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# From Backlog to Blueprint

## A Strategic Approach to Deferred Maintenance

### Deferred maintenance is the single largest liability for most colleges and universities, and one of the least discussed.

Growing at an estimated 6 to 8% per year, the national backlog is estimated at $100 to $200 billion, with benchmarking now putting the average backlog at $140–$156 per gross square foot, a record high that continues to rise year over year.[1] More alarming: 60% of institutions fund less than 25% of their annual deferred maintenance needs.[2] As net tuition revenue shrinks, debt capacity tightens and enrollment pressures intensify, the compounding burden of deferred maintenance is a critical issue that if unaddressed will accelerate enrollment decline and, for some, closure.

Deferred maintenance is not merely a capital budgeting problem. It is a mission sustainability problem. **65% of students say campus facilities influenced their decision to enroll.** Institutions that treat it reactively, patching only what breaks and deferring the rest, are quietly eroding the physical and financial foundation on which their long-term viability depends.

*Deferred maintenance doesn't just correlate with enrollment problems — it actively causes them.*

This paper explores how institutions can move beyond reactive patching and treat deferred maintenance as a deliberate, long-term capital strategy. We offer a practical framework for CFOs, CIOs and boards seeking to address this challenge before it becomes a crisis.

## Start with the Data: The Facility Condition Assessment

The foundation of any credible deferred maintenance strategy is knowing what you have. A Facility Condition Assessment (FCA) is a structured, independent evaluation of every building, system and piece of equipment on campus, rating condition, estimating remaining useful life and projecting repair and replacement costs. Institutions that conduct their first FCA consistently report the same thing: the number is larger than expected, and the actual need is typically higher still as costs escalate between assessment and execution.

The FCA does more than quantify need. It gives leadership:

1. a common language for prioritization;
2. a credible basis for board engagement;
3. a framework for decision-making.

[1] *Source: SchoolConstructionNEWS, Higher Ed Capital Renewal Backlog Rises, April 14, 2026.*

[2] *Source: Inside HigherEd, The Death Spiral of Deferred Maintenance , August 6, 2025.*

When faculty, staff and trustees can see condition data mapped across the campus, the conversation shifts from "why are we spending money on this" to "where do we start." The assessment should be conducted by external specialists, refreshed every 7 to 10 years and maintained as a living dashboard updated as work is completed.

The FCA should extend beyond physical plant to include technology infrastructure. Servers, wireless networks, uninterruptible power supplies and enterprise systems are as critical to student experience as HVAC or plumbing and often just as underfunded.

## Benchmarks

Absent a completed facilities condition assessment, there are four easy-to-calculate ratios that provide an immediate read on the scale of the problem and how urgently it needs to be addressed. These benchmarks draw on widely accepted standards from APPA, Moody's and Sightlines and can be calculated from audited financial statements without specialized software or outside consultants. If your institution falls short on more than one of these measures simultaneously, the backlog is almost certainly larger than the budget reflects.

| Benchmark | Standard | Source |
|---|---|---|
| Annual reinvestment floor | > 100% of annual depreciation | Generally accepted |
| APPA reinvestment rate | 2%–3% of CRV annually | APPA |
| PARR target | > 1.0x sustained | APPA / Sightlines |
| Accumulated depreciation trigger | > 50% warrants scrutiny | Moody's HE methodology |

*Source: APPA/Sightlines and Moody's. CRV stands for "current replacement value."*

## PARR Trend

PARR (Physical Asset Reinvestment Ratio) equals annual maintenance capital expenditures divided by annual depreciation expense. A ratio below 1.0x indicates the plant is being consumed faster than it is replaced; a ratio below 0.80x is flagged as particularly concerning.

The table below illustrates what this looks like in practice for a representative institution. Note the pattern: four consecutive years well below 1.0x, with the cumulative gap between investment and depreciation reaching nearly $13 million before a single strong year in 2025, at 2.12x, begins to close the deficit. That one year of catch-up still leaves a cumulative shortfall of more than $7 million — a reminder that a single strong capital year does not undo years of underinvestment.

Institutions should track PARR not as a point-in-time metric but as a trend line. A sustained PARR below 1.0x is a leading indicator of a growing backlog, even when no single year feels alarming.

| Fiscal Year | CapEx | Depreciation | (Gap)/Surplus | PARR | Cumulative (Gap)/Surplus |
|---|---|---|---|---|---|
| 2021 | $2,446,149 | $5,985,970 | ($3,539,821) | 0.41x | ($3,539,821) |
| 2022 | $1,367,693 | $5,708,656 | ($4,340,963) | 0.24x | ($7,880,784) |
| 2023 | $2,535,031 | $5,450,968 | ($2,915,937) | 0.47x | ($10,796,721) |
| 2024 | $3,207,492 | $5,344,195 | ($2,136,703) | 0.60x | ($12,933,424) |
| 2025 | $11,150,157 | $5,271,329 | $5,878,828 | 2.12x | ($7,054,596) |
| **5-Year Average** | **$4,141,304** | **$5,552,224** | **($1,410,919)** | **0.77x** | **($8,441,069)** |

*Source: Hirtle & Co. Data is shown for a representative institution with a five-year average deferred maintenance gap of over $8 million and a PARR of 0.77x. For illustrative purposes only.*

# Accumulated Depreciation as % of Gross Plant

Accumulated depreciation as a percentage of gross plant measures how much of an institution's physical asset base has been consumed relative to its original cost. Unlike PARR, which measures the flow of reinvestment, this ratio captures the stock — the cumulative aging of the plant over time. A rising percentage signals that the institution is not replacing assets as fast as they are wearing out.

| Fiscal Year | Gross Plant | Accumulated Depreciation | Net Plant | Accumulated Depreciation % |
|---|---|---|---|---|
| FY2021 | $279,836,673 | $133,459,348 | $146,377,325 | 47.69% |
| FY2022 | $287,474,158 | $139,782,297 | $147,691,861 | 48.62% |
| FY2023 | $299,733,427 | $146,664,178 | $153,069,249 | 48.93% |
| FY2024 | $308,316,711 | $154,161,635 | $154,155,076 | 50.00% |
| FY2025 | $317,580,268 | $162,156,177 | $155,424,091 | 51.06% |

| Ratio | Signal |
|---|---|
| Below 40% | Relatively new or well-reinvested asset base |
| 40%–60% | Moderate age, watch trajectory |
| 60%–75% | Aging, reinvestment urgency growing |
| Above 75% | High risk, significant reinvestment likely overdue |

*Source: Hirtle & Co. Data is shown for a representative institution for illustrative purposes only. Ratios are representative of general higher education guidance and not attributable to one sole source.*

In the example above, the ratio crossed 50% in FY2024 and reached 51% in FY2025, moving from the "watch trajectory" zone toward the threshold that warrants more urgent attention. For context, an institution at 65% or above has typically deferred so much reinvestment that the cost of full remediation will exceed what the operating budget alone can absorb, making capital campaigns, quasi-endowments or debt increasingly necessary.

# Building a Disciplined, Multi-Year Funding Strategy

Once institutions understand the scale of their need, the question becomes: where does the money come from? No single lever is sufficient. Addressing deferred maintenance requires a disciplined, multi-pronged approach that builds capacity over time. The four major funding sources are the operating budget, debt, gifts and government grants. It is critical that you are able to develop a realistic funding plan from these sources. The APPA/Sightline rule of thumb is that every $1 of deferred maintenance today typically costs $4–$5 to remediate in the future once deterioration compounds.

## Budget for Depreciation

The starting point is the goal of budgeting for depreciation, a practice that creates institutional discipline and a non-negotiable floor. To be successful you must proactively increase the Repair and Renovation (R&R) budget annually and then, in time of economic uncertainty, **protect it** aggressively. When the R&R budget is treated as a strategic priority, institutions may need to make reductions in salary and program budgets instead of yielding to pressure to decrease funding for repairs and renovations. While this seems difficult in the short term, the long-term benefit of this decision on institutional sustainability is enormous.

## Moratorium on New Space

The first strategy to address deferred maintenance is to stop building new space and focus on taking care of the space you have before. Every new building added to the campus inventory creates a maintenance obligation that will compound over time. Institutions that continue to expand their footprint while their existing

plant deteriorates are, in effect, borrowing against a future they cannot yet afford. A formal moratorium on new construction — until the deferred maintenance backlog reaches an acceptable Facility Condition Index (FCI) threshold — is not a concession of weakness. It is a demonstration of financial discipline that boards, rating agencies and donors increasingly respect.

## Establish Quasi-Endowments and Scale Capital Reserves

Operating margin generated through discipline should not sit idle in cash. Directing excess margin into a quasi-endowments designated for deferred maintenance allows those funds to be invested to grow over time. These funds are board-designated, not donor-restricted, which provides flexibility.

Critically, capital reserves must be scaled over time. A reserve that remains flat while the physical plant grows offers false security. As the institution adds new buildings and systems, the reserve should grow proportionally, sized and invested in coordination with a thoughtful capital plan.

## Embed Ongoing Maintenance in Capital Gifts

A best practice is structuring significant building gifts to include a R&R or Operations & Maintenance component. These funds can cover future renovation costs and offset ongoing custodial, maintenance and systems expenses for the building. Many colleges now request R&R components as part of all large-scale building gifts. Making this practice mandatory represents a significant opportunity to address the long-term maintenance burden.

## Diversify Funding Sources

Beyond operating dollars and debt, there are a range of alternative funding mechanisms worth considering:

**GRANTS —** Facilities-focused grants (e.g., for laboratory upgrades) are a viable option, though increasingly competitive

**VENDOR PARTNERSHIPS —** Dining services and campus store providers often have capital available to refresh facilities in exchange for contract renewals

**ENERGY-AS-A-SERVICE —** Third-party providers fund geothermal, solar or efficiency upgrades; institutions may pay a percentage of the cost savings

**P3 (PUBLIC-PRIVATE PARTNERSHIPS) —** A more complex but increasingly viable structure for housing, dining or other capital-intensive facilities

**SALE OF EXCESS PROPERTY —** Strategic asset sales with proceeds reinvested in deferred maintenance can be highly effective



## WHY THE ENDOWMENT SHOULD NOT BE YOUR PRIMARY FUNDING SOURCE

*When budgets are tight and deferred maintenance feels urgent, the endowment can look like an obvious solution. Yet, it is important to keep in mind that is not the intended use. Endowments are heavily restricted by donor intent and legally designated for specific purposes such as scholarships, faculty positions and research programs Redirecting those funds to deferred maintenance is not simply a policy choice; in many cases it is not legally permissible.*

*Beyond restrictions, the deeper structural problem is one of asset class mismatch: the endowment is an appreciating asset designed to generate perpetual income. Using it to fund a depreciating capital asset trades long-term financial capacity for a short-term fix, reducing future endowment income and making the underlying budget imbalance worse.*

# The Strategic Imperative

Every dollar of deferred maintenance that goes unfunded today becomes a larger, more expensive problem tomorrow. The compounding nature of physical and financial neglect means that institutions which continue to treat infrastructure as a lower priority are not simply deferring costs — they are quietly undermining the conditions that make their mission possible.

The institutions that are best positioned for the future will be those that commit to knowing what they have, building disciplined multi-year funding plans, diversifying capital sources and making both the risks and the rationale for action clear to boards and campus communities. Transparent communication about priorities and tradeoffs can build the support needed to sustain those plans over time.

The path is not easy and there is no single right answer. Every institution must navigate its own constraints, politics and opportunities.

Consistent, disciplined investment in campus infrastructure is not a distraction from mission. It is the foundation of it. For institutions ready to take the next step, Hirtle & Co. is available to discuss how investment strategy and capital planning can work together to support long-term financial sustainability.




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John is a Director and Endowment Specialist with Hirtle & Co.. He has over 35 years of higher education experience. From 2003 until 2014, he was the Chief Financial Officer and Treasurer of Bryn Mawr College. As the Treasurer at Bryn Mawr, he oversaw an $850 million endowment, managed cash, issued debt and was responsible for budgeting and strategy planning. At Bryn Mawr, he assisted in modernizing and diversifying the endowment. During the latest recession, Bryn Mawr was one of only a few colleges whose debt rating was upgraded. Prior to Bryn Mawr, John spent 15 years in various financial roles at the University of New Hampshire. John started his career at Coopers & Lybrand. He earned a Masters in Finance from Bentley University and a B.A. in Business Administration from the University of New Hampshire.



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