

KISHWAUKEE COLLEGE

Executive Summary

Facility Condition Assessments

July 2017

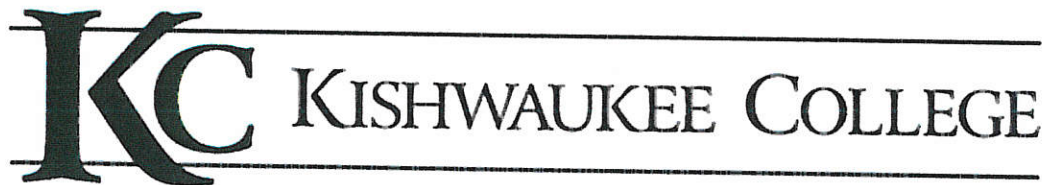


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OVERVIEW

Project Summary

In February 2017, ISES Corporation contracted with Demonica Kemper Architects (DKA) to perform comprehensive Facility Condition Assessment (FCA) services for Kishwaukee College (KC) in Malta, Illinois. The original proposal was for 18 buildings encompassing 540,819 square feet of general education, administrative, infrastructure, athletics, and support space. During the inspections, the original building list was regrouped with the assistance of KC and the DKA project manager to reflect current campus building designations. The square footages in the original proposal were adjusted to remove any overlap, and two buildings were added, changing the total assessed square footage to 576,637.

The campus was constructed in multiple phases beginning in the early 1970s and continuing through the 2010s. Significant renovations have been completed in many of the older buildings and in older portions of other buildings. In general, renovated portions of older buildings, along with the newer construction, are in good condition, while the older, unrenovated buildings and portions of buildings are in need of renewal.

The Facility Condition Needs Index (FCNI) and Facility Condition Index (FCI) are the primary needs metrics for the inspected buildings, and these metrics indicate that the KC buildings are in relatively good condition compared to other ISES clients. The average FCNI (a ratio of the 10-year renewal needs (including Deferred Renewal) to the current replacement value) for the inspected buildings is 0.16, which is in the top 20 percent of all ISES clients. Sixty percent of the inspected buildings are in good to excellent condition. The average FCI, which is a ratio of just Deferred Renewal to the current replacement value, is 0.04, well within the "Good" rating for overall condition. This places the college in a good position to plan for strategic growth and continued renewal. The capital planning strategy and completed renewal efforts have had a significant impact on the current condition of the facilities on campus as a whole. It is also worth noting that the Facilities Services department has done a good job of developing and executing maintenance strategies and keeping new and aged systems operational. Subsequent sections of this report will define these terms and present the relevant data to help KC determine where resources are most needed.

Average Year Built

The average year built for all of the inspected buildings (weighted by gross square foot) is 1980, for an average age of 37 years old at the time of inspection. Over 70 percent of the inspected square footage was built between 1970 and 1972, and there have been significant renovations to some if not most building. Nearly 80 percent of the inspected square footage is in the core of buildings at the center of campus (wings A, B, and C). Significant portions of A and B wings were constructed in the early 1970s, with renovations and additions in the 1980s and 1990s. Construction of the C wing dates between 1991 and 2013. The outer buildings include the Early Childhood Center and Grant building (constructed in 1970 and with renovations to both), the Greenhouses and Head Building (constructed in the 1970s and with additions in the 1980s), the Caukin building (constructed in the

1970s and with additions in the early 2000s), the Well House (constructed in the early 1970s), and the Campus Operations Building and Vehicle Storage Buildings (constructed in 2011 and 2013, respectively).

Facility Usage Types

The following table shows the usage types of the inspected buildings.

USAGE TYPE	BUILDING COUNT	SQUARE FOOTAGE	PERCENT OF TOTAL
Shops/Trade (ST)	6	271,468	47.1
Student Union (SU)	1	133,819	23.2
Classroom/Academic (CL)	1	92,250	16.0
Gymnasium/Athletics (GM)	1	65,500	11.4
Medical/Clinic (MC)	1	7,300	1.3
School/K-12 (SK)	1	6,300	1.1
TOTAL	11	576,637	

FCA Inspections

Extensive experience with asset surveys has led ISES to develop a standardized system of data collection that efficiently and effectively utilizes the time spent in each building. Each asset was inspected by a two-person team, which consisted of experienced architectural and engineering inspectors. They inspected the various components in each building and determined what repairs or modifications are necessary to restore the systems and buildings to an acceptable condition, or to a level defined by the college. The team typically starts on the roof, or the highest accessible level, and proceeds to the lowest level, inspecting each of the discrete building categories as the building is walked.

The assessment is an evaluation of the mechanical, electrical and plumbing systems, structural and architectural components, vertical transportation systems, and utilities as they relate to each asset in the study. Exterior equipment obviously associated with a building, such as a pad-mounted chiller, transformer or loading dock service lot, is included in the assessment. Parking facilities on the campus are not included in the building assessments and are more appropriately addressed by a campuswide hardscape report.

An ISES FCA complies fully with ASTM E2018-15. It includes an evaluation of resource conservation opportunities and addresses compliance with the ADA Accessibility Guidelines. All accessible equipment and building

components receive a thorough visual inspection. The inspection team lifts ceiling tiles in suspended ceilings and opens access doors to reveal hidden equipment and building components that are integral to the survey.

The visual nature of this inspection process requires close interaction with your operations and maintenance personnel. Many of the problems inherent in building systems are not visually apparent. ISES field assessors conducted staff interviews to ensure that all known system problems were cataloged and identified. Working as a team with your personnel improves the accuracy of the database and provides the most useful data.

Contacts

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Definitions

Facility Renewal Needs

Facility renewal needs are identified during the field inspections and result in recommendations that are intended to bring facilities up to like-new standards and condition. Renewal recommendations can also enhance user safety and mitigate client liability. They replenish the lifecycle of existing assets but do not include updates related to departmental space or program use changes, system replacements as a reaction to failure, or specialized program-related equipment. Routine facilities maintenance and repair activities are also not considered to be facilities renewal efforts.

Recurring vs. Nonrecurring

Facility renewal needs are divided into two main categories – recurring and nonrecurring. Recurring needs are cyclical and associated with replacement (or renewal) of building components and systems. Examples include roofs, chillers, windows, finishes and air handling units. The tool for projecting the recurring renewal costs is the Lifecycle Component Inventory. Each component has an associated renewal cost, installation date and life expectancy. From this data, a detailed projection of recurring renewal needs is developed for each building. These needs are categorized by UNIFORMAT II classification codes (down to Level 4). The result is a detailed year-by-year projection of recurring renewal needs for a given asset.

Nonrecurring needs pertain to facility repairs and improvements that are one-time propositions and not recurring. They typically consist of facility improvements to accommodate accessibility, address fire life/safety deficiencies, or alter a building for a new use. They also include nonrecurring deficiencies that could negatively affect the structure of the facility or the systems and components within. For nonrecurring needs, recommendations are developed with estimated costs to rectify said deficiency. They each have a unique project number and are categorized by system type, priority, and classification. The costs are indexed to local conditions and markups applied as the situation dictates. Examples of such needs are correction of building facade damage caused by a storm or seismic event, repairs to a roof section, or installing an ADA entrance ramp.

Recurring Renewal Need Classifications *(generated by the Lifecycle Component Inventory)*

- *Deferred Renewal*
Recurring needs that are past due for completion and have not yet been accomplished as part of normal maintenance or capital repair efforts. Further deferral of such renewal could impair the proper functioning of the facility. Costs estimated for Deferred Renewal needs should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to effect the needed repairs.

- *Projected Renewal*
Recurring renewal needs that will be due within the scope of the assessment. These represent regular or normal facility maintenance, repair, or renovation that should be planned in the near future.

Nonrecurring Renewal Need Classifications *(stored in the Projects module)*

- *Plant Adaption*
Nonrecurring expenditures required to adapt the physical plant to the evolving needs of the organization and to changing codes or standards. These are expenditures beyond normal maintenance. Examples include compliance with changing codes (e.g., accessibility), facility alterations required by changing teaching or research methods, and improvements occasioned by the adoption of modern technology (e.g., the use of personal computer networks).
- *Corrective Action*
Nonrecurring expenditures for repairs needed to correct random and unpredictable deficiencies that could have an effect on building aesthetics, safety, or usability. Such recommendations are not related to aligning a building with codes or standards.

Nonrecurring Renewal Need Categorization

Renewal needs are divided into appropriate categories, as well as multiple systems, components, and elements within each category. Categories in this study include:

- Immediate Building Site
- Exterior Structure and Roof Systems
- Interior Structure, including Architectural Finishes
- ADA Accessibility
- Energy/Water Conservation
- Health Hazards
- Fire/Life Safety
- Heating, Ventilation, and Air Conditioning Systems
- Plumbing System
- Electrical System
- Vertical Transportation

Prioritization of Nonrecurring Renewal Needs

Recurring renewal needs do not receive individual prioritization, as the entire data set of needs in this category is year-based. Each separate component has a distinct need year, rendering further prioritization unnecessary. Each nonrecurring renewal need, however, has a priority assigned to indicate the criticality of the recommended work. The prioritization utilized for this subset of the data is as follows.

- *Immediate*

Items in this category require immediate action to:

- a. correct a cited safety hazard
- b. stop accelerated deterioration
- c. and/or return a facility to normal operation

- *Critical*

Items in this category include actions that must be addressed in the short-term:

- a. repairs to prevent further deterioration
- b. improvements to facilities associated with critical accessibility needs
- c. potential safety hazards

- *Noncritical*

Items in this category include:

- a. improvements to facilities associated with noncritical accessibility needs
- b. actions to bring a facility into compliance with current building codes as grandfather clauses expire
- c. actions to improve the usability of a facility following an occupancy or use change

Calculations

Current Replacement Value

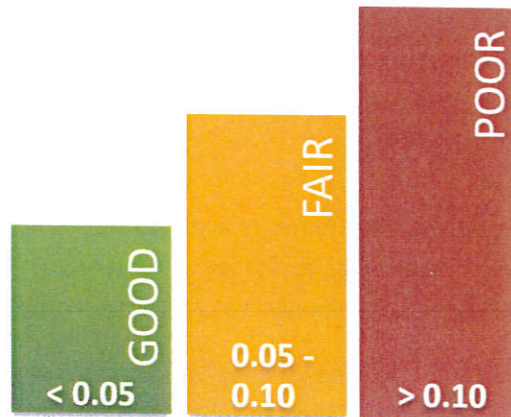
ISES traditionally calculates Current Replacement Value (CRV) using a cost per gross square foot based on building size and use (e.g. theater, research lab, classroom building, etc.). R.S. Means Section Square Foot costs are used as the starting point. This base number is adjusted for the size of the facility and modified with city cost indices to the local area, with appropriate modifiers for professional fees and demolition of existing structure added. Our standard methodology will prorate the base cost per GSF based on different use types in a building.

Traditional methods of calculating CRV do not take into account the historic significance of a structure. Replacement of a historic structure would only occur in the event of a catastrophic loss of said building. In such occurrences, the normal practice ISES observes is to construct modern facilities that meet the site/campus architectural standards rather than attempt to mimic the historical construction style that has been lost. Calculated CRVs are updated automatically in the AMS software when the annual inflation factor is added to the database.

Facility Condition Index

The Facility Condition Index (FCI) provides a relative measure for an objective comparison of building condition. This is a simple calculation derived by dividing the Deferred Renewal needs by the CRV. The following standards can be applied to assess where a facility falls within a range of conditions.

$$FCI = \frac{\text{Deferred Renewal}}{\text{Current Replacement Value}}$$



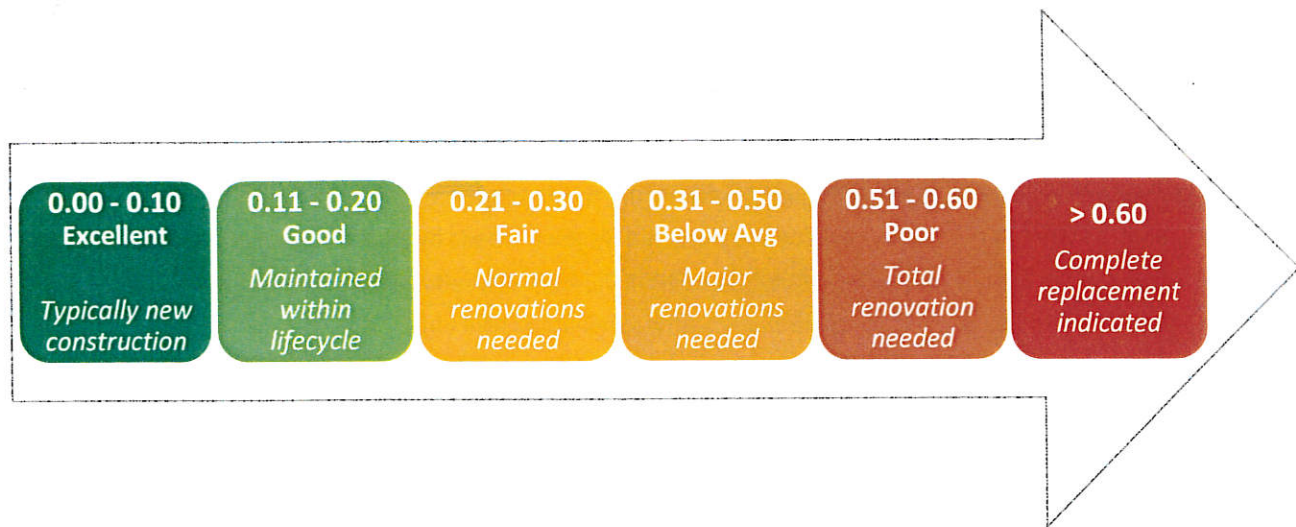
Facility Condition Needs Index

The Facility Condition Needs Index (FCNI) provides a lifecycle cost comparison. It is a ratio of the 10-year renewal needs (including Deferred Renewal) to the current replacement value of the asset.

$$\text{FCNI} = \frac{\text{10-Year Renewal Needs}}{\text{Current Replacement Value}}$$

The FCNI can be employed at multiple levels for analysis. It is most commonly used to compare buildings to other buildings. The index can be used as an evaluation tool when applying it to a single facility. The lower the FCNI, the better the facility condition. It should also be noted that this is an index, not a percentage. It can, especially in the case of historic facilities, exceed 1.00.

In terms of assessing where a facility falls within a range of conditions, the following standards can be applied.



The above ranges represent averages based upon our extensive FCA experience. The reader is cautioned, however, to examine each facility independently for mitigating factors (i.e., historic structures, temporary structures, facilities with abnormally low replacement costs, such as warehouses, etc.).

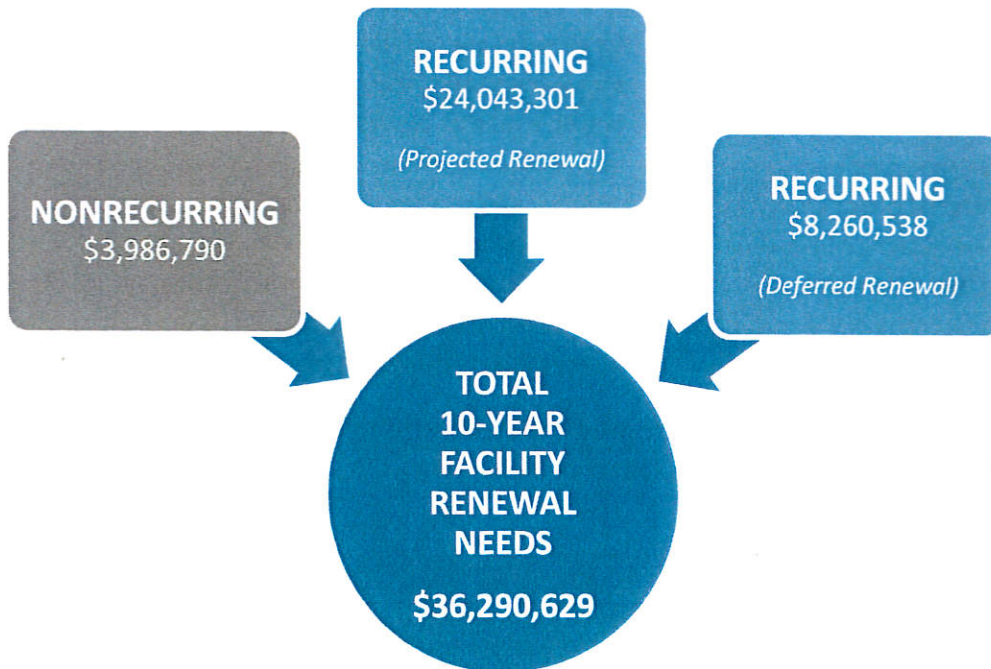
The FCNI can also be used for comparing groups of facilities to other groupings, including entire campuses. Comparisons in this vein form the basis of analysis for comparing the overall state of facilities to another comparable grouping. Note that the above ranges *do not* apply to multiple facilities. Variability among groups of buildings is reduced further as sample sets get larger. You can see how your institution ranks among other institutions in Appendix C.

SUMMARY OF FINDINGS

All data related to the FCAs was developed in, and is contained within, the ISES AMS (Asset Management System) database. ISES hosts this database system on our servers, and college personnel have access to the system via the Internet. The database is available for ongoing use by the facilities management team.

Total 10-Year Renewal Costs

As illustrated below, the FCA effort identified almost \$36.3 million in nonrecurring projects and recurring renewal needs that should be addressed over the next 10 years. Recurring renewal needs total more than \$32 million, with the remaining \$4 million being nonrecurring Plant Adaption or Corrective Action projects. Of the recurring costs, Deferred Renewal needs total almost \$8.3 million, which is 23 percent of the total 10-year renewal costs.



FCNI and FCI Calculations

$$\begin{array}{l}
 \text{FCNI} \quad \frac{\text{10-Year Renewal Needs}}{\text{Current Replacement Value}} = \frac{\$36,290,629}{\$233,807,000} = 0.16 \\
 \\
 \text{FCI} \quad \frac{\text{Deferred Renewal Needs}}{\text{Current Replacement Value}} = \frac{\$8,260,538}{\$233,807,000} = 0.04
 \end{array}$$

The average FCNI of the individual inspected buildings is 0.16. This suggests that the overall campus is well-funded relative to the national average, as amassed by 30 years of ISES clients.

It is our assessment that the establishment of consistent preventive maintenance programs and a system-directed capital renewal plan has allowed the total asset catalog to achieve a stable reinvestment state. Several factors have a significant impact on the overall and individual campus condition indices and general conditions. The overall average age of the inspected assets (37 years old at the time of inspection) and the percentage of inspected gross square footage that is more than 20 years old (93 percent) are offset by capital renovations in many of the older buildings and by new construction within the past six years (COB, VSB, and Student Center). These significant renovations and additions have minimized the negative metrics typically associated with older or aging portfolios. Given the established historical trends for this campus, it is recommended that the existing philosophy regarding major capital renovations of older spaces be continued. The campus does need to look at major renovations. Older buildings that are detached from the main education core buildings, along with unrenovated portions of the older buildings in the education core, were constructed before 1972 and are generally considered to be in below average or poor condition. Many of the major systems in those buildings were assessed to be original. Planned renovations will help reduce these major backlogs and improve the overall campus condition and ratings.

The table on the following page provides a detailed breakdown of all renewal needs listed by system, priority class (nonrecurring), and year (recurring), with totals for each category.

RENEWAL COSTS MATRIX

All dollars shown as Present Value

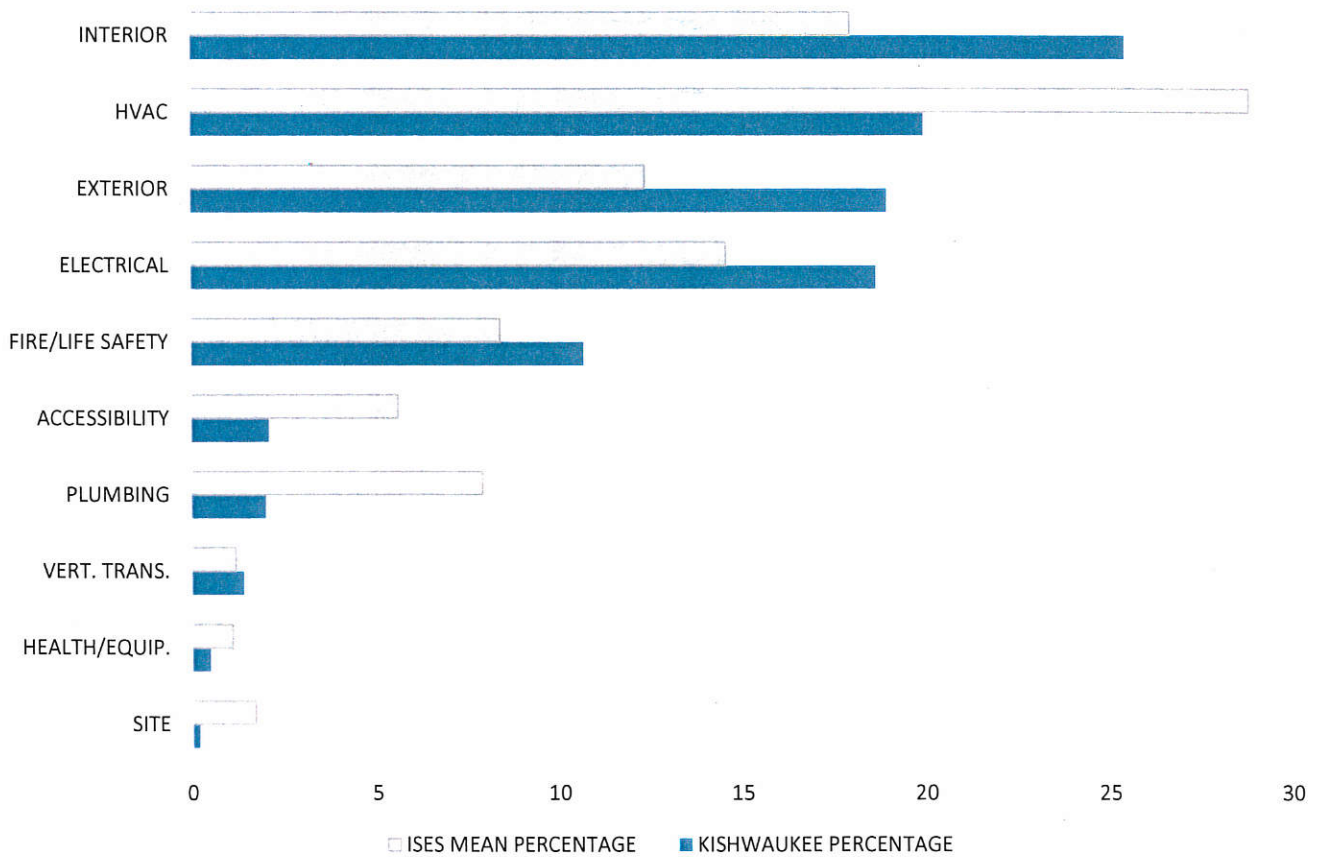
CATEGORY	NON-RECURRING PROJECT NEEDS			RECURRING COMPONENT REPLACEMENT NEEDS													TOTAL
	Immediate	Critical	Non-Critical	Deferred Renewal	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026			
ACCESSIBILITY	0	527,483	237,530	0	0	0	0	0	0	0	0	0	0	0	0	\$765,013	
EXTERIOR	0	32,439	285,334	1,469,600	50,552	81,799	377,741	2,060,423	649,211	129,162	10,318	92,384	1,642,783	0	0	\$6,881,745	
INTERIOR	0	0	201,813	2,676,216	607,676	1,152,381	255,853	580,407	110,306	127,827	229,481	3,001,365	197,111	110,309	0	\$9,250,743	
PLUMBING	0	0	0	261,519	22,278	104,017	0	99,228	22,526	61,937	79,030	5,567	32,815	44,723	0	\$733,639	
HVAC	0	0	12,584	2,607,146	3,532,383	63,464	0	549,153	246,591	3,618	93,718	0	27,799	106,648	0	\$7,243,104	
FIRE/LIFE SAFETY	0	154,505	2,332,832	878,480	52,690	0	161,937	295,827	0	0	0	0	0	0	0	\$3,876,270	
ELECTRICAL	0	0	11,348	115,211	47,996	30,065	9,867	505,317	0	4,673,216	23,332	1,080,556	281,616	0	0	\$6,778,524	
SITE	37,775	0	0	0	0	0	0	24,227	0	0	0	0	0	0	0	\$62,001	
VERT. TRANS.	0	0	0	225,890	0	264,739	0	0	0	19,425	0	0	0	0	0	\$510,053	
HEALTH/EQUIP.	0	0	153,148	26,477	0	0	0	0	0	9,912	0	0	0	0	0	\$189,536	
SUBTOTAL	\$37,775	\$714,427	\$3,234,588	\$8,260,538	\$4,313,576	\$1,696,464	\$805,397	\$4,114,581	\$1,028,633	\$5,025,096	\$435,878	\$4,179,872	\$2,182,124	\$261,681	\$36,290,629		
TOTAL NON-RECURRING PROJECT NEEDS				\$3,986,790	TOTAL RECURRING COMPONENT REPLACEMENT NEEDS											\$32,303,840	

CURRENT REPLACEMENT VALUE	\$233,807,000
FACILITY CONDITION NEEDS INDEX	0.16
FACILITY CONDITION INDEX	0.04

GSF	TOTAL 10-YEAR FACILITY RENEWAL NEEDS	10-YEAR NEEDS/SF
576,637	\$36,290,629	\$62.93

Renewal Costs by System Code

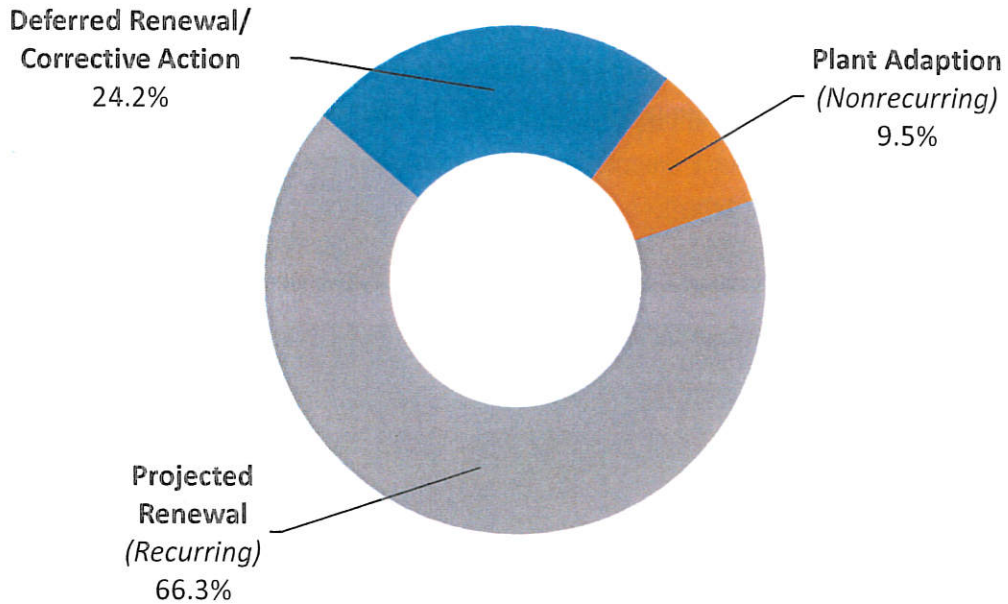
A viable approach to capital planning is to analyze common building systems for needs. The following chart illustrates the system project backlog by weight of total backlog and compares the results at Kishwaukee College to the average found across the ISES clients.



Five critical building systems (interiors, HVAC exteriors, electrical, and fire/life safety) have significant needs in the next 10 years. Of these five, interiors (26 percent), exteriors (19 percent), electrical (19 percent), and fire/life safety (11 percent) outpace the ISES average for percentage of total projected needs. Nearly 35 percent of the projected needs of all systems are considered deferred or needed in the next year (2017). In addition, projected needs for exterior (\$6.9 million), interior (\$9.3 million), HVAC (\$7.2 million), fire/life safety (\$3.9 million), and electrical (\$6.8 million) all exceed \$3 million. One-time (nonrecurring) project costs account for less than 12 percent (\$4 million) of the overall projected needs. Accessibility makes up 2 percent of the overall needs, which is drastically lower than the 5.6 percent ISES mean. This can be attributed to the significant renovations and remodeling of the older buildings. The remaining systems are in line or below the ISES client averages.

Renewal Costs by Classification

- Nonrecurring Plant Adaption needs make up 9.5 percent of the total cost (\$3,454,621).
- The recurring needs projected to emerge over the next 10 years represent 66.3 percent (\$24,043,303) of the facilities renewal recommendations.
- Recurring Deferred Renewal and nonrecurring Corrective Action needs are 24.2 percent of the recommendations (\$8,792,707).

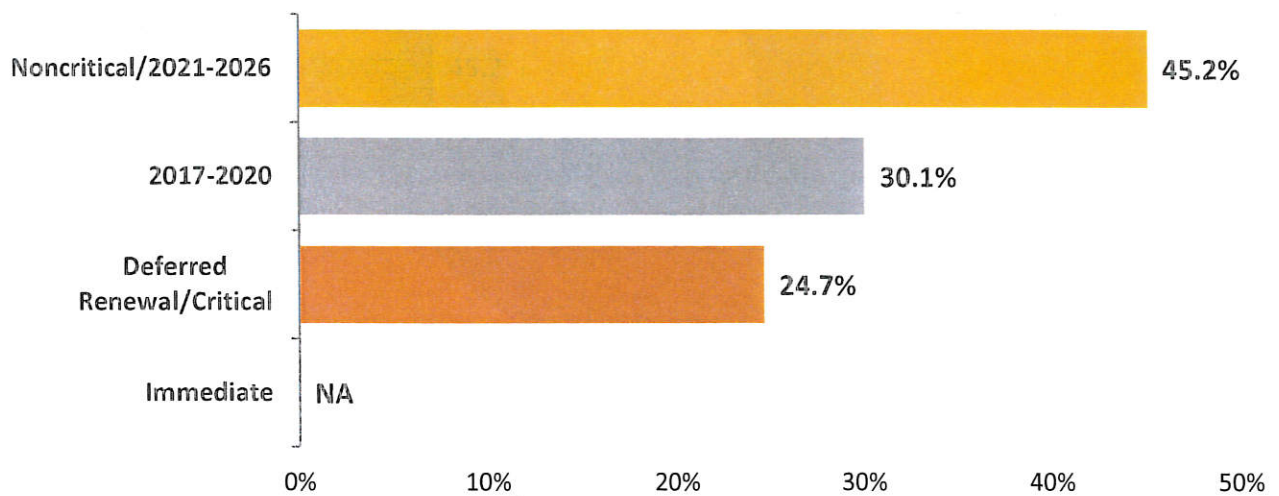


CLASSIFICATION	PERCENTAGE	COST (\$)
Projected Renewal	66.3%	24,043,303
Deferred Renewal/Corrective Action	24.2%	8,792,707
Plant Adaption	9.5%	3,454,621
TOTAL		\$36,290,629

Renewal Costs by Priority

The renewal needs have been prioritized to indicate the urgency of the recommendations. Like the previous chart, this also summarizes both the recurring and nonrecurring recommendations.

- There are no immediate nonrecurring needs.
- Recurring Deferred Renewal and nonrecurring Critical needs combined represent 24.7 percent of the recommendations (\$8,974,965).
- The first four years (2017-2020) of recurring component replacement needs equal \$10,930,018 (30.1 percent).
- The next six years (2021-2026) of recurring component replacement needs combined with the nonrecurring Noncritical needs equal \$16,385,647 or 45.2 percent.



PRIORITY	PERCENTAGE	COST (\$)
Immediate	NA	0
Deferred Renewal/Critical	24.7%	8,974,965
2017-2020	30.1%	10,930,018
Noncritical/2021-2026	45.2%	16,385,647
TOTAL		\$36,290,629

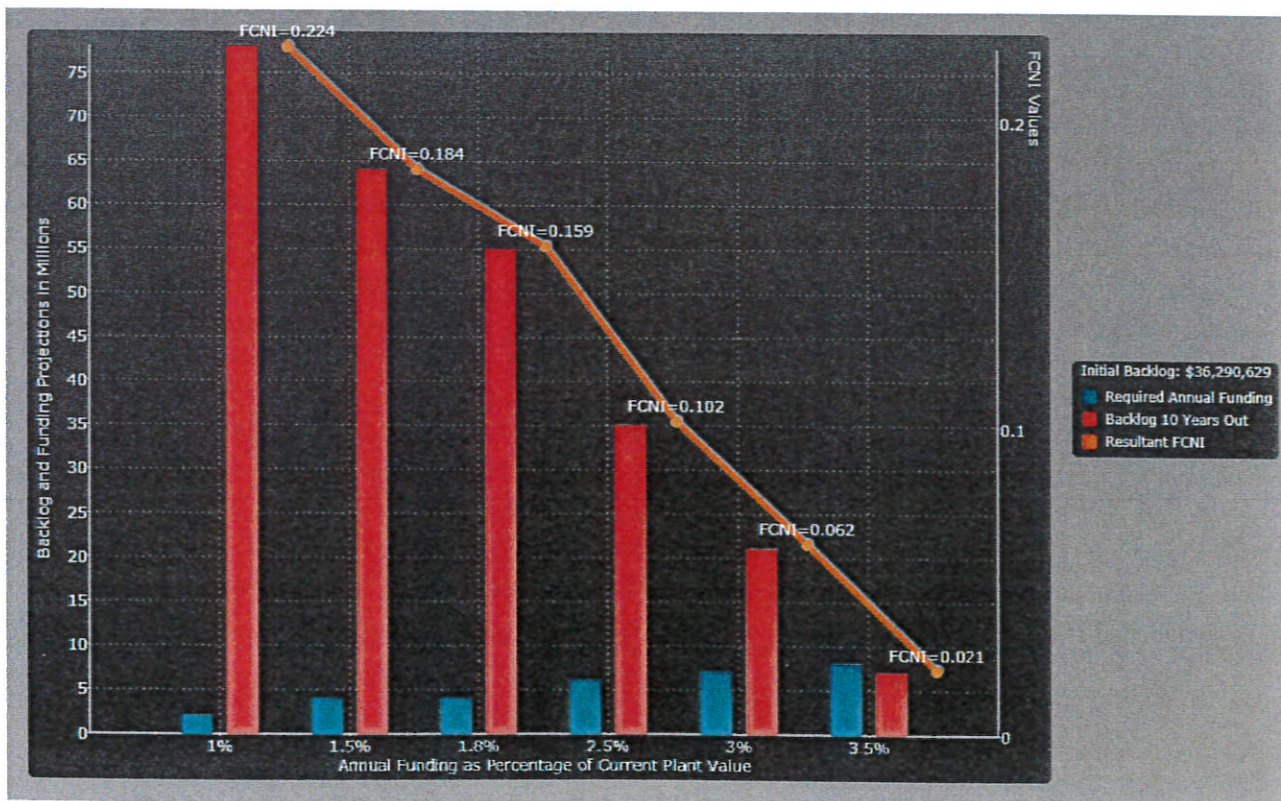
AMS FINANCIAL MODELING

FCNI Projections

The ISES AMS software features a funding modeling tool that can estimate the effects of funding levels on the FCNI. This tool calculates that \$4.2 million would need to be reinvested annually to maintain the current FCNI of 0.16. This is equal to 1.8 percent of plant value on an annual basis. (Note: This figure accounts for 3 percent inflation.) The model also incorporates a 1 percent portfolio growth rate (rate at which square footage is added) and a 1.5 percent plant deterioration rate (the rate at which new capital project needs arise).

Reinvestment Rates

If the reinvestment rate is lower than 1.8 percent of plant value, then the FCNI at the end of the tenth year will be higher than it was in the first year. For instance, if 1 percent of plant value (\$2.3 million) is reinvested annually, the resultant FCNI after 10 years is estimated to be 0.22. Conversely, if 3.0 percent of plant value (\$7 million) is reinvested annually, the resultant FCNI is estimated to be 0.06 after 10 years. The following chart shows sample funding scenarios.



The calculations in the model above take into account all money that goes towards renewing the facilities and their supporting components. In most cases, not all of the needs are funded by the Facilities Management organization's budget. Programs, donors, schools, and other stakeholders can pay for projects. It is common for projects that are part of major renovation efforts to be funded predominately by other sources besides the Facilities department.

The funding level presented in this section is a steady and annualized rate. It is important to understand that, in most cases, the fulfillment of these needs is ad hoc and the amount reinvested can vary widely from year to year. Not all projects are performed on a piecemeal basis. Projects can include limited renovation projects, gut renovation activities, or full raze and replace measures. These large-scale efforts can eliminate a significant proportion of needs in a relatively short period of time.

CONCLUSIONS

As the preceding sections of this report illustrate, the college has placed itself in a good position regarding its facilities, especially compared to similar institutions for which ISES has data. This is due to the consistent preventive maintenance and capital renewal reinvestment programs already in place that adequately identify and address the needs in older buildings. The 0.16 average FCNI and 0.04 average FCI metrics are the result of this maintenance and renovation strategy.

However, the data also show that the college still faces challenges over the next 10 years. The needs classified as Deferred Renewal total \$8.3 million, or nearly one-quarter of the identified backlog, and the needs that show up in the near-term (within the next three years) total almost as much (\$6.8 million). When combined with the identified nonrecurring project needs (\$4 million) and Deferred Renewal, this is about 53 percent of the total identified backlog and should be a major consideration in maintenance and capital reinvestment planning, as should the six buildings with FCIs that classify them as being in fair to poor condition.

From a building systems perspective, portfolio-wide HVAC and electrical distribution upgrades and replacement of remaining original systems are warranted. These primary building systems are critical to the day-to-day operation of a facility. Many are aged and, though functional, require routine and repetitive maintenance. The failure of either system could result in the ineffective use of, or the inability to use, the facility as a whole. Also, plumbing upgrades to aging assets should be planned with renovations to ensure that these systems are periodically renewed, especially given the age of a large percentage of the asset catalog. From a liability perspective, the accessibility and fire/life safety upgrades should be considered for execution regardless of the proportion of needs they represent.

The campus FCI is 0.04, which falls into the "Good" category. The FCI is a measure of Deferred Renewal needs, so, in general, building support equipment is being well maintained and is in working order. Capital replacement of assets in a timely manner can prevent "over-maintenance" and further reduce the percentage of Deferred Renewal needs. Six buildings (A wing and core, Caukin, Grant, Greenhouses, and Well House) have FCIs in the fair or poor category.

With regard to FCNI, the most effective method of shrinking the index is to continue to holistically reinvest in existing facilities. This means either razing and rebuilding or gut renovating aging assets. This type of project work has collateral benefits, such as making maintenance organizations more effective. New construction will have a positive effect on the FCNI only if existing buildings are replaced. If new structures are built but the older facilities kept in service, any existing FCNI problems will be exacerbated. Furthermore, if the maintenance staff is not expanded in the event of adding incremental square footage to the portfolio, the FCNI issues will become more difficult to manage.

If it is impossible to fully gut renovate or raze and replace a facility, consider bundling ISES recommendations to achieve economy-of-scale and minimize campus impact. For example, if an expensive HVAC system renewal project is justified and funded, consider undertaking any exterior envelope projects in concert with it. Replacing

roofs, windows, and exterior doors will produce maximum energy savings, which will allow for as short a payback period as possible. Also, when common efforts are needed in buildings that are close to each other, consider executing projects over multiple buildings. As plans are developed to address identified needs, the scope of these repairs should be carefully considered to maximize the financial impact of capital reinvestment.

The primary goal of reinvesting in or renewing facilities is to mitigate customer or program downtime, which, of course, results in happier customers. There are many other benefits as well. The college will provide more suitable and modern space for schools and programs, and the facilities will be more attractive to prospective students and programs. When effectively executed, facilities renewal efforts will reduce purchased energy consumption and make the existing maintenance organization more efficient.

KISHWAUKEE COLLEGE
FCA Executive Summary

Appendices

APPENDIX A
Building List by Building Number

Appendix A is a general building inventory sorted by building number. The table includes typical stats such as primary use, year built, and size and also provides valuable information like CRV, total renewal costs, FCNI, and FCI.

BLDG #	BUILDING NAME	BLDG TYPE	YEAR BUILT	SQUARE FEET	CRV (\$)	RENEWAL COSTS (\$)	FCNI	FCI
A CORE	A0400, A1100, UPPER LIBRARY	GM	1972	65,500	23,979,000	7,568,642	0.32	0.08
A WING	A1200, A1300, A1400, A2200	ST	1972	155,900	65,312,000	14,322,880	0.22	0.05
B WING	B1200, B1300, B1400, B2300	CL	1972	92,250	36,887,000	5,176,494	0.14	0.03
C WING	C1100, C1200, C2100, C2200	SU	1991	133,819	61,134,000	2,039,639	0.03	0.00
CAUKIN	CAUKIN BUILDING	ST	1970	62,250	21,240,000	2,892,179	0.14	0.05
COB	CAMPUS OPERATIONS BUILDING	ST	2011	30,218	12,306,000	348,861	0.03	0.00
ELC	EARLY CHILDHOOD CENTER	SK	1970	6,300	2,541,000	492,214	0.19	0.01
GRANT	GRANT BUILDING	MC	1970	7,300	4,041,000	1,051,634	0.26	0.07
GREENHS	GREENHOUSES AND HEAD HOUSE	ST	1970	13,900	2,656,000	1,816,386	0.68	0.22
VSB	VEHICLE STORAGE BUILDING	ST	2013	5,600	2,259,000	379,148	0.17	0.00
WELL	WELL HOUSE	ST	1972	3,600	1,452,000	202,553	0.14	0.06
GRAND TOTAL				576,637	\$233,807,000	\$36,290,629	0.16	0.04

APPENDIX B
Building List by FCNI

Appendix B provides a building list sorted by FCNI in descending order. This report is useful for directing funding for building renovations. If a building is high on the list and projected to be a relevant part of the campus mission for years to come, it is recommended that the building be sustained to a minimal degree until a major renovation or facility replacement can be funded.

BLDG #	BUILDING NAME	BLDG TYPE	YEAR BUILT	SQUARE FEET	CRV (\$)	TOTAL 10-YR NEEDS (\$)	FCNI
> 0.60							
GREENHS	GREENHOUSES AND HEAD HOUSE	ST	1970	13,900	2,656,000	1,816,386	0.68
0.60 – 0.51							
NONE							
0.50 – 0.31							
A CORE	A0400, A1100, UPPER LIBRARY	GM	1972	65,500	23,979,000	7,568,642	0.32
0.30 – 0.21							
GRANT	GRANT BUILDING	MC	1970	7,300	4,041,000	1,051,634	0.26
A WING	A1200, A1300, A1400, A2200	ST	1972	155,900	65,312,000	14,322,880	0.22
0.20 – 0.11							
ECC	EARLY CHILDHOOD CENTER	SK	1970	6,300	2,541,000	492,214	0.19
VSB	VEHICLE STORAGE BUILDING	ST	2013	5,600	2,259,000	379,148	0.17
B WING	B1200, B1300, B1400, B2300	CL	1972	92,250	36,887,000	5,176,494	0.14
WELL	WELL HOUSE	ST	1972	3,600	1,452,000	202,553	0.14
CAUKIN	CAUKIN BUILDING	ST	1970	62,250	21,240,000	2,892,179	0.14

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Appendices

BLDG #	BUILDING NAME	BLDG TYPE	YEAR BUILT	SQUARE FEET	CRV (\$)	TOTAL 10-YR NEEDS (\$)	FCNI
0.10 - 0.00							
C WING	C1100, C1200, C2100, C2200	SU	1991	133,819	61,134,000	2,039,639	0.03
COB	CAMPUS OPERATIONS BUILDING	ST	2011	30,218	12,306,000	348,861	0.03

APPENDIX C
FCNI Comparison

Appendix C is a comparison table with a sampling of results from similar FCA efforts to benchmark against Kishwaukee College. The average FCNI for the complete dataset is 0.23, and the average year built per square foot is 1972 (41 years old at time of inspection). This indicates that the inspected buildings at Kishwaukee are of a similar age but in above average condition compared to those clients.

CLIENT	FCNI	GSF	ASSET COUNT	AVG YEAR BUILT	AVG AGE AT INSP	RENEWAL COSTS/SF (\$)	TOTAL RENEWAL COSTS (\$)	FCNI PERCENTILE	AVG AGE PERCENTILE
Georgia College	0.10	1,129,229	21	1991	21	35.09	39,624,804	100%	100%
Columbia College	0.13	452,265	24	1952	61	52.60	23,789,565	92%	9%
San Bernardino CC District	0.16	1,031,471	54	1991	25	62.50	64,464,728	82%	91%
Kishwaukee College	0.16	576,637	11	1979	38	62.93	36,290,629	75%	42%
North Georgia College & State Univ.	0.20	649,095	9	1989	23	47.86	31,066,394	67%	92%
Oakland Community College	0.24	2,241,895	78	1980	32	67.47	151,259,842	59%	67%
Navarro College	0.25	306,420	14	1967	49	80.65	24,714,139	50%	25%
Notre Dame of Maryland University	0.25	655,037	16	1939	77	92.01	60,268,988	50%	0%
Portland Community College	0.27	2,055,698	39	1983	27	93.49	192,190,548	34%	75%
Morehouse College	0.29	716,619	25	1969	47	97.35	69,765,043	25%	34%
Black Hawk College	0.30	562,976	19	1974	37	114.82	64,639,609	17%	50%
Kenyon College	0.32	825,023	52	1949	58	84.38	69,612,041	9%	17%
University of Nebraska - Omaha	0.36	690,190	6	1971	35	76.81	53,013,995	0%	59%
AVERAGES	0.23	914,812	28	1972	41	\$74.05	\$67,746,179		

APPENDIX D

AMS Database Functionality

The ISES AMS database is the industry standard for maintaining and managing capital and deferred renewal needs. It was designed inhouse exclusively for the purpose of managing FCA data and is the tool used daily by ISES personnel for data development and report generation. The system accommodates ongoing management and use of FCA information in an efficient manner, allowing facilities professionals to manage their portfolios – instead of being managed by deteriorating facilities conditions.

AMS is cloud-based and user-friendly. It has a menu-driven system for the efficient management and organization of FCA information. It uses a relational database, eliminating the storage of redundant data. From ease of use for data entry to providing reports and graphics utilized to quantify and qualify capital improvement plans, AMS is a powerful and invaluable tool.

All assessment data is stored in AMS. The database is hosted under an ASP model. There are no minimal hardware specifications, and it is accessible via the Internet to anyone designated by the Client as an authorized user. Users can be created with different levels of view and edit capabilities based upon your needs. ISES will provide access via our own web servers and ensure that the system remains available and current. The only requirements for your authorized users are Internet access and web browser software. It is compatible with Windows Internet Explorer 7.0 or higher, as well as comparable browser systems, such as Firefox.

Benefits

The power of AMS lies in its ability to sort data in numerous ways and generate customized reports to meet your needs. AMS allows you to easily track, sort and prioritize facility conditions by building, defined group, site/campus or for all of the buildings in the database. Users will be able to identify needs across multiple assets through utilization of user-defined queries. Results can be exported for integration into presentations, analytical studies, reports, CMMS databases and more.

AMS Access

Your customized AMS database can be accessed by visiting the ISES homepage (<http://www.isescorp.com>). Click on **My AMS** in the upper right-hand corner to enter your login information.

Data Sorting and Customized Reporting

The data housed in AMS can be sorted in numerous ways. Project data fields and characteristics enable you to sort and filter electronic data more effectively. Typical sortable fields include, but are not limited to:

- Deficiency Priority
- Deficiency Category
- Facility Type
- Facility Location
- Correction Type
- Repair Cost
- Item/Component Types

AMS generates a report listing all of the renewal needs by building, group, or all buildings. Figures 1a and 1b show renewal needs sorted by priority class and priority sequence.

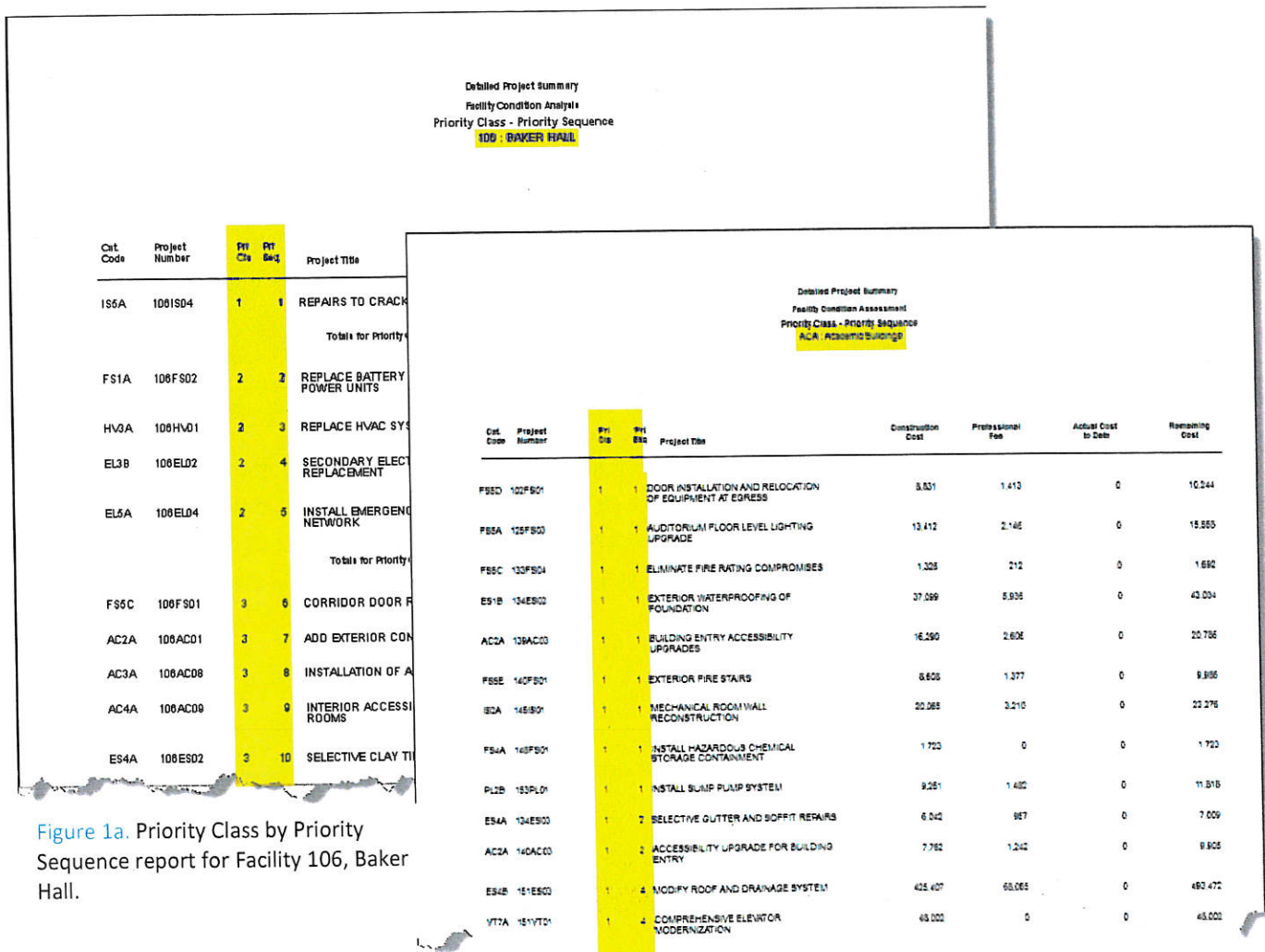


Figure 1a. Priority Class by Priority Sequence report for Facility 106, Baker Hall.

Figure 1b. Priority Class by Priority Sequence report for user-created group called "Academic Buildings".

Lifecycle Component Inventory (Recurring Renewal Needs)

The ISES FCA includes development of a full lifecycle component inventory of each facility. The inventory is based on industry standard life expectancies applied to an inventory of building systems and major components within a facility. This inventory covers the *entire* lifespan of the facility.

Figure 2a displays a typical lifecycle inventory list. Figure 2b shows the detail associated with individual line items in the inventory.

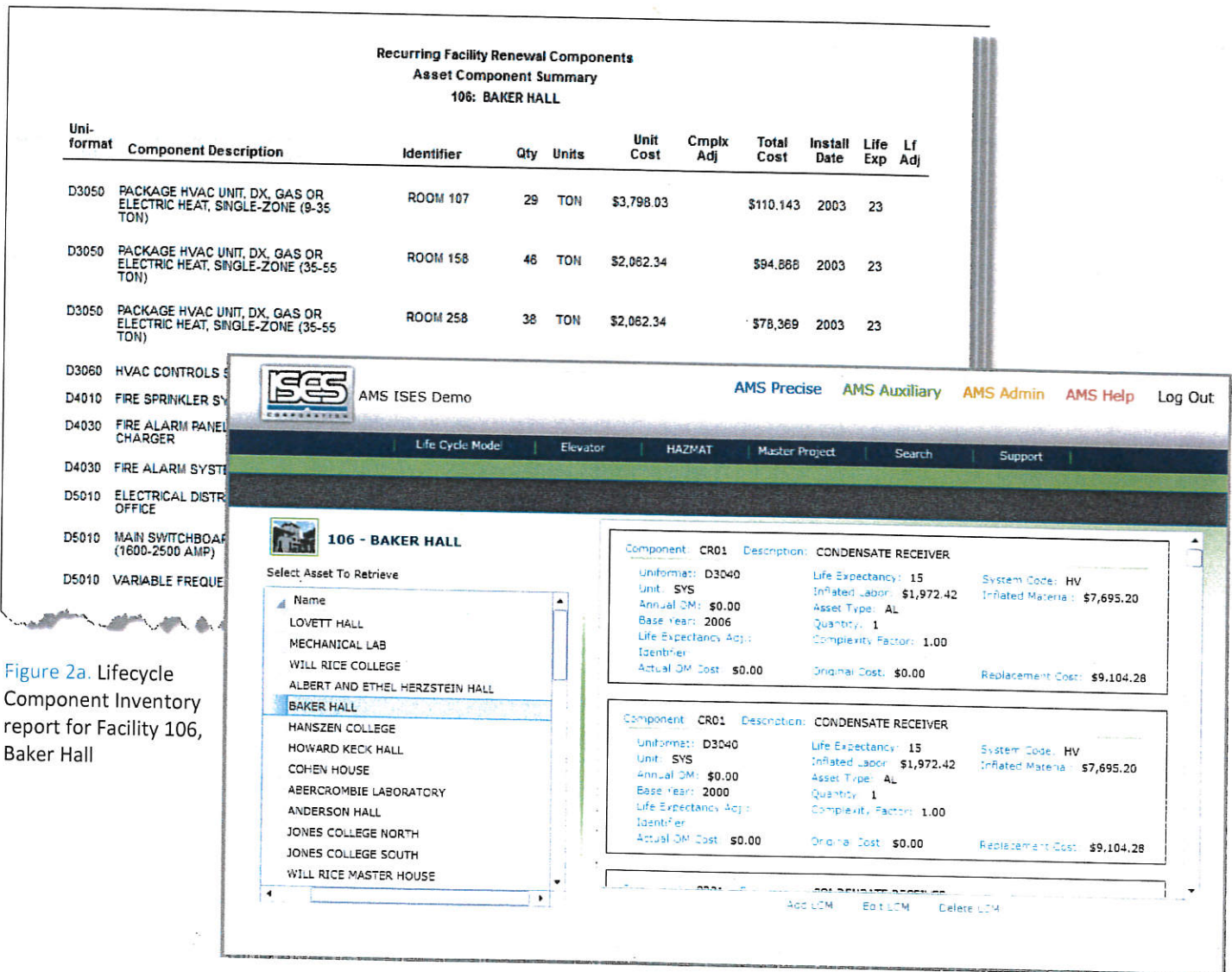


Figure 2a. Lifecycle Component Inventory report for Facility 106, Baker Hall

Figure 2b. AMS screenshot of Lifecycle Component Inventory detail.

Nonrecurring Renewal Needs

A. Management of Recommended Projects

The user can select an asset for specific data entry; enter, edit, or view various system data and settings, including photographs and CAD; print or view a wide array of reports produced by SAP Crystal Reports; generate on-the-fly search lists; and construct forecasting models of system financial data. Each deficiency is classified by the major property components identified for survey in the field. The user has the ability to edit fields and support tables to allow for owner-specified classifications to be added to the above lists.

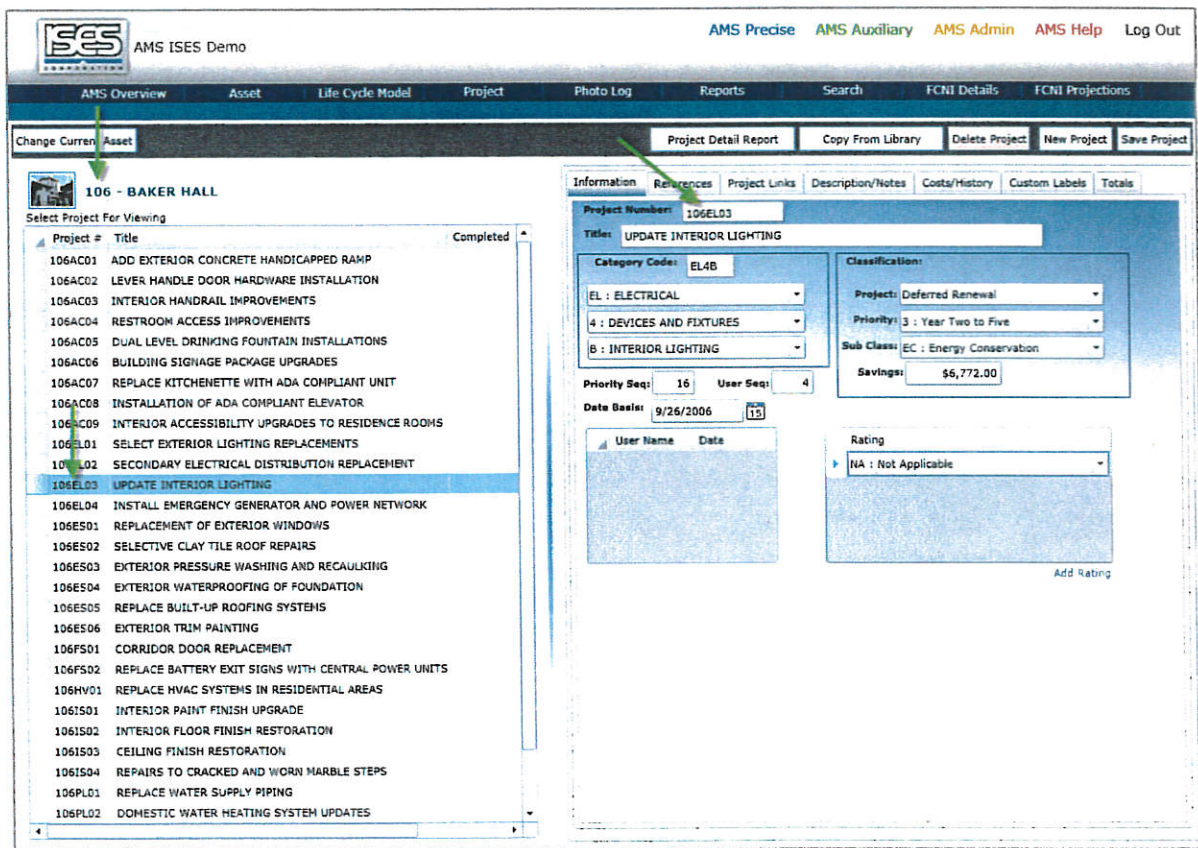


Figure 3. AMS screenshot of Project EL03 showing the Information tab of the Project Menu.

B. Cost Estimates

Costs for nonrecurring renewal needs include multiple tasks, as dictated by circumstances. All costs are estimated and then indexed to local conditions. Markups are applied as the situation dictates.

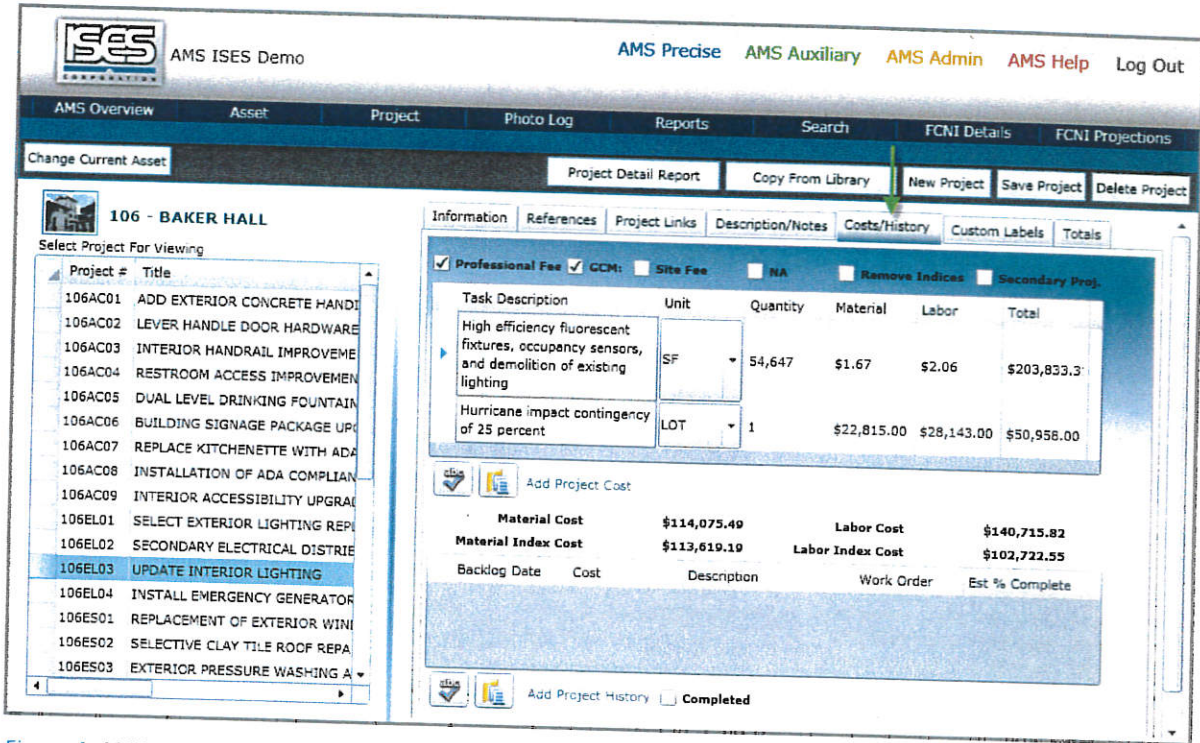


Figure 4. AMS screenshot of Project EL03's Costs/History tab.

The database also contains a History section that allows you to record any work that is performed on a project. This feature records the date, actual cost, description of work performed, work order number (if applicable) and estimated percentage of completion. If the work is 100% complete, it will remain in the database but is removed from the reporting of outstanding projects.

C. Project Totals

This summary shows original costs, inflation (as dictated by the base year of the estimate), total markups and work completed to date.

The screenshot displays the AMS ISES Demo software interface. At the top, there are navigation links: AMS Overview, Asset, Project, Photo Log, Reports, Search, FCNI Details, and FCNI Projections. Below this is a secondary menu with options: Change Current Asset, Project Detail Report, Copy From Library, New Project, Save Project, and Delete Project. The main content area is titled '106 - BAKER HALL' and features a 'Select Project For Viewing' list on the left. The list includes various project items, with '106EL03 UPDATE INTERIOR LIGHTING' selected. On the right, the 'Totals' tab is active, showing a detailed cost breakdown:

Material/Labor Index Cost:	\$216,341.74	GCM:	20%
GCM:	\$43,268.25	Inflation:	\$0.00
Inflation:	\$0.00	Base Year:	2006
Construction Cost:	\$259,610.08		
Construction Cost:	\$259,610.08	Professional Fee:	20%
Professional Fee:	\$51,922.02	Site Fee:	0%
Site Fee:	\$0.00	NA:	0%
NA:	\$0.00	Project Total:	\$311,532.10
Project Total:	\$311,532.10		
Cost To Date:	\$0.00	Est. % Complete:	0%
Project Total:	\$311,532.10		

Figure 5. AMS screenshot of Project EL03's Totals tab.

Photolog

In addition to detailed renewal information, ISES creates a full photographic record of the physical inspection of the building, which is accessible via the database. This provides visual identification of the facility, as well as documentation of renewal needs.

Figure 6a depicts thumbnails of the photographs taken by the field inspectors, together with their description and location. Clicking on the photo will generate a larger popup of the image. The photos in 6b are linked to project EL03 (Upgrade Interior Lighting), showing affected areas in the building.



Figure 6a. AMS screenshot of building Photolog.

Figure 6b. AMS screenshot of project EL03's Project Links Tab.

CAD Drawings

If drawings are provided by the Client, ISES identifies the location of nonrecurring renewal recommendations on the floor plans. These drawings are integrated with the database and included in published facility reports.

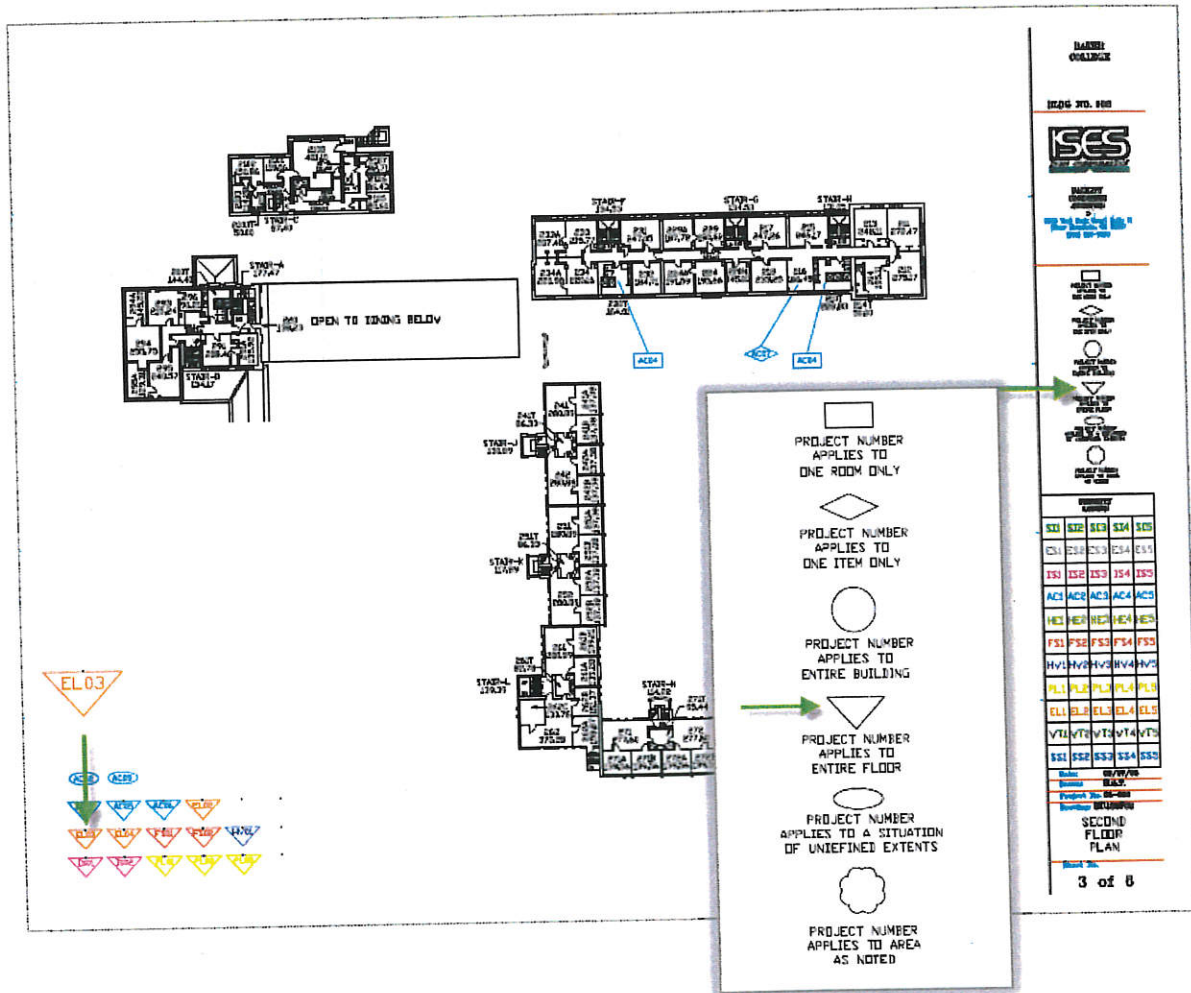


Figure 7. CAD for the second floor of the facility. The triangular icon for EL03 indicates that the renewal recommendation pertains to the entire floor.

Facility Reinvestment Modeling

Once the baseline condition of each facility has been established through the FCA process, the built-in modeling capability of AMS allows you to forecast funding requirements to meet target goals of condition. Multi-level financial modeling can be generated by deferred renewal backlog, capital renewal and selected timeframe. The information can be presented both graphically and textually and exported in standardized Microsoft Office formats. ISES will work with you to develop funding scenarios based on differing targets.

Projections can be based on renewal needs for a single building or across the entire facilities portfolio. AMS also calculates various metrics of your asset portfolio and measures the overall Facility Condition Needs Index (FCNI) against a national standard.

Figure 8 depicts economic parameters for setting up the models. It shows the various parameters that are input into the model once the existing condition has been established.

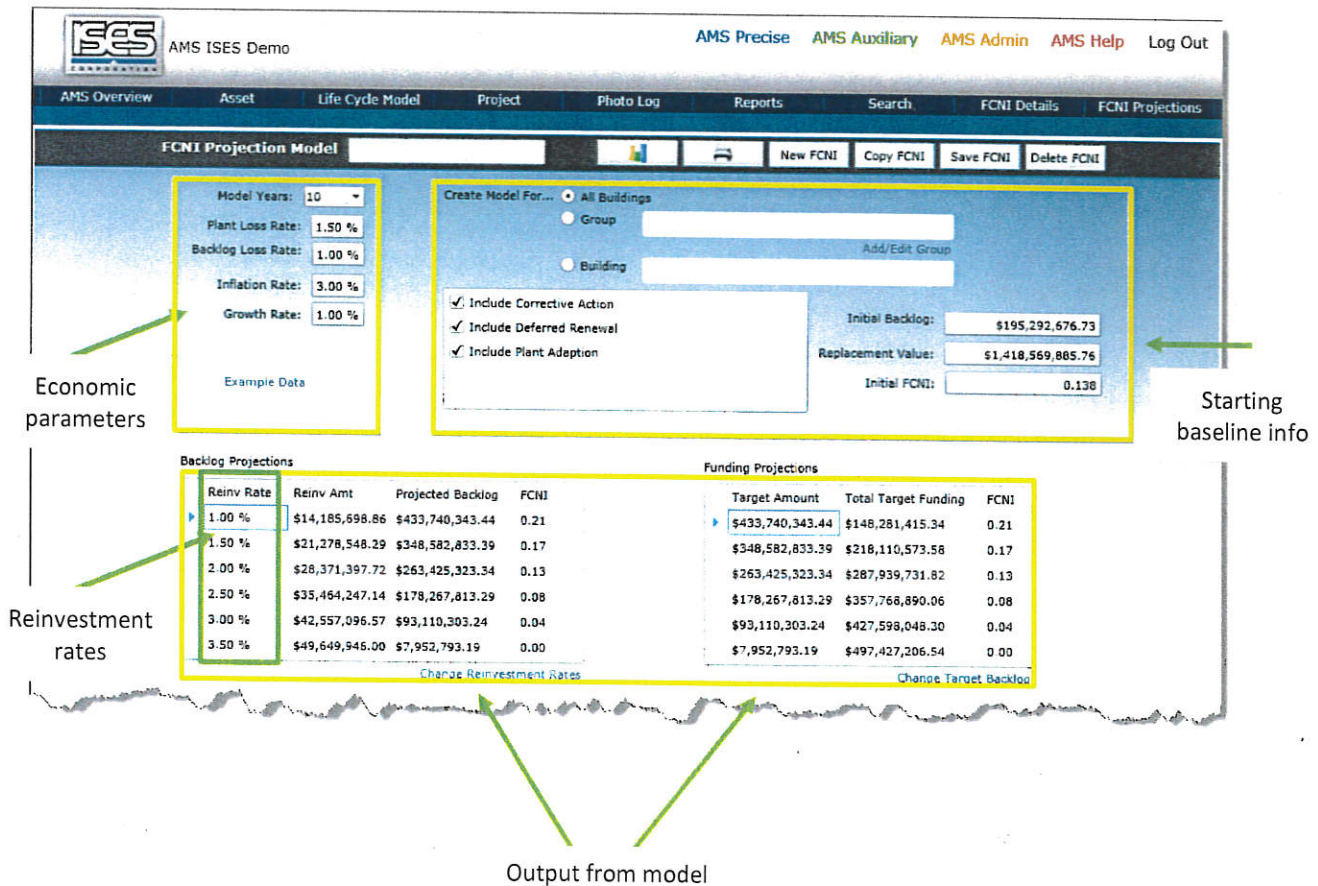


Figure 8. AMS screenshot of the Projection Model feature for the entire campus.

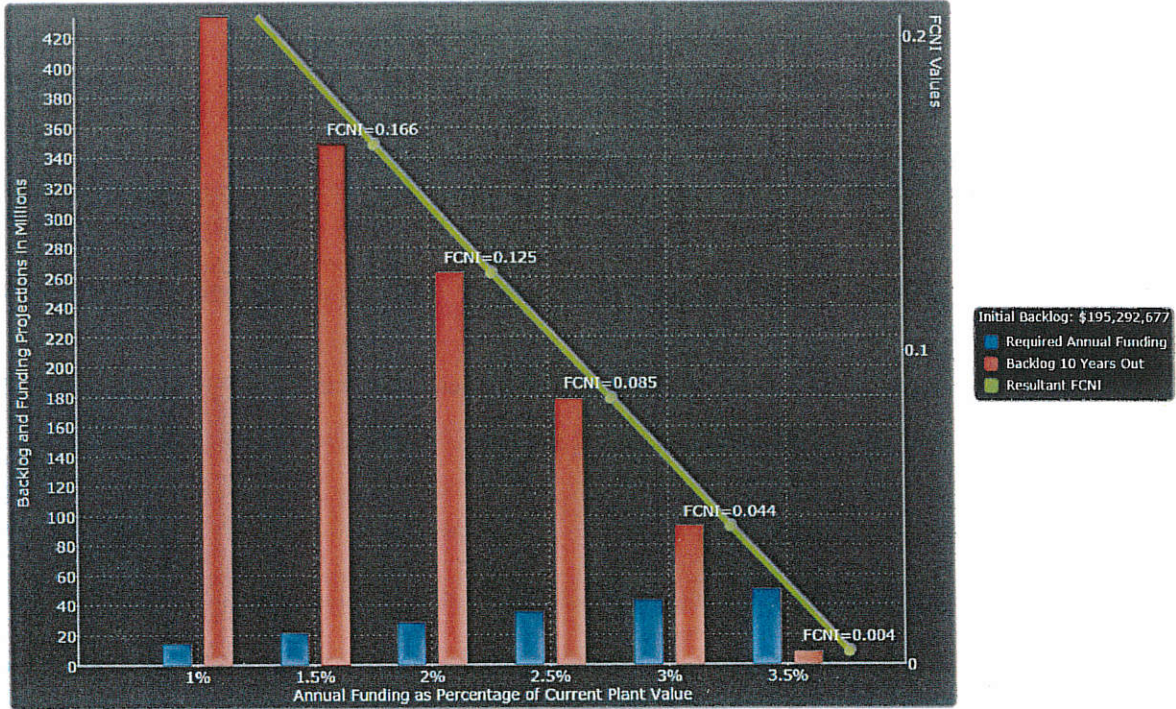


Figure 9. AMS screenshot of the Projection Model's Graphic Report.

ISES will work with you to develop several funding scenarios based on differing targets. Using the modeling function, the required levels of funding to achieve target conditions can be established.

The projections in Figure 8 are based on the facilities renewal need across the entire facilities portfolio. They are displayed graphically in Figure 9.