

## EDUCATIONAL SPECIFICATION

### BOCA RATON HIGH SCHOOL

Grades 9 – 12

Modification & New Construction

Existing CSR Student Stations (excluding existing Science Bldg): 1680

New Academy Student Stations: 160

New Science Addition Student Stations: 325

New Total CSR Student Stations: 2165

Utilization Factor: 95%

FISH Capacity: 2057

Projected Enrollment FY09- FY10: 1782

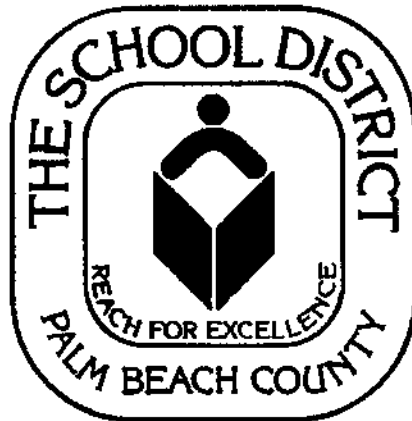
Future New CSR Student Stations: 545

Grand Total CSR Student Stations: 2710

Utilization Factor 95%

Future FISH CSR Capacity: 2574

Program Capacity: 2500



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NSF throughout document refers to Net Square Feet.

## INTRODUCTION

These Educational Specifications are intended for use as a planning guide by architects and others responsible for developing physical facilities in Palm Beach County. The general concept embodied in the specifications is to provide general and adequate details for proposed spaces while leaving ample flexibility for creativity and options in design by the architects.

Philosophy and Goals of the School Board of Palm Beach County (SBPBC) are provided as general directions for programs in the School District and are followed by a listing of General Considerations. The facility list is intended to be a summary of the spaces to be provided, but is sufficiently flexible to accommodate design requirements and compatibility with adjacent space.

Specifications for the various program areas include a common listing of informational categories within each of the areas. Specific information relative to each particular area is included under various headings as follows:

- I. Program Philosophy
- II. Program Goals
- III. Program Activities
- IV. Organizational Nomenclature
- V. Innovations, Experimental Ideas, Other Planned Uses
- VI. Justification for Variance from S.R.E.F.
- VII. Program Facilities List
- VIII. Program Furniture and Equipment
- IX. Special Considerations

The graphic representations of Space Relationships are intended only to establish adjacencies and not to set design. Spaces shall be arranged for the various program areas in a configuration compatible with traffic control, site needs and the following considerations:

1. Facilities shall be as functional as possible; that is, they shall be organized in a manner responsive to educational programming requirements in an orderly economical way.
2. Facilities shall be as responsive as possible to long-term maintenance goals. The architect shall endeavor to produce a product with the lowest possible life cycle cost.
3. Facilities shall be as vandal-resistant as is possible within realistic budget constraints.
4. Facilities shall be as aesthetically pleasing as possible, considering neighborhood, shape, materials, colors, etc.
5. Facilities shall be designed to provide adequate student movement (circulation) without unnecessary waste.

Special attention is directed to planning for community utilization of the plant and campus, maximum energy conservation and capital budget restraints.

## PHILOSOPHY AND GOALS

### I. PROGRAM PHILOSOPHY

The Board's philosophy is to provide an educational system which is instructionally sound and environmentally stimulating enough to attract and maintain high-quality professional, technical and administrative employees. This system is designed to earn the respect of Palm Beach County, the community, state and nation.

The Board believes that successful implementation of its philosophy is highly dependent upon a positive, active, working partnership which includes the Board, administrators, teachers, staff, students, parents, community, business and industry. For this reason, the support requirements for this project were developed by a participatory process involving committees of educators, the Department of Secondary and Career, and various departments of the School District of Palm Beach County.

### II. PROGRAM GOALS

A. **Student Goals** - Students shall acquire, to the extent of their individual physical, mental and emotional capacities, a mastery of the basic skills required in the curriculum.

1. **Communication and Learning Skills** - All students shall be provided an opportunity to do the following:
  - a. Develop and apply basic skills in reading, writing, speaking, viewing and listening.
  - b. Gain a general education in broader fields of language arts, social studies, science, science, mathematics, humanities and vocational education.
  - c. Develop a desire for learning.
  - d. Develop a capacity for self-evaluation and self-direction.
  - e. Examine, analyze, evaluate and utilize various kinds of information.
2. **Human Relations** - All students shall be provided an opportunity to do the following:
  - a. Develop a pride of accomplishment and a feeling of self-worth.
  - b. Learn to respect and get along with people.
3. **Citizenship Education** - All students shall be provided an opportunity to do the following:
  - a. Develop good character and self-respect.

- b. Be responsible citizens.
  - c. Participate in democratic experiences and processes.
4. **Occupational Interests** - All students shall be provided an opportunity to do the following:
- a. Develop a positive attitude toward work.
  - b. Develop respect for the dignity of all occupations.
  - c. Acquire information needed for making appropriate job selections.
  - d. Develop the ability to use information as it relates to a particular vocation.
5. **Home and Family Relationships** - All students shall be provided an opportunity to do the following:
- a. Broaden an appreciation of the family as a social institution and as a basic unit of society.
  - b. Acquire skills and attitudes for management of family resources.
  - c. Acquire and understand the skills of family living.
6. **Mental and Physical Health** - All students shall be provided an opportunity to do the following:
- a. Develop good health habits and an understanding of the conditions necessary for maintenance of physical and emotional well being.
  - b. Acquire a knowledge of basic psychological and sociological factors affecting human behavior and mental health.
  - c. Develop competence for adjusting to changes.
  - d. Recognize and work to solve environmental health problems.
7. **Aesthetic and Cultural Appreciation** - All students shall be provided an opportunity to do the following:
- a. Develop an understanding and appreciation of human achievement in natural sciences, social sciences, humanities and the arts.
  - b. Broaden interests and prepare for productive use of leisure time.
  - c. Develop skills and creative abilities for self-expression.

**B. Management Goals**

- 1. General Management** - The SDPBC shall refine, implement and utilize management practices which will provide the following:
  - a. Planning and evaluation programs which will ensure accurate and adequate information for decision-making.
  - b. Administrative procedures which ensure that program planning, budgeting and evaluation systems are integrated and cyclical in nature.
  - c. Information services that promote timely acquisition of accurate information regarding district policies, procedures and activities which fulfill the needs of the district and the public.
  - d. Administrative and Instructional support for "school-based management" procedures and techniques.
  - e. System-wide support services for functions, processes and programs.
  - f. Continuing development, refinement, implementation and evaluation of instructional materials, processes and components of the cutticulum.
  - g. Flexible organizational structure which clearly defines and delineates authority, responsibility and accountability.
  - h. Fiscal integrity in budgeting and business affairs.
  
- 2. Personnel Management** - The schools district will develop and maintain the following:
  - a. Practices and programs to recruit the best qualified personnel for all positions.
  - b. Programs to orient all employees properly to their job responsibilities, operation and organization of their units, and organization of the school system.
  - c. Staff Development Programs to update employees in their chosen fields and to enhance their professional and career growth.
  - d. Develop programs to teach administrators at all levels how to achieve excellence in managing people, including performance, planning, evaluation and counseling.
  - e. A system to identify high potential employees and their readiness status to qualify for higher career positions within the SDPBC.
  - f. Practices and programs to attain effective affirmative action.

- g. Practices and systems to establish realistic position descriptions for each level and equitable compensation for those levels.**

**Facility List by Areas**

**Grades 9 – 12**

**Modification & New Construction**

**Existing CSR Student Stations (excluding existing Science Bldg): 1680**

**New Academy Student Stations: 160**

**New Science Addition Student Stations: 325**

**New Total CSR Student Stations: 2165**

**Utilization Factor: 95%**

**FISH Capacity: 2057**

**Projected Enrollment FY09- FY10: 1782**

**Future New CSR Student Stations: 545**

**Grand Total CSR Student Stations: 2710**

**Utilization Factor: 95%**

**Future FISH CSR Capacity: 2574**

**Program Capacity: 2500**

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft. Per Unit	Sq. Ft. Total	Sq. Ft.	Stu. Sta. Unit	Stu. Stat. Total.	Student Stations
<b>FACILITY LIST DUE TO ACADEMY PROGRAMS</b>								
<b>Business Administration/Finance/Retail</b>								
1	Accounting (Existing Bldg 4)	1,460			960			13
1	Material Storage	155			93			
1	Project Storage	150						
	<b>Subtotal</b>	<b>1,765</b>			<b>1,053</b>			
<b>Business Supervision (Existing Bldg 5)</b>								
1	Business Supervision (Existing Bldg 5)	1,460			1,509			20
1	Material Storage	155			240			
1	Project Storage	150						
	<b>Subtotal</b>	<b>1,765</b>			<b>1,749</b>			
<b>Administrative Assistant (Existing Bldg 5)</b>								
1	Administrative Assistant (Existing Bldg 5)	1,460			1,472			20
1	Material Storage	155			104			
1	Project Storage	150						
1	General School Space				302			
	<b>Subtotal</b>	<b>1,765</b>			<b>1,878</b>			
<b>Digital Design (Existing Bldg 5)</b>								
1	Digital Design (Existing Bldg 5)	1,460			1,467			20
1	Material Storage	155			219			
1	Project Storage	150						
	<b>Subtotal</b>	<b>1,765</b>			<b>1,686</b>			
	<b>TOTAL</b>				<b>6,366</b>			<b>73</b>
<b>Information Technology</b>								
3	Computer Labs		1,460	4,380		20	60	
3	Material Storage		155	465				
3	Project Storage		150	450				
	<b>TOTAL</b>			<b>5,295</b>			<b>60</b>	



Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft.	Sq. Ft.	Sq. Ft.	Stu. Sta.	Stu. Stat.	Student
			Per Unit	Total		Unit	Total	Stations
<b>R.O.T.C. (NAVY)</b>								
1	Classroom (Existing Bldg 4)	1,050			1,253			29
1	Arms Room	150			266			
1	Material Storage	155			348			
1	Conference (divided into two spaces)	225			273			
	<b>TOTAL</b>	<b>1,580</b>			<b>2,140</b>		<b>0</b>	<b>29</b>
<b>S.T.E.M.</b>								
<i>(Science, Technology, Engineering &amp; Mathematics)</i>								
4	Science Demonstration / Classroom		1,300	5,200		25	100	
4	Material Storage		95	380				
4	Project Storage		95	380				
1	Chemical Storage		400	400				
	<b>Subtotal</b>			<b>6,360</b>				
1	Engineering Laboratory (Existing Bldg 5)	3,240			2,583			19
1	Technology Resource	800			502			
1	Material Storage	90			197			
1	Material Storage	395			127			
1	Project Storage	310			86			
1	Tool Storage	310						
1	Teacher Planning				188			
4	Student Storage				120			
	<b>Subtotal</b>	<b>5,145</b>			<b>3,803</b>			
	<b>TOTAL</b>			<b>6,360</b>	<b>3,803</b>		<b>100</b>	<b>19</b>
	Staff Restrooms (as required by code)			64				
	Student Restrooms (as required by code)			240				
	Custodial (as required by code)			176				
1	Teacher Planning		400	400				
<b>FACILITY LIST DUE TO SCIENCE ADDITION</b>								
<b>SCIENCE</b>								
12	Science Demonstration / Classroom		1,300	15,600		25	300	
1	Computer Laboratory & Storage		900	900		25	25	
6	Project Storage		95	570				
6	Material Storage		95	570				
1	Chemical Storage		400	400				
	<b>TOTAL</b>			<b>18,040</b>			<b>325</b>	
	Staff Restrooms (as required by code)			130				
	Student Restrooms (as required by code)			488				
	Custodial (as required by code)			358				
1	Teacher Planning		400	400				

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft. Per Unit	Sq. Ft. Total	Sq. Ft.	Stu. Sta. Unit	Stu. Stat. Total	Student Stations
<b>FUTURE CLASSROOMS (BUILD-OUT)</b>								
18	General Classroom		756	13,608		25	450	
18	Material Storage		90	1,620				
18	Teacher Planning		54	972				
	<b>TOTAL</b>		<b>900</b>	<b>16,200</b>			<b>450</b>	
<b>EXCEPTIONAL STUDENT EDUCATION</b>								
2	Self Contained Classroom		900	1,800		10	20	
2	Restroom, Student		40	80				
	<b>Subtotal</b>			<b>1,880</b>				
3	General Classroom (for use of ESE)		756	2,268		25	75	
3	Material Storage		90	270				
3	Teacher Planning		54	162				
	<b>Subtotal</b>		<b>900</b>	<b>2,700</b>				
3	ESE Resource Room		672	2,016				
3	Material Storage		155	465				
3	Student Storage		40	120				
	<b>Subtotal</b>		<b>867</b>	<b>2,601</b>				
	<b>TOTAL</b>			<b>7,181</b>			<b>95</b>	
	Staff Restrooms (as required by code)			218				
	Students Restrooms (as required by code)			818				
	Custodial (as required by code)			600				
2	Teacher Planning		400	800				

\*Future spaces are carried forward via Board Approved Educational Specification dated May 2001 and also includes Class Size Reduction.

Material Storage and/or Teacher Planning shall be folded into the classroom to create a classroom of 900 NSF. This will affect General Classrooms. Science Classrooms shall be 1,300 NSF with shared Material Storage.

The existing facilities will be analyzed by the project architect to determine appropriate usage of the site and buildings for necessary renovations and remodeling to meet SREF size standards, ADA requirements and other code issues.

**GENERAL CONSIDERATIONS**

Use the following documents, as a minimum, in facility design, the latest edition of the Florida Building Code (FBC) with latest revisions, the Florida Fire Prevention Code (FFPC), the SDPBC Education Specification, District Master Specification (DMS), District Design Criteria (DDC) and State Requirements for Educational Facilities (SREF)

- A. **Security** - The design shall comply with the DDC – Architectural and Civil.
- B. **Flexibility** - Consider flexibility to allow for future program changes and expansions of the school plant.
- C. **Construction Techniques** - Consider fast and economical construction consistent with long-range maintenance and flexibility requirements of a permanent school plant. Refer to the DDC - Architectural.
- D. **Heating, Ventilating and Air-Conditioning (HVAC)** – Design the system(s) in accordance with the DDC – Mechanical and the related DMS sections in Division 15.
- E. **Plumbing** - Design the system(s) in accordance with the DDC – Plumbing and the related DMS sections in Division 15.
- F. **Building Fire Protection** - Design the system(s) in accordance with the DDC – Plumbing and the related DMS sections in Division 15.
- G. **Windows** – Provide windows in accordance with the DDC - Architectural.
- H. **Floors** - Provide floors in accordance with the DDC - Architectural.
- I. **Walls** - Provide walls in accordance with the DDC - Architectural.
- J. **Roof** - Provide roofs in accordance with the DDC - Architectural
- K. **Corridors and Student Commons** - Corridor shall comply with the Florida Building Code, DDC and DMS.
- L. **Sound Treatment** - Acoustically-treated walls and ceilings shall be provided as necessary for the intended use of the space. Refer to the DDC – Architectural.
- M. **Hot Water** - Hot water shall be provided as indicated and per code. Refer to the DDC - Mechanical and Plumbing and DMS.
- N. **Lighting** - Classroom lighting shall be controlled with alternate switching of light fixtures. Provide lighting in accordance with the DDC – Electrical and DMS.
- O. **Electrical** - Provide Electrical System in accordance with the DDC – Electrical and DMS.

- P. **Student Toilets** - Soap dispensers shall be liquid type provided and installed by the contractor. Paper towel dispensers and toilet paper dispensers shall be continuous metal jumbo roll type provided and installed by the contractor. Follow the DDC – Architectural and Plumbing for locating, designing and equipping student toilet facilities.
- Q. **Entrances** – Entrance shall comply with the requirements of the DDC – Architectural.
- R. **Lockers** - Lockers shall be located in air-conditioned corridors. Refer to DMS.
- S. **Clock and Bell System** - GPS master satellite clock system (wireless) shall be utilized throughout the facility and provided and installed by the contractor. Bell system shall have automatic and manual operation.
- T. **Intercommunications System** - Provide two-way intercom system in accordance with the DDC - Electrical.
- U. **Instructional Television System** – Provide ITV system in accordance with the DDC – Electrical and DMS sections in Division 16.
- V. **Color/Finishes** - Harmonizing colors shall be used to enhance the design of the plant. The architect shall submit colors for review and approval by the SDPBC Department of Program Management. The exterior of the buildings shall use a maximum of three (3) different colors and the interior of the buildings shall use a maximum of four (4) different colors with one of the four interior colors serving as the accent color for the instructional space. Exterior materials and coatings shall be graffiti resistant and easily cleaned to the maximum extent practical. The architect shall submit finishing schedules and mill work for review and approval by the SDPBC Department of Program Management.
- W. **Display Case** - A built-in recessed display case with tackable backboard shall be located in the entrance foyer, music area and art area and media center. A built-in trophy case with tackable backboard shall be located in gymnasium and auditorium. Provide safety glass. The recessed display case shall be 6'W x 4'H and 36" off the floor.
- X. **Communications (Voice and Data)**- Provide Communication systems in accordance with the DDC - Electrical.
- Y. **Safety** - Provide safety devices in accordance with the DDC, DMS and FBC.
- Z. **Site Fire Protection** - Refer to the DDC, DMS, FBC and FFPC.
- AA. **Automobile Parking** - Provide parking in accordance with traffic control section, DDC – Architectural and Civil. Visitor parking shall be provided near the entrance to he administrative suite.
- AB. **Water Outlets** - Provide hose bibs in accordance with the DDC - Plumbing.

- AC. **Potable Water** - Systems shall be designed in accordance with the DDC – Civil and Plumbing.
- AD. **Pavement, Site Improvements** - Provide all pavement, markings, signage and other site improvements in accordance with the DDC - Civil.
- AE. **Sanitary Sewer** - Systems shall be designed in accordance with the DDC – Civil.
- AF. **Storm Water Drainage** - Systems shall be designed in accordance with the DDC - Civil.
- AG. **Irrigation Water** – System shall be designed in accordance with the DDC – Civil and SFWMD.
- AH. **Structural** - Systems shall be designed in accordance with the DDC - Structural.
- AI. **Bulletin Boards** - In addition to any bulletin boards specified in departmental specifications, there shall be located in all of the corridors and/or student common area the following: (a) for general administrative, provide eight lineal feet; (b) for student activities, eight lineal feet; (c) for general faculty, eight lineal feet; (d) for interscholastic activities, eight lineal feet; (e) for music, eight lineal feet; (f) for interdepartmental use, eight lineal feet. Bulletin (tack) boards shall not be less than 36" vertical measurement.
- AJ. **Ceiling Heights** - Ceiling height shall be in accordance with the DDC - Architectural.
- AK. **Crowd Control** - The design shall reflect good crowd control. Consideration shall be given to large groups that enter and leave the site at times of public and school events.
- AL. **Energy Conservation** - The building and its systems shall be designed in accordance with the DDC – Mechanical.
- AM. **Community School** - The general plan and campus design shall be arranged to permit and facilitate use of all appropriate school facilities by community agencies when these spaces are not in use for the regular school program. Community school considerations include ready access from parking lots to all athletic and recreational facilities, meeting rooms, music facilities, media center, cafeteria and community school coordinator's office. Offices(s) shall be located near the parking lot with adequate lighting and natural surveillance.
- AN. **Exterior Building Materials** - Major exterior building materials shall be fully documented in the design phase of project development for review and approval by the SDPBC Superintendent or his/her designee. Exterior materials and coatings shall be graffiti resistant and easily cleaned to the maximum extent practical. Refer to the DDC – Architectural.
- AO. **Instructional Technology** - Provide conduits, wiring, data outlets and receptacles for computer network requirements. Provide spaces and special air-conditioning for computer-related electronics. Refer to the DDC.

- AP. **School Site and Play Fields** - The school site and play fields shall be designed in accordance with the DDC – Architectural and Civil.
- AQ. **Working Heights** - Provide built-in equipment and furnishings in accordance with the DDC - Architectural.
- AR. **Ventilation** - Ventilation shall be designed in accordance with the DDC - Mechanical.
- AS. **Program Furniture and Equipment** - Program furniture and equipment list, in this document, is a design guide for determining space requirements and it is not intended as an ordering guide. Use existing furniture and equipment where possible.
- AT. **Natural Gas** - Refer to the DDC - Plumbing.
- AU. **Design Notebooks** - Refer to the DDC - Mechanical.
- AV. **Communications Room** - Every facility shall have one Communication Equipment Room (CER) and several Communication Closet Rooms (CCR) as necessary to comply with the DDC – Electrical and Mechanical.
- AW. The Architect/Engineer shall request a clarification from the Senior Project Administrator (SPA) of any conflicts between the Educational Specification, DDC or DMS.
- AX. For high schools, contractor to provide a lighted double sided marquee/school sign, 9'x12' in size, with adequate electrical service stubbed out for future wireless LED message area upgrades.
- AY. Refer to the DDC – electrical and DMS with regards to ceiling projectors raceway system. Contractor to provide ceiling projectors raceway system with all necessary wiring and properly supported projector mounting brackets in all instructional spaces and other designated areas. Obtain the latest detail of installation and specifications from the District's Network Services Department.
- AZ. Those high schools designed by the Emergency Operation Center will be Hurricane Shelters.
- BA. Contractor to provide and install wall mounted pencil sharpeners and flag pole holders with proper backing in all necessary areas. Contractor to provide and installed AV screens and brackets with proper backing in all necessary areas. Provide proper backing for all mounted equipment where necessary.
- BB. Each school center shall a lightning detection device.
- BC. All built-in counters shall be wire management holes (grommets) to service telephones and computer hook-ups.
- BD. When possible, the “head-in” equipment shall be located in the production room in the

**Library Media Center.** The equipment should not be located in the control room of the CCTV studio.

- BE.** Schools under modernization and/or comprehensive addition shall have the interior signage comply with the building and room numbering of the School District's guidelines. Room names and numbers on signage shall be coordinated with SDPBC Interior Design Coordinators.
- BF.** Contractor to provide a 30' high flagpole with two complete rope systems. The flagpole shall be located near the main office/administration.
- BG.** Refer to the DDC – electrical and DMS with regards to conduit and junction box for sound field enhancement system.
- BH.** Classrooms, instructional areas and other designated areas shall be equipped with built-in multimedia cabinets, provided by the contractor, for TV, LCD, DVD/VCR, and other multi-media equipment. The multimedia cabinet shall be approximately 48" in height with the capability to have a 27" TV sit on top of the cabinet. The multimedia cabinet shall include lockable doors with adjustable shelving for equipment and grommets for wire management. The cabinet shall be located on the teaching wall.

**GENERAL SECURITY CONSIDERATIONS**

- A. Meet with SDPBC Department of School Police at first stage, site and building layout development, to discuss project specific security issues.
- B. The area for loading/unloading of students shall be designed for easy supervision with no mixture of pedestrian and vehicles.
- C. Open parking areas shall have good natural surveillance. Provide a fenced staff parking area that can be locked during the day where local conditions warrant.
- D. Site access shall consist of a primary road and secondary access in the event the primary road is blocked.
- E. School sites shall have perimeter security fencing preventing access to walkways and courtyards when facility is not occupied, but allow for public use of exterior athletic facilities. Design exterior doors to prevent unauthorized entry by minimizing key locks and hardware on doors which would not be used for the purpose of essential entry but are installed for emergency egress.
  - 1. Doors which are determined to be essential entry shall be provided with key access and include card access control and hardware as per current SDPBC policy, guidelines and the project specific plan review process.
  - 2. Entire perimeter of site shall be fenced or wall barriered and gated to a minimum height of six (6) feet. Provide the delivery/receiving/service entry gates(s) with electric latching/lock hardware and all associated hardware to allow the control of it from the card access system.
  - 3. Create an interior perimeter barrier so that all open area students and staff commons and their thoroughfares, i.e. courtyards, areas between buildings, portable classrooms, PE fields, etc. are blocked from entering except through an access controlled main public entry. Create a structurally mounted set of metal entry doors in the interior perimeter barrier to become the focal point of all public entry. These doors shall be located in the entry thoroughfare between the visitor parking area and the administration reception area. At the public entry, provide card access, video surveillance; remote intercom and electric controlled lock hardware as per current SDPBC policy, guidelines and the project specific plan review process. All other egress points through this open area interior perimeter barrier shall have the same type of structurally mounted metal entry doors. No fence gates allowed.
- F. Use maze-type of entry system to restrooms where appropriate, i.e., gymnasium. Do not use maze-type of entry for exterior locations.
- G. Bicycle parking compound shall be located in an area with good natural surveillance and have an 8' fence. Provide racks to which bicycles can be locked. Should be visible from office staff or classroom windows.
- H. When designing courtyards, consider physical division of space, i.e. benches, planters,



to avoid congregation of large groups of students and to allow smooth flow of traffic. Position amenities to create multiple access and passageways. Planters shall not be placed in such a way as to allow its contents to block clear vision of common areas and courtyards. Limit the heights of all trees and shrubbery that are planted between the buildings and all thoroughfares, congregate areas, bike and auto parking spaces, courtyards, portables, entry/exit points throughout the interior perimeter barrier, playfields, etc. to not exceed three feet (3'), for a distance of fifty feet (50'). Consideration should be taken when locating landscaping to assure that it will not block lighting.

- I. Locate teacher planning areas throughout the campus to provide supervision for potential problem areas. Acceptable locations are at ends of buildings and center of hallways.
- J. Provide zoned lighting to allow for security during community school activities at night. Consider use of motion detector lights in isolated areas.
- K. Design roofs without obstructions that could conceal persons from view. Roof access shall be properly secured and lockable.
- L. Provide two (2) KNOX Box for emergency key access to the site and buildings(s), one for school police and one for the fire department. Coordinate with local fire department and district personnel.

**SITE DEVELOPMENT**

- A. All site plans shall comply with SDPBC Technical Requirements Manual for Site Plans.
- B. Refer to the District Design Criteria (DDC).
- C. Landscaping plan shall contribute to the development of a balanced and harmonious appearance of the educational complex. Landscaping shall be based on surveys of existing plants on the site and a palette of species of plants native to the vicinity. Plantings shall be site specific with special consideration given to minimizing supplemental irrigation systems, energy efficiency and maintainability of the designed vegetation systems, from installation to maturity. Supplemental irrigation systems to be used shall provide for total coverage of landscape areas. Where practical, minimum plant sizes and maximum spacing shall be used. Landscaping shall be in compliance with State Requirements for Educational Facilities Guidelines.

**TRAFFIC CONTROL**

The following traffic related activities occur on the school site:

1. Approximately, 30 school buses will enter and exit the site at the beginning and end of each school day.
2. Approximately, 270 staff will enter and exit the site daily.
3. Service and visitor vehicles will enter and exit the site daily.
4. Private vehicles of spectators attending extra curricular activities will enter and exit the site periodically.

Proper signage should be included to delineate each area. Signage and bumpers for parking spaces shall be provided by the contractor.

Specific consideration shall be given to the following:

1. Parking spaces shall be conveniently located for approximately (235) staff, (565) students, (25) visitors and (40) service personnel. Ten of these to be convenient to kitchen. Parking locations shall be located on-site and/or off-site.
2. Visitor parking shall be provided near the administrative suite and will naturally lead to the administrative suite reception entry.
3. A fenced parking area with lockable gates for bicycles shall be provided.
4. Student pedestrian traffic to play fields shall not cross any vehicular traffic area.
5. Refer to **District Design Criteria (DDC)**.

**CUSTODIAL**

**I. PROGRAM PHILOSOPHY**

Staff and students can expect a clean healthful environment in which to teach and learn. A properly organized and trained custodial staff has the ability to ensure the sanitation and regular cleaning of any facility, if their cleaning program is supported through the cooperation of the entire staff and student body. Custodians are allocated based on the size of the school (square feet) in sufficient numbers to maintain the cleanliness of the facility and care must be exercised that cleaning is their primary function. Redirection of the custodial staff to non-cleaning functions can severely impact the cleanliness of the facility. Staff and students help ensure the success of a custodial program through avoiding abuse of the facility. Our investment in school facilities is protected by initial provision and utilization of sufficient, effective equipment and personnel.

**II. PROGRAM GOALS**

To provide a safe, sanitary and aesthetically acceptable learning and work environment through proper utilization of human resources, material, equipment and methods.

**III. PROGRAM ACTIVITIES**

- A. Prepare and maintain adherence to work schedules to ensure regular, daily cleaning of the entire facility in accordance with "Instructional Handbook for Custodians."
- B. Maintain personal use facilities (restrooms, water fountains, shower rooms, sinks) in clean and sanitary condition to minimum standards of State Requirements for Educational Facilities (S.R.E.F.) regulations and in accordance with the "Instructional Handbook for Custodians."
- C. Assure that school grounds are kept free of litter and safety hazards.
- D. Report all hazardous conditions immediately.
- E. Observe and adhere to all safety and fire regulations regarding storage of material and maintenance and use of equipment.
- F. Maintain security of buildings during non-school hours.
- G. Report any items in facility in need of repair.
- H. Maintain custodial equipment so that it is clean and usable at all times.
- I. Use only authorized materials, methods and equipment to accomplish program goals.
- J. Maintain orderly storage and running inventory of custodial supplies and reorder as necessary for timely replacement.
- K. Attend training classes as provided.

**IV. ORGANIZATIONAL NOMENCLATURE**

Number of custodial staff determined as a function of Budget Department.

**V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES**

Personnel - Desired trend is to employ more competent custodians with better organized work schedules, in-service training and supervision. Total staff shall be able to read and write and must be able to communicate in English. Custodial foreperson must have demonstrated ability to perform in accordance with all requirements of the position.

**VI. JUSTIFICATION FOR VARIANCE FROM STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (S.R.E.F.)**

N/A.

**VII. PROGRAM FACILITIES LIST**

Spaces	Description	Proposed		Proposed	
		Sq. Ft. Per Unit	Sq. Ft. Total	Stu. Sta. Unit	Stu. Sta. Total
<b>FACILITIES LIST DUE TO ACADEMY/ADDITION</b>					
	Custodial (as required by code)		176		
<b>FACILITIES LIST DUE TO SCIENCE ADDITION</b>					
	Custodial (as required by code)		358		
<b>FACILITIES LIST DUE TO FUTURE CLASSROOMS (BUILD-OUT)</b>					
	Custodial (as required by code)		600		

**VIII. PROGRAM FURNITURE AND EQUIPMENT**

**A. Service Closet (per closet)**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1	X		Service sink, floor mounted (HW/CW).
1		X	Service Cart
	X		Built-ins (refer to special considerations)

**IX. SPECIAL CONSIDERATIONS - CONTRACTOR PROVIDED**

Refer to GENERAL CONSIDERATIONS, GENERAL SECURITY CONSIDERATIONS AND TRAFFIC CONTROL.

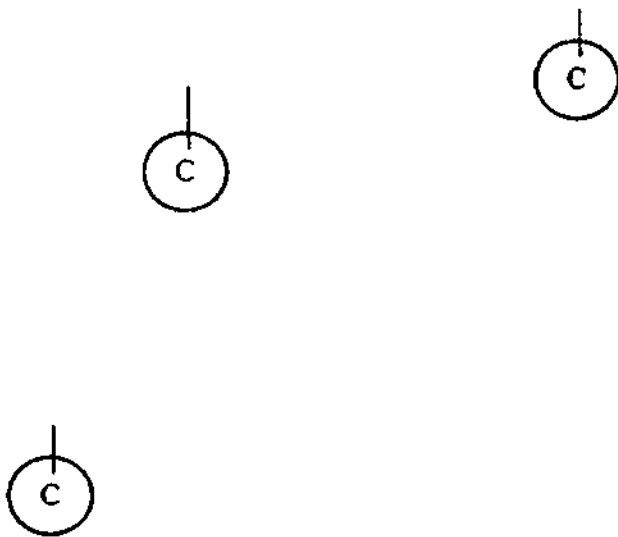
**A. Heating/Cooling/Ventilation** - As required to meet District Standards.

**B. Acoustical** - As required to meet District Standards.

- C. **Floor** - As required to meet District Standards.
- D. **Walls** - As required to meet District Standards. One third of central receiving shall be partitioned with wire mesh for security storage.
- E. **Ceiling** - As required to meet District Standards.
- F. **Lighting** - As required to meet District Standards. Provide explosion proof in flammable storage.
- G. **Windows** - N/A
- H. **Doors** - As required to meet District Standards.
- I. **Water/Plumbing Fixtures** - As required to meet District Standards.
- J. **Communications** - As required to meet District Standards.
- K. **Electrical** - As required to meet District Standards
- L. **Instructional Technology** - As required to meet District Standards.
- M. **Gas and Air** - As required to meet District Standards.
- N. **Safety** – As required to meet District Standards.
- O. **Fencing** - As required to meet District.
- P. **Service Drives** - N/A.
- Q. **Parking** - N/A.
- R. **Built-ins** -
  - 1. **Service Closets** – Provide adjustable, 12"D, steel shelving, on one wall, mid-wall to ceiling.
- S. **Other Considerations**  
N/A

SPATIAL RELATIONSHIPS

Custodial



C = Closets, per SREF

Not all spaces are shown

**RESTROOMS**

Provide public restrooms, student restrooms and staff restrooms as required by code.

Spaces	Description	Proposed		Proposed	
		Sq. Ft. Per Unit	Sq. Ft. Total	Stu. Sta. Unit	Stu. Sta. Total
<b>FACILITIES LIST DUE TO ACADEMY ADDITION</b>					
	Staff Restrooms (as required by code)		64		
	Students Restrooms (as required by code)		240		
<b>FACILITIES LIST DUE TO SCIENCE ADDITION</b>					
	Staff Restrooms (as required by code)		130		
	Students Restrooms (as required by code)		488		
<b>FACILITIES LIST DUE TO FUTURE CLASSROOMS (BUILD-OUT)</b>					
	Staff Restrooms (as required by code)		218		
	Students Restrooms (as required by code)		818		

Although square footage allocation is per SREF, accommodations for size of spaces and numbers of spaces must be made for F.A.C.B.C. and parity.



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TEACHER PLANNING

**I. PROGRAM PHILOSOPHY**

Refer to overall. (Page 1)

**II. PROGRAM GOALS**

The goal is to provide teachers and staff with a comfortable and restful environment in which to mentally and physically relax during non-duty periods.

**III. PROGRAM ACTIVITIES**

The teacher planning areas shall provide spaces for the social and emotional development of teachers and staff. It also provides the opportunity for small group meetings and planning.

**IV. ORGANIZATIONAL NOMENCLATURE**

During the course of the day staff members will use the facilities. The number of people, at any one time, will vary.

**V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES - N/A**

**VI. JUSTIFICATION FOR VARIANCE FROM SREF REQUIREMENTS**

N/A

**VII. PROGRAM FACILITIES LIST**

Spaces	Description	Proposed		Proposed	
		Sq. Ft. Per Unit	Sq. Ft. Total	Stu. Sta. Unit	Stu. Stat. Total
<b>FACILITIES LIST DUE TO ACADEMY ADDITION</b>					
	Teacher Planning		400		
<b>FACILITIES LIST DUE TO SCIENCE ADDITION</b>					
	Teacher Planning		400		
<b>FACILITIES LIST DUE TO FUTURE CLASSROOMS (BUILD-OUT)</b>					
2	Teacher Planning	400	800		

**VIII. PROGRAM FURNITURE AND EQUIPMENT**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
		X	Vending machine(s)
1		X	Copier
		X	Computers
		X	Printers
1	X		Tack board, 4' x 6'
1	X		Clock, battery
1		X	Activity Table
	X		Built-ins (refer to special considerations)
1	X		Mirror & vanity in staff restroom

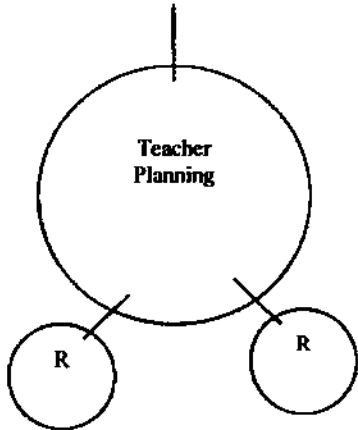
**IX. SPECIAL CONSIDERATIONS - CONTRACTOR PROVIDED**

Refer to GENERAL CONSIDERATIONS, GENERAL SECURITY CONSIDERATIONS AND TRAFFIC CONTROL.

- A. Heating/Cooling/Ventilation - As required to meet District Standards.
- B. Acoustical - As required to meet District Standards.
- C. Floor - As required to meet District Standards.
- D. Walls - As required to meet District Standards.
- E. Ceiling - As required to meet District Standards.
- F. Lighting - As required to meet District Standards.
- G. Windows - As required to meet District Standards.
- H. Doors - As required to meet District Standards.
- I. Plumbing Fixtures/Water - As required to meet District Standards.
- J. Communications - As required to meet District Standards.
- K. Electrical - As required to meet District Standards.
- L. Instructional Technology - As required to meet District Standards.
- M. Gas and Air - As required to meet District Standards.
- N. Safety - As required to meet District Standards.

- O. **Fencing** - As required to meet District Standards.
- P. **Service Drives** - As required to meet District Standards.
- Q. **Parking** - As required to meet District Standards.
- P. **Built-ins** -
  - 1. Provide mirror and shelf over sinks.
  - 2. Full-length mirror in restroom.
  - 3. Provide teacher carrels with pedestal to accommodate ten (10) teachers with computer and printer. Provide lockable upper cabinets above teacher carrels. The teacher carrels shall have grommets for wire management.
  - 4. Teacher Planning shall be located next to the Satellite Administrative Suites.

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**SPATIAL RELATIONSHIPS**  
**Teacher Planning**



R = Restrooms, Staff

**RETAIL/FINANCE/BUSINESS EDUCATION - CAREER EDUCATION**

**I. PROGRAM PHILOSOPHY**

Business Technology Education in Palm Beach County will prepare individuals for occupations in the following clusters:

- X Accounting Operations - Finance
- X Business Supervision and Management - Retail
- X Computer Technology - Information Technology
- X Office Support Services - Business

Emphasis will be placed on ethical conduct and effective communication skills which are needed to function as an effective employee and leader in the American business system. Upon reaching various Occupational Completion Points, a well-trained business education student will have gained the necessary skills to secure employment in the chosen field of study via internship or permanent placement.

**PROGRAM DESCRIPTION**

Business Technology Education is a group of planned, specialized instructional programs structured to prepare students to enter, to advance, and to refine prescribed competencies requisite for employment in a cluster of business occupations or in a specific occupation chosen as a career objective.

Future Business Leaders of America (FBLA) is the appropriate vocational student organization for providing leadership learning experiences and for reinforcing the skills that are taught in Business Technology Education.

**II. PROGRAM GOALS**

The overall goal of the Business Technology Education program is to focus on broad, transferable skills that stress understanding and demonstration of the following elements of the workplace: planning; management; finance; technical and production skills; underlying principles of technology; labor issues; community issues; and health, safety, and environmental issues. Cluster goals are as follows:

- A. **Accounting Cluster** - The goal of this cluster is to prepare students for employment as General Office Clerk, Accounting Clerk, and Bookkeeper. The accounting cluster is comprised of one program - **Accounting Operations**. This program offers a broad function of knowledge and skills expanding the traditional role of Bookkeeper. The content of the program includes double-entry accounting principles; methods of recording business transactions; preparation and analysis of various documents and financial statements; payroll records and tax forms; accounting control systems; account and transactions analysis; inventory methods; the aging process; depreciation; and the application of accounting principles to various entities.

- B. **Business Supervision and Management Cluster** - The purpose of this cluster is to prepare students for employment as General Office Clerk, Supervisor/Manager Trainee, and Supervisor. Two programs make up this cluster - Business Supervision and Management and the Academy of International Business.

The content of the Business Supervision and Management program includes communication skills, forms of business ownership and organizational structures, supervisory/management functions and skills, business law concepts, leadership skills, business ethics, cultural diversity, insurance awareness, governmental regulations, human resources management issues, and career development.

The content of the Academy of International Business program includes the concept of a global economy with attention given to economic, cultural, and political factors affecting international business. Also, the study of organizational structures, business management, entrepreneurship, human relations, cross-cultural communications, leadership, marketing, legal agreements, trade relations, banking and finance, and international economics will be addressed.

- C. **Computer/Information Technology Cluster** - The purpose of this cluster is to prepare students for employment as General Office Clerk, Computer Programming Aide, Junior Programmer, Network Support Help Desk Technician, Software Support Help Desk Technician, Network Support Specialist, PC Support Specialist, Network Administrator, Computer Graphics Designer, Associate Web Designer, Multimedia Designer, Web Designer, and Web Master. The Computer Technology cluster is made of five programs - Business Computer Programming, Network Support Services, PC Support Services, Digital Publishing, and Web/Internet/Intranet Services.

Business Computer Programming offers a broad foundation of knowledge and skills expanding the traditional role of the Junior Programmer. The content includes converting problems into detailed plans; writing code into computer language; testing, monitoring, debugging, documenting, and maintaining computer programs; and designing programs for specific uses and machines.

Network Support Services offers a broad foundation of knowledge and skills to prepare students for employment in network support services positions. The content of the program includes instruction in computer literacy; software application support; basic hardware configuration and troubleshooting; networking technologies, troubleshooting, security, and administration; and customer service and human relations skills.

PC Support Services offers a broad foundation of knowledge and skills to prepare students for employment in PC support services positions. The content includes software applications and operating systems including the use of advanced software/system features and programs; electronic communication via the Internet; Web page components; computer networking and network administration; the interrelationships among major components of networks; hardware and software selection and installation; integration techniques to enhance projects; and preventative hardware maintenance.

Digital Publishing offers a broad foundation of knowledge and skills to prepare students for employment in digital publishing positions. The content includes enhance practical experiences in computer generated art and text, graphic design, graphic production electronic design skill preparation of electronic layouts and illustrations, and electronic scanning; and development of specialized skills in multimedia presentations to include producing compact disks featuring a company=s advertising and/or communication.

Web/Internet/Intranet Services offers a broad foundation of knowledge and skills to prepare students for employment in Web/Internet/Intranet services positions. The content includes Operating System commands and Web document development, design, scripting, programming, networking, and management.

- D. Office Support Services - The purpose of this cluster is to prepare students for employment as General Office Clerk, Customer Care Representative, Customer Care Specialist, Administrative Assistant, Secretary, Legal Secretary, and Medical Secretary. The Office Support Services cluster is made up of five programs - Customer Assistance, Administrative Assistant, Court Reporting, Legal Secretary, and Medical Secretary.

The Customer Assistance program offers a broad foundation of knowledge and skills to prepare students for employment in positions in customer care service positions. The content includes the development of interpersonal communications, conflict resolution, leadership, decision making, problem solving, supervisory, and employability skills; diversity awareness; telephone techniques; and technical applications in customer care environment.

The Administrative Assistant program offers a broad foundation of knowledge and skills expanding the traditional role of the Administrative Assistant. The content includes the use of technology to develop communications skills, higher level thinking skills, and decision making skills; the performance of office procedures tasks; the production of quality work in a efficient manner using advanced features of business software applications; research of job opportunities; and the production of high quality employment portfolios and job-seeking documents.

Although Court Reporting is a part of the Office Support Service cluster, at the present time, it is only being offered on the post-secondary level.

The content of the Legal Secretary program includes the use of technology to develop communications skills, higher level thinking skills, and decision making skills; legal terminology; the performance of office procedures specific to the legal environment; transcription of legal documents from machine dictation; the production of quality work in an efficient manner using advanced features of business software applications, research of job opportunities; and the production of high quality employments portfolios and job-seeking documents.

The content of the Medical Secretary program includes the use of technology to develop communications skills, higher level thinking skills, and decision making skills; medical terminology; the performance of office procedures specific to the

medical environment; transcription of medical documents from machine dictation; the production of quality work in an efficient manner using advanced features of business software applications, research of job opportunities; and the production of high quality employment portfolios and job-seeking documents.

### III. PROGRAM ACTIVITIES

All students in the business education area are in grades nine through twelve, including special needs students. Instruction and learning activities will be provided in a laboratory setting that is reflective of a typical business environment. This is an overview of each cluster and is not inclusive of all activities that are required for successful completion of a cluster.

- A. **Accounting Cluster** - Performance of the following activities is included in this area: touch keyboarding; use of spreadsheet and accounting software; communicating via listening, speaking, writing, electronic, and nonverbal methods; discussion of workplace issues such as appropriate grooming, human relations, and time management; mathematical computation and financial assessment with and without machines as it relates to bookkeeping/accounting; and analyzing personal strengths and weaknesses as they relate to career exploration and personal development. In addition, the student will develop the following skills: filing and record management, scheduling, reprographics, and mail handling. Furthermore, the student will participate in work-based learning experiences.
  
- B. **Business Supervision and Management Cluster** - Performance of the following activities is included in this area: touch keyboarding; use of information systems to enhance workplace performance; communicating via listening, speaking, writing, electronic, and nonverbal methods; use of technology to enhance the effectiveness of communications; use of information to set priorities and complete tasks; analyze current and emerging workplace trends and issues to determine impact on the workplace; develop awareness of management functions and organizational structures; practice quality performance; incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of ethics to accomplish job objectives; mathematical computation and financial assessment with and without machines; justify the need to gain and maintain competitive advantage; perform human relations activities; analyze the impact and relationship of government regulations and community involvement; and analyzing personal strengths and weakness as they relate to career exploration and personal development. In addition, the student will develop the following skills: filing and record management, scheduling, reprographics, and mail handling. Furthermore, the student will participate in work-based learning experiences.
  
- C. **Computer Technology Cluster** - Performance of the following activities included in this area: touch keyboarding; communicating via listening, speaking, writing, electronic, and nonverbal methods; use of technology to enhance the effectiveness of communications; use of information to set priorities and complete tasks; perform end user support and assistance by troubleshooting and diagnosing through telephone, e-mail, remote access, or direct contact; perform installation and configuration activities; use of computer networks, system software, and application software proficiently; perform digital publishing operations, digital imaging, programming tasks, and HTML.



programming proficiently; mathematical computation and financial assessment with and without machines; and analyzing personal strengths and weakness as they relate to career exploration and personal development. In addition, the student will develop the following skills: filing and record management, scheduling, reprographics, and mail handling. Furthermore, the student will participate in work-based learning experiences.

- D. **Office Support Services** - touch keyboarding; use of information systems to enhance workplace performance; communicating via listening, speaking, writing, electronic, and nonverbal methods; use of technology to enhance the effectiveness of communications; use of information to set priorities and complete tasks; analyze current and emerging workplace trends and issues to determine impact on the workplace; develop awareness of management functions and organizational structures; practice quality performance; incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of ethics to accomplish job objectives; mathematical computation and financial assessment with and without machines; gain knowledge of medical and legal terminology; develop telephone skills and techniques; perform relevant research on the Internet; and analyzing personal strengths and weakness as they relate to career exploration and personal development. In addition, the student will develop the following skills: filing and record management, scheduling, reprographics, and mail handling. Furthermore, the student will participate in work-based learning experiences.

#### IV. ORGANIZATIONAL NOMENCLATURE

Teacher - Student Ratio 1:20

Grade Levels for Which Program is Intended 9 - 12

#### V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES

- A. Every business, international and domestic, is dependent upon computers for completing day-to-day activities. If business technology education is to successfully prepare students to enter the workforce at one point in time, it is absolutely necessary that each lab be equipped with a minimum of 38 multi-media computers and peripherals such as laser printers, scanners, plotters, projection panels, digital to analog convertors for the television/computer connection, 30 inch monitor, and laser disc players.
- B. All clusters will employ the cooperative method of instruction.
- C. Every business technology education department should have a server that will necessitate the networking of the business technology education labs. This will allow facilitators to maintain control over student workstations, deliver instructions and assist individual students remotely, as well as perform assessments in a non-traditional manner. If desired by the school site, this network should have a pass through to the main server so that the media center and the school wide e-mail can be accessed by students. This pass through will also allow facilitators to gain access to teacher tools that are on the main server.
- D. Every business technology education lab should be wired to support a lab of 38 multi-media computers. The appropriate wiring consists of CAT (latest version) data

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cabling, electrical outlets, and electronics. This will allow for easy access to the Internet.

**VI. JUSTIFICATION FOR VARIANCE FROM STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (S.R.E.F.)**

A. Business Cooperative Education (BCE) office shall be housed in project storage and is needed for the coordinator of the On-the-Job Training Program.

**VII. PROGRAM FACILITIES LIST**

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft. Per Unit	Sq. Ft. Total	Sq. Ft.	Stu. Sta. Unit	Stu. Stat. Total	Student Stations
			<b>FACILITY/LIST/DUE TO/ACADEMY/PROGRAMS</b>					
<b>Business Administration/Finance/Retail</b>								
1	Accounting (Existing Bldg 4)	1,460			960			13
1	Material Storage	155			93			
1	Project Storage	150						
	<b>Subtotal</b>	<b>1,765</b>			<b>1,053</b>			
<b>Business Supervision (Existing Bldg 5)</b>								
1	Business Supervision (Existing Bldg 5)	1,460			1,509			20
1	Material Storage	155			240			
1	Project Storage	150						
	<b>Subtotal</b>	<b>1,765</b>			<b>1,749</b>			
<b>Administrative Assistant (Existing Bldg 5)</b>								
1	Administrative Assistant (Existing Bldg 5)	1,460			1,472			20
1	Material Storage	155			104			
1	Project Storage	150						
1	General School Space				302			
	<b>Subtotal</b>	<b>1,765</b>			<b>1,878</b>			
<b>Digital Design (Existing Bldg 5)</b>								
1	Digital Design (Existing Bldg 5)	1,460			1,467			20
1	Material Storage	155			219			
1	Project Storage	150						
	<b>Subtotal</b>	<b>1,765</b>			<b>1,686</b>			
	<b>TOTAL</b>				<b>6,366</b>			<b>73</b>

## VIII. PROGRAM FURNITURE AND EQUIPMENT

A. Office Support Services Laboratory/Administrative Assistant

No. of Items	Contractor Provided	District Provided (FF&E)	Description
20		X	Student Tables, 30"D x 48"W x 27"H, with CPU Tower Holder and wire management
25		X	Student Chair, pneumatic lift, tilt, caster base, armless
1		X	Teacher desk, 60° Arc Stations (3) with riser shelves (2), drawer pedestal (2), pull-out keyboard and CPU holder
1		X	Teacher chair with executive chair back 20"W x 19"D, tilt with lock, pneumatic lift, arms, and five-star wide base with hooded casters
1		X	Side chair for teacher desk, no casters
20		X	Multi-media computer workstation with wire management to include the latest computer equipment
1		X	Multi-media computer workstation with wire management to include the latest computer equipment for teacher
1		X	Various software
20			Transcribing machine, foot pedal, mini-plug headphones, cassette
1		X	Dictating/transcribing machine, foot pedal, mini-plug headphones, cassette, microphone
2		X	Inkjet Color Printer
3		X	Laser printer
1		X	Scanner, color, full page, table top, with OCR editing software, cable
4		X	Mobile printer stands
1		X	Computer Projection devices
1		X	Color monitor/receiver -- 30" color video monitor/receiver with TV/VCR remote, cable and stand
1		X	Video Cassette Recorder
1		X	Laser Disc Player/DVD
20		X	Financial calculator with memory, both display and print
2		X	Vertical File, four drawer, legal, lateral, with lock
1		X	Table, 72" x 30", laminated top, adjustable
1		X	Paper cutter, small
2		X	Stapler electric
1		X	3-hole Puncher, electric
1		X	Pencil sharpener, electric
1		X	Lectern with shelf, 23" x 12 1/2" x 44"
1		X	Magazine Rack, 42" x 18" x 60"
1		X	Multi-media cabinets with 6" deep drawers
1		X	Paper shredder
1	X		6' x 8' Video Format Screen with black masking borders
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
2	X		Marker board, 4' x 16', with map rail and flag holder
2	X		Tack Board, 4' x 4'
1	X		Pencil sharpener with proper backing
2	X		Hanging fixtures for charts in front of room
1	X		Security mirror
1	X		Clock, battery

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

**B. Computer Technology Laboratory/Digital Design**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
20		X	Student Tables, 30"D x 48"W x 27"H, with CPU Tower Holder and wire management
25		X	Student Chair, pneumatic lift, tilt, caster base, armless
1		X	Teacher desk, 60° Arc Stations (3) with riser shelves (2), drawer pedestal (2), pull-out keyboard and CPU holder
1		X	Teacher chair with executive chair back 20"W x 19"D, tilt with lock, pneumatic lift, arms, and five-star wide base with hooded casters
1		X	Side chair for teacher desk, no casters
20		X	Multi-media computer workstation with wire management to include the latest computer equipment
1		X	Multi-media computer workstation with wire management to include the latest computer equipment for teacher
1		X	Various software
1		X	Compact disk recorder
2		X	Inkjet Color Printer
3		X	Laser printer
1		X	Scanner, color, full page, table top, with OCR editing software, cable
4		X	Mobile printer stands
1		X	Computer Projection devices
1		X	Color monitor/receiver -- 30" color video monitor/receiver with TV/VCR remote, cable and stand
1		X	Video Cassette Recorder
1		X	Laser Disc Player/DVD
2		X	Digital camera
2		X	Vertical File, four drawer, legal, lateral, with lock
4		X	Table, 72" x 30", laminated top, adjustable
1		X	Paper cutter, small
2		X	Stapler electric
1		X	3-hole Puncher, electric
1		X	Pencil sharpener, electric
1		X	Lectern with shelf, 23" x 12 1/2" x 44"
1		X	Magazine Rack, 42" x 18" x 60"
1		X	Multi-media cabinets with 6" deep drawers
1		X	Paper shredder
4-6		X	Worktables
1	X		6' x 8' Video Format Screen with black masking borders
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
2	X		Marker board, 4' x 16', with map rail and flag holder
2	X		Tack Board, 4' x 4'
1	X		Pencil sharpener with proper backing
2	X		Hanging fixtures for charts in front of room

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1	X		Security mirror
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

**C. Accounting Operations/Business Supervision & Management Laboratory**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
20		X	Student Tables, 30"D x 48"W x 27"H, with CPU Tower Holder and wire management
25		X	Student Chair, pneumatic lift, tilt, caster base, armless
1		X	Teacher desk, 60° Arc Stations (3) with riser shelves (2), drawer pedestal (2), pull-out keyboard and CPU holder
1		X	Teacher chair with executive chair back 20"W x 19"D, tilt with lock, pneumatic lift, arms, and five-star wide base with hooded casters
1		X	Side chair for teacher desk, no casters
25		X	Multi-media computer workstation with wire management to include the latest computer equipment
1		X	Multi-media computer workstation with wire management to include the latest computer equipment for teacher
20		X	Computers
1		X	Network File Server
1		X	Various software
1		X	Compact disk recorder
2		X	Inkjet Color Printer
3		X	Laser printer
1		X	Scanner, color, full page, table top, with OCR editing software, cable
4		X	Mobile printer stands
1		X	Computer Projection devices
1		X	Color monitor/receiver -- 30" color video monitor/receiver with TV/VCR remote, cable and stand
1		X	Video Cassette Recorder
1		X	Laser Disc Player/DVD
20		X	Financial calculator with memory, both display and print
2		X	Vertical File, four drawer, legal, lateral, with lock
4		X	Table, 72" x 30", laminated top, adjustable
1		X	Paper cutter, small
2		X	Stapler electric
1		X	3-hole Puncher, electric
1		X	Pencil sharpener, electric
1		X	Lectern with shelf, 23" x 12 1/2" x 44"
1		X	Magazine Rack, 42" x 18" x 60"
1		X	Multi-media cabinets with 6" deep drawers
1		X	Paper shredder
1	X		6' x 8' Video Format Screen with black masking borders
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
2	X		Marker board, 4' x 16', with map rail and flag holder

No. of Items	Contractor Provided	District Provided (FF&E)	Description
2	X		Tack Board, 4' x 4'
1	X		Pencil sharpener with proper backing
2	X		Hanging fixtures for charts in front of room
1	X		Security mirror
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

Consult with SDPBC Program Management (Construction Liaison at-large) for additional Furniture, Fixtures and Equipment.

#### IX. SPECIAL CONSIDERATIONS - CONTRACTOR PROVIDED

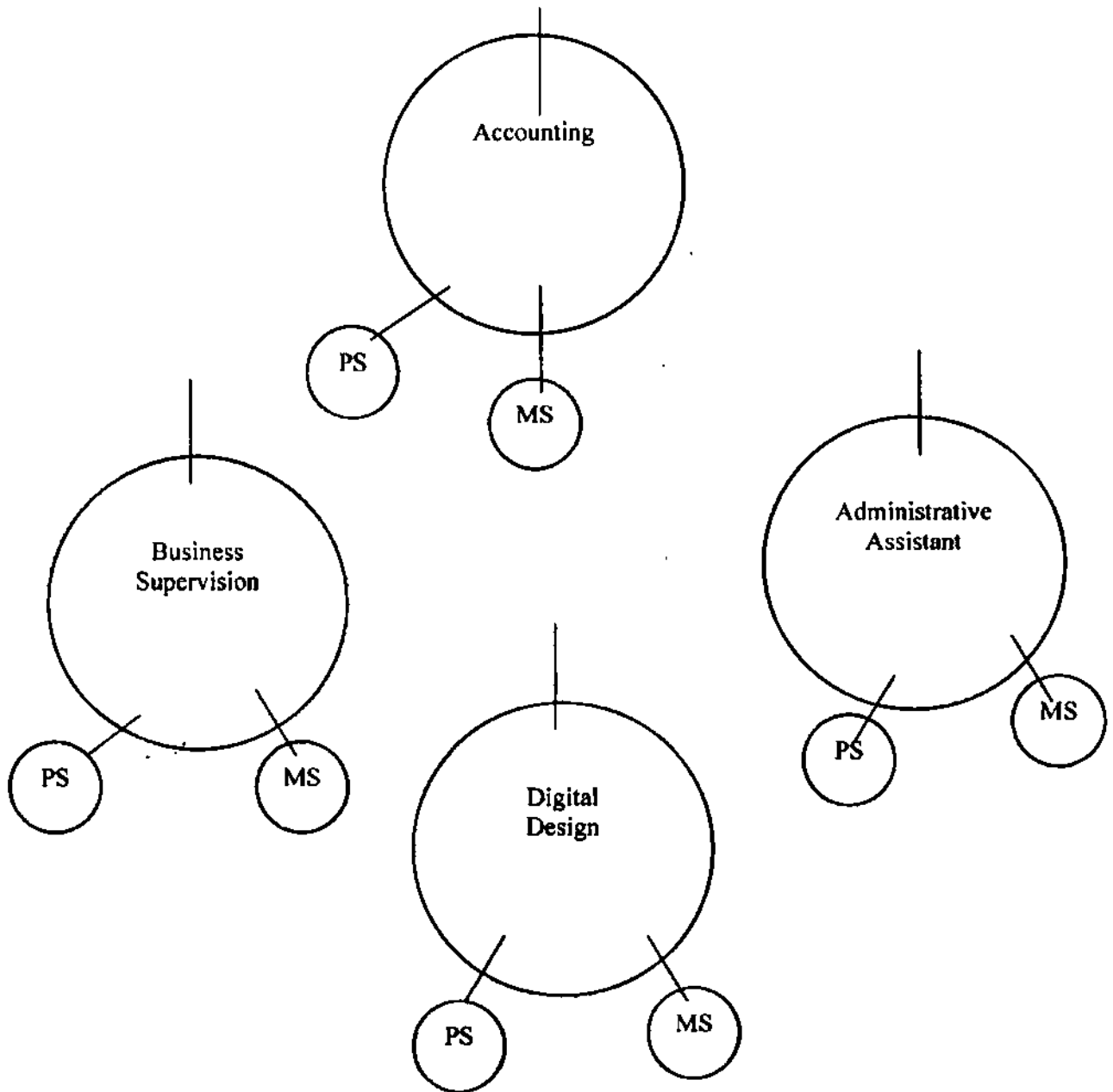
Refer to GENERAL CONSIDERATIONS, GENERAL SECURITY CONSIDERATIONS AND TRAFFIC CONTROL.

- A. Heating/Cooling/Ventilation - As required to meet District Standards.
- B. Acoustical - As required to meet District Standards.
- C. Floor - As required to meet District Standards.
- D. Walls - As required to meet District Standards.
- E. Ceiling - As required to meet District Standards.
- F. Lighting - As required to meet District Standards.
- G. Windows - As required to meet District Standards. All business-related areas shall face to the interior of the campus or be on the second floor to reduce risk of theft. Window panes shall be narrow enough to prevent entry and shall be tinted and equipped with closable, dark shades so that reflection on computer screens may be controlled. Provide observation window between BCE office and laboratory.
- H. Doors - As required to meet District Standards.
- I. Water/Plumbing Fixtures - As required to meet District Standards.
- J. Communications - As required to meet District Standards. Provide phone jack in BCE Office.
- K. Electrical - As required to meet District Standards. Maximum utilization of walls for duplex outlets, but no less than three duplex outlets on each wall, and ceiling wiring (location to be determined later) in all instructional areas. Must be equipped with a master toggle switch (with red light power indicator) to control current into the adjacent classroom.
- L. Instructional Technology - As required to meet District Standards.

- M. **Gas and Air** - As required to meet District Standards.
- N. **Safety** - As required to meet District Standards. Security mirrors for student observation shall be installed in every lab.
- O. **Fencing** - As required to meet District Standards.
- P. **Service Drives** - As required to meet District Standards.
- Q. **Parking** - As required to meet District Standards. It is desirable that the business education area be located in close proximity to student parking because of its heavy population in evening and community programs.
- R. **Built-ins**
  - 1. Provide base cabinet with doors, lockable and adjustable shelves, 34"H, and upper cabinets with doors, lockable and adjustable shelves.
  - 2. Provide built-in bookcase, 5'L x 15"D x 40"H with adjustable shelves.
  - 3. Provide TV/Multimedia cabinet, approximately 48" in height with the TV monitor sitting on top of the cabinet. The TV/Multimedia cabinet shall include lockable doors with adjustable shelving for multimedia equipment. The TV/Multimedia cabinet shall also have grommets for wire management. The TV/Multimedia cabinet shall be located along or near the teaching wall
- S. **Other Considerations** - The business technology education areas shall be located near all other vocational areas.

**SPATIAL RELATIONSHIPS**

**Retail/Finance/Business Education**



MS = Material Storage  
PS = Project Storage (1 PS in cluster shall be used as BCE office)



**INFORMATION TECHNOLOGY - CAREER EDUCATION**

**I. PROGRAM PHILOSOPHY**

All students shall have the opportunity to gain working knowledge of capabilities, applications, entry level skills in networking, web and computer equipment and social impact of computer technology. As our technology increases more rapidly, it is important for a person to adapt to this changing technology, therefore necessitating a flexible training environment with the potential for growth and change.

**II. PROGRAM GOALS**

Students will have an opportunity to:

- A. Gain a working knowledge of computer applications and their limitations
- B. Investigate computer-related careers and master necessary skills
- C. Develop problem solving skills for all areas of computer uses
- D. Acquire a desire for optimum development in computer education
- E. Be creatively challenged commensurate with ability.

**III. PROGRAM ACTIVITIES**

The following courses will be taught in Computer Laboratory:

- A. Business System and Technology
- B. PC Support 1-6
- C. Networking 1-6
- D. Web Design 1-6
- E. Directed Independent Study

**IV. ORGANIZATIONAL NOMENCLATURE**

Teacher - Student Ratio 1:20

Grade Levels for Which Program is Intended 9 - 12

**V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES**

- A. Think tank exercises with developmental opportunities. Simulation of network and internet service provider operations.

**VI. JUSTIFICATION FOR VARIANCE FROM STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (S.R.E.F.)**

- A. Combine two material storage into one larger space.

**VIII. PROGRAM FACILITIES LIST**

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft. Per Unit	Sq. Ft. Total	Sq. Ft.	Stu. Sta. Unit	Stu. Stat. Total	Student Stations
			<b>FACILITY LIST DUB TO ACADEMY PROGRAMS</b>					
<b>Information Technology</b>								
3	Computer Labs		1,460	4,380		20	60	
3	Material Storage		155	465				
3	Project Storage		150	450				
<b>TOTAL</b>				<b>5,295</b>			<b>60</b>	

**VIII. PROGRAM FURNITURE AND EQUIPMENT**

**A. Laboratory**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
20		X	Computer workstation with wire management
1		X	Teacher computer workstation and chair
1		X	File cabinet, four-drawer, legal, lateral, lockable
1		X	Table, 30" x 72"
1		X	Bookcase
25		X	Chairs
1		X	Lectern
1		X	Stool
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
2	X		Marker board, 4' x 16', with map rails and flag holder
2	X		Tack Board, 4' x 4'
1	X		6' x 8' Video Format Screen with black masking borders
20		X	Computers
4		X	Printers
2		X	Scanner
2		X	CD Burner
2		X	Multimedia computer stand
1		X	Multimedia stand to hold LCD projector, computer, keyboard with lockable storage
4		X	Computer wall unit
2		X	Heavy equipment worktables with stools
1		X	Network wall with lockable drawers
2		X	Computer racks on wheels with locks
1	X		Pencil sharpener with proper backing
1	X		Single sink with HW & CW
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

Consult with SDPBC Program Management (Construction Liaison at-large) for additional Furniture, Fixtures and Equipment.

IX. SPECIAL CONSIDERATIONS - CONTRACTOR PROVIDED

Refer to GENERAL CONSIDERATIONS, GENERAL SECURITY CONSIDERATIONS AND TRAFFIC CONTROL.

- A. Heating/Cooling/Ventilation – As required to meet District Standards.
- B. Acoustical - As required to meet District Standards.
- C. Floor - As required to meet District Standards.
- D. Walls - As required to meet District Standards.
- E. Ceiling - As required to meet District Standards.
- F. Lighting - As required to meet District Standards.
- G. Windows - As required to meet District Standards. Provide observation windows between material storage and laboratory.
- H. Doors - As required to meet District Standards.
- I. Water/Plumbing Fixtures - As required to meet District Standards.
- J. Communications - As required to meet District Standards.
- K. Electrical - As required to meet District Standards. Provide one duplex outlet per station, plus one surge protector per station in laboratories; provide outlets for computers and tables on perimeter with sufficient amperage to run 35 computer devices.
- L. Instruction Technology - As required to meet District Standards.
- M. Gas and Air - As required to meet District Standards.
- N. Safety – As required to meet District Standards.
- O. Fencing – As required to meet District Standards.
- P. Service Drives – As required to meet District Standards.
- Q. Parking – As required to meet District Standards.
- R. Built-ins
  - 1. **Built-in work/storage**
    - a. Laboratories – Provide metal shelving with adjustable shelving. Provide backing in walls to attach metal shelving. Provide 25 cubbyholes approximately 15" h x 15"w x 15"d each by entrance. Provide built-in bookcase, 5'L x 15"D x 40"H with adjustable shelves. Provide

TV/Multimedia cabinet, approximately 48" in height with the TV monitor sitting on top of the cabinet. The TV/Multimedia cabinet shall include lockable doors with adjustable shelving for multimedia equipment. The TV/Multimedia cabinet shall also have grommets for wire management. The TV/Multimedia cabinet shall be located along or near the teaching wall

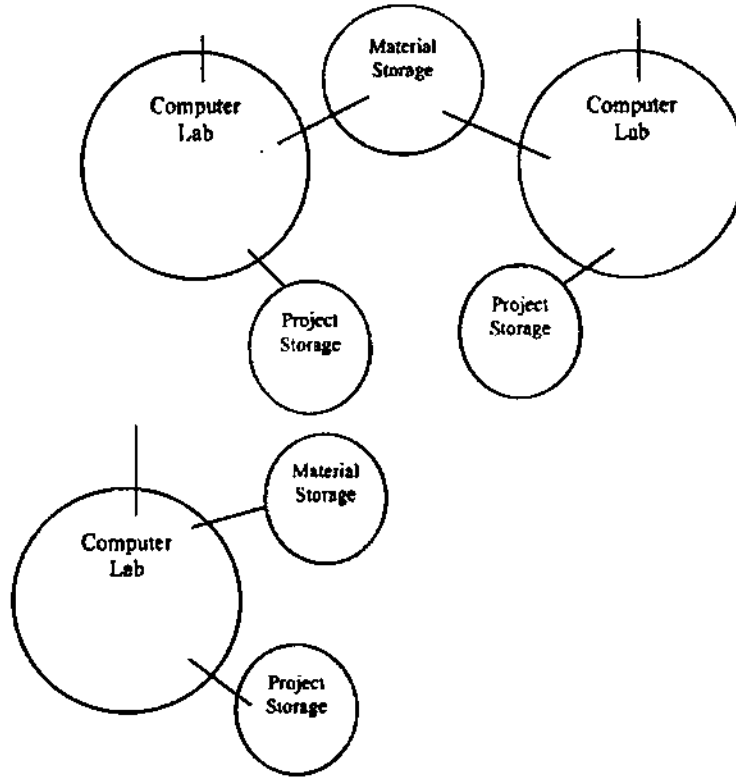
- b. **Project Storage** – Provide cabinet (2), approximately, 7'H x 4'W x 18"D; with doors and adjustable shelving.

**S. Other Considerations**

- 1. Provide data and electrical hook-ups in the material storage.

**SPATIAL RELATIONSHIPS**

**Information Technology**



**I. PROGRAM PHILOSOPHY**

The mission of R.O.T.C. is to acquaint secondary students with the aerospace age, develop informed citizens, strengthen character, promote an understanding of the role of the citizen in a democratic society, and motivate students for careers in the United States military.

**II. PROGRAM GOALS**

The R.O.T.C. curriculum integrates a minimum of 120 hours of course work and Leadership Education. The goals of the R.O.T.C. program include the following:

- A. Development of personal and leadership skills;
- B. Provide instruction in heritage and requirements of military;
- C. Provide positive examples of careers in civil and military careers.
- D. Provide instruction in military marching and ceremonies;
- E. Provide instruction in appropriate individual and group behavior;
- F. Present information in communication management.

**III. PROGRAM ACTIVITIES**

**A. Classroom Activities**

**1. Classroom**

- a. Lecture
- b. Lecture/Discussion
- c. Demonstration
- d. Supervised study
- e. Small group discussion
- f. Role playing
- g. Individual skills development
- h. Testing
- i. Viewing of videos and films
- j. Listening to audio tapes
- k. Display of trophies
- l. Bulletin boards for activities

2. **Arms Room (Secure)**
  - a. Storage of sidearms and rifles
  - b. Storage of sabers
  - c. Storage of flags
  - d. Storage of ceremonial uniform items
3. **Material Storage (Secure)**
  - a. Fitting of uniforms
  - b. Storage of uniforms and all associated items for 200 cadets
  - c. Storage of military films
4. **Conference Room/Teacher Planning**
  - a. Storage of teaching materials
  - b. Computer for program management
  - c. Storage of US military required publications
  - d. Bulletin board for management notices
  - e. Teacher planning

#### IV. ORGANIZATIONAL NOMENCLATURE

Teacher Student Ratio: 1:25

Grade Levels: 9-12

#### V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES

- A. Simulator used for instruction.
- B. Computers used for merits/demerits.
- C. Military Academic Honorary.
- D. A dressing room in material storage area for fitting and activity preparation.
- E. Use electronic bulletin board to advertise activities.
- F. Weather station.
- G. Material storage requires separate area for male and female uniforms.

#### VI. JUSTIFICATION FOR VARIANCE FROM STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (S.R.E.F.)

- A. Conference Room will be divided into two spaces.

**VII. PROGRAM FACILITIES LIST**

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft. Per Unit	Sq. Ft. Total	Sq. Ft.	Stu. Sta. Unit	Stu. Stat. Total	Student Stations
			<b>FACILITY LIST DUE TO ACADEMY PROGRAMS</b>					
<b>R.O.T.C. (NAVY)</b>								
1	Classroom (Existing Bldg 4)	1,050			1,253			29
1	Arms Room	150			266			
1	Material Storage	155			348			
1	Conference (divided into two spaces)	225			273			
	<b>TOTAL</b>	<b>1,580</b>			<b>2,140</b>		<b>0</b>	<b>29</b>

**VIII. PROGRAM FURNITURE AND EQUIPMENT**

**A. Classroom**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
25		X	Student desk combo
1		X	Lectern
1		X	Teacher desk and chair
1		X	Stool, 30"
1		X	Table, 30"W x 72"L
6		X	Chair
1		X	File cabinet, four-drawer, legal, lateral, lockable
4		X	Computer
2		X	Printer
1	X		Trophy case
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
1	X		Marker Board, 4' x 16', with map rail and flag holder
2	X		Tack Board, 4' x 4'
1	X		6' x 8' Video Format Screen with black masking borders
1	X		Pencil sharpener with proper backing
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

**B. Arms Room**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Teacher desk and chair
1		X	Stool, 30"
1		X	Table, 30"W x 72"L
6		X	Chair



No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	File cabinet, four-drawer, legal, lateral, lockable
1		X	Computer
1		X	Printer
1	X		Tack Board, 4' x 4'
1	X		Clock, battery
	X		Built-ins (refer to special considerations)

**C. Material Storage**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	File cabinet, four drawer, legal, lateral, lockable
1	X		Mirrors, full length on dressing room door
1	X		Fire extinguisher
2		X	Storage bin for dirty uniforms with hinged top that swings up and a hinged door in front that swings out, 32"H x 32"W x 32"D
	X		Built-ins (refer to special considerations)

**D. Conference Room**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Teacher desk and chair
1		X	Table, 6'
6		X	Chair
1		X	File cabinet, four-drawer, legal, lateral, lockable
1		X	Computer
1		X	Printer
1	X		Marker board, 4' x 8', with map rail and flag holder
1	X		Tack Board, 4' x 4'
1	X		Clock, battery

**IX. SPECIAL CONSIDERATIONS - CONTRACTOR PROVIDED**

Refer to GENERAL CONSIDERATIONS, GENERAL SECURITY CONSIDERATIONS AND TRAFFIC CONTROL.

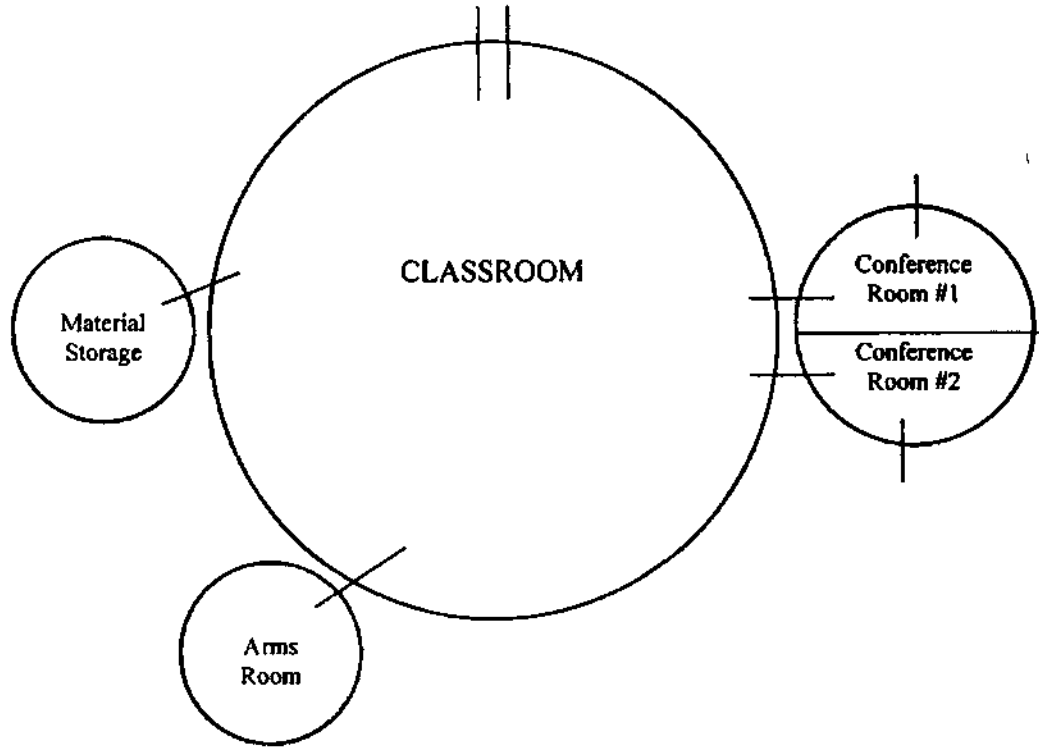
- A. Heating/Cooling/Ventilation - As required to meet District Standards.
- B. Acoustical - As required to meet District Standards.
- C. Floor - As required to meet District Standards.
- D. Walls - As required to meet District Standards.
- E. Ceiling - As required to meet District Standards.

- F. **Lighting** - As required to meet District Standards.
- G. **Windows** - As required to meet District Standards. Provide bars on the arms room and material storage rooms to protect equipment.
- H. **Doors** - As required to meet District Standards. All rooms must have dead bolt locks, except dressing room.
- I. **Water/Plumbing Fixtures** - As required to meet District Standards.
- J. **Communications** - As required to meet District Standards. Conference room requires telephone jacks for counseling, scheduling of numerous school activities and contact with military representatives. Two phone lines in addition to standard system.
- K. **Electrical** - As required to meet District Standards.
- L. **Instructional Technology** - As required to meet District Standards.
- M. **Gas and Air** - As required to meet District Standards.
- N. **Safety** – As required to meet District Standards.
- O. **Fencing** - As required to meet District Standards.
- P. **Service Drives** – As required to meet District Standards.
- Q. **Parking** - As required to meet District Standards.
- R. **Built-ins**
  - 1. **Material Storage Room -**
    - a. Provide counter, 24'L x 32"W x 34"H, with adjustable rows of shelves under counter, approximately, 15" x 15", accessible from one side only and electrical outlet in the counter.
    - b. Provide 1 and 2 tiered rod system with shelves above for uniform storage.
    - c. Provide a dressing room area with curtain in the material storage room.
    - d. Provide full length mirror, locate one in the dressing room and one on any convenient wall.
  - 2. **Arms Room -**
    - a. Provide gun rack to hold 24 simulated rifles

3. Classroom -

- a. Provide shelf (5), 1' vertical separation, 14"D.
- b. Provide base cabinet with doors, lockable and adjustable shelves, 34"H, and upper cabinets with doors, lockable and adjustable shelves.
- c. Provide built-in bookcase, 5'L x 15"D x 40"H with adjustable shelves.
- d. Provide computer counter to accommodate four (4) computers and two (2) printers (14'W x 30"D). The counter shall have grommets for wire management.
- e. Provide TV/Multimedia cabinet, approximately 48" in height with the TV monitor sitting on top of the cabinet. The TV/Multimedia cabinet shall include lockable doors with adjustable shelving for multimedia equipment. The TV/Multimedia cabinet shall also have grommets for wire management. The TV/Multimedia cabinet shall be located along or near the teaching wall

**SPATIAL RELATIONSHIPS**  
**R.O.T.C.**



**STEM**  
**(SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS)**

**I PROGRAM PHILOSOPHY**

Technology Education is a comprehensive action-based educational program concerned with technical means, their evolution, utilization, and significance; with industry, its organization, personnel, systems, techniques, resources, and products; and their social/cultural impact.

**II. PROGRAM GOALS**

The program is designed to provide students with an in-depth foundation for career preparation at the secondary or post-secondary levels. Students will gain skills leading to consumer awareness and personal enrichment as well as occupational readiness.

**III. PROGRAM ACTIVITIES**

**A. General Activities (applicable to all laboratories)**

1. Applying problem solving techniques
2. Applying tools, materials, processes, and technical concepts safely and efficiently
3. Designing and developing
4. Applying other school subjects
5. Dealing with forces that influence the future
6. Experimenting in the laboratory
7. Becoming a wiser consumer
8. Making informed career choices

**B. Specific Activities**

1. **Engineering Technology Laboratory**
  - a. Demonstrating and applying fluid system principles
  - b. Demonstrating and applying thermal system principles
  - c. Demonstrating and applying electrical system principles
  - d. Demonstrating and applying mechanical system principles
  - e. Communicating through oral, written, or graphical means the results of solutions of designs
  - f. Demonstrating graphical literacy and use of graphical representation in analysis and design
  - g. Demonstrating engineering analysis and design methods
  - h. Using tools, machines, calculators, and computers necessary for obtaining solutions to design problems
  - i. Conducting research and experimentation and/or designing a project on engineering technology

**IV. ORGANIZATIONAL NOMENCLATURE**

Teacher - Student ratio: 1:24

Grade levels for which program is intended: 9-12

**V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USE**

Titles of the laboratories have changed to comply with the revised educational program.

**VI. JUSTIFICATION FOR VARIANCE FROM STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (S.R.E.F.)**

N/A

**VII. PROGRAM FACILITIES LIST**

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft. Per Unit	Sq. Ft. Total	Sq. Ft.	Stu. Sta. Unit	Stu. Stat. Total.	Student Stations
<b>FACILITY LIST DUE TO ACADEMY PROGRAMS</b>								
<b>S.T.E.M.</b>								
(Science, Technology, Engineering & Mathematics)								
4	Science Demonstration / Classroom		1,300	5,200		25	100	
4	Material Storage		95	380				
4	Project Storage		95	380				
1	Chemical Storage		400	400				
	<b>Subtotal</b>			<b>6,360</b>				
1	Engineering Laboratory (Existing Bldg 5)	3,240			2,583			19
1	Technology Resource	800			502			
1	Material Storage	90			197			
1	Material Storage	395			127			
1	Project Storage	310			86			
1	Tool Storage	310						
1	Teacher Planning				188			
4	Student Storage				120			
	<b>Subtotal</b>	<b>5,145</b>			<b>3,803</b>			
	<b>TOTAL</b>			<b>6,360</b>	<b>3,803</b>		<b>100</b>	<b>19</b>

**I. PROGRAM FURNITURE AND EQUIPMENT**

**A. Engineering Technology Laboratory**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Teacher chair, pneumatic lift, non-tilt, caster base, armless
1		X	Drafting table, teacher's, 48"W x 372"D x 37"H, solid

DRAFT - Scheduled for March 05' Board Meeting

No. of Items	Contractor Provided	District Provided (FF&E)	Description
			maple legs, full tilting top, tool drawer with lock, shallow print drawer, with dust cover
1		X	Parallel straightedge, 48," mobile, with mounting hardware and instructions
1		X	Teacher drafting stool, pneumatic lift, non-tilt, caster base, armless
1		X	File cabinet, four-drawer, legal, lateral, lockable
1		X	Filing cabinet, 18"W x 262"D, two-drawer, legal, lockable
1		X	Magazine rack, 42"W x 18"D x 60"H, steel, eight shelves
3		X	Work station, 15' x 15', quad type, eight students, each
24		X	Student chair, pneumatic lift, non-tilt, caster base, armless, for work stations
1		X	Hand tools, assorted, including basic woodworking and mechanical tools
1	X		Tool storage cabinet, 62"W x 22"D x 84"H, general shop, without tools, constructed of hard maple framing with hardwood plywood panels, with master keyed locks
1	X		Cabinet, 72"W x 30"D x 34"H, sliding door, steel base with double sliding doors, one adjustable shelf, cylinder lock 23" maple top
2		X	Work bench, 64"W x 28"D x 23"H, two-station, base consists of one heavy gauge steel unit, with double swinging doors and cylinder lock, top is constructed from hard rock maple, with one wood-working vise
2	X		Cabinet, 60"W x 30"D x 34"H, sliding door, steel base with double sliding doors, one adjustable shelf, cylinder lock, 23" maple top
1	X		Tool storage cabinet, 60"W x 22"D x 84"H, for portable power tools and robot arms, two sections, each with five adjustable shelves, constructed of hard maple framing and hardwood plywood panels, with master keyed locks
18		X	Computer
11		X	Power-switching system, with surge suppression, 115V
1		X	Printer, Laser
5	X		Reels from ceiling for air and electric on side
1		X	Air compressor, portable
1		X	Robotic arm, advanced robotic arm with teach through nose software, including: curriculum and instructional packages, Vision System, linear conveyor, rotary table, linear slide base, two experimenter tables, end effector package, D.C. servo motor kit, gravity feeder, infra-red sensor, integration manual, and bar stock gripper adapter
1		X	Computer Numerical Controlled (CNC) metal lathe, bench-top model, lathe machinist kit, air chuck robotic interface, pneumatic lathe shield opener, CAD/CAM software, 200-2000 RPM, 2HP single phase motor, 115V, 12A
1		X	Mobile service bench, for CNC metal lathe, 53" casters, 42"W x 24"D x 28"H
1		X	Computer Numerical Controlled (CNC) milling

DRAFT - Scheduled for March 05' Board Meeting

No. of Items	Contractor Provided	District Provided (FF&E)	Description
			machine, 24"W x 22"D bench-top model, with Lexan safety shield, air vise robotic interface, milling machinist kit, quick-change tooling, CAD/CAM software and documentation, 1HP DC motor, 115V, 15A
1		X	Mobile Computer Integrated Manufacturing (CIM) bench (2), 36" x 72", steel, with controller mounting modules Type 1 and 2, keyboard/monitor mounting module, utilities distribution module, electrical power module, compressed air distribution module, quick release connector, and monitor multiplexer
1		X	Band saw, 8", bench-top mounted, with miter gauge, 1/5 HP single phase motor, 115V, 2.5A
1		X	Scroll saw, 20", bench-top mounted, tilting table, multi-speed, with blades and accessories, single phase motor, 115V, 2A
1		X	Drill press, 14", bench-top model, five spindle speeds, 2" chuck, 11"W x 25"D, 2 HP single phase motor, 115V, 10A
1		X	Combination belt/disc sander, 1" belt/8" disc, bench-top model, with miter gauge, 15"W x 24"D, α HP single phase motor, 115V, 10A
1		X	Tool grinder, 6," bench-top model, with two-piece tool rests, exhaust-type guards, two wheels 6" x 2" (one, 36 - grit and one, 60 - grit), α HP single phase motor, 115/230V, 10/5A
1		X	Utility vise, 5" jaw width, 5-2" opening, with replaceable serrated steel jaws, built-in steel pipe jaws, swivel base
3		X	Vacuum cleaner, 28 - gallon, with 6' x 2-2" hose, extension wands and nozzle, 115V, 10A
1		X	Drill, variable speed, reversing, 8" chuck, 115V, 4A
2		X	Bench, steel, open base, 72"W x 30"D
1	X		Safety glasses cabinet, with glasses
2		X	Television, 27" color, with cart, 115V, 2A
1		X	VCR, four - head, 115V, .5A
1		X	Video encoder, to connect a computer's video card to a VCR and TV
1		X	Structural technology module, with structural tester (counter top model), videos, projects, software and manuals
1		X	Electricity and electronics module, with trainer, tools, meters, leads and curriculum, 115V, 1A
1		X	Hydraulics module, with lockable steel case, counter top, components, video, instructor notes and curriculum
1		X	Pneumatics module, with lockable steel case, counter top, components, video, instructor notes and curriculum
1		X	Mechanisms module, with lockable steel case, counter top, components, video, instructor notes and curriculum
1		X	Oily waste can, six gallon
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
2	X		Marker board, 4' x 16', with map rail and flag holder
2	X		Tack Board, 4' x 4'



DRAFT – Scheduled for March 05' Board Meeting

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1	X		6' x 8' Video Format Screen with black masking borders
1	X		Pencil sharpener with proper backing
	X		Fire extinguishers, per code
1	X		Fire blanket, wall-mounted
1	X		First Aid kit, wall mounted
1	X		Provide stainless steel sink, 18"D x 24"W, with hot and cold water
1	X		Electric water cooler.
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

**B. Science Demonstration Laboratory (per lab)**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
4	X		Tables to seat eight students at each table; F.A.C.B.C. and F.A.C.B.C. accessible, flat table top: no monitor well turret, enclosure or infrared remote keyboard; include sink module; exclude portable cabinet cubicles and upright clamp rod assembly; include cold water unicast fixture with gas (no unimix H/C).
1		X	Teacher desk and chair
1		X	Laboratory Stool, adjustable back
1		X	Table, 30"W x 72"L
32		X	Chair
1		X	File cabinet, four-drawer, legal, lateral, lockable, chemical resistant top
2		X	Laboratory cart, portable
1		X	Fume hood, permanent, vented to outside, in the chemistry lab
1		X	Safety shield, (explosion shield) portable
1		X	Sterilizer for safety goggles with lamp
1		X	Trash can, 25-gal., non-metal
1		X	Spark-resistant safety can for disposal of flammables
1		X	Dry chemical waste container
16		X	Microscope
40		X	Safety goggle and spill-control pillows
1		X	Sand bucket, 25 pounds
30		X	Student apron
1		X	Teacher Lab coat
1		X	Electronic Scale
1		X	Ultrasonic cleaner
1		X	Microviewers
1		X	Flex Cam
25		X	Triple-beam balance
1		X	Stream table, portable (Earth Science only)
1		X	Weather station with Barograph, Thermograph, etc. (Earth Science only)
8	X		Sinks, stainless steel (with sink covers)
1	X		Deluge shower and eye wash

DRAFT – Scheduled for March 05' Board Meeting

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Glassware drying rack
4		X	Computer
2		X	Printer
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
2	X		Marker board, stackable, 4' x 16', with map rail and flag holder
2	X		Tack Board, 4' x 4'
1	X		6' x 8' Video Format Screen with black masking borders
1	X		Pencil sharpener with proper backing
	X		Fire extinguishers, per code
1	X		Fire blanket, wall-mounted
1	X		First Aid kit, wall mounted
1	X		Display cabinet, transparent front
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)
1	X		Teacher demonstration table (refer to special considerations)

**C. Chemical Storage**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Glassware drying rack
1		X	Trash can, 25-gal. capacity, non-metal
4	X		Smoke detector
1		X	File cabinet, four draw, legal, lateral, lockable
1	X		Refrigerator with ice maker, shared within department
1	X		Dishwasher, shared within department
	X		Exhaust fan per code
1	X		Double stainless steel sink
5		X	Stainless steel laboratory, cart
3	X		Fire proof steel storage cabinet (3), lockable -- one cabinet each for caustics, acids and flammables
1	X		Fixed fume hood, vented outside
	X		Built-ins (refer to special considerations)

**D. Material Storage**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Glassware drying rack
1		X	Trash can, 25-gal. capacity, non-metal
	X		Smoke detector, per code
	X		Exhaust fan, per code
1	X		Double stainless steel sink
	X		Built-ins (refer to special considerations)

Consult with SDPBC Program Management (Construction Liaison at-large) for additional Furniture, Fixtures and Equipment.

**IX. SPECIAL CONSIDERATIONS - CONTRACTOR PROVIDED**

Refer to GENERAL CONSIDERATIONS, GENERAL SECURITY CONSIDERATIONS AND TRAFFIC CONTROL

- A. Heating/Cooling/Ventilation - As required to meet District Standards.
- B. Acoustical - As required to meet District Standards.
- C. Floor - As required to meet District Standards.
- D. Walls - As required to meet District Standards.
- E. Ceiling - As required to meet District Standards. 12' in all laboratories except the Drafting and Design Technology Laboratory which will be standard height.
- F. Lighting - As required to meet District Standards.
- G. Windows - As required to meet District Standards. Exterior windows in the laboratory should be above eye-level to avoid outside distractions and allow use of wall space. Windows should be operable for ventilation. Maximum security must be provided at all exterior windows. Provide observation windows between material storage and laboratories.
- H. Doors - As required to meet District Standards. Provide one, 6' double door with removable mullion in each laboratory to facilitate delivery of materials and sharing of equipment. Provide one, 6' double door with removable mullion between the equipment storage room and the Production Technology Laboratory, the equipment storage room and the Engineering Technology Laboratory, and the project storage room and the Communication Technology Laboratory.
- I. Water/Plumbing Fixtures - As required to meet District Standards. Provide master shut-off valve for water.
- J. Communications - As required to meet District Standards.
- K. Electrical - As required to meet District Standards. Laboratory to have 120-volt, wall-mounted, duplex outlets 6' apart. One, 120-volt, industrial quality, pull-down/retractable, ceiling-mounted extension cord to be installed above each work bench, plus power poles for quad type computer work stations. When in the retracted position, the cords shall not extend lower than 6' above the floor. Material storage to have two, 120- volt duplex outlets. Student project storage to have two, 120-volt duplex outlets. Master shut-offs to all electrical outlets in an area shall be provided and located in a secure area near the demonstration areas in laboratories and near the exit doors of other areas, with the exception of the chemical storage room where the master shutoff will be located externally and marked.

- L. **Instructional Technology** - As required to meet District Standards.
- M. **Gas and Air** - As required to meet District Standards. Provide compressed air in the Engineering Technology labs. Provide two gas lines at teacher station and at student stations. For Chemistry and Advanced Biology laboratories, provide compressed air, gas and water at teacher station and at student stations. Provide master shut-off valves for gas and compressed air. Based on program furniture and equipment, provide gas and compressed air as required.
- N. **Safety** - As required to meet District Standards. Panic buttons (kill switches) for instant disconnection of all equipment should be installed on two walls in appropriate laboratories. A keyed reset switch to be installed in conjunction with one of the panic buttons in each laboratory. Adequate fire extinguishers of proper size must be provided in each laboratory.
- O. **Fencing** - As required to meet District Standards.
- P. **Service Drives** - As required to meet District Standards. Production Technology lab should be located on the first floor near a service drive for delivery of large stock.
- Q. **Parking** - As required to meet District Standards.
- R. **Built-ins**
  - 1. **Engineering Technology Laboratory**
    - a. Provide counter, 30', 1-" thick, hard maple top, with cabinets below and above, lockable.
    - b. Provide teacher demonstration table, 96" x 30" x 34", with 13" laminate top, double-door base unit with two adjustable shelves, five-drawer base unit, modesty panel, master keyed cylinder locks and pulls.
    - c. Provide open, full-height shelving (12), 36" x 24" shelves in storage room.
    - d. Provide storage cabinet (6), 36"W x 21"D x 78"H, steel construction, four adjustable shelves, lockable in storage room.
  - 2. **Science /Demo Laboratory** – Provide and position counters on both side walls with lockable cabinets below and glass-fronted cabinets above. Leave at least 2' of space between counter and upper cabinets to accommodate computers and other equipment. Also provide computer hook-up (6), including phone modem and lock down capability. Bookcases, 30"H, adjustable shelves. Provide microscope cabinet to house microscope (60), and stereoscopic microscope (15), lockable. Provide bookcase with locking, hinged, glass doors and adjustable shelves, approximately, 84"H x 42"W x 16"D. Provide teacher demonstration table, 72", permanent with sink, electrical and data connections (additionally, gas and air hook-ups in the chemistry lab only); with above demonstration mirror.

Provide computer counter to accommodate four (4) computers and two (2) printers (14'W x 30"D). The counter shall have grommets for wire management.

Provide TV/Multimedia cabinet, approximately 48" in height with the TV monitor sitting on top of the cabinet. The TV/Multimedia cabinet shall include lockable doors with adjustable shelving for multimedia equipment. The TV/Multimedia cabinet shall also have grommets for wire management. The TV/Multimedia cabinet shall be located along or near the teaching wall

3. **Material Storage** – Provide acid-resistant counter on two walls with double, deep sink (2) with residue traps, full service (gas, air, electricity, water); lockable drawers and open, adjustable shelf base cabinets. Provide wall cabinets, glass-front doors, lockable, with adjustable shelves on available wall space. Provide floor-to-ceiling, adjustable shelves, 12"D, on available wall space.
4. **Chemical Storage** – Provide stone top counter, approximately, 10', with acid-resistant sink with residue traps, full service (gas, air, electricity, water); lockable drawers and open, adjustable shelf base cabinets. Provide 100 lineal feet, 14"D, chemical storage shelving, non-corrosive. Provide full-height, adjustable shelving on available wall space, with lip, non-corrosive
5. **Other Built-in**
  - a. Provide air compressor, central system, in all laboratories located away from laboratories.
  - b. Provide TV/Multimedia cabinet, approximately 48" in height with the TV monitor sitting on top of the cabinet. The TV/Multimedia cabinet shall include lockable doors with adjustable shelving for multimedia equipment. The TV/Multimedia cabinet shall also have grommets for wire management. The TV/Multimedia cabinet shall be located along or near the teaching wall.

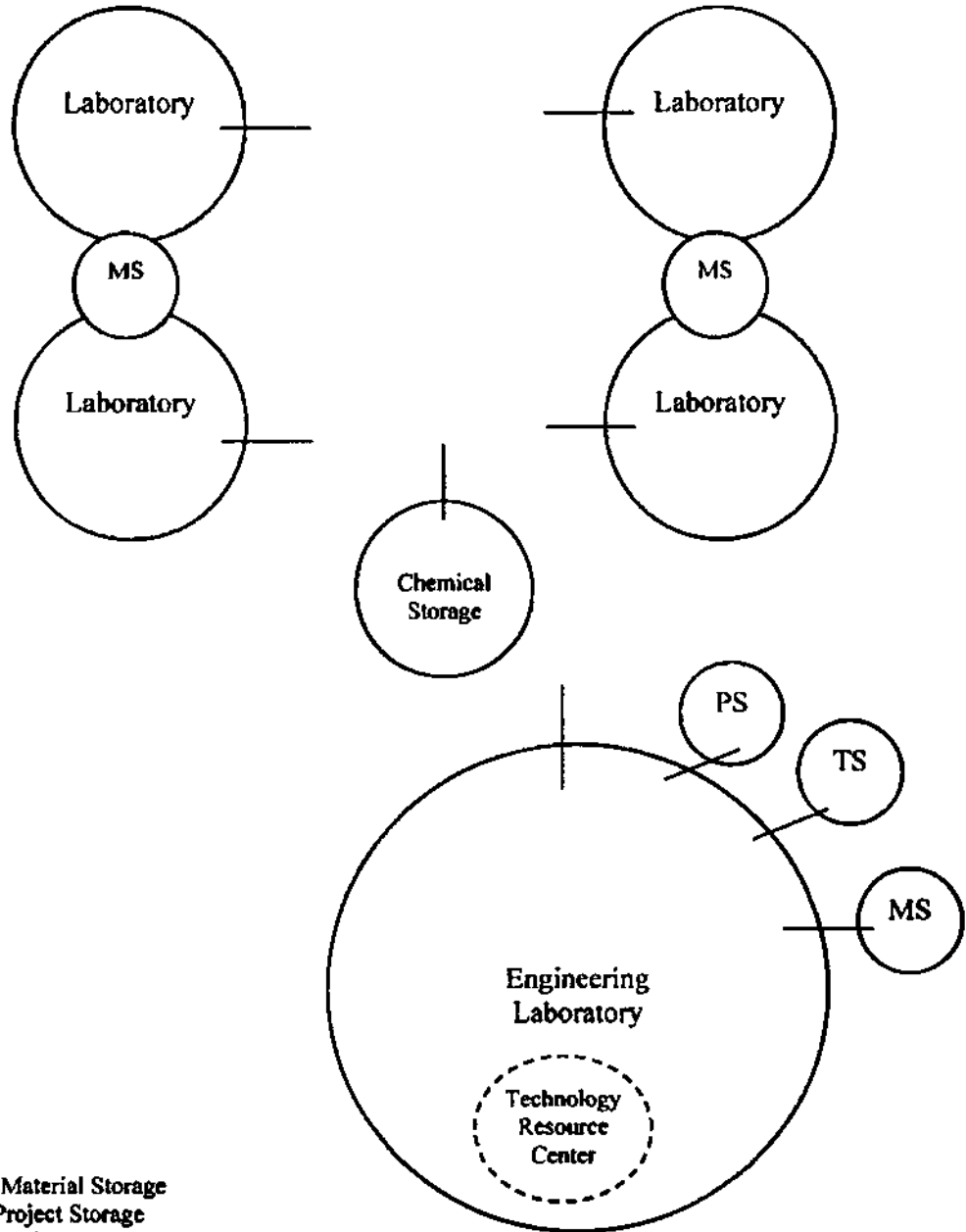
S. **Other Considerations**

1. Noise control between laboratories and within laboratory areas.
2. Visual availability and supervision should be considered in planning all areas of the laboratories for the purpose of providing the instructor visual contact with students at all times and in all areas.
3. Provide air compressor, central system, in all laboratories located away from laboratories.
4. Provide grease traps, where necessary.
5. Chemical storage to have outside wall in case of explosion.
6. Student activities take place in the perimeter areas of the laboratory. Laboratory shall require adequate standing height work surface.

7. A dispensing area located in the laboratory shall be necessary to issue supplies and equipment.

**SPATIAL RELATIONSHIPS**

**STEM**  
**(Science, Technology, Engineering & Mathematics)**



MS = Material Storage  
PS = Project Storage  
TS = Tool Storage

Not all spaces are shown

**SCIENCE**

**I. PROGRAM PHILOSOPHY**

Today's society requires scientifically literate and laboratory-skilled high school graduates. Therefore, it is imperative that they participate in a dynamic science education program with considerable laboratory opportunities. Such a program will encourage student understanding of the experimental nature of science, increase the level of students' technical skills, and enhance student enthusiasm.

**II. PROGRAM GOALS**

- A. Maximize laboratory use and provide a laboratory-centered science experience for all students.
- B. Provide a cost-effective laboratory program through more efficient utilization of materials and equipment.
- C. To eliminate equipment duplication.

**III. PROGRAM ACTIVITIES**

**A. Courses Offered**

- |                                 |                              |
|---------------------------------|------------------------------|
| 1. Earth Science                | 9. Botany                    |
| 2. Biology I, II, honors & AP   | 10. Zoology                  |
| 3. Marine Science               | 11. Astronomy                |
| 4. Chemistry I, II, honors & AP | 12. Environmental Science    |
| 5. Physical Science             | 13. Ecology                  |
| 6. Physics I, II & AP           | 14. Principles of Technology |
| 7. Science Research             | 15. Genetics                 |
| 8. Anatomy and Physiology       | 16. Intergrated Science      |

The facilities must be adaptable to all these curricula. It is planned that all courses will be taught with an emphasis on investigation.

**B. Teacher Activities**

- 1. Conduct lecture/class discussion.
- 2. Demonstrate for single and double classes in lecture room.
- 3. Demonstrate on marker board and with overhead projector.
- 4. Plan, provide and lead laboratory activities.
- 5. Use ITV, films, Closed-Circuit TV, etc.
- 6. Teach, test and remediate individuals, small and large groups.
- 7. Prepare students for science fair competitions.
- 8. Answer individual student questions.
- 9. Plan individually and departmentally.
- 10. Team two teachers with single and double classes in teaching/lecture room.
- 11. Use models, charts and whiteboard
- 12. Conduct outdoor instructional activities for classes and individual students.



**C. Student Activities**

**1. Classroom/Laboratory**

- a. Perform activities in small and large groups.
- b. Listen to lecture and participate in class discussions.
- c. Watch audio-visual and ITV presentations
- d. Participate in small group activities with display equipment, such as aquarium models and other apparatus for class projects not requiring laboratory facilities.
- e. Maintain animals and plants.
- f. Observe specimens under a microscope.
- g. Plan, prepare, demonstrate, and exhibit science fair projects.
- h. Perform activities which involve the use of gas, water, air and electricity.
- i. Utilize counter space to read earth science maps, operate computers, etc.
- j. Study and experiment individually.
- k. Collect and identify rocks, minerals and soil.
- l. Perform scientific experiments in groups of two or three. These experiments will apply, prove and/or test basic theories which have been presented in the classroom.
- m. Use a variety of microscopes.
- n. Utilize apparatus and equipment in performing scientific experiments requiring electricity, water, air, and gas.
- o. View ITV, films, and/or videos individually and in groups.
- p. Interface the computer with basic laboratory equipment.

**IV. ORGANIZATIONAL NOMENCLATURE**

Teacher - Student Ratio 1:25

Grade Levels for Which Program is Intended 9 - 12

**V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES**

- A. Provide for inter- and intra-departmental Closed-Circuit TV which will allow for the transmission of appropriate lectures and demonstrations to selected

classrooms/laboratories.

The opportunity for centralizing signal origination shall be available. Selective switching of programming to points of signal origination shall include the classroom/laboratories.

- B. Community School utilization in science-related interest areas, e.g., electricity, astronomy.
- C. Science areas shall have a lockable, equipment maintenance room with hose bibb to allow cleaning and storage of wet equipment after field trips.
- D. Six science laboratories shall be equipped for Biology, Chemistry, Physics, and Earth/Physical Science programs.

**VI. JUSTIFICATION FOR VARIANCE FROM STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (S.R.E.F.)**

- A. Chemical Storage of 400 NSF is necessary to meet the current state safety standards for the storage of chemicals and for the preparation of chemicals for laboratory use.
- B. Five demonstration classrooms at 5,450 NSF and 8 laboratories at 12,640 NSF have been combined into 12 laboratories at 1,300 NSF each, 1 computer laboratory at 900 NSF, 6 project storages at 95 each and 6 material storages at 95 each.
- C. Material Storage and Project Storage should be combined to create an 190 NSF shared storage for two classrooms.

**VII. PROGRAM FACILITIES LIST**

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft. Per Unit	Sq. Ft. Total	Sq. Ft.	Stu. Sta. Unit	Stu. Stat. Total	Student Stations
			<b>FACILITY LIST DUE TO SCIENCE ADDITION</b>					
<b>SCIENCE</b>								
12	Science Demonstration / Classroom		1,300	15,600		25	300	
1	Computer Laboratory & Storage		900	900		25	25	
6	Project Storage		95	570				
6	Material Storage		95	570				
1	Chemical Storage		400	400				
	<b>TOTAL</b>			<b>18,040</b>			<b>325</b>	

## II. PROGRAM FURNITURE AND EQUIPMENT

A. Science Demonstration / Classroom (per lab)

No. of Items	Contractor Provided	District Provided (FF&E)	Description
4	X		Tables to seat eight students at each table; F.A.C.B.C. and F.A.C.B.C. accessible, flat table top; no monitor well turret, enclosure or infrared remote keyboard; include sink module; exclude portable cabinet cubicles and upright clamp rod assembly; include cold water unicast fixture with gas (no unimix H/C).
1		X	Teacher desk and chair
1		X	Laboratory Stool, adjustable back
1		X	Table, 30"W x 72"L
32		X	Chair
1		X	File cabinet, four-drawer, legal, lateral, lockable, chemical resistant top
2		X	Laboratory cart, portable
1		X	Fume hood, permanent, vented to outside, in the chemistry lab
1		X	Safety shield, (explosion shield) portable
1		X	Sterilizer for safety goggles with lamp
1		X	Trash can, 25-gal., non-metal
1		X	Spark-resistant safety can for disposal of flammables
1		X	Dry chemical waste container
16		X	Microscope
40		X	Safety goggle and spill-control pillows
1		X	Sand bucket, 25 pounds
30		X	Student apron
1		X	Teacher Lab coat
1		X	Electronic Scale
1		X	Ultrasonic cleaner
1		X	Microviewers
1		X	Flex Cam
25		X	Triple-beam balance
1		X	Stream table, portable (Earth Science only)
1		X	Weather station with Barograph, Thermograph, etc. (Earth Science only)
8	X		Sinks, stainless steel (with sink covers)
1	X		Deluge shower and eye wash
1		X	Glassware drying rack
4		X	Computer
2		X	Printer
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
2	X		Marker board, stackable, 4' x 16', with map rail and flag holder
2	X		Tack Board, 4' x 4'
1	X		6' x 8' Video Format Screen with black masking borders
1	X		Pencil sharpener with proper backing
	X		Fire extinguishers, per code
1	X		Fire blanket, wall-mounted
1	X		First Aid kit, wall mounted

**DRAFT – Scheduled for March 05' Board Meeting**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1	X		Display cabinet, transparent front
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)
1	X		Teacher demonstration table (refer to special considerations)

**B. Chemical Storage**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Glassware drying rack
1		X	Trash can, 25-gal. capacity, non-metal
4	X		Smoke detector
1		X	File cabinet, four draw, legal, lateral, lockable
1	X		Refrigerator with ice maker, shared within department
1	X		Dishwasher, shared within department
	X		Exhaust fan per code
1	X		Double stainless steel sink
5		X	Stainless steel laboratory, cart
3	X		Fire proof steel storage cabinet (3), lockable -- one cabinet each for caustics, acids and flammables
1	X		Fixed fume hood, vented outside
	X		Built-ins (refer to special considerations)

**C. Material Storage (per)**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Glassware drying rack
1		X	Trash can, 25-gal. capacity, non-metal
	X		Smoke detector, per code
	X		Exhaust fan, per code
1	X		Double stainless steel sink
	X		Built-ins (refer to special considerations)

**D. Computer Laboratory Dedicated to the Science Department**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
30		X	Computer workstation with wire management
1		X	Teacher desk and chair
30		X	Chair
1		X	File cabinet, four-drawer, legal, lateral, lockable, chemical resistant top
30		X	Computer
4		X	Printer
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1	X		Marker Board, 4' x 16', with map rail and flag holder
2	X		Tack Board, 4' x 4'
1	X		6' x 8' Video Format Screen with black masking borders
1	X		Pencil sharpener with proper backing
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

#### IX. SPECIAL CONSIDERATIONS - CONTRACTOR PROVIDED

Refer to GENERAL CONSIDERATIONS, GENERAL SECURITY CONSIDERATIONS AND TRAFFIC CONTROL.

- A. Heating/Cooling/Ventilation - As required to meet District Standards.
- B. Acoustical - As required to meet District Standards.
- C. Floor - As required to meet District Standards.
- D. Walls - As required to meet District Standards.
- E. Ceiling - As required to meet District Standards.
- F. Lighting - As required to meet District Standards.
- G. Windows - As required to meet District Standards. Provide observation window between material storage and laboratories.
- H. Doors - As required to meet District Standards.
- I. Water/Plumbing Fixtures - As required to meet District Standards. Provide master shut-off valve for water.
- J. Communications - As required to meet District Standards.
- K. Electrical - As required to meet District Standards. Master shut-offs to all electrical outlets in an area shall be provided and located in a secure area near the demonstration areas in laboratories and near the exit doors of other areas, with the exception of the chemical storage room where the master shutoff will be located externally and marked.
- L. Instructional Technology - As required to meet District Standards.
- M. Gas and Air - As required to meet District Standards. Provide two gas lines at teacher station and at student stations. For Chemistry and Advanced Biology laboratories, provide compressed air, gas and water at teacher station and at student stations. Provide master shut-off valves for gas and compressed air. Based on

program furniture and equipment, provide gas and compressed air as required.

N. **Safety** - As required to meet District Standards.

O. **Fencing** – As required to meet District Standards.

P. **Service Drives** – As required to meet District Standards.

Q. **Parking** - As required to meet District Standards.

R. **Built-ins**

1. **Laboratory** – Provide and position counters on both side walls with lockable cabinets below and glass-fronted cabinets above. Leave at least 2' of space between counter and upper cabinets to accommodate computers and other equipment. Also provide computer hook-up (6), including phone modem and lock down capability. Bookcases, 30"H, adjustable shelves. Provide microscope cabinet to house microscope (60), and stereoscopic microscope (15), lockable. Provide bookcase with locking, hinged, glass doors and adjustable shelves, approximately, 84"H x 42"W x 16"D. Provide teacher demonstration table, 72", permanent with sink, electrical and data connections (additionally, gas and air hook-ups in the chemistry lab only); with above demonstration mirror. Provide computer counter to accommodate four (4) computers and two (2) printers (14'W x 30"D). The counter shall have grommets for wire management. Provide TV/Multimedia cabinet, approximately 48" in height with the TV monitor sitting on top of the cabinet. The TV/Multimedia cabinet shall include lockable doors with adjustable shelving for multimedia equipment. The TV/Multimedia cabinet shall also have grommets for wire management. The TV/Multimedia cabinet shall be located along or near the teaching wall
2. **Material Storage** – Provide acid-resistant counter on two walls with double, deep sink (2) with residue traps, full service (gas, air, electricity, water); lockable drawers and open, adjustable shelf base cabinets. Provide wall cabinets, glass-front doors, lockable, with adjustable shelves on available wall space. Provide floor-to-ceiling, adjustable shelves, 12"D, on available wall space.
3. **Chemical Storage** – Provide stone top counter, approximately, 10', with acid-resistant sink with residue traps, full service (gas, air, electricity, water); lockable drawers and open, adjustable shelf base cabinets. Provide 100 lineal feet, 14"D, chemical storage shelving, non-corrosive. Provide full-height, adjustable shelving on available wall space, with lip, non-corrosive.
4. **Computer Lab** – refer to Computer Education/Skills Development Laboratory section of the educational specification.

S. **Other Considerations**

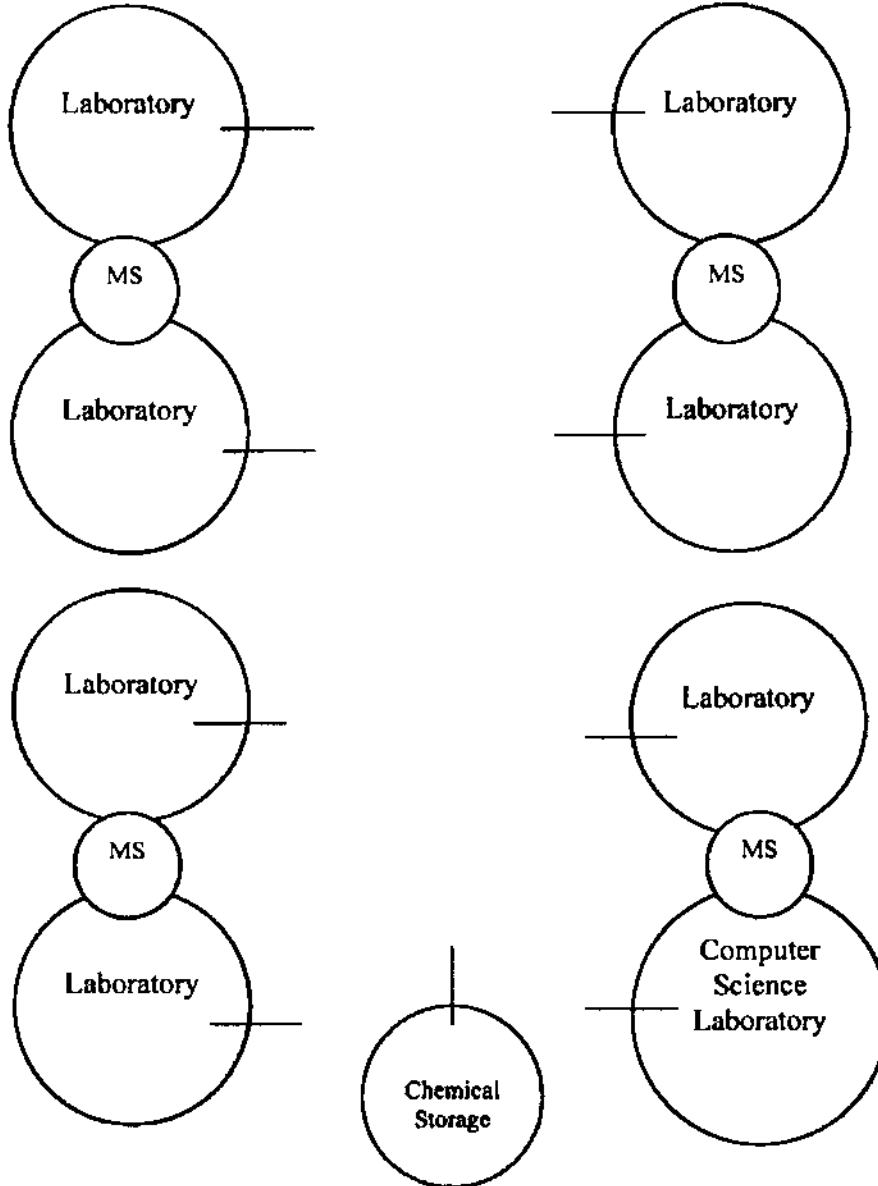
1. Provide grease traps, where necessary.
2. Chemical storage to have outside wall in case of explosion.
3. Student activities take place in the perimeter areas of the laboratory. Laboratory

shall require adequate standing height work surface.

4. A dispensing area located in the laboratory shall be necessary to issue supplies and equipment.

**SPATIAL RELATIONSHIPS**

**Science**



MS = Material Storage  
TP = Teacher Planning  
PS = Project Storage  
Not all spaces are shown



**GENERAL CLASSROOMS**  
**(FUTURE)**

**I. PROGRAM PHILOSOPHY**

The high school program is organized around, and focused on, personal and societal goals that help students become effective participants in the social world.

**II. PROGRAM GOALS**

The high school program goals center around the preparation of students for more reflective and effective participation in their society. The program goals would include the following:

- A. **Socialization** - aimed at helping the student become an effective member of social groups.
- B. **Decision-making Processes** - aimed at helping students to make effective use of intellectual skills in reaching decisions about his/her social concerns.
- C. **Citizenship** - aimed at helping the students to use more effectively the processes of a representative-democratic government.
- D. **Knowledge Acquisition** - aimed at helping the student to acquire and utilize information and intellectual skills provided through the curriculum.

In addition, the program will stress the assimilation of three important components: subject, learner and society.

**III. PROGRAM ACTIVITIES**

**A. Student Activities**

- 1. **Think** - Creative and critical thinking, problem solving, associations.
- 2. **Speak** - Speeches, explanations, dramatizations, demonstrations, simulations, class and panel discussions.
- 3. **Read** - Textbooks, reference books, reports, magazines, newspapers, fiction, trade books.
- 4. **Write** - Creative writing, reports, research papers, outlines, summaries, speeches, comparisons.
- 5. **View** - Films, pictures, T.V., maps, charts, globes.
- 6. **Inspect** - Relief maps, roads maps, globes, artifacts, samples, pictures, charts, graphs.

7. Construct - Booklets, displays, posters, scrapbooks, graphs, bulletin boards, maps, charts, diagrams, time lines, pictures, replicas, dioramas, mobiles, murals.

**IV. ORGANIZATIONAL NOMENCLATURE**

Teacher - Student Ratio 1:25

Grade Levels for Which Program is Intended 9 - 12

**V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES**

- A. Areas may be used for night class and community school activities.
- B. The architect shall study the shape of typical classrooms to provide for efficient operation and communication, utilizing marker board and wall-mounted illustrations. The spaces must also provide flexibility for large and small group instruction as well as the capability for individualization. Computerized lab activities will be incorporated into instructional program.

**VI. JUSTIFICATION FOR VARIANCE FROM STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (S.R.E.F.)**

- A. Teacher Planning and Material Storage shall be folded into the classroom to create a room of 900 NSF.

**VII. PROGRAM FACILITIES LIST**

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft.	Sq. Ft.	Sq. Ft.	Stu. Sta.	Stu. Stat.	Student
			Per Unit	Total		Unit	Total	Stations
<b>FUTURE CLASSROOMS (BUILD-OUT)</b>								
18	General Classroom		756	13,608		25	450	
18	Material Storage		90	1,620				
18	Teacher Planning		54	972				
	<b>TOTAL</b>		<b>900</b>	<b>16,200</b>			<b>450</b>	

**VIII. PROGRAM FURNITURE AND EQUIPMENT****A. Classroom**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
25		X	Student combo desk
1		X	Teacher desk and chair
1		X	File cabinet, four-drawer, legal, lateral, lockable
1		X	Table, 30" x 72"
1		X	Lectern
1		X	Stool
2	X		Teacher storage cabinet, 36'W x 30"D x 72"H, with adjustable shelving, lockable
1	X		Marker board, 4' x 16', with map rails and flag holder
2	X		Tack Board, 4' x 4'
1	X		6'x 8' video format screen with black masking borders
4		X	Computers
2		X	Printers
1	X		Pencil sharpener with proper backing
1	X		Clock, battery
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

**IX. SPECIAL CONSIDERATIONS – CONTRACTOR PROVIDED**

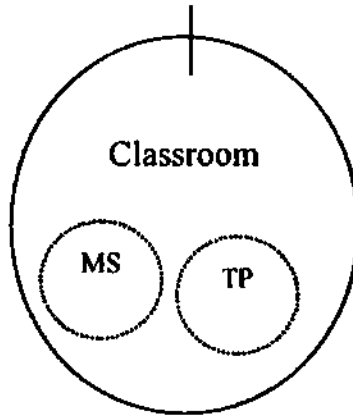
Refer to GENERAL CONSIDERATIONS, GENERAL SECURITY CONSIDERATIONS AND TRAFFIC CONTROL,

- A. Heating/Cooling/Ventilation - As required to meet District Standards.
- B. Acoustical - As required to meet District Standards.
- C. Floor - As required to meet District Standards.
- D. Walls - As required to meet District Standards.
- E. Ceiling - As required to meet District Standards.
- F. Lighting - As required to meet District Standards.
- G. Windows - As required to meet District Standards.
- H. Doors – As required to meet District Standards.
- I. Water/Plumbing Fixtures - N/A
- J. Communications - As required to meet District Standards.
- K. Electrical - As required to meet District Standards

- L. **Instruction Technology** - As required to meet District Standards.
- M. **Gas and Air** - As required to meet District Standards.
- N. **Safety** – As required to meet District Standards.
- O. **Fencing** – As required to meet District Standards.
- P. **Service Drives** – As required to meet District Standards.
- Q. **Parking** – As required to meet District Standards.
- R. **Built-ins**
  - 1. Provide base cabinet with lockable doors and adjustable shelves and upper cabinets with lockable doors and adjustable shelves.
  - 2. Provide built-in bookcase, 5'L x 15"D x 40"H with adjustable shelves.
  - 3. Provide computer counter to accommodate four (4) computers and two (2) printers (14'W x 30"D). The counter shall have grommets for wire management.
  - 4. Provide TV/Multimedia cabinet, approximately 48" in height with the TV monitor sitting on top of the cabinet. The TV/Multimedia cabinet shall include lockable doors with adjustable shelving for multimedia equipment. The TV/Multimedia cabinet shall also have grommets for wire management. The TV/Multimedia cabinet shall be located along or near the teaching wall
- R. **Other Considerations** - N/A

**SPATIAL RELATIONSHIPS**

**General Classrooms**



MS – Material Storage  
TP – Teacher Planning

Not all spaces are shown

DRAFT - Scheduled for March 05' Board Meeting

**EXCEPTIONAL STUDENT EDUCATION**  
**(FUTURE)**

**I. PROGRAM PHILOSOPHY**

All exceptional students are entitled to receive appropriate educational services in the least restrictive environment which will enable them to have full equality of opportunity. Instructional program must fully meet the educational needs of students who deviate from the average to the extent that they require special education to develop their maximum potential.

**II. PROGRAM GOALS**

Students with special learning differences will be provided educational programs designed to meet their individual needs. Diagnostic evaluation, prescriptive planning and implementation of individual student programs will be provided.

**III. PROGRAM ACTIVITIES**

Students with special learning styles will be provided educational programs designed to meet their individual needs. Individualized and small group instruction will be provided in academic, learning strategies, pre-vocational/vocational, and daily living skills curriculum area.

**A. Specific Activities**

**1. Emotionally Handicapped/Severely Emotionally Handicapped**

- a. Behavior adjustment and group interaction: behavior management techniques and affective curriculum
- b. Academic instruction: remedial or regular curriculum
- c. Functional life skills
- d. Vocational preparation

**2. Educable Mentally Handicapped**

- a. Instruction in basic academic skills, social studies and science
- b. Social-personal skills development
- c. Functional life skills
- d. Vocational preparation
- e. Community referenced instruction

**3. Trainable Mentally Handicapped**

- a. Personal - social development, self management/home living skills
- b. Independent daily living skills, general community functioning skills

- c. Instruction in basic skills, functional academics
- d. Communication, embedded communication/motor/social skills
- e. Vocational preparation
- f. Community based instruction

**4. Autistic**

- a. Structured program to provide instructional strategies where Students frequently experience success.
- b. Academic instruction: remedial and/or regular curriculum.
- c. Functional life skills.

**5. Itinerant Rooms / Supplementary Instruction**

- a. Individualized or small group therapy
- b. Diagnostic testing
- c. Itinerant instruction: Hearing Impaired, Visually Impaired, Speech-Language Impaired)
- d. Psychological evaluations

**6. Teacher Planning**

- a. Program development
- b. Material preparation
- c. Conferences
- d. Office for department chairperson

**IV. ORGANIZATIONAL NOMENCLATURE**

Teacher - Student Ratio

Self contained Instructional Classrooms: 1:10

Includes Physically Handicapped, Emotionally Handicapped and Trainable Mental Handicapped.

Part-Time Instructional Classrooms: 1:15

Includes Educable Mentally Handicapped, Specific Learning Disability, Hearing/Visually Impaired.

Laboratory: 1:12

Grade Levels for Which Program is Intended 9 - 12

**V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES**

- A. After school and adult education classes specific to each exceptionality, e.g., Emotionally Handicapped - day treatment
- B. General use - Availability of interactive video with appropriate hook-ups. Access to

computers in each classroom.

- C. Laboratory – One of the two laboratories shall be designed as a F.A.C.B.C. model apartment for teaching life skills (Trainable Mentally Handicapped Laboratory). It includes kitchen, laundry, and bathroom facilities.
- D. Other instructional uses can be for programs for English for Speakers of Other Languages.

**VI. JUSTIFICATION FOR VARIANCE FROM STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (S.R.E.F.)**

- A. ESE classrooms and related spaces shall be disbursed throughout the campus in compliance with the School District inclusion philosophy and can be used as general classrooms for flexibility purposes.
- B. ESE restroom/changing room with shower, 3' x 5', wheelchair, roll-in capability, toilet, cot and sink in compliance with F.A.C.B.C. shall be provided. Restroom shall be a separate sterile space with private corridor entrance opening to the hallway.
- C. Material Storage and Student Storage shall be folded into the ESE Resource Room to create a larger instructional space.
- D. The General Classrooms are shown as part of the ESE. However these ESE classrooms can be used as Part-Time instruction and are at the discretionary use of the school Principal.
- E. ESE classrooms should be located on the ground floor whenever possible.



**VII. PROGRAM FACILITIES LIST**

Spaces	Description	SREF Sq. Ft. Total	Proposed		Existing	Proposed		Existing
			Sq. Ft. Per Unit	Sq. Ft. Total	Sq. Ft.	Stu. Sta. Unit	Stu. Stat. Total	Student Stations
<b>FUTURE ESE CLASSROOMS (BUILD-OUT)</b>								
<b>EXCEPTIONAL STUDENT EDUCATION</b>								
2	Self Contained Classroom		900	1,800		10	20	
2	Restroom, Student		40	80				
	<b>Subtotal</b>			<b>1,880</b>				
3	General Classroom (for use of ESE)		756	2,268		25	75	
3	Material Storage		90	270				
3	Teacher Planning		54	162				
	<b>Subtotal</b>		<b>900</b>	<b>2,700</b>				
3	ESE Resource Room		672	2,016				
3	Material Storage		155	465				
3	Student Storage		40	120				
	<b>Subtotal</b>		<b>867</b>	<b>2,601</b>				
	<b>TOTAL</b>			<b>7,181</b>			<b>95</b>	

**VII. PROGRAM FURNITURE AND EQUIPMENT**

**A. Self-Contained**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
5-10		X	Student desk, adjustable
1		X	Teacher desk and chair
1		X	File cabinet, four-drawer, vertical or lateral, lockable
3		X	Activity table
2		X	Cabinet, general storage with four adjustable shelves on one side, marker board on the other, with casters
2		X	Cabinet, cubbies with plastic trays on one side, marker board on the other.
1		X	Bookcase, double-sided, three adjustable shelves on each side, with casters
4		x	Carrel, free-standing, with storage shelf & grommets
10-12		X	Chairs, stackable, 18", plastic
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
1	X		Marker Board, 4' x 16', with map rails and flag holder

**DRAFT – Scheduled for March 05' Board Meeting**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
2	X		Tack Board, 4' x 4'
1	X		6'x 8' video format screen with black masking borders
4		X	Computers
2		X	Printers
1	X		Pencil sharpener with proper backing
1	X		Clock
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

**B. General Classroom used as:  
Part - Time**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
10-15		X	Student desk, adjustable
1		X	Teacher desk and chair
1		X	File cabinet, four-drawer, vertical or lateral, lockable
4		X	Activity Table
2		X	Cabinet, general storage with four adjustable shelves on one side, marker board on the other, with casters
5		X	Carrel, free-standing with storage shelf & grommets
15-17		X	Chairs, stackable,
2	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
1	X		Marker Board, 4' x 16', with map rails and flag holder
2	X		Tack Board, 4' x 4'
1	X		6'x 8' video format screen with black masking borders
4		X	Computers
2		X	Printers
1	X		Pencil sharpener with proper backing
1	X		Clock
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

**C. Resource Room**

No. of Items	Contractor Provided	District Provided (FF&E)	Description
1		X	Teacher desk and chair
1		X	File cabinet, four-drawer, vertical or lateral, lockable
1		X	Activity Table
7-10		X	Chairs, stackable, 17", plastic
1	X		Teacher storage cabinet, 36"W x 30"D x 72"H, with adjustable shelving, lockable
2	X		Marker Board, 4' x 8', with map rails and flag holder

No. of Items	Contractor Provided	District Provided (FF&E)	Description
2	X		Tack Board, 4' x 4'
1	X		6'x 8' video format screen with black masking borders
4		X	Computers
2		X	Printers
1	X		Pencil sharpener with proper backing
1	X		Clock
1	X		TV/Multimedia cabinet (refer to General Considerations)
	X		Built-ins (refer to special considerations)

**IX. SPECIAL CONSIDERATIONS**

- A. **Heating/Cooling/Ventilation** - As required to meet District Standards.
- B. **Acoustical** - As required to meet District Standards.
- C. **Floor** - As required to meet District Standards.
- D. **Walls** - As required to meet District Standards.
- E. **Ceiling** - As required to meet District Standards.
- F. **Lighting** - As required to meet District Standards.
- G. **Windows** - As required to meet District Standards.
- H. **Doors** - As required to meet District Standards.
- I. **Water/Plumbing Fixtures** - As required to meet District Standards.
- J. **Communications** - As required to meet District Standards. Provide a telephone jack and a dedicated line for telecommunication hearing and visually impaired.
- K. **Electrical** - As required to meet District Standards.
- L. **Instructional Technology** - As required to meet District Standards.
- M. **Gas and Air** - As required to meet District Standards.
- N. **Safety** - As required to meet District Standards.
- O. **Fencing** - As required to meet District Standards.

P. **Service Drives** - As required to meet District Standards. Laboratory shall be accessible for commercial delivery.

Q. **Parking** – As required to meet District Standards.

R. **Built-ins**

1. **Self Contained; Part-Time & ESE Resource Rooms**

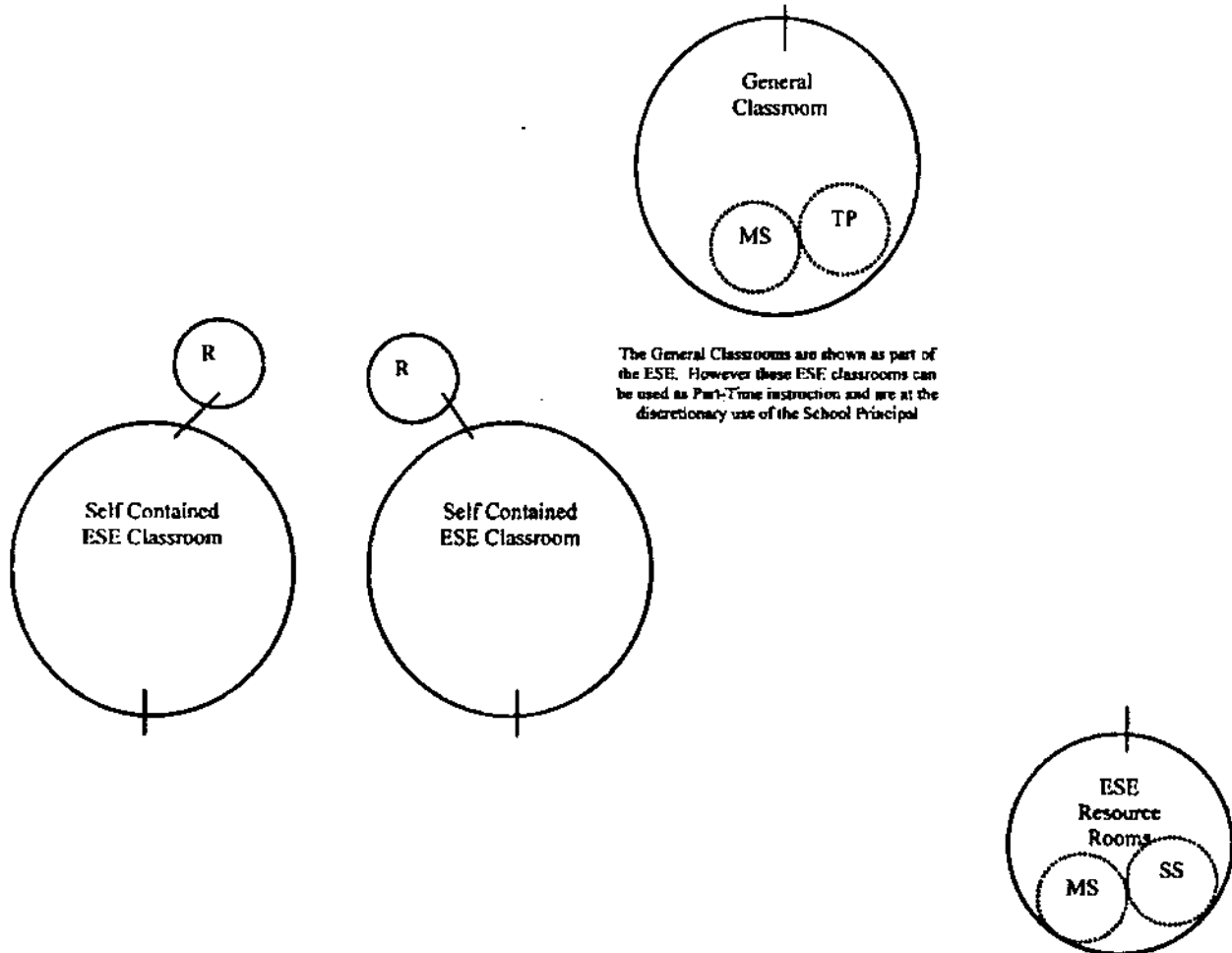
- a. Provide base cabinets with lockable doors and adjustable shelves and upper cabinets with lockable doors and adjustable shelves.
- b. Provide built-in bookcase, 5'L. x 15"D. w/adjustable shelves.
- c. Provide computer counter to accommodate four (4) computers and two (2) printers (14' Wx 30"D). Counter shall have grommets for wire management.
- d. Provide TV/Multimedia cabinet, approximately 48" in height with the TV monitor sitting on top of the cabinet. The TV/Multimedia cabinet shall include lockable doors with adjustable shelving for multimedia equipment. The TV/Multimedia cabinet shall also have grommets for wire management. The TV/Multimedia cabinet shall be located along or near the teaching wall

S. **Other Considerations**

1. The use of observation window(s) in ESE classroom(s) will be reviewed on a school by school basis.
2. The architect shall work with District staff with regards of the placement of ESE classrooms on the floor plan.

**SPATIAL RELATIONSHIPS**

**Exceptional Student Education**



MS = Material Storage  
SS = Student Storage  
R = Restroom

Not all rooms are shown

**FACILITY SPACE SUMMARY**

Grades 9-12

Modification & New Construction

Existing CSR Student Stations (excluding existing Science Bldg.): 1680

New Academy Student Stations: 160

New Science Addition Student Stations: 325

New Total CSR Student Stations: 2165

Utilization Factor: 95%

FISH Capacity: 2057

Projected Enrollment FY09 – FY10: 1782

Future New CSR Student Stations: 545

Grand Total CSR Student Stations: 2710

Utilization Factor: 95%

Future FISH CSR Capacity: 2574

Program Capacity: 2500

Facility Area	Proposed	Existing	Proposed	Existing	Future Build-Out	
	Student Stations	Student Stations	Square Footage	Square Footage	Student Stations	Square Footage
<b>Academy Programs</b>						
Business Administration/Finance/Retail		73		6,366		
Information Technology	60		5,295			
ROTC		29		2,140		
STEM	100	19	6,360	3,803		
Staff Restrooms			64			
Student Restroom			240			
Custodial			176			
Teacher Planning			400			
<b>Science/Addition</b>						
Science Classrooms	325		18,040			
Staff Restrooms			130			
Student Restroom			488			
Custodial			358			
Teacher Planning			400			
<b>Future Classrooms (Build-Out)</b>						
General Classrooms					450	16,200
ESE Classrooms					95	7,181
Staff Restrooms						218
Student Restroom						818
Custodial						600
Teacher Planning						800
<b>Totals</b>			<b>31,950</b>	<b>12,309</b>	<b>545</b>	<b>25,816</b>
<b>Mechanical @ 6%</b>			<b>1,917</b>			<b>1,549</b>
<b>Total Net Sq. Ft.</b>			<b>33,867</b>			<b>27,365</b>
<b>Circulation, Walls etc. @ 34%</b>			<b>11,515</b>			<b>9,304</b>
<b>Total Gross Sq. Ft.</b>			<b>45,382</b>			<b>36,669</b>