# FCIS

Facilities Condition Index Survey

Survey of Building Conditions in Higher Education

June 2024





**Facilities Condition Index Survey (FCIS)**

**Survey of Building Conditions in Higher Education**

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### Introduction

This book contains a description of the Arkansas Division of Higher Education’s Facilities Condition Index Survey (FCIS), to be used by institutions to document and produce their critical maintenance capital-funding request for the 2025-27 biennium. Users will find in this book instructions for submitting critical maintenance requests and instructions for using the software.

The Arkansas Division of Higher Education (ADHE) and Arkansas Building Authority (ABA) staff developed the Facilities Audit Program. SBS no longer services the schools which leaves ADHE alone to maintain the program. The name of the program is being updated for the future from the Facilities Audit Program to the Facilities Condition Index Survey. FCIS represents a continued development of the facilities audit software.

The program was redesigned in 2008. The new web-based program allows institutions to view, revise, and input data through a secure website. There is no software to install and no data to transfer between ADHE and the institutions. Any computer with an internet browser and Adobe Reader can be used to complete FCIS. Users who are experiencing problems may call ADHE staff for software help. \*The current web-based system has not been functional since 2018. Until the DHE data group is able to update and replace the non-functional system, basic spreadsheets will be requested to be completed in order to compile the needed data.

**Summary of Procedures**

The recommendations of the Arkansas Higher Education Coordinating Board for critical maintenance funding in the 2025-27 biennium will be based on data developed during the following steps:

1. Inspection of each building by the institution's physical plant staff.

2. Entering revised building system data into the FCIS spreadsheet and, where applicable, completing each data element for each building record contained in the institution's building inventory. A record should be added for any building, which is in use but not included in the established building records, or for new construction which is scheduled to be in use *by the end of fiscal year 2026*.

3. Development by the institution of a priority listing of projects and completion of the Maintenance Priorities Report. This report should be printed from the FCIS program and a signed copy sent to ADHE.

4. Identification by ADHE of the most critical maintenance requirements statewide, and formulation of staff recommendations to the AHECB.

**Capital Request Deadline**

Institutional requests for critical maintenance and renovation/construction capital fund requests are due at the Arkansas Division of Higher Education, Institutional Finance, no later than July 3, 2024.Institutions should submit updated **Facilities Condition** reports to support their requests no later than **July 3, 2024**. Forms and instructions for completion of renovation/construction capital requests (other than Critical Maintenance) have been emailed to each institution.

**Capital Funding Priorities for the 2025-27 Biennium**

With an approximate plant replacement value over $5.4 billion, Arkansas higher education must continue to protect and improve its investment in plant facilities, equipment, and library holdings/technology. In particular, public higher education in Arkansas needs to strategically adopt emerging technologies available for instruction, library resources, and communications infrastructure. Furthermore, perpetual investments need to be made in critical maintenance to increase both plant longevity and safety. The Arkansas Higher Education Coordinating Board will request funding from the General Improvement Fund in the 2025-27 biennium within the following capital funding priorities:

* Technology infrastructure improvements including installations or upgrades of local area networks (LANS); campus infrastructure to support increased bandwidth; and instructional technology equipment for classrooms, laboratories, and distance learning delivery systems.
* Critical maintenance projects where “critical” needs are defined as those which must be addressed before the end of 2026 and which, if neglected, could result in substantial damage to the structural integrity of a building, or needs that are related to the imminent failure of building systems such as HVAC, electrical, and plumbing. In addition, critical maintenance projects include those associated with ADA compliance and/or safety needs.
* Improvements in instructional, research, and clinical equipment as well as library holdings/technology.
* Renovation of existing facilities to address changing program needs.
* New construction of facilities when the renovation of an existing building is either not cost effective or is not an option, e.g., new space to address enrollment growth.

Institutional funding requests should be constructed within the context of the above statewide capital funding priorities according to each institution’s capital needs.

The following types of projects will **not** be considered:

* Renovation, repair, or construction of facilities primarily used for auxiliary projects; only the educational and general portion of projects having mixed use will be considered for state funding.
* Projects related to the operation of a student bus or transportation service.
* Parking lots.

Such projects should be funded by institutional revenue bonds, user fees, or from other non-state funds.

**Uses of FCIS data**

FCIS data will support institutional requests for state funding of the critical maintenance needs of their educational and general buildings. FCIS data will also be used as part of the funding models in determining an institutions operating funds need.

Users will enter and update building data, including maintenance needs data. The costs of those maintenance needs are calculated by FCIS in the same way they were calculated in previous versions of FCIS, and except for a seismic adjustment this method is uniform across all institutions. *Critical maintenance* needs, however, must be calculated *manually* and input as a dollar value to permit users to reflect the actual regional costs of the proposed critical maintenance project with their unique building conditions.

Users are also requested to prioritize their critical maintenance needs, indicating which needs are most urgent.

**Critical Maintenance Request**

When designating critical maintenance and the priorities of the various projects, please keep the Coordinating Board’s **definition of critical maintenance** in mind:

Critical maintenance needs are those needs which must be addressed before the end of 2026 and which, if neglected, could result in substantial damage to the structural integrity of the building, or as those needs which are related to the imminent failure of building systems such as HVAC, electrical, plumbing, etc. In addition, critical maintenance projects include those associated with ADA compliance and/or safety needs.

**ADA modifications** are considered to be part of an institution's maintenance needs and are included in FCIS as a building system. ADA cost estimates are calculated automatically if a value for a need is input in the ADA needs area of the program. If no ADA modifications are required, leave the ADA fields blank.

**Infrastructure needs**, such as the repair of utility tunnels, sewer systems, etc., may also be included in your critical needs. *Do not attempt to include infrastructure needs in the FCIS spreadsheet*. The spreadsheet was not designed to include infrastructure items, and attempts to make those items fit into the spreadsheet are not effective.

Requests for infrastructure maintenance should be included with your bound capital construction requests that will be sent under separate instructions by ADHE.

All public institutions of higher education should review and enter any building data to the FCIS spreadsheet. Be sure that **all buildings** are included in the inventory, including both **educational and general** buildings and **auxiliary enterprise** buildings. Each building must be evaluated, and the institution's FCIS data updated. Be sure to include information reflecting maintenance, renovations, and systems replacements achieved since the previous completion of FCIS. The updates to FCIS will generate maintenance needs costs that should be somewhat different from those reported in institutions' previous FCIS submissions, due to changing building conditions and updated construction rates.

**Buildings under construction and planned to be on-line by the end of the second year of the budgeted biennium (June 2027) should be entered into the FCIS spreadsheet**. These buildings will not have any needs associated with them, and building needs data need not be entered. The addition of these new buildings or additional square footage in the FCIS inventory, however, will be the source for determining educational and general square footage funding for the next two years.

**Building Evaluation**

The physical condition of institutions’ facilities is the basis for the Coordinating Board's critical maintenance recommendations, and the current replacement value (CRV) calculated by FCIS supports any funded depreciation recommendation, which may be included in institutional operating budgets. The condition of facilities statewide is described by the FCIS data, and it is extremely important that conditions be documented in a standard manner.

**Institutional Request and Submittal**

Electronic copies must be submitted by **July 3, 2024.**

Institutions' priority requests will be reviewed by staff members of ADHE.

**Users needing help with FCIS should contact Chandra Robinson – via phone at (501) 371-2024 or email at** **Chandra.Robinson@adhe.edu****.**

  **FCIS: Facilities Condition Index Survey Overview**

The objective of the Facilities Condition Index Survey (FCIS) is to document the evaluation of building conditions on each campus and to provide support for institutions' requests for maintenance funding for educational and general facilities. FCIS's primary purpose documents the building evaluation process as support for institutions' **critical maintenance requests and any funded depreciation recommendation in operating budgets**.

FCIS is based on a model of facilities management proposed by APPA: The Association of Higher Education Facilities Officers. The facilities audit process includes institutional examination and documentation of buildings' and systems' conditions and ages, and the entering of revised building information into the FCIS spreadsheet.

FCIS is a Web-based program which leads building evaluators through a series of screens for input of information that will generate the current replacement value of each building and calculate cost estimates of maintenance needs based on the expended useful life of component systems. **Instructions for using the FCIS software are included beginning on page 7 of this manual.**

FCIS calculates maintenance needs cost estimates by building system through reference to various supporting look‑up tables which are part of the spreadsheet. The data contained in these tables or schedules were developed from Means cost data and SBS experience with construction and material costs in Arkansas. A building's total maintenance needs cost is based on the expended useful life for each system and subsystem in the structure.

FCIS automatically calculates maintenance needs, but **critical needs** must be **calculated manually** and a **cost value entered for every system determined to be in critical need** of replacement or repair. All critical needs are deleted before the data is released to institutions for the new biennial survey.

**Building Description**

FCIS calculates several numerical values, which are essential to the description of each building. These include the current replacement value (CRV), the maintenance need, the critical maintenance need, and the Facility Condition Index (FCI).

The **current replacement value (CRV)** estimates the cost of building a comparable, but modern, structure at present day construction costs (design and engineering fees are not included in this estimate). The CRV is calculated by estimating the cost per *gross* square foot by building function.

**NOTE:** Multiple building functions are recognized in the calculation of the CRV. The predominant building function determines the component multipliers used to calculate maintenance needs.

The total **maintenance need** is another value used to describe buildings. This is an estimate of "scheduled" maintenance needs and is calculated for each building system by the "expended useful life" method which takes into account the aging of systems in relation to their expected useful lives.

When entering information into the spreadsheet, the evaluator is given the opportunity to indicate **critical maintenance needs** associated with each system. ("Critical" need is defined on page 3.) The critical need must be manually calculated after the "maintenance need" and the result is entered to the spreadsheet. The critical need may be a value, which is the same, more, or less than the maintenance need. Critical need cost estimates may be calculated by the "expended useful life method" (Method #1) or by one or a combination of three other methods described in Appendix A.

Total maintenance needs costs (excluding the critical maintenance cost) contribute to the calculation of a **Facility Condition Index (FCI)**, which describes the condition of each building as a ratio of maintenance needs to the total current replacement value of the building. This index is a way to describe the extent to which the useful life of a building's systems has been depleted relative to the building's current replacement value.

**APPENDIX A**

**Methods of Calculation and Example Calculations**

**Methods of Calculation:**

**Building Descriptors and Maintenance Needs Costs**

FCIS performs all calculations necessary to estimate maintenance needs and to calculate the Current Replacement Value (CRV) and the Facility Condition Index (FCI). All critical maintenance needs, however, must be manually calculated and the results entered to the spreadsheet.

**Current Replacement Value**

FCIS calculates the Current Replacement Value (CRV) when building data, including items such as name, age, gross square footage, type of construction, and building function, have been entered. The CRV estimates new construction costs for a substantially similar, but modern building. The gross square footage by function is multiplied by the value per square foot assigned for that function as described in Appendix B. For instance if a building contains 5,000 square feet of classroom space, multiply 5,000 by $180 (the per square foot average cost of classroom space) for a CRV of $900,000. If 4,000 square feet in that building are devoted to classrooms and 1,000 are laboratory space, multiply 4,000 by $180 per square foot and multiply 1,000 square feet by $210. Sum the results of these two calculations to obtain the CRV of $930,000. The CRV is used in every estimate of the maintenance needs of a building system.

**Maintenance Needs and Critical Maintenance Needs**

*Scheduled maintenance needs are calculated by Method 1, the expended useful life calculation* (except for asbestos abatement and ADA accessibility modifications). If a maintenance need is considered to be critical according to the criteria defined on page 4, the evaluator may calculate the critical need cost *using any one or a combination of Methods 1 through 4* described below. The resulting estimate of the cost of the critical repair is then entered into FCIS.

METHOD ONE: Expended Useful Life

After inspection, and using available records, determine the age of each system in the building and enter this value at the appropriate prompt. The computer will calculate the maintenance need by referencing Appendices C and D and applying the formula used in the following example:

**Example:** Calculate the cost of repair or replacement of the HVAC system in a classroom building

Where:

1) System Age equals ten (10) years (as determined by the inspection records).

1. System's Useful Life equals twenty (20) and thirty (30) years (from Table 3, Useful Life of Building Systems, Appendix D).

3) Component Multiplier (determined by the predominant building function) equals 0.0200 for thirty‑year components and 0.1794 for twenty-year components (from Table 2, Percent Value of Building Systems, and Appendix C).

4) Current Replacement Value equals $900,000 (as calculated in the previous section).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| System Age |  | Useful Life |  | Component Multiplier |  | Current Replacement Value |  | Maintenance Need for System |
| 10 | / | 30 | X | 0.0200 | X | $900,000 | = | $5,940 |
| 10 | / | 20 | X | 0.1794 | X | $900,000 | = | $80,730 |
|  |  |  |  |  |  |  |  | $86,670 |

The HVAC maintenance cost equals $86,670.

METHOD TWO: Percent Deficiency

This is an optional method of manual calculation for use *when the maintenance need is critical* as

defined on page 4, and the system's condition shows wear exceeding the value that would be assigned using Method 1, the expended useful life method. The evaluator must establish a percent of deficiency value for the affected system, using his or her own best judgment regarding how much of the system's useful life has been expended. Using this formula and Appendix C, the System Deficiency Cost may be calculated as follows:

**Example:** Calculate the maintenance need of the interior wall finishes in the classroom building.

Where:

1) System Deficiency Rating equals fifty-five percent (55%) of expected useful life as judged by the evaluator.

2) Component Multiplier (as determined by the predominant function of the building) for interior wall finishes for the predominant building function equals 0.0227 (from Table 2, Appendix C).

3) Building Current Replacement Value equals $900,000.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| System Deficiency Rating |  | Component Multiplier |  | Current Replacement Value |  | Maintenance Need for System |
| 0.55 | X | 0.0227 | X | $900,000 | = | $11,237 |

The interior wall finish maintenance cost equals $11,237.

METHOD THREE: Materials and Labor

This is an optional method of manual calculation for use *when the maintenance need is critical* and the cost of labor and materials can be established using the Means cost data such as *Means Repair and Remodeling Cost Data, Means Square Foot Cost, Means Facilities Cost Data*, and/or *Means Building Construction Cost Data*. This estimate is calculated as follows:

**Example:** Calculate the total cost for replacing lighting units.

Where:

1) The estimated labor cost for each fixture is $142.

2) The cost per fixture is $82.63.

3) 100 fixtures need replacing.

($142 + $82.63) X 100 fixtures = $22,463

The System Deficiency Cost is $22,463.

METHOD FOUR: Other Sources

This is an optional method of manual calculation for use *when the maintenance need is critical* and maintenance need costs are based on an authoritative source other than those listed in Method 3. Contractors, architects or engineers, published books accepted by the construction industry, or estimates provided by Arkansas State Building Services are generally acceptable. The estimate may be documented by this method and described as follows:

A contractor's estimate for exterior doors eight pairs (installed) ‑‑ totaled $15,312 and the System Deficiency Cost is $15,312.

**Facility Condition Index**

The Facility Condition Index (FCI) is automatically calculated after revised data has been entered for all building systems. The calculation divides the total maintenance need by the building's Current Replacement Value (CRV). The calculation is carried out to 5 decimal places and truncated at 4. (The value of critical maintenance needs is not included in this calculation.)

Facility Condition Index (FCI) =

 Total Maintenance Needs

 Building Current Replacement Value (CRV)

**List of Tables**

Appendices B through F contain copies of the look‑up tables used by FCIS to complete various calculations and Appendix G presents sample reports. Examples of the calculation of maintenance needs for various systems begin on the following page. The schedules used in the calculations are as follows:

**Appendix B ‑ Building Current Replacement Value:**

Establishes a Current Replacement Value (CRV) for each building by building function(s). In multi‑use buildings, cost per square foot is prorated by each function. For example, in a building containing classrooms and an auditorium, estimate the square footage of each usage and apply the appropriate per square foot value in Appendix B for each function to determine the total CRV for the building.

**Appendix C ‑ Available Component Multipliers by Building Type:**

Establishes a percent value or Component Multiplier (C.M.) for each system of the building based on the predominant use of the building. Each building function has a unique schedule, and the component multipliers for each "predominant function" total 1.00 for all systems. For instance, if 75% of the building space is classrooms and 25% laboratories, the classroom function will determine the schedule of C.M.'s (Appendix C) used in the calculations. Note that each building system may be composed of several components.

**Appendix D ‑ Useful Life of Building Systems:**

Establishes an anticipated useful life for each system in the building. If the system being evaluated does not fit the descriptions contained in this table, call SBS for advice.

**Appendix E ‑ Americans with Disabilities:**

Provides estimates of the cost of various alterations required to meet the standards of the federal Americans with Disabilities Act.

**Appendix F ‑ Asbestos Abatement Pricing:**

Provides cost estimates for asbestos abatement based on the year of the building's original construction.

**Appendix G ‑ Sample Reports:**

Presents examples of completed FCIS reports including 1, 2A, 2B, and 3, Building Needs Detail Report and Building Function Allocation Report.

**Example Calculation**

 (FOR A STUDENT UNION)

To demonstrate how FCIS calculates various values for buildings, the following evaluation of a Student Union is provided.

Example: Seventeen (17) year old building, 3 floors.

CRV = $210 x 33,000 square feet = $6,930,000

*Note: When converting fractions to decimals, calculate to 5 places past the decimal and truncate at 4. Do not round. Round dollar amounts to the nearest whole dollar.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Building Systems and Components |  |  |  |  | Age | Useful Life |  |  |  | CM |  | CRV |  | Maint Needs |
| **1110 Footings And Foundations** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Masonry Or Concrete Block | 50% | X | ( | 17 | / | 100 | ) | X | 0.0313 | X | $6,930,000  | = | $18,437  |  |
|  | 002 Cast-in-place Or Pre-cast Concrete | 50% | X | ( | 17 | / | 100 | ) | X | 0.0313 | X | $6,930,000  | = | $18,437  |  |
| **1120 Excavation And Backfill** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Excavation And Backfill | 100% | X | ( | 17 | / | 100 | ) | X | 0.0064 | X | $6,930,000  | = | $7,540  |  |
| **1220 Exterior Closure Walls** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 012 Hollow Or Concrete Block; Brick Masonry | 100% | X | ( | 17 | / | 50 | ) | X | 0.0886 | X | $6,930,000  | = | $208,759  |  |
| **1280 Columns And Beams** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Columns And Beams | 100% | X | ( | 17 | / | 100 | ) | X | 0.0384 | X | $6,930,000  | = | $45,239  |  |
| **1310 Slab On Grade** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Reinforced Concrete Floor Slabs | 100% | X | ( | 17 | / | 100 | ) | X | 0.0213 | X | $6,930,000  | = | $25,094  |  |
| **1320 Elevated Floors** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 002 Elevated Floors | 100% | X | ( | 17 | / | 75 | ) | X | 0.0687 | X | $6,930,000  | = | $107,914  |  |
| **1330 Floor Finishes** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Carpeting | 10% | X | ( | 6 | / | 12 | ) | X | 0.0534 | X | $6,930,000  | = | $18,503  |  |
|  | 002 Resilient Vinyl Tile | 90% | X | ( | 17 | / | 20 | ) | X | 0.0534 | X | $6,930,000  | = | $283,097  |  |
| **1410 Roof Construction** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 002 Corrugated Metal Deck | 100% | X | ( | 17 | / | 30 | ) | X | 0.0636 | X | $6,930,000  | = | $249,757  |  |
| **1430 Roof Covering** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Roll Roofing / Single Ply | 100% | X | ( | 12 | / | 12 | ) | X | 0.0148 | X | $6,930,000  | = | $102,564  |  |
| **1440 Roof Insulation** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Expanded Perlite,polyurethane & Fiber Bd | 100% | X | ( | 17 | / | 40 | ) | X | 0.0078 | X | $6,930,000  | = | $22,976  |  |
| **2110 Ceiling Finishes** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Acoustical Tile | 25% | X | ( | 17 | / | 20 | ) | X | 0.0282 | X | $6,930,000  | = | $41,528  |  |
|  | 002 Plaster | 75% | X | ( | 17 | / | 40 | ) | X | 0.0282 | X | $6,930,000  | = | $62,292  |  |
| **2210 Interior Surface / Exterior Wall** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 005 Brick | 100% | X | ( | 17 | / | 75 | ) | X | 0.0079 | X | $6,930,000  | = | $12,409  |  |
| **2240 Wall Finishing** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Interior Paint-on Masonry (high Use) | 100% | X | ( | 1 | / | 2 | ) | X | 0.0201 | X | $6,930,000  | = | $69,647  |  |
| **2310 Windows And Glaze Walls** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Operable Glazing;fixed,single,double | 100% | X | ( | 17 | / | 40 | ) | X | 0.0373 | X | $6,930,000  | = | $109,858  |  |
| **2320 Exterior Closure Doors** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Automatic Sliding Door | 10% | X | ( | 9 | / | 15 | ) | X | 0.0048 | X | $6,930,000  | = | $1,996  |  |
|  | 004 Hollow Metal Door Frame; solid Core Wood | 90% | X | ( | 17 | / | 40 | ) | X | 0.0048 | X | $6,930,000  | = | $12,723  |  |
| **2330 Interior Doors** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Hollow Core Wood | 100% | X | ( | 17 | / | 20 | ) | X | 0.0537 | X | $6,930,000  | = | $316,320  |  |
| **3110 HVAC System (20 Year Life Components)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Twenty (20) Year Life Components | 100% | X | ( | 17 | / | 20 | ) | X | 0.0461 | X | $6,930,000  | = | $271,552  |  |
| **3220 Plumbing System (20 Year Life Component)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Twenty (20) Year Life Components | 100% | X | ( | 17 | / | 20 | ) | X | 0.006 | X | $6,930,000  | = | $35,343  |  |
| **3315 Electrical/lighting (40 Year Life Comp.)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Forty (40) Year Life Components | 100% | X | ( | 17 | / | 40 | ) | X | 0.1015 | X | $6,930,000  | = | $298,943  |  |
| **3410 Conveying** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Elevators | 100% | X | ( | 17 | / | 50 | ) | X | 0.0285 | X | $6,930,000  | = | $67,152  |  |
| **4110 Stairs** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 002 Pre-cast Concrete Stairs | 100% | X | ( | 17 | / | 50 | ) | X | 0.0102 | X | $6,930,000  | = | $24,033  |  |
| **4210 Fire Protection** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Fire Protection(sprinklers & Standpipes) | 100% | X | ( | 17 | / | 40 | ) | X | 0.0208 | X | $6,930,000  | = | $61,261  |  |
| **4410 Special Safety** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 001 Special Electrical System | 100% | X | ( | 8 | / | 20 | ) | X | 0.0165 | X | $6,930,000  | = | $45,738  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | **TOTAL MAINTENANCE NEEDS:** |  |  |  | **2,539,110** |  |

**APPENDIX B**

**CURRENT REPLACEMENT VALUE**

Although the building CRV may be available elsewhere, FCIS's CRV is the only value recognized by ADHE for budget purposes. ADHE has used RSMeans Square Foot Cost Data as a source in establishing the per-square-foot value used to calculate the Current Replacement Value. This value has been fixed for several types of buildings typically found on Arkansas college and university campuses.

In multi‑use buildings, the CRV should be prorated across the various functions. For instance, if 4,000 square feet of the building are allocated to classrooms and 1,000 square feet to laboratories, multiply 4,000 \* $180 (the value per square foot assigned to classroom space) and multiply 1,000 \* $210 (the value per square foot assigned to laboratory space). The sum of these two calculations equals the building's CRV.

**This CRV information has been developed solely for this report. These replacement values are not intended to be applied to construction budgeting efforts or for other facility programs.**

**Current Replacement Values**

|  |  |
| --- | --- |
| **Primary Function** | **Square Foot Value** |
| Unused Function | $0.00 |
| Apartment Building | $221.17 |
| Auditorium | $202.80 |
| Barn w/4 Walls Type 1 | $56.00 |
| Barn w/4 Walls Type 2 | $47.00 |
| Barn w/4 Walls Type 3 | $31.00 |
| Barn w/4 Walls Type 4 | $23.00 |
| Barn w/Less Than 4 Walls Type 1 | $26.00 |
| Barn w/Less Than 4 Walls Type 2 | $21.00 |
| Barn w/Less Than 4 Walls Type 3 | $16.00 |
| Barn w/Less Than 4 Walls Type 4 | $12.00 |
| Barn, Classrooms / Spec. Purpose | $118.00 |
| Classroom | $205.88 |
| College Dorm | $228.13 |
| College Dorm (4+ Floors) | $216.52 |
| Community Center | $172.93 |
| Computer Data Center | $414.19 |
| Daycare Center | $232.01 |
| Economy Building | $86.00 |
| Factory | $157.87 |
| FireStation | $194.81 |
| Garage (Parking) | $83.69 |
| Garage (Repair) | $167.99 |
| Graduate Research Center | $253.00 |
| Greenhouse (Contract) | $134.00 |
| Greenhouse (Inhouse) | $79.00 |
| Gymnasium | $217.87 |
| Hanger, Aircraft | $173.84 |
| Hospital / Serv. Ctrs. 4 Floors or Less | $402.93 |
| Hospital / Serv. Ctrs. Greater Than 4 Floors | $336.50 |
| Hotel | $222.04 |
| HPER | $213.00 |
| Laboratory | $220.00 |
| Library | $206.98 |
| Medical Office / Infirmary | $270.82 |
| Miscellaneous Storage Bldgs | $79.00 |
| Nursing Home | $248.96 |
| Office (Maximum 4 Floors) | $225.60 |
| Office (Over 4 Floors) | $232.76 |
| Physical Plant Facilities | $133.00 |
| Post Office | $165.77 |
| Poultry House | $71.00 |
| Power Plants | $1,011.00 |
| Racquetball Court | $203.54 |
| Residence Type 1 | $189.00 |
| Residence Type 2 | $157.00 |
| Residence Type 3 | $118.00 |
| Residence Type 4 | $94.00 |
| Residence Type 5 | $63.00 |
| Stanchion Dairy Barn | $166.00 |
| Student Center (Unions) | $198.63 |
| Swimming Pool Building | $333.56 |
| Vocational School | $205.11 |
| Warehouse | $159.51 |

**APPENDIX C**

**AVAILABLE COMPONENT MULTIPLIERS (CM) BY BUILDING TYPE**

**(PERCENT VALUE OF BUILDING SYSTEMS)**

The following table, Available Components by Building Type (Percent Value of Building Systems), was established by Arkansas State Building Services (SBS). The Percent Value is used as the Component Multiplier (CM) in calculating the dollar value of maintenance needs of a system. Each type of building has a unique set of values. In multi‑use buildings, the predominant use of the building determines the function chosen for this calculation. For instance, calculations for a building that is 75% classroom space and 25% laboratory space will reference the CM table for the classroom function. Unless otherwise noted percent values of these schedules were derived by using Means Square Foot Cost, updated in 1998.

 METHOD OF ESTIMATING THE

 COST/PERCENT VALUE OF BUILDING SYSTEMS:

1. Define the type of building by predominant function (i.e., classrooms, office, laboratory, etc.).

2. Determine the percent value for each system in the building.

The building Cost Per Square Foot column in Means data book is used to establish the square foot cost/percent value for each system in the building. The square foot value for all of the building systems is calculated from this column. The sum of the building systems CM's must equal 1.00.

If your building type is different from the types listed in this report. Call ADHE staff for advice.

**APPENDIX D**

 **USEFUL LIFE OF BUILDING SYSTEMS**

This schedule is used to estimate the useful life of a building system. Each building system has a different useful life, and system components within a system may also have different useful lives.

The following table of Useful Life of Building Systems was established by Arkansas State Building Services.

**APPENDIX E**

 **AMERICANS WITH DISABILITIES ACT (ADA) PRICING**

The ADA Pricing Schedule provides the approximate cost of items commonly necessary to complete modifications to meet the requirements of the federal Americans with Disabilities Act (ADA).

SBS developed this table for use when more precise information is not available.

##### **Pricing Schedule**

|  |  |
| --- | --- |
| Item | Amount |
| New unisex ADA toilet with one lavatory and one water closet in existing building | $7,500/each |
| Elevator improvements (excluding cab replacement) | $2,500/cab |
| Other miscellaneous items (door, clearance improvements, door thresholds, existing toilet room renovations) | $0.50/SQFT of bldg. |

NOTES:

1. In the absence of more reliable cost data for a specific building, use these data in the completion of Form #2 (Building Condition Evaluation Form)

**APPENDIX F**

 **TABLE 5**

 **ASBESTOS ABATEMENT PRICING**

Provided below is the approximate cost per square foot for asbestos abatement in buildings according to their original construction dates.

SBS has developed these values for use when more accurate pricing data is unavailable. If consultants have completed an asbestos abatement survey on the campus, include their estimate of cost and note the source of information in the text space provided in the FCIS program for this building component.

|  |  |
| --- | --- |
| **Year Constructed** | **$ per Gross Bldg SQFT** |
| 1980 to 1985 | $2.00 |
| 1946 to 1979 | $5.00 |
| 1945 and before | $1.00 |

Sample Asbestos Cost Deficiency Calculation:

Total Building Gross SQFT Floor Area: 20,000

1955 portion: 15,000

1982 portion: 5,000

1955) 15,000 SQFT x $5.00/ SQFT = $75,000

1982) 5,000 SQFT x $2.00/ SQFT = $10,000

 Asbestos Cost Deficiency $85,000

**APPENDIX G**

 **FCIS REPORTS**

The remainder of this manual contains examples of each report available in FCIS. Instructions for accessing, exporting, and printing these reports are included on page 16 of this manual.

A copy of the Maintenance Priorities report is to be printed and signed by the President or Chancellor of the institution when FCIS data entry has been completed. The signed report should be mailed to ADHE as described on page 1 of this manual.

Available reports include:

* Building List
* Maintenance Priorities
* Building Condition Evaluation
* Building Needs Survey
* Building and Land Summary
* Building Needs Detail
* Building Function Allocation