APPROVED
2-1989

Rockville, Maryland
January 10, 1989

The Board of Education of Montgomery County met in regular session at the Carver Educational Services Center, Rockville, Maryland, on Tuesday, January 10, 1989, at 10 a.m.

ROLL CALL Present: Dr. Robert E. Shoenberg, Vice President in the Chair
Mrs. Sharon DiFonzo
Mr. Blair G. Ewing
Mr. Bruce A. Goldensohn
Mrs. Catherine E. Hobbs
Mr. Chan Park
Mrs. Marilyn J. Praisner

Absent: Dr. James E. Cronin

Others Present: Dr. Harry Pitt, Superintendent of Schools
Dr. Paul L. Vance, Deputy Superintendent
Mr. Thomas S. Fess, Parliamentarian

Re: ANNOUNCEMENT

Dr. Shoenberg announced that Dr. Cronin was out of town.

RESOLUTION NO. 1-89 Re: BOARD AGENDA - JANUARY 10, 1989

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

RESOLVED, That the Board of Education approve its agenda for January 10, 1989.

RESOLUTION NO. 2-89 Re: HB 5 - VEHICLE LAWS - DRIVER'S LICENSE HIGH SCHOOL DROPOUTS

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

RESOLVED, That the Board of Education oppose HB 5 - Vehicle Laws - Driver's License - High School Dropouts.

RESOLUTION NO. 3-89 Re: BILLS ON DRUG FREE ZONES

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mr. Goldensohn, the following resolution was adopted unanimously:

RESOLVED, That the Board of Education supports the concept of a drug free zone on school property but raises a series of questions about the bills including (1) what school property is to be included, for

example, school buildings only, bus parking, administrative offices, future school sites, school buses, school bus stops, etc., (2) mandatory penalties versus mandatory jail sentences, and (3) use of fines for drug education.

Re: INDUSTRIAL AND TECHNOLOGY EDUCATION CURRICULUM

Dr. Pitt announced that this was part of their continuing effort to cover the various areas of the curriculum and give the Board an opportunity to be updated. The discussion today would not cover all the areas of what he would call vocational education, and staff would explain this.

Dr. Theodore Rybka, director of the Department of Career and Vocational Education, said they would describe activities for which his department provided financial resources, personnel, and leadership. These programs enrolled 13,600 students or 49 percent of the students served by career and vocational education. They would not be covering business education, community-based education, home economics, and career education.

Mr. Donald Wilson, coordinator of industrial and technology education, explained that these programs used to be known as industrial education. For the past three years they had been making this change with the theme of "programs in industrial arts reaching for tomorrow's technology." The program classifications covered in industrial and technology education included trade and industrial education, agriculture and renewable natural resources, and technology education. The trade and industrial courses provided students with the skills needed to enter the work force upon graduation from high school. These courses included auto mechanics, carpentry, cosmetology, electronic technology, welding, and so forth. The largest concentration of these programs was at the Edison Career Center where they offered 13 of these programs. Only cabinet making and radio/television were not offered at Edison. They also had these courses at the six vocational minicenters around the county. The Lincoln Center also housed part of the auto trades program. This year they had 1,250 students taking trade and industrial courses.

Mr. Wilson reported that in the agriculture/horticulture courses students learn how to use natural resources and to create an environment in which to grow plants and animals. Students develop skills that lead to employment in nurseries and in agro-businesses. They had horticulture programs at Sherwood, Wheaton, Gaithersburg, and Damascus High Schools. They offered landscape nursery management at Gaithersburg High School. Ridgeview, Montgomery Village, and Gaithersburg Junior offered environmental agriculture, and this year over 500 students were enrolled in these programs at the secondary level.

Mr. Wilson explained that technology education was formerly known as industrial arts and provided students with the opportunity of developing technological literacy and of exploring technical careers.

All secondary schools offered these courses. In Category One they had technical and mechanical drafting, architectural drafting, wood technology, and other vocational and agricultural courses. They also offered communications technology, photography, electricity and electronics, and research and experimentation. At the J/I/M level all schools offered technology education at grades 7 and 8, and there was an introductory program for sixth graders. This year 5,l00 high school students and about 7,000 J/I/M students were taking technology education courses.

Mr. Edward Clements, principal of Edison Career Center, expressed his appreciation for the opportunity to work at Edison. During his short tenure he had focused on student enrollment increases, familiarization with program and staff, and identification of program needs. The basic goal of the Edison program was to prepare high school students for the world of work. Some would elect to work immediately upon high school graduation and some used their Edison experience as a foundation for a technical program at the college level. Their data suggested that 50 percent of the students attending Edison continued their education beyond high school.

Mr. Clements stated that students from Edison possessed a well-developed set of positive work habits and technical skills. Graduates of any of their 19 programs received an employability profile which verified their skills. He shared two samples of these profiles with the Board. The contents of these profiles were reviewed annually by their craft and advisory committees. For example, the Marriott Corporation worked closely with Edison staff and students on an almost weekly basis and reviewed this profile. The Edison job placement coordinator discussed the profile items with employers and provided feedback. These processes helped assure the relevancy of the Edison classroom and lab instruction to skills required in the work place. This also assisted them in identifying the technical training teachers needed to remain current and the materials of instruction and equipment necessary to stay abreast of technical advancements. It was critical that students receive sufficient skill training to become effective employees, and a major piece of their instructional design was hands-on experience. Students at Edison could tell them of their involvement in real life activity such as building a home, designing a home, or preparing a gourmet dinner. He had asked two students to share their experiences.

Ms. Judy Dickson said she was now a full-time student majoring in architecture at Montgomery College. After three years at Edison, she had had experiences in architectural drawing, mechanical drawing, and electrical drawing. She had entered the Young American contest where she had to design her own home based on the requirements of other architects. In addition, she had worked with PEPCO in their electrical drawing program learning everything about what PEPCO did. Edison had given her experience on the autocad computer. She felt that she received recognition for doing her best at Edison because for two years she received the award for the most outstanding student in drafting. PEPCO gave her a certification of completion of their

program which would help her as a job reference. She praised the Edison program and the foundation it had supplied her for her work at Montgomery College.

Mr. Rick Brennan said he was in his second year at Edison in the graphic arts program. He had not been interested in the regular program at high school and going to Edison seemed the natural thing to do. His counselor had pushed him toward Edison because he thought it was a good program. He reported that his program used the latest equipment including desk top publishing, typesetting, and photography equipment. He reported that there would be a skills Olympics held in Anne Arundel for students in graphic arts and other programs. The winners would compete against students from other states. Edison had also helped with his college placement by sending him to the Rochester Institute of Technology to look at their graphic program.

Dr. Brennan, Rick's father, stated that if he had been told four years ago that he would be before the Board of Education telling them how happy he was with how his son was doing in school he wouldn't have believed it. He explained that he was a physician with about 19 years of education post high school, and his wife was a school teacher. Rick was a good kid but not turned on by high school. He had liked graphic arts and wanted to go to Edison, but Dr. Brennan was against this. He was afraid that a vocational program would prejudice Rick against going on to college. By the eleventh grade it was obvious that changes had to be made, and Rick entered Edison. Within three months there were phenomenal changes in Rick. He showed skills in planning, working with projects, and having a sense of achievement. One of the reasons for the change was that the staff at Edison got to know each student individually and to learn what motivated these students. They had the Vocational/Industrial Clubs of America (VOCA), and students could enter a variety of competitions. Students got a chance to achieve and a chance to succeed. Rick was now very positively motivated toward going on for additional education and was now much happier with himself as a person. Dr. Brennan said he had gone from being a doubter in terms of vocational educational programs to being a strong believer. He thought that if more students who were more geographically separated from Edison had opportunities to go to Edison they would benefit as well.

Dr. Michael Wilson, Trades Foundation, introduced Mr. John Bowess, president of the Automotive Trades Foundation, and the assistant general manager of Chevy Chase Chevrolet. Mr. Bowess reported that his father who had been involved in the inception of the foundation had urged him to get involved. The foundation was basically a used car dealership operated by MCPS and tied in with local businesses. The uniqueness of the program was its relationship with area businesses and the dealership community. It allowed students to learn a trade in a very interesting and lucrative field. The mini-dealership gave students an opportunity to learn the basics before going on to college or to a postsecondary education program. This was a very well-rounded program which included marketing and accounting and was supported very strongly by the dealership

community.

Mr. Robert Hubbard, environmental protection manager of Montgomery County government was the president of the Construction Trades Foundation. Mr. Hubbard explained that they were a not-for-profit organization comprised of businessmen who facilitated the off-school premises and on-the-job-site construction of single family houses with the trades program of the vocational education centers. They were unpaid volunteers. The foundation started in 1976 with the building of luxury homes in Bethesda, and the success of these homes changed the views of the building community. In recent years they had become involved with the Housing Opportunities Commission in developing moderately priced dwelling units in the Lyttonsville area. They had since completed the project and were now back in the speculative home market. Last year they worked with School Facilities in the construction of the Phoenix II facility. At present they had two homes under construction and were planning an open house on February 4. He invited the Board and staff to the open house and the cornerstone ceremony in the spring.

Mr. Hubbard reported that this year they had 300 students from 20 different high schools participating. Today 100 students were competing in the design of next year's home. He said that students were not just involved in construction. They were involved in marketing, public relations, advertising, bookkeeping, and interior design.

Mr. Frank Nuff, Wheaton High School student, explained that he was in the auto mechanics part of the dealership. He said that he fixed cars, the auto body section painted them, and then the cars were sold.

Mr. Brian Cohen, Springbrook High School student, reported that Edison Center had taught him a lot of things. One was to work with his hands, but he also needed his mind to use his hands. He would be attending Montgomery College and planned to major in physical education. His dream was to be a coach, but he also wanted to have a heating and air conditioning business on the side. He commented that Edison had changed his life because at 18 he knew what he wanted to do. Edison had offered him an opportunity to find out whether or not

he liked a trade, and he had found that he liked air conditioning and heating.

Mr. Derek Moore, Springbrook High School student, said he had not known what to do with his life. His mother had encouraged him to attend Edison and take up carpentry. He liked carpentry and planned to make it his career. He hoped someday to have his own business and hire students from Edison.

Dr. Wilson thanked the students for their extremely fine presentations. He said the students did an even finer job when they worked with their hands and their minds. He invited the Board members to visit students on their own "turf."

Mr. Wilson showed Board members, staff, and audience a video tape on technology education in the United States.

Mr. Paul Skellchock, Einstein High School resource teacher, recalled that the last time he had been before the Board it had been as an industrial arts teacher. Now he was going to be speaking as a technology education teacher, and he would explain the difference. At Einstein they had taken a woodworking and drafting program and improved the product for students. For starters they had to educate youngsters, their parents, the staff, and the administration of the school as to what technology education was. They had done this through the video, presentations, and articles in the school newspaper. They had been working on this conversion for two years. They were now converting shops into technology laboratories. In addition, they were modifying their program and infusing new materials, systems, machines, and instrumentation into the labs.

Mr. Skellchock reported that experiences for students now included the technologies of construction, manufacturing, communication, transportation and power energy. Students studied modern technological processes and products with an emphasis on the use of mathematics and science as they related to the application of the various technologies. The overall goal was to develop each student's potential as an effective, knowledgeable, and contributing member of a technological society. Industrial education had always been rich with hands-on experience, but now they were switching that mode. Before they had been producing projects, and now they were producing products. These products were knowledgeable and more informed students who were capable of competing in the 21st century. They were now problem-solving through the use of technological processes, systems, organizations, materials, tools, and machines. The experiences were both realistic and simulated and were found within industry today. Math and science were incorporated in the process as well as the relationship of technology to all the other disciplines within the school building.

Mr. Skellchock said that the woodworking shop was a thing of the past. They now had a research and development lab where students were exploring materials by making tests and experimenting with processes and products. If they visited the drafting room, they would see a language learning center, the language of industry. Students wishing to pursue engineering were studying robotics, civil engineering, automotive engineering, aeronautics, digital and electronics, commercial and residential architecture, and space structures in industrial engineering. They were dealing with product design, design analysis, photoelasticity, kinematics, statics, descriptive geometry, computer-assisted manufacturing and design, applied engineering, and research and development. For example, a group of students were designing a roadway that would span a 600-foot canyon. They would design it, engineer it, build a scale model, and test that model through structural testing. They were using solar power for heat, for air conditioning, and for hot water. They were building a wind tunnel to test vehicles for aerodynamic design, and

they were using computers to do analyses.

Mr. Skellchock reported that his school was also using their labs for ESOL students in a program introducing them to the construction industry. They were training these students to have entry-level job skills to get part-time work or full-time work. In addition, they were doing the same thing with Level 4 and 5 special education students.

Mr. George Haney, Earle B. Wood Middle School, said that at the seventh grade they had a program called exploring technology which prepared students for the future by developing skills and knowledge about the evolution of technology and its contribution to life. Students studied transportation, communications, power, energy, construction, and manufacturing. They did this by gathering information, developing working models, and preparing reports. He shared one student's work on the Wright Brothers' first airplane. Another program at the eighth grade level introduced students to manufacturing technology. Students organized manufacturing companies, generated product ideas, constructed fixtures with which to fabricate materials, devised production schedules, produced products, and distributed those to a specified market. He showed the Board two products manufactured by students.

Mr. Haney indicated that they offered students a program in research and experimentation which emphasized experimental techniques and organized research procedures. Tools, instructional equipment, and laboratory equipment permitted students to test and evaluate products, processes, and materials. Students actually tested products and recorded the findings. Oral seminars allowed students to discuss their research problems, to relate ideas, to share sources of information, and to report the findings of their research. He showed Board members an example of a problem of the effects of pressure on the breakage of tempered glass diving mask lenses. Mr. Haney reported that they had a robotics program to educate students about robots and to provide them with some hands-on experience. He showed the Board a robotic system that was being used to manufacture the products that students were purchasing. They provided youngsters with a robotics handbook with information about robotic systems, the work cells common in these systems, applications both now and in the future, and instructions on programming and operating a real-life robotic system.

Ms. Brigitte Valesey, department chair at Frost Intermediate, stated that one interesting technology education activity was for students to brainstorm definitions for technology. The list usually began with computers, continued with making products, and ended up with traveling in outer space. At Frost they defined technology as knowing how to use resources efficiently to provide the goods and services that people wanted and needed. The emphases in classes were knowing how, efficient use of resources, and providing goods and services for society. Frost students developed this know-how through a number of hands-on activities. They used computer-aided drafting (CAD), and they were introduced through a structured unit developed

by county teachers. Students used the guide to learn how to combine lines and symbols into technical drawings using the computer. The computer allowed them to input, modify, and store drawings. They learned the universal language of drafting through CAD in much less time than it took to learn manual drafting using T-squares and triangles.

Ms. Valesey explained that another activity to gain know-how was product disassembly. Students brought in a discarded product from home and disassembled the product into its subcomponents. They identified the resources used to make the product, determined the function of the parts, and explained how they thought the product worked.

In another project, students selected and designed a commercial building. They identified building alternatives, examined constraints and constructed models. They weighed the advantages and disadvantages of a particular site and the overall impact of that building on the community and on the environment. Technology education attracted the majority of Frost students because it was the one part of their general education that focused on knowing how as well as how to. It pulled together what students had learned in math, science, English, and world studies. They developed critical thinking and hands-on skills for the home and for the job.

Mr. Leon Seeman, Frost student, said they had covered communications, construction, manufacturing, computer-related drafting, robotics, and transportation. He showed a model of a house that was done in their construction unit. As part of their manufacturing unit, they picked a product to manufacture. They looked at what would sell the most and cost them the least. They decided on trays and made about 15 trays which they sold for $2 each. Their third project was a game which was a review of everything they had learned. The main idea of the game was to teach the player about technology. As part of their communications unit, he had done a silk-screen of an eye-pleasing symbol for a product or company.

Mr. Barry Burke, teacher specialist, explained that it was his job to talk about the use of computers in industrial and technology education. Computers were used as tools to solve problems. They used the computer much the same ways as they used screw drivers, T-squares, robots, etc. Computers were used in a variety of classrooms from cosmetology to auto mechanics. Woodworking and cabinet making classes used programs to prepare bills and spread sheets to create job estimates. At Einstein High School, students had the opportunity to design, program, and operate a computer-controlled lathe. In the auto mechanics program, students used Lotus-type spread sheets to keep track of inventory, costs, and labor.

Mr. Burke indicated that the computer applications were the result of the efforts of instructions to familiarize students with the experiences found in the world of work. Their most comprehensive efforts to date were in their drafting program. Each high school had

the hardware and software for a computer-aided drafting station which included AUTOCAD software, an IBM computer, a plotter, and a digitizing device known as a mouse. Quince Orchard had and Watkins Mill would have four such stations. The Edison Career Center had 15 stations with AUTOCAD installed. The CAD software was also being used in electronics classes where circuit boards were being designed and etched.

Mr. Burke said that they were currently implementing desk-top publishing at the Edison Career Center graphics lab and at Quince Orchard High School. A third school would begin operations next semester. Desk-top publishing was part of a new course being piloted in communications technology where students learned a variety of computer applications from CAD to computer-generated slide shows. By next month, every middle school would have a computer-aided drafting station. This experience was to spark student interest so that they could explore computer-aided drafting at the high school. Students at the middle level also used the computer to control the robot. The program could be stored and retrieved which gave students an actual simulation of industry. He reported that instructors of industrial and technology education had worked hard to create appropriate learning activities and were sharing this information with other instructors across the county.

Dr. Rybka commented that all that the Board had seen today could not have been possible without the leadership of Mr. Wilson, Mr. Burke, and Dr. Wilson. They intended to continue with efforts to convert industrial arts to technology education. They also wanted to extend this down into the elementary schools. Last spring Dr. Shoenberg had asked them to think about having a program they could take to the elementary school, and they were looking into this. In industrial education they continued to work with business and industry persons to make sure that their programs were relevant and that their graduates were prepared for the world that was facing them.

Mr. Goldensohn applauded the staff and students for their presentation and the enthusiasm they showed. He asked whether they had a reasonable balance between male and female interest and participation at Wood. Mr. Haney replied that in seventh grade all students took technology, and at the eighth grade it was selected but quite a number of females were taking the course.

Mrs. Praisner echoed Mr. Goldensohn's appreciation for the information and the materials. She wondered about the program being optional at the eighth grade. She requested information on the extent to which there was variation from middle school to junior high school on offering this as an option.

Mrs. Praisner was also concerned about the extent to which there was variation in the availability of equipment. She recognized that the Edison Center programs were obviously different. She was pleased to see John Goodloe in the audience because the key was parental support for the program and counselor encouragement. She wondered about the extent to which they could use parents with other parents to explain

their experience. She hoped that Dr. Brennan would be willing to speak to other parents. She asked for information on what their expectation was for each student to understand about technology as they moved from the junior high level to the high school level. She would like to know what was the expectation for what students were supposed to know through these activities and projects.

Dr. Shoenberg remarked that they had heard the clearest illustration they could possibly have of differences in learning styles and how that learning style had made a difference in the lives of several students. He knew that were were doing work on learning style issues, and he hoped that they were going to pursue this with some vigor.

Dr. Shoenberg knew that a lot of equipment was terribly expensive. They were in the process of preparing students for the workplace, particularly in the Edison Center. In some areas they had appropriate equipment to move students out into the work place. He wondered whether there were certain kinds of equipment they couldn't touch and what kinds of support they were getting from the industries that might employ these students. Dr. Rybka replied that they were trying to find the most efficient and effective use of the equipment they were able to purchase. At Edison, they were in very good shape because last year they were able to utilize their federal vocational dollars to upgrade programs. Next year they would work on the electronic office program to replace word processing, and they were

going to be looking for some donations from the business community to help support that effort.

Mrs. Hobbs pointed out that on January 1l the Edison Career would be holding its open house. She hoped that the students before the Board would encourage other students to take advantage of the opportunities at Edison.

Dr. Shoenberg thanked staff and students for their presentation. Dr. Pitt added that this represented a very small portion of all of the kinds of vocational and technical programs that were available to students. He wished that the business community and the County Council could have been present to hear the discussion this morning. He was also pleased by the small increase in the enrollment at Edison Center. He thanked staff and students for their efforts.

RESOLUTION NO. 4-89 Re: HB 7 - EDUCATION - ACADEMIC CREDIT FOR THE STUDY OF AMERICAN SIGN LANGUAGE

On recommendation of the superintendent and on motion of Mr. Goldensohn seconded by Mr. Park, the following resolution was adopted with Mr. Ewing, Mr. Goldensohn, Mrs. Hobbs (Mr. Park), and Dr. Shoenberg voting in the affirmative; Mrs. DiFonzo and Mrs. Praisner voting in the negative:

RESOLVED, That the Board of Education take no position on HB 7 - Education - Academic Credit for the Study of American Sign Language.

Re: EXECUTIVE SESSION

The Board met in executive session from 12:15 to 2:15 p.m. to discuss personnel and legal issues.

Re: BOARD/PRESS/VISITORS CONFERENCE

Debbie Elder, Maryland Bankers Association, appeared before the Board.

RESOLUTION NO. 5-89 Re: APPROVAL OF FOOD AND FITNESS COURSE

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, The public school laws of Maryland specify that the county superintendent shall prepare courses of study and recommend them for adoption by the county Board (THE ANNOTATED CODE OF THE PUBLIC GENERAL LAWS OF MARYLAND, EDUCATION (Volume), Section 4-205); and

WHEREAS, The public school laws of Maryland also state that the county Board, on the written recommendation of the county superintendent, shall establish course of study for the schools under its jurisdiction (IBID., Sec. 4-110); and

WHEREAS, The PROGRAM OF STUDIES is the document that contains the prescribed curriculum elements, including instructional objectives, of all MCPS curriculum programs and courses (MCPS Regulation 345-1: Development and Approval of Curriculum and Supporting Materials); and

WHEREAS, Excellence in curriculum can be maintained only by continuing attention to the need for curriculum change; and

WHEREAS, The Council on Instruction, charged by the superintendent with considering recommendations for curriculum change, has recommended approval of the curriculum for the Food and Fitness course; and

WHEREAS, The superintendent recommends that the Board approve this new course curriculum; now therefore be it

RESOLVED, That the Board of Education approve Food and Fitness, presented to the Board of Education on December 13, 1988, for publication in the PROGRAM OF STUDIES as part of home economics MCPS curriculum to become effective in the school year 1989-1990.

RESOLUTION NO. 6-89 Re: PROCUREMENT CONTRACTS OVER $25,000

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, Funds have been budgeted for the purchase of equipment, supplies, and contractual services; now therefore be it

RESOLVED, That having been duly advertised, the contracts be awarded to the low bidders meeting specifications as shown for the bids as follows:

	AWARDEE(S)	
COG NO.	Gasoline	
80143	J. E. Meintzer and Sons, Inc.	$ 841,548
213-9	Telephone Equipment	
	North Supply Company	$ 39,066
37-89	Library Media Center Supplies	
	Brodart Company	$ 11,974
	Demco, Inc.	6,784
	Gaylord Brothers	17,337
	Kunz, Inc.	8,355
	Nicholas P. Pipino Associates	2,031
	Southern Business Communications of DC	5,070
	University Products, Inc.	2,342
	West Coast Wholesale Distributors, Inc.	15,048*
	TOTAL	$ 68,941
51-89	Air Conditioner Parts and Controls	
	Aireco, Inc.	$ 9,266
	The Cooling Tower Store	39,291
	Albert G. Fraley Enterprises, Inc. T/A Fraley Supply Company	6,579*
	Kolz International, Inc.	7,034
	R. E. Michel Company, Inc.	58,617
	H. M. Sweeney Company	20,024
	TOTAL	$ 140,811
71-89	High Speed Copying Machine for Publications Services	
	Xerox Corporation	$ 93,000
	TOTAL OVER $25,000	$1,183,366

*Denotes MFD vendors

RESOLUTION NO. 7-89 Re: REROOFING OF EARLE B. WOOD MIDDLE SCHOOL

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, The following sealed bids were received on December 1, 1988,

for the reroofing of Earle B. Wood Middle School:

	BIDDER	BASE BID
1.	J. E. Wood & Sons, Inc.	$298,646
2.	R. D. Bean, Inc.	318,830
3.	Orndorff & Spaid, Inc.	348,850
4.	Raintree Industries, Inc.	438,700

and

WHEREAS, The low bidder, J. E. Wood & Sons, Inc., has performed satisfactorily for MCPS; and

WHEREAS, Sufficient funds are available in Account 999-42 to award a contract for the base bid; and

WHEREAS, The State Interagency Committee for Public School Construction has agreed to fund 50 percent of the approved contract as part of its systemic renovation program; now therefore be it

RESOLVED, That a contract for $298,646 be awarded to J. E. Wood & Sons, Inc., for the reroofing of Earle B. Wood Middle School in accordance with plans and specifications prepared by the Department of School Facilities.

RESOLUTION NO. 8-89 Re: CHANGE ORDERS OVER $25,000

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, Change orders exceeding $25,000 for various projects have been received by the Department of School Facilities; and

WHEREAS, Staff and the project architect have reviewed these change orders and found the costs to be equitable; now therefore be it

RESOLVED, That the Board approve the following change orders for the amounts and contracts indicated:

ACTIVITY 1

Project:	Northwood High School Change Order No. 7
Description:	Provide serving line equipment for cafeteria
Contractor:	Henley Construction Co., Inc.
Amount:	$68,753.00

ACTIVITY 2

Project:	Quince Orchard High School Change Orders 25 through 29
Description:	Mechanical/electrical modifications for the future addition and changes to equipment layouts in various classrooms

Contractor: Glen Construction Co. of Virginia, Inc.
Amount: $122,957.00

ACTIVITY 3
Project: Woodlin Elementary School
Change Order No. 1
Description: Oil-Grit separator required by county Department of Environmental Protection
Contractor: Patrick Quinn, Inc.
Amount: $30,140.00

RESOLUTION NO. 9-89 Re: ARCHITECTURAL ADJUSTMENTS - VARIOUS CAPITAL PROJECTS

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, Changes to the original plans for various capital projects were approved as part of the FY 1989-1994 Capital Improvements Program; and

WHEREAS, These changes necessitated fee adjustments for architectural service contracts; now therefore be it

RESOLVED, That the following contracts for architectural services be amended to reflect the increased fee identified for each contract:

Project	Fee Increase	Total % of Est. Const. Cost
Sherwood High School Modernization	$255,000	6.25
Broad Acres Elementary School Addition	32,700	6.50
Cresthaven Elementary School Addition	(57,300)*	8.55

* Reduction in fee

RESOLUTION NO. 10-89 Re: TRANSFER OF CAPITAL FUNDS

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, Surplus construction funds have been identified in two capital projects that have been completed; now therefore be it

RESOLVED, That excess funds in the following projects be transferred to the Local Unliquidated Surplus Account:

1.	Greencastle Elementary School	$55,000
2.	Strawberry Knoll Elementary School	40,000
	TOTAL	$95,000

and be it further

RESOLVED, That funds from the Unliquidated Surplus Account be transferred to the following projects:

1.	Paint Branch High School	$55,000
2.	Waters Landing Elementary School	40,000
	TOTAL	$95,000

and be it further

RESOLVED, That the county executive be requested to recommend that the County Council approve these transfers.

RESOLUTION NO. 11-89 Re: MONTHLY PERSONNEL REPORT

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

RESOLVED, That the following appointments, resignations, and leaves of absence for professional and supporting services personnel be approved: (TO BE APPENDED TO THESE MINUTES).

RESOLUTION NO. 12-89 Re: EXTENSION OF SICK LEAVE

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, The employee listed below has suffered serious illness; and

WHEREAS, Due to the prolonged illness, the employee's accumulated sick leave has expired; now therefore be it

RESOLVED, That the Board of Education grant an extension of sick leave with three-fourths pay covering the number of days indicated:

NAME	POSITION AND LOCATION	NO. OF DAYS
Stewart, Corry	Bus Operator Area III Transportation	10

RESOLUTION NO. 13-89 Re: DEATH OF MRS. ANDA JUBERTS, CLASSROOM TEACHER AT THOMAS S. WOOTTON HIGH SCHOOL

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, The death on December 14, 1988, of Mrs. Anda Juberts, a classroom teacher at Thomas S. Wootton High School, has deeply

saddened the staff and members of the Board of Education; and

WHEREAS, In over seventeen years of teaching with Montgomery County Public Schools, Mrs. Juberts demonstrated outstanding performance, using creative techniques and innovative ideas; and

WHEREAS, Mrs. Juberts was respected by the staff, student body, and community as a challenging teacher and true professional; now therefore be it

RESOLVED, That the members of the Board of Education express their sorrow at the death of Mrs. Anda Juberts and extend deepest sympathy to her family; and be it further

RESOLVED, That this resolution be made part of the minutes of this meeting and a copy be forwarded to Mrs. Juberts' family.

RESOLUTION NO. 14-89 Re: PERSONNEL REASSIGNMENT

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

RESOLVED, That the following personnel reassignment be approved:

NAME	FROM	TO
Charlotte S. Klumph	Classroom Teacher Takoma Park ES	Assignment to be determined; to retire 7-1-89; will maintain salary status

RESOLUTION NO. 15-89 Re: PERSONNEL TRANSFERS

On recommendation of the superintendent and on motion of Mrs. Praisner seconded by Mr. Goldensohn, the following resolution was adopted unanimously:

RESOLVED, That the following transfers be approved:

TRANSFER	FROM	TO
John R. Burley	Principal Viers Mill ES	Principal Middlebrook ES Effective: 2-1-89
Kenneth Egloff	Principal Stonegate ES	Principal Cloverly ES Effective: 2-1-89

RESOLUTION NO. 16-89 Re: PERSONNEL APPOINTMENT

On recommendation of the superintendent and on motion of Mrs. Praisner seconded by Mr. Goldensohn, the following resolution was

adopted unanimously:

RESOLVED, That the following personnel appointment be approved:

APPOINTMENT	AS
Eva Shackelford	Social Worker, Rock Terrace HS Effective: 1-11-89

Re: PROPOSALS FOR FOLLOW-UP TO THE NSF STUDY OF ACHIEVEMENT OF MINORITIES AND FEMALES IN MATHEMATICS

Dr. Pitt pointed out that this study and other national studies focused in on math and made some recommendations. He had reported on a number of efforts in this area, and while this report focused on mathematics they had had committee look at their science curriculum as well. The first priority of this committee was the elementary science curriculum. The general feeling was that there were many good elementary school science programs in MCPS, but there was not a total science curriculum which encompassed new focuses K-6. His first priority would be to put a group of people together to recommend such a curriculum. Using available resources, they might be able to come up with a curriculum in about 12 months.

Dr. Pitt observed that the memo before the Board focused on what they were now doing and some things they hoped to do in this area in mathematics. The study indicated that there were some differences as to what happened to women and minorities. Some minority children started falling behind in math at a young age, and women later. The first recommendation was to increase the mathematics competency of elementary teachers. This was based on the NSF study and a math study done in MCPS. Another recommendation was to promote positive attitudes and expectations for minorities and females for mathematics achievement. Another was to increase emphasis on early intervention to keep problems from developing, and another was to increase the use of technology as a tool in mathematics instruction and learning. The final goal was to provide support and outreach programs for parents to increase their involvement in helping their children learn better. Dr. Pitt reported that to reach these goals they would have a multifaceted program of activities, both in-school and out-of-school efforts. Many of these efforts involved initiatives that had begun about two to three years ago. Preliminary data suggested that these efforts would have an impact. However, because these efforts were relatively new, they were not included in the NSF study. He proposed continuing these efforts because of the promise they held and because of the positive feedback.

Dr. Pitt said that they had some new efforts which had emerged out of recent analyses. These were based on the latest research findings nationally as well as their own efforts. The program covered training, technology, parental support and involvement, and after-school activities. He indicated that a lot of the NSF study addressed training needs directly or had implications for training,

and elementary teachers were the focus of number of these training recommendations. The MCPS study said essentially the same thing. One recommendation was to put an additional specialist in each elementary school. However, this would mean adding about 100 teachers.

Dr. Pitt reported that they had an Elementary Mathematics Teacher Training Project, and one of the goals of the project, which started in 1986, was to train at least one teacher from each elementary school between 1986 and 1991. The purpose was to strengthen teachers' mathematics background and build confidence and leadership skills. This would enable them to share skills and knowledge with other teachers at their schools. This was originally underwritten with Title II funds, but it was now supported with MCPS funds. Most of the teachers trained had been females, and the training had helped build a cadre of teachers who had expertise and were role models for female students. To date, about 75 teachers had participated. In addition, they had the Mathematics, Science and Minorities Training Project. This was a cooperative arrangement between the Mid-Atlantic Center for Race Equity (American University) and MCPS, and it had been underway for four years. Dr. Pitt had met with the entire group last summer and was impressed with the entire program. The goal was to help teachers develop and extend attitudes and skills designed to foster the math and science achievement of minority students. Ten elementary schools had been participating, and preliminary assessments indicated positive changes in teacher attitudes. They hoped to double that effort this year. This effort involved D.C. and Prince George's County.

Dr. Pitt reported that they had focused the sex equity initiatives on secondary schools during the last three years. They had held conferences for staff and parents to create an awareness of sex equity issues. They had also involved guidance counselors, media specialists, career technicians, and students in this effort. In EYE workshops, teachers, media specialists, and guidance counselors had developed materials and activities for use by secondary teachers, guidance counselors, and parents. This year the focus was on the upper elementary grade levels. They had seen some significant changes in the last year or so in the number of women taking courses at the secondary level. Last summer materials were developed for the secondary level and for students in grades 4-6. A conference was being planned for staff from elementary schools, area and central

office, and parents. He had attended one workshop with counselors, and he was very impressed with the program.

One issue that was not resolved by this approach was what happened to young women when they graduated from high school. There were fewer women choosing the mathematics areas than were men. Women were now going into law and medicine as opposed to higher math.

Dr. Pitt said that training elementary teachers in math would not solve the problem totally. One thought was to have the curriculum specialists specifically trained in mathematics. However, he would

not move this way until he talked with the elementary principals. He observed that the ISM system was another area they needed to work on. They had a lot of new principals, and they were going to look at the background of these people. Those who had not had training in this area would be required to have training. They believed this could be built into their current leadership training program.

Dr. Pitt indicated that they were currently involved in a proposal with the University of Maryland to address the issue of early intervention. The main thrust of this proposal would be to develop a training program for teachers in grades K-3 to enable them to detect and address mathematics learning difficulties in those early grade levels. The project would focus on training and instructional activities. The goal was to produce a process and training which could be replicated in other schools. This would be a four-year effort at three MCPS elementary schools. The first year would focus on kindergarten, the second on first grade, the third on second grade, and the fourth on third grade. If at the end of the first year they found what they were doing was successful, he would probably come in with a budget request for expansion.

Dr. Pitt stated that technology provided direct support for the curriculum and instructional practices. Although the NSF study did not focus directly on technology, they believed these tools could help teachers and students focus in on math instruction. At Pine Crest Elementary School they were pilot testing one of the most sophisticated computer software packages available. Staff thought this package had some potential. This year they were getting free support from IBM.

Dr. Pitt said they had developed additional guides for computer use and were moving into continuing training efforts for software to support basic skills development in mathematics. Each school would have the software to support mathematics, and they were duplicating, on request, additional copies of the Minnesota Educational Computer Corporation software.
During the summer of 1989 they would develop instructional guides for computer use in grades 2 and 3. They would be revised to include more lesson plans for using specific software. They were planning a workshop for primary teachers on mathematics and language arts computer use.

Dr. Pitt had recommended they put $1.4 million additional in computers for the elementary school. The county executive's recommendations cut that fund and recommended they fund at the same level as last year. He hoped they could convince the Council this was an important area.

The NSF study had recommendations on parent support and involvement. The study showed that parents were interested in their youngsters learning mathematics. The issue was how to support the child in this area. They now had the Parent Involvement in Basic Skills Program (PIBS) to provide schools with materials and parent training ideas in math and reading/language arts. Efforts were underway to develop

strategies by which schools could increase the effectiveness and use of these materials. He had included additional support in his FY1990 budget.

For the past two years QIE had been helping schools acquire and use a very successful parent support program called "Family Math." The program helped schools reach out to the parents of students with the greatest needs. Parents attended workshops where they were provided with activities that could be done at home.

Dr. Pitt reported that they were going to try to devise a communications campaign to develop more positive attitudes towards achieving better in mathematics. This effort would inform parents of things that they could do. He had put about $10,000 in the budget to come up with some research ideas having to do with technology and parenting. A teacher had developed some video tapes for use in his classroom. Many economically deprived parents had VCR's in their homes. He believed they could develop a video cassette idea to help with parenting in mathematics. He was talking about teaching math to very young children. If they encouraged parents to use these cassettes, they could focus in on some particular populations. He had also requested an early childhood coordinator and hoped that person would take some leadership in pursuing these ideas.

Dr. Pitt said they had a wonderful program called Summer Search which focused on students at the secondary level. It identified minority students, and to date over 300 students had been involved. QIE and the business community had developed this for youngsters to work in some of the scientific areas in businesses and in universities. He would like to expand this program.

Dr. Pitt reported that there was another major effort in the budget this year. They had a recommendation to focus in on 900 students grades 3, 4, and 5. This age group was related to the NSF study because at the third grade they started to see some kids fall off. These would be average students in a summer institute at nine centers. They would help these students develop math skills and do some teacher training as well.

Dr. Pitt indicated that they had a number of initiatives they had started, some they needed to focus in on, and a couple that he would like to look at next year.

Mr. Ewing remarked that this was a good set of responses. He had a question that had to do with what was required of whom and what results did they expect. On page four there were a couple of requirements regarding curriculum specialists and principals. Throughout the paper there were a number of training efforts, and he wondered if they had a requirement that elementary teachers without a sufficient effort of math expertise must participate in the training. Dr. Pitt replied that there was no such requirement, and he was not sure that he wanted to go that way. The focus was to try to have at least one teacher as a support person in each elementary school. The second focus would be on the curriculum specialists. If they had

additional requirements for elementary school teachers, this would require a different approach in terms of funding and possibly a policy change. Dr. Vance added that they were remaining flexible on in-service training for the summer and next school year to look at the possibility of having a heavy concentration in math and science. Again, this would not be mandatory.

Dr. Pitt commented that as they looked at reorganization of the curriculum area they saw a need to have more focus on direct intervention at the school level. They were talking about a little more in-depth training of teachers. Whether they went to a specific requirement for teachers was one question. His focus now was to get specific skills in every school.

Dr. Thomas Rowan, coordinator of elementary mathematics, advised the Board that one of the goals of the elementary math teacher training project was to have the trained person share the information with the other teachers at the school. Some of those teachers had been able to do that, but it had been difficult because no time was provided to do this. With Title II funds they were now providing minigrants to schools that would enable those trained people to have access to either stipends or some substitute time to share their training with other teachers. This and the training of the curriculum specialists were efforts to address the training of the larger group of teachers. Dr. Pitt observed that he had asked staff to look at ways of organizing elementary schools, particularly at the upper grade levels. Dr. Shoenberg thought they were edging toward this business of differential staffing. He felt it would take more time and money to train every classroom teacher to be an effective teacher of mathematics than it would to organize. Dr. Pitt advised that they probably would do that at the upper grades; however, staff was still debating about how much differentiation they wanted to have for very young children. He wanted their early childhood person to take a look at this issue.

Mr. Ewing said that his concern was not necessarily that every single teacher be trained or that they should differentiate. He was concerned about the pace of this and the volunteerism. He thought they were unlikely to make progress very quickly. This was an issue that had a relationship to a whole range of problems faced by the school system. He could prefer for them to address the issue much more comprehensively and, if necessary, much less voluntarily. The same thing was true of the 900 students at the summer institute out of 25,000 at those grade levels. Dr. Pitt felt that 900 was a significant effort. Mr. Ewing questioned whether this met the need. Dr. Pitt said that as they looked at data they felt that 900 would hit a significant number of students in that category. Dr. Vance added that they had looked at the numbers in terms of centers and where the youngsters tended to cluster throughout the county rather than at the aggregate number.

Mrs. DiFonzo noted that they had not provided structured time for trained teachers to deal with the other teachers. Mr. Ewing had touched on her concern about volunteers. She would venture to say

that the chances were probably 99 to 1 that the volunteers were those people who already had an interest and a special ability in that area. It seemed to her they should be getting at those teachers without those skills and enthusiasm. The question then became what were they going to do for those people. For example, did they intend to provide special in-service time for them or released time? Dr. Pitt replied that the goal would be to give time for the trained teacher to work with those teachers who needed this. For example, curriculum specialists already had the time available. At this point, they had not decided to give all teachers some concentrated training in this area. The idea was to get a person trained in each school and to differentiate at the upper grade levels. In addition, they wanted to train principals to manage the ISM system.

Mrs. DiFonzo said that the other issue was accountability. They could train the trainer, but she wondered what measures they would put in place to see that the untrained were getting the value of the expertise of the trained.

In regard to training efforts, Dr. Shoenberg asked what they meant by "strong mathematics background" for curriculum specialists. Dr. Rowan replied that the current requirement for elementary teachers was six credits in mathematics. The University of Maryland required eight credits, but in his opinion both of those requirements were inadequate to the needs for classroom teachers. He thought they needed a program that would encompass what they had in the elementary teacher training project. This contained a more intense development of the structure of mathematics up through algebra and geometry. He felt they were giving teachers an additional six credits in mathematics. Therefore, he was talking about 12 credits minimum. Dr. Shoenberg commented that a strong mathematics background at a university did not translate into what they wanted people to have. He suggested they needed to work with the universities to develop the kind of course that would strengthen the math background of elementary school teachers. Dr. Rowan reported that he had met with representatives of the University of Maryland, Western Maryland College, and Bowie. Dr. Pitt added that he would be meeting with representatives of Johns Hopkins in the next couple of weeks. They had talked about support for teacher training.

Dr. Shoenberg asked that he be provided with some of the materials they were using in sex equity initiatives with teachers. He said the Board had received a math report, a science report, and a report on technology training. He asked about coordination among math, science, and technology initiatives. Dr. Pitt was bothered by this issue. In curriculum they saw a focus on elementary, middle, and senior without losing the fact that they had subject specialists. They needed to do a better job of coordinating those people at those levels. At the K-3 level it was a very important concern. The coordinators and specialists were working together and looking at better coordination. He was particularly concerned about coordinating at the elementary and middle levels.

Dr. Shoenberg pointed out that as they looked at these initiatives

they set up a number of programs which did very interesting things for some schools. It did have a serious "bits and pieces" quality to it. People made an investment in these projects, but they could not do everything at once. Therefore, the global issues involving coordination tended to be seen as a distracter from the specific programs that people had a stake in. He was afraid that when the best came along they were going to have trouble making it happen because people were so invested in the good they could not find the energy to deal with the global issues. Dr. Pitt agreed that they needed to coordinate how they operated at the central as compared to how they operated at the school level. Secondly, he did not want to be too global. He thought they had to focus on two major areas in the elementary school. One was mathematics, and they needed to have better trained people. Secondly, they had to have a coordinated science curriculum in the elementary school. The coordination of effort at the elementary level had to be done with a little different emphasis at the central and area level. Dr. Shoenberg said that if they did not coordinate math and science in some way, they would lose people because they would never have the feeling about the mathematical part of science because they dealt only with the descriptive part of science for the first five or six years of their education. Dr. Pitt felt this was not quite true in terms of what they were trying to train people to do. He said they had to train people and develop curriculum to be used in elementary schools where there was a global approach to teaching.

Dr. Rowan commented that in the math training they had tried to integrate. In curriculum they had tried to show where the subject areas related to one another and not to separate the math out. They used science activities, social studies data, and writing in mathematics. Mr. William Clark, director of academic skills, reported that Dr. Rowan and Mr. Schuder had looked at reading and math instruction and the data from CRT's in reading and math. They were trying to determine the importance that reading played in mathematics problem solving to integrate those two subjects to focus in on problem-solving skills.

It seemed to Mr. Ewing that if they were able to establish that math and science were both areas where they wanted to place emphasis in the elementary schools particularly in K-3 and if they were able to establish a standard for teachers, they should be able to specify and lay out what they would require of those teachers. They should be able to spell out over a period of three or four years what staff training was needed and what could be accomplished. He thought this should be given serious consideration.

Dr. Pitt said that one question was whether it was fair to assume that the elementary school teacher would be able to be trained that well in mathematics and that well in some other areas. He pointed out that they had done this in reading and staff could do it again. At the upper elementary level, most schools were looking at some differentiation in instruction. The other issue was the growth of 30,000 students in six years, and most of those would be elementary school students. They would have to bring on a large number of

additional staff, and he wondered whether they could do all of this with all the new people. He said they had to consider putting more specialization in a school and do a little more restructuring in the elementary school and then try to train teachers to a minimal level.

Mr. Ewing suggested that they had to choose and they ought to choose now before they were overwhelmed by the avalanche of students and teachers. If they decided to specialize, this had a very different kind of strategy associated with it. Dr. Pitt agreed that they would have to have further discussions on these issues.

Mrs. DiFonzo noted that they had spent a great deal of time talking about women in the areas of math and science and women going into traditionally male-dominated occupations. She wondered whether the time would dawn when they were also as concerned about men not studying humanities, early childhood education, cosmetology, fashion design, etc. She submitted that the concern needed to cut both ways.

Mr. Barron Stroud, director of Q.I.E., reported that for over four years they had had six major trainings for school-based leadership teams. Each team was trained in both mathematical and science concepts. That team took leadership in the school and trained entire staffs from supporting services to professionals during the year. There were two to three in-service days on math and science concepts with university level professors in those content areas. They had some indicators and more science and math were being taught. Teacher techniques were improving and teachers were transferring this to all students in specific populations over a four year period.

Dr. Pitt asked if they had good data yet, and Mr. Stroud replied that the focus of the program initially was to look at how they changed teacher behaviors and expectations when they improved concept knowledge. They knew enough about the model now to set it in place and look at what the actual achievement of students would be.
Mr. Clark noted that if they were going to require teacher training, it would have to be done during the school day. There was a question about someone trained in a subject area teaching elementary teachers. This raised a question of what they wanted to provide to students in the primary level. If they had differentiation, they had to look at the developmental level of children. However, it was true that in other countries they did provide people trained specifically in math and science to teach in elementary schools. Dr. Shoenberg explained that he was not urging this for the primary grades. Mr. Clark recalled that back in the 1970's they were concerned about what students were supposed to learn at each grade level. Therefore, they developed curriculum by grade level in the subject areas. Since 1981, they had been focusing more and more on an interdisciplinary approach as far as the curriculum and the structure of instruction.
Dr. Shoenberg thanked staff. He agreed that this was a difficult problem, and he appreciated the considerable imagination with which staff had approached this issue.

Re: REPORT ON BUSINESS AND SCHOOL SYSTEM PARTNERSHIPS

Mr. Robert Grossman, director of the Department of Information, noted that the written summary provided the Board listed the partnerships which were on a more formal and visible basis. However, in all schools, principals and staff members were constantly developing other kinds of partnerships. He introduced Dr. Ted Rybka, Mrs. Sally Jackson, and Mrs. Sally Keeler.

Dr. Rybka reported that the Department of Career and Vocational Education had a long-standing commitment to working with business, industry, government, and communities. This began in the 1940's but the real building started in the 1960's with the expansion and improvement of the cooperative education program and was continued in the 1970's with career education and the formation of the Foundation programs. In the 1980's it had grown to include higher education and a focus on new technologies. The nature of career and vocational education required that they stay abreast of the trends and changes in new technologies. Federal and state legislation also required that they stay involved with the business community through such groups as the Private Industry Council and their advisory committees.

Dr. Rybka pointed out that 18 of these collaborative programs were described in the paper presented to the Board. They had community-based programs and internships that involved 1,500 individual employers and 1,800 students. Examples included cooperative work experience, marketing education, and the executive and summer internships. The Foundations made up the second category and involved business and professional persons and school representatives. The Automotive and Construction Trades Foundations were active. The Retail Trades Foundation has been reactivated and would be developing linkages with Montgomery College and their marketing programs. The third category was contractual agreements with individual businesses and non-profit organizations which involved their medical careers program and specific internships. Fourth they had joint venture arrangements with chambers of commerce, and this included Project High Hopes and the entrepreneurial internship program. The major project was adopt-a-school and involved 57 businesses and 53 schools. The fifth and last category was co-sponsorship with county government and included the fire cadet program and the Maryland's Tomorrow program.

Mrs. Jackson stated that the staff of MCPS had a long tradition of inviting citizens from the community in to reinforce and enrich instruction in the classroom. Last year of the 29,000 who gave 1.7 million hours of volunteer service, 1,500 or 8 percent of them were business people on administrative or annual leave from their jobs. They served as tutors, classroom aides, and guest speakers. They had partnerships with government agencies which enabled highly skilled employees to share their love of learning and work with students on a regular basis as tutors. Last summer, the Office of Volunteers, the Office of Student Affairs, and the Department of Career and Vocational Education collaborated to develop a student community service course which enables students to give volunteer service in local non-profit agencies. The half credit elective course was being

piloted in three high schools.

Mrs. Jackson reported that in 1985 the business people in the Montgomery Education Connection developed the connection resource bank. This was a service which gave teachers access to a vast array of resources in the community to enhance instruction in the classroom and in the workplace. With a single phone call teachers could get experts to serve as guest speakers, mentors, competition judges, hosts for special tours, and supervisors of internships. The bank had made over 2,000 bookings for teachers and called on over 1,800 resources. It had served more than 36,000 students. While the bank only listed resources in math and science areas, business people were working with her office to expand the bank into social studies and language arts.

Mrs. Keeler added that the resource bank is a large project and the first one developed by the Connection, and it continued to have very strong support from that organization. The Connection membership included most of the large businesses in the county and was reaching out to the smaller businesses in an effort to increase its critical base of numbers and people. It was established more than four years ago to meet school system needs that could be addressed most appropriately by business and to engage in projects that were of mutual benefit to schools and business. It concentrated mainly on projects affecting the academic curriculum as opposed to the vocational. All Connection projects had appropriate MCPS staff members serving on their planning committees.

Mrs. Keeler noted that the Connection in collaboration with the Department of Information produced a monthly newsletter, "Of Interest." This highlighted many of the interesting programs that were available through the bank, and it also provided information to professional staff about other activities. It was originally published by a U.S. Department of Education grant, and now the Connection had hired a full-time employee to continue the publication of the newsletter and to provide other support activities. Each month from October to May, the Connection recognized a teacher who had made innovative or extraordinary use of community resources. Through its economics project, the Connection provided in-service programs for economics teachers, and through STARS, Connection members were working with high schools to raise student, staff, and parent awareness about the skills and attitudes that students need to be successful in the world of work. Work force needs had become critical in the county, and representatives of the Connection would be meeting with MCPS staff to discuss possible roles each can play in responding to the gap between qualified applicants and job needs. Mrs. Keeler explained that many organizations in the county provided personal and financial help to the schools. The chambers of commerce were high on this list and supported several projects in addition to adopt-a-school. They were now planning a fall conference for teachers and business people. The Business Institute for Educators was another group which provided teachers, counselors, and administrators from the Washington metropolitan area with professional and personal training sessions as well as information

about business resources and career opportunities for students. They held three eight-day summer sessions, and the program offered either in-service or graduate credit to its participants.

Mrs. Keeler indicated that the Fairchild Junior Board of Directors program was in its seventh year, and Business Against Drugs continued an effort begun in 1980 to help prevent drug abuse in the county. Junior Achievement continued its work with high school students, and the area science fair was supported by more than 50 agencies and businesses and was in its 33rd year. Potomac Edison and Apple had supplied computer labs, and large firms such as IBM had supported many programs. One interesting project was PEPCO support for the development of quality circles in the MCPS Division of Systems Development. PEPCO had sent a consultant out to work with MCPS, and it was providing three personnel slots in its week-long training sessions which ran every other month. To date, about 20 MCPS people had been trained.

Mr. Grossman commented that in addition to the things they got back from businesses, the speakers, the work experiences, etc., these partnerships gave MCPS the ability to have a presence and a role in a very important part of the community. As schools were asked to do more and more with less and less, it became apparent that they needed to work together with the community and its resources.
Mrs. DiFonzo asked why businesses were willing, eager, and anxious to help the schools. Mrs. Keeler replied that it was in their own self interest. In a meeting of the Economic Development Committee of the county Chamber of Commerce, it was stated that the schools were the primary thing that brought people to Montgomery County. This made it easier for businesses to hire management people.

Mrs. DiFonzo asked if they could put a dollar value on the services provided by businesses to the public schools. Mrs. Keeler guessed that it would be in the millions of dollars. Mrs. Jackson added that if they put a dollar value on it they would almost devalue it. What they gave freely, MCPS could not afford to buy. Mrs. DiFonzo asked if they had any idea of the hours of business and industry time went to youngsters in the classroom. Mrs. Jackson replied that from the school volunteer program it would 1.7 million hours with 8 percent of that coming from released time from the business community. She reported that they had one volunteer for every three students in the system.

Mrs. DiFonzo commented that the criticism had been made that the school system was not involved with business and industry, and the reality was that MCPS was involved. From a recent survey, not many people in the county were aware of the partnerships that existed between MCPS and business community. She was trying to get a number in terms of hours or dollars. Dr. Pitt replied that 8 percent would be 136,000 hours or 17,000 days for the business community support of volunteer programs. This was only in the schools, and it did not include students going out to business and industry. He thought that Mrs. DiFonzo's question was worth pursuing.

Dr. Rybka pointed out that their internship programs were about a 30-hour week where a student was assigned to an individual out in the community. With the Construction Trades Foundation, they had about eight to ten business persons who meet weekly at the job site. Mrs. DiFonzo said she would be interested in seeing the number of awards that had come to MCPS and to the county for efforts in this area. For example, Larry Shulman had won the Kraft-Disney World award. She asked staff if they could pull a list together. This might give them a handle on how broad-based and how deep the involvement was.

Mrs. Praisner said she was frustrated because their "thousand points of light" in volunteerism and community/business participation in Montgomery County had been under a bushel as far as the public was concerned. They needed to make sure they could communicate to the general public about what they were doing and about the commitment of that segment of the community. It would be worthwhile if they could convert this to hours. This was also tied to a request under new business about an annual report to the community. She felt that the county was not as aware of MCPS as it should be, and she suggested they had to reconstitute methods of communicating. She was glad Mrs. Keeler had mentioned the PEPCO quality circles because she was not aware of this. They thought of the business community as working with teachers and students, but they did think of their involvement in school system operations.

Mrs. Praisner asked if they were seeing any changes or trends as far as the business community involvement. For example, were they dropping things that they used to do before because they were no longer viable? How were they assessing what they were doing or what they were not doing? She asked about their involvement in math and other heavy issues. She noted that many parents they were trying to reach were employees of business in the county. She wondered whether there were avenues they could explore here.

Dr. Rybka reported that businesses were becoming more involved in the schools because of the declining enrollment in high schools and, therefore, a decline cadre of workers entering the work force. The business community wanted MCPS to prepare more workers for them. About 39 percent of their twelfth grade students were enrolled in some kind of vocational education, but 61 percent of that 39 percent went on to college. Of the nonvocational graduates, 87 percent went on to college.

Dr. Pitt explained that they were getting some criticism because there were not enough people out there in the work force in entry level jobs. MCPS was not going to be able to solve that problem. Some people felt that too many students were going to college. He felt that somehow they had to communicate better and point out that they had a tremendous number of high school age in entry level jobs in the community. He pointed out that young people were working in retail establishments and fast-food places in the afternoons and evenings. They had also heard complaints from the trades that young

people were not skilled enough; however, they were getting many of the students who were the least skilled and MCPS needed to train these students better. On the other hand, many of these young workers were not coming from Montgomery County.

Mrs. Praisner explained that she was not talking about the educational program. She was asking if they had seen changes in the desire of the business community to be involved in the educational program not in the curriculum area. Mr. Grossman replied that this was a national issue because a lot of ceo's of major corporations were speaking out more and more in favor of supporting schools. He thought they had a good foundation in Montgomery County. He was concerned if the business community did not know about the involvement. He thought they should target their efforts and identify the people they wanted to be involved and think about what they wanted them to do. This would allow them to focus their communication efforts a lot more accurately and in a less expensive way. Dr. Pitt thought that Board members were on target when they said MCPS ought to be doing a better job of communicating. He agreed that they did a tremendous job of working with business, but people did not know they were doing this.

Mrs. Praisner explained that this was not necessarily a criticism of the school system. However, the community was not appreciative enough of what the business community was already done. Mr. Ewing hoped that as the communication occurred with the business community it would be stated diplomatically that the school system did not exist solely or even primarily to training to fill local jobs. This may be a function of what happened, but it was not why they were engaged in education. He noted that the report was called an update on business and school partnership activities. The report had a number of references to federal government agencies. These were not really businesses. He asked how well they thought they were doing with federal agencies.

Mrs. Jackson replied that they did have individual partnerships with many of the federal agencies; however, she thought they had not begun to tap the resources there. Dr. Rybka added that they had 56 students in cooperative programs with ten federal agencies.
In regard to business comments about not training students, Mrs. Keeler said that much of what she had heard about needs for skills at entry level involved mathematics, writing, decision-making, etc. Business was not looking to MCPS strictly for training. She pointed out that entry level jobs had increased in their complexity. For example, a courier needed to be able to operate a computer program. Dr. Pitt pointed out that every youngster graduating needed basic skills and had to pass the Maryland competency tests. However, MCPS did not provide many students directly into the work force as compared to other places in the country. He would guess that fewer than 20 percent of their graduates went directly into the work force. Dr. Shoenberg thanked staff for effort that went into preparing the report and its useful information.

RESOLUTION NO. 17-89 Re: POLICY ON HONORS AND RECOGNITION

On recommendation of the superintendent and on motion of Mrs. Praisner seconded by Mrs. DiFonzo, the following resolution was adopted unanimously:

WHEREAS, On September 14, 1988, the Board of Education discussed 10 selected policy items that are not specifically covered by the newly adopted Pre-K to Grade 12 Policies and identified those items that the Board might wish to continue as separate policy statements; and

WHEREAS, One of the items that the Board of Education identified dealt with student recognition; and

WHEREAS, The Board of Education agreed that the carry-over might be combined in a single policy statement with the existing Board policy relating to student honor roles and honor societies; and

WHEREAS, The superintendent is recommending the adoption of a combined policy statement; now therefore be it

RESOLVED, That the following policy statement, "Honors and Recognition," be adopted; and be it further

RESOLVED, That Resolution No. 431-62, September 10, 1962, "Honor Rolls and Honor Societies," be rescinded since its content is incorporated in the new policy statement.

Honors and Recognition - JIA

A. Purpose

To stimulate improved student performance and learning through a comprehensive program of honors and recognition

B. Process and Content

The Board of Education encourages the recognition of students' outstanding achievements in both academic and cocurricular activities. Such recognition may appropriately occur at all levels within the school system from the Board of Education to the individual schools including, but not limited to, the following:

1. Honor Rolls and Honor Societies

a) The Board of Education recognizes the value of honor societies and honor roll lists and encourages their establishment at the middle level and senior high schools.

b) The operation of honor societies shall be in accordance with administrative regulation.

2. Other Recognition and Incentives

Each school should establish opportunities for recognizing student achievements in academic, athletic, and extracurricular activities.

C. Review and Reporting

This policy will be reviewed every three years in accordance with the Board of Education review process.

Re: BOARD MEMBER COMMENTS

1. Mr. Goldensohn asked the superintendent to provide him with an update on the elementary school sixth grade patrols. Now that they were moving into middle schools, the sixth graders were not in the elementary schools. He felt that in September the fifth graders were very, very young to be put out on school patrol duty. He wanted to know how the schools were handling the situation.

2. Mrs. DiFonzo recalled that there was a Walter Johnson/Woodward transition committee which was supposed to report on how the transition worked. She asked if this group had been formally disbanded and whether it had filed a final report.

3. Mrs. Praisner reported that Kevin Keegan from Rockville High School had created a quiz master challenge program which would involve MCPS high schools on cable television. She asked that she be provided with a tape of the show.

4. Mr. Goldensohn said that during the winter break he had attended a holiday dinner for needy families sponsored by the DECA Club at Gaithersburg High School. He was impressed by the fact that these students had given up time during their vacation and by the fact that everything was donated by local businesses. Their club sponsor, Mrs. Ravick, and the club members should be commended.

RESOLUTION NO. 18-89 Re: EXECUTIVE SESSION - JANUARY 23, 1989

On recommendation of the superintendent and on motion of Mrs. DiFonzo seconded by Mrs. Praisner, the following resolution was adopted unanimously:

WHEREAS, The Board of Education of Montgomery County is authorized by Section 10-508, State Government Article of the ANNOTATED CODE OF MARYLAND to conduct certain of its meetings in executive closed session; now therefore be it

RESOLVED, That the Board of Education of Montgomery County hereby conduct its meeting in executive closed session beginning on January 23, 1989, at 7:30 p.m. to discuss, consider, deliberate, and/or otherwise decide the employment, assignment, appointment, promotion, demotion, compensation, discipline, removal, or resignation of employees, appointees, or officials over whom it has jurisdiction, or

any other personnel matter affecting one or more particular individuals and to comply with a specific constitutional, statutory or judicially imposed requirement that prevents public disclosures about a particular proceeding or matter as permitted under the State Government Article, Section 10-508; and that such meeting shall continue in executive closed session until the completion of business.

RESOLUTION NO. 19-89 Re: MINUTES OF NOVEMBER 14, 15, 16, AND 21 AND DECEMBER 1 AND 12, 1988

On recommendation of the superintendent and on motion of Mr. Park seconded by Mrs. DiFonzo, the following resolution was adopted unanimously:

RESOLVED, That the following minutes be approved:

November 14, 1988
November 15, 1988
November 16, 1988
November 21, 1988
December 1, 1988
December 12, 1988

RESOLUTION NO. 20-89 Re: APPOINTMENT OF STUDENT MEMBERS TO ADVISORY COMMITTEES

On recommendation of the superintendent and on motion of Mrs. Praisner seconded by Mrs. DiFonzo, the following resolution was adopted unanimously:

WHEREAS, In accordance with the Guidelines for Board of Education Advisory Committees adopted by the Board of Education, the Board appoints advisory committee members; and

WHEREAS, Student appointments to Board advisory committees shall be for one-year terms; and

WHEREAS, All student member terms will begin on January 1 and end on December 31 of the same year; now therefore be it

RESOLVED, That the following student be reappointed to serve an extended term (through December 31, 1989) on the Title IX Advisory Committee:

Michelle Kunitz, Walter Johnson High School

and be it further

RESOLVED, That the following students be reappointed to serve one-year terms on the Advisory Committee on Counseling and Guidance:

Michael Bodgan, Rockville High School
Karyn Steinbach, Walter Johnson High School

Robert Hardis, Walt Whitman High School

and be it further

RESOLVED, That the following one-year student appointments be made:

Citizens Advisory Committee on Career and Vocational Education
Darren Schoen, Gaithersburg High School
Advisory Committee on Counseling and Guidance
Seth Hall, Herbert Hoover Junior High School
Janet Wang, Richard Montgomery High School
Laura McClintock, Gaithersburg High School

Advisory Committee on Family Life and Human Development
Jodi Finder, Springbrook High School
Khesha Jennings, Richard Montgomery High School
Leslie McCullough, Gaithersburg High School

Advisory Committee on Minority Student Education
Gianpaolo Sinicropi, Wheaton High School
Jeremi Duru, Montgomery Blair High School
Linda Chen, Churchill High School

Title IX Advisory Committee
Adam Baacke, Richard Montgomery High School
Melanie Da Trindade, Westland Intermediate School

*Mr. Ewing temporarily left the meeting at this point.

RESOLUTION NO. 21-89 Re: APPOINTMENTS TO THE ADVISORY COMMITTEE ON MINORITY STUDENT EDUCATION

On recommendation of the superintendent and on motion of Mrs. Praisner seconded by Mrs. DiFonzo, the following resolution was adopted unanimously:

WHEREAS, In accordance with the policy statement on the Advisory Committee on Minority Student Education adopted by the Board of Education, the members are appointed by the Board; now therefore be it

RESOLVED, That the following persons be appointed to the Advisory Committee on Minority Student Education to serve the remainder of the two vacated terms through June 30, 1990:

James H. Farmer
Elizabeth (Lee) Smith Ingram

RESOLUTION NO. 22-89 Re: APPOINTMENT OF MEMBERS OF LOCAL ADVISORY COUNCIL FOR VOCATIONAL-TECHNICAL EDUCATION

On recommendation of the superintendent and on motion of Mrs. Praisner seconded by Mrs. DiFonzo, the following resolution was

adopted unanimously:

WHEREAS, The Local Advisory Council for Vocational-Technical Education has been active since its establishment in 1977; and

WHEREAS, The subcommittee on membership is charged with maintaining the membership; and

WHEREAS, Vacancies now exist on the Council due to resignations of several members; and

WHEREAS, The vacancies for the Council have been advertised as directed by the Board of Education; and

WHEREAS, In accordance with the Board-approved recruitment and selection procedures, the nominees listed below were recommended by the Local Advisory Council to the superintendent; and

WHEREAS, Members are appointed by the Board of Education through the superintendent; now therefore be it

RESOLVED, That the Board of Education appoint the following person to a three-year term effective January 1, 1989, and terminating December 31, 1991:

Rebecca Strandberg

and be it further

RESOLVED, That the Board of Education appoint the following persons to complete unexpired terms terminating June 30, 1991:

Joan M. Paul
Joan F. Stern

RESOLUTION NO. 23-89 Re: EDUCATIONAL FOUNDATION, INC.

On recommendation of the superintendent and on motion of Mrs. Praisner seconded by Mr. Goldensohn, the following resolution was adopted unanimously:

WHEREAS, On July 12, 1988, the Board of Education established the Montgomery County Public Schools Educational Foundation, Inc.; and

WHEREAS, The Board of Education and the superintendent of schools have appointed seven people to serve on this Foundation; now therefore be it

RESOLVED, That the following individuals be appointed to serve as chairperson and secretary-treasurer for a one-year term:

Vicki Rafel, chairperson
Clarence Kettler, secretary-treasurer

*Mr. Ewing rejoined the meeting at this point.

Re: PROPOSED RESOLUTION ON ANNUAL REPORT TO CITIZENS

On December 13, 1988, Mrs. Praisner moved and Mrs. DiFonzo seconded the following:

RESOLVED, That the superintendent be directed to develop an annual report to the Montgomery County citizens on the state of education in the system including, but not limited to, MCPS goals, priorities, and philosophy and information on programs, schools, staff, personnel, and budgets.

RESOLUTION NO. 24-89 Re: SUBSTITUTE MOTION ON AN ANNUAL REPORT TO CITIZENS

On motion of Mr. Ewing seconded by Mr. Goldensohn, the following resolution was adopted unanimously:

RESOLVED, That the superintendent be directed to develop for the Board's action plans and cost estimates for an annual report and communicate this information to the Board.

RESOLUTION NO. 25-89 Re: DISCUSSION OF ALTERNATIVE SECONDARY PROGRAMS

On motion of Mrs. Praisner seconded by Mrs. DiFonzo, the following resolution was adopted unanimously:

RESOLVED, That the Board discuss the system's alternative secondary programs, both special programs such as QUEST, Phoenix II, Kingsley Wilderness, and the current uses of staff assigned by the Board to secondary schools to allow local schools to serve these students' needs at the home school, with the intent of assessing the status and long-term needs for these programs.

RESOLUTION NO. 26b-89 Re: APPOINTMENT OF MEMBER TO BOARD SUBCOMMITTEE ON RESEARCH AND EVALUATION

On motion of Mrs. Praisner seconded by Mr. Ewing, the following resolution was adopted unanimously:

WHEREAS, The Board of Education has a research and evaluation committee; and

WHEREAS, Sharon DiFonzo was appointed by the Board to a three-year term on the research and evaluation committee; and

WHEREAS, Mrs. DiFonzo cannot serve that three-year term; now therefore be it

RESOLVED, That the Board appoints Catherine Hobbs to complete Mrs. DiFonzo's three-term which ends on November 30, 1991.

RESOLUTION NO. 26-88 Re: MC 915-89, NONCERTIFICATED PUBLIC SCHOOL EMPLOYEES - STRIKES

On motion of Mrs. Hobbs seconded by Mr. Ewing, the following resolution was adopted with Mr. Ewing, Mr. Goldensohn, Mrs. Hobbs, (Mr. Park), and Dr. Shoenberg voting in the affirmative; Mrs. DiFonzo and Mrs. Praisner voting in the negative:

RESOLVED, That the Board schedule a vote at its next business meeting to amend its position on MC 915-89, Non-certificated Public School Employees - Strikes.

Re: ITEMS OF INFORMATION

Board members received the following items of information:

1. Items in Process
2. Construction Progress Report
3. Monthly Financial Report
4. Minority-, Female-, or Disabled-owned Business (MFD) Procurement Report for the Second Quarter of FY 1989

Re: ADJOURNMENT

The vice president adjourned the meeting at 4:40 p.m.

VICE PRESIDENT

SECRETARY

HP:mlw