DEFERRED MAINTENANCE PROJECT PLAN

SAN DIEGO STATE UNIVERSITY

APRIL 2021

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DEFINING THE PROBLEM

Similar to other public universities throughout the country, San Diego State University has a deferred maintenance backlog due to a lack of adequate state funding to address the normal maintenance and capital renewal needs, which have accumulated over a number of years.

In 2019, SDSU, together with the California State University (CSU) system, contracted with Intelligent Systems and Engineering Services (ISES) to conduct a Facility Condition Analysis (FCA) for all of the state-funded buildings. ISES identified a deferred maintenance and capital renewal budget of over $552 million that they concluded should be spent over the next 10 years in order to address the identified outstanding issues.

The costs included in the FCA address the following:

- **Recurring Deferred Renewal:** Major building components that have already exceeded their useful service life and Non-Recurring Corrective Action, such as repairs needed for unanticipated deficiencies (approximately $280 million).
- **Recurring Projected Renewal:** Major building components that will be at the end of their useful service life within the next 10 years (approximately $159 million).
- **Non-recurring Plant Adaptation:** Costs of complying with current codes that were not applicable when the building was initially constructed (approximately $114 million). The required annual allocation would be $55 million per year to address the currently identified deferred maintenance backlog.

It is important to note the **FCA costs mentioned above are only associated with state-funded academic and administrative buildings and do not include infrastructure,** such as utilities and roadways, or costs associated with program enhancements that meet current academic or mission-driven requirements. While the auxiliaries and enterprise entities also have deferred maintenance backlogs, they are able to depend on self-support funds for financing. The major building components included in the facility condition analysis are those systems related to accessibility, building exterior and interior, plumbing, Heating, Ventilation, and Air Conditioning (HVAC), fire/life safety, electrical, site, vertical transportation, and health.

CURRENT PORTFOLIO

132 Buildings[1]

Approx. 57% of Buildings = **40+ Years old**[3]

$3 Billion+ in Assets[2]

69 Buildings Over 5,000 Gross Square Feet

3.9 Million Gross Square Feet[1]

6+ Miles of Roads and Paths

53 Miles of Infrastructure

Average Building Age = **43 years**

63 Buildings Under 5,000 Gross Square Feet

54,000 Square Feet of Parking Lots

48% of Buildings = Below Average or Worse Condition

[1] Total buildings/Gross Square Feet maintained by Facilities Services at SDSU, SDSU Imperial Valley, and research stations at Santa Margarita Ecological Reserve, and Mount Laguna Observatory. This number does not include housing, parking, Associated Students, Aztec Shops, or SDSU Research Foundation facilities.

[2] Estimated average total project cost in 2020 (total Gross Square Feet x $800/Gross Square Feet)

[3] Date of construction is only documented for 93 of the 132 buildings.

GUIDING PRINCIPLES

1. Integrate building condition considerations into university planning activities to maximize SDSU's limited financial resources.
2. Balance individual user, college, and department needs with impacts to core university functions to leverage limited financial resources for maximum effectiveness.
3. Align facilities investments to university strategic priorities.
4. Identify potential funding sources to avoid adding to the deferred maintenance backlog.

PRIORITY WORK PLAN SUMMARY

Below is the priority scale used to evaluate individual deferred maintenance list items:

Priority 1: Currently Critical / Life Safety / Code Compliance

Significant impact to the mission of the University. Require immediate action to return a facility to normal operation, stop accelerated deterioration, or correct a cited safety hazard, especially those conditions which potentially impact an entire Campus or pose a significant risk to health and safety.

Priority 2: Potentially Critical

Will become Priority 1 within a year if not corrected expeditiously. Currently experiencing intermittent interruptions, rapid deterioration, and potential safety hazards.

Priority 3: Necessary / Not Critical

Conditions require reasonable prompt attention to avoid predictable deterioration or potential downtime. Costs of project increase if deferred further.

Priority 4: Recommended / Programmatic

Sensible improvement to existing conditions. Projects will either improve overall usability and/or reduce long term maintenance.

DEFERRED MAINTENANCE CATEGORIES

Accessibility: For people with disabilities

Exterior: Includes windows, doors, finish materials, roof, etc.

Interior: Architectural finishes

Plumbing System: Includes piping, drainage, plumbing fixtures, etc.

Heating, Ventilation, and Air Conditioning (HVAC) System: Includes air handlers, air distribution systems, fans, chillers, etc.

Electrical System: Includes switchgear, transformers, and electrical wiring

Immediate Building Site: Includes walkways, stairs, ramps, and railings adjacent to building

Vertical Transportation: Includes freight and passenger elevators and lifts

Health Hazards: Includes any known hazardous materials or other health issues such as asbestos, mold, etc.

Campus Wide Utility Infrastructure: Includes telecommunications, central domestic water, sewer, storm drain, chilled water, heating hot water, steam, electrical, and natural gas systems

HISTORICAL SUMMARY

Historical Funding for State-Managed Deferred Maintenance and Infrastructure Repairs and Capital Renewal

Fiscal Year	State Deferred Maintenance	State Infrastructure	State Major Capital	SDSU President's Budget Advisory Commitee (PBAC)	Total	Notes
2009/2010	$0	$0	$0	$0	**$0**	
2010/2011	$0	$0	$57,169,000	$1,800,000	**$58,969,000**	Storm Nasatir construction, Comm AC
2011/2012	$0	$0	$0	$0	**$0**	
2012/2013	$0	$0	$2,583,000	$3,000,000	**$5,583,000**	Storm Nasatir equipment, LL elevator, steam lines
2013/2014	$0	$0	$0	$1,000,000	**$1,000,000**	Painting of buildings
2014/2015	$0	$5,883,000	$8,732,000	$2,500,000	**$17,115,000**	Engineering Roof, Love Library Roof and elevator; HVAC Controls; Music HVAC, SSE roof; Storm Nasatir
2015/2016	$1,300,000	$1,000,000	$34,736,000	$1,959,000	**$38,995,000**	Chiller plant repairs (Fowler) & loop connection; IVC Substation, Priority Roofs; EISC, Exterior painting, Window washing, Gum removal, PSFA feasibility study
2016/2017	$2,000,000	$1,822,000	$0	$1,142,069	**$4,964,069**	HVAC Controls (PSFA); IVC North Classroom; Exterior painting, PSFA fume hood repairs
2017/2018	$0	$1,140,000	$0	$4,075,000	**$5,215,000**	Drain Pipe Replacement, Extend Fire Sprinkler; Exterior painting, Window washing, HVAC replacement (NLS), Alley repair (behind OHA)
2018/2019	$6,932,000	$0	$0	$2,180,000	**$9,112,000**	Electrical Switchgear Replacement Phase 1, Tennis court resurface, Exterior painting, Deep clean classrooms, LL roof replacement
2019/2020	$20,000,000	$0	$33,212,000	$12,300,000	**$65,512,000**	Electrical and critical utilities repair; Don Powell; PSFA Ennrionmental Condition Improvements, Deferred Maintenance Funding
2020/2021	$0	$0	$0	$0	**$0**	No funding due to state and campus resource cuts
Rolling Totals	**$30,232,000**	**$9,845,000**	**$136,432,000**	**$29,956,069**	**$206,465,069**	
Rolling Annual Averages	**$2,519,333**	**$820,417**	**$11,369,333**	**$2,496,339**	**$17,205,422**	

PROPOSED FUNDING STRATEGIES

Over the past several years, **SDSU has identified several strategies and solutions to fund the university's deferred maintenance.** One of the primary solutions SDSU has long relied on is CSU annual capital funding and one-time state allocations. In addition, SDSU has supplemented these dollars by soliciting available discretionary money through the President's Budget Advisory Committee (PBAC) and by utilizing reserves if/when there have been system or infrastructure failures. The average annual allocation for deferred maintenance has been approximately $18 million per year for the past 10 years (please refer to the Historical Summary section on pg. 12).

While SDSU has not made any recommendations at this time, many other state-funded institutions across the country have augmented their state allocations and campus-based discretionary dollars with the following:

- Space-use fees
- Student fees
- Grant funding
- Donor contributions

During the coronavirus (COVID-19) pandemic, the university also received funding as part of the federal Coronavirus Aid, Relief and Economic Security (CARES) Act, which has provided resources to address matters that impact health (e.g., HVAC system upgrades).

SDSU will continue to explore additional options, consider unconventional methods, and observe other institutions' successful practices to address the university's deferred maintenance backlog. For example, SDSU has noted how other campuses have also developed incentive-based budgeting models that link facility and space needs with the resources and services required to support those efforts. This not only allows for a mechanism to address deferred maintenance, but also links required resources to program expansion needs. Some campuses further fine-tune these models to address different investment levels required for various types of facilities (i.e., intensive laboratories as opposed to lecture style classrooms and office buildings).

GLOSSARY

Current Replacement Value: The estimated cost to to replace a building in kind under current economic conditions and construction costs.

Deferred Maintenance: Delaying repair and/or replacement of renovation or replacement of aged or deficient equipment or building systems based on a lack of available resources (funding and personnel) to complete the needed work.

Deferred Maintenance Backlog: An accumulation of aged or deficient equipment or building systems that require repair and/or replacement. Includes building elements that are beyond their useful life or are not functional.

Expected Life Cycle: Each building system or component (e.g., electrical system or roof) has an expected number of years during which it should reliably perform its function. After the specified number of years, it is expected that the system or component will be refurbished, repaired, or replaced.

Facility Condition Assessment: The California State University (CSU) hired a third party engineering firm to conduct facility condition assessments. The consultant team evaluated facility conditions across the 23 campuses and identified deficient conditions, items each campus needed to address immediately, and items each campus should plan to address in the next ten years to reduce deferred maintenance and make informed decisions regarding facility renewal and replacement.

Facility Condition Index: The Facility Condition Index (FCI) is the ratio of the deferred renewal costs to the current replacement value.

Facility Condition Needs Index: The Facility Condition Needs Index (FCNI) is the life cycle cost comparison. The ratio of renewal costs over ten years to the current replacement value of the asset.

Facility Renewal Needs: Deficiencies identified during field inspections for components or systems that are past their useful life, damaged, or not working properly. One-time investments are needed to bring components or systems up to like-new standards. This investment and work will replenish the lifecycle of existing assets but does not address programmatic, function, use changes, or upgrades to the building.

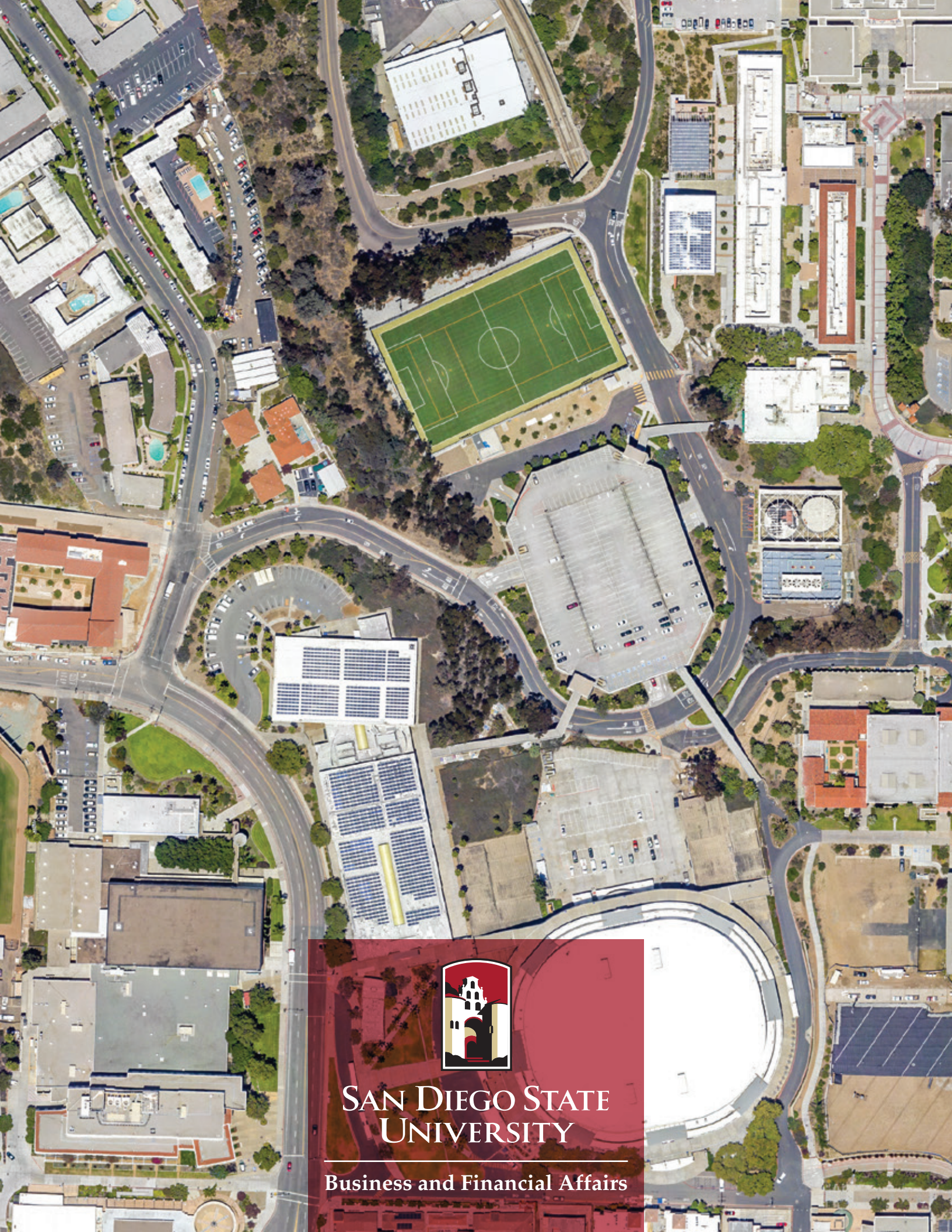
Heating, Ventilation, Air Conditioning (HVAC): Building systems that heat, cool, and provide ventilation (air) to a building.

Non-Recurring Renewal Needs: One-time facility repairs and improvements to accommodate codes and/or standards that change over time (e.g., accessibility for people with disabilities or life/safety elements such as fire alarms). These repairs and/or upgrades may also be required if the building's programmatic, function, or use changes.

One-time Funding: Funds that are only available one time, and will not be available in the future as they are non-renewable.

PBAC: The President's Budget Advisory Committee (PBAC) is composed of students, faculty, staff, and administrators. The committee reviews University Operating Fund (UOF) funding requests and makes recommendations to the president for approval.

Recurring Renewal Needs: Cyclical (on-going) needs associated with replacement or renewal of building components and systems. In an ideal scenario, each of these components or systems has an expected lifecycle and should be replaced when it nears the end of this timeframe.



San Diego State University

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