. All exterior corners of gypsum board will have full height high-impact corner guards.
4. Ceilings: Unusually low or high ceilings are discouraged because of the effect on the acoustical properties of the space. Minimize reverberation times to avoid disturbance caused by multiple simultaneous activities. Do not use any angled or vaulted ceilings without full acoustical absorptive material covering the angle.
5. Doors: Recognizing that staff and students often prefer open corridor doors, use electromagnetic hold open devices at classroom doors to maintain the integrity of the exit system.
6. Windows into the classrooms from the corridors are not permitted except as sidelights beside doors or as windows within the door.
7. Public Access: Provide lockable security separations to isolate building areas that may be used after hours by the public such as the gymnasium, performance/cafeteria, music room and LIC.
8. Provide a built-in general-purpose lighted display case in the Main Lobby Corridor.
9. Provide 200 to 300 sq. ft. of tackboards at 3 or 4 prominent locations in the main corridor.
10. Signs: Provide directional signs in the lobby to the main areas of the building. Provide room name, number and replaceable teacher name plaques at each doorway. Provide a dedication plaque. Design standards will be provided by Facilities Planning and Design. All signs must meet ADA requirements.
11. Electrical Receptacles: Provide 110V general use duplex receptacles at 50 feet maximum spacing throughout the corridor system.
12. Lighting: Corridor lighting shall be 30 foot-candles at 36 inches above the floor maintained.

CUSTODIAL

SPACE DESCRIPTION:

Custodial support areas are required for the proper maintenance and operation of the facility. When school buildings lack appropriate storage spaces the staff is often forced to use spaces inappropriately which causes building code violations.

Custodial Spaces:

1. Building Engineer Office
2. Custodial Closets
3. Custodial Storage Room
4. Outside Equipment Storage

DESIGN CRITERIA:

A. Custodial Spaces:

1. **Building Engineer Office**: The space is a combination office and receiving and storage space of 240-sq. ft. +/- 5% which should be located close to the service entrance for receiving. A roof access hatch with built-in ladder should be located in this space.

2. **Custodial Closets:** Provide one per instructional suite, one for the gym and cafeteria and one in the kitchen. Each custodial closet shall be 75-sq. ft. +/- minimum. See the "Kitchen" section for special custodial requirements. Electrical transformers and breaker sub-panels shall not be located in the custodial closets. The closets should have space for 20 linear feet of adjustable metal shelving that is purchased from the FFE budget. Each closet shall contain a floor mounted minimum 24" square terrazzo service sink with a maximum lip height of six inches above the floor and with an industrial braced faucet of hot and cold water. Provide 48" high RFP (reinforced fiber panel) wainscots at service sinks.

3. **Custodial Storage Room:** Provide a 150 sf +/- storage room for indoor floor cleaning equipment such as extractors, vacuum cleaners, buffers and floor machines. The room is intended to keep the equipment from being stored in electrical, mechanical and communications rooms. Electrical transformers and breaker subpanels are not to be located in the storage room.

4. **Outside Equipment Storage**: Provide storage for site maintenance equipment, gasoline-powered tractors, ladders and flammable materials. An attached room is preferred in new construction. A separate structure, remote from the main building, is an acceptable substitute in renovation projects. Locate Outside Equipment Storage adjacent to the service drive. The storage area should be 240-sq. ft. with a ceiling height of 10' - 0" minimum and a depth sufficient to accommodate a tractor with snowplow or mowing device attached. Provide a pair of doors at grade level with a level threshold to the building exterior. Direct doors from the storage room into the school building are prohibited. Provide heat to prevent equipment freeze-up and 110V general-purpose duplex receptacles. Provide two minimum 20 amp circuits if the building is attached to

the main building. Provide four 20-amp outlets if the building is free standing. Locate the automatic irrigation controller is the building.

SQUARE FEET SUMMARY:

Custodial Spaces:

1.	Building Engineer Office	1 x 240 sf =	240
2.	Custodial Closets:		
	4 Pod + 1 Core	5 x 75 sf =	375
3.	Custodial Storage Room	1 x 150 sf	150
4.	Outside Equipment Storage	1 x 240 sf =	240
5.	Kitchen Custodial Closet	(SF included in Kitchen)	
	Total Square Footage for Custodial Spaces		**1,005 sf**

MECHNICAL, ELECTRICAL AND COMMUNICATIONS ROOMS

A. Mechanical and Electrical Rooms

The floor level should be at grade with direct exterior access. Corridor access is required. If a change in floor level is required, the change should be no steeper than the building code allows for stairways. Access to roofs may be by vertical ladders with safety accessories.

Provide door openings adequate to permit passage of the largest piece of equipment. Maximize acoustical isolation and sound attenuation. Provide one 110-v general duplex outlet in each space. Provide 30 foot-candles lighting at 36 inches maintained.

Conceal all utility systems in public areas, classrooms and finished spaces. Pipes, conduits, wire and ductwork can only be run exposed with approval from the District Coordinating Architect.

B. Communications Room

The Communications Room serves to distribute video, cable, and satellite transmissions to other parts of school. The room houses all building special systems control equipment and is not intended as a storage room. Key access will be limited. Provide a door from the corridor. The space can be across the corridor from the LIC or some other location that is central to the geometry of the building. Data cable runs must not exceed 300 total linear feet. Provide 140 sf space +/- with a minimum 8'-0" ceiling height. Walls shall be 3/4" nonflammable unpainted plywood. See additional requirements in the District Data, Communications and Fire Alarm Diagram available from the District Coordinating Architect.

Conceal all systems in public areas, classrooms and finished spaces. Pipes, conduits, wire and ductwork can only be run exposed with approval of the District Coordinating Architect.

PLUMBING FACILITIES

SPACE DESCRIPTION OF PLUMBING SPACES:

- Instructional Area Student Restrooms
- Instructional Area Staff Restrooms
- Instructional Area Work Sinks
- Core Area Public Restrooms
- Administrative Staff Restroom
- Clinic Restroom
- Core Area Work Sinks
- Drinking Fountains
- Custodial Closets
- Kitchen
- Exterior Keyed Hose Bib

QUANTITY:

1. Instructional Area Student Restrooms: For each instructional suite, provide one for each sex convenient to suite classrooms.
2. Instructional Area Staff Restrooms: For each instructional suite, provide one unisex facility convenient to the Multi-Use Room.
3. Instructional Area Work sinks: One in each classroom is preferred. If sinks cannot be provided in each classroom, provide three or four dispersed sinks convenient to all pod classrooms and visible from teaching stations.
4. Core Area Public Restrooms: Provide a minimum of one facility for each sex sized to accommodate more than one user at a time. Locate the restrooms accessible to the gymnasium, cafeteria, and administration and directly accessible from temporary classrooms.
5. Administrative Staff Restroom: Provide one unisex facility
6. Clinic Restroom: Provide one unisex facility with specialty shower, floor drain and changing table. See "Administration" section for further requirements.
7. Core Area work sinks: Provide sinks in each of the following areas: Clinic, Administration Workroom, Staff Lounge, General Music Room, Art Room, and Staff Processing/Production Room.
8. Drinking Fountains: Provide two minimum in the Core area. In Instructional Suites include a bubblier on each classroom sink and an ADA accessible bubblier outside the restrooms. If sinks are not provided in classrooms two bubbliers should be provided at restrooms.
9. Drinking Fountains: Provide fountains near the gymnasium, cafeteria, and administration.
10. Custodial Closets: Provide one floor mounted sink in each closet.
11. Kitchen: Provide a staff restroom, custodial closet with floor mounted sink, washer and dryer, hand sink, pot sinks, preparation sinks with garbage disposal, dishwashing area with garbage disposal, hot tables, floor drains and floor sinks.
12. Exterior Keyed Hose Bib: Provide one at the kitchen service entrance.

ADDITIONAL REQUIREMENTS:

1. Ceilings: Gypsum board with epoxy paint is preferred. Lay-in grid ceilings are not allowed in restrooms or in the kitchen.
2. Doors: Student restroom designs should not have doors.
3. Acoustical Considerations: To the greatest extent possible provide acoustical separation between instructional suites and restrooms, with special consideration for noise generated by electric hand dryers.
4. Instructional Area Student Restrooms: Provide fixture ratios per the Uniform Building Code or Uniform Plumbing Code, whichever is more economical. Assume maximum building or instructional suite capacity according to the formula contained in the Educational Specifications and assume 50% each sex. Lavatory areas are permitted to have a unisex configuration if separated from toilets and urinals.
5. Core Area Public Restrooms: Fixture ratios should be provided according to requirements of the Uniform Plumbing Code. Design public restrooms in conjunction with central student restrooms to serve 50% of the maximum assembly occupancy of the gymnasium per the Uniform Building Code. Assume a 50% ratio for each sex.
6. Instructional and Administration Area Staff Restrooms: Provide one unisex toilet and one lavatory.
7. Instructional Area Classroom Work Sinks: Sinks should be child-accessible with minimum inside measurements of 13- " x 16" x 17- " with a rigid gooseneck mixing faucet installed at either end. Supply cold water only and a drinking fountain bubblier.
8. Drinking Fountains: Provide non-refrigerated bubbliers at the public restrooms. If classroom sinks are not provided, locate a non-refrigerated bubblier near the pod restrooms. Meet code fixture quantity requirements.
9. Provide supplemental exhaust from restrooms.

SPECIAL SYSTEMS

A. Audio Enhancement System (Optional):
The system, consisting of a base unit, four speakers, and a wireless microphone, allows use of a hands free, wireless microphone to enhance voice projection. One unit is installed for each teaching station. The system must be purchased and installed from the school budget.

B. CATV:
Cable TV will be installed throughout the school. Refer to the media matrix in the Appendix for specific locations.

1. Cable outlet boxes, empty conduit to above the ceilings and convenience outlets to serve the televisions are supplied and installed as part of the construction contract.
2. The District communications contractor provides television cable, cable terminations, and outlet covers.
3. Cable television control equipment is located in the Communications Room by the Communications contractor.

C. Central Energy Management System (CEMS):
The central energy management system monitors the heating, ventilating and air conditioning system (HVAC) and reports status information to a District central monitor location.

1. The system is supplied and installed as a part of the construction contract.
2. CEMS control equipment is located in the Communications Room.

D. Clock System:
School clocks are on a master self-adjusting electrical system. Refer to the media matrix in the Appendix for specific locations.

1. The system is supplied and installed as a part of the construction contract.
2. Locate the master control in the Communications Room.

E. Data Systems:
A computer network will be installed throughout the school. Refer to the media matrix diagram in the Appendix for specific quantities and outlet locations.

1. Outlet boxes, empty conduit up to ceiling and a corridor "bridle ring" system are supplied and installed by the construction contract.
2. Cable, data box covers and related hardware devices are installed by the District communications contractor.
3. Control equipment is located in the Communications Room.

F. Fire Alarm System:
A fire alarm system will be installed throughout the school. A fire alarm status panel will be located in the administrative area.

1. The system is supplied and installed by the construction contract.
2. Control equipment is located in the Communications Room.

G. Public Address System:
A public address system will be provided in the Gymnasium.

1. The system consists of an amplifier, speakers, two wired microphones and two wireless microphones.
2. Locate operation controls in the Gymnasium offices.
3. The system is supplied and installed by the construction contract.

H. Security System:
Security detection devices are located in corridors, the administration area and computer laboratories.

1. The system is supplied and installed by the construction contract.
2. The system control equipment is located in the Communications Room.

I. Stereo Systems:

1. A school wide stereo system is part of the telephone system. The system is supplied and installed by the District communications contractor and Telecommunications.
2. The General Music Room portable system consists of an amplifier, CD player, tuner, tape recorder, two remote speakers and one wire microphone. The portable stereo system is purchased from the school budget.

J. Telephone System:
A programmable phone/paging system will be installed. Refer to the media matrix diagram for device locations and to the Data Diagram for more information.

1. Telephone boxes, empty conduit room stub ups, and a corridor "bridle ring" system are supplied and installed by the construction contract.
2. Telephone cable, cable terminations, outlet covers, and telephone instruments are installed by the District communications contractor and Telecommunications.
3. Telephone control equipment is located in the Communications Room.

SITE DEVELOPMENT STANDARDS

DESIGN CRITERIA:

Site development should allow for maximum utilization of passive solar design alternatives for structures and site amenities. Minimize northern exposures and utilize building shading for main site circulation routes and amenities. Building and site amenities should generally follow existing contours so that all building exits are on grade.

For security reasons, configure the building to minimize areas not exposed to general public view.

Site Components:

A. Land

The site should be almost flat with good drainage and a large amount of road frontage or a corner site. The site should be close to utilities and centered in its neighborhood boundary area. The preferred location is abutting a park. The site shall not be accessed directly from a major roadway. Good sun access and protection from wind is important. The site can not be in a flood plain or over a mining area. The geology and soils must be acceptable to the District Department of Facilities Planning and Design and the State Geologist.
Minimum useable land size 435,600 +/-sf = 10 Acres +/- .

B. Program Site Facilities

1. Bus loading: The number of buses serving a site varies widely, but the average is 8.
2. Auto parking: Provide 65 parking spaces, based on one paved staff/visitor space per ten students. Increase capacity up to 100 autos at sites where adjacent off-street parking is unavailable. Provide a ratio of stalls for handicapped parking according to applicable regulations.
3. Outdoor school community area: Provide seating and wind screens whenever possible. Seating for up to 100 students may be on retaining walls or raised planters.
4. Bike pad and enclosure: Provide 1,000 sq. ft. Omit or reduce enclosure size at sites with no sidewalks or with limited potential for bicycle travel.
5. Ecology area: Natural streams and drainage areas, rock outcroppings, native grass and trees for student study, and passive areas are desirable. These areas may incorporate benches and garden areas. If no natural area with these amenities exists, construct areas with plantings and fencing. The area may be off-site and not require development.
6. Temporary classroom area: Most school sites will house portable classrooms, often for a period of years. Temporary portable wood-frame classroom buildings are 24'-0" x 40'-0".
   a. Provide space for four to eight temporary buildings and direct access for moving buildings in and out with minimal disturbance to site improvements.
   b. Separate temporary classrooms from each other and from the main building by 20 feet in each direction. Two temporary buildings may be joined together to form one unit.
   c. Provide two concrete underground vaults with conduit stubbed-in for electrical power, gas, water, sewer, fire and security alarms, telephones, clocks, paging system, cable television and computer network systems for future extension.
7. Provide an enclosure for three trash containers (dumpsters).

C. Physical Education Facilities

Provide:

1. One Softball Field: Where possible provide a skinned infield incorporating sand and Terragreen moisture absorbing mineral with a top surface of 4" of soil. Provide a backstop that is 18'-0" high x 20'-0" wide with 10'-0" wings located 20'-0" behind home plate. Foul lines should be 200'-0" long. Do not overlap fields if possible, however, if necessary softball outfields may overlap soccer fields, except for goal areas. Softball fields should be oriented on a northeast or northwest axis.
2. One Soccer Field: Orientation should be north-south with a size of 150'-0" x 300'-0". If a second soccer or softball field is provided, the soccer field and softball outfield may overlap.
3. One Long Jump Pit

D. Apparatus Areas

1. Primary, locate near primary play pad: 50% of all apparatus must be ADA accessible.
    a. 2 spring rockers - individual and multi-person
    b. 6 swings - 8'-0" high with sling-type seats
    c. 2 slides - 2 different types
    d. 1 crawl tunnel
    e. 1 vertical climber
    f. 1 horizontal climber or track ride
    g. fun funnel - 8'-0" high
2. Intermediate, 50% of the apparatus must be ADA accessible.
    a. 2 overhead ladders
    b. 1 flexible climber
    c. 1 slide - 10'-0" high
    d. 6 swings - 10'-0" high
    e. 2 vertical climbers
    f. 1 log roll
    g. 2 fun funnels - 10'-0" high
3. Play Pads (2)
    a. Primary: 14,400-sq. ft. asphalt play pad configured in a 120'-0" square is suggested, but can be other dimensions. Paint lines on the pads for the following activities:
        4 hopscotch layouts (1" white lines and numbers)
        1 volleyball court (1" white lines and letters)
        2 basketball goals (2" white lines, 1' yellow backcourt lines)
        2 tetherball courts (1' red lines)
        4 foursquare courts (1" white lines/letters)
        1 sand pit for kindergarten use
    b. 1 intermediate: 14,400-sq. ft. asphalt play pad configured in a 120'-0" square is suggested, but can be other dimensions. Paint lines on pads for the following activities:
        6 basketball goals (2" white lines, 1" yellow backcourt line)
        4 tetherball courts (1" red lines)

4 hopscotch layouts (1" white lines and numbers)
4 volleyball courts (1" white lines and letters) with permanently installed volleyball standards on 2 courts.
4 foursquare courts (1" white lines and letters) Layout may require overlapping of event markings.

E. Site Relationship

1. The building and grounds should be arranged to provide maximum safety and visual observation opportunities for all site components.
2. The main school entrance should be adjacent to and visible from the parking lot. Ideally, the parking lot, bus loading/unloading area, and parent/visitor loading/unloading area should all be separate. Good visual supervision of these areas from the office area is essential.
3. Locate the bicycle enclosure to maximize supervision and safety.
4. Provide a separate service drive to the kitchen and outside equipment storage. Minimize vehicular conflict with student traffic patterns and loading/unloading areas.
5. After-hour facilities such as gymnasium and performance areas should have lighted parking lot access.
6. Areas adjacent to the building educational spaces should be reserved for playground activities, considering that the closer to the building the more passive the play. General play fields should be located far enough away from the building to prevent accidental damage to window areas and landscaping.
7. Locate physical education fields directly accessible to the gymnasium with concern for noise generated and the effect on building users and neighbors. Design to minimize errant balls landing on neighboring property, parking lots, building roofs and window areas.
8. Do not let foot traffic from the gymnasium, cafeteria and play fields cross service or parent driveways.
9. Orient and group temporary classroom buildings to minimize distances to core and support facilities. Temporary Classrooms are to function as permanent instructional areas to the greatest extent possible.
10. Locate and landscape the area around temporary classroom buildings to minimize visual impact on adjacent residential properties.

F. Site Circulation

1. Site safety is paramount. Intersections between pedestrian, bicycle and vehicular traffic should be minimized.
2. Pathways and/or sidewalks are required to connect all building exits with fire refuge areas, parking lots, bike enclosures, service areas, play pads, site pedestrian access points and along street frontages.
3. Bus loading should be off street with counter-clockwise circulation.
4. Design the site to provide access for service and deliveries to the kitchen/cafeteria, custodial facilities, gymnasium and physical education fields and structures. Delivery vehicles need a turn-around space to avoid long backing distances. Trash compactor trucks require a concrete loading pad with minimum grade and no curbs. Consider that trash trucks may be front or rear loading and provide approach space as required.

5. Barrier-free accessibility is required for all site amenities.

G. Site Improvements

1. Drainage: Water discharge over sidewalks is prohibited. Provide necessary site drainage improvements as required by the design concept. Provide structures to control erosion wherever quantities of water are discharged to earth surfaces. Direct water to storm drains where possible.
2. Provide appropriate planting features or safety structures to ensure child safety near headwalls.
3. Prepare storm drainage studies when required by governing agencies. On-site retention ponds should be avoided.
4. Landscaping: Use of turf grasses or sod is restricted to designated play fields and high traffic areas.
   a. Native drought-resistant grasses and plant materials ("Xeriscape") are preferred for unpaved and unassigned decorative and utility areas of the site.
   b. Steep slopes, embankments and swales that are subject to erosion must comply with District Technical Specifications.
   c. Provide a complete and fully automatic underground irrigation system to cover all play fields, lawns and planting areas. Also provide quick-connect hose couplers to allow for remedial watering.
   d. On sites where irrigation water rights exist, develop the system to utilize these rights to the fullest possible extent. Provide a complete landscape design.
   e. 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 and to harmonize with the community. Plantings shall be of a type and size to survive the school environment and require minimal care.
5. Fencing: In general, chain link fencing is required at all property lines, along existing or future private development, and where portions of active playgrounds are adjacent to street frontages or parking areas. Fencing is usually not required where school property abuts public-park land.
   a. 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 rolling down banks and to prevent access of horses and non-authorized motor vehicles onto the play fields.
   b. Pedestrian access is ways required for public use of the grounds. Freestanding fence posts spaced to prevent entry by horses and motor vehicles shall protect these access ways. Gates are required for passage of grounds equipment, service vehicles and snowplows.
   c. Consider use of ornamental wood fencing for site-specific purposes such as to protect planting and lawn areas from damaging foot traffic.
6. Fire Protection: Meet with the Fire Marshal to determine the locations of hydrants. Meet

with the water provider to determine the routes and types of easements required for the water lines.

H. **Miscellaneous Items:**
Incorporate into the site plan a flagpole and benches for informal seating in patios and at main entrances. Provide fire and weather resistant fixed trash receptacles at main building entrances and a sturdy masonry, concrete or wood timber enclosure for meters, transformers and trash dumpsters. Locate a recessed dual-keyed Knox box at the main entrance in coordination with the Fire Department.

I. **Exterior Signage**: Provide building identification, direction and traffic control signs.

1998
ELEMENTARY EDUCATIONAL SPECIFICATION
BUILDING SQUARE FEET SUMMARY

ASSIGNABLE SPACE ALLOCATIONS FOR 650 PUPIL FACILITY

INSTRUCTIONAL SUITES AREAS

Instructional Suites	4 suites x 6 CR/ pod = 24 CR x 900 sf/CR	=	21,600	
Multi-Use Room	4 suites x 600 sf	=	2,400	
Playground Equipment. Closet	1 x 10 sf	=	10	
Special Education and SERS Office	1 x 300 sf	=	300	
Instructional Suite Total				**24,310**

CORE INSTRUCTIONAL AREAS

Instructional Components of LMC Spaces:			
Open Area		2,100	
Stack Area, Large Group Instructional Area Individual and Small Group Activity Area, Computerized Public Access Catalogue			
Student Multi-Media Production Studio		300	
Sub Total Instructional Components of LMC	2,400		
Management Component of LMC Spaces:			
Circulation Desk Area		300	
Office		120	
Equipment Storage		200	
Staff Processing/Production Room		300	
Learning Resources Storage		300	
Subtotal Management Component of LMC		1,220	
Library Information Center Total			**3,620**
Computer Lab.			
Computer Lab. Total			**700**
Art			
Studio		1,250	
Material Storage		150	
Art Total			**1,400**
Music			
General Music/Performance Room		1,200	
Instrumental Music/ Conference Room		500	
Instrumental Storage Room	150		
Chair and Table Storage Room		150	
Music Total			**2,000**

Cafeteria				
	Cafeteria		1,700	
	Table Alcove			300
	Special Program Storage Rooms 3 x 50 sf =		150	
	Cafeteria Total			**2,150**
Physical Education				
	Gymnasium			3,250
	PE Teacher Office			100
	Mat Storage Space (under Music Room Floor)			--
	Performance Chair Storage		150	
	PE Equipment Storage			200
	Physical Education Total			**3,700**
CORE NON-INSTRUCTIONAL AREAS				
Administration Spaces				
	Reception/Waiting Area			150 sf
	Secretaries' Work Area			250
	Principal's office			180
	Clinic			200
	HC toilet		55	
	Workroom			200
	Mail Center			35
	Conference room			450
	Storage Room			150
	Staff restroom			45
	Asst.. Principal's Office			150
	Staff Lounge			400
	Administration Complex Total			**2,265**
Kitchen				
	Kitchen includes custodial closet and Staff Restroom			1030
	Kitchen Total			**1,030**
SUPPORT AREAS:				
Custodial				
	BE Office	240		
	Custodial Closets			
	4 at suites + 1 core = 5 x 75 =	375		
	Outside Equipment Storage Room	240		
	Custodial Storage Room	150		
	Kitchen Custodial Closet included under Kitchen			
	Communications Room	140		
	Custodial Total	**1,145**		

FACILITY TOTAL (NET ASSIGNABLE AREA) 42,320

Part of Gross Area defined here for space count.

Restrooms (square footage may vary depending upon fixture counts) Part of Gross Area

Suite Student Restrooms 4 x 400sf =	1,600	
Suite Staff Restrooms 4 x 45sf =	180	
Public Restrooms 1 x 400sf =	400	
Admin.. Staff Restroom 1 x 45 sf =	45	
Clinic Restroom included under administration	--	
Kitchen Staff Restroom included under Kitchen	--	
Total Restrooms		**2,225**

Traffic Areas (Part of Gross Area)
- Lobby
- Vestibules
- Corridors
- Hallways

Mechanical (Part of Gross Area)
- Boiler Room

Electrical (Part of Gross Area)
- Main Switch Equipment

Summation:

1998 Elementary School buildings will range between 56,600 to 58,300 gross sf.

Preschool Suite Spaces:

If preschool were added to an elementary school the following building area would be needed and additional land will be required

Classrooms	900 sf x 4 cr.	3,600 net sf	
Storage rooms	75 sf x 4	300	
Multi-use Room	800 sf x 1	800	
Storage Rooms	75 sf x 2	150	
Directors Office	120 sf x 1	120	
Girls and Boys Restrooms	45 sf x 4	180	
Staff Restroom	45 sf x 1	45	
Custodial Closets	75 sf x 1	75	
Playground Equipment Closet	10 sf x 1	10	
Preschool Total			**5,280 net sf**

A ratio of 5,280 net square feet to 7050 gross sf of building is possible, assuming 75% efficiency.

COMPARISON FROM 1990 EDITION TO 1993 AMENDMENT TO 1998 EDITION

Edition	1990	1993A	1998	Change from 93A
INSTRUCTIONAL AREAS:				
INSTRUCTIONAL SUITE (850 X 6 CL=900 X 6 CL=5,700 sf =	22,800	5,100x4=20,400	5,400x4=21,600	
TEACHER PLANNING/CONFERENCE	1,200	1,200	0	
MULTI-USE ROOM	0	0	600x4=2,400	
PLAY FIELD EQUIPMENT CLOSET	0	0	10	
SPECIAL ED. & SERS OFFICE	0	0	300	
INSTRUCTIONAL SUBTOTAL	**24,000**	**21,600**	**24,310**	**2,710**
CORE INSTRUCTIONAL AREAS:				
LIBRARY INFORMATION CENTER:				
OPEN AREA	2,600	2,100	2,100	
SEMINAR ROOMS (2 @ 150 SF) 300	300	0		
STUDENT MULTI MEDIA STUDIO	0	0	300	
LIC INSTRUCTIONAL COMPONENT SUBTOTAL	2,900	2,400	2,400	
WORK AREA/OFFICE	120	120	120	
CIRCULATION AREA	300	300	300	
MEDIA PRODUCTION ROOM	300	300	300	
LEARNING RESOURCES STORAGE	300	300	300	
AUDIO-VISUAL EQUIPMENT STORAGE 200	200	200		
COMMUNICATIONS ROOM	0	140	relocated to support	
LIC MANAGEMENT COMPONENT SUBTOTAL	1,220	1,360	1,220	
LIBRARY INFORMATION CENTER TOTAL	**4,120**	**3,760**	**3,620**	**(140)**
COMPUTER LABORATORY	700	700	700	
COMPUTER LABORATORY TOTAL	**700**	**700**	**700**	--
ART STUDIO	1,250	1,250	1,250	
MATERIAL STORAGE	150	150	150	
DARK ROOM (OPTIONAL @ 120 SF)		Drop Dark Rm. Opt.		
ART TOTAL	1,400	1,400	1,400	--
GENERAL MUSIC	1,200	1,200	1,200	
INSTRUMENTAL MUSIC/FLEX. CONFERENCE	1,200	Drop Space	800	
MUSIC TOTAL	**2,400**	**1,200**	**2,000**	**800**

Edition	1990	1993A	1998	Change From 98A
PERFORMANCE/CAFETERIA	2,000	2,000	2000	Drop Performance
PROGRAM STORAGE CLOSETS	0	0	150	
CAFETERIA TOTAL	**2,000**	**2,000**	**2,150**	**150**
GYMNASIUM	3,250	3,250	3,250	
P. E. TEACHER OFFICE	part of office/storage	part of office/storage	100	
PERFORMANCE CHAIR STORAGE	part of office/storage	part of office/storage	150	
OFFICE STORAGE	200	200	200	
PHYSICAL EDUCATION TOTAL	**3,450**	**3,450**	**3,700**	**250**
CORE NON-INSTRUCTIONAL AREAS:				
MAIN OFFICE	600	600	785	
OFFICE STORAGE	150	150	150	
PRINCIPAL'S OFFICE	150	150	180	
FLEXIBLE OFFICE/CONFERENCE ROOM	450	450	450	
CLINIC	200	200	255	
STAFF LOUNGE 400		400	400	
ADMINISTRATION TOTAL	**1,950**	**1,950**	**2,265**	**315**
SERVING KITCHEN	600			
PREPARATION KITCHEN (OPTIONAL)	+ 900	New prototype Kitchen		
KITCHEN PROTOTYPE		1,000	1,030	
KITCHEN SUBTOTAL	**1,500**	**1,000**	**1,030**	**30**
FACILITY TOTAL (NET ASSIGNABLE AREA)	**41,520**	**37,060**	**41,305**	**4,245**
AREAS INCLUDED IN NET AREA BUT COUNTED IN GROSS AREA:				
SUPPORT:				
BE OFFICE	240	240	240	
CUSTODIAL CLOSETS	375	375	375	
OUTSIDE STORAGE	240	240	240	
INSIDE STORAGE ROOM	0	0	150	
COMMUNICATIONS CLOSET	0	0	140	
TOTAL SUPPORT SPACES	**855**	**855**	**1,145**	**290**
NEW FACILITY TOTAL (NET ASSIGNABLE AREA)	**42,375 sf**	**37,915 sf**	**42,310 sf**	**4,395**

ELEMENTARY SCHOOL ACOUSTIC STANDARD

Room Acoustics Criteria

Proper room acoustics is essential to providing a conducive learning environment for students, and a comfortable working environment for Teachers and Staff. To ensure proper room acoustics, school designs must meet the criteria outlined below.

Design goals for Reverberation Times (T_{60}) are provided for each space. To meet the criteria (and approach the goal), the Architect shall select finish materials to provide the space-averaged Noise Reduction Coefficients (NRC) required by Table 1 below. The worksheet given in Figure 1 may be used to calculate the space-averaged NRC. NRC values of some common construction materials are given in Table 2, and should be used for the calculation unless another value can be supported by laboratory test data of the selected material. The NRC values for ceiling tile and other materials that are not listed should be acquired from the product manufacturer (and be based on laboratory tests).

Table 1 - Room Acoustics Criteria

Room Description	Minimum Space Averaged NRC	Design Goal T_{60} (seconds)
Classroom	0.23	0.5
Art Studio	0.20	0.8
Private Office	0.16	0.5
Computer Lab	0.20	0.6
Conference Room	0.22	0.5
Teacher Work Room	0.18	0.5
Library (LIC)	0.23	1.0
Cafeteria/Multiuse Room	0.18	1.4
Gymnasium	0.21	1.5
Instrumental Music/Conference Room	0.20	0.8
General Music/Performance Room	0.20	0.8

Table 2: NRC values of some common materials

Material	NRC
Gypsum Board, painted	.05
CMU, coarse, unpainted and unsealed	.35
CMU, painted or sealed	.05
Brick, unglazed and unpainted	.05
Brick, unglazed, painted	.00
Classroom Marker or Chalk Board, wall mounted	.05
Metal roof deck, exposed	.05
Metal roof deck, acoustical deck (perforated with insulation fill)	.35
Concrete, sealed or painted	.00
Floor, wood	.10
Floor, Vinyl Composite Tile	.05
Carpet, 1/8" pile height	.15
Carpet, 1/4" pile height	.25
Carpet, 3/16" combined pile and foam	.25
Window	.10
Door	.05

FIGURE 1: SPACE-AVERAGED NRC WORKSHEET

JEFFERSON COUNTY SCHOOL DISTRICT

SCHOOL:

ROOM:

Enter the NRC and area of *all* floor, ceiling, and wall surfaces in the room. Multiply each component's NRC by its area. Add columns B and C. Calculate the space-averaged NRC.

DESCRIPTION	A NRC	B AREA (SQ. FT.)	C (Col. A x Col. B) AREA x NRC
1. FLOOR SURFACE:			
2. FLOOR SURFACE:			
3. CEILING SURFACE:			
4. CEILING SURFACE:			
5. WALL SURFACE:			
6. WALL SURFACE:			
7. WALL SURFACE:			
8. WINDOWS:			
9. DOORS:			
10.			
11.			
12.			
13.			
14. (Add Rows 1 Through 13) **TOTALS:**			

SPACE-AVERAGED NRC ____

(14c ÷ 14B)

Sound Isolation Criteria

Most rooms in a school can be grouped into the following categories:

Type A: Classrooms, Art Studio, Library Information Center (LIC), Principal's Office, Health Office/Clinic

Type B: Assistant Principal's Office, Teacher Work Rooms, Conference Rooms, Computer Lab

Type C: Stairways, Locker Rooms, Staff Restrooms, Fitness Room

Type D: Instrumental Music/Conference Room, General Music/Performance Room, Student Restrooms, Cafeteria/Multiuse Room

Type E: Corridor

Type F: Mechanical Rooms, Electrical Rooms with transformers (25 KVA or larger).

The airborne sound insulation requirements between each type of space are given in the matrix shown by Table 1 (with the exceptions given by the numbered notes). The requirements are listed as Sound Transmission Class (STC) values. The selected walls or floor-ceiling assemblies should meet these requirements, based on their laboratory STC ratings, or ratings estimated by qualified personnel.

To ensure compliance, the partitions may be field tested per ASTM E336, Standard Test Method for Measurement of Airborne Sound Insulation in Buildings. Sound insulation test results will be reported as a Field Sound Transmission Class (FSTC) value in accordance with ASTM E413, Classification for Rating Sound Insulation. The measured FSTC should be no more than 5 points below the required STC rating (according to Table 1). For example, a wall separating two classrooms should have a laboratory STC rating of 40, or a minimum FSTC of 35.

Table 1: Sound Transmission Class (STC) Ratings between spaces.

	A	B	C	D	E	F
A	40	45	45	55	40	Note 4
B		40	45	55	40	Note 4
C			40	55	30	Note 4
D				60 Notes 1,2	45 Note 3	Note 4
E					--	Note 4
F						Note 4

Table 1 - Notes

1. Wherever practical, the following guidelines should be followed: Instrumental and Vocal Music rooms should not be located directly adjacent to each other.

2. Sound isolation between Restrooms should be STC-40 or greater.

3. Sound isolation between a Restroom and a Corridor should be STC-40 or greater.

4. Separation of Type F rooms from other occupied spaces should be analyzed on a case-by-case basis. Where practical, Type F rooms should be separated from occupied space with a buffer space (i.e., Storage rooms or other unoccupied space). In any case the partition(s) separating the Type F room from the occupied room should be designed to reduce the intrusive noise into the occupied room to 5 decibels below the required mechanical Noise Criterion (NC) level at each octave-band frequency, for the occupied room. Refer to Division 15 for the applicable mechanical noise level criteria.

General Requirements

Sound isolating gypsum board partitions should be installed and sealed per ASTM E497, Standard Practice for Installing Sound-Isolating Gypsum Board Partitions, and ASTM C919, Standard Practice for Use of Sealants in Acoustical Applications.

Doors in sound isolating walls shall be solid-core wood or insulated metal doors. Where the wall must be rated for STC-40, the doors should be equipped with a perimeter smoke seal. Where the wall is rated for STC-45, the doors should be equipped with a perimeter smoke seal, an automatic door bottom, and threshold (if the floor is carpeted). For walls rated 55 or higher, the doors shall be an acoustically rated door assembly having an STC rating no less than 5 points below the wall rating.

Mechanical System Noise Criteria

The mechanical system design shall include means and methods to reduce the mechanical noise levels in occupied spaces to the levels shown by Table 1. The criteria is given as Noise Criterion (NC) ratings. These ratings must be maintained at any location within the room that may be occupied by a person as part of the normal use of the room.

To determine compliance with this specification, octave band noise levels will be measured (by the Owner) in an *unoccupied* space, with all mechanical systems operating, at locations that are 3 feet or more from the floor, ceiling, walls, or other solid surface. A Type 1 or 2 sound level meter (according to ANSI S1.4-1983, Specification for Sound Level Meters) will be used. NC ratings will be determined from the octave band noise levels.

Table 1 - Mechanical Noise Criteria

Room Description	Maximum RC(N) & NC [1] Rating
General Music/Performance Room	30
Cafeteria/Multiuse Room	35
Instrumental Music/Conference Room	35
Private Offices 35	
Classroom	35 [2]
Art Studio	35
Computer Lab	35
Conference Room	35
Teacher Work Room	35
Open Plan Office Administrative areas	40
Library Information Center (LIC)	40
Gymnasium	40
Corridor	50
Stairway	50

Table 1 Notes

1. Refer to Chapter 7 of the 1997 ASHRAE Handbook - Fundamentals, for a description of the NC curves.

2. NC-35 is the maximum allowable noise level. A noise level of NC-30 is desirable.

FURNITURE AND EQUIPMENT

In addition to the construction budget, school projects generally contain three additional equipment budget allocations:

- Instructional Equipment
- Food Service Equipment
- Custodial Equipment

Projects for new and replacement schools, for substantial building renovations and for additions to existing schools contain funds for purchase of new and replacement instructional equipment. Food Service Equipment funds are provided for new and replacement schools and for those schools receiving major food service area renovations and building additions. Custodial Equipment funds are provided for new and replacement schools and for building additions The funds are determined by a per student allocation which varies according to the project type. The District Coordinating Architect will provide a copy of the project cost estimate (PCE) showing the amounts and account numbers at the beginning of the project. In addition, the Director of Construction Management and the Director of Purchasing hold information meetings several times a year for Principals, Financial Secretaries and Building Engineers regarding regulations and guidelines for expenditures of bond funds.

In addition to the Design Advisory Group members, the project design team consists of:

- The District Coordinating Architect who guides the project through design
- The District Construction Manager who guides the project through construction
- The Consulting Architect, a firm that is contracted for the design and construction of the project
- The Furnishings and Interiors Coordinator who is available on an as needed basis to work with the project team on design issues

The Coordinating Architect will introduce the Facilities Planning and Design Furnishings and Interiors Coordinator as the design portion of major projects near completion. The Coordinator will be available to provide assistance to Principals, Design Advisory Groups and school furniture committees regarding space planning, setting up budgets, use of District furniture bids and color and materials selection.

The project Consulting Architect is responsible for providing adequate voice, data and power outlets in every space. It is very important that during the Design Advisory Group process the Consulting Architect be given as much information as possible with regard to how rooms and spaces will be used, where furniture will likely be placed, and how equipment will be used and by whom. Once a construction project has been bid changes in voice, data and power locations become very expensive and generally cannot be made. The Furnishings and Interiors Coordinator can use project construction plans to verify that voice, data and power are in place for school purchased furniture and equipment.

The project Consulting Architect is not responsible for providing space planning services for furniture and equipment layouts except as noted in the Consultant Guidelines. Educational specifications recommend that built-in furniture be minimized in order to provide maximum future flexibility. The Furnishings and Interiors Coordinator works with Principals to plan administrative areas, with LIC Specialists to plan Library Information Centers for maximum efficiency, and with teachers to plan "typical" classrooms in order to demonstrate how much furniture and equipment can be placed in a classroom without overcrowding. In addition, the FI Coordinator works with the Coordinating Architect to provide pricing for those items paid for by the construction budget but installed by others.

The District's Purchasing Department bids a large variety of furnishings and equipment for school use each year. A binder containing the various products is available to each school

Administration Offices and Reception Areas:
As noted in the educational specifications, it is strongly recommended for future flexibility that administration areas be designed as open space without built-in casework. The intent is that the District's vendor, HON systems furniture, will be used. The systems furniture is paid for from the FFE budget. As soon as Coordinating Architects have a color/material sample board from the Consulting Architect, it should be made available to the Principal and FI Coordinator along with a reproducible architectural floor plan. The range of colors from HON will be compatible with any color palate. A drawing showing voice and data outlets, fire alarm annunciator panels and thermostat locations should also be conveyed.

Counseling Offices, Conference Rooms or Other Administrative Areas:
For future flexibility use HON systems furniture wherever possible.

LIC's (LMC's):
Elementary School circulation desks are paid for from the construction budget. The design of the desk is standardized in size, height and natural oak finish. Circulation desks may not be specified to be HON systems furniture. A drawing for information purposes is available from the Facilities Planning and Design. The drawing may be used to scale in on construction drawings in order to located voice, data and power outlets. The desk is provided and installed by others. Obtain pricing from the Furnishings and Interiors Coordinator.

Middle and High School circulation desks are paid for from the construction budget. The design is not standardized, however, Coordinating Architects are strongly encouraged to have the design reviewed by the Coordinator of Library Services to ensure functionality. The desk can also be provided and installed by the same vendor that builds elementary school circulation desks. The advantage of this method is both reduced price through elimination of contractor markups as well as reduced need for coordination of wood species and stain colors to match wood top canopies, end panels, tables and chairs that are likely to be provided by the same vendor. Woods other than oak for wood top canopies and end panels usually result in extra charges to school FFE budgets.

Metal library shelving is standardized in all schools. All metal shelving attached to walls is paid for from the construction budget. Custom shelving, without exception, is not permitted. The

shelving is provided and installed by a vendor coordinating with the FI Coordinator. All freestanding shelving is paid for from the FFE budget. Wood top canopies and end panels that cover metal shelving are paid for from the FFE budget whether the shelving is freestanding or wall attached.

High Density Shelving:
High-density rolling shelving is paid for from the construction budget and is optional. The FI Coordinator works with Purchasing to bid high-density shelving. The Consulting Architect should provide a floor plan showing the location and size to the Coordinating Architect for use by the FI Coordinator and Purchasing. 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"). Rolling units are 24" deep x 84" high x length in whole feet. The Construction Project Manager and FI Coordinator coordinate installation requirements.

The LIC Specialist office can be HON systems furniture paid for by the FFE budget.

Teachers' Lounge:
Teachers' lounge requirements are identified in the educational specifications. Schools may wish to purchase from their FFE budget full size or undercounter refrigerators, disposals, microwaves, dishwashers or clothes washers. The District bids appliances each year. Schools should contact the FI Coordinator who will assist them in selecting the products and coordinating requirements (e.g., coordinating plumbing for the icemaker feature with the project manager). Coordinating Architects should also refer to the FI Coordinator for size, power and other requirements of appliances.

Tack Boards and White Boards:
The educational specifications define the type and amount of tack boards and white boards. Schools often wish to purchase more than that amount. The District uses a local vendor to supply additional tack boards at very reasonable cost. The vendor constructs any desired size using a vast array of fabric choices. The FI Coordinator can assist the school in determining size and color selections.

White boards in addition to what is supplied by the educational specifications can also be coordinated with the FI Coordinator.

Consumer and Family Studies Appliances:
Appliances are purchased from the school FFE budget. As noted above, the District bids appliances each year and the FI Coordinator will coordinate with the Coordinating Architect and Project Manager regarding requirements.

GLOSSARY

Americans with Disabilities Act (ADA):
A civil rights law that mandates building and site accessibility for all people.

As-Built Drawing:
A drawing showing the exact condition after the construction is complete.

Asset Management Plan:
A District published book, updated yearly, that describes all of the school district assets and details the history and future expenditures anticipated for that asset.

Assigned Square Feet:
Net building square feet that is assigned to a school program function, e.g., a classroom is an assigned use. Corridors or other support spaces that are not available for instructional use are not assigned.

Bid:
A formal process to secure pricing of work to be preformed by a General Contractor.

Bond Project:
Voter approved funds for school district capital improvement projects. Projects must have a 20-year or greater life expectancy to use bond funds.

Building Efficiency:
The ratio expressed as a percentage of a building's net square footage to the gross square footage.

Capacity:

Permanent Design Capacity:
Number of regular classrooms times 28 students. Core areas are not counted as regular classrooms.

Temporary Building Capacity:
Number of temporary buildings multiplied by 28 students.

Deduct Classrooms:
Number of regular classroom that may be used for core classroom activities.

Capital Reserve Funds:
Funds set aside from the yearly general operating fund for capital improvement projects. Improvements must have less than a 20-year life expectancy.

Casework:
Either floor-supported or wall-hung cabinets that are permanently attached to building structure.

CD:
Construction Documents. The final stage of design that results in complete drawings and specifications that are used in the bidding process.

CM:
Construction Management Department of Jefferson County School District.

Design Advisory Group (DAG):
A group of people generally selected by the Principal who are invited to work with the District Coordinating Architect and Consulting Architect or Planner to provide input on needs, program function and appearance of a school capital improvement project. The members are composed of the principal, building engineer, teaching staff, parents, and interested community members.

Data Diagram:
A schematic diagram produced by Facilities Planning and Design, Telecommunications and Networking Services that illustrates for Consultants the District's standards for telephones, computer wiring, power, fire alarms, security systems, and communication rooms in elementary, middle and high schools.

Design Development (DD):
The second stage of design in which the schematic design is expanded to show more in-depth construction materials, methods and details.

Design Review:
At the end of each project design phase, the District coordinating architect holds a formal technical review of the design drawings, specifications and cost estimate.

Educational Specifications (Ed Specs):
Written specifications developed by the District that outline facility planning standards. The specifications guide development of the architectural program for the school building.

Furniture, Fixtures, and Equipment (FFE):
Items that are not permanently attached to the building structure.

FP&D:
Facilities Planning and Design Department of the Jefferson County School District.

General Contractor:
The prime construction contracting company, selected through a competitive bidding process, that is responsible for construction of the improvements. The contractor works directly for the School District.

Gross Square Feet:
The total enclosed floor area of a building measured from the outside surface of the exterior walls. This definition pertains to District educational specifications only, because a number of definitions have been developed by various organizations.

HVAC:
An abbreviation for a building's heating, ventilation, and air conditioning system.

JCSD:
Jefferson County School District.

LF or lf :
An abbreviation for lineal feet.

Net Square Feet:
The usable floor area of a building. Wall thickness, corridors, restrooms and mechanical spaces are not counted when determining a building's net square feet. This definition pertains to District educational specifications only, because a number of definitions have been developed by various organizations.

Project Cost Estimate (PCE):
A Facilities Planning and Design/Construction Management form used to track all design and construction costs for a project.

Preparation (Prep) Kitchen:
A school kitchen that prepares food for its student lunch program and for lunch programs at other nearby school facilities.

Program:
A written document that defines the function of various spaces within a building or on a site. The program is developed by the Consulting Architect to aid in setting desired parameters for areas and spatial relationships for use by DAGs.

Satellite Kitchen:
A school kitchen that receives prepared food to serve from another school's preparation kitchen.

Scope of Work:
The agreed upon type and amount of work that will be accomplished during construction at a facility.

Schematic Design (SD):
The first phase of architectural design in which conceptual ideas are developed and outlined from the District provided Scope of Work description and the consultant's program developed with the DAG.

SF or sf :
Abbreviation for square feet.

Subcontractor:
A specialty contractor who contracts to work for the General Contractor, usually as part of the bidding process, e.g., electrical contractor or painting contractor.

Systems Furniture:
A furniture system using modular components that can be rearranged for different configurations and uses by adding or removing components.

Technical specifications:
JCSD Field Services Division, in conjunction with FP&D and CM, publishes guidelines intended to establish uniform and consistent quality standards for JCSD school facilities. The guidelines outline minimum acceptable standards for products, materials and building systems used in District facilities.

Total Program Capacity:
The sum of the Permanent Design Capacity plus the Temporary Building Capacity minus the deduct classroom capacity. The Total Program Capacity determines the number of spaces available for students at a school site.

UBC:
Uniform Building Code. The building code that governs school design in Colorado with regard to life safety issues.

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