

DOCUMENT RESUME

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ABSTRACT

Fifty-seven references to documents received and processed to date by ERIC/CEP concerned with cost implications of educational facilities at the elementary and secondary levels are included in this interpretive bibliography. The references are classified according to content within the following categories--(1) Economies in School Construction, (2) School Bond Elections, (3) Renovating and Remodeling, (4) Construction Programs in Specific Areas, (5) Design Methodologies and Construction Procedures, (6) Urban School Construction, and (7) Federal and State Aid. Each reference is indexed and abstracted and the procurement source for each document is supplied. (NT)

ED035268

**CLEARINGHOUSE ON  
EDUCATIONAL  
FACILITIES**

**ERIC CEF**

EDUCATIONAL RESOURCES INFORMATION CENTER • 606 STATE STREET, ROOM 314 • MADISON, WIS. 53703

**COST FACTORS IN THE PLANNING, DESIGN, FINANCING,  
AND CONSTRUCTION OF ELEMENTARY AND SECONDARY  
EDUCATIONAL FACILITIES**

**An Interpretive Bibliography**

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE  
OFFICE OF EDUCATION

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EF 004 087

COST FACTORS IN THE PLANNING, DESIGN, FINANCING,  
AND CONSTRUCTION OF ELEMENTARY AND SECONDARY  
EDUCATIONAL FACILITIES

Prepared By

Norman P. Isler

Subject Area Coordinator

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ERIC Clearinghouse on Educational Facilities

The University of Wisconsin

Madison, Wisconsin

February, 1970

**COST FACTORS IN THE PLANNING, DESIGN, FINANCING, AND CONSTRUCTION  
OF ELEMENTARY AND SECONDARY EDUCATIONAL FACILITIES**

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	<u>Pages</u>
<b>Economies in School Construction</b>	<b>2-15</b>
<p>Comprising this first section are fourteen references to documents which specifically deal with effecting economies in school building construction. Design, flexibility, prefabrication, construction methods, and contracting are included in the various references as they pertain to the cutting of costs.</p>	
<b>School Bond Elections</b>	<b>17-27</b>
<p>School bond elections and the marketing of bonds once the borrowing has been approved by the electorate are the subjects of the eleven references. Included are discussions of bond election promotion techniques, legal implications, and interest rates.</p>	
<b>Renovating and Remodeling</b>	<b>29-32</b>
<p>The cost implications of renovating and/or remodeling school plants as opposed to the construction of new facilities are discussed in these four references. One document refers in particular to the refurbishing of non-educational buildings for use as schools.</p>	
<b>Construction Programs in Specific Areas</b>	<b>34-38</b>
<p>Cost considerations in school construction programs have been reported from various areas in the U.S. and Canada. Included here are reports from Mississippi, Kentucky, Delaware, and Alberta, concerned with the financing of school construction in those areas.</p>	
<b>Design Methodologies and Construction Procedures</b>	<b>40-49</b>
<p>Various design methodologies and construction procedures having a direct bearing on costs are the subjects of ten references. Critical Path Method, Component Building Systems, and a campus plan for an elementary school are among those reported upon.</p>	
<b>Urban School Construction</b>	<b>51-53</b>
<p>The problem of school construction in urban areas and its effect on costs is discussed through cost models and systems analysis.</p>	

Pages

**Federal and State Aid**

**55-64**

Ten references which deal with federal aid and state aid toward construction of educational facilities are presented.

## FOREWORD

The Educational Resources Information Center - Clearinghouse on Educational Facilities (ERIC/CEF) is a clearinghouse for information about sites, buildings, and equipment used for educational purposes. ERIC/CEF is part of a national network of 19 clearinghouses, each covering a different field of educational research. Information from all these clearinghouses is reported monthly in Research in Education (RIE), a publication of the U.S. Government Printing Office (annual subscription: domestic \$21.00, foreign \$26.25).

Since January, 1968 approximately 1,100 documents have been submitted by ERIC/CEF for inclusion in RIE. In addition, approximately 3,700 documents have been accumulated in a local collection which serves more specialized interests. While the clearinghouse collection does include textbooks, dissertations, and journal articles, the prime mission of ERIC/CEF is to locate and report on documents that are not well known nor widely distributed.

In performing subject searches in RIE, researchers should correlated its use with the Thesaurus of ERIC Descriptors. Descriptors are technically meaningful terms or short phrases that are used to characterize a document and which may also be used as index entries. The descriptors used to generate this particular bibliography were:

Accounting	Financial Needs
Bond Issues	Financial Policy
Budgeting	Financial Problems
Capital Outlay (For Fixed Assets)	Financial Services
Construction Costs	Financial Support
Contracts	Insurance Programs
Cost Effectiveness	Interest
Costs	Money Management
Credit (Finance)	School District Spending
Economic Factors	School Finance
Educational Finance	State Aid
Federal Aid	State Federal Support

All documents in the ERIC/CEF collection, which had been indexed using one or more of the aforementioned descriptors, were initial candidates for the bibliography. These documents were screened for applicability and quality and then organized into sections according to content.

The references contained herein do not represent an exhaustive compilation of publications on the subject. However, many of the documents are not widely circulated; and the bibliography serves to disseminate this information.

February, 1970

Howard E. Wakefield  
Director

## HOW TO OBTAIN DOCUMENTS

Information regarding the procurement of documents cited in this bibliography is provided at the bottom of each page. The documents are obtainable in either of two ways:

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ECONOMIES IN SCHOOL CONSTRUCTION



ERIC/CEP DOCUMENT NO. EFO00190

DISPOSITION-CERS 3

ECONOMIES IN SCHOOL CONSTRUCTION

INTERSTATE SCHOOL BUILDING SERVICE, NASHVILLE, TENNESSEE

PUBLISHED- 62

047 PAGES

DESCRIPTORS- \*EDUCATIONAL PLANNING, \*CONSTRUCTION COSTS, \*SCHOOL  
CONSTRUCTION, SCHOOL PLANNING, SCHOOL LOCATION, SCHOOL DESIGN,  
BUILDING DESIGN, EDUCATIONAL FINANCE

THE PURPOSE OF THIS BULLETIN IS TO ASSIST DECISION-MAKERS IN THE DECISIONS  
AND CHOICES WHICH MUST BE MADE AND WHICH INFLUENCE THE COST OF A BUILDING  
PROJECT.

**Availability;**

Interstate School Building Service  
George Peabody College for Teachers  
Nashville, Tennessee

258 WAYS TO SAVE MONEY IN PLANNING AND CONSTRUCTION SCHOOLS  
BUILDINGS

BY- BULES, HAROLD W.  
WESTERN MICHIGAN UNIVERSITY, KALAMAZOO, SCHOOL OF GRADUATE STUDIES

PUBLISHED- 63  
IN- SERIES VII, NO. 1

026 PAGES

DESCRIPTORS- \*COSTS, \*CONSTRUCTION COSTS, \*SCHOOL PLANNING,  
PLANNING

THIS BOOKLET PRESENTS A COMPREHENSIVE LIST OF ECONOMY FACTORS, MOST OF WHICH ARE UNIVERSALLY APPLICABLE. THESE FACTORS WERE DETERMINED BY QUESTIONNAIRES PERTAINING TO 86 SCHOOL PLANTS CONSTRUCTED IN 1955.

**Availability;**

Campus Stores  
Western Michigan University  
Kalamazoo, Michigan

ERIC/CEP DOCUMENT NO. EF000402 ED 15616 DISPOSITION-EDC- 1

STRUCTURAL CONSIDERATIONS IN SCHOOL BUILDING ECONOMY

CONNECTICUT STATE DEPARTMENT OF EDUCATION, HARTFORD

PUBLISHED-JUN63

IN- SCHOOL BUILDING ECONOMY SERIES NO. 5

033 PAGES

DESCRIPTORS- \*ARCHITECTURAL ELEMENTS, \*CONSTRUCTION COSTS, \*CONSTRUCTION NEEDS, \*SCHOOL CONSTRUCTION, BUILDING DESIGN, BUILDING EQUIPMENT, PREFABRICATION, SCHOOL ARCHITECTURE, SCHOOL BUILDINGS

ALL SCHOOL BUILDINGS ARE BASICALLY SHELTER STRUCTURES. THEIR ELEMENTARY COMPONENTS ARE (1) STRUCTURAL MEMBERS, (2) WEATHER PROTECTION ELEMENTS, (3) MECHANICAL INSTALLATIONS, (4) FINISHING ELEMENTS, AND (5) BUILT-IN EQUIPMENT. THE CHOICE OF BUILDING SYSTEMS IS DEPENDENT ON (1) SUBSOIL CONDITIONS, (2) SITE CONTOURS, AND (3) CLIMATIC CONDITIONS. SEVERAL STRUCTURAL SYSTEMS ARE ANALYZED IN TERMS OF THESE CRITERIA. WEATHER PROTECTION ELEMENTS SUCH AS (1) ROOFING, (2) FLASHING, (3) SIDING, (4) WATERPROOFING, (5) INSULATION, (6) OVERHANGS AND SUNSHADES, (7) CIRCULATION CHARACTERISTICS, (8) AIR AND LIGHT PASSAGE, (9) ACOUSTICAL CORRECTION, AND (10) AESTHETIC IMPROVEMENT ARE DISCUSSED IN TERMS OF SCHOOL CONSTRUCTION. THE ASPECTS OF FIRE-RESISTIVITY MENTIONED ARE (1) SAFETY, (2) BUILDING RATING, AND (3) LOCAL ORDINANCES. MISCELLANEOUS ARCHITECTURAL CONSIDERATIONS ARE LISTED ALONG WITH RECOMMENDATIONS FOR THE ADOPTION OF A MODULAR SYSTEM OF DIMENSIONS. (MH)

Order from EDRS as: ED 15616

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HC \$1.75

**TOWARDS AN ECONOMICAL FLEXIBILITY**

BY- RICHARDSON, L. S. AND CAUDILL, WILLIAM W.  
CAUDILL, ROWLETT, SCOTT AND ASSOCIATES ARCHITECTS-ENGINEERS  
BRYAN, TEXAS

IN- RESEARCH REPORT, 3

010 PAGES

DESCRIPTORS- \*AUDITORIUMS, \*CONSTRUCTION COSTS, \*FLEXIBLE FACILITIES, \*SCHOOL EXPANSION, \*SPACE DIVIDERS, BUILDING DESIGN, CLASSROOM DESIGN, SCHOOL PLANNING

AN ARCHITECT AND A SUPERINTENDENT OF SCHOOLS COLLABORATED ON THE DESIGN FOR A HIGH SCHOOL, WHICH STRESSED ECONOMY AND FLEXIBILITY. THEY CONSIDERED THREE ASPECTS OF FLEXIBILITY--(1) EXPANDABILITY, (2) CONVERTIBILITY, AND (3) VERSATILITY. EXPANDABILITY IS DISCUSSED IN TERMS OF SITE SELECTION AND PLANNING. CONVERTIBILITY FEATURES IDENTIFIED INCLUDE MOVABLE SPACE DIVIDERS, EITHER STORAGE UNITS OR TEACHING PANELS, WHICH COULD BE REARRANGED FOR DIFFERENT INSTRUCTION LAYOUTS. VERSATILITY IS INCLUDED IN THE AUDITORIUM DESIGN WHICH INCORPORATES THE BAND ROOM AND ASSEMBLY ROOM, AND USING FOLDING PARTITIONS, PERMITS A NUMBER OF STAGE AND SEATING CONFIGURATIONS. THE AUDITORIUM ALSO FEATURES A CIRCULAR DOMED CONSTRUCTION WHICH HAS ACOUSTIC, ECONOMIC, AND STRUCTURAL ADVANTAGES. SPECIFIC ATTENTION IS GIVEN TO (1) STORAGE LIGHTING, (2) AUDITORIUM SEATING, (3) DOORLESS CLASSROOMS, AND (4) UTILITIES FLEXIBILITY. (CM)

Order from EDRS as: ED 14856

MF \$0.25

HC \$0.60

**COMPACT SCHOOL AND \$\$ SAVINGS**

**BY- BAIR, W. G.  
AMERICAN SCHOOL BOARD JOURNAL, MILWAUKEE, WISCONSIN**

**PUBLISHED-MAY66  
IN- AMERICAN SCHOOL BOARD JOURNAL, MAY 66, PP. 32-33**

**002 PAGES**

**DESCRIPTORS- \*AIR CONDITIONING, \*COSTS, \*FUEL CONSUMPTION,  
\*HEATING, \*TEMPERATURE**

A REVIEW OF THE CRITERIA FOR CONSIDERING THE USE OF A TOTAL ENERGY SYSTEM WITHIN A SCHOOL BUILDING STATES THE WINDOWLESS, COMPACT SCHOOL OFFERS MORE EFFICIENT SPACE UTILIZATION WITH LESS AREA REQUIRED FOR GIVEN STUDENT POPULATION AND LOWER OPERATION COSTS. THE AUTHOR RECOMMENDS THAT THESE BUILDINGS BE WINDOWLESS TO REDUCE HEAT COSTS. HOWEVER, AT THE SAME TIME IT IS POINTED OUT THAT WINDOWLESS STRUCTURES REQUIRE INCREASED LIGHTING LEVELS, AIR CONDITIONING AND AIR TREATMENT. IT IS RECOMMENDED AT THIS POINT THAT SCHOOL PLANNERS SHOULD SEEK THE ADVICE OF A CONSULTANT ENGINEER TO ASSESS THE FEASIBILITY OF INSTALLING A TOTAL ENERGY UNIT. ANNUAL COSTS OF COMMERCIAL ENERGY SHOULD BE COMPARED WITH OPERATING AND MAINTENANCE OF THE TOTAL ENERGY SYSTEM. SHOULD THE PLANNERS FAVOR THE TOTAL ENERGY UNIT, THEY SHOULD ALSO CONSIDER THE PURCHASE OF BACK-UP UNITS TO OPERATE IN THE EVENT OF A POWER FAILURE OF THE PRIMARY UNIT. THIS ARTICLE APPEARED IN THE MAY, 1966 ISSUE OF AMERICAN SCHOOL BOARD JOURNAL. COPIES MAY BE OBTAINED FROM THE EDITOR, BRUCE PUBLISHING CO., 400 N. BROADWAY, MILWAUKEE, WISCONSIN 53211. (GM)

**Availability:**

**Editor, Bruce Publishing Company  
400 North Broadway  
Milwaukee, Wisconsin 53211**

**A REVIEW OF STUDIES OF ECONOMIES IN SCHOOLHOUSE CONSTRUCTION**

**BY- DUHERTY, LEO D. AND WHEATLEY, ARTRELLE  
STATE UNIVERSITY OF NEW YORK, ALBANY, NEW YORK**

**PUBLISHED-MAY60**

**030 PAGES**

**DESCRIPTORS- \*CONSTRUCTION COSTS, \*EDUCATIONAL FINANCE,  
\*EDUCATIONAL PLANNING, \*SCHOOL CONSTRUCTION, \*SCHOOL PLANNING,  
COMPONENT BUILDING SYSTEMS, MAINTENANCE, PREFABRICATION, SCHOOL  
DESIGN, SITE DEVELOPMENT, SCHOOL LOCATION, SCHOOL MAINTENANCE**

**ECONOMIES IN PLANNING AND DESIGNING BEGIN WITH THE WISE  
CHOICE OF AN ARCHITECT. COMPLETE INFORMATION ON BUILDINGS NEEDS,  
ENROLLMENT PROJECTIONS, AND PROGRAM MUST BE AVAILABLE. INCLUSION  
OF MULTIPLE-USE ROOMS, MINIMAL PERIMETER WALLS, LOWERED CEILINGS,  
MINIMAL WASTE SPACE, MINIMAL USE OF GLASS, AND USE OF STOCK PLAND  
ARE CONCEPTS WHICH CAN EFFECT ECONOMIES. FURTHER ECONOMIES CAN BE  
EFFECTED BY CAREFUL SITE SELECTION, DEVELOPMENT, AND UTILIZATION.  
PREFABRICATED SCHOOLS AND MODULAR DESIGN ARE NEWER CONCEPTS  
SUGGESTED AS EFFICIENT USES OF MATERIALS. LOW COST MAINTENANCE  
CONSTRUCTION CAN SAVE MUCH MUNEY. USE OF TEMPORARY BUILDINGS  
SHOULD BE AVUIDED. CAREFUL FINANCING OF BUILDING PROJECTS WILL  
HELP REDUCE COSTS ESPECIALLY IF PROPER TIMING IS INDORPORATED.  
TIMING IS ESSENTIAL TO THE ENTIRE CONSTRUCTION PROGRAM. A  
BIBLIOGRAPHY IS INCLUDED. (RH)**

**Order from EDRS as: ED 19814**

**MF \$0.25**

**HC \$1.60**

**25 SIGNIFICANT ECONOMIES IN NEW SCHOOL BUILDINGS**

**BY- BOLES, HAROLD W.**

**PUBLISHED-JAN64**

**IN- AMERICAN SCHOOL BOARD JOURNAL, JANUARY, 1964**

**002 PAGES**

**DESCRIPTORS- \*CONSTRUCTION COSTS, \*EDUCATIONAL FINANCE,  
\*FINANCIAL POLICY, \*SCHOOL PLANNING, BUDGETING, BUDGETS,  
CONTRACTS, EDUCATIONAL SPECIFICATIONS, EQUIPMENT, SCHOOL  
BUILDINGS, SCHOOL DESIGN**

**A CHECKLIST OF WAYS TO ACHIEVE ECONOMY IN SCHOOL PLANT CONSTRUCTION.  
SOME OF THE FACTORS TO BE CONSIDERED INCLUDE: (1) BIDS, (2) DRAWINGS  
AND SPECIFICATIONS, (3) ELIMINATION OF AREAS, (4) SELECTION OF ARCHITECT,  
(5) EQUIPMENT, AND (6) PLAN FOR MULTIUSE.**

**Availability:**

**Bruce Publishing Co.  
400 N. Broadway  
Milwaukee, Wisconsin**

**VIRGINIANS STAY WITH LOW-COST SCHOOL PLAN****PUBLISHED-JAN64****IN- NATIONS SCHOOLS, VOL. 73, NO. 1, JANUARY, 1964****003 PAGES****DESCRIPTORS- \*BUILDING INNOVATION, \*CONSTRUCTION COSTS, \*SCHOOL  
CONSTRUCTION**

AT LEAST \$50,000 IS SAVED EVERY TIME A TWIN-CIRCLE SCHOOL IS BUILT IN PRINCE WILLIAM COUNTY, VIRGINIA. THE LOCH LOMOND SCHOOL IS COMPRISED OF TWO ROUND CLASSROOM BUILDINGS THAT ARE CONNECTED BY A 'CORRIDOR' LEADING TO CENTRAL COMMON USE AREAS.

**Availability:**

**The Nation's Schools  
1050 Merchandise Mart  
Chicago, Illinois 60654**



**SEVEN STEPS CUT SCHOOL BUILDING COSTS****PUBLISHED-JUN65****IN- NATIONS SCHOOLS, VOL. 75, NO. 6, JUNE, 1965****003 PAGES****DESCRIPTORS- \*INSURANCE PROGRAMS, \*SCHOOL CONSTRUCTION, SAFETY**

A STRONG CONSTRUCTION SAFETY PROGRAM CAN SAVE THOUSANDS OF DOLLARS FOR A SCHOOL DISTRICT ENGAGED IN A BUILDING PROGRAM. THE LESS INSURANCE MONEY THE CONTRACTOR MUST FIGURE INTO HIS PAYROLL, THE LOWER HE CAN BID.

**Availability:**

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Chicago, Illinois 60654**

ERIC/CEP DOCUMENT NO. EF001930 ED 22350 DISPOSITION-EDC- 1

DESIGNING THE SCHOOL PLANT FOR ECONOMY (SCHOOL BUILDING ECONOMY  
SERIES-NU. 4)

CONNECTICUT STATE DEPARTMENT OF EDUCATION, HARTFORD

PUBLISHED-JUN61

111 PAGES

DESCRIPTORS- SIGN NEEDS, SPACE UTILIZATION

TOPICS OF ECONOMICAL DESIGNING AND PLANNING ARE EXAMINED IN BOTH GENERAL AND SPECIFIC TERMS. DIAGRAMS AND PHOTOGRAPHS ILLUSTRATE GENERAL CONDITIONS AND PRINCIPLES WHILE THE TEXT OUTLINES CRITERIA AND PROVIDES SPECIFIC SUGGESTIONS. SUBJECTS COVERED INCLUDE--(1)BUILDING DESIGN FUNDAMENTALS, (2)COST COMPARISONS, (3)EFFICIENT DESIGN, (4)BASIC PLAN SCHEMES, (5)ENVIRONMENTAL CONTROL FACTORS, (6)ELEMENT PLANNING, (7)SITE ACCOMMODATION, (8)EXPANSION FACILITATION, (9)TREND DEVELOPMENT, AND (10)STATE AND LOCAL CODES. A BIBLIOGRAPHY IS INCLUDED.(MH)

Order from EDRS as: ED 22350  
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ECONOMIES FROM A TO Z IN PLANNING AND BUILDING SCHOOLS. ECONOMY HANDBOOK

NEW YORK STATE COMMISSION ON SCHOOL BUILDINGS, ALBANY

PUBLISHED-NOV53

AVAILABLE FROM- NEW YORK STATE COMMISSION ON SCHOOL BUILDINGS, ALBANY, N. Y.

051 PAGES

DESCRIPTORS- \*CAPITAL OUTLAY (FOR FIXED ASSETS), \*CHECK LISTS, \*CONSTRUCTION COSTS, \*ECONOMIC FACTORS, \*SCHOOL CONSTRUCTION, CONSTRUCTION PROGRAMS, EDUCATIONAL FINANCE, FACILITY EXPANSION, SCHOOL PLANNING, SITE SELECTION

PRESENTED IN THIS HANDBOOK ARE GENERAL DESCRIPTIONS AND CHECK LISTS OF ECONOMIES PERTAINING TO THE FOLLOWING ASPECTS OF SCHOOLHOUSE CONSTRUCTION--(1) SELECTING THE ARCHITECT, (2) SITE SELECTION, (3) EDUCATIONAL AND ARCHITECTURAL PLANNING, (4) CONSTRUCTION DETAILS, AND (5) CONTRACTING THE WORK. THE ECONOMIES ARE INTENDED FOR IMPLEMENTATION IN A WISE AND CAREFULLY MANAGED EXPENDITURE OF SCHOOL FUNDS IN PROVIDING FACILITIES WHICH ARE ADEQUATE IN TERMS OF THE NEEDS OF THE EDUCATIONAL PROGRAM AT THE MOST REASONABLE COST. PICTURES AND DRAWINGS SUPPLEMENT THE DESCRIPTIONS. (FS) //

**Availability:**

New York State Commission on  
School Buildings  
Albany, New York

HGM PARMA BUILT A SPACE-AGE SCHOOL AND SAVED A MILLION DOLLARS

PUBLISHED-SEP62

IN- NATIONS SCHOOLS. V 70 N 3 P 102-106.108 SEP 1962

AVAILABLE FROM- MCGRAW-HILL PUBLICATIONS, CIRCULATION DEPT., 1050  
MERCHANDISE MART, CHICAGO, ILLINOIS 60654

007 PAGES

DESCRIPTORS- \*ARCHITECTURAL MATERIALS, \*BUILDING DESIGN,  
\*CONSTRUCTION COSTS, \*ECONOMIC FACTORS, \*FLEXIBLE FACILITIES,  
EDUCATIONAL COMPLEXES, FACILITY REQUIREMENTS, MULTIPURPOSE  
CLASSROOMS, SCHOOL CONSTRUCTION, SCHOOL PLANNING

A DESCRIPTION IS GIVEN OF THE COST CUTTING FEATURES, WHICH WERE IMPLEMENTED IN THE DESIGN AND CONSTRUCTION OF A HIGH SCHOOL IN PARMA HEIGHTS, OHIO. CONSIDERATION IS GIVEN TO SAVINGS EFFECTED THROUGH FUNCTIONAL DESIGN, PROVIDING FOR THE MULTIPLE USE OF MANY AREAS, AND BY THE USE OF LARGE QUANTITIES OF STANDARD MATERIALS, WITH A CORRESPONDING REDUCTION IN THE AMOUNT OF CUSTOM AND SPECIAL MATERIALS UTILIZED. IT IS EMPHASIZED THAT THE ECONOMIES WERE REALIZED WITHOUT CUTTING THE QUALITY OF THE EDUCATIONAL PROGRAM. INCLUDED ARE PHOTOGRAPHS, WHICH EXEMPLIFY THE COST SAVING FEATURES. (FS) //

Availability:

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NORTHVILLE BUILDS ELEMENTARY SCHOOL FOR \$7.00 PER SQUARE FOOT  
CONSTRUCTION COST. ST. PAUL LUTHERAN CHURCH CEMENTS SOME SAVING

PUBLISHED-MAR60  
IN- MICHIGAN ASSOCIATION OF SCHOOL BOARDS JOURNAL, P 11-12 MAR  
1960

AVAILABLE FROM- MICHIGAN ASSOCIATION OF SCHOOL BOARDS, 450  
ERICKSON HALL, MICHIGAN STATE UNIVERSITY EAST LANSING, MICHIGAN  
48823

002 PAGES

DESCRIPTORS- \*ARCHITECTURAL ELEMENTS, \*BUILDING DESIGN,  
\*CONSTRUCTION COSTS, \*ELEMENTARY SCHOOLS, \*FACILITY GUIDELINES,  
ARCHITECTURAL PROGRAMING, FACILITY EXPANSION, FACILITY  
REQUIREMENTS, SCHOOL ARCHITECTURE

VARIOUS COST-CUTTING PROCEDURES, WHICH WERE IMPLEMENTED IN  
THE CONSTRUCTION OF THE NORTHVILLE, MICHIGAN ELEMENTARY SCHOOL,  
ARE DESCRIBED. CONSIDERATION IS GIVEN TO FACILITY AND EQUIPMENT  
DESIGN FEATURES TOWARD WHICH ECONOMIZING EFFORTS WERE DIRECTED.  
PHOTOGRAPHS, OF SOME OF THE DESIGN FEATURES REFERRED TO, ARE  
INCLUDED. (FS)//

**Availability;**

Michigan Association of School Boards  
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Michigan State University  
East Lansing, Michigan

ERIC/CEP DOCUMENT NO. EF000227

DISPOSITION-CERS 3

LONG RANGE PLANNING AND EDUCATIONAL SPECIFICATIONS FOR SCHOOL  
BUILDING ECONOMY

CONNECTICUT STATE DEPT. OF EDUCATION, HARTFORD

PUBLISHED- 62  
IN- SCHOOL BUILDING ECONOMY SERIES, NO. 2

040 PAGES

DESCRIPTORS- \*COSTS, \*PLANNING, \*STUDENT DISTRIBUTION, \*STUDENT  
ENROLLMENT, \*STUDENT TEACHER RATIO, CLASS SIZE, ESTIMATED COSTS,  
EDUCATIONAL PLANNING, SCHOOL PLANNING

IT IS THE PURPOSE OF THIS BOOKLET TO HELP LOCAL SCHOOL BOARDS TOWARD A  
FULLER UNDERSTANDING OF THE BENEFITS OF PLANNING AND THE TECHNIQUES FOUND  
MOST EFFECTIVE.

Availability

Connecticut State Dept. of Education  
Hartford, Connecticut

**SCHOOL BOND ELECTIONS**

ERIC/CEP DOCUMENT NO. EF000480 ED 14863 DISPOSITION-CERS 1

BOND ISSUE: WHAT SHALL WE DO (TECHNIQUES USED IN PROMOTING SCHOOL BOND ELECTIONS)

TEXAS EDUCATION AGENCY, AUSTIN, TEXAS

PUBLISHED-MAR66

091 PAGES

DESCRIPTORS- \*BOND ISSUES, \*EDUCATIONAL FINANCE, \*FINANCIAL SUPPORT, \*PUBLIC RELATIONS, \*PUBLIC SUPPORT, SCHOOL SUPPORT

THIS REPORT OUTLINES SUGGESTIONS FOR CONDUCTING SCHOOL BOND CAMPAIGNS. ONE OF THE FIRST STEPS AN ADMINISTRATOR SHOULD TAKE IS TO EVALUATE THE FACTORS IMPORTANT TO THE SELLING OF BONDS--STIMULATE INTEREST IN INVESTMENT DEALERS THEREBY INCREASING COMPETITION FOR BONDS. PREPARE A COMPLETE ACCURATE PROSPECTUS, CIRCULATE THE PROSPECTUS AMONG BOND DEALERS, ANSWER ALL INQUIRIES PROMPTLY AND ACCURATELY. IF NOT RATED, INVESTIGATE THE POSSIBILITY OF BECOMING RATED. ANOTHER PRE-CAMPAIGN MEASURE IS TO ESTABLISH LINES OF COMMUNICATION FOR DISSEMINATING INFORMATION TO THE PUBLIC. MASS MEDIA, PUBLIC SPEAKERS, AND CITIZENS COMMITTEES UTILIZING GRAPHS, CHARTS, ETC. MAY BE USED TO CARRY THE CAMPAIGN TO THE PUBLIC. A PUBLIC RELATIONS PROGRAM IS SUGGESTED AS A MEANS FOR STIMULATING COMMUNITY ACTION. SAMPLES OF SPEECHES, BROCHURES, GRAPHS, BLUEPRINTS, FINANCIAL REPORTS AND OTHER CAMPAIGN MATERIALS ARE CITED IN THE REPORT. (GM)

Order from EDRS as: ED 14863

MF \$0.50 HC \$4.65



**DEVELOPING PRACTICES CONCERNING GENERAL OBLIGATION SCHOOL BONDS  
AND CAPITAL OUTLAY FINANCING**

**BY- SHOCKLEY, EMMETT  
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS, CHICAGO, ILLINOIS**

**PUBLISHED- 65  
IN- PROCEEDINGS, ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE  
UNITED STATES AND CANADA, 50TH ANNUAL MEETING AND EDUCATIONAL  
EXHIBIT, SAN FRANCISCO, CALIFORNIA, OCTOBER 17-22, 1964**

**013 PAGES**

**DESCRIPTORS- \*FEDERAL AID, \*FINANCIAL NEEDS, \*FINANCIAL SUPPORT,  
\*STATE AID, \*EDUCATIONAL FINANCE, SCHOOL SUPPORT**

**THIS REPORT PRESENTS THE HISTORY AND EVOLUTION OF GENERAL  
OBLIGATION SCHOOL BONDS AND CAPITAL OUTLAY FINANCING FOR PUBLIC  
EDUCATION. THE HISTORY ENTAILS PAST LEGISLATION OF SEVERAL STATES  
CONCERNED WITH SCHOOL BORROWING. THE EVOLUTION OF SCHOOL BONDING  
IS EXPLAINED IN TERMS OF INCREASED SCHOOL FINANCING FROM 1900  
THROUGH 1958. SINCE 1958 A LEVELING TREND IN SCHOOL BORROWING IS  
NOTED. THE SCHOOL BUILDING AUTHORITY, FEDERAL AID AND STATE  
CAPITAL OUTLAY ASSISTANCE ARE CITED AS MAJOR CAUSES FOR THE  
PLATEAU IN SCHOOL BORROWING. THE ISSUANCE OF BUILDING AUTHORITY  
BONDS CONTINUES TO SHOW THE MOST EXPANSION. STATE BONDS HAVE NOT  
SHOWN THE SAME RATE OF EXPANSION.**

**Availability:**

**ASBO Secretary  
2424 W. Lawrence Ave.  
Chicago, Illinois 60625**

**FINANCING SCHOOL CONSTRUCTION**

**BY- DAUM, HENRY F.  
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS, EVANSTON, ILLINOIS**

**PUBLISHED-OCT61  
IN- PROCEEDINGS, ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE  
UNITED STATES AND CANADA, 47TH ANNUAL MEETING AND EXHIBIT,  
TORONTO, ONTARIO, CANADA, OCTOBER 7-12, 1961**

**006 PAGES**

**DESCRIPTORS- \* BOND ISSUES, \*EDUCATIONAL FINANCE, \*SCHOOL  
CONSTRUCTION, CONSTRUCTION COSTS, BUDGETING, BUDGETS, FINANCIAL  
NEEDS, FINANCIAL POLICY, FINANCIAL PROBLEMS, PLANNING, SCHOOL  
PLANNING**

**A DISCUSSION OF AUTHORITY FINANCING AS IT IS PRACTICED IN PENNSYLVANIA.  
AN AUTHORITY IS A SPECIAL CORPORATION CHARTERED BY THE STATE LEGISLATURE  
WHICH IS EMPOWERED TO BORROW MONEY AND TO BUILD SCHOOL BUILDINGS FOR  
LOCAL DISTRICTS AND THEN RENT THEM TO THE DISTRICTS FOR A RENT SUFFICIENT  
TO PAY OFF INTEREST AND PRINCIPAL.**

**Availability:**

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Chicago, Illinois 60625**

EXPERTS SURVEY FINANCING SCHOOL-BUILDING PROGRAMS

BY- JARVIS, USCAR T.

PL115FEU-JAN64

IN- AMERICAN SCHOOL BOARD JOURNAL, JANUARY, 1964

602 PAGES

DESCRIPTORS- \*GENERAL ISSUES, \*CAPITAL OUTLAY (FOR FIXED ASSETS) ,  
\*SCHOOL FINANCE, BUDGETING, FISCAL CAPACITY , STATE AID

SEVERAL METHODS OF FINANCING THE SCHOOL BUILDING PROGRAM ARE DISCUSSED.  
(1) THE BONDING PLAN, (2) PAY AS YOU GO, AND (3) THE COMBINATION PLAN.  
AN OUTLINE OF THE STATE'S RESPONSIBILITY FOR SCHOOL BUILDING FINANCING IS  
PROVIDED.

**Availability;**

The American School Board Journal  
Bruce Publishing Co.  
400 N. Broadway  
Milwaukee, Wisconsin

**LEGAL PROBLEMS RELATED TO MARKETING OF SCHOOL BONDS**

**BY- GALLOWAY, ARCHIBALD N.  
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS, EVANSTON, ILLINOIS**

**PUBLISHED- 59  
IN- PROCEEDINGS, ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE  
UNITED STATES AND CANADA, 44TH ANNUAL CONVENTION, NEW YORK, N.  
Y., OCTOBER 5-9, 1958**

**009 PAGES**

**DESCRIPTORS- \* BOND ISSUES, \*EDUCATIONAL FINANCE, \*LEGAL  
PROBLEMS, \*MONEY MANAGEMENT, EDUCATIONAL POLICY, LEGAL AID, LEGAL  
CGSTS, MANAGEMENT, MUNICIPALITIES**

**A "BIRD'S EYE" VIEW OF PROBLEMS INVOLVED AND THE WARNING SIGNS THAT MUST  
BE OBSERVED. AMONG THE PROBLEMS DISCUSSED ARE: DEBT LIMIT, PURPOSE OF THE  
ISSUE, REFERENDUM, MAXIMUM LIFE OF ISSUE, AMOUNTS OF ANNUAL MATURITIES,  
SALE OF BONDS, AND REQUIREMENTS FOR FURNISHING FINANCIAL INFORMATION.**

**Availability;**

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Chicago, Illinois 60625**

**FINANCIAL PROBLEMS RELATED TO MARKETING OF SCHOOL BONDS**

**BY- WHITBECK, JOHN  
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS, EVANSTON, ILLINOIS**

**PUBLISHED- 59  
IN- PROCEEDINGS, ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE  
UNITED STATES AND CANADA, 44TH ANNUAL CONVENTION, NEW YORK, N.  
Y., OCTOBER 5-9, 1958**

**011 PAGES**

**DESCRIPTORS- \*BOND ISSUES, \*EDUCATIONAL FINANCE, \*FINANCIAL  
POLICY, \*FINANCIAL PROBLEMS, \*MONEY, ADMINISTRATION, MANAGEMENT,  
SCHOOL ADMINISTRATION**

**A DISCUSSION OF STEPS A SCHOOL DISTRICT MAY TAKE WHICH SHOULD HELP TO HAVE A  
SUCCESSFUL SALE AT LOWEST POSSIBLE INTEREST COST.**

**Availability:**

**ASBO Secretary  
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MICHIGAN SCHOOL BOND LOAN PROGRAM

MICHIGAN STATE DEPT. OF EDUCATION, LANSING

PUBLISHED- 66

14 PAGES

DESCRIPTORS- \*BOND ISSUES, \*EDUCATIONAL FINANCE, \*FINANCIAL SERVICES, \*SCHOOL DISTRICTS, \*STATE PROGRAMS, STATE DEPARTMENTS OF EDUCATION, STATE LAWS, STATE LEGISLATION

AN ACTUAL STATEMENT OF LEGISLATION PERTAINING TO SCHOOL BONDS IN MICHIGAN.

**Availability:**

Michigan State Department of Education  
Lansing, Michigan

**GARDEN CITY REPORTS SUCCESSFUL BOND AND SCHOOL MILLAGE ELECTIONS**

**BY- O'LEARY E.J.**

**PUBLISHED-MAR64**

**IN- AMERICAN SCHOOL BOARD JOURNAL, P 17-18, MAR 1964**

**AVAILABLE FROM- THE AMERICAN SCHOOL BOARD JOURNAL, BRUCE PUB. CO., 400 N. BROADWAY, MILWAUKEE, WISCONSIN 53201**

**VOTERS IN THIS MICHIGAN CITY APPROVED 18 SPECIAL SCHOOL PROPOSITIONS IN 11 YEARS AND TURNED DOWN MORE. SOME REASONS BEHIND THE SUCCESS ARE RELATED IN THIS ARTICLE.**

**Availability:**

**Bruce Publishing Co.  
400 W. Broadway  
Milwaukee, Wisconsin 53201**

## THE COST OF BORROWING MONEY

PUBLISHED-JUL65

003 PAGES

DESCRIPTORS- \*ADMINISTRATOR GUIDES, \*CONSTRUCTION COSTS,  
\*CREDIT(FINANCE), \*SCHOOL DISTRICTS, \*SCHOOL DISTRICT SPENDING,  
EDUCATIONAL FINANCE, INTEREST

A DISCUSSION OF THE EFFECT OF INTEREST RATES ON SCHOOL  
CONSTRUCTION COSTS. AFTER REVIEWING THE VARIABLES WHICH DETERMINE  
INTEREST COSTS THE AUTHOR SUGGESTS THE ONE FACTOR THE SCHOOL  
ADMINISTRATOR CAN BEST CONTROL IS HIS DISTRICT'S CREDIT  
RATING.(FPO)

## Availability:

School Management Magazine Inc.  
22 West Putnam Ave.  
Greenwich, Connecticut 06830



## FIFTEEN FINE YEARS OF SCHOOL CONSTRUCTION PROGRESS, 1950-1965

MILWAUKEE PUBLIC SCHOOLS, WISCONSIN

PUBLISHED- 66

066 PAGES

DESCRIPTORS- \*CONSTRUCTION PROGRAMS, \*FACILITY EXPANSION,  
\*FACILITY REQUIREMENTS, \*FINANCIAL SUPPORT, \*SCHOOL CONSTRUCTION,  
BOND ISSUES, BUDGETS, SCHOOL DISTRICTS, SCHOOL TAXES, SITE  
SELECTION

A PROGRESS REPORT REVIEWING THE MILWAUKEE SCHOOL BOARDS CONTINUOUS PROGRAM OF ACQUIRING SITES AND BUILDING SCHOOLS. AN ITEMIZED LISTING OF 140 COMPLETED CONSTRUCTION PROJECTS IS SUPPLEMENTED WITH PERTINENT FACTS AND FIGURES. THESE INCLUDE DATA CONCERNED WITH--(1) GROWTH FACTORS AFFECTING SCHOOL BUILDING NEEDS, (2) RESULTANT INCREASES IN THE PHYSICAL PLANT, STAFF AND BUDGET, (3) RESEARCH ACTIVITIES OF THE STAFF AND THE BOARD, (4) THE ROLES OF THE CONSTRUCTION AND THE REPAIR DIVISIONS, AND (5) THE PROGRAM FOR SCHOOL MODERNIZATION. ATTENTION IS ALSO GIVEN TO BASIC POLICIES RELATING TO SITE SELECTION, SCHOOL CONSTRUCTION AND DISTRICTING. A SECTION DEALING WITH THE FINANCIAL ASPECTS OF THE BUILDING PROGRAM SUMMARIZES FOUR SCHOOL BOND REFERENDUM ELECTIONS AND DISCLOSES THE REVENUES RECEIVED ANNUALLY THROUGH THE CONSTRUCTION FUND LEVY. (FS)

## Availability:

Milwaukee Public Schools  
5225 W. Vilet St.  
Milwaukee, Wisconsin 53208

## BOND SALES FOR PUBLIC SCHOOL PURPOSES 1967-68

BY- BARR, RICHARD H.  
U.S. DEPT OF HEALTH, EDUCATION AND WELFARE, OFFICE OF EDUCATION,  
WASHINGTON, D.C.

PUBLISHED-JAN69

OC8 PAGES

DESCRIPTORS- \*BOND ISSUES, \*EDUCATIONAL FINANCE, \*ELECTIONS,  
\*INTEREST, \*PUBLIC SCHOOLS, COSTS, STATISTICAL DATA

INFORMATION IS PROVIDED CONCERNING THE SALE OF BONDS FOR CONSTRUCTION OF PUBLIC ELEMENTARY AND SECONDARY SCHOOL FACILITIES. IT IS INTENDED FOR USE BY ADMINISTRATORS, BOARD MEMBERS, AND THE GENERAL PUBLIC WHO MUST REPAY THESE BONDS AND HENCE MUST HAVE SOME KNOWLEDGE OF THEIR FINANCING. A GENERAL DESCRIPTION OF THE CHARACTERISTICS OF PUBLIC SCHOOL PRIMARY MARKET BOND SALES DURING THE FISCAL YEAR 1968 (JULY 1, 1967-JUNE 30, 1968) IS GIVEN. SPECIFIC INFORMATION IS ALSO PROVIDED REGARDING NEW BOND SALES, BOND ELECTIONS FOR PUBLIC SCHOOL PURPOSES, AND NET INTEREST COSTS. (NI) //

Availability:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402 \$0.10

## RENOVATING AND REMODELING

**MODERNIZATION OF SCHOOL BUILDINGS**

**BY- L HOTE, JOHN  
NATIONAL COUNCIL ON SCHOOLHOUSE CONSTRUCTION, EAST LANSING,  
MICHIGAN**

**PUBLISHED-OCT63**

**IN- PROCEEDINGS OF THE NCSC 40TH ANNUAL MEETING, PRINCETON, NEW  
JERSEY, OCTOBER 7-10, 1963**

**005 PAGES**

**DESCRIPTORS- \*BUILDING IMPROVEMENT, \*BUILDING OBSOLESCENCE,  
\*CONSTRUCTION COSTS, \*EVALUATION METHODS, \*SCHOOL CONSTRUCTION,  
DECISION MAKING, EDUCATIONAL NEEDS, HEALTH, SAFETY, STATE LAWS,  
STRUCTURAL BUILDING SYSTEMS**

**THE PROBLEM OF BUILDING MODERNIZATION VERSUS REPLACEMENT  
CANNOT YET BE SOLVED WITH FIXED FORMULAS OR GUIDELINES. THE  
DECISION PROCESS INVOLVES A COMBINATION OF MANY FACTORS INCLUDING  
COSTS, HEALTH, SAFETY, EDUCATIONAL ADEQUACY, STRUCTURAL SAFETY,  
ADMINISTRATIVE FEATURES, AND APPEARANCE. THESE ARE DETERMINED BY  
BOTH CITIZEN AND STAFF EVALUATION. THE BASIC DECISIONS ARE MADE  
ON--(1) STRUCTURAL SOUNDNESS, (2) THE NEED FOR THE FACILITY, (3)  
APPROPRIATENESS OF FACILITIES. ECONOMIC CONSIDERATIONS DETERMINE  
THE NEED FOR MODERNIZATION, WHICH CAN BE DONE EFFECTIVELY, WITHIN  
THIS GENERAL DECISION FRAMEWORK. DISCUSSION AND EXAMPLES ARE  
DRAWN FROM THE DETROIT SCHOOL SYSTEM.**

**Availability:**

**C.E.F.P. Executive Headquarters  
29 West Woodruff Avenue  
Columbus, Ohio 43210**

ERIC/CEP DOCUMENT NO. EF001437 ED 18951 DISPOSITION-EDC- 1

**MAJOR CONSIDERATIONS IN SCHOOL MODERNIZATION - AGE, LOCATION,  
EDUCATIONAL ADEQUACY**

**BY- LHOE, JOHN D.  
RESEARCH COUNCIL OF THE GREAT CITIES PROGRAM FOR SCHOOL  
IMPROVEMENT, CHICAGO, ILLINOIS**

**PUBLISHED-OCT67  
IN- NEW LIFE FOR OLD SCHOOLS NEWSLETTER, NO. 22**

**004 PAGES**

**DESCRIPTORS- \*BUILDING IMPROVEMENT, \*CONSTRUCTION COSTS,  
\*EDUCATIONAL NEEDS, \*PHYSICAL DESIGN NEEDS, \*SCHOOL CONSTRUCTION,  
BUILDING OBSOLESCENCE, EDUCATIONAL FACILITIES, EDUCATIONAL  
SPECIFICATIONS, FLEXIBLE FACILITIES, SCHOOL LOCATION**

**A DESCRIPTION OF THE RELATIONSHIP BETWEEN SCHOOL  
MODERNIZATION AND BUILDING AGE, WITH PARTICULAR ATTENTION TO  
RENOVATION RATHER THAN NEW CONSTRUCTION TO MEET CHANGING  
EDUCATIONAL NEEDS, IS GIVEN. THE NEWSLETTER EMPHASIZES  
EDUCATIONAL ADEQUACY AS BEING MORE IMPORTANT THAN BUILDING AGE,  
AND DESCRIBES RENOVATION TECHNIQUES WHICH WILL FACILITATE THIS  
APPROACH. A MAJOR CONSIDERATION IS IN TEACHING NEEDS AND  
EDUCATIONAL METHODS AS CRITERIA IN ADDITION TO LIGHTING AND  
CLIMATE CONTROL WHICH SERVE PHYSIOLOGICAL NEEDS. OTHER ITEMS  
INCLUDE DECISION MAKING PROCESSES, COSTS, FLEXIBILITY, AND  
TEACHER EDUCATION. CLARIFICATION OF THE TERM SCHOOL MODERNIZATION  
IS ALSO INCLUDED. (MM)**

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WAREHOUSES, GARAGES, BOWLING ALLEYS - NON-EDUCATIONAL BUILDINGS  
FIND NEW LIFE AS SCHOOLS

BY- GRAVES, BEN E.  
RESEARCH COUNCIL OF THE GREAT CITIES PROGRAM FOR SCHOOL  
IMPROVEMENT, CHICAGO, ILLINOIS

PUBLISHED-JAN68  
IN- NEW LIFE FOR OLD SCHOOLS NEWSLETTER, NO. 24

4 PAGES

DESCRIPTORS- \*BUILDING CONVERSION, \*CONSTRUCTION COSTS, \*SPACE  
UTILIZATION, BUILDING OBSOLESCENCE, SCHOOL IMPROVEMENT

INCREASING SCHOOL POPULATIONS AND SITE COSTS ARE CAUSING  
GREATER USE OF NON-EDUCATIONAL BUILDINGS. EXAMPLES CITED  
INCLUDE--(1) THE USE OF CHURCHES FOR CERTAIN PRIMARY LEVELS, (2)  
COMMERCIAL SPACE CONVERTED TO ADULT EDUCATION FACILITIES, (3) A  
420,000 SQUARE FOOT FACTORY CONVERTED INTO A VOCATIONAL SCHOOL,  
(4) A TELEPHONE COMPANY BUILDING CONVERTED INTO A VOCATIONAL  
GUIDANCE CENTER, (5) A 660,000 SQUARE FOOT FACTORY CONVERTED INTO  
A TRADE SCHOOL AND MANPOWER TRAINING CENTER, (6) A FOOD STORE  
BUILDING CONVERTED INTO A VOCATIONAL HIGH SCHOOL, AND (7) A STUDY  
CONDUCTED CONFIRMING THE FEASIBILITY OF MERGING COMMUNITY COLLEGE  
FACILITIES WITH CULTURAL AND COMMERCIAL FACILITIES IN A DOWN TOWN  
LOCATION. EACH EXAMPLE DEMONSTRATES THE ECONOMIC ADVANTAGES WITH  
COST FIGURES. THE WINNING SUBMITTAL IN A COMPETITION TO CONVERT A  
JUNIOR HIGH SCHOOL INTO AN INTERMEDIATE SCHOOL IS SHOWN IN FLOOR  
PLAN AND PERSPECTIVE VIEWS. THE RENOVATION SCHEDULE WAS DESIGNED  
TO MINIMIZE DISTURBANCE TO EXISTING OPERATIONS. (MH)////

Availability;

Research Council of the Great Cities  
Program for School Improvement  
4433 W. Touhy Ave.  
Chicago, Illinois 60645

ERIC/CEF DOCUMENT NO. EFC01569 ED 18102 DISPOSITION-EDC- 1

RENOVATE AND MODERNIZE OR ABANDON AND BUILD (A SUMMARY OF AN ILLUSTRATED TALK GIVEN BY WILLIAM L. ENSIGN OF MC LEOD, FERRARA AND ENSIGN, ARCHITECTS, AT THE AASA CONVENTION IN ATLANTIC CITY, 1968)

RESEARCH COUNCIL OF THE GREAT CITIES PROGRAM FOR SCHOOL IMPROVEMENT, CHICAGO, ILLINOIS

PUBLISHED-MAR68

IN- NEW LIFE FOR OLD SCHOOLS NEWSLETTER, NO. 26, MARCH 1968

4 PAGES

DESCRIPTORS- \*BUILDING IMPROVEMENT, \*CONSTRUCTION COSTS, \*DESIGN NEEDS, \*EDUCATIONAL INNOVATION, \*SCHOOL CONSTRUCTION, BUILDING INNOVATION, CONTROLLED ENVIRONMENT, EDUCATIONAL NEEDS, SAFETY

THIS NEWSLETTER COMPARES THE ADVANTAGES AND DISADVANTAGES OF SCHOOL RENOVATION AND NEW SCHOOL CONSTRUCTION WITH RESPECT TO EVOLVING EDUCATIONAL NEEDS AND METHODS. THE NEED TO UTILIZE EXISTING STRUCTURES THROUGH RENOVATION AND MODERNIZATION IS EMPHASIZED AND A FORMULA IS PROVIDED FOR COMPARING RENOVATION AND NEW SCHOOL CONSTRUCTION COSTS. PROBLEMS AND CONSIDERATIONS ARE GIVEN FOR MODERNIZATION. EXAMPLES ARE GIVEN OF SUCCESSFUL RENOVATION PROJECTS INCLUDING GYMNASIUMS, AUDITORIUMS, AND CLASSROOMS. NEW TEACHING INNOVATIONS ARE ALSO ILLUSTRATED.  
(MM)////

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CONSTRUCTION PROGRAMS IN SPECIFIC AREAS



## MISSISSIPPI'S 300 MILLION DOLLAR SCHOOL CONSTRUCTION PROGRAM

BY- NAYLOR, T. H. JR. AND CAIN, G. J.  
MISSISSIPPI STATE EDUCATIONAL FINANCE COMMISSION, JACKSON

PUBLISHED-JUL65

026 PAGES

DESCRIPTORS- \*COSTS, \*IMPROVEMENTS, \*PLANNING, CONSTRUCTION COSTS, BUILDING IMPROVEMENT, PUBLIC SCHOOLS, SCHOOL PLANNING, SOUTHERN SCHOOLS

THIS REPORT IS A REVIEW OF THE ASSISTANCE PROGRAM FROM 1946 TO THE PRESENT FOR LOCAL SCHOOL DISTRICTS IN MISSISSIPPI. SCHOOL DISTRICT PROGRAM NEEDS WERE DETERMINED BY A CITIZEN'S COUNCIL, A LEGISLATURE STUDY COMMITTEE, AN EDUCATIONAL FINANCE COMMITTEE AND A LEGISLATIVE REPORT IN PUBLIC EDUCATION. THESE GROUPS EXAMINED EXISTING SCHOOL PLANT FACILITIES AND MADE RECOMMENDATIONS IN TERMS OF PROJECTIONS OF FUTURE NEEDS. A TABLE OF ALLOCATIONS TO SCHOOL DISTRICTS AND A TABLE OF ANNUAL ALLOCATIONS ARE INCLUDED IN THE REPORT. A SUMMARY PRESENTS SITE SPECIFICATIONS, FACILITIES INCLUDED, THE REDUCTION OF THE NUMBER OF SCHOOL DISTRICTS, SCHOOL POPULATION GROWTH AND SCHOOL CONSTRUCTION COSTS.

Availability:

Mississippi State Educational Finance  
Commission  
Jackson, Mississippi

**FINANCING SCHOOL BUILDING CONSTRUCTION**

BY- ROBINSON, RAYMUND W. AND SPEIDEL, HAROLD O.  
PENNSYLVANIA STATE DEPARTMENT OF PUBLIC INSTRUCTION, HARRISBURG

PUBLISHED- 64  
IN- SCHOOL EXECUTIVE SERIES NO. 5

010 PAGES

DESCRIPTORS- \*CONSTRUCTION COSTS, \*EDUCATIONAL FINANCE,  
\*FINANCIAL NEEDS, \*SCHOOL CONSTRUCTION, BOND ISSUES, CONSTRUCTION  
NEEDS, FINANCIAL SUPPORT, MUNICIPALITIES, STATE AID, FINANCING

THIS PUBLICATION OUTLINES THE VARIOUS METHODS THAT MAY BE EMPLOYED BY PENNSYLVANIA SCHOOL DISTRICTS TO FINANCE BUILDING CONSTRUCTION. PAY-AS-YOU-GO IS CITED AS THE MOST ECONOMICAL WAY SINCE FUNDS COME FROM CURRENT TAX RECEIPTS, TEMPORARY LOANS ARE NEXT. SUCH LOANS ARE CONSIDERED TO BE FOR FIVE YEARS OR LESS. ISSUANCE OF GENERAL OBLIGATION BONDS IS ANOTHER COMMON METHOD OF FINANCING NEW CONSTRUCTION. STATUTORY LIMITATIONS PROVIDE CONTROLS WHICH MUST BE OBSERVED. THE MOST COMMON METHOD OF FINANCING CONSTRUCTION IS THROUGH USE OF A MUNICIPALITY AUTHORITY. THIS IS A SEPARATE CORPORATE ENTITY WHICH BUILDS THE BUILDING AND RENTS IT TO THE SCHOOL DISTRICT ON A LONG-TERM LEASE. THE STATE PUBLIC BUILDING AUTHORITY CAN DO THE SAME THING AS A MUNICIPALITY AUTHORITY. INTEREST RATES ARE OFTEN LOWER THROUGH SUCH A BODY. PROVISIONS ARE MADE FOR STATE REIMBURSEMENT ON APPROVED BUILDING PROJECTS.

**Availability:**

Pennsylvania State Department of  
Public Instruction  
Harrisburg, Pennsylvania

## KENTUCKY PUBLIC SCHOOL CONSTRUCTION

BY- SPARKS, HARRY M.  
KENTUCKY STATE DEPARTMENT OF EDUCATION, FRANKFORT

PUBLISHED- 67

163 PAGES

DESCRIPTORS- \*SCHOOL ARCHITECTURE, \*SCHOOL BUILDINGS, \*SCHOOL CONSTRUCTION, \*SCHOOL DISTRICT SPENDING, ELEMENTARY SCHOOLS, HIGH SCHOOLS, SCHOOL SUPPORT

NEW SCHOOL CONSTRUCTION IN THE STATE OF KENTUCKY IS ILLUSTRATED THROUGH REVIEW OF--(1) 15 ELEMENTARY SCHOOLS, (2) 14 HIGH SCHOOLS, AND (3) ONE ADMINISTRATIVE FACILITY. EACH EXAMPLE INCLUDES--(1) A GENERAL ARCHITECTURAL DESCRIPTION, (2) SITE AND FLOOR PLANS, AND (3) AN EXTERIOR PHOTOGRAPH OR PERSPECTIVE. PRECEDING THESE EXAMPLES ARE REVIEWS OF--(1) BONDS, SPECIAL LEVIES AND ASSESSMENTS OF STATE SCHOOL DISTRICTS, (2) BONDS OUTSTANDING AND SCHOOL REVENUE BONDS, AND (3) AREA AND COST DATA FOR SCHOOL CONSTRUCTION. COPIES MAY ALSO BE OBTAINED FROM THE DIRECTOR, DIVISION OF STATISTICAL SERVICES, STATE DEPARTMENT OF EDUCATION, FRANKFORT, KENTUCKY. (MH)

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HC \$8.25

A REPORT TO THE ASSOCIATION OF STATE DIRECTORS OF EDUCATIONAL  
PLANT SERVICES ANNUAL MEETING IN DETROIT

PUBLISHED-OCT67

004 PAGES

DESCRIPTORS- \*CONSTRUCTION COSTS, \*CONSTRUCTION PROGRAMS,  
\*EDUCATIONAL FINANCE, \*EDUCATIONAL IMPROVEMENT, \*SCHOOL  
CONSTRUCTION, CAPITAL OUTLAY (FOR FIXED ASSETS), FACILITY  
EXPANSION, FINANCIAL POLICY, FINANCIAL SUPPORT

A DESCRIPTION IS PRESENTED OF CHANGES EFFECTED IN SCHOOL  
BUILDING PROCEDURES IN DELAWARE. UPDATING OF PROCEDURES AND  
FUNDING OF CONSTRUCTION PROGRAMS IN THE FOLLOWING AREAS ARE  
DESCRIBED--(1) LEGISLATION, (2) NEW PROGRAMS, (3) REPORTS, (4)  
THE BUILDING PROGRAM, (5) BOARD POLICY AND (6) EDUCATIONAL  
TELEVISION. INCLUDED IS A BREAK-DOWN OF FUNDS INVOLVED IN THE  
ANNUAL CAPITAL IMPROVEMENT ACT FOR FISCAL 1968. (FS)

Availability:

State Department of Education  
Dover, Delaware

## SCHOOL BUILDING IN ALBERTA

BY- HALL, L. G.

PUBLISHED-MAR67

IN- CANADIAN EDUCATION AND RESEARCH DIGEST, V7 N1 P59-66 MARCH 1967

AVAILABLE FROM- CANADIAN EDUCATION AND RESEARCH DIGEST, CANADIAN EDUCATION ASSN., 151 BLOOR ST. W., TORONTO 5, ONTARIO, CANADA

006 PAGES

DESCRIPTORS- \*AGENCY ROLE, \*EDUCATIONAL ADMINISTRATION, \*EDUCATIONAL FINANCE, \*FACILITY REQUIREMENTS, \*SCHOOL CONSTRUCTION, CONSTRUCTION COSTS, CONSTRUCTION PROGRAMS, FACILITY EXPANSION, FINANCIAL SUPPORT

AFTER POINTING OUT THE NEED FOR MORE SCHOOL BUILDINGS IN ALBERTA, CANADA, CONSIDERATION IS GIVEN TO THE ADMINISTRATIVE AND FINANCIAL BACKGROUND TO SCHOOL BUILDINGS. ROLES ARE DISCUSSED FOR PROVINCIAL ORGANIZATIONS INVOLVED IN BUILDING PROJECTS AND PLANNING, AND THE ROLE OF THE SCHOOL BUILDINGS BOARD IS DESCRIBED. (FS)

## Availability:

Canadian Education and Research Digest  
Canadian Education Association  
151 Bloor St.  
Toronto 5, Ontario Canada

DESIGN METHODOLOGIES AND CONSTRUCTION PRODEDURES

**CRITICAL PATH METHODS IN CONSTRUCTION PRACTICE****BY- ANTILL, JAMES M. AND WOODHEAD, RONALD W.****PUBLISHED- 65****290 PAGES****DESCRIPTORS- \*CONSTRUCTION COSTS, \*PLANNING, \*SCHOOL  
CONSTRUCTION, \*SYSTEMS ANALYSIS, \*SYSTEMS APPROACH, SCHOOL  
PLANNING**

THE CRITICAL PATH METHOD IS APPLIED AS A TOOL FOR THE PLANNING AND MANAGEMENT OF DIFFERENT TYPES OF CONSTRUCTION PROJECTS. THIS METHOD CONSISTS OF A SCHEMATIC DIAGRAM OR MODEL THAT DEPICTS THE SEQUENCE AND INTERRELATION OF THE COMPONENT PARTS OF A PROJECT. A PLANNING APPROACH OF THIS TYPE PERMITS CONTINUAL EVALUATION AND COMPARISON OF ALTERNATIVE WORK PROGRAMS, CONSTRUCTION METHODS, AND TYPES OF EQUIPMENT THAT MAY BE USED. ONCE A PLAN HAS BEEN DEvised AND CONSTRUCTION HAS STARTED, THE MODEL CAN PROVIDE INFORMATION ON THE EFFECTS OF CONSTRUCTION VARIATION OR DELAY AND PERMIT IDENTIFICATION OF CONSTRUCTION OPERATIONS REQUIRING ADJUSTMENTS. CRITERIA TO BE PUT INTO THE MODEL INCLUDE TIME-COST FACTORS, SCHEDULING, FLOAT TIMES AND PROJECT, RESOURCE AND COST CONTROLS. (GM)

**Availability;****Wiley Publishing Co.  
New York, New York**

ERIC/CEP DOCUMENT NO. EFO00426 ED 14857 DISPOSITION-EDC- 1

RELATIONSHIP OF COST TO THE GEOMETRY OF A BUILDING

BY- ROWLETT, JOHN M. AND BULLOCK, THOMAS A.  
CAUDILL, ROWLETT, SCOTT AND ASSOCIATES ARCHITECTS-ENGINEERS  
BRYAN, TEXAS

IN- RESEARCH REPORT, 5

006 PAGES

DESCRIPTORS- \*BUILDING DESIGN, \*CONSTRUCTION COSTS, \*SCHOOL  
DESIGN, ARCHITECTURE, BUILDINGS, DESIGN, SCHOOL BUILDINGS, SCHOOL  
CONSTRUCTION

A SIMPLE BUILDING WITH A MINIMUM NUMBER OF INSIDE AND  
OUTSIDE CORNERS GIVES THE MAXIMUM AMOUNT OF QUALITY TEACHING  
SPACE FOR EACH BUILDING DOLLAR. THIS CONCLUSION IS BASED ON ONE  
ARCHITECTURAL FIRM'S COMPARISON OF TWO SIMILAR SCHOOLS, ONE OF  
WHICH HAD A MORE COMPLEX PLAN. A COMPARISON OF COSTS, AREAS  
PERIMETERS, VOLUMES, NUMBER OF CORNERS, AND NUMBER OF ROOFS IS  
GIVEN. (JT)

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**CURRENT TRENDS IN SCHOOL FACILITIES****SCHOOL MANAGEMENT INC., GREENWICH, CONNECTICUT****IN- ANNUAL SCHOOL BUILDING ISSUE, SCHOOL MANAGEMENT VOL 9 NO 7  
JULY 1965 PP 108-141****034 PAGES****DESCRIPTORS- \*CONSTRUCTION COSTS, \*EQUIPMENT, \*SCHOOL FACILITIES**

THIS DOCUMENT PRESENTS GRAPHS AND CHARTS WHICH DEMONSTRATE CURRENT TRENDS IN THE COSTS, EQUIPMENT, AND MATERIALS IN THE CONSTRUCTION OF ELEMENTARY AND SECONDARY SCHOOLS FOR THE 1963, 1964 AND 1965 SCHOOL YEARS. BY SCHOOL SIZE AND STATE, THE DOCUMENT LISTS CLASSROOM COSTS, PER PUPIL COSTS AND THE SPECIALIZED FACILITIES WHICH ARE BEING PROVIDED IN AUDITORIUMS, CAFETERIAS, KITCHENS, GYMNASIUMS, LANGUAGE LABORATORIES, SCIENCE LABORATORIES, INDUSTRIAL ARTS, ART, HOME ECONOMICS, BUSINESS EDUCATION, LIBRARY, AND MUSIC. SPECIALIZED COSTS FOR EDUCATIONAL TELEVISION, AIR CONDITIONING, CARPETING, AND OPERABLE WALLS ARE INCLUDED.

**Availability:**

School Management Magazine Inc,  
22 W. Putnam Ave.  
Greenwich, Conn.

SCHOOL BUILDING PROJECT PROCEDURES (A GUIDE FOR THE SCHOOL BUILDING COMMITTEE)

CONNECTICUT STATE DEPARTMENT OF EDUCATION, HARTFORD

PUBLISHED-JUN60

IN- SCHOOL BUILDING ECONOMY SERIES-\*1

043 PAGES

DESCRIPTORS- \*CONSTRUCTION COSTS, \*CONTRACTS, \*BUDGETING, \*SCHOOL BUILDINGS, \*SCHOOL PLANNING

IN 1959 THE CONNECTICUT GENERAL ASSEMBLY PASSED LEGISLATION REQUIRING THAT THE STATE DEPARTMENT OF EDUCATION ESTABLISH A SCHOOL CONSTRUCTION SERVICE TO ASSIST COMMUNITIES IN ACHIEVING INCREASED ECONOMY IN THEIR SCHOOL BUILDING PROJECTS. IT FURTHER REQUIRES EACH PROJECT BE REVIEWED BY THE SERVICE FOR ECONOMY IN ORDER TO QUALIFY FOR STATE CONSTRUCTION GRANT. THIS FIRST BOOKLET RECOMMENDS PROCEDURES DESIGNED TO ELIMINATE WASTED EFFORT, LOST TIME, AND THE RESULTANT, HIDDEN BUT CONSIDERABLE COST. IT IS A MUST IN PROCEDURES WHICH COMMUNITIES SHOULD FOLLOW IF THEY WISH TO OBTAIN FINANCIAL ASSISTANCE UNDER THE CONNECTICUT SCHOOL BUILDING AID LAW. CHAPTERS ON SCHOOL BUILDING COMMITTEE, ALLOCATION OF RESPONSIBILITIES, EDUCATIONAL SPECIFICATIONS RECONSIDERED, SELECTING AN ARCHITECT, TIME FOR PLANNING, BUDGETING AND COST CONTROL, CONTRACT DOCUMENTS, BIDDING AND CONSTRUCTING, AND CONSTRUCTION PERIOD, ARE SHORT, CONCISE, AND USEFUL TO GROUPS AND OFFICIALS PLANNING SCHOOL FACILITIES. THE OTHER FOUR CHAPTERS ARE APPROPRIATE ONLY TO CONNECTICUT AND OTHER STATE LAWS AND REGULATIONS.

**Availability:**

Connecticut State Department of Educ.  
Hartford, Conn.

COMPONENTS FOR SCHOOL CONSTRUCTION IN THE MID-HUDSON  
REGION,---FINAL REPORT 3

RENSSELAER POLYTECHNIC INSTITUTE, TROY, NEW YORK, CENTER FOR  
ARCHITECTURAL RESEARCH

PUBLISHED-MAR66

027 PAGES

DESCRIPTORS- \*BUILDING DESIGN, \*CONSTRUCTION COSTS, \*COSTS,  
\*SCHOOL CONSTRUCTION, \*SCHOOL DESIGN, COMPONENT BUILDING SYSTEMS  
• DESIGN

THE FINAL REPORT OF A THREE PART FEASIBILITY STUDY OF THE  
COMPONENT CONSTRUCTION SYSTEMS SAMPLED APPROPRIATED ASPECTS OF  
THE SCHOOL CONSTRUCTION CLIMATE IN NEW YORK STATE. IT SOUGHT TO  
DETERMINE THE APPROPRIATENESS OF THE SCHOOL CONSTRUCTION SYSTEM  
DEVELOPMENT PROCESS TO SCHOOL CONSTRUCTION IN THE MID-HUDSON  
VALLEY AND TO EXPLORE POSSIBILITIES FOR THE ACCOMPLISHMENT OF  
SUCH PROGRAMS. THIS COMPONENT APPROACH SEEKS TO ACHIEVE ECONOMIES  
BY STANDARDIZING CERTAIN UNITS OF CONSTRUCTION AND EQUIPMENT AND  
BY LARGE SCALE PURCHASING OF THESE COMPONENTS. THIS STUDY  
CONTAINS A SUMMARY OF THE EIGHT 'CLIMATE AREAS' THAT WERE  
INVESTIGATED AND CONCLUSIONS AS TO THE VARIOUS ASPECTS OF  
FEASIBILITY. (BD)

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**CONTRACT DOCUMENTS AND PERFORMANCE SPECIFICATIONS**

**FIRST CALIFORNIA COMMISSION ON SCHOOL CONSTRUCTION SYSTEMS, PALO ALTO**

**PUBLISHED-JUL63**

**269 PAGES**

**DESCRIPTORS- \* COMPONENT BUILDING SYSTEMS, \*CONSTRUCTION PROGRAMS, \* CONTRACTS , \*COSTS, \*EDUCATIONAL SPECIFICATIONS, BUILDING DESIGN, CONSTRUCTION COSTS, SCHOOL CONSTRUCTION, SCHOOL PLANNING, SCHOOLS, STRUCTURAL BUILDING SYSTEMS**

**A SET OF EDUCATIONAL SPECIFICATIONS DRAFTED BY THE FIRST CALIFORNIA COMMISSION ON SCHOOL CONSTRUCTION SYSTEMS GIVES INFORMATION ON BIDDING PROCEDURES, A DESCRIPTION OF THE CURRENT CONSTRUCTION PROGRAM, PROCEDURES FOR SUBMITTING A PROPOSAL, DATA AND CONDITIONS RELATED TO THE DEVELOPMENT PHASE OF THE PROJECT, COMPONENT CONTRACTS, AND GENERAL CONDITIONS AND PROCEDURES. PERFORMANCE SPECIFICATIONS ARE OUTLINED IN TERMS OF STRUCTURE, HEATING, VENTILATION, COOLING, CEILING LIGHTING AND INTERIOR PARTITIONS. ALSO INCLUDED ARE MATERIALS--COST MATRICES, CONSTRUCTION TIMETABLES AND ADDENDA TO THE SPECIFICATIONS. (GM)**

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**HIGH SCHOOL SIZE AND COST FACTORS, FINAL REPORT**

**BY- KIESLING, HERBERT J.  
INDIANA UNIVERSITY, BLOOMINGTON**

**PUBLISHED-MAR68**

**153 PAGES**

**DESCRIPTORS- \*COST EFFECTIVENESS, \*EXPENDITURE PER STUDENT,  
\*FACILITY GUIDELINES, \*SCHOOL SIZE, \*SECONDARY SCHOOLS,  
ENROLLMENT INFLUENCES, FACILITY IMPROVEMENT, SOCIOECONOMIC  
INFLUENCES, STANDARDS, STUDENT NEEDS**

**THE RELATIONSHIP OF PUBLIC HIGH SCHOOL PERFORMANCE TO  
EXPENDITURE PER PUPIL AND HIGH SCHOOL SIZE WAS EXAMINED. DATA  
FROM 775 PUBLIC HIGH SCHOOLS IN THE CONTINENTAL UNITED STATES  
GENERATED BY THE AMERICAN INSTITUTE FOR RESEARCH (PROJECT TALENT)  
WAS USED TO EVALUATE TWELVE POTENTIAL MEASURES OF HIGH SCHOOL  
PERFORMANCE. NINE OF THESE MEASURES WERE EITHER ACHIEVEMENT TESTS  
OR FACTOR SCORES BASED ON ALL TESTS. WHAT WERE JUDGED TO BE THE  
MOST IMPORTANT OF THESE OUTPUT MEASURES WERE THEN RELATED TO HIGH  
SCHOOL EXPENDITURE AND SIZE IN A SIMPLE MODEL OF THE EDUCATIONAL  
PROCESS IN WHICH PERFORMANCE OF PUPILS FROM SIMILAR  
SOCIO-ECONOMIC BACKGROUNDS WAS EXPLAINED BY A GENERAL  
INTELLIGENCE FACTOR SCORE, SCHOOL EXPENDITURE, SCHOOL SIZE, AND  
AN INDEX OF PUPIL SOCIO-ECONOMIC BACKGROUND. (RLP)**

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**METHODS OF BUILDING COST ANALYSIS**

**BUILDING RESEARCH INST. INC., WASHINGTON D.C.**

**PUBLISHED- 61**

**086 PAGES**

**DESCRIPTORS- \*ARCHITECTURAL PROGRAMING, \*BUILDING DESIGN,  
\*CONSTRUCTION COSTS, COST EFFECTIVENESS, FACILITY INVENTORY,  
LIGHTING**

**PRESENTATION OF SYMPOSIUM PAPERS INCLUDES--(1) A STUDY  
DESCRIBING TECHNIQUES FOR ECONOMIC ANALYSIS OF BUILDING DESIGNS,  
(2) THREE CASE STUDIES OF ANALYSIS TECHNIQUES, (3) PROCEDURES FOR  
MEASURING THE AREA AND VOLUME OF BUILDINGS, AND (4) AN OPEN FORUM  
DISCUSSION. CASE STUDIES EVALUATE--(1) THE THERMAL ECONOMICS OF  
BUILDING ENCLOSURES, (2) AN ECONOMIC ANALYSIS OF INTEGRATED  
LIGHTING, AND (3) COMPUTER OPTIMIZATION OF BUILDING SYSTEMS OF  
MORE THAN THREE VARIABLES. (MH)**

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## A FIVE-YEAR SCHOOL BUILDING AND FUTURE SITES PROGRAM 1966-1970

MILWAUKEE BOARD OF SCHOOL DIRECTORS, WISCONSIN

PUBLISHED-JAN65

AVAILABLE FROM- BOARD OF SCHOOL DIRECTORS 5225 W VILET ST.  
MILWAUKEE, WISCONSIN 53208

114 PAGES

DESCRIPTORS- \*CONSTRUCTION COSTS, \*CONSTRUCTION PROGRAMS,  
\*FACILITY EXPANSION, \*FACILITY REQUIREMENTS, \*SITE ANALYSIS,  
CONSTRUCTION NEEDS, EDUCATIONAL FINANCE, SCHOOL CONSTRUCTION,  
SCHOOL IMPROVEMENT, SCHOOL PLANNING

FIVE-YEAR SCHOOL BUILDING AND SITE NEEDS AND RELATED FINANCIAL REQUIREMENTS ARE SUMMARIZED FOR MILWAUKEES SCHOOLS. EDUCATIONAL POLICIES CONCERNING THE SCHOOL BUILDING PROGRAM ARE STATED, AND CONSIDERATION IS GIVEN TO FACTORS AFFECTING SCHOOL BOARD NEEDS SUCH AS BIRTH RATE, PUBLIC HOUSING PROJECTS, URBAN RENEWAL, HIGHWAYS AND EXPRESSWAYS, ETC. SCHOOL FACILITIES AND SITES NEEDED ARE SPECIFICALLY NOTED. A PROGRESS REPORT IS GIVEN ON THE SCHOOL CONSTRUCTION AND IMPROVEMENT PROGRAM, AND INTERIM REPORTS OF THE FIVE-YEAR BUILDING AND FUTURE SITES COMMISSION ARE PRESENTED. (FS)

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THE CAMPUS PLAN. ONE ANSWER TO QUALITY ELEMENTARY EDUCATION IN SYRACUSE

SYRACUSE CITY SCHOOL DISTRICT, N.Y.

PUBLISHED- 68

017 PAGES

DESCRIPTORS- \*CAMPUSES, \*EDUCATIONAL COMPLEXES, \*EDUCATIONAL FINANCE, \*ELEMENTARY EDUCATION, \*SCHOOL PLANNING, CAPITAL OUTLAY (FOR FIXED ASSETS), EDUCATIONAL PARKS, RACIAL BALANCE, SCHOOL BUILDINGS, SCHOOL DISTRICT SPENDING

ONE OF THREE RESEARCH REPORTS PUBLISHED ON THE CAMPUS PLAN FOR SYRACUSE ELEMENTARY SCHOOLS. THIS REPORT, AFTER EXPLAINING THE PLAN AND THE ADVANTAGES TO BE REALIZED FROM IT, IS CONCERNED WITH HOW MUCH THE PLAN WOULD COST. A SCHEDULE OF CAPITAL OUTLAYS FOR VARIOUS ALTERNATE PLANS, FOR BOTH THE CAMPUS PLAN AND SCATTERED-SITE SCHOOLS WITH VARIOUS FACILITY ARRANGEMENTS, IS PRESENTED. (FPO) //

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URBAN SCHOOL CONSTRUCTION

COST MODEL FOR LARGE URBAN SCHOOLS

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, WASHINGTON, D.C.

PUBLISHED- 67  
IN- TECHNICAL NOTE, NO. 30

026 PAGES

DESCRIPTORS- \*COSTS, \*SCHOOL CONSTRUCTION, \*URBAN EDUCATION,  
CAPITAL, EQUIPMENT, EXPENDITURES, SCHOOL LOCATION, TRANSPORTATION

THIS DOCUMENT CONTAINS A COST SUBMODEL OF AN URBAN EDUCATIONAL SYSTEM. THIS MODEL REQUIRES THAT PUPIL POPULATION AND PROPOSED SCHOOL BUILDING ARE KNOWN. THE COST ELEMENTS ARE--(1) CONSTRUCTION COSTS OF NEW PLANTS, (2) ACQUISITION AND DEVELOPMENT COSTS OF BUILDING SITES, (3) CURRENT OPERATING EXPENSES OF THE PROPOSED SCHOOL, (4) PUPIL TRANSPORTATION COSTS, (5) INSTRUCTIONAL EQUIPMENT COSTS, AND (6) DEBT SERVICE COSTS. VARIABLES CITED THAT DETERMINE CONSTRUCTION COSTS OF NEW SCHOOLS ARE ADMINISTRATION COSTS, SPACE PER PUPIL, TOTAL PUPILS, AND THE SQUARE FOOT COST. FROM EVIDENCE PRESENTED, THE ASSUMPTION THAT LARGER SCHOOL PLANTS COST LESS PER PUPIL CANNOT BE SUPPORTED. QUANTITY RATHER THAN QUALITY OF BUILDING WAS CONSIDERED. LAND COSTS ARE DETERMINED BY COST PER ACRE, LAND NEEDED FOR TYPE OF SCHOOL, LAND NEEDED PER PUPIL, AND TOTAL NUMBER OF PUPILS. CURRENT OPERATING COSTS ARE ESTIMATED FROM SALARY LEVEL AND NUMBER OF STAFF, EDUCATIONAL LEVEL AND NUMBER OF PUPILS, AND TEACHER-PUPIL RATIO. TRANSPORTATION EXPENSES ARE DETERMINED FROM EQUIPMENT COST, MAINTENANCE AND STORAGE COST, PUPILS TRANSPORTED, EFFECTIVE CAPACITY OF BUS PER MILE COST OF OPERATION, BUS SPEED, AND PUPIL COLLECTION TIME. INSTRUCTIONAL EQUIPMENT COSTS ARE DETERMINED FROM PURCHASE AND MAINTENANCE COSTS, AND NUMBER OF PUPILS USING EQUIPMENT. DEBT SERVICE COSTS ARE ESTIMATED FROM CONSTRUCTION, BUS, EQUIPMENT, LAND PURCHASE, INTEREST VARIABLES, AND AMORTIZATION SCHEDULE. (JZ)

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**URBAN EDUCATION SYSTEMS ANALYSIS**

**BY- CLARK, STEPHEN C. AND O BRIEN, RICHARD J. AND CASE, C. MARSTON  
DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, WASHINGTON, D.C.**

**PUBLISHED- 67  
IN- TECHNICAL NOTE, NO. 24**

**016 PAGES**

**DESCRIPTORS- \*COSTS, \*DECISION MAKING, \*DEMOGRAPHY, \*SYSTEMS ANALYSIS, \*URBAN EDUCATION, ESTIMATED COSTS, SCHOOL DEMOGRAPHY**

**ANALYSIS OF URBAN EDUCATIONAL SYSTEMS MAY BE ACHIEVED BY USE OF AN ANALYTICAL MODEL. THE MODEL MAY BE USED IN DECISION-MAKING REGARDING SCHOOL LOCATION, ENROLLMENT, FACILITIES, ORGANIZATION, PROGRAMS AND COSTS. KNOWN DATA SUCH AS MONIES AVAILABLE, STAFF ALLOCATION, AND CURRENT SCHOOL PLANT ARE INTRODUCED INTO THE MODEL. IN THE STRUCTURE OF THE MODEL--(1) AN INITIAL INVESTMENT POLICY (BUILDING) IS PROPOSED BY THE ADMINISTRATOR. THE PROPOSAL IS RELATED TO (2) AN URBAN SUBMODEL WHICH COMBINES PUPIL POPULATION, LOCATION, TRANSPORTATION NEEDS, AND SOCIO-ECONOMIC CHARACTERISTICS OF THE COMMUNITY. (3) SCHOOL SUBMODEL WHICH DESCRIBES THE SCHOOL PROGRAM, SITE SPECIFICATIONS AND DEVELOPMENT PLANS, STAFF SPECIFICATIONS, AND SPACE AND EQUIPMENT PROVISIONS PER PUPIL BY INSTRUCTIONAL AREA, AND (4) COST SUBMODEL WHICH HELPS TO ESTIMATE ACCURATELY TOTAL PER PUPIL EXPENDITURE FOR REMODELING EXISTING FACILITIES COMPARED TO NEW SITE AND CONSTRUCTION PROPOSALS, PER PUPIL TRANSPORTATION EXPENDITURES, AND CURRENT OPERATION COSTS. IN AN INTERACTION SUBMODEL (5), SUBMODELS (2), (3), AND (4) ARE SUMMED. SUBMODEL (6) EVALUATES BENEFITS AND COSTS PER PUPIL IN RELATION TO EDUCATIONAL OBJECTIVES, CAUSING EXAMINATION SUBMODEL (7), THROUGH FEEDBACK, TO ALTER THE ORIGINAL PROPOSAL (1), JUSTIFYING, MODIFYING, OR ELIMINATING THE INITIAL INVESTMENT POLICY. (8D)**

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**EDUCATIONAL FACILITIES IN URBAN SETTINGS**

**PUBLISHED- 67**

**066 PAGES**

**DESCRIPTORS- \*EDUCATIONAL PARKS, \*FEDERAL AID, \*SCHOOL PLANNING, \*URBAN POPULATION, \*URBAN SCHOOLS, DEFACTO SEGRATION, EDUCATIONAL FINANCE, POPULATION DISTRIBUTION, URBAN EDUCATION**

**MAJOR ADDRESSES CONCERNING EDUCATIONAL FACILITIES IN URBAN SETTINGS, WHICH WERE PRESENTED AT THE 1967 MEETING OF THE COUNCIL OF EDUCATIONAL FACILITY PLANNERS. THE PRESENTATIONS SET FORTH MUCH OF THE CONTEMPORARY THINKING AND PLANNING AS TO HOW EDUCATIONAL FACILITIES CAN BE DEVELOPED TO HELP RESOLVE THE VASTLY COMPLICATED NEGATIVE SITUATION CURRENTLY CHARACTERIZING URBAN ENVIRONMENTS. (FS)//**

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**FEDERAL AND STATE AID**

PER PUPIL COSTS OF NEW SCHOOL BUILDINGS, 1965

PENNSYLVANIA STATE DEPARTMENT OF PUBLIC INSTRUCTION, HARRISBURG

PUBLISHED- 65

663 PAGES

DESCRIPTORS- \*COSTS, \*EDUCATIONAL FINANCE, CONSTRUCTION COSTS,  
ELEMENTARY SCHOOLS, HIGH SCHOOLS, STUDENT COSTS

A TABLE WHICH GIVES PER PUPIL COST STRUCTURE PLUS ARCHITECTS FEE, AND PER PUPIL  
COST BASED ON TOTAL COST LESS SITE COST FOR SCHOOLS BUILT IN PENNSYLVANIA IN 1965.

**Availability;**

**Pennsylvania State Department of  
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Harrisburg, Pennsylvania**

NEW YORK STATE TITLE III NDEA PLANNING GUIDE (REVISED EDITION  
1967-68)

STATE UNIVERSITY OF NEW YORK, ALBANY

PUBLISHED- 68

028 PAGES

DESCRIPTORS- \*EDUCATIONAL FINANCE, \*FEDERAL AID, \*FEDERAL  
PROGRAMS, \*FINANCIAL SUPPORT, \*PLANNING, SCHOOL PLANNING

THIS DOCUMENT PROVIDES GUIDELINES FOR PUBLIC SCHOOL  
AUTHORITIES WHO WISH TO AVAIL THEMSELVES OF THE OPPORTUNITIES  
PROVIDED BY THE TITLE III NDEA PROGRAMS. FOR A SCHOOL DISTRICT OR  
OTHER AGENCY TO BE ELIGIBLE FOR FEDERAL ASSISTANCE UNDER ANY  
PROGRAM ADMINISTERED BY THE USDEA, THE OFFICIAL GOVERNING BODY IS  
REQUIRED TO FURNISH ASSURANCE OF COMPLIANCE WITH THE CIVIL  
RIGHTS ACT OF 1964. THE LIST OF EQUIPMENT AND MATERIALS IN THE  
DOCUMENT ARE NOT PROSCRIPTIVE. THE DOCUMENT OUTLINES  
PARTICIPATION IN THE PROGRAM IN TERMS OF--APPLICATION PROCEDURES,  
REIMBURSEMENT PROCEDURES, SPECIAL PROJECTS, PRIORITY  
CONSIDERATIONS, BASIC STANDARDS FOR THE APPROVAL OF PROJECTS, AND  
SPECIAL EQUIPMENT AND FURNITURE. (GM)

**Availability:**

The University of the State of New York  
The State Education Department  
Division of Educational Finance  
Albany, New York

FEDERAL ASSISTANCE FOR EDUCATIONAL PLANNING ACQUIRING AND DEVELOPING SITES AND CONSTRUCTING FACILITIES

BY- GARDNER, DWAYNE E. AND TROTTER, CHARLES E., JR. AND LEVY, SPERRY D.  
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, WASHINGTON, D. C.

044 PAGES

DESCRIPTORS- \*EDUCATIONAL FACILITIES, \*EDUCATIONAL PLANNING, \*FEDERAL AID, \*FEDERAL PROGRAMS, \*SITE DEVELOPMENT, \*HEALTH OCCUPATIONS EDUCATION, \*HIGHER EDUCATION, \*LIBRARY FACILITIES, \*URBAN EDUCATION, \*VOCATIONAL SCHOOLS

A GUIDE TO FEDERAL FINANCIAL ASSISTANCE PROGRAMS. THE PROGRAMS ARE IDENTIFIED WITH THE ENABLING LEGISLATION, ALONG WITH ADDRESSES OF FEDERAL AGENCY OFFICES IN ALL AREAS OF THE COUNTRY RESPONSIBLE FOR THEIR ADMINISTRATION. THE BOOKLET IS DIVIDED INTO THREE PARTS ACCORDING TO THE TYPE OF FEDERAL PROGRAM--(1)EDUCATIONAL PLANNING, (2)ACQUISITION AND DEVELOPMENT OF SITES FOR EDUCATIONAL FACILITIES, AND (3)CONSTRUCTION OF EDUCATIONAL FACILITIES.(NI)

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**PUBLIC SCHOOL BUILDING AID PROGRAM IN CONNECTICUT (A BRIEF HISTORY FROM 1945 TO 1968)**

**CONNECTICUT STATE DEPARTMENT OF EDUCATION, HARTFORD, BUREAU OF SCHOOL BUILDINGS**

**PUBLISHED-MAY68**

**OC3 PAGES**

**DESCRIPTORS- \*EDUCATIONAL FINANCE, \*EDUCATIONAL LEGISLATION, \*SCHOOL BUILDINGS, \*STATE AID, \*STATE PROGRAMS, HANDICAPPED, MIDDLE SCHOOLS, REGIONAL SCHOOLS, RETARDATION, SPECIAL EDUCATION, VOCATIONAL EDUCATION**

**A BRIEF REVIEW OF LEGISLATIVE HISTORY IN CONNECTICUT WITH REFERENCE TO THE PUBLIC SCHOOL BUILDING AND PROGRAM. SPECIAL ACTIONS TAKEN BY THE 1965 LEGISLATURE AND THE 1967 GENERAL ASSEMBLY ARE ENUMERATED. A STATISTICAL SUMMARY OF AID UNDER THE PROGRAM IS PRESENTED. (FPO)**

**Availability:**

**Connecticut State Department of Educ.  
Bureau of School Buildings  
Hartford, Connecticut**

STATE PARTICIPATION IN FINANCING LOCAL PUBLIC-SCHOOL FACILITIES

BY- BARK, W. MONTFORD AND WILKERSON, WILLIAM R.  
NATIONAL EDUCATION ASSN., WASHINGTON D.C., COMMITTEE ON  
EDUCATIONAL FINANCE

PUBLISHED- 65

DESCRIPTORS- \*EDUCATIONAL FINANCE, \*PUBLIC SCHOOLS, \*RESEARCH  
METHODOLOGY, \*RESEARCH REVIEWS (PUBLICATIONS), \*STATE AID,  
EDUCATIONAL ADMINISTRATION, EDUCATIONAL TRENDS

A REVIEW OF RESEARCH AND PROCEDURES IN STATE PARTICIPATION  
IN FINANCING LOCAL CAPITAL OUTLAYS IN THE 25 YEAR PERIOD FROM  
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SINCE THAT DATE. (FPO)

**Availability:**

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PLAN FOR EXPENDITURE OF STATE CAPITAL OUTLAY FUNDS, 1968-69

TENNESSEE STATE DEPT. OF EDUCATION, NASHVILLE

PUBLISHED- 68

7 PAGES

DESCRIPTORS- \*ACCOUNTING, \*CAPITAL OUTLAY (FOR FIXED ASSETS),  
\*EDUCATIONAL FINANCE, \*EDUCATIONAL PLANNING, \*STATE PROGRAMS,  
STATE DEPARTMENTS OF EDUCATION

THE BLANK FORM TO BE FILLED OUT BY A SCHOOL DISTRICT FOR SUBMISSION TO  
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DETERMINATION OF THE STATE MATCHING RATIO

WASHINGTON OFF. STATE SUPT. PUB. INSTR., OLYMPIA

PUBLISHED-JAN64

5 PAGES

DESCRIPTORS- \*BUILDING PROGRAMS, \*EDUCATIONAL FINANCE, \*SCHOOL BUILDINGS, \*SCHOOL DISTRICTS, \*STATE AID, FINANCIAL SUPPORT, STATE PROGRAMS

THE DETERMINATION OF THE PERCENTAGE OF STATE ASSISTANCE TO AID SCHOOL DISTRICTS IN FINANCING SCHOOL BUILDING CONSTRUCTION COMMONLY KNOWN AS THE " STATE MATCHING RATIO " IN THE STATE OF WASHINGTON.

**Availability:**

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Olympia, Washington

**SCHOOL BUILDING CONSTRUCTION NEEDS 1967-69 BIENNIAL PERIOD**

**WASHINGTON STATE BOARD OF EDUCATION, OLYMPIA**

**PUBLISHED-DEC66**

**23 PAGES**

**DESCRIPTORS- \*CONSTRUCTION NEEDS, \*EDUCATIONAL FINANCE,  
\*SPECIFICATIONS, \*STATE DEPARTMENTS OF EDUCATION, \*STATE SURVEYS,  
SCHOOL BUILDINGS**

**A SUMMARY OF THE DATA SUBMITTED BY SCHOOL DISTRICTS IN AN ON-THE -PREMISES  
SURVEY CONDUCTED BY THE STATE OF WASHINGTON, DEPARTMENT OF EDUCATION  
OFFICE STAFF DURING THE SPRING AND SUMMER OF 1966 IN EACH SCHOOL DISTRICT  
OF THE STATE WHICH INDICATED A NEED FOR ADDITIONAL FACILITIES BY JULY 1, 1972.**

**Availability:**

**Washington State Board of Education  
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**PROCEDURES TO BE OBSERVED IN ORDER FOR SCHOOL DISTRICTS TO QUALIFY FOR STATE PUBLIC SCHOOL BUILDING FUNDS**

**MISSISSIPPI STATE DEPT OF EDUCATION, JACKSON**

**PUBLISHED- 65**

**A LISTING OF, AND AN ELABORATION ON 21 PROCEDURES WHICH SCHOOL DISTRICTS IN MISSISSIPPI MUST OBSERVE IN ORDER TO QUALIFY FOR STATE BUILDING FUNDS.**

**Availability:**

**Mississippi State Department of Educ.  
Jackson, Mississippi**

**THE DEVELOPMENT OF FEDERAL, STATE AND COUNTY FINANCE PROGRAMS FOR KANSAS SCHOOLS**

**KANSAS STATE DEPT. OF PUBLIC INSTR., TOPEKA**

**PUBLISHED-MAY62**

**012 PAGES**

**DESCRIPTORS- \*EDUCATIONAL FINANCE, \*FEDERAL AID, \*FINANCIAL SUPPORT, \*STATE AID, \*STATE FEDERAL SUPPORT, EQUALIZATION AID, SCHOOL TAXES, STATE FEDERAL AID, TAX SUPPORT**

**THIS IS A BRIEF HISTORICAL ACCOUNT OF THE DEVELOPMENT OF FEDERAL, STATE AND COUNTY SCHOOL FINANCE PROGRAMS THAT HAVE BEEN ESTABLISHED IN KANSAS.(FS)**

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