AGENDA

Meeting Type:	SPECIAL
Date:	06/15/1999
JOINT MEETING:	CITY/COUNTY/SCHOOLS

City of Charlotte, City Clerk's Office

Charlotte Mecklenburg Board of Education
Post Office Box 30035
Charlotte North Carolina 28230 0035
Telephone (704) 379 7141

Arthur Griffin Jr Chairperson
John W Lassiter Vice Chairperson
Wilhelmenia I Rembert At large
James H Puckett District 1
Vilma D Leake District 2
George R Dunlap District 3
Louise S Woods District 4
Molly B Griffin District 5
Lindalyn Kakadelis District 6

Joint Luncheon

City Council/County Commission/Board of Education
Mecklenburg Town Mayors

June 15, 1999, 12 00 Noon
Room 267, Government Center

Agenda

1 Welcome

2 Report on Bright Beginnings Prekindergarten Program

3 Teaching in the 21st Century

4 Update on the Technical High School

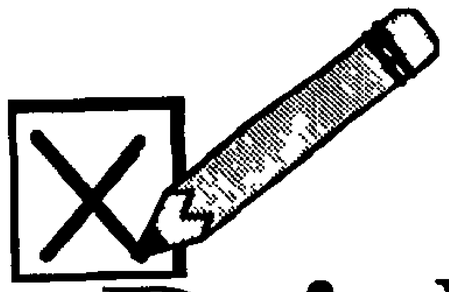
5 Adjournment

Bright Beginnings

Program Goal

To provide a literacy-based program for four-year-olds creating a foundation for emergent literacy development

Goals 2001



Bright Beginnings is linked to the district's long-range goal for third grade reading.

Background Data

- 1,938 in 1998-99
- Larger than 12 N.C. school districts
- 9 Head Start collaborative classrooms in 1998-99 (11 to 15 in 1999-2000)
- 102 classrooms in 1998-99 (102 in 1999-2000)
- 3 Centers, 7 school-based sites
- Collaboration with corporate and community partners

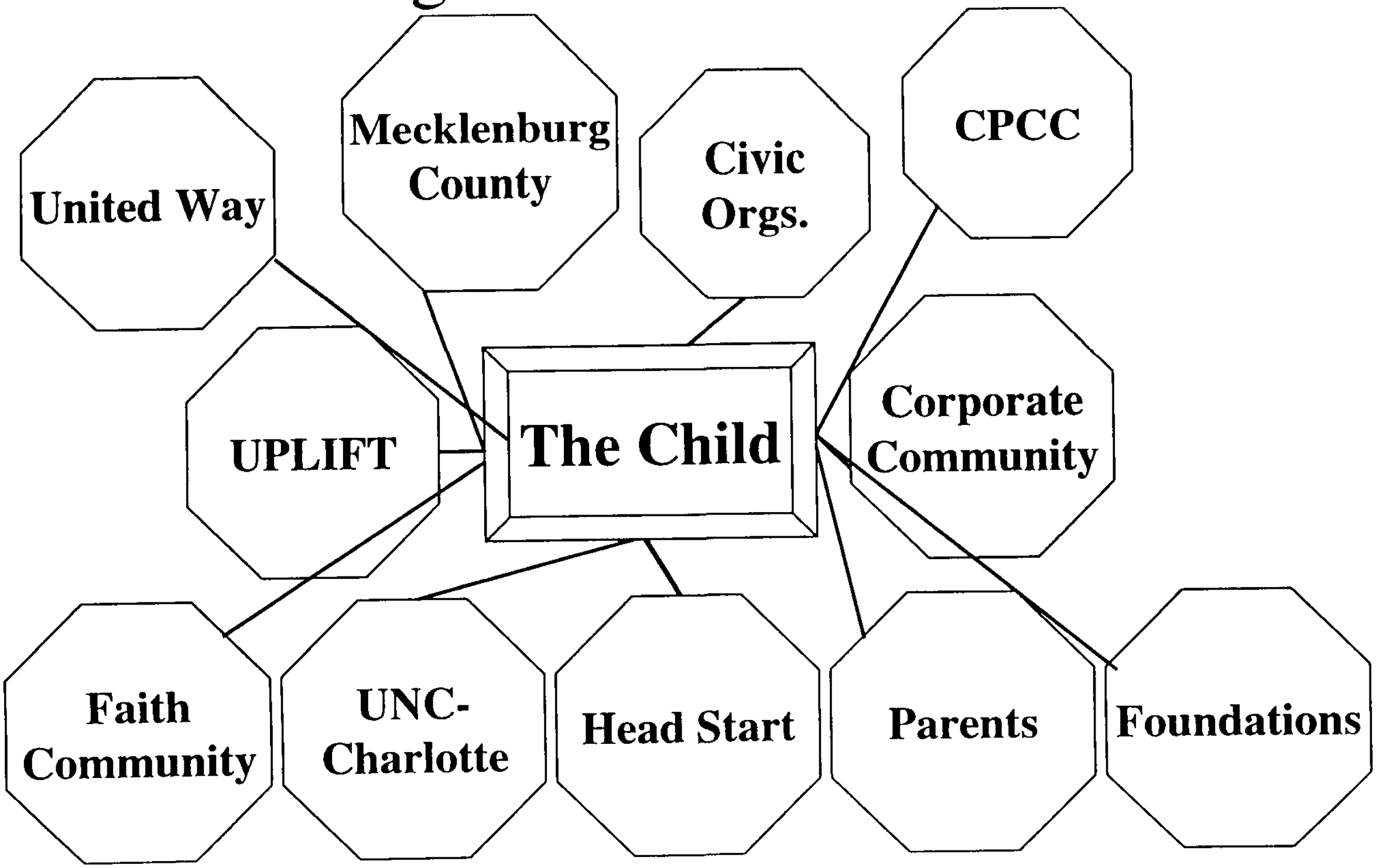
Children were screened to select those with the highest educational need. Items included:

- Letter Identification
- Number Identification/Counting
- Colors and Shapes
- Phonemic Awareness
- Other Developmental Measures

End-of-Year Achievement
selected COR Items

	High/Scope sample	Bright Beg.
Cooperating in program routines	3.8	4.0
Engaging in social problem-solving	3.4	3.6
Speaking	3.4	3.6
Showing interest in reading activities	3.5	4.3
Demonstrating knowledge about books	3.0	4.0
Beginning reading	2.1	3.0
Beginning writing	2.6	3.3
Sorting	2.6	3.1
Counting objects	3.5	4.5

Family-School-Community Partnerships Promoting the PreK Child's Success



Charlotte-Mecklenburg Schools
Curriculum Department
Walton Plaza – Suite 506
700 E Stonewall Street
Charlotte North Carolina 28202
Telephone (704) 343 6975

Eric J Smith Ed D
Superintendent

TECHNICAL HIGH SCHOOL FACILITIES PROGRAM

The attached document is for your review and is a result of the work completed by the CMS planning committee, the technical high school planning committee and the architects of Schenkle Shultz Architecture

Please be advised that the program document has two volumes, Volume1/summary document, (attached) and Volume 2/technical document, (not included at this time) The documents supply the following information

Volume 1/summary document

- a facility space listing for all the programmed spaces in the facility
- program description for the career clusters and other core spaces
- diagrammatic graphics representing the spatial relationship between the various elements
- the verbal imagery narrative that was developed in the group sessions
- the visual imagery summary that was developed in the group sessions

Volume 2/technical document

- back up information
- specifications
- furniture fixture and equipment listings
- cut sheets and other technical information
- state guidelines for career program space
- CMS program requirements
- response sheets and information that CMS program specialists provided to assist in the design process

Together these two documents comprise the critical information that the architects will utilize to develop the design documents for the project As the second/technical document is quite volumous and contains the finite details about each program it has not included it at this time If however, you would like to review this work please advise me accordingly and arrangements will be made for your review

Contact Person Patricia Sullivan

WORKFORCE DEVELOPMENT COURSES

COMPUTER SCIENCE & INFORMATION SYSTEMS	CONSTRUCTION TECHNOLOGY	ENVIRONMENTAL SCIENCE SYSTEMS	HALTH SCIENCE AND TECHNOLOGY	MANUFACTURING & ENGINEERING SYSTEMS	TRANSPORTATION SYSTEMS
Computer Applications I & II	Carpentry I & II	Agriscience Applications	Biomedical Technology	Fundamentals of Technology	Auto Service Technology I, II
Computerized Accounting I, II	Electrical Trades I, II, III	Horticulture I, II	Health Team Relations	Principles of Technology	Heavy Equipment & Transportation I, II
Business & Electronic Communications	HVAC I, II, III	Environmental & Natural Resources	Medical Science I, II	Pre-Engineering I (CareerPlus)	Transportation Advanced Studies
Business Management & Applications	Masonry I, II, III	Environmental Systems	Foods & Nutrition	Pre-Engineering II (TechnoCareers)	
Business Law	Plumbing I, II, III	Earth/Environmental Science	Parenting & Child Development	Drafting/CADD	
Business & Financial Management	Introduction to T & I	Entomology	Food Science	Electro-Mechanical Technology I, II, III	
Small Business/ Entrepreneurship	Wheels of Learning	Geology	Health Science Advanced Studies	Electronics I, II, III	
Network Administration I, II	T & I Advanced Studies	Botany		Graphic Communications I, II	
Marketing		Environmental Chemistry		Flexography	
Business Advanced Studies		Atmosphere Science		Scientific & Technical Visualization I, II	

		Zoology		Computer Engineering Technology I, II, III (CISCO)	
		Metrology		Manufacturing & Engineering Advanced Studies	
		Oceanography			
		Environmental Science Advanced Studies			

CHARLOTTE-MECKLENBURG SCHOOLS
Technical High School

Turning Dreams into Opportunity

The mission of the technical high school as adopted by the Technical High School Advisory board is ' To develop more fully the occupational skills academic competencies and lifelong learning abilities needed by students prepared to enter a technologically advanced workplace or post-secondary education "

In 1997 the Career Cluster Committee representing business, industry, secondary and post-secondary education and the community identified six career clusters for the technical high school

- **Computer Science and Information** – office information and management information systems
- **Construction Technologies** – carpentry, electrical, masonry plumbing HVAC
- **Environmental and Science Systems** – biosystems, ecosystems, physical systems
- **Health Science and Technologies** - diagnostics therapeutics, information systems, environment, health promotion
- **Manufacturing and Engineering Systems** – engineering production, service
- **Transportation** – automotive diesel aviation maintenance

Open to all students grades 9 through 12 in Mecklenburg County, the technical high school is designed to engage students with individually tailored career concentrations and challenging core academics combined with work-based learning opportunities The school will be structured after best practices derived from business and education throughout the United States Partnerships with parents and families, business, industry and labor, community-based organizations, and higher education will diversify learning settings and make learning up-to-date and meaningful The relevant and rigorous academic curriculum will be taught in an applied manner and will meet or exceed the North Carolina state academic graduation requirements Features such as concentrated math and science sequences in the ninth and tenth grades will challenge students Interdisciplinary and integrated teaching will assist students with the association of contextual learning Problem solving and teaming will be reinforced through the core curriculum, technology-oriented classes and work-based learning In addition to core academics and technical skills, students will be encouraged to develop a work ethic and master communication skills needed for success in today's workplace

Upon completion of a program of study and graduation, students will be prepared to enter into a college, two-year college, technical training program or the workforce Advanced English, math, science and foreign language are strongly recommended electives for each career cluster

6/99

In general, the hierarchy of information to be used in programming the facility is

1. *February Planning Session Data*
2. *N C Department of Public Instruction - Work-based Learning Program Standards*
3. *Industry Specifications*
4. *'94 CMS Facility Standards, including 1998-1999 Edition NCHSAA Handbook & NFHS' 1999 court and field guidelines*

Table of Contents

Section 1 *Mission Statement*

Section 2 *Design Philosophy*
Photo & Verbal Imagery Surveys

Section 3 *Site Location Map*
Site Design Considerations/Criteria
Project Timeline

Section 4 *Facility Space Program List*
Relationship Diagrams (2)

Section 5 *Space Program Summary Sheets*

Separately Bound Appendices

Appendix A *Detail for Facility Program Areas*
- February Worksession Data
- N.C. Department of Professional Instruction: Program Sheets
- CMS High School Standards (2/15/94)

Charlotte-Mecklenburg Schools
Mission and Goals
Technical High School

Mission

To develop more fully the lifelong learning abilities and attitudes, academic competencies, and workplace skill sets needed by students preparing to enter the technologically advance workplace and/or post-secondary education

Goals

1 To prepare students for technologically oriented careers and for the lifelong earning which those careers demand

2 To provide technical education relevant to the workplace

3 To offer instruction in the advanced technologies appropriate to the needs of students preparing for post-secondary education

4 To instill a strong work ethic and character traits which are consistent with responsible citizenship

5 To meet students' needs for personal growth and fulfillment

6 To involve educators, parents and mentors/advocates in the educational development of each student

7 To draw upon the human and equipment resources of local colleges, universities, businesses, and industries in order to maximize instructional benefits for the students and minimize duplication of community assets

8 To effect continuous improvement in the educational processes and outcomes through meaningful assessment, evaluation and planning

Guiding Principles for the Technical High School

1. ***Preparation***
   Graduates from the THS will have the essential skills competencies and behaviors to succeed in the workplace today and in the future

2. ***Community Collaboration***
   The business and educational communities in Charlotte will collaborate on all aspects of the high school in order to assure that graduates will be equipped to enter the workforce or pursue post-secondary education and training at a community college or university

3. ***Integrated Learning***
   The THS will be designed around multidimensional career clusters which integrate rigorous high-level core academics (English mathematics science and social studies) with technical and applied courses

4. ***Contextual Learning Environments***
   Relevant curriculum and work-based learning will transform workplaces into active components of the education program and provide regular opportunities for students to apply learning to real-world tasks

5. ***Complete Educational Program***
   The THS will have the complete range of secondary school activities and programs including athletics and student organizations related to particular career concentrations

6. ***Quality Educators***
   The school will invest in the development of faculty and staff through ongoing educational training in order to provide high-level interdisciplinary/integrated instruction which will assist the student

Design Philosophy

The network of learning exists in the thousands of interconnected situations that occur throughout our day, week, year, and life Design the built environment to facilitate access for the learner to allow him to look into the windows of the control room or the parliament, if he cannot get in the door, provide spaces in which peers and elders outside the student's immediate horizon become accessible

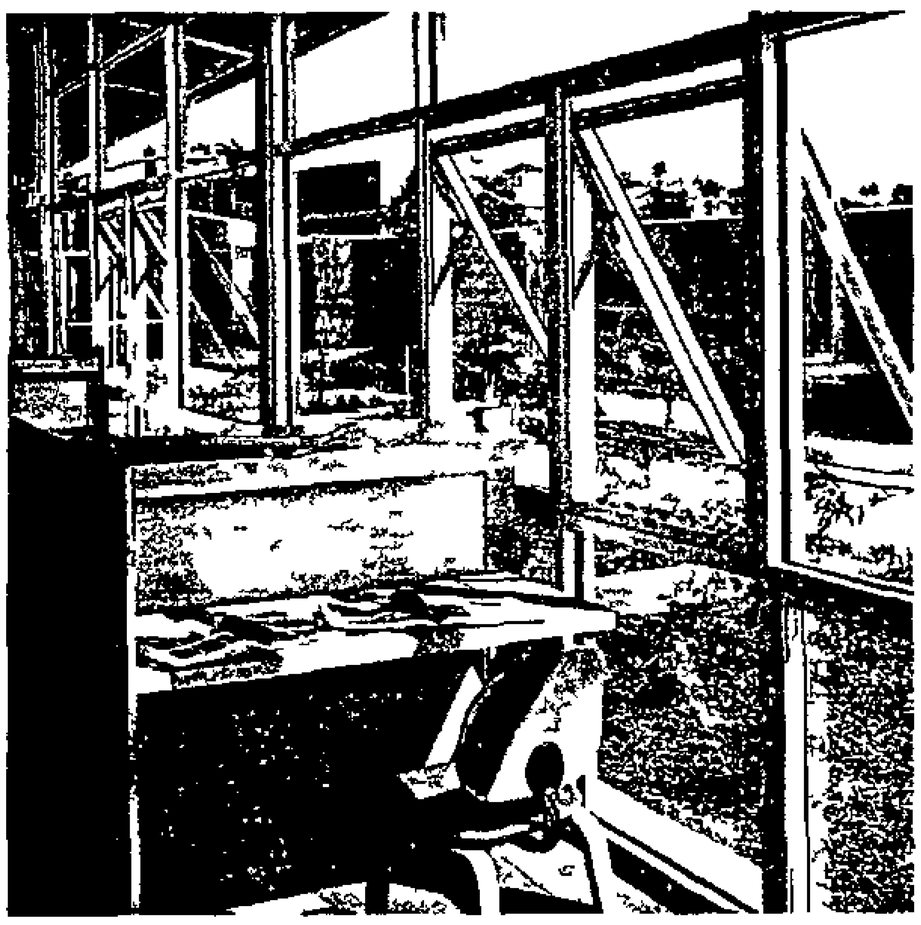
The built environment should meld people of varying interests and life-stages through classes, workgroups and individual explorations into the things they love, learning is decentralized and enriched through contact with many people, in many places This variety of experiences and physical environments forms the backbone of the learning process The design of the educational facility should weave students, facilitators, professionals and apprentices together as a marketplace network for learning Informal activities, a chance meeting, a shared meal, etc , contribute as much to the growth of students as the formal educational activities Self-organized learning should be reinforced by the physical environment

This media space was very attractive The space seems bright and attractive with natural lighting entering the space from continuous clearstory openings up above

- *Use of clerestory windows*
- *Light color finishes and furnishings*
- *Clear span space*
- *Combination of architectural & natural lighting*

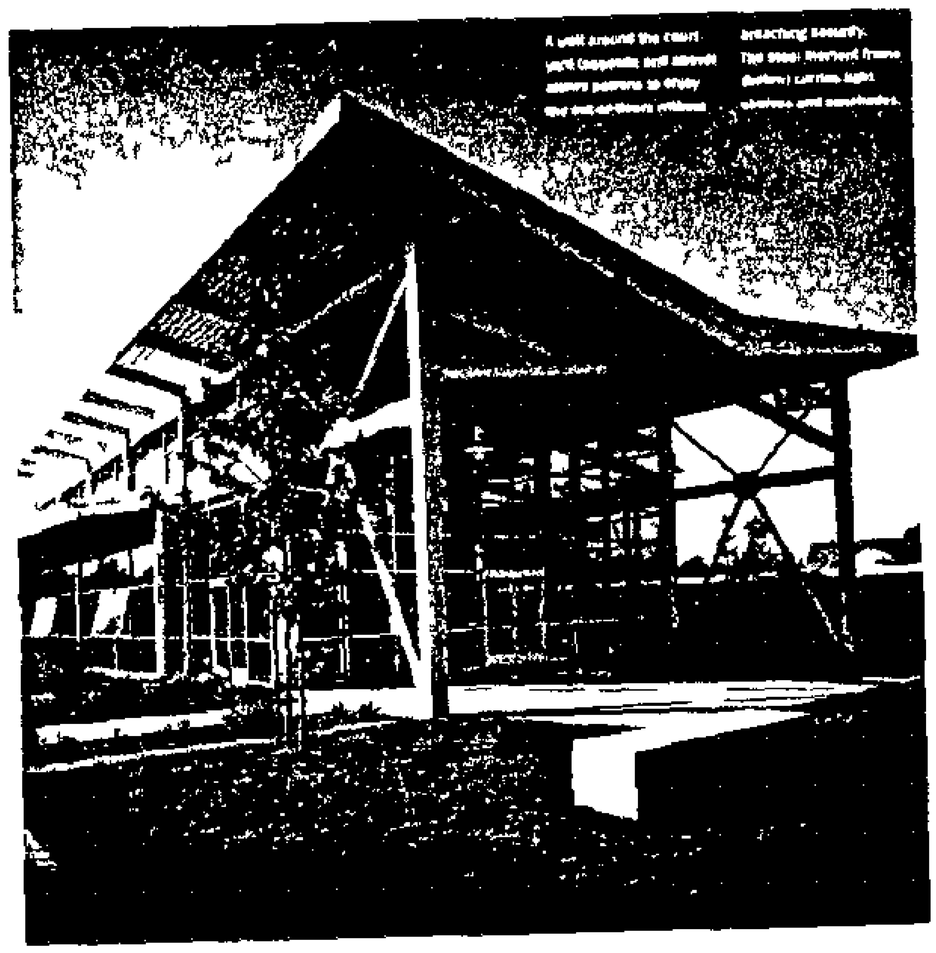
In this image, the large expanse of glass provides an "open" and attractive environment The architecture makes a clear connection to the outdoor space

- *Use of floor-to ceiling glass curtain wall system as exterior skin*
- *Use to two story volumes*
- *Use of building perimeter as open spaces enclosed space located toward the building s center*



This image was perceived as "modern but not sterile" The idea that the windows were operable was considered a plus The space was also described as "functional with a connection to the outdoors"

- *Use of floor to ceiling glass curtain wall system as exterior skin with human scale articulation*
- *Use to operable windows connects to connect to the natural environment*
- *Use of wood furnishings*



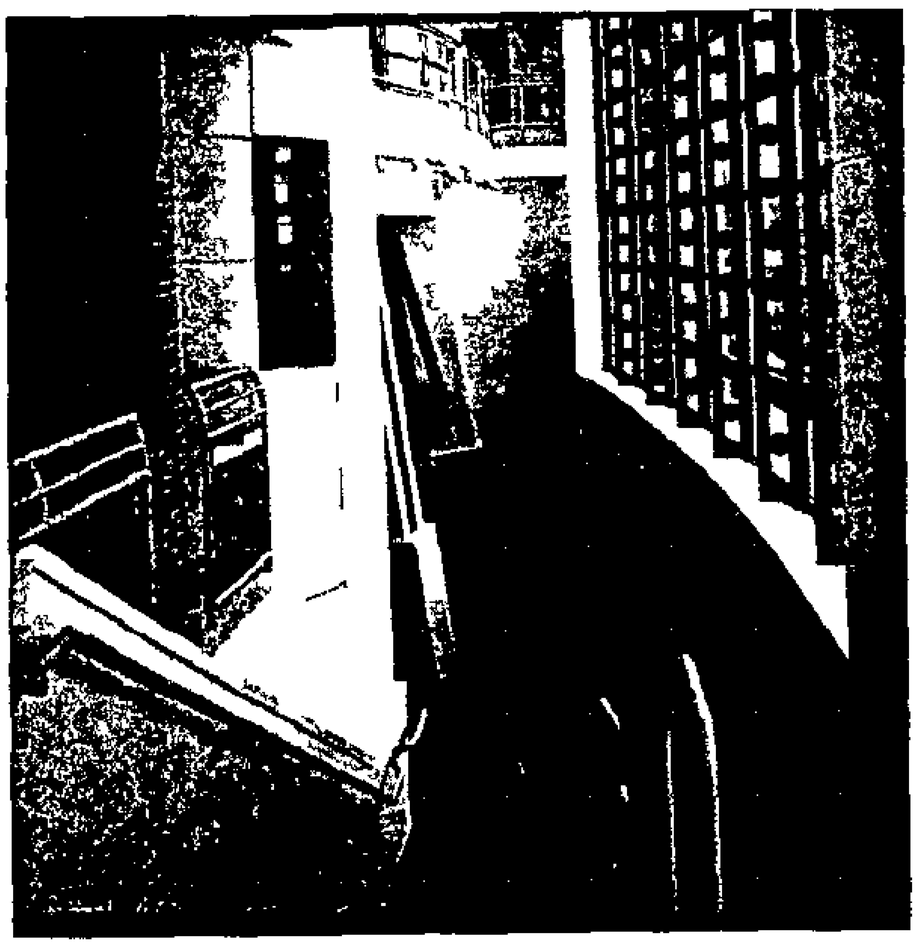
This image was enticing to the group as a symbol of openness and having a sense of awareness of the surrounding environment

- *Use of glass curtain wall system as exterior skin*
- *Use to multi-story volumes at building's perimeter*
- *Use of building interior perimeter as open space enclosed space located toward the building's center*
- *Use building structure to transition from built to natural environment*

The idea of outdoor space associated with the school seems to make sense With a strong environmental program that will utilize the outdoors as an extension to their lab these type of spaces are important attributes to the school

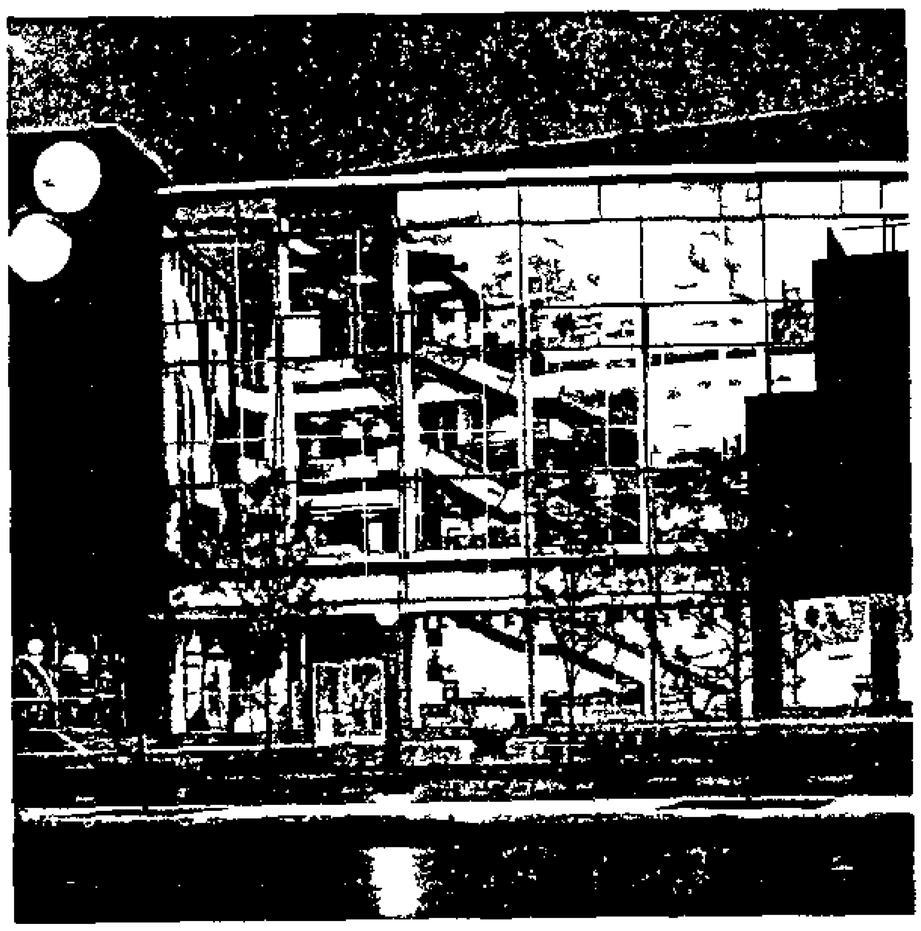
- *Use of floor to-ceiling glass curtain wall system as exterior skin to reinforce how your feet inside the building are connected to the ground outside*
- *Use of vistas into exterior environment*
- *Use planting beds and landscape elements that physically tie school's building edge to adjoining properties*

(see comments above)



The use of natural light and color in this circulation space was dramatic and desirable

- *Use of primary color accents against a light background*
- *Use of multi story volumes*
- *Use of large geometric surfaces in varying planes with patterning at a human scale*
- *Crossing paths*

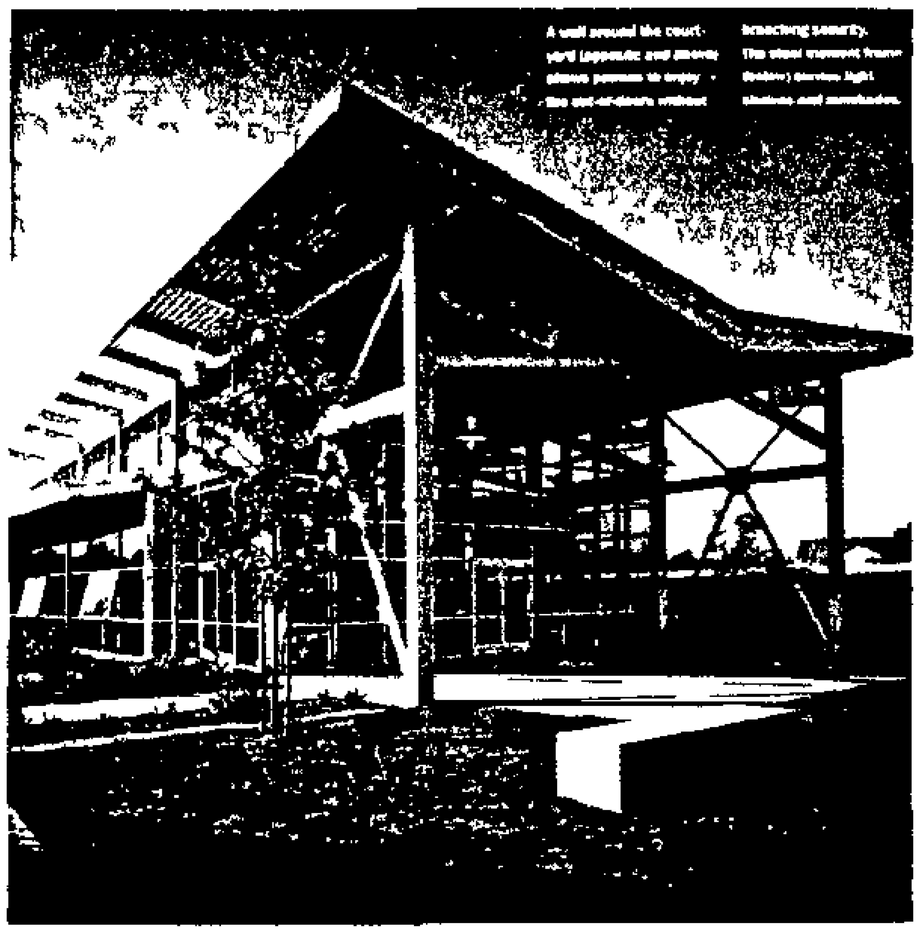


This image was seen as "inviting and light" It was of particular interest that this image became a billboard or "image of the school" to the surrounding community that was "readily visible"

- *Use of floor to ceiling glass curtain wall system as exterior skin*
- *Use to multi story volumes at building s perimeter*
- *Exposed circulation elements at the building perimeter allowing for visibility and orientation of users*

This image was viewed as both "technical and industrial" It provides a "clean working environment" for many of the lab spaces that will make up the school The open bright space filled with natural light provides an excellent educational environment

- *Use of large scale building access elements*
- *Use of multi story volumes and exposed systems which connects the student to the type of learning*
- *Use of metal finishes and light colored surfaces*



This image was enticing to the group as a symbol of openness and having a sense of awareness of the surrounding environment

- *Use of glass curtain wall system as exterior skin*
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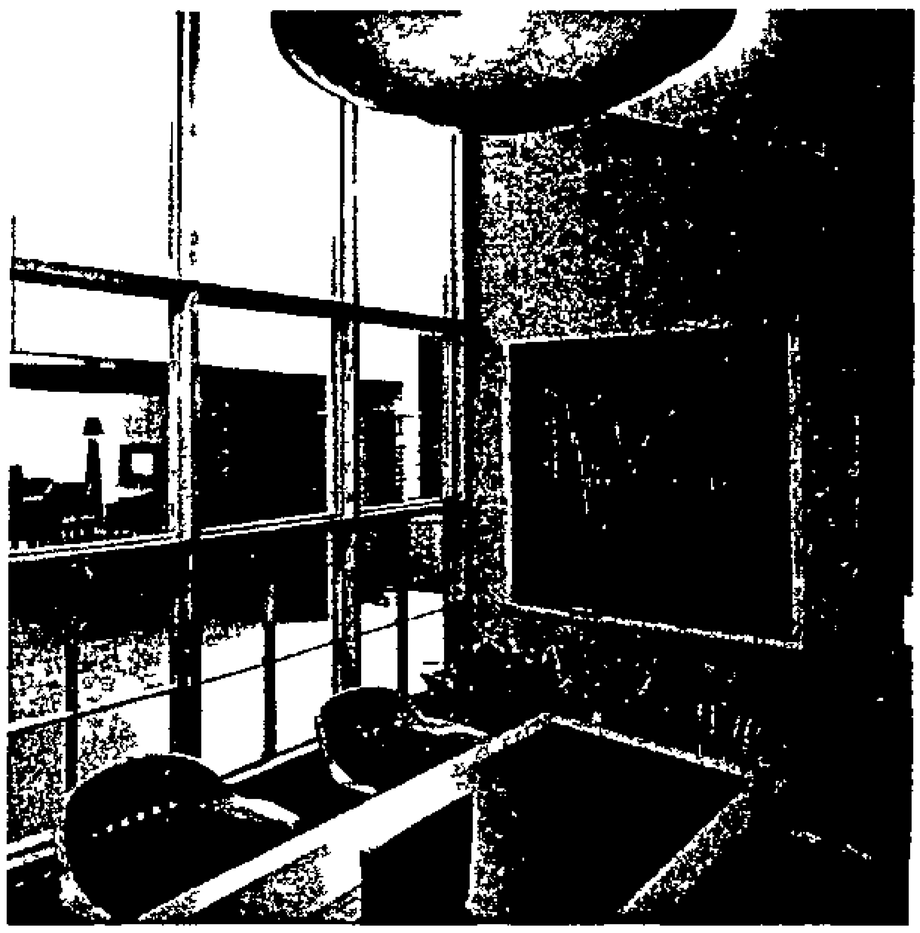


This image was described as "warm and inviting" and as a possible small conference room or gathering space off the main corridor or other educational space The idea of openness and transparency was very attractive

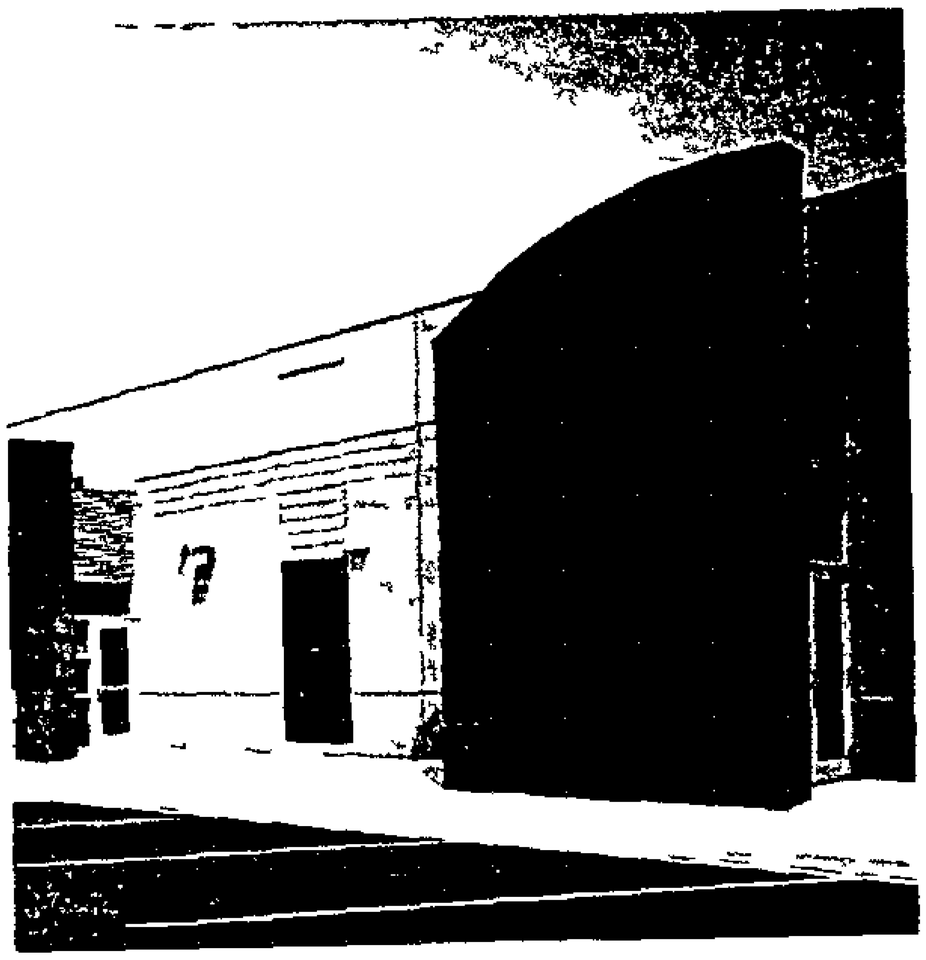
- *Use of wood in furnishings and as building material*
- *Use of windows vision panels between spaces*
- *Development of small break out conference spaces*

The articulated walls in this space were very inviting an interesting The undulating walls suggested flow and movement and the circular pattern brought about the concept of surprise and anticipation The use of wood helped make the space warm and inviting

- *Use of wood as building material*
- *Use of selected curved circulation patterns*
- *Use of refuge and prospect*

This image was described as "professional" and had the "look of a learning center" The tall open windows were appealing and the idea that they focused onto a courtyard was pleasing

- *Develop axial patterns and focus to entry*
- *Use of large scale window patterns*
- *Develop exterior courtyards that buildings face onto*



This photo has a direct correlation to the Technical High School being a vocational school project The program identification through forms and signage was a positive feature The idea of "community inclusive" was discussed in relationship to this image

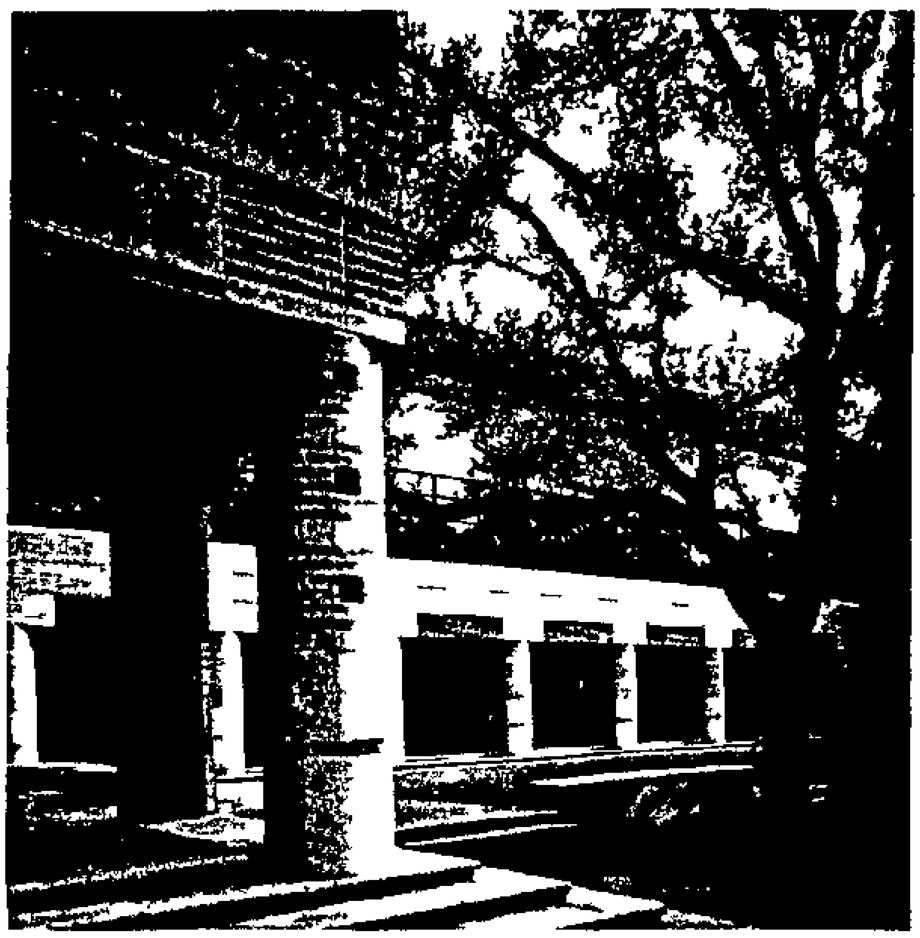
- *Use of building elements to communicate function*
- *Use of building massing to communicate access*

This space was appealing with it's sculpted ceilings and natural lighting The clerestory light cascades over the curved surface and illuminates the circulation corridor The space was described as "light and dynamic"

- *Use of clerestory light and volume spaces to direct soft illumination to the pedestrian*

This image was described as "pleasing and open" The color and illumination at night make this an attractive feature to the building

- *Use of glass volumes and curtain wall systems as exterior skin*
- *Use to multi story volumes at building's perimeter*
- *Use of building interior perimeter as open space enclosed space located toward the building's center*
- *Use of lighting to illuminate and showcase buildings interior workings in evening hours*

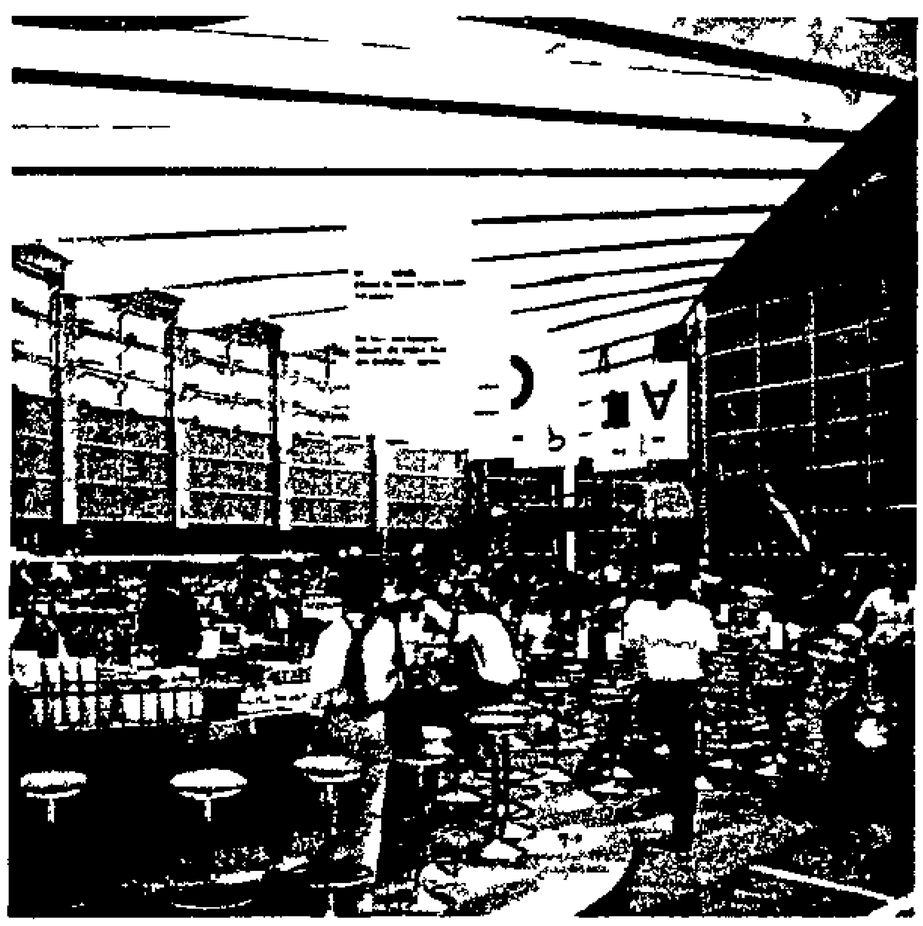


This image had the same comments related below with the addition of the building looking "professional and technical" and a sense of sophistication

- *Use of uniform repetitive elements and pattern across building elevation*
- *Use combination of window systems and design including continuous ribbon windows as part of modern vocabulary*

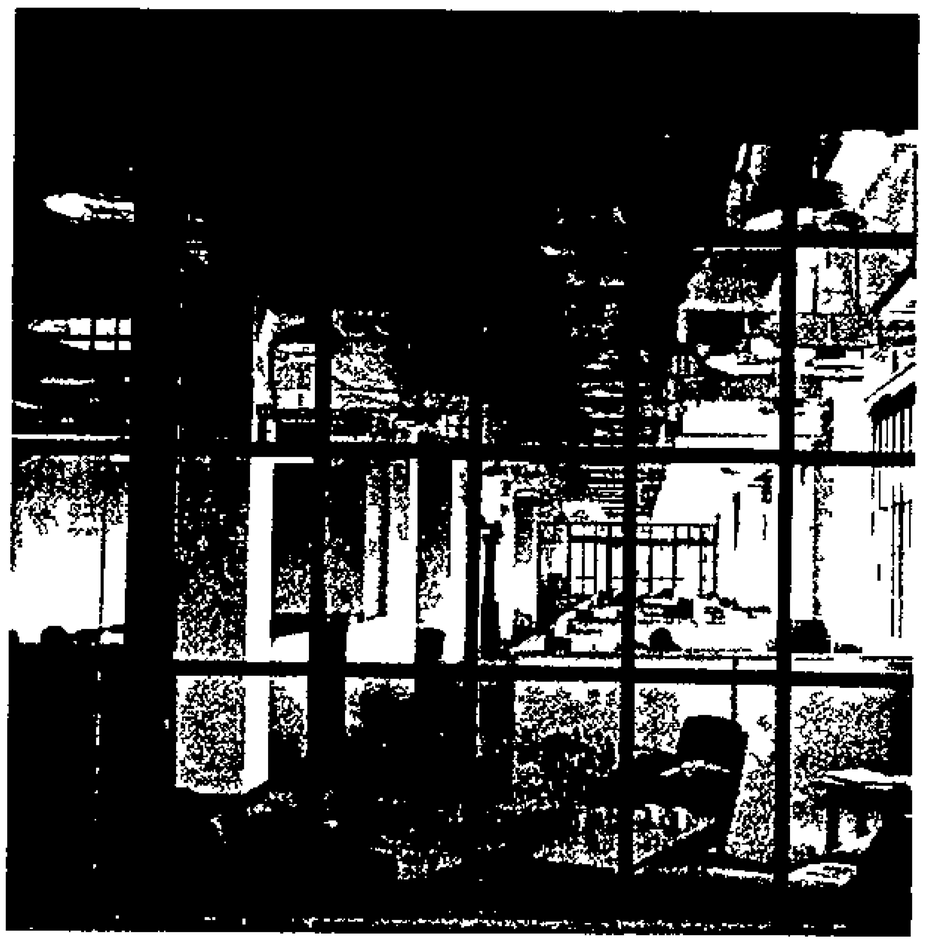
This image was very attractive for it's "park like atmosphere" The lawn space and large overhanging shade trees were an attractive blend with the architecture and a natural extension

- *Use of selective site clearing*
- *Use of materials colored to compliment the landscape palette*
- *Use of covered path and a terraced edge to make an ambiguous boundary between building and natural environment*



This image had mixed review comments The idea of a "Mall" concept where students could gather, talk, eat, and interact was very appealing and interesting The space however wasn't felt to have a sufficient level of excitement The comment was made that it needs to be "more dynamic and interactive"

- *Use of a street cafe experience*
- *Use of natural light*
- *Use of color and natural materials plantings*
- *Use of various types of chairs and tables*
- *Various services available (meals sundries newstand etc)*
- *Use of banners graphics and other devices that provide identification and visual interest to space*

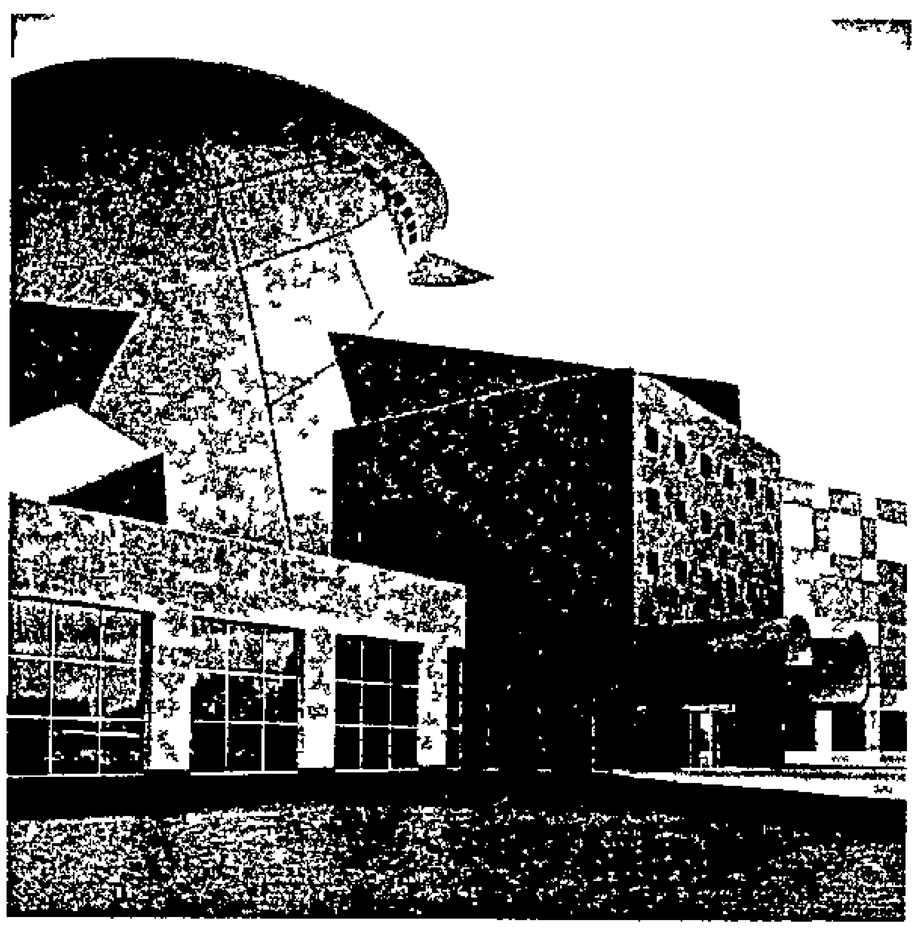


The concept of visibility within the space was very appealing The term "transparency" was used to describe this image Perhaps an application of the way a circulation space could pass by a lab or classroom area was discussed

- *Use of low wall transparent partitions as separations*
- *Use of building structure to articulate separation*

This image was attractive for its use of exterior space The use of low walls, landscape, trees and trellis elements was well received The way the landscape and building connected and blended to gether were desirably The use of outdoor activity space associated with the program is a plus

- *Use of terracing and transparent screening to make an ambiguous boundary between built and natural environments*

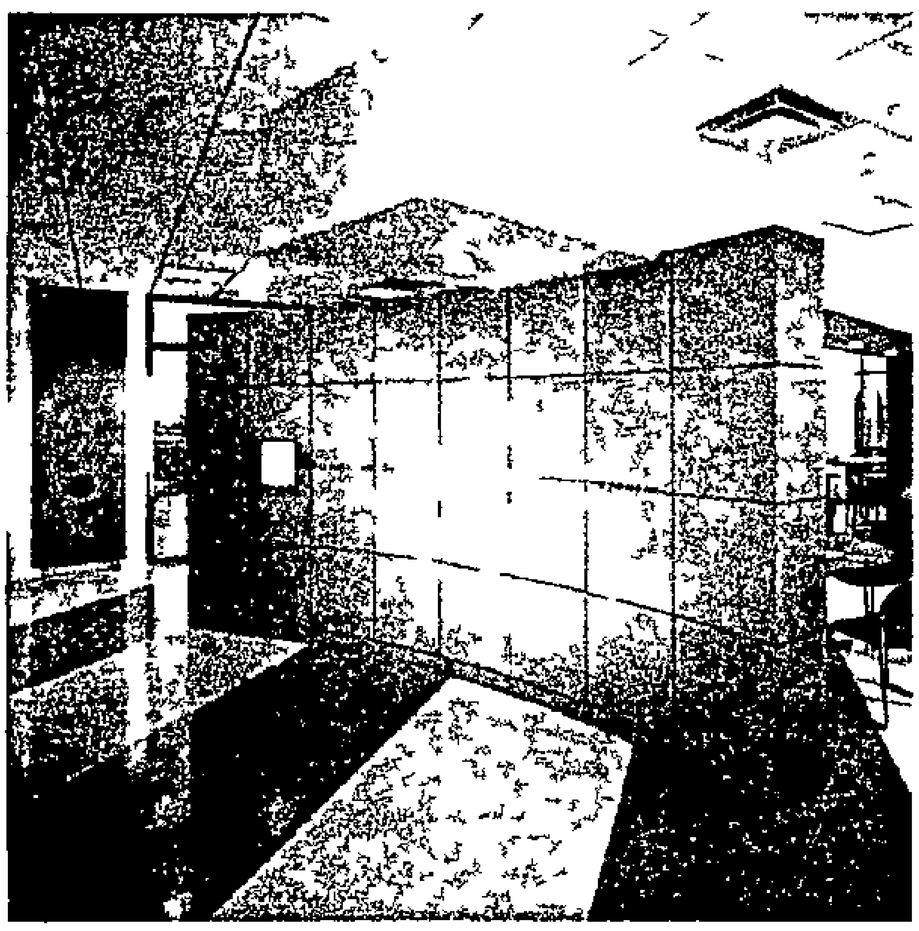


This exciting image was seen as "multifaceted" and "dynamic" The idea of bringing together various geometries to represent the variety of programs represented by the school was appealing

- *Use of large geometric shapes patterns and colors intersecting*
- *Variety of size shape articulation of building windows to give an interesting play of scale*

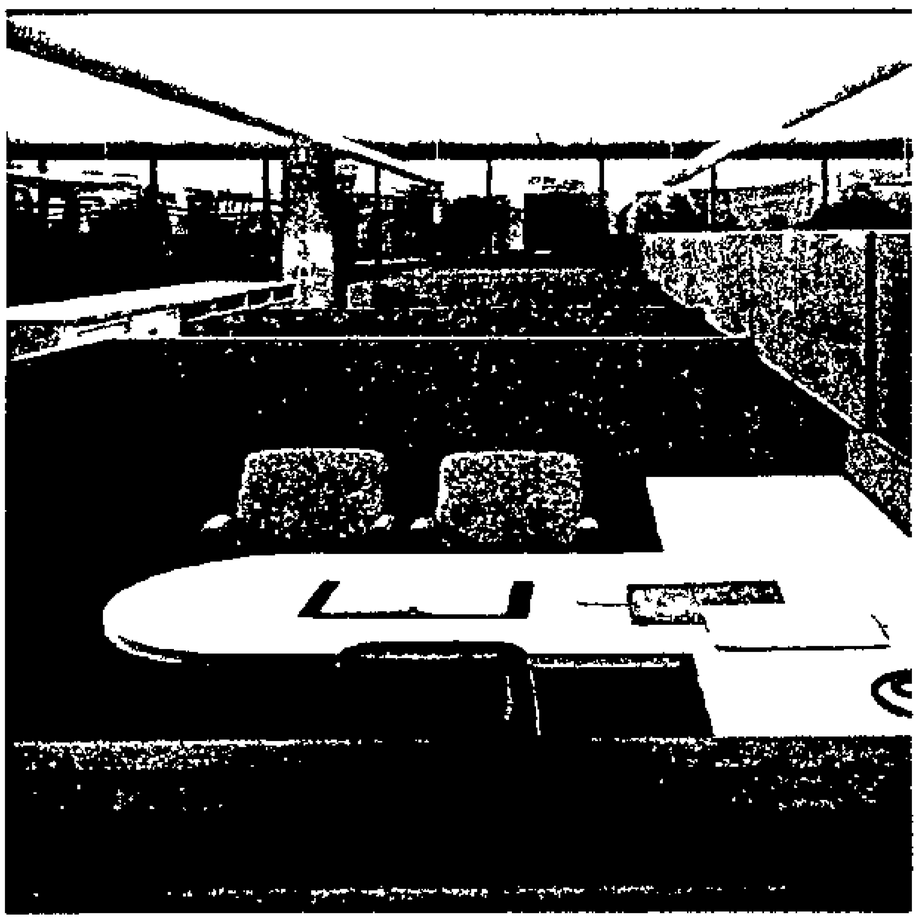
The word "ergonomics" and "curve" were used in describing this space The use of furnishings to create personal space for the students was seen as a plus

- *Use of ergonomically designed workstations*
- *Use of low wall systems furnishings*



The use of exciting partitions to divide up space was seen as attractive and an alternative to full height wall that partition off space The use of color in the project as accents is desirable

- *Use of free standing screens dividers to segment large volume spaces into useable spaces that provide a variety of uses*

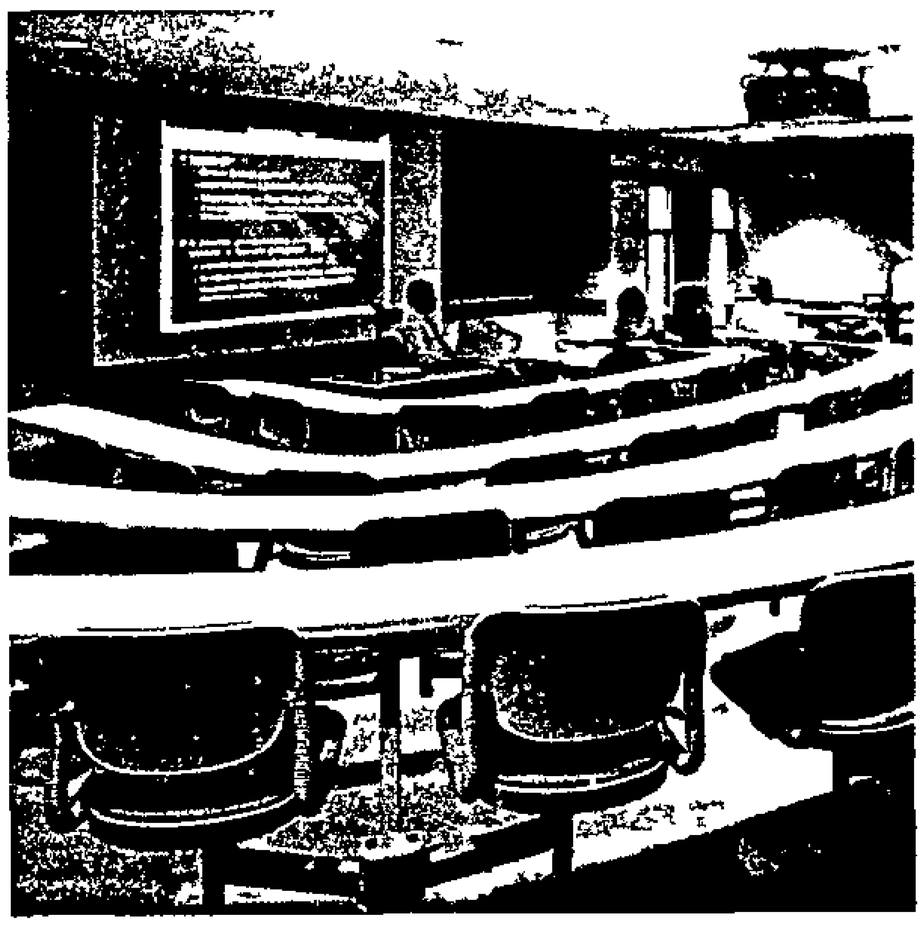


This photo illustrated a professional office environment that was appealing The connection to the outside was very appealing as well as the low partitioning that kept the space open and comfortable

- *Use of window walls along corridors and adjoining related rooms*
- *Use of low wall partitions and systems furnishings to maintain open views and connection to exterior environment*

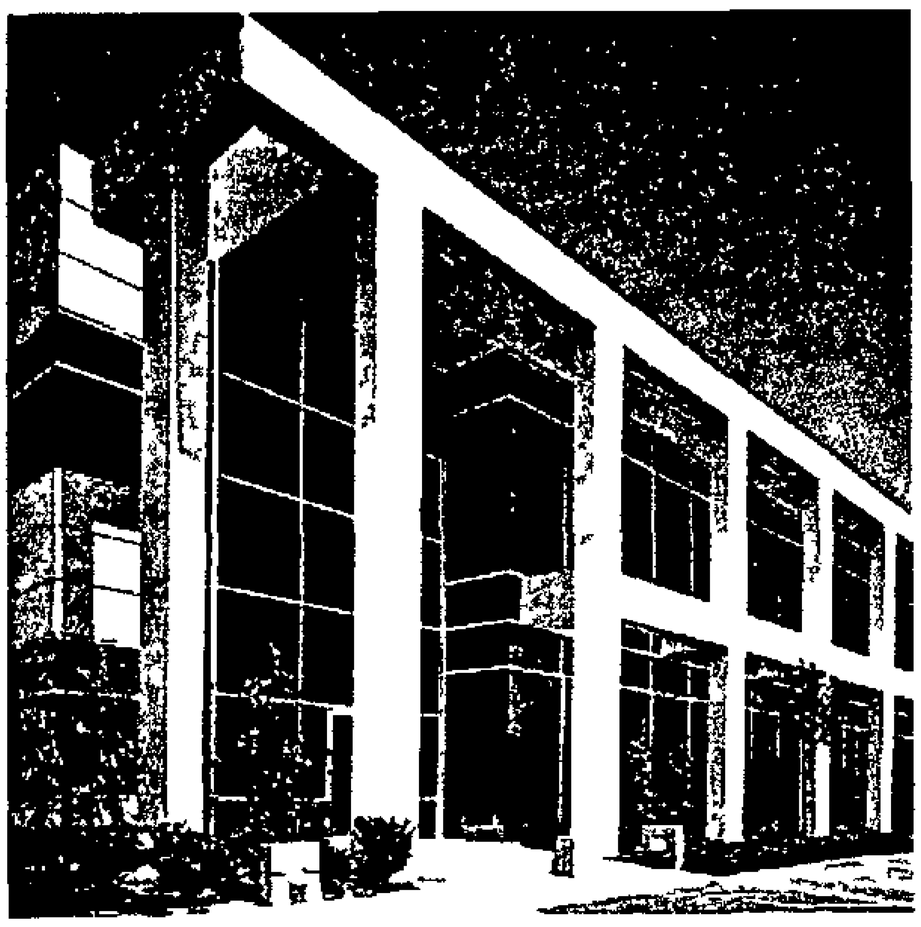
This photo provided a strong sense of entrance and used a blend of old and new to achieve an interesting effect The gates and rhythm of the lighting elements helped focus the attention on the entry as one approached

- *Use of landscape lighting and other non building elements to enhance the entry sequence*
- *Mix of traditional and modern elements in the design composition*



This photo had some obvious direct application to the Technical High School "Focused Learning" was the term used to describe the space The use of technology and the seating arrangement were well received

- *develope task specific learning environments for learning*
- *Provide technology infastructure for learning*



The columns and repetition of the module were of interest in this photo The light color helped make the building seem light and airy

- *Use of building structure as design elements*
- *Use of uniform repetitive elements and pattern across building elevation*
- *Use combination of window systems and design including continuous ribbon windows as part of modern vocabulary*

This space had a very comfortable appeal to it The natural light and views from the space made the environment very inviting

- *Create nooks and small areas with views and vistas where students and faculty can gather for informal dialogue or activity*
- *Use of two story glazing for broad connection to exterior environment*

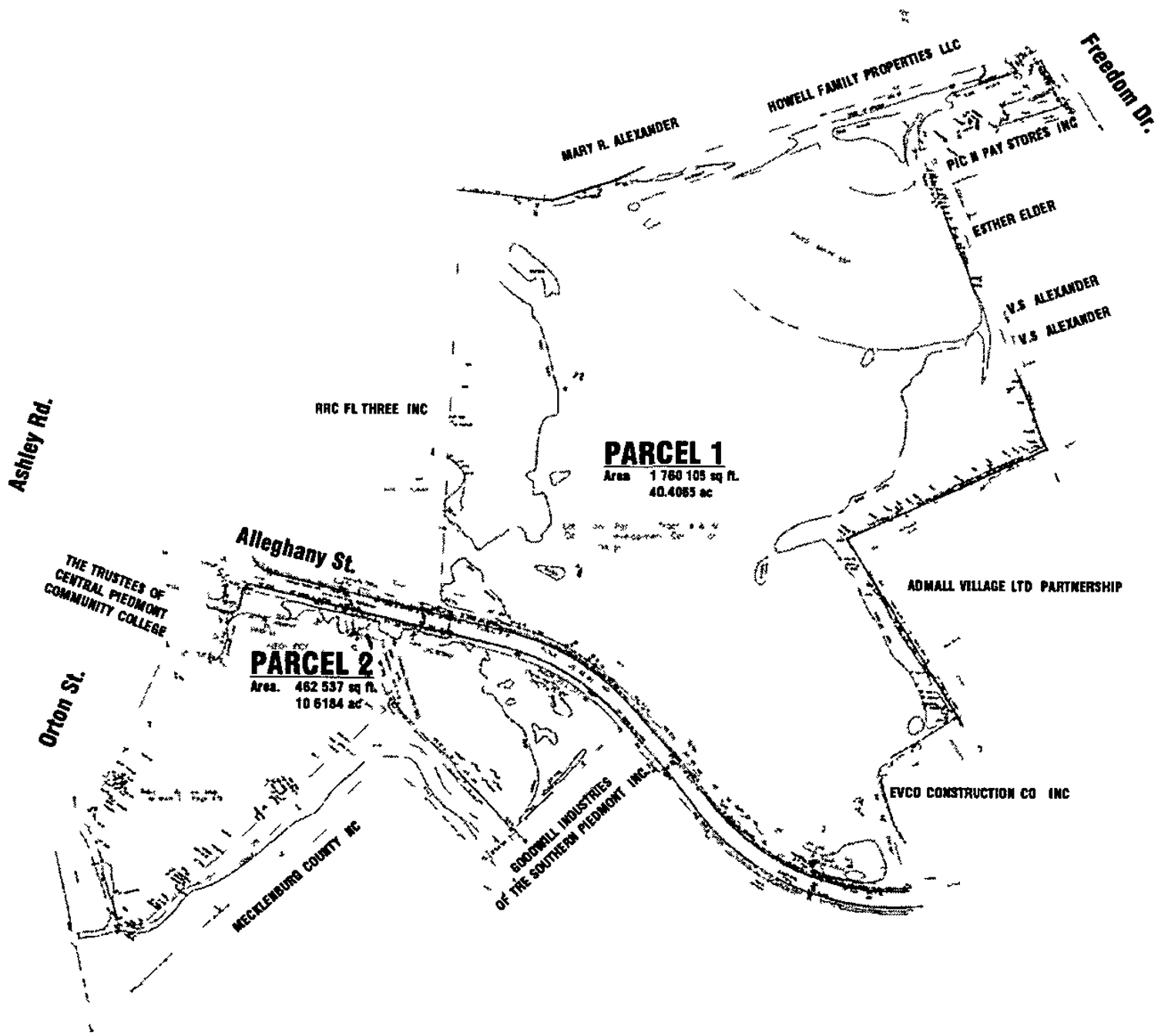
This open two story space was appealing and may have implications for a space like the media center where books and reading could take place on the first level and computers and technology could occupy the second level The open space also had a technical appeal to it that was interesting and appropriate for the High School

- *Use of volume spaces with connecting views*
- *Use of color pallets that are warm and comfortable in spaces that are designed for smaller gatherings*

Use of wide / generous circulation spaces was appealing This space could be improved with added natural and artificial light

- *Develop comfortable circulation paths where individuals have sufficient and adequate means of navigating*
- *Create small nooks and pockets off the main circulation paths where students can gather*

SCHENKELSHULTZ
ARCHITECTS ENGINEERS



North Arrow

Key Plan

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Scale In Feet

otte Mecklenburg Schools
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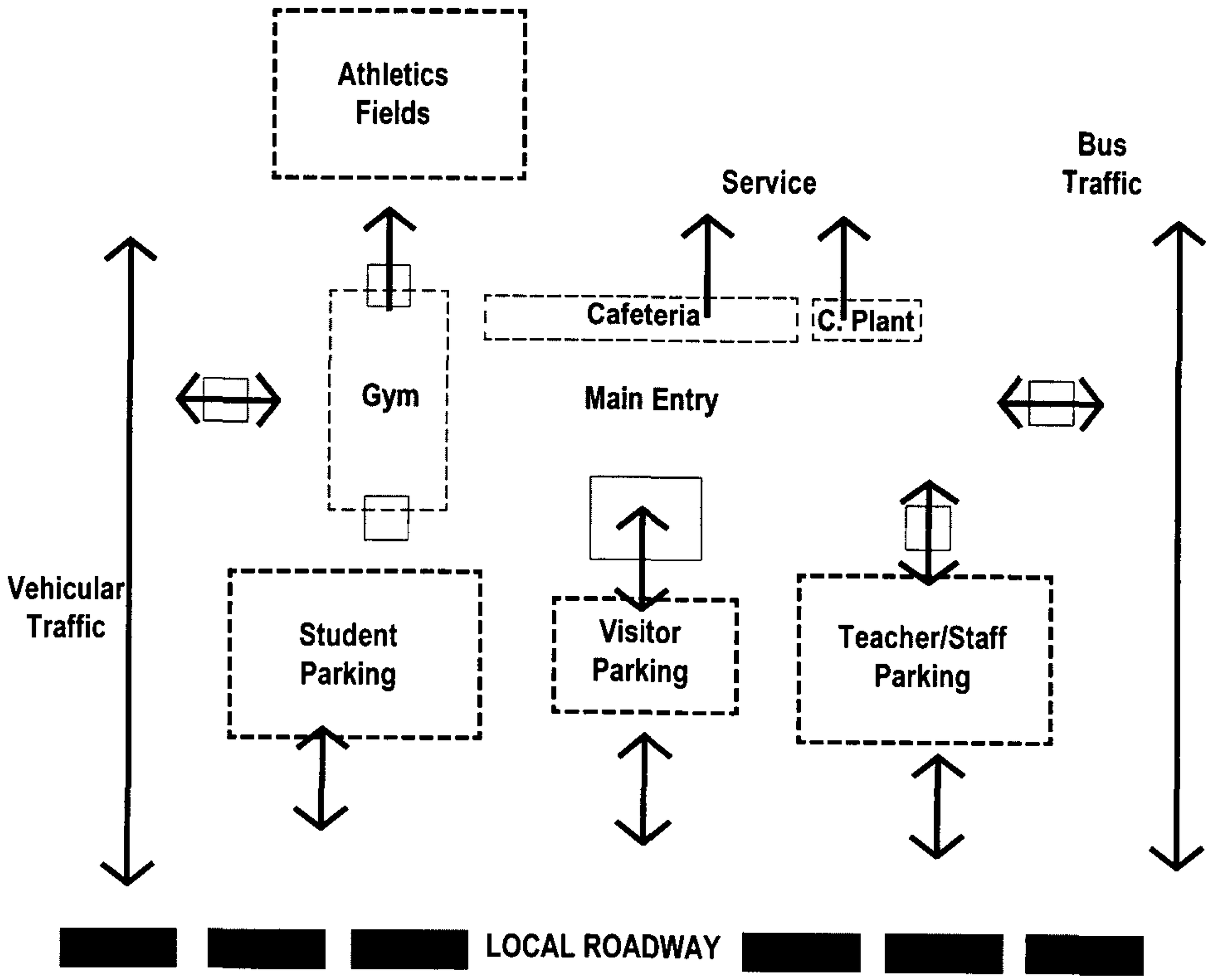
Site Relationships



SCHENKELSHULTZ
ARCHITECTURE PC

Planning & Predesign Phase

June 1995
THS task force formed

Oct. 1996
THS steering committee formed

Feb. 1997
Steering Committee issues Interm Report

May 1997
Career Cluster Program Report Issued

Oct. 1997
THS Advisory Board Enacted

June 1998
CMS board of Ed approves the Career Cluster Circulum Guide

Oct. 1998
Architects Selected
Programming Begins
Site Selection Begins

March 1999
Programming omplete

Design Phase

March 1999
Design Phase Begins

May 2000
Design Phase Ends
Construction Doc Complete

Bidding & Construction

May 2000
Bidding

July 2000
Let Contracts for Construction

Mar 2003
Design Phase Ends
Construction Doc Complete

Facility Preparation

Mar 2003
Fit up Begins
Furniture / Fixtures / Equipment

August 2003
Facility Opens

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ. FT.	
	1600	2000	1600	2000	1600	2000		1600	2000
GENERAL CLASSROOMS									
Mathematics	200	300	8	12	8	12	850	6 800	10 200
Communications Arts	200	300	8	12	8	12	850	6 800	10 200
Social Studies	200	300	8	12	8	12	850	6 800	10 200
Foreign Language	150	225	4	9	4	9	850	3 400	7 650
Teachers Prep Area					2	2	900	1 800	1 800
Subtotals	*750*	*1125*	*28*	*45*	*30*	*47*		*25 600*	*40 050*
SCIENCE									
General Science Labs	50	100	2	4	2	4	1 400	2 800	5 600
Biology Labs	100	150	4	6	4	6	1 400	5 600	8 400
Chemistry Labs	75	100	3	4	3	4	1 400	4 200	5 600
Physics Labs	25	50	1	2	1	2	1 400	1 400	2 800
Lab Prep Areas					5	8	600	3 000	4 800
Teachers' Prep Area					2	2	900	1 800	1 800
Subtotals	*250*	*400*	*10*	*16*	*17*	*26*		*18 800*	*29 000*
EC									
Resource (ESE)	24	48	2	4	2	4	450	900	1 800
Resource (OT/PT)	12	24	1	2	1	2	450	450	900
Teacher Planning (Locate with core academic group work areas) (4)									
Self-Contained	24	48	2	4	2	4	850	1 700	3 400
Small Group Instruction					1	1	250	250	250
Assessment Space					1	1	100	100	100
In School Suspension					1	1	450	450	450
Team Meeting Space					1	1	150	150	150
Subtotals	*60*	*120*	*5*	*10*	*9*	*14*		*4 000*	*7 050*
Subtotals	***1060***	***1645***	***43***	***71***	***56***	***87***		***48,400***	***76,100***

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ. FT.	
	1600	2000	1600	2000	1600	2000		1600	2000
ARTS EDUCATION									
Art Classroom	25	50	1	2	1	2	1 500	1 500	3 000
Art Workroom					1	1	300	300	300
Art Storage					1	1	150	150	150
Teachers' Prep (for 2) Art					1	1	150	150	150
Kiln Room					1	1	150	150	150
Instrumental Music (Band) & Vocal	50	50	1	1	1	1	2 200	2 200	2 200
Instrumental & Vocal Music Library					1	1	150	150	150
Teachers Prep (for 3) Music					1	1	150	150	150
Orchestra Storage					1	1	300	300	300
Band Storage					1	1	300	300	300
Percussion Storage					1	1	150	150	150
Uniform Storage					1	1	300	300	300
Practice Room					4	4	50	200	200
Ensemble					1	1	350	350	350
Robe Storage					1	1	150	150	150
Teacher Prep (for 1) Theatre Arts					1	1	150	150	150
Vocal Music Storage					1	1	100	100	100
Conference Center (previously Auditorium)					1	1	5 000	5 000	5 000
Set Storage					1	1	300	300	300
Stage					1	1	850	850	850
Prop Storage					1	1	300	300	300
Subtotals	***75***	***100***	***2***	***3***	***24***	***25***		***13,200***	***14,700***

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ. FT.	
	1600	2000	1600	2000	1600	2000		1600	2000
COMPUTER SCIENCE AND INFORMATION SYSTEMS									
Business Law Classroom	25	50	1	2	1	2	850	850	1 700
Computer Labs – Computer Applications	52	52	2	2	2	2	1 400	2 800	2 800
Computer Labs – Comp Acctg/ Bus & Fin Mgmnt	26	26	1	1	1	1	1 400	1 400	1 400
Computer Labs – Network Administration	32	32	2	2	2	2	1 000	2 000	2 000
Related Classrooms / General Computer Lab			2	2	2	2	850	1 700	1 700
Marketing Education Lab/Classroom	20	20	1	1	1	1	1 000	1 000	1 000
Marketing Education Storage					1	1	200	200	200
Teachers' Prep Area					4	4	120	480	480
Team Planning/Conference Room					1	1	250	250	250
Lead Teacher Office					1	1	120	120	120
Student Service Office					1	1	120	120	120
Multi-Resource & Interdisciplinary Planning					2	2	450	900	900
Administrative Storage					1	1	120	120	120
Subtotals	***155***	***180***	***9***	***10***	***20***	***21***		***11,940***	***12,790***

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ FT.	
	1600	2000	1600	2000	1600	2000		1600	2000
CONSTRUCTION									
Electrical /Carpentry Lab					1	1	3 500	3 500	3 500
Electrical Storage					1	1	300	300	300
Electrical/Carpentry Classroom	20	20	1	1	1	1	650	650	650
Carpentry Storage					1	1	300	300	300
Masonry Lab					1	1	2 500	2 500	2 500
Masonry Classroom	20	20	1	1	1	1	650	650	650
Masonry Storage					1	1	300	300	300
Plumbing/HVAC Lab					1	1	3 500	3 500	3 500
Plumbing Storage					1	1	300	300	300
Locker Area (M/F)					2	2	400	800	800
Plumbing/HVAC Classroom	20	20	1	1	1	1	650	650	650
HVAC Storage					1	1	300	300	300
Teachers Prep Area					4	4	120	480	480
Team Planning/Conference Room					1	1	250	250	250
Lead Teacher Office					1	1	120	120	120
Student Service Office					1	1	120	120	120
Multi-resource & Interdisciplinary Planning					1	1	450	450	450
Administrative Storage					1	1	120	120	120
Subtotals	***60***	***60***	***3***	***3***	***22***	***22***		***15,290***	***15,290***

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ. FT.	
	1600	2000	1600	2000	1600	2000		1600	2000
ENVIRONMENTAL SCIENCE									
Agriscience Applications Lab (Ag)	20	20	1	1	1	1	1 400	1 400	1 400
Agriscience/Natural Resources Classroom (Ag)			1	1	1	1	850	850	850
Agriscience Storage					1	1	500	500	500
Horticulture Indoor Lab (Ag)	25	25	1	1	1	1	1 400	1 400	1 400
Horticulture Classroom			1	1	1	1	850	850	850
Horticulture Greenhouse					1	1	3 600	FFE Item	FFE Item
Horticulture Indoor Storage					1	1	500	500	500
Horticulture Outdoor Activity Area					1	1		0	0
Horticulture Outdoor Storage/Chemical Storage					1	1	1 000	FFE Item	FFE Item
Environmental Systems Lab	20	20	1	1	1	1	1 400	1 400	1 400
Environmental Systems Storage					1	1	500	500	500
Environmental Outdoor Storage					1	1	250	FFE Item	FFE Item
Environmental & Natural Resources Lab (Ag)	included in Agriscience Applications Lab								
Natural Resources Outdoor Activity Area					1	1		0	0
Natural Resources/ Env Sys Shared Outdoor Activity Area (Pond)					1	1		0	0
Natural Resources Storage					1	1	500	500	500
Environmental Science Labs (ology s)	25	50	1	2	1	2	1 400	1 400	2 800
Environmental Prep Area					1	1	600	600	600
Teachers Prep Area					4	4	120	480	480
Locker/Changing Area					2	2	400	800	800
Team Planning/Conference Room					1	1	250	250	250
Lead Teacher Office					1	1	120	120	120
Student Service Office					1	1	120	120	120
Multi-resource & Interdisciplinary Planning					1	1	450	450	450
Administrative Storage					1	1	120	120	120
Subtotals	***90***	***115***	***6***	***7***	***28***	***29***		***12,240***	***13,640***

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ. FT.	
	1600	2000	1600	2000	1600	2000		1600	2000
HEALTH SCIENCE									
Health Science Classrooms	75	150	3	6	3	6	850	2 550	5 100
Medical Science Labs	50	50	1	1	1	1	1 400	1 400	1 400
Multi-Purpose Lab	25	25	1	1	1	1	1 400	1 400	1 400
Allied Health Sciences Lab	25	25	1	1	1	1	2 100	2 100	2 100
Teachers' Prep Area					4	4	120	480	480
Family and Consumer Science Lab	20	20	1	1	1	1	1 500	1 500	1,500
Family and Consumer Science Classroom	20	20	1	1	1	1	850	850	850
Family and Consumer Science Storage					2	2	100	200	200
Family and Consumer Science Teacher Prep Area (2)					1	1	150	150	150
Health Education Classrooms	25	50	1	2	1	2	850	850	1 700
Lead Teacher Office					1	1	120	120	120
Student Service Office					1	1	120	120	120
Administrative Storage					1	1	120	120	120
Subtotal	***240***	***340***	***9***	***13***	***19***	***23***		***11,840***	***15,240***

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ FT	
	1600	2000	1600	2000	1600	2000		1600	2000
MANUFACTURING AND ENGINEERING									
Fundamentals of Technology Labs	20	20	1	1	1	1	1 850	1 850	1 850
Preengineering I Lab (Career Plus)	20	20	1	1	1	1	1 500	1 500	1 500
Preengineering II Lab (Techno Careers)	20	20	1	1	1	1	2 500	2 500	2 500
Machining Room					1	1	450	450	450
Manufacturing Systems Lab (Amatrol)	20	20	1	1	1	1	1 850	1 850	1 850
Manufacturing Systems Storage					2	2	300	600	600
Electronics Lab					1	1	1 850	1 850	1 850
Electronics/CET Classroom	20	20	1	1	1	1	650	650	650
Computer Engineering Technology Lab (Cisco)					1	1	1 850	1 850	1 850
Electronics/CET Shared Storage					1	1	300	300	300
Electro-Mechanical Lab w/Welding Area	20	20	1	1	1	1	2 500	2 500	2 500
CADD Labs	40	40	2	2	2	2	1 800	3 600	3 600
CADD Storage					1	1	600	600	600
Science and Technology Visual Lab	20	20	1	1	1	1	1 800	1 800	1 800
Principles of Technology Labs (Applied Physics)	20	20	1	1	1	1	1 800	1 800	1 800
Principles of Technology Storage					1	1	300	300	300
Printing/Graphics Lab	20	20	1	1	1	1	2 500	2 500	2 500
Printing/Graphics Darkroom					1	1	250	250	250
Printing/Graphics/Computer Room					1	1	850	850	850
Printing/Graphics/Materials Storage					1	1	250	250	250
Lead Teacher Office					1	1	120	120	120
Student Service Office					1	1	120	120	120
Administrative Storage					1	1	120	120	120
Team Planning/Conference Room					1	1	480	480	480
TRANSPORTATION									
Auto Service & HEAT Technology Lab					1	1	3 500	3 500	3 500
Auto Service Technology Classroom	20	20	1	1	1	1	650	650	650
Auto Service Technology Storage (Parts & Tools)					1	1	350	350	350
Heavy Equipment & Transport Technology Classroom	20	20	1	1	1	1	650	650	650
Heavy Equipment & Transport Technology Storage					1	1	350	350	350
Locker Room (M&F)					2	2	400	800	800
Subtotals	***260***	***260***	***13***	***13***	***33***	***33***		***34,990***	***34,990***

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ FT.	
	1600	2000	1600	2000	1600	2000		1600	2000
MEDIA CENTER									
Main Use Room					1	1	9,600	9 600	9 600
Conference					3	3	150	450	450
AV Production/Workroom					1	1	600	600	600
AV Storage and Distribution					1	1	175	175	175
TV Studio					1	1	300	300	300
Office					1	1	120	120	120
File Server					1	1	120	120	120
Subtotals	*0*	*0*	*0*	*0*	*9*	*9*		*11 365*	*11 365*
CHILD NUTRITION									
Dining					1	1	8 000	8 000	8 000
Serving					1	1	1 500	1 500	1 500
Kitchen					1	1	2 900	2 900	2 900
Subtotals	*0*	*0*	*0*	*0*	*3*	*3*		*12 400*	*12 400*
ADMINISTRATION									
Principal					1	1	300	300	300
Assistant Principal					1	1	180	180	180
Assistant Principal for Instruction					1	1	180	180	180
Reception/Secretary					1	1	1 000	1 000	1 000
Principal Secretary					1	1	150	150	150
Finance					1	1	150	150	150
Resource Officer					1	1	150	150	150
Instructional Accountability Officer					1	1	150	150	150
Storage Room					1	1	150	150	150
Health Room					1	1	500	500	500
Workroom					1	1	300	300	300
Conference					1	1	400	400	400
Record Storage					1	1	300	300	300
Subtotals					*13*	*13*		*3 910*	*3 910*
STUDENT SUPPORT									
Offices					8	8	100	800	800
Careers Room					1	1	750	750	750
Reception/Secretary					1	1	200	200	200
Conference					1	1	200	200	200
File Room/ Record Storage					1	1	300	300	300
Storeroom					1	1	100	100	100
VOCATS					1	1	150	150	150
Subtotals					*14*	*14*		*2 500*	*2 500*
Subtotals					***39***	***39***		***30,175***	***30,175***

EDUCATIONAL PROGRAM COMPONENT	# OF STUDENTS		TEACHER STATIONS		# OF ROOMS		UNIT SQ FT	TOTAL SQ. FT.	
	1600	2000	1600	2000	1600	2000		1600	2000
MISCELLANEOUS									
Plant Operations					1	1	1 650	1 650	1 650
Subtotals					***1***	***1***		***1,650***	***1,650***
PHYSICAL EDUCATION									
Gymnasium	50	50	2	2	1	1	12 000	12 000	12 000
Lobby/Concession					1	1	2 000	2 000	2 000
Auxiliary Gymnasium		25	0	1	0	1	3 600	0	3 600
Boys and Girls Locker Rooms			1	1	2	2	2 500	5 000	5 000
Storage					2	2	400	800	800
Mens/Womens Athletic Office					4	4	100	400	400
Coaches Locker/Showers					2	2	250	500	500
Weight Room	25	25	1	1	1	1	2 000	2 000	2 000
Classroom	25	25	1	1	1	1	850	850	850
Subtotals	*100*	*125*	*3*	*3*	*14*	*15*		*23 550*	*27 150*
ATHLETICS INDOOR SPACES									
Coach Office					2	2	200	400	400
Training					1	1	300	300	300
Subtotals					*3*	*3*		*700*	*700*
ATHLETICS OUTDOOR SPACES									
Football Field w/ Goals (Inside Track)						1			
Football Practice Fields						2			
Soccer Field with Goals and Nets						1			
Soccer Practice Field						2			
Softball Diamond with Backstops and Dugouts						1			
Baseball Diamond with Backstops and Dugouts						1			
Track						1			
Outside storage						1	2 000	0	2 000
Tennis Courts						10			
Stadium						1			
Subtotal						*21*		*0*	*2000*
SUBTOTALS	***100***	***125***	***3***	***3***	***17***	***39***		***24,250***	***29,850***
TOTALS	**2040**	**2825**	**88**	**123**	**219**	**279**		**203,975**	**244,425**

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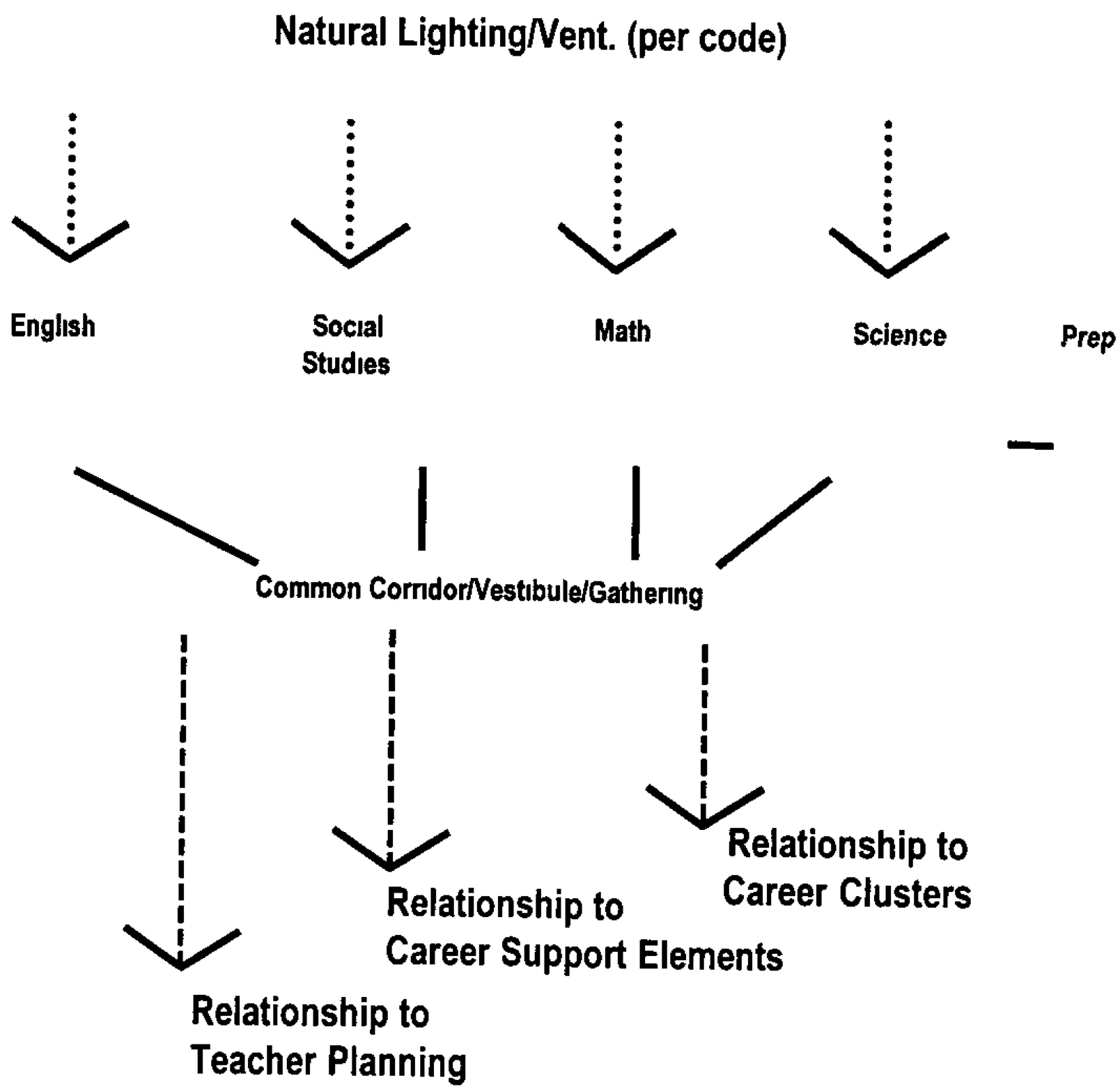

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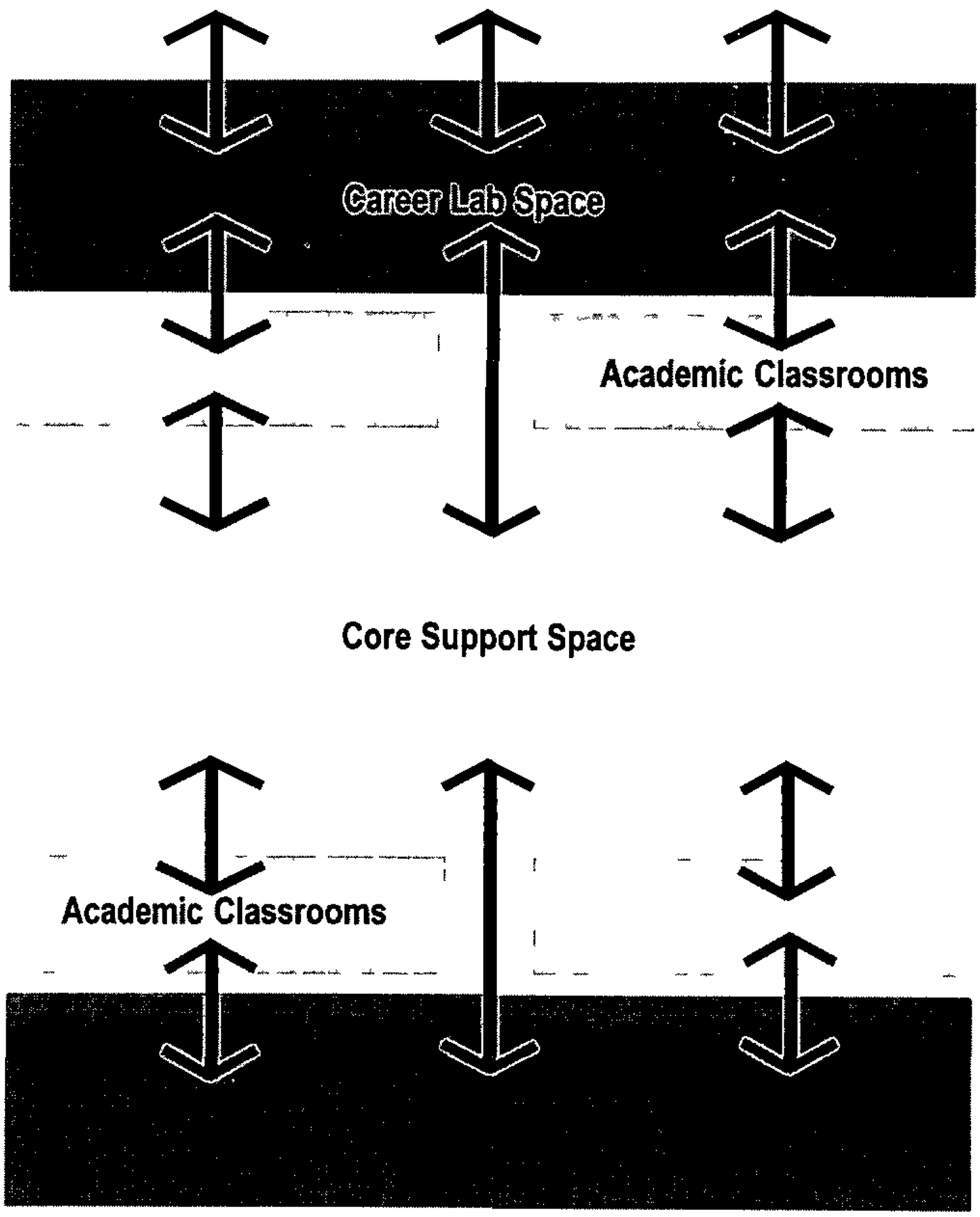

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Cluster Grouping Diagram:

Environmental Science

Heatlh Science & Technologies

Computer Science & Information Systems

Aviation (future)

Construction Technology

Manufacturing & Engineering Technologies

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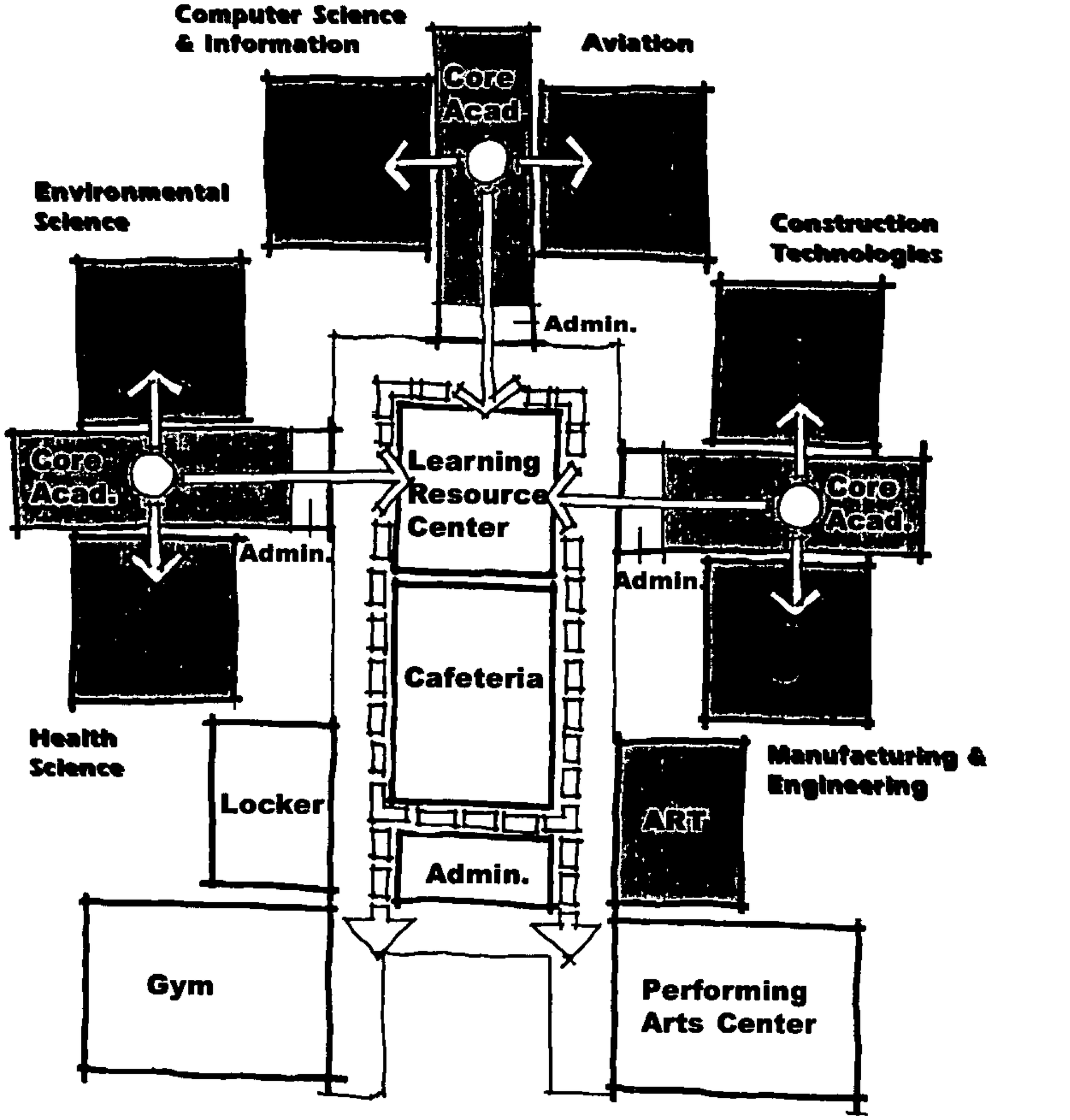
Relationship Diagram



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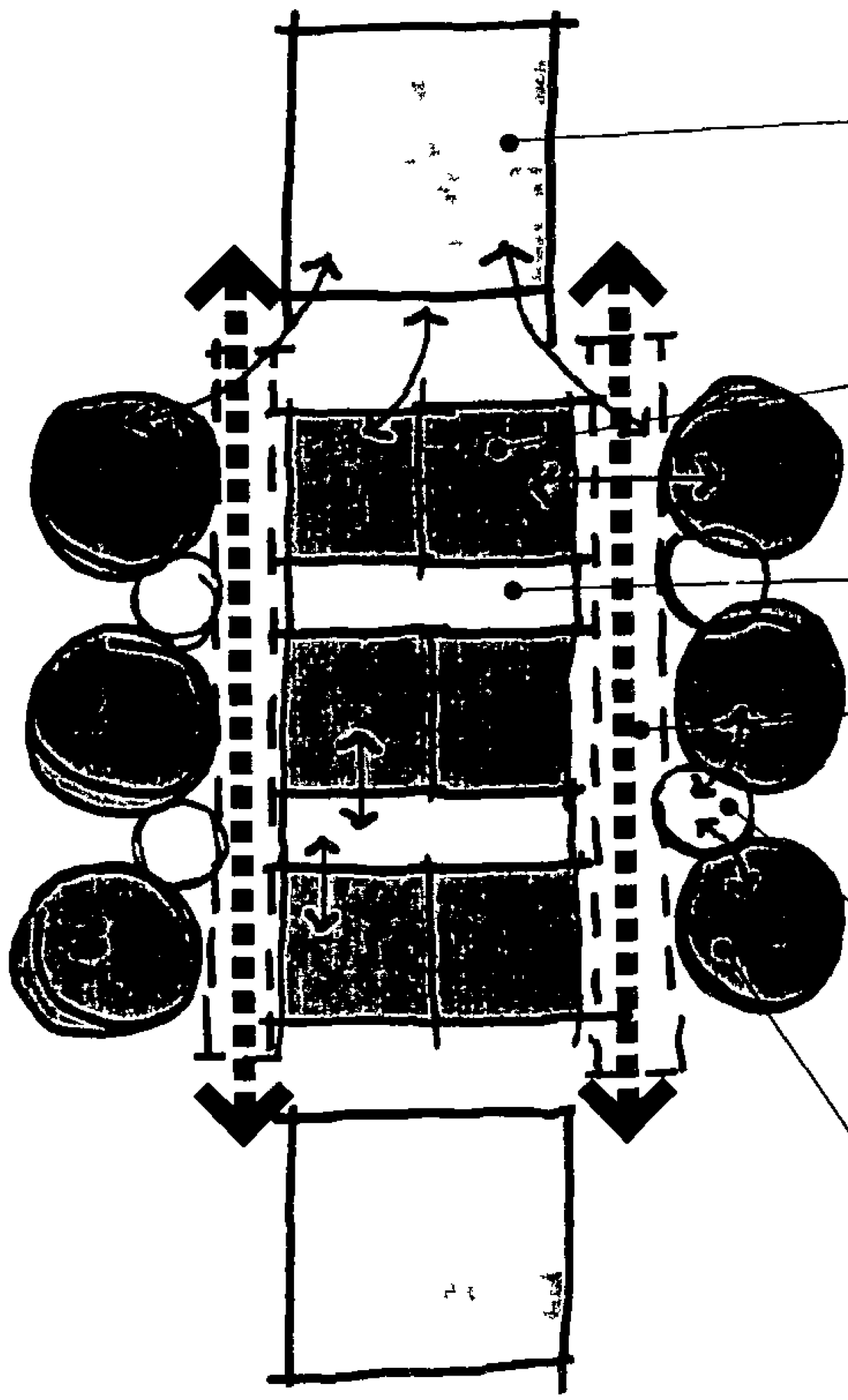
Training Tomorrow s Work Force

Relationship Diagram



Core Interactive Space
Multiuse cafeteria and auditorium space media gym etc provide spaces for interaction Location is convenient to academic houses and career clusters

Core Academics House
Standard classroom "houses" that integrate core subjects while relating to the clusters they support.

Core Academics Support

Interactive Mall
Mall space serving as circulation between academic houses and clusters Lockers in this area facilitate interaction between students

Cluster Collaboration Module
Activity Hub for cluster(s) could include Admin / Guidance space Multi-Media center Reference Resources Meeting Space Distance Learning/Conferencing Center etc

Career Cluster
Career cluster containing instructional classrooms lab spaces and cluster support spaces

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List of Program Area Descriptions

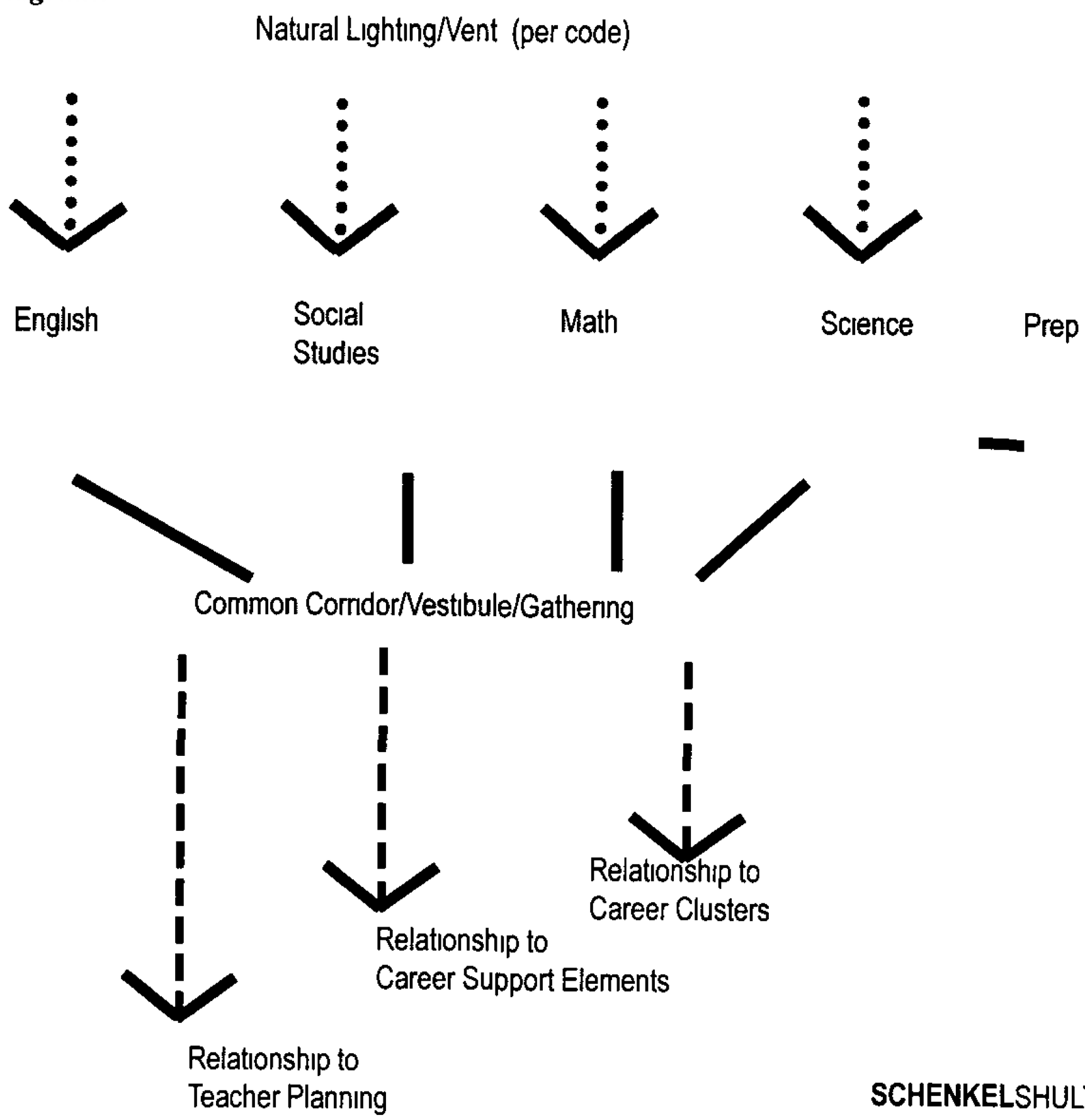
- *General & Science Classrooms*
- *Exceptional Child & Special Needs*
- *Arts*
- *Lead Teacher Office*
- *Teacher Preparation Area*
- *Multi-Resource & Interdisciplinary Planning*
- *Computer Science & Info Systems*
- *Construction*
- *Environmental*
- *Health Sciences*
- *Manufacturing & Engineering*
- *Media Center*
- *Physical Education*

General & Science Classrooms

Space Requirements/Specifications:

- *Integration of various Core Academics areas is desirable*
- *Centralized teacher planning areas is desirable*
- *The classrooms should be distributed to allow more interaction with various Career Clusters*
- *The quantities of these rooms are to be based on the student capacity*
- The rooms labeled Other Science Labs are to be relocated to the Environmental Cluster
- Distribute Chemistry labs with two in the core academic area adjacent to the Health and Environmental Career Clusters, and two in the Core Academic area adjacent to the Construction and Manufacturing career clusters There should be a single chemical storage area
- The Physics lab should be located in the Core Academic area near the Health and Environmental Career Cluster
- Distribute the 3 General Science labs evenly within the three Core Academic areas
- Distribute the 6 Biology labs evenly within the three Core Academic areas
- Provide water and gas to all Science Labs

Relationship Diagram:



Resource /Exceptional Children

Description:

Space Requirements/Specifications:

- *The Small Group Instruction will be the speech lab*
- *One resource room will be utilized for Physical Therapy and Occupational Therapy This rooms should be located near the Health Sciences Career Cluster*
- *These program areas should be decentralized throughout the school*

Relationship Diagram:

Arts Education Visual, Instrumental, Vocal and Theatre

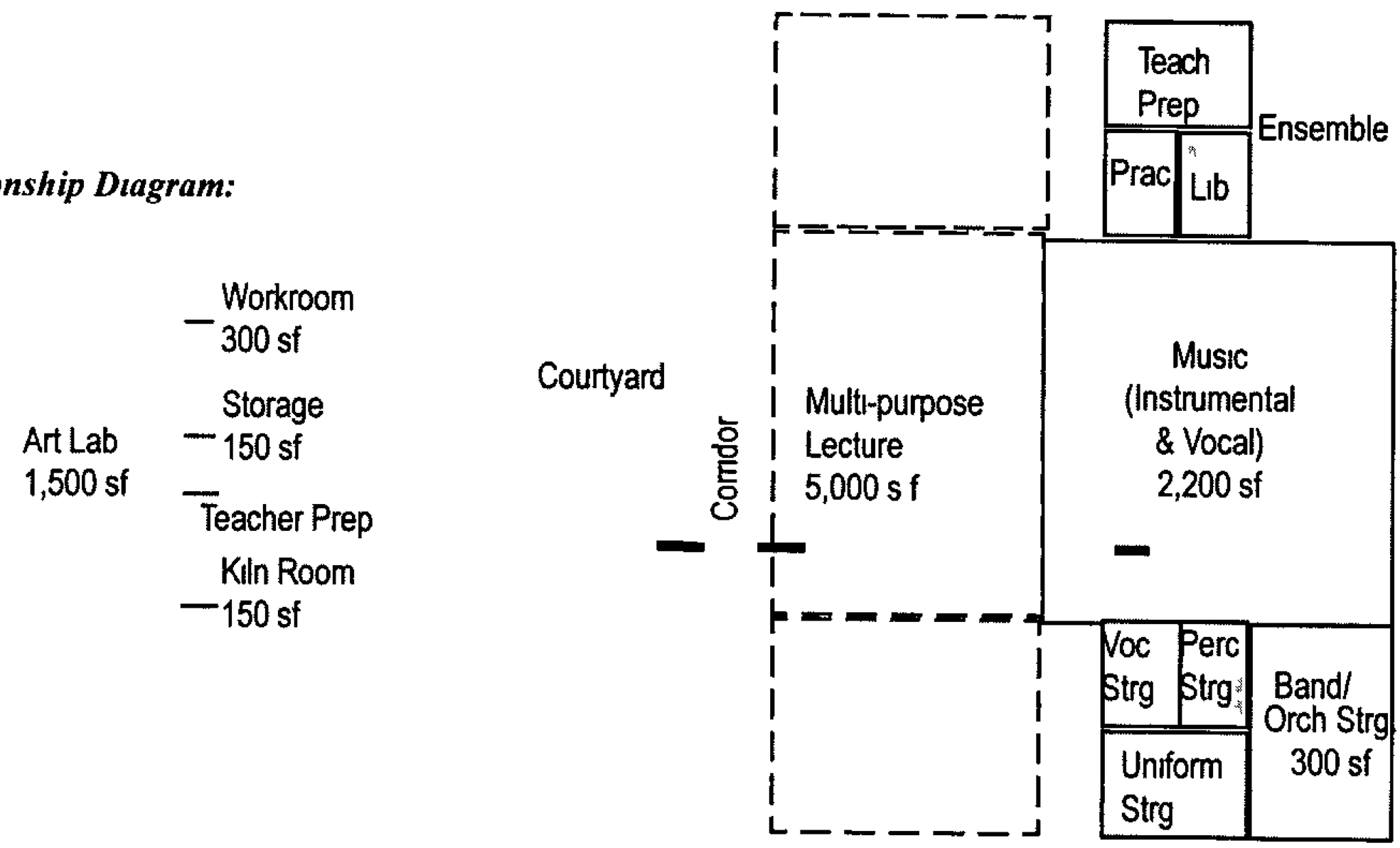
Description:

The study and practice of the arts allows the student to explore a range of activities materials and tools in the development and expression of concepts

Space Requirements/Specifications:

- *The visual and performing arts may be grouped together to form an Arts Cluster*
- *One multipurpose art lab will be provide for phase 1 with an additional lab being added at phase 2*
- *A second lab for Instrumental Music (Orchestra) is not required*
- *The recent high school auditoriums have been seating approximately 650 people*
- *The auditorium should be as flexible as possible The division into smaller areas may be a consideration In addition tablet arms may be considered*

Relationship Diagram:



Lead Teacher Office

Each of the Career Clusters has a Lead Teacher overseeing the curriculum within the Cluster

Space Requirements/Specifications:

Offices are furnished and equipped per the Assistant Principal office specification contained in the 94 CMS Facility Standard (page 126)

Relationship Requirements:

Each Lead Teacher is provided a dedicated office located adjacent to the Cluster labs and classrooms Lead Teacher Office visibility into the lab(s) is desirable The Lead Teacher Office does not require access off a main corridor

Teacher Preparation Area

Teacher Preparation Areas are used by any of the instructors within the facility The Teacher Preparation Area is provided for assembling lesson plans and class materials grading student papers/ tests

Space Requirements/Specifications:

Teacher Preparation Areas are furnished with work tables task chairs photocopier computer stations printers

The space is furnished and equipped for a capacity of up to four (4) occupants some Teacher Preparation Areas are furnished/equipped for a smaller number of occupants

Multi-Resource & Interdisiciplinary Planning

Description:

The Multi-Resource & Interdisciplinary Planning is accessible to all instructors guest speakers and business partners Each Multi-Resource & Interdisciplinary Planning Area contains a minimum of four (4) 450 s f units which can function individually or in groupings The space is used for various modes of work from small group collaboration/design to group lecture this area is not designed for individual work The Multi-Resource & Interdisciplinary Planning areas do not have computer stations book shelves or materials storage furnishings/fixtures the area supports the use of whitewalls/workwalls overhead projection, smartboards and other such multimedia equipment This area should have its primary access on a main corridor

Space Requirements/Specifications:

These areas need to be outfitted with telephone and computer wiring for multiple occupants

Relationship Requirements:

Computer Science and Information Systems

Description:

This cluster s curriculum prepares students for positions which use computers to process manage and communicate information The area is accessed by all students regardless of academic concentration

Space Requirements/Specifications:

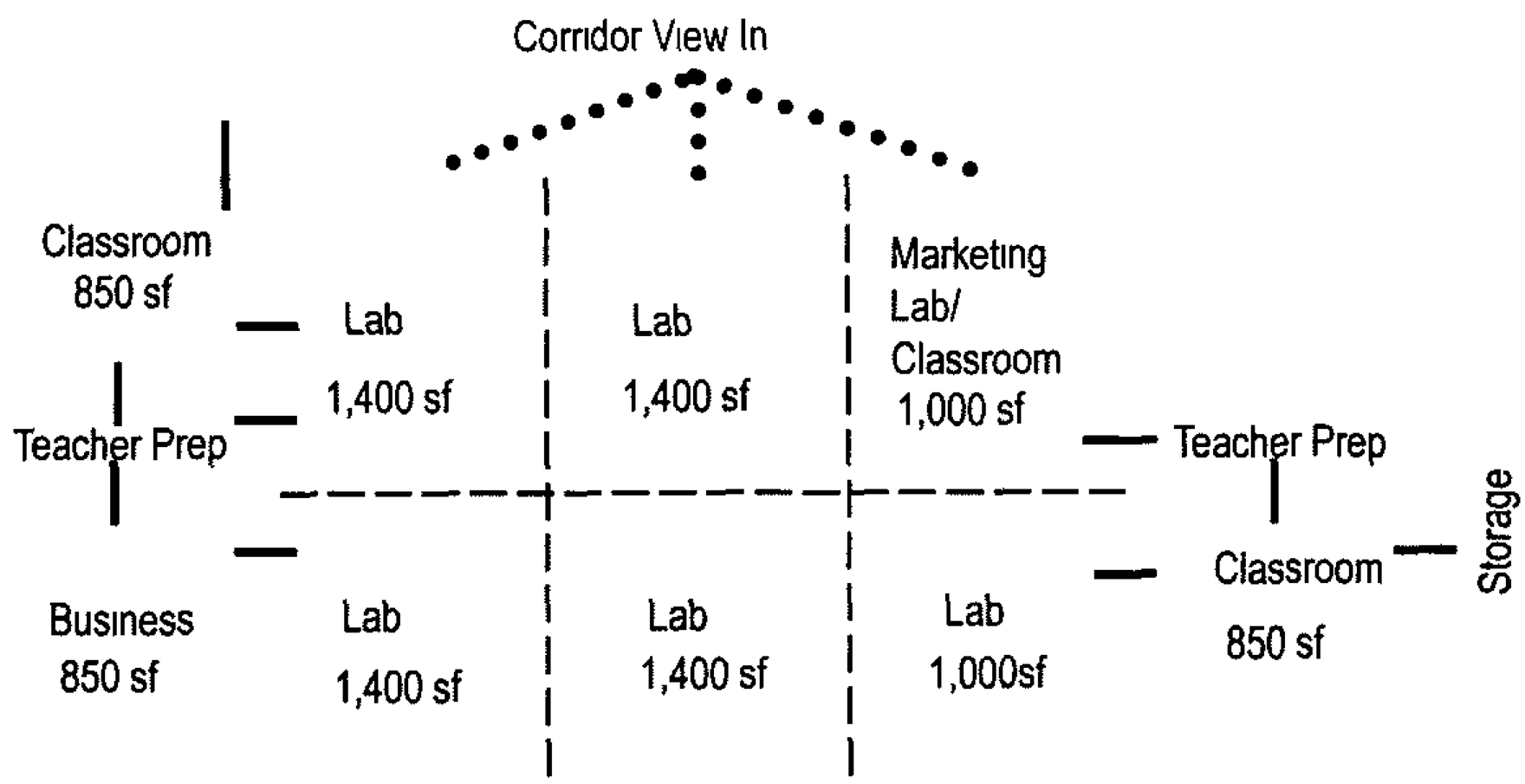
- *Combine 6 lab areas into one large laboratory area to simulate a work environment Area should have glass to main circulation corridor*
- *Add two related classrooms adjacent to the large computer /office lab area*

- *Moved Family Consumer Science Lab to the Health Science cluster*

- *A Distance Learning Lab/teleconferencing rooms would be located in a central area for easy access by entire student body These should be flexible rooms with sloped seating areas The rooms must be designed to both send and receive The rooms should be capable of large screen projection*
- *Distance Learning has been utilized by the district in the past however getting the Staff needed who are familiar with the possibilities has been an issue*

- *This Cluster may want to be adjacent to the administration area in order to utilize the Workroom as a business office environment where students can produce products utilized by the school A business partnership with Kinkos could be pursued*

Relationship Diagram:



Construction Technologies

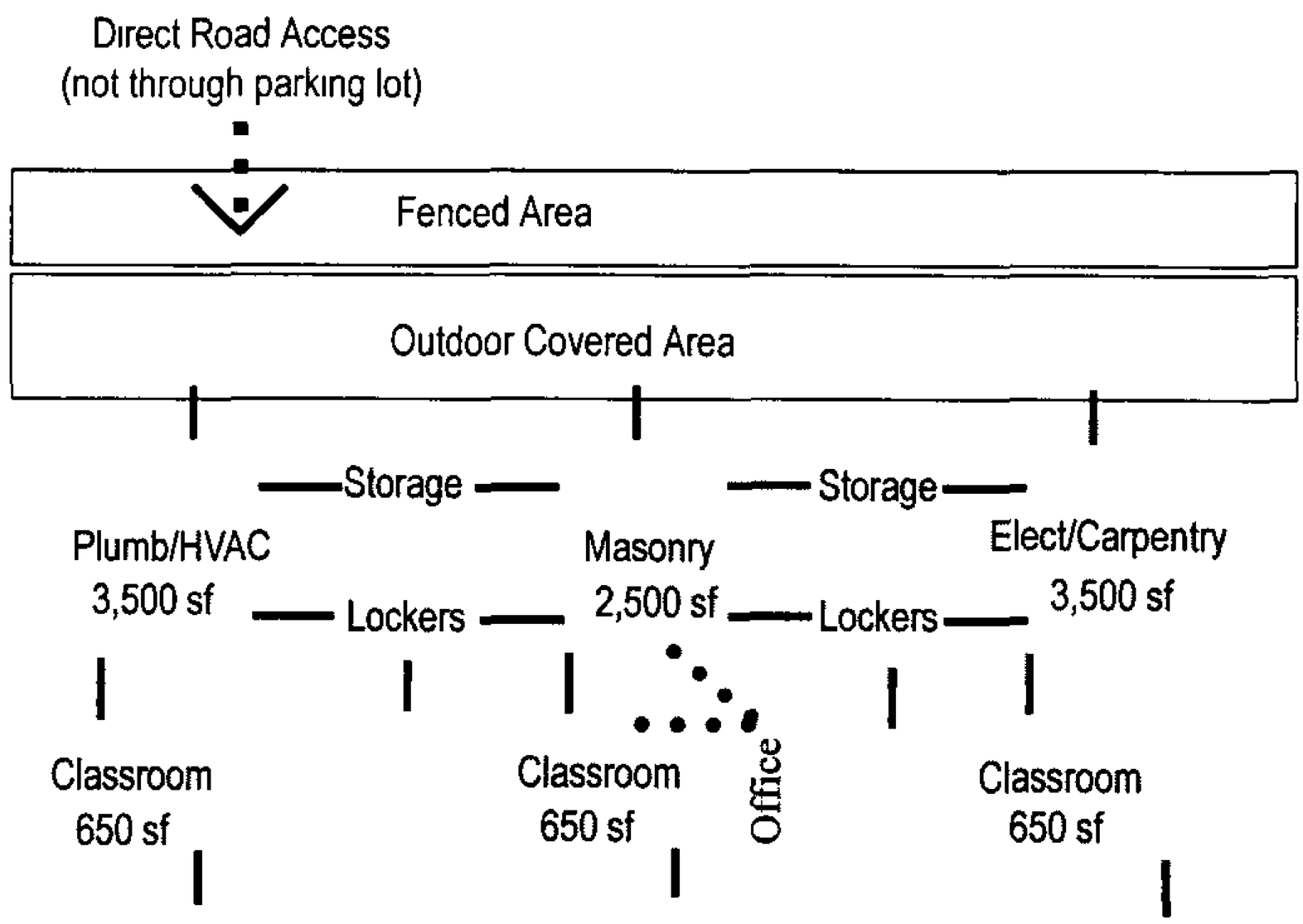
Description:

Students in these areas, prepare for skill-based trades Materials are manipulated in labs theory and instruction are accommodated in classrooms

Space Requirements/Specifications:

- *HVAC and Plumbing Labs are to be combined into one large lab*
- *Electrical and Carpentry are to be combined one large lab*
- *Masonry will remain a stand alone lab (maybe smaller than the other two)*
- *Classrooms associated with laboratories may be reduced in size to 650 sf*
- *Separate Wheels of Learning classroom may be eliminated*
- *A large covered outdoor area is required to be shared by all the labs*
- *Locker/changing areas are used by students in this Cluster*

Relationship Diagram:



Environmental Science

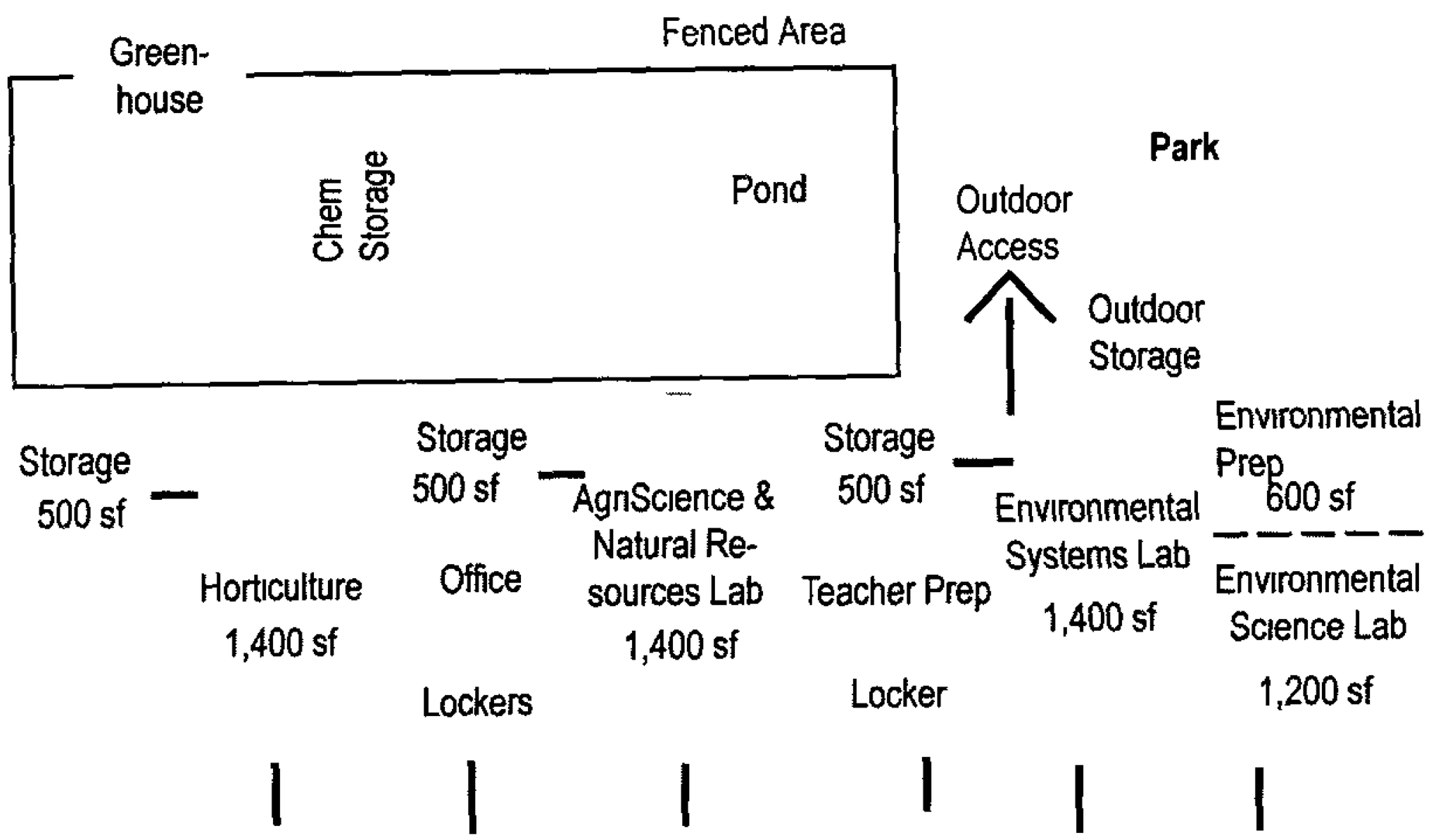
Description:

Environmental Science applies to the questions problems and findings from all disciplines of Science that involve Earth systems (land plant/animal/insect air water)

Space Requirements/Specifications:

- *General Science labs are included in this Cluster These will be used for various programs including oceanography botany zoology etc*
- *Locker /changing areas are used by students in this Cluster*
- *A large fenced-in outdoor area will be required that includes a 1 000 sf outdoor storage area and a 36 x 100 greenhouse*
- *The Environmental lab requires direct outdoor access but not into the fenced area This program wants close proximity to the park*

Relationship Diagram:



Health Science and Technologies

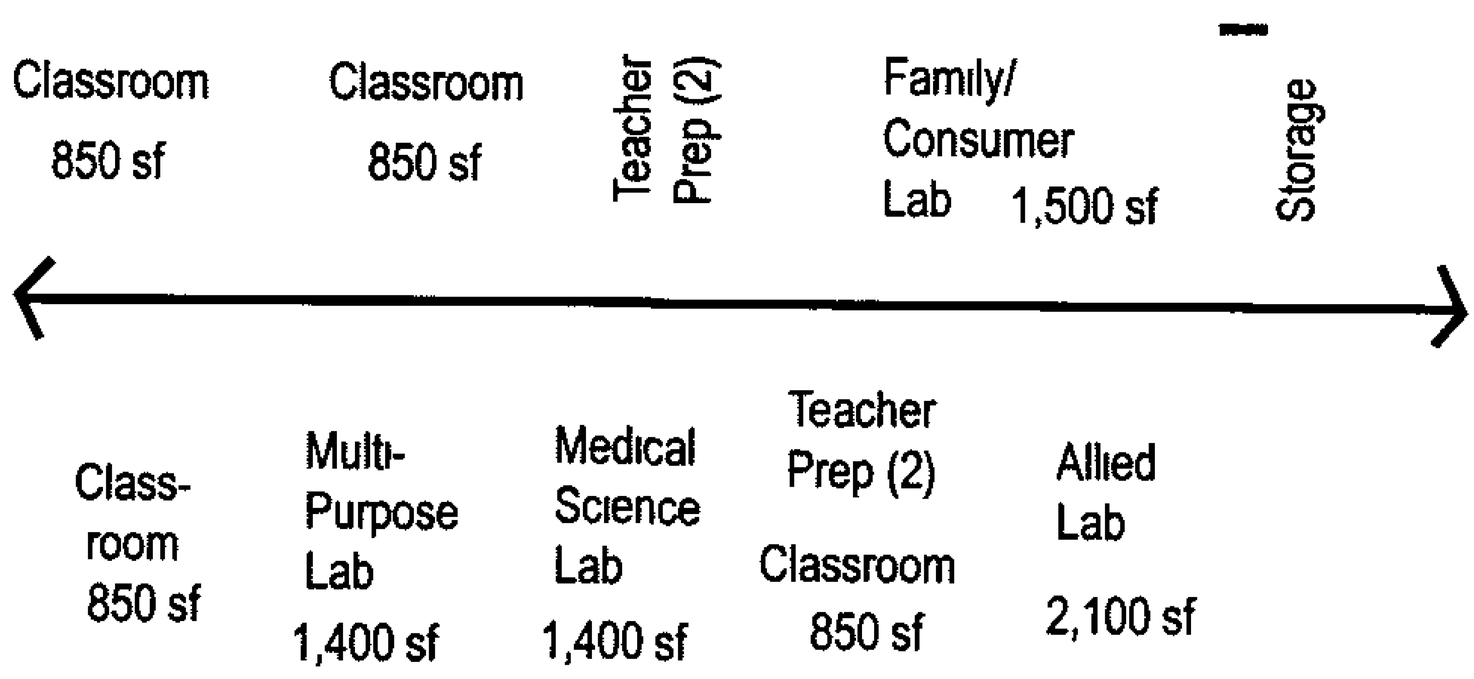
Description:

The Health Science and Technologies fields are diverse in scope, including wellness diagnostics therapeutics information services

Space Requirements/Specifications:

- *One lab area is designated a Multipurpose Lab for use by various programs including CPR*
- *The Allied Health Lab is larger than the other three labs and contains the hospital setting*
- *The general health education classrooms is grouped with the Health Science Cluster*
- *The Family and Consumer Science lab is part of this Cluster*
- *There are a total of 3/6 Health Science classrooms in this Cluster for the 1600/2000 student capacities respectively*

Relationship Diagram:



Manufacturing and Engineering Technologies

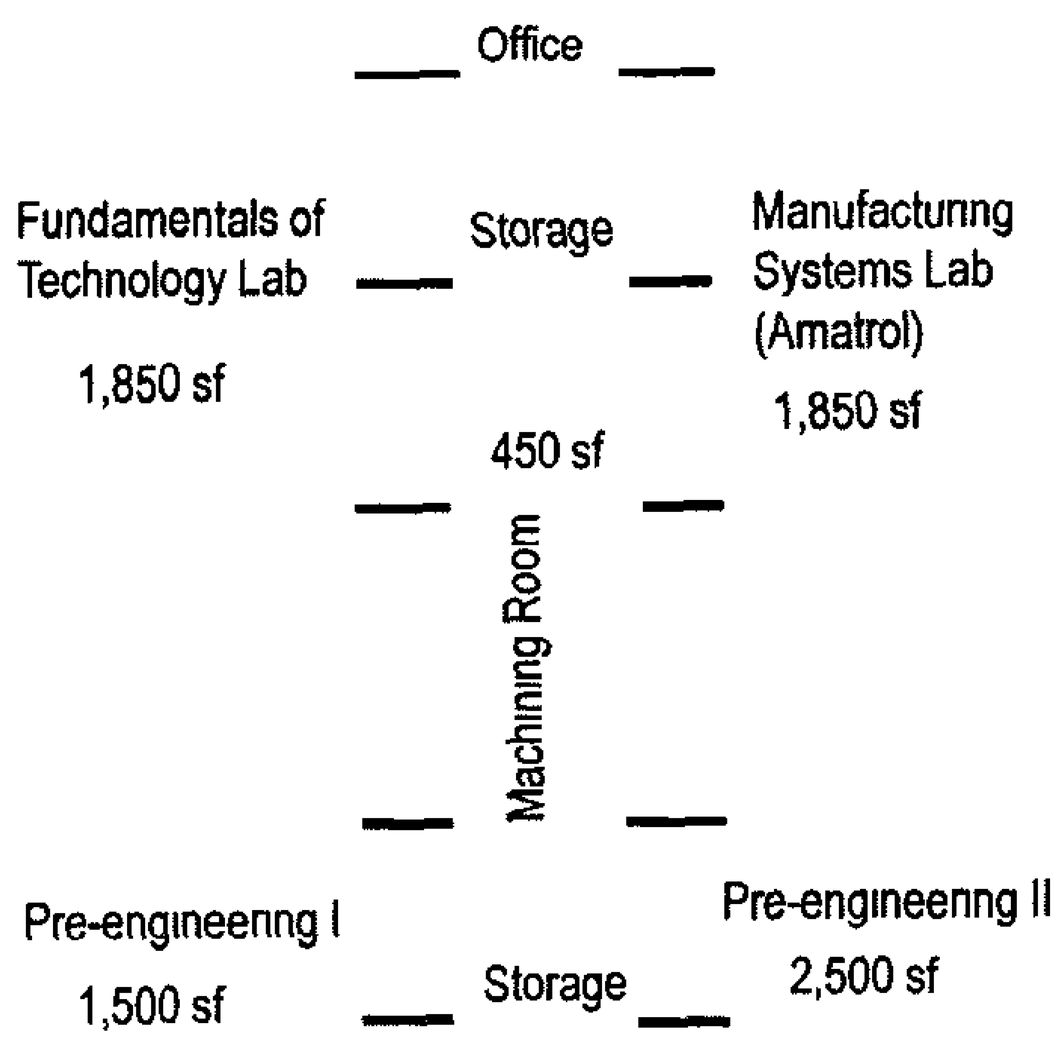
Description:

Curriculum in the Manufacturing and Engineering Technologies includes design engineering plant and facilities maintenance factory automation and manufacturing trade skills

Space Requirements/Specifications:

- *Revise Wheels of Learning classroom to Pre-Engineering 1*
- *A Pre-Engineering 2 Lab is part of Phase 1*
- *Revise the Manufacturing Systems Lab to Manufacturing (AMATROL) Lab*
- *Revise Manufacturing Systems classroom to Machine Room which would be shared by the two PreEngineering labs Fundamentals of Technology Lab and the Manufacturing 1 (AMATROL) Lab*

Relationship Diagram:



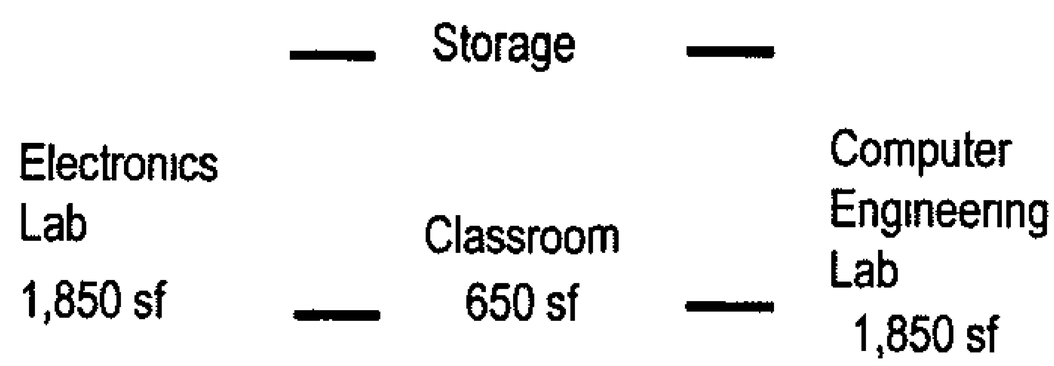
Manufacturing and Engineering : Electronics and Computer Engineering

Description:

Space Requirements/Specifications:

- *The Computer Engineering Technology lab (Cisco) requires an adjacent classroom*
- *The Electronics lab requires an adjacent classroom*
- *The CET and Electronics labs should be adjacent to one another with a shared storage*

Relationship Diagram:



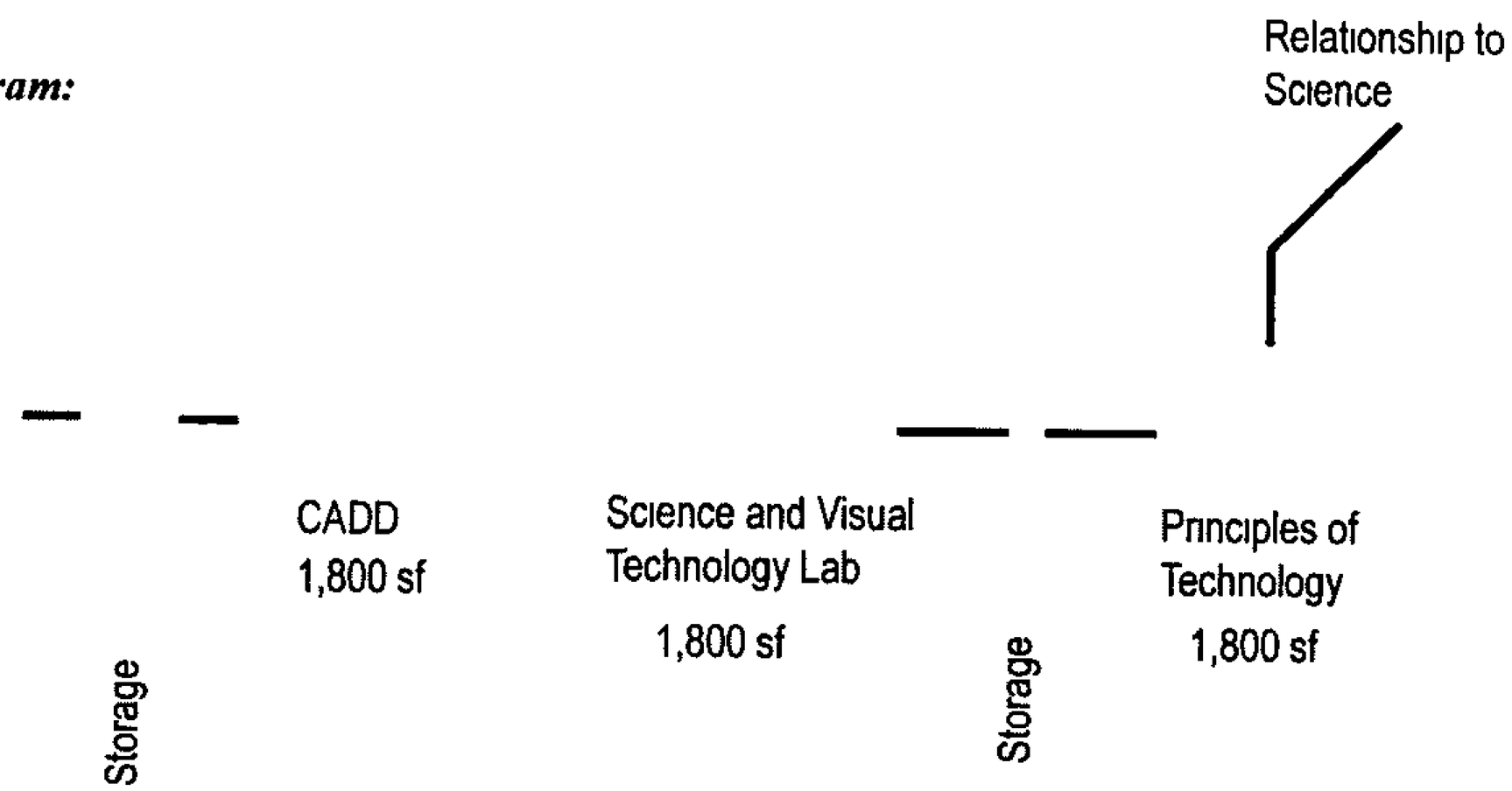
Manufacturing and Engineering : CADD and Science, Visual Technology, Principles of Technology

Description:

Space Requirements/Specifications:

- *Revise the four CADD Labs to 2 CADD Labs 1 Science and Technology Visual Lab and a Principles of Technology (Applied Physics) Lab*

Relationship Diagram:

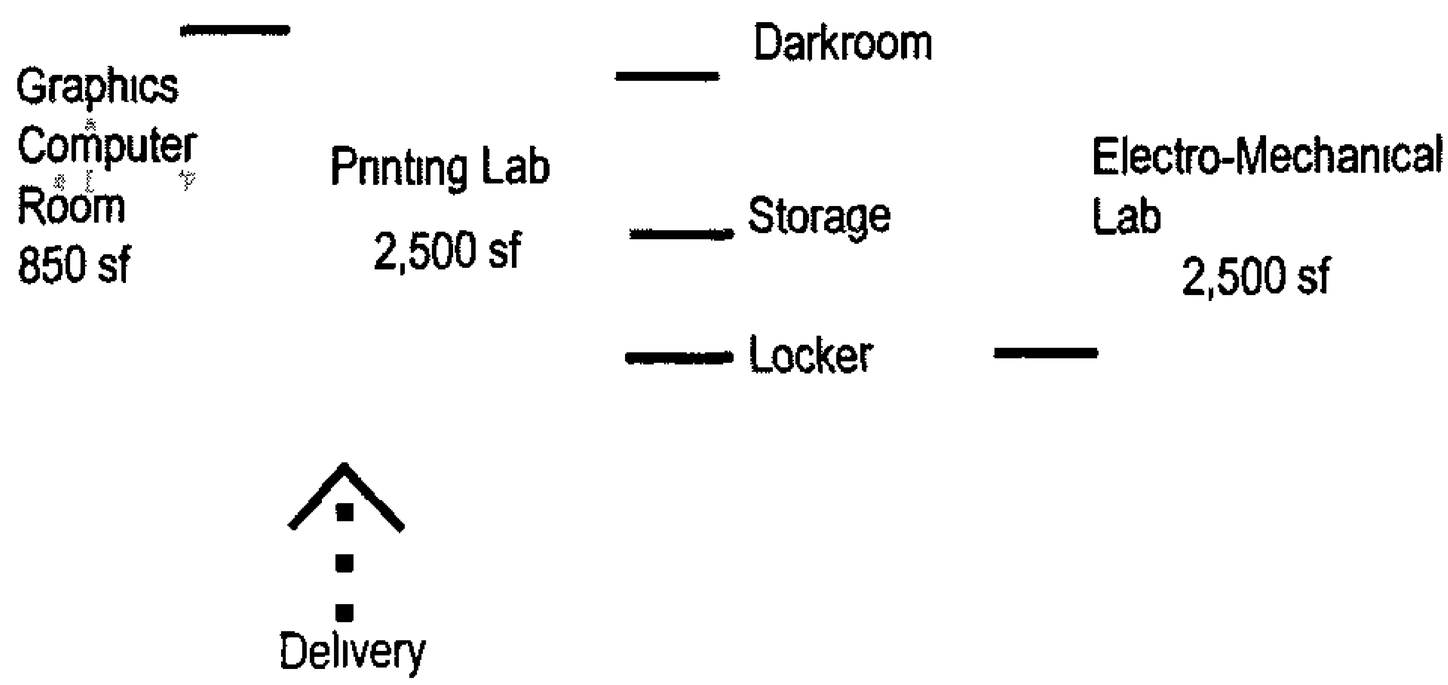


Manufacturing and Engineering Technologies : Graphics/Flexo Technology

Description:

Space Requirements/Specifications:

- *The Printing Graphics Lab will require delivery access*
- *The welding area and Electro Mechanical Classroom should be adjacent to the large Electro Mechanical Lab*
- *Add a locker/changing area to this cluster*



Manufacturing and Engineering Technologies: Transportation

Description:

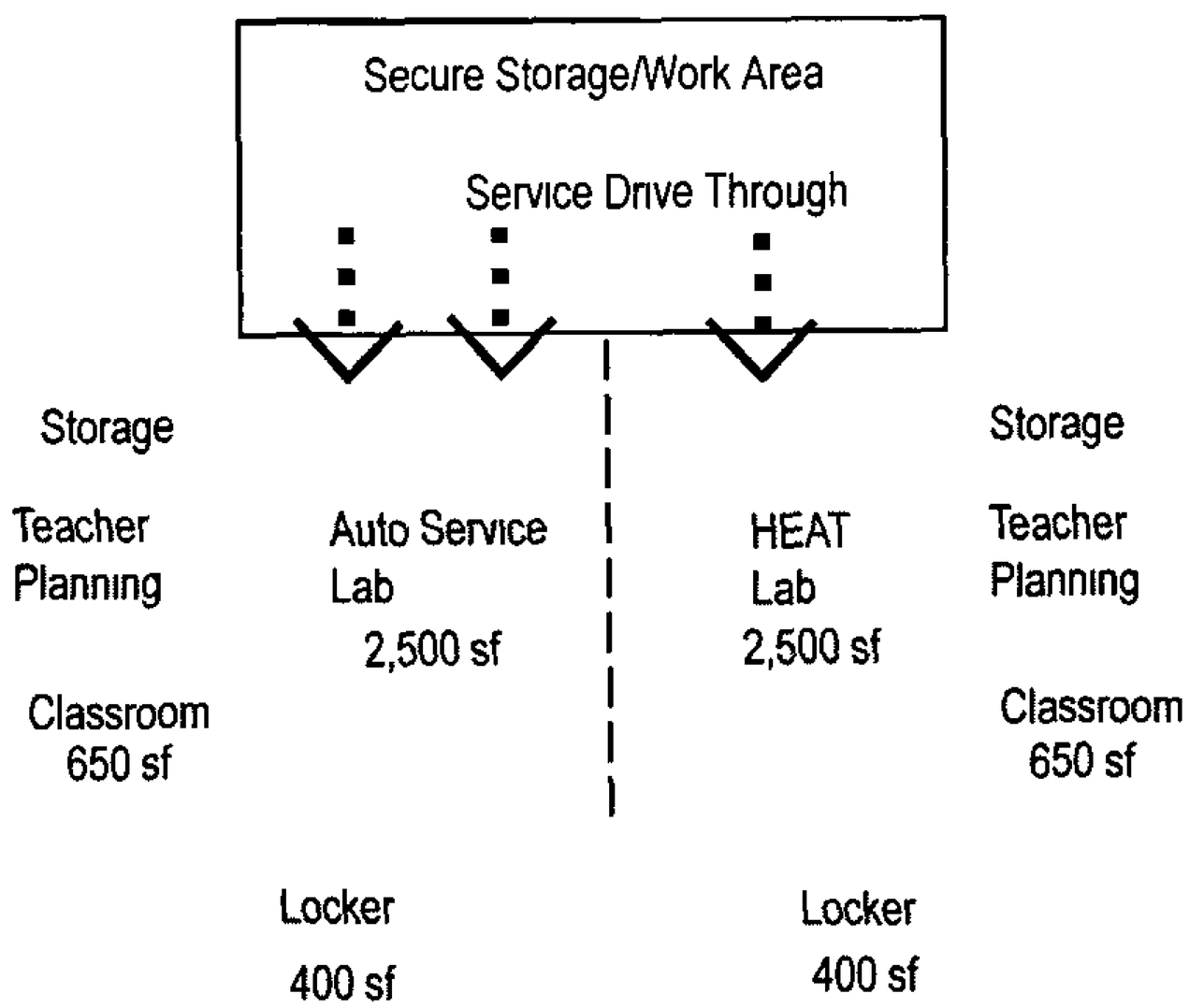
Space Requirements/Specifications:

- *Auto Service Technology Lab should accommodate six vehicles drive through set up is preferred*
- *A fenced outdoor storage area is required*
- *The classroom will be shared with Heavy Equipment and Transport Lab*

- *Access to outdoor secure area shared with Auto Service Technology is required*

- *A drive through scenario is preferred in the lab with space for a truck tractor (without trailer)*
- *An overhead crane will not be required*
- *Add locker/changing areas to this cluster area*

Relationship Diagram:



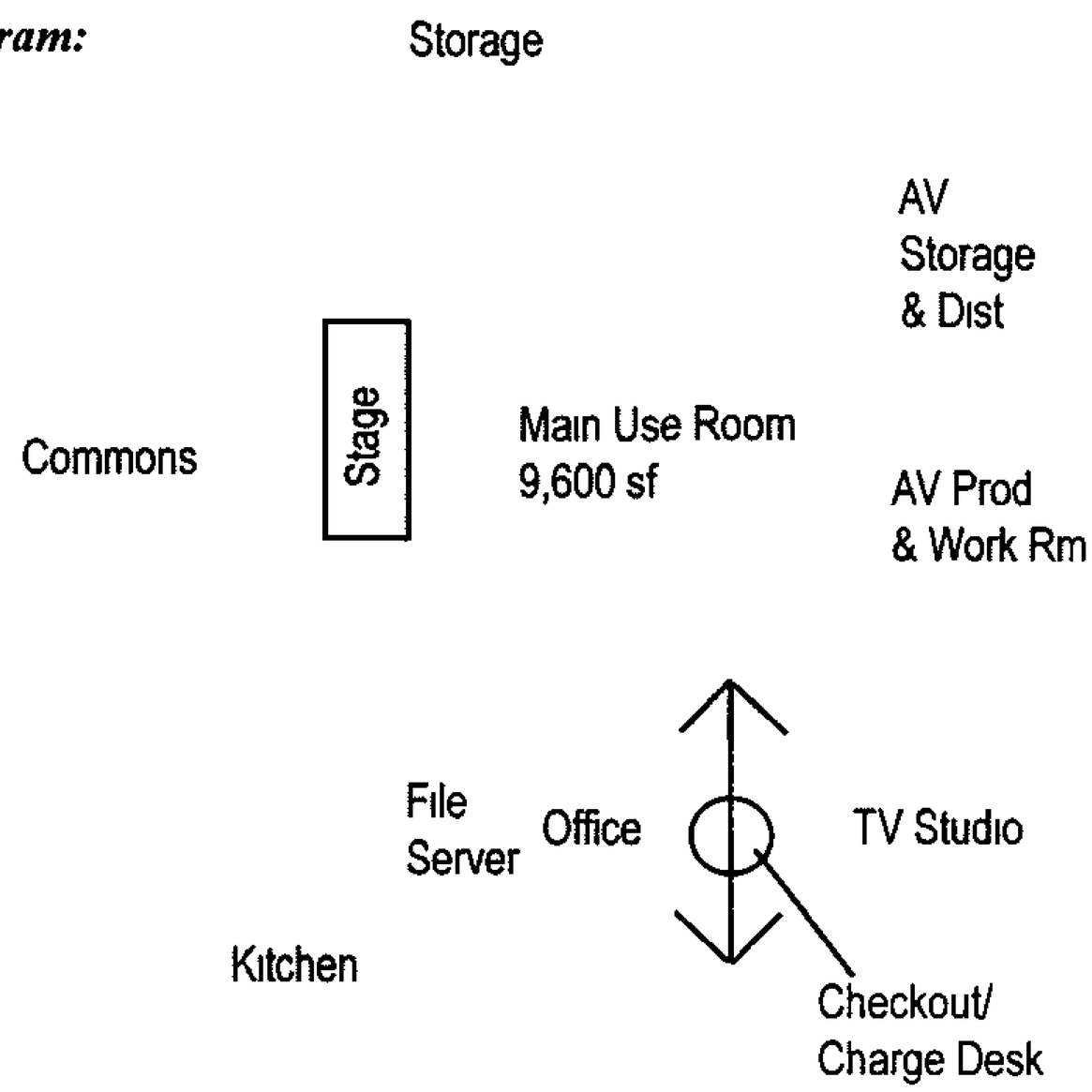
CORE AREAS: Media Center

Description:

Space Requirements/Specifications:

- *Decentralized Media Center in each Career Cluster is a good concept however staffing issues will need to be addressed*
- *Natural light to the Media Center is desirable*
- *The main room of the Media Center should be divided into areas including a reference area (books) two areas for seating of 36 students a circulation desk area a leisure seating area and the technology area (computers)*
- *The technology area should contain stations for 48 computers this area should be millwork designed by the architect in lieu of furniture*
- *A TV studio should be provided similar to the one at Vance HS*
- *A projection screen with push button remote should be provided in the main room*
- *Control of the lighting in each zone of the main room is important*
- *All support rooms should have direct access to the main room with the possible exception of the AV storage room which should access the AV production room*

Relationship Diagram:

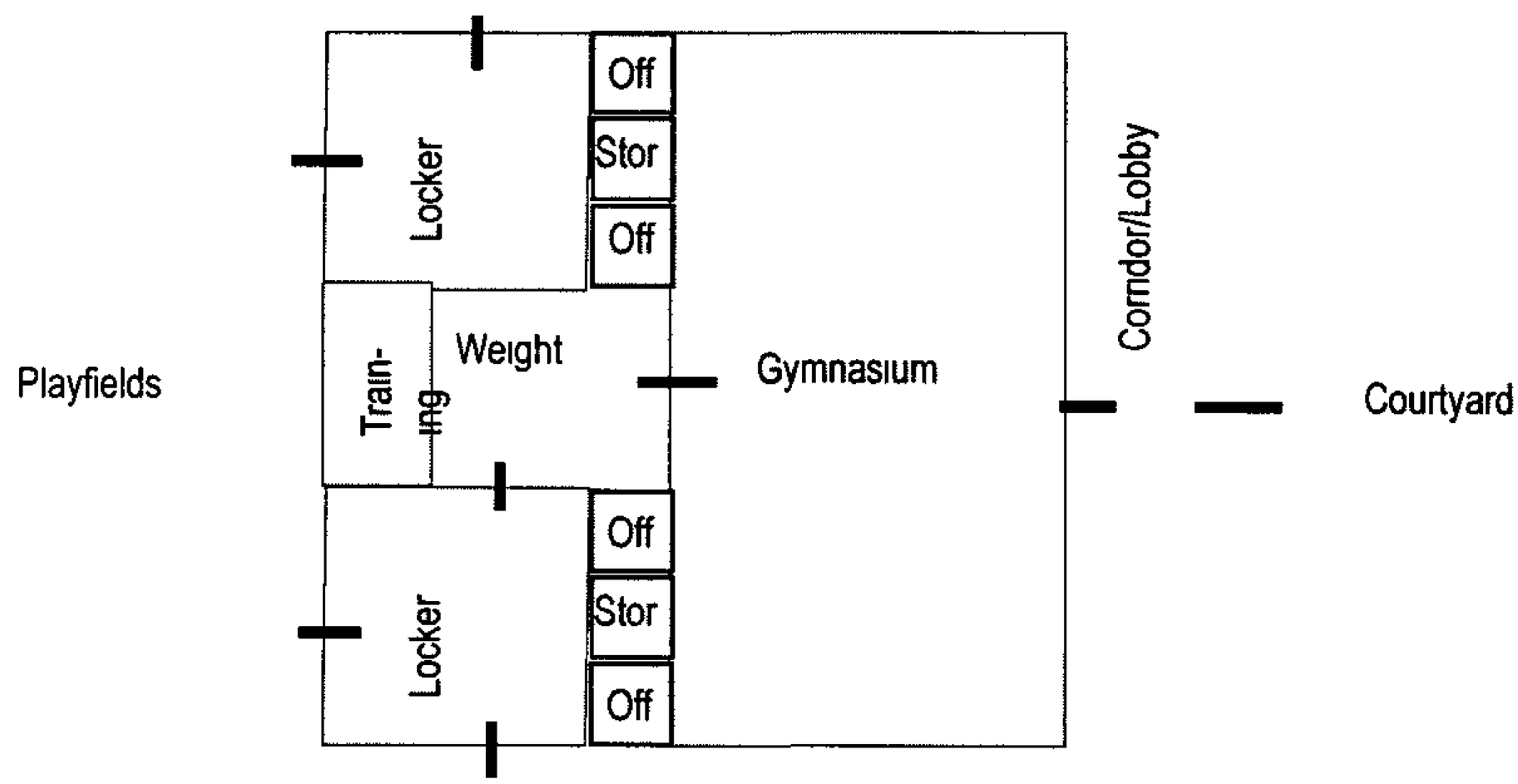


Physical Education

Description:

The gymnasium is the main space component of the physical education program and one around which all the remaining revolve The gymnasium will be used for physical education athletics practice intermural games and other tournaments The school might also utilize the gymnasium to hold events that require the attendance of the entire school or students and relatives such as graduation

Space Requirements/Specifications:

- *The athletic directors from Vance HS and Butler HS should be consulted during the design process*
- *Construction budget versus equipment budget is always an issue in this area*
- *The flow of students through the athletic areas should be studied in detail*
- *Separate the flow of male and female students from the respective locker rooms*

Relationship Diagram: