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**CEF**

THE MAINTENANCE OF EDUCATIONAL FACILITIES

An Annotated Reference List

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE  
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THE MAINTENANCE OF EDUCATIONAL FACILITIES

An Annotated Reference List

Prepared By

Howard E. Wakefield

Director

ERIC Clearinghouse on Educational Facilities

The University of Wisconsin

Madison

November, 1968

## FOREWORD

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THE INSTRUCTIONAL MATERIALS  
CENTER  
BY- KLOSTER, ALEXANDER J.  
MICHIGAN DEPARTMENT OF EDUCATION,  
LANSING  
PUBLISHED- 65  
IN- BULLETIN NO. 369  
071 PAGES

DESCRIPTORS- \*AUDIOVISUAL AIDS,  
\*INSTRUCTIONAL MATERIALS,  
\*INSTRUCTIONAL MATERIALS CENTERS,  
\*LIBRARIES, CARRELS, INDIVIDUAL  
STUDY, STUDY FACILITIES

Index Terms  
(Major terms are  
preceded by an  
asterisk)

Abstract

THIS BULLETIN PRESENTS RECOMMEND-  
ATIONS WITH REGARD TO PROGRAM,  
PERSONNEL, AND FACILITIES FOR AN  
INSTRUCTIONAL MATERIALS ORGANIZ-  
ATION AND LAYOUTS FOR AN INSTRUCT-  
IONAL MATERIALS CENTER. CASE STUDIES  
AND EXAMPLES ARE PROVIDED FOR MAKING  
THE MAXIMUM POSSIBLE USAGE OF THE  
CENTER WITHIN BOTH THE SCHOOL AND  
THE COMMUNITY. (BD)

## ANNOTATED REFERENCES

ARTIFICIAL LIGHTING FOR MODERN SCHOOLS (A GUIDE FOR ADMINISTRATIVE USE)

BY- REIDA, GEORGE W.  
KANSAS STATE DEPARTMENT OF PUBLIC INSTRUCTION, TOPEKA

PUBLISHED- 60

052 PAGES

DESCRIPTORS- \*CLASSROOM ENVIRONMENT, \*EQUIPMENT STANDARDS, \*ILLUMINATION LEVELS, \*LIGHTING, \* TASK PERFORMANCE, ADMINISTRATOR GUIDES, BUILDING IMPROVEMENT, ECONOMICS, PHYSICAL ENVIRONMENT, ENVIRONMENTAL INFLUENCES, HEALTH NEEDS, ILLUMINATION, MAINTENANCE, VISION, WORK ENVIRONMENT

DESIGNED TO SERVE AS A GUIDE IN THE DEVELOPMENT OF GOOD VISUAL ENVIRONMENT AND ECONOMICALLY FEASIBLE LIGHTING INSTALLATIONS IN SCHOOLS. EIGHTY PERCENT OF ALL SCHOOL LEARNING IS GAINED THROUGH THE EYES AS ESTIMATED BY THE U.S. OFFICE OF EDUCATION. GOOD SCHOOL LIGHTING IS COMFORTABLE, GLAREFREE AND ADEQUATE FOR THE VISUAL TASK. EYE STRAIN AND UNNECESSARY FATIGUE AS A RESULT OF POOR VISUAL CONDITIONS AFFECT LEARNING. SATISFACTORY LIGHTING IS MORE THAN PROVIDING RECOMMENDED LEVELS WHERE THEY ARE NEEDED. CONSIDERATION MUST ALSO BE GIVEN TO THE QUALITY OF LIGHT PROVIDING ADEQUATE AND COMFORTABLE SEEING CONDITIONS FOR EVERY TYPE OF SCHOOL ACTIVITY. FOUR FACTORS THAT AFFECT VISION ARE--(1) SIZE, (2) CONTRAST, (3) TIME, AND (4) BRIGHTNESS. OTHER TOPICS DISCUSSED ARE--(1) THE VISUAL ENVIRONMENT, (2) TRENDS IN NATURAL LIGHTING, (3) LIGHT AND INTERIOR FINISHES OF CEILINGS, WALLS, FLOORS, CHALKBOARDS, TRIM AND FURNITURE, (4) BRIGHTNESS DIFFERENCES, (5) PRINCIPLES OF SCHOOL LIGHTING, (6) BRIGHTNESS, (7) LEVELS OF ILLUMINATION, (8) SELECTING LIGHTING FIXTURES, AND (9) LIGHTING COSTS, SWITCHES, CUTLETS, MAINTENAN

## AIR STRUCTURES FOR SCHOOL SPORTS

BY- ROBERTSON, NAN  
EDUCATIONAL FACILITIES LABORATORIES, INC., NEW YORK, N. Y.

PUBLISHED- 64

28 PAGES

DESCRIPTORS- \*AIR STRUCTURES, \*PHYSICAL EDUCATION FACILITIES,  
\*PREFABRICATION, ATHLETIC ACTIVITIES, CONSTRUCTION COSTS, COSTS,  
MAINTENANCE, SAFETY, SCHOOL CONSTRUCTION, SCHOOL MAINTENANCE,  
SCHOOL SAFETY

AIR STRUCTURES ARE FABRIC BUILDINGS BLOWN UP AND HELD UP BY AIR PRESSURE. EXPERIMENTS WITH SUCH STRUCTURES WERE CONDUCTED AS EARLY AS 1917. IN 1948 THE UNITED STATES AIR FORCE SOUGHT A NEW WAY OF HOUSING LARGE RADAR ANTENNAE PLANNED FOR THE ARCTIC. AS AN OUTCOME OF THEIR SEARCH, BIRDAIR STRUCTURES, INC., WHICH IS NOW ONE OF SEVERAL COMPANIES SELLING SUCH STRUCTURES, WAS FOUNDED. EARLY EXPERIENCES WITH AIR STRUCTURES FOR SCHOOLS IN LITCHFIELD, CONNECTICUT, WERE DISAPPOINTING. THE SUBSEQUENT ERECTION OF TWO MORE BUBBLES WAS EVIDENCE THAT SATISFACTION WAS EVENTUALLY ACHIEVED. COST ESTIMATES OF \$2.14 PER SQUARE FOOT COMPARE FAVORABLE WITH WOOD-DOMED FIELDHOUSES AT \$6.53 PER SQUARE FOOT OR GEODESIC FIELDHOUSES AT \$8.34 PER SQUARE FOOT. COSTS FOR SWIMMING POOL USE ARE ESTIMATED AT \$9.38 PER SQUARE FOOT AS COMPARED TO \$26.00 AND \$32.00. EASE OF HEATING IS ALSO EMPHASIZED. INSTALLATION TIME IS APPROXIMATELY ONE DAY. THERE IS NO DANGER OF SUFFOCATION IN CASE OF DEFLATION BECAUSE THE PROCESS IS SLOW AND THE MATERIAL CAN EASILY BE LIFTED SHOULD ONE FIND IT NECESSARY TO GET OUT UNDER SUCH CONDITIONS. THERE IS NO FIRE DANGER. BECAUSE OF A HIGH REFLECTION SURFACE, LIGHTING PROBLEMS ARE MINIMAL. CURRENT EXPERIMENTS ARE BEING CARRIED OUT TO MAKE IMPROVEMENTS. INTERESTED READERS MAY SEE SUGGESTED DO'S AND DON'TS BY REFERRING TO THIS BOOKLET. ADVANTAGES OF AIR STRUCTURES ARE COST, HEATING EASE, LIGHTING EASE, UNOBSTRUCTED AREA, PORTABILITY, MAINTENANCE, AND DEPENDABILITY. THE MAIN DISADVANTAGE IS THE LIMITED LIFE EXPECTANCY. THIS DOCUMENT IS AVAILABLE FROM EDUCATIONAL FACILITIES LABORATORIES, INC., 477 MADISON AVENUE, NEW YORK, N.Y. 10022. (RH)



TINY FEET NO TREAT TO FLOORS

BY- SMALLEY, DAVE E.  
BRUCE PUBLISHING COMPANY, MILWAUKEE, WISCONSIN

PUBLISHED-MAY66  
IN- AMERICAN SCHOOL BOARD JOURNAL, MAY, 66, PP. 57-58

3 PAGES

DESCRIPTORS- \*FLOORING, \*REPAIR, \*SCHOOL IMPROVEMENT, \*SCHOOL MAINTENANCE, BUILDING MATERIALS, CONSTRUCTION (PROCESS), EQUIPMENT

A DISCUSSION OF FLOOR MAINTENANCE AND CARE IN TERMS OF BROKEN, WARPED, AND OTHERWISE DAMAGED CONDITIONS WHICH OFTEN REQUIRE REPLACEMENTS GIVES SUGGESTIONS FOR VARIOUS TYPES OF FLOORING MATERIAL. WOOD FLOOR CONDITIONS MAY INCLUDE--(1) CUPPED BOARDS, (2) BUCKLING BOARDS, AND (3) BROKEN BOARDS. A DETAILED DISCUSSION IS GIVEN OF METHODS FOR REMOVING DAMAGED RESILIENT TILES. TECHNIQUES ARE SUGGESTED FOR REMOVING AND REPLACING LINOLEUM TILES. FOR TERRAZZO FLOORS, TREATMENT IS MENTIONED BOTH FOR CRACKS AND HOLES. SIMILAR METHODS ARE INDICATED FOR MARBLE FLOORS. THIS ARTICLE APPEARED IN THE MAY, 1966, ISSUE OF THE AMERICAN SCHOOL BOARD JOURNAL, PP. 57 TO 58. COPIES MAY BE OBTAINED BY WRITING TO THE EDITOR, AMERICAN SCHOOL BOARD JOURNAL, BRUCE PUBLISHING CO., 400 N. BROADWAY, MILWAUKEE, WISCONSIN. (MM)

ROLE OF THE PLANT MANAGER IN DESIGN

BY- TENIGAN, RICHARD F.  
AMERICAN SCHOOL AND UNIVERSITY, NEW YORK, N. Y.

PUBLISHED-MAY65  
IN- AMERICAN SCHOOL AND UNIVERSITY, MAY 65

006 PAGES

DESCRIPTORS- \*BUILDING OPERATION, \*MAINTENANCE, \*PLANNING,  
COOPERATIVE PLANNING, EQUIPMENT MAINTENANCE, SCHOOL MAINTENANCE

THIS REPORT ANALYSES THE ROLE THE PLANT SUPERVISOR CAN PLAY IN SCHOOL PLANT PLANNING. THE SUPERVISOR'S EXPERTISE SHOULD BE USED IN BUILDING CONSTRUCTION IN TERMS OF REDUCING MAINTENANCE COSTS. THE SUPERVISOR CAN MAKE AN OBJECTIVE ANALYSIS OF MATERIALS, FINISHES AND EQUIPMENT. HE CAN EXAMINE CONSTRUCTION PLANS AND SPECIFICATIONS FOR THOROUGHNESS IN SUCH FUNCTIONAL NEEDS AS WORKSHOPS, STORAGE AREAS, OFFICES AND PERSONNEL FACILITIES. THE SUPERVISOR CAN GIVE HIS VIEWS ON UTILITY NEEDS, HEATING, VENTILATION, LIGHTING, PLUMBING AND ELECTRICITY. HE CAN FURTHER CONTRIBUTE TO PLANNING BY SUGGESTING BUILDING DESIGN WHICH WILL FACILITATE MORE EFFICIENT OVERALL CLEANING AND CARE.

GOOD MAINTENANCE BY DESIGN

BY- WIEDERSUM, NORMAN J.  
AMERICAN SCHOOL AND UNIVERSITY, NEW YORK, N. Y.

PUBLISHED-MAY66  
IN- AMERICAN SCHOOL AND UNIVERSITY, MAY 66, PP. 85-87

005 PAGES

DESCRIPTORS- \*MAINTENANCE, \*SCHOOL DESIGN, \*SCHOOL MAINTENANCE,  
\*SCHOOL PLANNING, ACOUSTICAL ENVIRONMENT, BUILDING DESIGN,  
BUILDING OPERATION, CORRIDORS, DESIGN, PLANNING, SCHOOLS

ONE GOOD DESIGN PRACTICE IS TO KEEP TO A MINIMUM THE NUMBER OF DIFFERENT BASIC EXTERIOR MATERIALS USED IN CONSTRUCTION. SELECTION PROCEDURES SHOULD TAKE INTO CONSIDERATION THE CAPABILITY TO WITHSTAND NATURE'S FORCES AS WELL AS AESTHETICS. A NEOPRENE/HYPALON COATING ON THE ROOF PROVIDES LIGHTWEIGHT AND COMPETITIVE QUALITY PROTECTION. A POLYURETHANE COATING APPLIED DIRECTLY TO A CONCRETE FLOOR MAY PROVIDE GREATER DURABILITY AND COLOR VERSATILITY THAN TERRAZZO DOES. SURFACES OF THIS MATERIAL ARE SEAMLESS, NON-SKID, AND RESILIENT AND REQUIRE NO WAXING. A RESIN-BASED COATING IS AVAILABLE FOR ALUMINUM WINDOWS. THIS WILL PROVIDE WEATHER PROTECTION. ACOUSTICAL TILE HUNG CEILINGS PREVENT DUST FROM ACCUMULATING, REQUIRE NO PAINTING, AND PREVENT HEAT LOSS. THEY ALSO PERMIT IMPROVED LIGHTING. TILE OR GLAZED WAINSCOTING IN CORRIDOR HALLS ALSO WILL REDUCE MAINTENANCE COSTS. VINYL WALL COVERINGS ARE INCREASINGLY FINDING NEW APPLICATIONS IN SCHOOL BUILDINGS. THEIR STAIN-RESISTANT QUALITIES MAKE THEM USEFUL ON FOLDING PARTITIONS AND DRY WALLS. ELECTRONIC PROGRAMMING IS BEING USED MORE FREQUENTLY TO PINPOINT POTENTIAL BREAKDOWNS IN THE VARIOUS MECHANICAL SYSTEMS OF A SCHOOL. (RH)

GUIDE FOR THE EVALUATION OF SCHOOL FACILITIES

CALIFORNIA ASSOCIATION PUBLIC SCHOOL BUSINESS OFFICIALS,  
PRESENTED BY THE SOUTHERN SECTION BUILDING COMMITTEE

PUBLISHED-APR66

062 PAGES

DESCRIPTORS- \*FACILITY GUIDELINES, \*ENVIRONMENTAL INFLUENCES,  
\*EVALUATION METHODS, \*PHYSICAL ENVIRONMENT, \*SCHOOL CONSTRUCTION,  
ACOUSTICAL ENVIRONMENT, AUDIOVISUAL AIDS, EQUIPMENT, HEATING,  
MAINTENANCE, SAFETY, SCHOOL BUILDINGS, SCHOOL PLANNING, SPATIAL  
RELATIONSHIP, VISUAL ENVIRONMENT

THE SCHOOL EVALUATION GUIDE IS DESIGNED TO PROVIDE WORKABLE  
CRITERIA FOR APPRAISAL OF THE PHYSICAL CHARACTERISTICS OF  
EXISTING SCHOOL PLANTS. INFORMATION OBTAINED FROM THE GUIDE CAN  
BE USED FOR THE PURPOSE OF SEEKING OUT UNSATISFACTORY BUILDING  
FEATURES AND TO STIMULATE IMPROVEMENTS IN FUTURE SCHOOL  
CONSTRUCTION. WITH THIS EVALUATION PROCEDURE, SCHOOL  
ADMINISTRATORS AND ARCHITECTS CAN DETERMINE DEFICIENT  
CHARACTERISTICS IN A SCHOOL AND THE STEPS TO BE TAKEN IN  
CORRECTING THEM. SECTION PROFILES HAVE BEEN INCLUDED IN THIS  
CRITERIA FOR THE SITE--SPATIAL, VISUAL, THERMAL, SONIC, AESTHETIC,  
AUDIO-VISUAL, EQUIPMENT, SAFETY, AND MAINTENANCE FACTORS. THE  
SECTION PROFILES HAVE BEEN DEVELOPED TO PERMIT A MORE DETAILED  
EVALUATION FOR EACH OF THE FACTORS THAT ARE TREATED UNDER THE  
SAME FORMAT CONTAINING A BRIEF DESCRIPTIVE PARAGRAPH, A SET OF  
QUESTIONS RELATIVE TO SPECIALIZED ASPECTS OF THE FACTOR, AND AN  
EVALUATION PROFILE FORM. THE FINAL SECTION OF THE GUIDE A SERIES  
OF QUESTIONNAIRES TO BE SUBMITTED TO GROUPS OF TEACHERS,  
PRINCIPALS, STUDENTS, AND DISTRICT ADMINISTRATORS. THESE  
QUESTIONNAIRES SUPPLEMENT DATA GATHERED ON SONIC, THERMAL, AND  
VISUAL FACTORS. THIS EVALUATION GUIDE REPRESENTS THE EFFORT OF  
SCHOOL PLANNERS, ADMINISTRATORS, ARCHITECTS, AND ENGINEERS WHO  
HAVE CONTRIBUTED THEIR TIME TO THE CAUSE OF BETTER SCHOOL  
PLANNING. IT IS IN EXPERIMENTAL FORM AND THROUGH PERIODIC USE, A  
FINAL GUIDE WILL BE DEVELOPED. (RK)

CONSTRUCTING SCHOOL BUILDINGS WITH MATERIALS THAT WILL MINIMIZE  
FUTURE MAINTENANCE

BY- ECKERT, A. W.

PUBLISHED-OCT53

IN- PROCEEDINGS, THE ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF  
THE UNITED STATES AND CANADA, OCT. 53

004 PAGES

DESCRIPTORS- \*BUILDING MATERIALS, \*CONSTRUCTION COSTS,  
\*ECONOMICS, \*MAINTENANCE, \*SCHOOL BUILDINGS, FLOORING, GLASS  
WALLS, LIGHTING

MAINTENANCE PROBLEMS ARE DISCUSSED IN TERMS OF SCHOOL  
BUILDING CONSTRUCTION AND ECONOMICS. BUILDING MATERIALS AND  
INHERENT PROBLEMS EXPANDED ON ARE--(1) FLOORS, (2) WALLS, (3)  
ROOF OVERHANG, (4) DOORS, (5) WINDOWS, (6) LIGHT FIXTURES, AND  
(7) MECHANICAL SYSTEMS. QUALIFIED CUSTODIAL PERSONNEL IS THE KEY  
TO KEEPING A SCHOOL PLANT OPERATING SMOOTHLY. (RK)

EXCELLENCE AND ECONOMY (A REPORT ON THE BENEFITS OF CARPETING IN THREE PUBLIC SCHOOLS)

AMERICAN CARPET INSTITUTE INC., NEW YORK, N. Y.

PUBLISHED- 65

038 PAGES

DESCRIPTORS- \*ACOUSTICS, \*CARPET, \*SCHOOL DESIGN, DISCIPLINE, MAINTENANCE, NOISE, SOUND

ADVANTAGES OF CARPETING FOUND IN THREE PUBLIC SCHOOLS ARE PORTRAYED IN THIS REPORT. SHAKER HIGH SCHOOL IN UPSTATE NEW YORK WAS SELECTED AS ONE OF THE TEN OUTSTANDING SCHOOLS BY THE NATION'S SCHOOLS MAGAZINE IN 1958. ONE WING IS CARPETED AND ONE IS TILED. THE PRINCIPAL REPORTS THAT NOISE IS REDUCED IN THE CARPETED WING, DISCIPLINE IS BETTER, MAINTENANCE IS ABOUT HALF, AND THE FACULTY EXPERIENCES LESS FATIGUE. PETER PAN SCHOOL IN ANDREWS, TEXAS, HAS ALSO PROVED TO SUPPORT THESE CLAIMS. IN ADDITION, SAFETY IS INCREASED. COST COMPARISONS REVEAL COSTLIER INSTALLATIONS WITH CARPETING BUT NET OVERALL SAVINGS FOR A THREE YEAR PERIOD. ANDREWS HIGH SCHOOL OFFICIALS FOUND THAT CARPETING HAS REDUCED THE NEED FOR ACOUSTICAL MATERIALS ON THE CEILING. THE OPEN PLAN USED IN CLASSROOM DESIGN IS POSSIBLE BECAUSE OF THE ACOUSTICAL QUALITIES OF THE CARPETING. PEOPLE DESIRING MORE INFORMATION ON CARPETING CAN CONTACT THE AMERICAN CARPET INSTITUTE, 350 FIFTH AVENUE, NEW YORK, N.Y.

## CUTTING COSTS WITH CARPET

AMERICAN CARPET INSTITUTE, NEW YORK, N. Y.

PUBLISHED- 63

022 PAGES

DESCRIPTORS- \*CARPET, \*MAINTENANCE, \*SCHOOL MAINTENANCE,  
CONSTRUCTION COSTS, COSTS

AN ANALYSIS OF INSTALLATION AND MAINTENANCE COSTS OF CARPET, TILE, AND TERRAZZO IN A WIDE VARIETY OF COMMERCIAL INSTALLATIONS IS PRESENTED. OVER 400,000 SQUARE FEET OF CARPETED FLOORS WERE EXAMINED AND EVALUATED AS WELL AS OVER 1,000,000 SQUARE FEET OF VARIOUS KINDS OF NON-CARPETED FLOORS. THIS STUDY GIVES PROSPECTIVE COMMERCIAL FLOOR COVERING BUYERS COMPLETE AND OBJECTIVE COMPARATIVE 'USE COST' DATA. 'USE COST' IS DETERMINED BY THREE IMPORTANT POINTS OF EVALUATION WHICH ARE COVERED IN THIS BOOKLET THROUGH THE USE OF CHARTS. AMORTIZED INSTALLATION COSTS OF CARPET ARE ON THE AVERAGE HIGHER THAN ON NON-CARPETED FLOORS. MAINTENANCE COSTS, HOWEVER, ARE MUCH LOWER ON CARPETED FLOORS. TOTAL 'USE COSTS' VARY FROM 40.8 PER CENT TO 47.6 PER CENT LESS THAN FOR NON-CARPETED FLOORS. A TWENTY YEAR COST PICTURE OF CARPET VERSUS VINYL ASBESTOS TILE SHOWS A SAVINGS OF \$2,769.60 IN 1,000 SQUARE FEET. A DAILY RATE OF 9.3 MINUTES OF MAINTENANCE MANPOWER PER THOUSAND FEET FOR CARPETING COMPARES FAVORABLY TO 30.4 MINUTES FOR VINYL ASBESTOS TILE, 28.1 MINUTES FOR VINYL, 34.4 MINUTES FOR ASPHALT, AND 27.0 MINUTES FOR TERRAZZO.

MIRACLES IN MAINTENANCE

BY- THEODORES, JAMES L.  
AMERICAN SCHOOL AND UNIVERSITY, NEW YORK, N. Y.

PUBLISHED-MAY65  
IN- AMERICAN SCHOOL AND UNIVERSITY, MAY 65, PP. 84-88

005 PAGES

DESCRIPTORS- \*EQUIPMENT, \*EQUIPMENT UTILIZATION, \*MAINTENANCE,  
SCHOOL MAINTENANCE

THIS REPORT REVIEWS RECENT DEVELOPMENTS IN BUILDING MAINTENANCE EQUIPMENT. THE EQUIPMENT REVIEWED IN THE REPORT CONSISTS OF, FLOOR SCRUBBING AND POLISHING MACHINES, HIGH RISE FOLDING SCAFFOLDS, HIGH REACH WINDOW WASHERS, LEAF SOAP DISPENSERS, FOLD UP CUSTODIAL CARTS, PORTABLE PACK TYPE VACUUM CLEANERS, POLE TYPE BULB CHANGERS, AIRLESS SPRAY UNITS, PIPE PAINTING GLOVES, VACUUM SWEEPERS, AND POLYETHELENE OR PAPER TRASH BARREL LINERS. THE REPORT EMPHASIZES THE NECESSITY OF TRAINING THE MAINTENANCE MAN WITH HIS EQUIPMENT. THROUGH TRAINING AND TECHNOLOGY MAINTENANCE TIME AND COSTS ARE REDUCED.



PREVENTIVE MAINTENCE

AMERICAN SCHOOL BOARD JOURNAL, MILWAUKEE, WISCONSIN

PUBLISHED-MAY66

IN- AMERICAN SCHOOL BOARD JOURNAL, MAY 66, PP. 40-42, 47

006 PAGES

DESCRIPTORS- \*EQUIPMENT MAINTENANCE, \*SCHOOL MAINTENANCE,  
ADMINISTRATION, EQUIPMENT, INSPECTION, MAINTENANCE, REPAIR

A PREVENTIVE MAINTENANCE PROGRAM IS DEFINED AS ONE IN WHICH THE WEAR AND CHANGES A SYSTEM WILL UNDERGO DURING OPERATION ARE ANTICIPATED AND CONTINUOUS CORRECTIVE ACTION IS TAKEN TO MINIMIZE DETERIORATION. PERIODIC INSPECTION AND REPLACEMENT OF COMPONENTS ARE REQUIRED. BENEFITS OF SUCH A PROGRAM ARE--GREATER SYSTEM RELIABILITY, LESS LARGE SCALE REPAIRS, EXTENDED EQUIPMENT LIFE, LESS STANDBY EQUIPMENT REQUIRED, CONTROL OF SPARE PARTS, GREATER OPERATING EFFICIENCY, DATA AVAILABILITY, AND CONTROLLED MAINTENANCE WORK LOAD. SCHOOL ADMINISTRATORS SHOULD BE GIVEN REPORTS ON THE PROGRAM SO PROPER POLICIES WILL BE FORMULATED. LOCAL CONSIDERATIONS WILL TAKE INTO ACCOUNT THE SYSTEMS IN USE, HOUSEKEEPING PROCEDURES, FREQUENCY OF INSPECTION, MANHOUR REQUIREMENTS, SKILLS REQUIRED, AND WORK SCHEDULES. ADMINISTRATORS ARE APPRAISED OF THE NEED FOR CAREFUL CONSIDERATION OF TOTAL EQUIPMENT COSTS AT THE TIME OF INSTALLATION.

MINIMUM MAINTENANCE PLANNING FOR SCHOOL GROUNDS

BY- BRUNING, WALTER F.  
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS, CHICAGO, ILLINOIS

PUBLISHED-NOV63  
IN- PROCEEDINGS, ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE  
UNITED STATES AND CANADA, 49TH ANNUAL MEETING AND EDUCATIONAL  
EXHIBIT, DENVER, COLORADO, NOVEMBER 3-8, 1963

012 PAGES

DESCRIPTORS- \*MAINTENANCE, \*SCHOOL MAINTENANCE, \*SCHOOL SITE,  
\*SITE DEVELOPMENT, \*TURF MANAGEMENT, MANAGEMENT, PLANNING, SCHOOL  
ADMINISTRATION, SCHOOL LOCATION

MAINTENANCE EFFICIENCY IN THE PUBLIC SCHOOLS INVOLVES TIME,  
SAVINGS, AND MONEY. WHEN APPLIED TO SCHOOL SITES, SUCH AREAS AS  
PARKING LOTS, LOADING ZONES, ATHLETIC FIELDS, ROADS, WALLS, AND  
OUTDOOR CLASSROOMS BECOME INVOLVED. PRINCIPLES OF EFFICIENCY  
BECOME OPERATIVE IN THE SITE SELECTION PROCESS WHEN  
CONSIDERATIONS ARE GIVEN TO ACCESSIBILITY, SIZE, TOPOGRAPHY,  
EXPOSURE, AND SOIL CONDITIONS. SIMILAR PRINCIPLES CAN BE APPLIED  
TO PLANNING WHEN CONSIDERATIONS MUST TAKE INTO ACCOUNT SCHOOL  
BUILDINGS, ROADS, SERVICE AND PARKING AREAS, PLAY AREAS,  
PEDESTRIAN WALKS, AND BUS LOADING AREAS. SURFACE MATERIALS ON THE  
SCHOOL SITE SHOULD BE CHOSEN ON THE BASIS OF MINIMUM MAINTENANCE.  
PAVING, CURBING, AND SIDEWALK MATERIALS, RETAINING WALLS, STEPS  
AND HANDRAILS, FENCE MATERIALS, EXTERIOR LIGHTING, PLAY AREAS,  
AND ATHLETIC AREAS HAVE DIFFERING NEEDS WHICH DEMAND INDIVIDUAL  
REQUIREMENTS. LAWN CARE CAN BE MINIMIZED THROUGH PROPER SOIL  
PREPARATION, GRASS SELECTION, MOWING, FERTILIZING, AND WEED  
CONTROL. PROPER MAINTENANCE EQUIPMENT SELECTION CAN MAKE WORK  
EFFICIENT WHEN DEMANDS OF EACH SITUATION ARE CONSIDERED  
INDIVIDUALLY. CAREFUL ADMINISTRATION OF SUCH A PROGRAM WILL  
INSURE PROPER UTILIZATION OF MANPOWER.

JUSTIFICATION OF BETTER BUILDING MATERIALS

BY- SWISHER, WILLIAM M.  
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

014 PAGES

DESCRIPTORS- \*BUILDING MATERIALS, \*ECONOMICS, \*MAINTENANCE,

DISCUSSES THE USE AND SPECIFICATION OF NEW MATERIALS IN VIEW  
OF INITIAL COSTS AND LATER MAINTENANCE COSTS. (RK)

PROCEEDINGS, THE ASSOCIATION OF COLLEGE AND UNIVERSITY HOUSING OFFICERS

THE ASSOCIATION OF COLLEGE AND UNIVERSITY HOUSING OFFICIALS

PUBLISHED-NOV63

IN- 15TH ANNUAL CONFERENCE, LOS ANGELES, CALIFORNIA, AUGUST 1963

384 PAGES

DESCRIPTORS- \*HIGHER EDUCATION, \*COLLEGE HOUSING, \*DORMITORIES, \*STUDENT NEEDS, \*FACILITY GUIDELINES, FEDERAL-STATE AID, FINANCIAL SUPPORT, FOOD SERVICE, MAINTENANCE, HOUSING NEEDS

ADDRESSES TO THE GENERAL SESSIONS DELIVERED AT THE CONFERENCE IN LOS ANGELES WERE IN THE AREAS OF STUDENT HOUSING IN HIGHER EDUCATION, THE HOUSING AND HOME FINANCE AGENCY'S RELATIONSHIP TO EDUCATION AND THE STUDENT. SPECIAL SESSIONS COVERED, (1) MANAGEMENT AND OPERATION - FEDERAL HOUSING AND HOME FINANCE, MANAGEMENT STIMULATION EXERCISE, STAFF LEADERSHIP DEVELOPMENT, STUDENT LEADERSHIP APPLICATION, STUDENT HOUSING IN OTHER LANDS, TRAINING PERSONNEL IN INDUSTRY, COMMUNICATIONS, HIGH-RISE BUILDINGS AND COMMISSARIES, DATA PROCESSING FOR RESIDENCE HALLS, TRIMESTER IMPLICATIONS FOR COLLEGE HOUSING, SUMMER CONFERENCES, SELECTION AND CARE OF FURNISHINGS, HOUSEKEEPING MAINTENANCE TECHNIQUES AND MATERIALS, VENDING, CIVIL DEFENSE AND AUDIO-VISUAL TRAINING SESSIONS, (2) STUDENT AFFAIRS--RESIDENCE HALLS PROGRAMS, COUNSELING IN RESIDENCE HALLS, STUDENT GOVERNMENT, CAMPUS DISCIPLINE, CO-ED HOUSING, (3) APARTMENT HOUSING--MARRIED STUDENTS, CONSTRUCTION AND OPERATION OF MARRIED STUDENT HOUSING, GROUP LIVING, AND SINGLE APARTMENTS, (4) OFF-CAMPUS HOUSING--OVERVIEW AND FUTURE OF OFF-CAMPUS AND SORORITY HOUSING, (5) FOOD SERVICE--ECONOMIES IN FOOD SERVICE, SUMMER CONFERENCE FEEDING, STUDENT RELATIONSHIPS, (HH)

CREATIVE PLANNING OF PARKS AND PLAY AREAS FOR LEARNING, LIVING,  
AND LEISURE

BY- SCHNEIDER, RAYMOND C. AND BOYCE, R. DUDLEY AND PETERSON, TED  
T.  
STANFORD UNIVERSITY, CALIFORNIA, SCHOOL PLANNING LABORATORY

PUBLISHED-DEC57

C75 PAGES

DESCRIPTORS- \*MAINTENANCE, \*PLANNING, \*RECREATIONAL ACTIVITIES,  
\*RECREATIONAL FACILITIES, \*RECREATIONAL PROGRAMS, COOPERATIVE  
PLANNING

THIS DOCUMENT IS A COLLECTION OF REPORTS ON DEVELOPING PARKS  
AND PLAY AREAS. UNDER THE GENERAL HEADING OF COOPERATIVE PLANNING  
FOR CREATIVE LEARNING, LIVING AND LEISURE ARE REPORTS ON SCHOOL  
AND COMMUNITY FACILITIES, TEAMWORK, MASTER PLANNING, RECREATION  
AND PARK DEVELOPMENTS FOR URBAN AREAS, MIDDLE-RIGID CITY  
RECREATIONAL PLANNING AND RURAL COMMUNITY COORDINATION OF LEISURE  
TIME AND RECREATION. THE SECOND MAJOR DIVISION OF THE DOCUMENT IS  
DESIGN FOR LEARNING, LIVING AND LEISURE. IN THIS AREA ARE  
REPORTS ON DESIGN FOR USE OF LEISURE TIME, IMAGINATIVE PLAY  
EXPERIENCE, AND ACCIDENT PREVENTION AND MAINTENANCE. BALANCING  
QUALITY AND ECONOMY IN SCHOOLHOUSE PLANNING IN THE FINAL MAJOR  
AREA INCLUDED IN THE STUDY. THIS SECTION CONTAINS REPORTS ON THE  
SELECTION OF RESILIENT FLOOR MATERIALS, TILE AND ITS USES, YEAR  
ROUND AIR CONDITIONING AND A MASTER PLAN FOR CLARK COUNTY, NEVADA  
SCHOOLS.

THE RELATIONSHIP OF INITIAL COST AND MAINTENANCE COST IN  
ELEMENTARY SCHOOL BUILDINGS

BY- ZIMMERMAN, WILLIAM J.  
EDUCATIONAL FACILITIES LABORATORIES, INC., STANFORD, CALIFORNIA,  
WESTERN REGIONAL CENTER

PUBLISHED-JUL 60  
IN- REPORT NUMBER 1

18 PAGES

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

THIS REPORT IS A STATISTICAL ANALYSIS OF THE RELATIONSHIP BETWEEN INITIAL SCHOOL CONSTRUCTION COSTS AND FUTURE MAINTENANCE COSTS. WHILE THE STUDY IS RESTRICTED TO THE LOS ANGELES CITY SCHOOL DISTRICT, THE RESULTS ARE TO SOME EXTENT GENERALIZABLE. THE STUDY SHOWS AN INVERSE RELATIONSHIP IN THESE COSTS--WHERE INITIAL CONSTRUCTION COSTS ARE LOW MAINTENANCE COSTS TEND TO BE HIGH. FACTORS RELATED TO INITIAL COST ARE--WALL CONSTRUCTION IN OFFICES AND CLASSROOMS, THE NUMBER OF BIDDERS FOR EACH BUILDING AND ADDITION, THE YEAR OF THE BID, SITE TOPOGRAPHY, AND TOTAL NUMBER OF SQUARE FEET OF PERMANENT CONSTRUCTION IN A SINGLE BID. THESE FACTORS TEND TO REDUCE THE DIFFERENCE BETWEEN THE TWO COSTS AND COUNTERACT THE EFFECT ON FUTURE MAINTENANCE COST RESULTING FROM MATERIAL USED IN CONSTRUCTION. TWO RELATIONSHIPS BETWEEN THESE COSTS ARE SHOWN--THE LARGER THE PROPORTION OF CLASSROOMS IN A BUILDING THE LOWER THE INITIAL AND MAINTENANCE COSTS, THE LARGER THE PROPORTION OF THE SCHOOL BUILDING DEVOTED TO GROUP ACTIVITY, THE HIGHER THE INITIAL COST BUT THE LOWER THE MAINTENANCE COST. METHODOLOGY FOR THE STUDY, CHARTS AND RECOMMENDATIONS ARE INCLUDED IN THE REPORT. THIS DOCUMENT IS AVAILABLE FROM THE WESTERN REGIONAL CENTER, EDUCATIONAL FACILITIES LABORATORIES, INC., SCHOOL OF EDUCATION, STANFORD UNIVERSITY, STANFORD, CALIFORNIA. (GM)

A GUIDE FOR STUDY OF THE ELEMENTARY SCHOOL (ELEMENTARY SCHOOL FACILITIES)

ARKANSAS ELEMENTARY SCHOOL COUNCIL, LITTLE ROCK

PUBLISHED- 63

018 PAGES

DESCRIPTORS- \*EDUCATIONAL FACILITIES, \*ELEMENTARY SCHOOLS, \*FACULTY EVALUATION, \*SELF EVALUATION, CLASSROOMS, CLASSROOM ENVIRONMENT, EQUIPMENT MAINTENANCE, EVALUATION, HEATING, ILLUMINATION, LIGHTING, MAINTENANCE, SCHOOL MAINTENANCE, SCHOOL SITE, VENTILATION, TEACHER EVALUATION

THIS IS A SELF-EVALUATION GUIDE FOR ELEMENTARY SCHOOL FACILITIES. FOUR SECTIONS TO BE EVALUATED ARE SCHOOL SITE, BUILDINGS AND EQUIPMENT, HEATING, VENTILATION, AND LIGHTING, AND MAINTENANCE AND CUSTODIAL SERVICES. A FOUR POINT RATING SCALE IS USED. AT THE BEGINNING OF EACH TOPIC IS A STATEMENT OF GUIDING PRINCIPLES WHICH SETS FORTH THE PHILOSOPHY, AIMS, AND OBJECTIVES. THE STATEMENTS ARE INTENDED TO INDICATE DESIRABLE SCHOOL ENVIRONMENT. THE GUIDE IS SUGGESTED FOR FACULTY USE.

RESEARCH STUDY IN THE COST OF HOUSING

NEW YORK STATE DIVISION OF HOUSING AND COMMUNITY RENEWAL, ALBANY

PUBLISHED-OCT62

IN- VOL. III

34 PAGES

DESCRIPTORS- \*BUILDING MATERIALS, \*CONSTRUCTION COSTS,  
\*ENVIRONMENTAL RESEARCH, \*FACILITY CASE STUDIES, \*HOUSING,  
MAINTENANCE, STRUCTURAL SYSTEMS

RESULTS OF A STUDY BASED ON EXPERIMENTS CONDUCTED IN MULTISTORY FIREPROOF STRUCTURES OF PUBLIC HOUSING PROJECTS AND IN A MOCK-UP SIMULATING ALL CONDITIONS OF A FIREPROOF STRUCTURE. THE FINDINGS ARE BASED ON TESTS CONDUCTED DURING SEVERAL WINTER SEASONS, NONE OF WHICH DEVIATED MARKEDLY FROM A NORM IN NEW YORK CITY. RESULTS ARE--(1) A STRUCTURE WITH CONVENTIONAL CAVITY WALLS WITH SINGLE GLAZED SASH REQUIRES 2.3 TIMES AS MUCH ENERGY TO HEAT AS A STRUCTURE WITH POLYSTYRENE INSULATED CAVITY WALLS AND DOUBLE GLAZED SASH WITH THERMO-BARRIER FRAMES, (2) SAVINGS IN THE INITIAL CONSTRUCTION ARE ESTIMATED AT \$10,150.00, AND (3) THE SAVINGS IN THE COST OF MAINTENANCE ARE INDICATED AT \$15,531.00 PER ANNUM. INCLUDED IS A HISTORY OF THE EXPERIMENT ALONG WITH DRAWINGS AND CHARTS. (RK)



ERIC/CEF DOCUMENT NO. EFOC0974

DISPOSITION-EDC- 2

SCHOOL LIGHTING GUIDE (WITH TIPS ON ECONOMICAL MAINTENANCE)

WAKEFIELD W LIGHTING, VERMILION, OHIO

REPORT/SERIES NO.- AIA-FILE-NO. 31F2

016 PAGES

DESCRIPTORS- \*ECONOMICS, \*EQUIPMENT MAINTENANCE, \*ILLUMINATION LEVELS, \*LIGHTING, \*SCHOOL ENVIRONMENT

DISCUSSES ADEQUATE LEVELS OF ILLUMINATION, QUALITY OF LIGHTING, BRIGHTNESS RATIOS, REFLECTANCE VALUES OF ROOM SURFACES, GLARE, DIRECT GLARE, AND REFLECTED GLARE. TIPS ON ECONOMICAL LIGHTING MAINTENANCE INCLUDES THE FOLLOWING--(1) CLEANING, (2) WASHING LUMINAIRES, (3) WASHING LAMPS, AND (4) CLEANING AND WASHING INCANDESCENT LUMINAIRES. (RK)

ERIC/CEF DOCUMENT NO. EF000993 ED 015 633 DISPOSITION-CERS 1

SCHOOL PLANT MANAGEMENT FOR SCHOOL ADMINISTRATORS

BY- ENGMAN, JOHN DAVID  
GULF SCHOOL RESEARCH DEVELOPMENT ASSOCIATION, HOUSTON, TEXAS

PUBLISHED- 62

235 PAGES

DESCRIPTORS- \*FACILITY UTILIZATION RESEARCH, \*HEALTH FACILITIES,  
\*MAINTENANCE, \*PLANNING, \*SCHOOL ADMINISTRATION, ELEMENTARY  
SCHOOLS, HIGH SCHOOLS, SCHOOL MAINTENANCE

THIS REPORT IS A COMPILATION OF STUDIES ON SIGNIFICANT ASPECTS IN SCHOOL PLANNING AND OPERATION. A RELATIONSHIP IS SHOWN BETWEEN CURRICULUM, PERSONNEL AND AUXILIARY SERVICES IN EDUCATIONAL PROGRAM OPERATIONS. THE REPORT INCLUDES PLANNING, MANAGEMENT AND OPERATION OF SUCH AREAS AS--NONINSTRUCTIONAL PERSONNEL POLICIES, CUSTODIAL SERVICES, OPERATIONAL AND PREVENTIVE MAINTENANCE, AESTHETICS AND THE SCHOOL PLANT, PLANT UTILIZATION, COMMUNITY RELATIONS, PLANT SAFETY AND HYGIENE, SCHOOL MODERNIZATION, THE SCHOOL BUSINESS OFFICE, AND THE EVALUATION OF PLANT MANAGEMENT PROCEDURES. RECORD, ORDER AND EVALUATION FORMS AS WELL AS BIBLIOGRAPHIES ARE INCLUDED FOR A NUMBER OF THE STUDIES. THIS DOCUMENT IS ALSO AVAILABLE FROM THE GULF SCHOOL RESEARCH DEVELOPMENT ASSOCIATION, 3801 CULLEN BOULEVARD, HOUSTON 4, TEXAS, FOR \$2.50. (GM)

SCHOOL ENVIRONMENT (GUIDE, LAW AND REGULATIONS)

MONTANA STATE BOARD OF HEALTH, HELENA

PUBLISHED- 63

033 PAGES

DESCRIPTORS- \*ENVIRONMENTAL CRITERIA, \*GUIDELINES, \*LAWS, \*SCHOOL BUILDINGS, \*SCHOOL ENVIRONMENT, EQUIPMENT, HEATING, LIGHTING, MAINTENANCE, SANITARY FACILITIES, SCHOOL SITE, VENTILATION

THIS REPORT CONSISTS OF THREE PARTS--(1) GUIDE, (2) LAWS, AND (3) REGULATIONS FOR PROVIDING A HEALTHFUL SCHOOL ENVIRONMENT IN MONTANA. INFORMATION INCLUDED WILL ASSIST IN THE PROPER DESIGN AND CONSTRUCTION OF NEW AND REMODELED SCHOOL BUILDINGS AND IN THE OPERATION AND MAINTENANCE OF A HEALTHFUL ENVIRONMENT FOR SCHOOL CHILDREN AND PERSONNEL. PART ONE DESCRIBES WHAT IS DESIRABLE AND THE REASONS FOR CERTAIN FEATURES IN THE SCHOOL ENVIRONMENT. IT DEALS WITH THE SANITARY MAINTENANCE OF SCHOOLS. TOPICS DISCUSSED ARE--(1) SITE AND GROUNDS, (2) SCHOOL BUILDINGS, (3) HEATING AND VENTILATION, (4) LIGHTING, (5) WATER SUPPLY AND DISPENSING, AND (6) TOILETS, PLUMBING, AND WASTE DISPOSAL. PART TWO DISCUSSES THE MONTANA STATE LAWS IN TERMS OF--(1) SELECTION, (2) REQUIREMENTS OF ARCHITECTURE APPROVAL BY STATE BOARD OF HEALTH, (3) FLOOR SPACE-AIR-LIGHT-REGULATION BY BOARD OF HEALTH, (4) PENALTIES, (5) SUGGESTIVE PLANS, (6) VESTIBULES, (7) CARE OF SCHOOL HOUSES, AND (8) WATER SUPPLIES AND TOILET ACCOMMODATIONS. PART THREE CONCERNS ITSELF WITH REGULATION AND DISCUSSES--(1) GENERAL REQUIREMENTS, (2) SITE AND GROUNDS, (3) SCHOOL BUILDINGS, (4) LIGHTING, (5) HEATING AND VENTILATING, (6) WATER SUPPLY AND DISPENSING, (7) TOILETS, PLUMBING, AND WASTE DISPOSAL, AND (8) EQUIPMENT. ALL SCHOOL BUILDINGS TO BE ERECTED, REPAIRED, OR ENLARGED IN MONTANA MUST CONFORM TO THE REQUIREMENTS CONTAINED IN THIS PART. CHARTS, DIAGRAMS, AND PHOTOGRAPHS ARE INCLUDED. (RK)

ERIC/CEF DOCUMENT NO. EF001108

DISPOSITION-EDC- 1

ASPHALT FOR OFF-STREET PAVING AND PLAY AREAS (3RD EDITION)

ASPHALT INSTITUTE, COLLEGE PARK, MARYLAND

PUBLISHED-MAY65

IN- MANUAL SERIES NO. 9 (MS-9)

039 PAGES

DESCRIPTORS- \*BUILDING MATERIALS, \*CONSTRUCTION (PROCESS),  
\*PARKING AREAS, \*PHYSICAL EDUCATION, \*PLAYGROUNDS, DESIGN NEEDS,  
MAINTENANCE

THIS PAMPHLET DISCUSSES THE ALTERNATIVE METHODS,  
APPLICATIONS, AND TECHNICAL CONSIDERATIONS FOR OFF-STREET PAVING  
AND PLAY AREAS. OFF-STREET PAVING INCLUDES--(1) ASPHALT-PAVED  
PARKING AREAS, (2) ROOF DECK PARKING AREAS, (3) ASPHALT-PAVED  
DRIVEWAYS, (4) ASPHALT-PAVED SERVICE STATION LOTS, AND (5)  
SIDEWALKS. THE DISCUSSION OF PLAY AREAS INCLUDES--(1)  
PLAYGROUNDS, (2) TENNIS COURTS, AND (3) ASPHALT SWIMMING POOLS.  
SUGGESTIONS ARE GIVEN IN EACH AREA FOR SITE PREPARATION,  
DRAINAGE, ASPHALT MIXTURE, THICKNESS, BASE COURSE, AND SURFACE  
TREATMENT. A REFERENCE LIST IS GIVEN OF OTHER ASPHALT SOURCE  
BOOKS. (MM)

PLANNING YOUR PLAYGROUND

J. E. BURKE COMPANY, FUND DU LAC, WISCONSIN

041 PAGES

DESCRIPTORS- \*EQUIPMENT, \*FACILITY GUIDELINES, \* PLANNING,  
\*PLAYGROUNDS, \*RECREATIONAL FACILITIES, HEALTH ACTIVITIES,  
MAINTENANCE

REVIEWS THE VALUE OF PLAYGROUND APPARATUS,FACTORS IN  
SELECTION OF EQUIPMENT, AND CONSIDERATIONS IN PLANNING  
PLAYGROUNDS. ALSO INCLUDED ARE SECTIONS ON TYPES OF PLAY DEVICES,  
CONSTRUCTION OF PLAYGROUND APPARATUS, UNUSUAL PLAYGROUND  
APPARATUS, CARE OF EQUIPMENT, SOURCES OF ACCIDENTS OR DANGERS ON  
PLAYGROUNDS, AND EQUIPMENT SPACE REQUIREMENTS. ASSEMBLY,  
ERECTION, AND FIELD PAINTING SUGGESTIONS ARE ALSO DISCUSSED.  
HEALTHFUL EXERCISES FOR OUTDOOR GYM SETS AND SURFACING PLAY AREAS  
ARE EXPLAINED. SEVERAL PLAYGROUND LAYOUT AND SPECIFICATION  
DIAGRAMS ARE INCLUDED. (RK)

THE CARPETED LIBRARY

BY- GARRETT, JOE B.  
AMERICAN CARPET INSTITUTE, NEW YORK, N. Y.

PUBLISHED-JUN64

007 PAGES

DESCRIPTORS- \*ACOUSTICAL ENVIRONMENT, \*CARPET, \*COSTS,  
\*MAINTENANCE, \*LIBRARIES, CONTROLLED ENVIRONMENT, PHYSICAL  
ENVIRONMENT, SCHOOL ENVIRONMENT, SCHOOL MAINTENANCE

THIS REPORT IS A DISCUSSION OF THE ADVANTAGES OF CARPETED FLOOR COVERINGS FOR LIBRARIES. THE TWO MAIN ADVANTAGES PRESENTED FOR USING CARPETING ARE NOISE CONTROL AND LOW MAINTENANCE COSTS. ACCORDING TO THE REPORT CARPET REDUCES FLOOR INSTIGATED OR IMPACT NOISES WHILE BEING PSYCHOLOGICALLY DIGNIFYING AND CREATING USER RESPECT AND PROPER BEHAVIOR PATTERNS. MAINTENANCE COSTS FOR CARPET ARE LESS THAN FOR OTHER TYPES OF FLOOR COVERINGS BECAUSE OTHER FLOOR COVERINGS GENERALLY REQUIRE EXTENSIVE SURFACE PREPARATION. WHEN ALL ROOM SURFACES ARE CONSIDERED, THE INITIAL COST OF CARPET IS LITTLE IF ANY MORE THAN OTHER FLOOR COVERINGS. CARPETING CAN BE USED QUICKLY AND ECONOMICALLY AS A REPLACEMENT FLOOR COVERING IN OLDER LIBRARIES FOR BOTH AESTHETIC AND UTILITY PURPOSES. (GM)

SCHOOL BUILDING SURVEY FOR WILLCOX, ARIZONA

BY- STOKES, MARSDEN B. AND FUNK, WILLIAM R.  
ARIZONA UNIVERSITY, TUCSON, BUREAU OF EDUCATIONAL RESEARCH AND  
SERVICE

PUBLISHED-AUG67

094 PAGES

DESCRIPTORS- \*DEMOGRAPHY RESEARCH, \*FACILITIES UTILIZATION,  
\*FINANCIAL SUPPORT, \*SCHOOL MAINTENANCE, \*SCHOOL PLANNING,

THIS DOCUMENT REVIEWS THE DETERMINANTS OF SCHOOL BUILDING NEEDS IN THE WILLCOX, ARIZONA SCHOOL DISTRICT. CONSULTANTS FROM THE UNIVERSITY OF ARIZONA WERE RETAINED BY THE DISTRICT TO CONDUCT THE SURVEY. THE STUDY PRESENTS A TEN-YEAR PROJECTION OF PUPIL POPULATION IN THE DISTRICT DETERMINED BY THE SURVIVAL TECHNIQUE USING CITY CENSUS, POSTAL RECEIPTS, AGRICULTURAL EMPLOYMENT, SCHOOL CENSUS, BUILDING PERMITS, AND BIRTH RATES AS INDICATORS OF FUTURE SCHOOL MEMBERSHIP. THE EXISTING SCHOOL BUILDINGS WERE SURVEYED FOR STRENGTHS AND SHORTCOMING ON THE BASIS OF STANDARDS PRESCRIBED BY THE NATIONAL COUNCIL FOR SCHOOLHOUSE CONSTRUCTION. SOME MAJOR SHORTCOMINGS IN THE PRIMARY GRADE BUILDINGS WERE DISCERNED AND A REPLACEMENT SCHEDULE FOR A PORTION OF THE BUILDINGS WAS SUGGESTED IN ADDITION TO IMPROVED MAINTENANCE PROGRAMS IN OTHER PORTIONS OF THE BUILDINGS. THE SAME PROCEDURE WAS FOLLOWED FOR THE JUNIOR AND SENIOR HIGH BUILDINGS. IN VIEW OF THE POTENTIAL DECLINE IN THE PUPIL POPULATION, THERE WAS NO NEED FOR ADDITIONAL CLASSROOM SPACE EXCEPT TO REPLACE SUBSTANDARD FACILITIES PRESENTLY IN EXISTENCE, OR TO BOLSTER THE EXISTING SCHOOL CURRICULUM. THE STUDY REVIEWED THE BONDING CAPACITY OF THE DISTRICT AND DETERMINED THAT THE FINANCIAL ABILITY OF THE DISTRICT WAS MORE THAN SUFFICIENT TO MEET THE COST OF THE PROPOSED BUILDING IMPROVEMENT PROGRAM.