Facilities and Services

Facilities and Services
2009-2019

Figure 5.4: Public Institutions with 12,000+ FTE Students

<table>
<thead>
<tr>
<th>Number in Report</th>
<th>Avg gsf Per FTE</th>
<th>Avg Maintenance Level</th>
<th>Productivity Factor</th>
<th>gsf/FTE Percentage Change from 05-06</th>
<th>Level/Volume Percentage Change from 05-06</th>
<th>Productivity Factor Percentage Change from 05-06</th>
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<tr>
<td>49</td>
<td>65,362</td>
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<tr>
<td>51</td>
<td>69,025</td>
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<td>47</td>
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<td>66,216</td>
<td>1.85</td>
<td>3.39</td>
<td>1.33%</td>
<td>-1.87%</td>
<td>3.19%</td>
</tr>
</tbody>
</table>

Avg gsf/FTE and Avg Maintenance Level

BE BOLD. Shape the future. | All About Discovery!

Live Learn Thrive

One Team/One Goal
Facilities and Services

Hadley Hall
(Administration Building)

Skeen Hall
(Background)
Senior Vice-President of Business, Finance, and Human Resources Jennifer Taylor hired me at New Mexico State University in December of 2008. The Office of Facilities Services had suffered through a public and egregious scandal and was working towards addressing an audit with more findings than any of us had ever seen. I have been asked how much longer we will talk about the scandal and subsequent audit, and I hope FS never forgets. We manage large amounts of resources in a tempting environment, our work is known for developing and being dependent upon long-term relationships, and the tasks involve emergency needs that beg for expediting, so it is important that we operate “above reproach” with the highest ethical standards.

We set about building a team that would create an organization that is “Built to Last,” a term borrowed from the book of the same name by Jim Collins. Our guiding thought was to build processes that were self-sustaining and foster succession planning so that the best practices we adopted and put in place were perpetuated and continuously improved upon.

Facilities and Services consists of the PROJECT DEVELOPMENT AND ENGINEERING group that manages both Capital Construction and small projects across the NMSU System; FACILITIES OPERATIONS, which is organized in traditional shops and is responsible for the physical operation and maintenance of NMSU Las Cruces Instructional and General buildings; and ENVIRONMENTAL HEALTH SAFETY AND RISK MANAGEMENT that is responsible for environmental compliance, risk management, and the health and welfare of NMSU faculty, staff, and students at twelve Agricultural Science Centers and four Community Colleges as well as on the main campus in Las Cruces.

Oversight of the business operations is provided by FACILITIES ADMINISTRATION, the SUSTAINABILITY MANAGER partners with our units to make sure that sustainable practices are incorporated into all of our activities, and the UNIVERSITY ARCHITECT AND CAMPUS PLANNING OFFICER oversees campus planning and the NMSU Master Plan. The NMSU FIRE DEPARTMENT is a full-service fire department that provides fire suppression, emergency medical services, hazardous material response, and technical rescue as well as medical standby for all athletic games, special events, and concerts.

If you look around NMSU, the administrative side of the house is loaded with people learning through on-the-job-training. In contrast, Facilities and Services has three Ph.D.’s whose degrees and training are in their field; Katrina Doolittle, Ph.D., Executive Director for Environmental Health, Safety, and Risk Management; Dale Harrell, Ph.D., P.E., University Engineer, and Patricia Hartell, Ed.D., Executive Director of Administration. Dale is also a licensed electrical engineer. Heather Zack Watenpaugh, AIA, NCARB, AUA, University Architect and Campus Planning Officer is a registered architect who studied urban planning and historic preservation in Europe, and has both a Bachelor of Science and Master of Architecture (MARCH) in architectural design, with a graduate certificate in historic preservation.
Alton Looney, Executive Director, Project Development and Engineering has nearly forty years of experience in the construction industry with both public and private firms. Tim Dobson, CEFP, is also an engineer and managed maintenance at the White Sands Missile Range prior to joining NMSU. NMSU Fire Chief Johnny Carrillo retired from the City of Las Cruces with over twenty years of experience, and his Deputy Fire Chief, Louis Huber, has over thirty years of experience with numerous agencies including eight with Homeland Security.

Facilities and Services won the APPA Award for Excellence in 2016. This is the highest organizational honor and APPA does not give them away; it is a significant achievement. The award video is here: HTTPS://WWW.YOUTUBE.COM/WATCH?v=N8bkCmnCC3U

Our submission is online: HTTPS://FACILITIES.NMSU.EDU/APPA-AWARD/

The last ten years have been quite the ride, and we are proud of our team. Our organization has had a singular program that has served us well for these ten years: **We rigorously adhere to our core function of facilities management and fanatically practice continuous improvement.**

Recognizing the importance of remembering where we come from and the overarching criticality of keeping our focus on where we are going, we prepared documentation each year that builds upon previous publications in much the same manner that we take the organization to progressively higher levels. Thus, to produce this summary of our decade was simply a matter of compiling earlier achievements with more recent ones. Much of this material is adapted from **Facilities 2018**, a document that was provided to President Floros and Chancellor Arvizu.

When I interviewed for this position, I submitted the criteria for the APPA Award for Excellence to the search committee chair Tim Nesbitt, telling him that we would use the document as a guide for building a high-performing organization. We won the award seven years later and have updated our efforts towards each criterion annually. Since an organization can resubmit for this achievement every five years, I hope that NMSU Facilities and Services will consider submitting again in 2021.

Regardless of what the future holds for us all, it had been my privilege to lead Facilities and Services from 2009 to 2019, and I wish only the best for everyone on the FS team and for NMSU.

Sincerely,

Glen Haubold
Associate Vice President, Facilities and Services
2009-2019
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NMSU LEADS 2025 ALIGNMENT TOOL
Facilities and Services overarching goal has been to create and sustain a high performing organization that is "Built to Last," a term borrowed from the book of the same name by Jim Collins. We rigorously adhere to our core function of facilities management and fanatically practice continuous improvement.

Loss of institutional memory when key people depart is a challenge for any organization. Our approach to succession planning emphasizes the development of our future leaders and the establishment of processes that preserve institutional memory as well as providing guidance and direction for problem-solving.

Sometimes it seems that NMSU just holds on to everything. Going far beyond shared governance, we debate at length whether or not freshmen will be required to live on campus, argue over staffing levels, smoking policy, and if we should have “walk only” or “dismount zones” as if no other schools have tried these things successfully.

In most every case, people are resistant to change, preferring the status quo to doing something different. Sometimes, though, if you want to run with the big dogs, you need to do what the big dogs do.

Facilities and Services adopts best practices and keeps up with the rapidly-changing environment in higher education through professional development. We have many initiatives and projects underway, opportunities to take advantage of, and challenges to overcome. FS emphasizes data-driven decisions and measures outcomes with metrics, and we commissioned numerous plans and studies that were used to develop the 2017-2027 Master Plan that connects to Vision 2020. The additional material is either referenced or listed on the FS website.

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Facilities and Services Award for Excellence Photo
2016

Aggie Memorial Stadium
Facilities and Services

MAJOR ACCOMPLISHMENTS 2009-2019

CREATION OF A STRATEGIC PLAN AND THE APPA AWARD FOR EXCELLENCE

In spring of 2007, the New Mexico State University (NMSU) Physical Resources division consisted of the Office of Facilities Planning and Construction (OFPC), the Office of Facilities and Services (OFS), Environmental Health and Safety (EHS), the Fire Department, the Police Department along with Parking and Transportation Services, the Office of Space Management, and the Office of Real Estate. Throughout that year, allegations of inappropriate behavior played out both publicly and privately, and many of the component units were relocated to other departments.

By the end 2008, Senior Vice President for Business and Finance Jennifer Taylor had the beginnings of a new leadership team in place. We took our cue from the association for higher education facilities professionals, APPA, and decided to follow the criteria for the Award for Excellence, a blueprint for organizational excellence adapted from the Baldridge criteria. As detailed in the Outline for Excellence submission, James and Susan Cole with CommTech Transformations were brought on board to help us refine our strategic plan.

In 2010, Environmental Health and Safety, and Space Management were transferred back to the department. Katrina Doolittle led the Internal Advisory Committee and our unit adopted a new name, Facilities and Services (FS). The Fire Department moved back in 2012. In 2014, Athletics Custodial and Maintenance were relocated to FS, and in 2015, the reporting line of the Auxiliaries custodial staff as well as their maintenance helpers were changed to FS as part of the

In 2016, NMSU Facilities and Services was honored with the APPA Award for Excellence. The Award for Excellence is APPA's highest institutional honor and provides educational institutions the opportunity for national and international recognition for their outstanding achievements in facilities management. The award is designed to highlight the essential role of facilities operations in the overall institutional mission and vision. Award for Excellence nominations are evaluated in the areas of leadership, strategic and operational planning, customer focus, information and analysis, development and management of human resources, process management, and performance results. Nominated institutions also submit to a site review conducted by an evaluation team from the APPA Awards Committee. The Award for Excellence designation is valid for a period of five years.

We are proud to list our accomplishments from this last decade, and we detail the challenges and opportunities the organization faces as it strives to attain even higher levels of excellence over the next ten years.

**Satellite Chilled Water Plant and Thermal Storage**
As the Center for the Arts (CFTA) was being planned, concern was expressed by the utility operators that the capacity of the NMSU chilled water plant might be exceeded, as a new bookstore and the second phase of the Chamisa residence hall expansion were on the drawing board. As a result, GLHN Architects and Engineers was engaged in 2008 to create a Utility Development Plan that would assess the capability of the infrastructure to meet the future needs of the university, and their recommendations included the construction of a satellite chilled
water plant that would supplement the existing plant. Ultimately located on Stewart Street across from Aggie Health and Wellness, the new satellite chilled water plant houses two large chillers and ice storage. These chillers began producing chilled water in 2012.

A 2,500-ton centrifugal duplex chiller cools water to 41 degrees Fahrenheit, and this chilled water is then pumped to buildings across campus for use in the heating, ventilation, and air conditioning systems to cool the buildings. A second system consists of a 1,000-ton glycol chiller containing ethylene glycol to cool water to 23 degrees Fahrenheit for ice production. The ice is generated at night during El Paso Electric's off-peak billing hours, stored in 72 large tanks behind the facility, and melted during the day as it passes through a heat exchanger. The resulting chilled water is used to cool buildings on campus.

The satellite plant construction was accompanied by installation of a steam turbine chiller at the central plant, and two separate rate negotiation cycles with El Paso Electric produced the net result that NMSU pays an incredibly low 4/10 of a cent for off-peak power. When coupled with the Ameresco Performance Contract, NMSU has saved millions of dollars in energy consumption though careful planning.

**Completion of the 2017-2027 Master Plan**

An executive steering committee led by University Architect Heather Watenpaugh, University Engineer Dale Harrell, and Senior Administrative Assistant Olga Holguin worked throughout 2016-2017 to deliver the New Mexico State University Master Plan for the next ten years.² This plan will guide the physical development of the NMSU System for the next decade.

As written in the Preface:

> Because of the decline in enrollment coupled with the corresponding reduced staffing levels and the expiration of the 2006-2016 plan, the time was right for NMSU to develop a new physical and facilities Master Plan that complements and supports the University's current academic goals and enrollment projections. An Executive Committee was assembled, and as guiding principles were developed, the

team quickly realized that NMSU possessed a wealth of subordinate plans that would provide the needed direction. In addition, a formal comparative space analysis was commissioned to be used in developing physical needs. This study confirmed what many already suspected: NMSU has ample space for its projected 18,000 students. After conducting a staffing study, Deloitte, a consulting and advisory firm, reported that NMSU was staffed correctly, but organized inefficiently; the same may be said of the space at NMSU.

This 2017-2027 plan supports Vision 2020 and incorporates subordinate plans that consider utility development, deferred maintenance, residential living and housing, dining services, transportation and parking, Arrowhead Center, Inc., and Aggie Development, Inc., while advocating for a reduction in net overall square footage. The plan’s focus is on diversity, inclusion, and student recruitment and retention through assembly of amenities that provide state-of-the-art support for these initiatives while supporting the philosophy of “graduate, get a job, give back,” sponsored research, innovation and engagement, and philanthropy.

The current plan takes a realistic view of enrollment projections and seeks improved space utilization to maximize resources. Also, the Master Plan recognizes the role that attractive spaces and student amenities play in recruitment and retention.

A university system the size of NMSU might expect to pay in the neighborhood of a million dollars for a comprehensive Master Plan. Less than 10% of that amount was spent by engaging local architects to provide illustrations and layout services, hiring writers, using a proofreader, and organizing listening sessions. Opportunities for input included a joint Town Hall meeting with Arrowhead Research Park and Aggie Development to present the Master Plan to the staff, faculty, students, and community.

In addition, numerous supporting plans were adopted as appendices or incorporated into the plan. The Heritage Preservation Plan Volumes I and II, Housing Master Plan, Food Service Master Plan, Transportation Master Plan, Utility Development Plan, Structural Integrity Study for NMSU Utility Tunnel, Water Master Plan, Site Electrical Infrastructure Master Plan, DACC Facilities Master Plan, Fire Protection and Fire Life Safety Assessment, and the Storm Water Management Plan were employed in the preparation of the 2017-2027 Master Plan.

In 2013, after hearing a presentation from the Counselors of Real Estate at a conference, the firm was selected to prepare a report detailing options for NMSU’s vast landholdings.  

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3 The Counselors of Real Estate, https://www.cre.org/
recommendations of the Counselors of Real Estate report were later implemented, such as the first-year residency requirement and the sale of the property on Wisconsin Avenue.4

**RISK MANAGEMENT TO ENVIRONMENTAL HEALTH AND SAFETY**

Risk Management transitioned from Procurement Services to Environmental Health and Safety in early 2018. This move was outside of and in addition to the Transforming NMSU reorganizational process as funds or personnel were not transferred.

Procurement Services had experienced a series of personnel changes, and Facilities and Services thought that by absorbing Risk Management responsibilities, significant improvements in the program could be made while filling a critical role. This transfer was completed with existing staff knowing that additional personnel would need to be requested later once the value of an active and robust risk management program is demonstrated. Risk Management previously did little more than claims processing, and our vision is to move towards Enterprise Risk Management.

Some of the early successes have been the elimination of $8,649 in worker compensation coverage premiums for the PSL balloon contract, improved health insurance benefits at lower cost for inbound international students, and the recovery of $18,000 in unpaid expenses on the loss at Knox Hall when a fire sprinkler head failed. A duplicated charge on one of the many invoices for our various “insurance” coverages was identified that prevented an overpayment of $55,000.

An easy-to-navigate Risk Management website was created that provides quick access to valuable information and resources. New areas of exposure have been identified that should be included in our annual risk survey to ensure coverage at the appropriate level. One of the more promising improvements has been the synergy that this has created with Space Management, the Office of Real Estate, and the University Architect; because each group maintains an official building list that is used for official purposes, we have been able to begin categorizing, tracking, and reconciling all university properties.

The high-level objective of this effort is to establish an Enterprise Risk Management program that will guide and provide assistance to the overall compliance effort at NMSU.

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NMSU FIRE DEPARTMENT
NMSU operates a fire department that also receives local funds as a component of the Doña Ana County system. A Chief, Deputy Chief, two Captains, and approximately 22 students make up the Fire Department staff.

One of our major goals has been to improve the fire prevention program, and the Insurance Service Office (ISO) rating goes hand-in-hand with this as a mechanism for measuring performance.

When Chief Carrillo was hired in 2013, our ISO rating was a 5/9. Needed improvements, challenges, and obstacles were delineated, and plans to accomplish the objective were set in motion. We added NMSU’s first Deputy Fire Chief and two day-time career Firefighters. We subsequently improved not only response time but also increasing the level of experience and expertise. In the 2014 ISO survey, the NMSU Fire Department advanced to a 3/3X PPC rating.

With a larger team and more experience, we identified how the rating could be improved further. The Fire Department developed an inspection and preventative maintenance program for the NMSU system, and tests and inspects fire hydrants, emergency eye-wash stations and showers, fire alarms, fire sprinklers, standpipes, fire extinguishers, hood systems, and alternative extinguishing systems. A system-wide fire department compliance statement was authored and adopted that was sent to system satellite campuses and auxiliary units. An independent fire protection engineering firm was engaged to prepare a Fire Protection Master Plan for the Las Cruces Campus.

Since then, we have made significant improvements to campus fire protection systems, water distribution systems, fire suppression abilities, and radio communication systems. Processes put in place to make NMSU a safer place to work and live include: hot work permits, impairment processes, fire watch procedures, and building safety inspections. In 2017, the NMSU Fire Department was re-affirmed by the New Mexico Public Regulation Commission and its Fire Marshall’s Office as being recognized as the Authority Having Jurisdiction (AHJ) for NMSU and a model for other fire services in New Mexico.

Effective July 1, 2018, NMSU was recognized for achieving an ISO Public Protection Classification (PPC) of a 02/2X. This rating is a testament to NMSU’s commitment to minimizing risk by taking meaningful steps to ensure the safety of everyone at NMSU.
A new effort in 2018 will install emergency stair chairs in several locations throughout the NMSU main campus and develop a uniform emergency evacuation planning system.

BUILDING REPAIR AND RENEWAL (BRR) FUND MANAGEMENT
NMSU receives $5.2 million in recurring Building Repair and Renewal (BRR) funding annually. There was a time when there was a basis for this amount that harks back to the older formula funding that used the Instructional and General (I&G) square footage to establish the amounts. At the time, the goal was up to 3% of replacement cost for a 25-year-old building, but the square footage was frozen at the 1994 levels, funded at 70% of replacement cost and not adjusted for inflation, and the formula used an extremely low $85 per GSF for classroom space and $103 per GSF for lab space. There have been several attempts to resurrect and fully fund the BRR formula, but these have fallen short due to the lack of appropriations.

In 2010, the accounting rules guiding BRR expenditures were removed at the state level, leaving institutions free to spend BRR in any manner in which they saw fit. NMSU was the only institution in the state of New Mexico that left the BRR rules in place, although after NMSU received praise for doing so from the Higher Education Department and the Legislative Finance Committee, UNM returned to allocating their BRR in the former manner, as did others.

BRR fund management is based around four sectors, and each year the University Budget Committee approves sector allocations in Environmental Health and Safety, Major Maintenance,
Infrastructure, and Capital Improvements. These sectors are designed to ensure that BRR is used for the purposes intended, and in 2015, the University Budget Committee agreed that the Capital Improvements sector should be capped at $500,000 so that additional infrastructure projects could be undertaken.

The FS BRR Committee maintains the rolling 3-year BRR list with a dozen or so infrastructure categories such as chilled water, roadways, elevators, electrical systems, etc. These projects are updated several times each year as needs are aggregated with other projects. For example, we will consolidate electrical system and sewer improvements in the areas around the new Devasthali and Juniper Halls.

The Capital Improvement Sector is set aside to provide for new programs and initiatives. Each year, the AVP of Facilities and the University Architect meet with Deans and Vice-Presidents to discuss facility needs, from Capital Outlay to BRR to maintenance and operation services.

These Capital Improvement requests are then summarized and presented to the Senior Vice-President for Administration and Finance and the Executive Vice-President and Provost for review and prioritization.

The projects in the Environmental Health and Safety, Major Maintenance, and Infrastructure sectors are taken from the many plans and studies that have been prepared to prioritize infrastructure repairs. By consolidating projects, capping Capital Improvements, and focusing on renovations of existing space, NMSU has been able to meet the asset stewardship target.
One such rule is that the staff in PDE are not allowed to be paid from state funds. Like the other large institutions in New Mexico, NMSU thus funds PDE through a percentage of project costs for providing construction administration. This funding covers the planning, design, construction oversight, contract administration, warranty management, and the filing and maintenance of the record documents, which are then maintained on a shared drive for accessibility to users and archival of records. Also, PDE ensures compliance with the Department of Labor Public Works Act and the Construction Industries Division permitting and licensing requirements.

While we strive to complete every job in an accelerated manner, arbitrage requirements for our bond projects are generally to expend no less than five percent of the proceeds for the project within six months and at least eighty-five percent of the proceeds within three years after the applicable bond proceeds are available for the project.

We changed our delivery model in PDE several years ago from separate design and construction groups to a model known as concept-to-completion, where a project management team oversees the project from start to finish. Using this model accelerated our project delivery, and we are well thought of by the governing agencies across the state for improving delivery time of our capital outlay projects. In response to concerns that construction in higher education takes too long and costs too much, we work diligently to accelerate schedules, lower expenses, and set realistic expectations, and we demonstrate results through our metrics.

PDE has approximately $160 million in project valuation in progress at any given time.
SPACE BENCHMARKING STUDY

In the fall of 2016, Facilities Space Planning and the University Architect worked with a team from Huitt-Zollars and Facilities Programming to create the Comparative Analysis and Space Benchmarking with Peer Universities. This survey was conducted with oversight from the Associate Vice President for Facilities and Services with assistance by the Assistant Vice President for Institutional Analysis.

Facilities and Services leveraged our contacts and ultimately was able to obtain participation from 13 of our 15 peer institutions. We made the draft results available to each university for review and reconciled all data to account for the differences in organizational structures. Having such a high percentage of peers participate was critical to the success of this study and a testimony to the engagement of NMSU staff in higher education facilities management. We were able to obtain this high response rate because the other higher education facilities professionals placed a high degree of trust in us to generate correct and useful data.

The Space Benchmarking Study provided the foundation for the 2017-2027 Master Plan and serves as the go-to document for college and administrative square footage evaluations. Analysis of the campus and comparisons to peers are reported by assignable square footage for college, building, faculty, and student. This document is a reference for the best decisions for shared spaces, capital outlay needs, improvements in space utilization, and requests for selective reductions.
ENERGY PERFORMANCE CONTRACT

NMSU partnered with Ameresco to perform an Investment Grade Energy Audit (IGA) of all NMSU campuses to become more energy efficient and promote sustainability. The initial audit included the facilities at Alamogordo, Carlsbad, Doña Ana Community College, Grants, the remote Agricultural Science Centers, and all buildings on the main campus. Ameresco’s audit identified $45 million in potential energy-related projects. The university decided to move forward on a select group of those projects to validate the concept.

Ameresco and New Mexico State University then executed a performance contract that is on target to save more than $1.3 million annually. This contract was completed in December 2015 and allowed NMSU to generate 51 percent of its needed electrical power during the 2016 fiscal year, meaning that the university is producing more electricity than it purchases from El Paso Electric.

NMSU also reduced electrical and natural gas consumption while lowering the production of 24.9 million pounds of carbon dioxide. The project included upgrades of more than 39,000 incandescent and fluorescent lamps that reduced electricity consumption and cooling requirements, and made improvements to heating, ventilation, and air-conditioning systems.

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5 Press release used as reference, https://newscenter.nmsu.edu/articles/view/12243/nmsu-saves-big-on-energy-contract
A performance contract is a public-private partnership where infrastructure improvements are made at no cost to the taxpayer with the private entity assuming risk by guaranteeing the savings. NMSU blazed the trail in New Mexico for projects that leverage private investment to reduce infrastructure costs.

We recently received updated proposals from the performance contractor for new investments at the community colleges. However, a particular challenge is that our utility rates are so low that the payback on energy efficiency improvements exceeds the life of the investment.

**MAINTENANCE AND CUSTODIAL SERVICES CONSOLIDATION**

In 2007, Athletics paid for maintenance services on a billable basis, and custodial services were outsourced; use of a lower cost custodial firm led to an outbreak of the MRSA virus in the locker-room. After that, Athletic custodial services were provided by Special Events.

In September of 2014, the delivery model was changed for Athletics. Facilities and Services provide and manage the custodial and maintenance with a rate per square foot under a service level agreement (SLA), and this amount is calculated at the same cost as for the I&G facilities.

This methodology allows for services to be paid up front, eliminating budget uncertainty.

Housing and Residential Life and the Corbett Student Union previously provided oversight to their custodians and some unlicensed “handyman” type positions. This arrangement led to duplicative service response when the unlicensed staff first tried to correct a problem and subsequently had to call for FS licensed personnel on a billable basis.
This reorganization was well underway when Deloitte made the recommendation to consolidate these services for efficiency during the Transforming NMSU process, and in July of 2015, Facilities Services began managing the maintenance and custodial for Housing and Residential Life and Corbett Student Union.

These services are also calculated with a rate per square foot, allowing the maintenance and custodial costs to be established at the beginning of the fiscal year.

As the following graphs illustrate, these organizational moves have certainly worked as intended, yielding substantial dollar savings through reduced overhead and economies of scale. The green horizontal line is the average for all of the institutions in APPA, the association of higher education facilities professionals, and the clusters are the six regions of universities the association.

The preceding chart shows the four-year cost per gross square foot (GSF) for maintenance, and the two that follow are the Custodial Cost per GSF and Grounds Cost per GSF.

It is noteworthy that the custodial costs are slightly above ½ of the average cost of the APPA institutions. This is combination of both low wages and an efficient department, but it is also indicative of the fact that the increases in minimum wage have not arrived at NNSU. This is showing with an increase in turnover.
During 2018, Facilities and Services engaged Hunter Consulting and Training and Duane Hickling and Associates to conduct benchmarking and make efficiency recommendations for both the custodial and maintenance departments. These studies provide detailed information about staffing and funding levels, and the executive summaries are available on the FS website.\(^6\)\(^7\)

Four of the most relevant comments from these two studies were:

- “It appears the campus may be burdened with an overabundance of building space;
- Space capacity beyond the needs of the current student population and research mission add per student cost to maintaining the facilities portfolio;
- Historical Available FTEs are less than Authorized FTEs due to vacancies, lack of hiring, and unnecessarily slow hiring process; and,
- Historical hiring process and (the) hiring freeze have hindered timely replacement of workers.”

Recommendations from these two studies are being implemented with follow-up sessions scheduled to measure the improvement.

Outsourcing has been evaluated through preliminary conversations with Sodexo and Compass Maintenance Group; Compass Group services at least one area hospital. As can be seen from the charts, NMSU benchmarks staffing levels regularly, is very competitive, and thus the operational savings available from outsourcing would be minimal. Additional information from our 3rd party benchmarking firm, Sightlines, suggests that our funding may be insufficient to provide the service that NMSU requires to support recruitment and retention efforts.

The Public Works Act requires that state wage rates be paid on construction and maintenance labor when the contract valuation exceeds $60,000. This would most likely negate any savings on maintenance, as the dictated wage rates exceed NMSU compensation. Permits and licenses are also a challenge, but if these could be overcome, there might be an upfront payment in the neighborhood of several million dollars if multiple functions were bundled, and possibly more if dining services were included. Eastern Kentucky University recently outsourced Grounds and Custodial in return for a $3 million one-time grant, although that school is much larger than NMSU. The downside is that this payment is monetization of assets such as the vehicle, tools, and equipment, which would require repayment when the agreement terminated.

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Regardless, the Sodexo agreement with NMSU ending in spring of 2019 has been renewed for another year, and this would be an appropriate time to evaluate this option should NMSU desire to consider an RFP similar to the one issued at Texas A&M for foodservice, maintenance, custodial, and grounds. On the other hand, NMSU contracted with Sodexo Grounds Services for many years until 2009 when NMSU returned to in-house operations, saving more than $100,000 annually; we believe that recurring savings tend to be a better long-term proposition than one-time cash payments. AVP Haubold has substantial experience with these arrangements, both as a university employee and as an independent consultant.

There is a good discussion of the pros and cons of outsourcing in a recent article in APPA Facilities Manager Magazine. Our favorite quote is, “There are many high-achieving facilities management organizations in higher education that have the talent in-house to achieve performance excellence. They may need a little help in certain areas, but they are smart enough to identify that and deal with it.”

We think that comment typifies NMSU FS.

Campus appearance is vital to recruitment and retention, and the comparative data shows that we should be spending slightly more on this effort, not less.

__Campus Signage Improvements__

In 2011, University Architect Michael Rickenbaker and Associate Vice President of Facilities and Services Glen Haubold recommended that NMSU building signage be removed from buildings and a standard building sign be used instead, as building letters have a tendency to be blocked.

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by tree growth and require substantial maintenance. In addition, the street signs were to be changed to crimson with white letters with the NMSU logo. The NMSU Campus Planning Committee agreed with both moves, and the President approved.

The color scheme affectionately known as “the mosaic” has been retired, and new branding put in place. Replacing the signs with the new branding will be yet another initiative that will again improve the appearance of the campus.

**VEHICLE REDUCTION**

NMSU adopted a vehicle reduction plan in 2009 to save both dollars and energy. FS reduced the vehicle count significantly and began to deploy smaller turf vehicles and golf carts. The pictures to the left compare the FS parking lot over the years.

Doubling up creates other efficiency challenges and places an extra demand upon the supervisors and lead personnel to schedule their work.

**AiM and Assetworks**

AiM by Assetworks software replaced a home-grown legacy work order and facilities financial system in 2009. Assetworks is one of the leading systems for facilities management, and NMSU has barely scratched the surface in terms of what can be accomplished with this software. For example, some AiM systems were either under development at the time of the implementation or were not purchased in order to reduce the cost. The Project Module is a case in point in that the work order system was modified to handle projects as opposed to the purchase and implementation of the Project Module. As a result, an inordinate amount of manual activity must occur in the tracking of projects, placing a burden on the project managers.

The current initiative is the deployment of handheld devices, and we are working through the various stages of implementation with AiM IQ and Fire/GO. AiM Fire/GO O&M and Purchasing is a role-based mobile product that will allow the technicians to assign work visually on a map, record time, attach photos, record notes and create new requests.
CAMPUS CLEANUP

In 2008 there was a location on “A” Mountain known as the “Boneyard” where old equipment was taken instead of being sent for surplus properly. We decided that this was hardly the example that a land grant university should set and were able to clean it up through a cooperative effort with Environmental Health Safety and Risk Management.

A similar condition also exists at the site of the old geothermal well greenhouses, and FS is working with the College of Engineering to vacate and demolish this mess.

ENGINEERING STUDIES, FS LIBRARY, AND DELTA T

FS started the FS Library as a repository to store supporting plans and studies that have been used to provide stewardship to the NMSU system facilities. The Heritage Preservation Plan Volumes I and II, Housing Master Plan, Food Service Master Plan, Transportation Master Plan, Utility Development Plan, Structural Integrity Study for NMSU Utility Tunnel, Water Master Plan, Site Electrical Infrastructure Master Plan, DACC Facilities Master Plan, Fire Protection and Fire Life Safety Assessment, and the Storm Water Management Plan were all employed in the preparation of the 2017-2027 Master Plan and used to create the zero based budget Building Repair and Renewal (BRR) Plan.
In addition, the Office of Space Management maintains the record drawing for the NMSU system on a shared drive, nicknamed Delta-T after the firm that structured the drawing file. This electronic drawing file allows any user with access to view the NMSU record drawings.

**JUST IN TIME MATERIALS**

We regularly use benchmarks to guide improvements, and several years ago identified that our *time-to-close* for work orders increased significantly when materials had to be ordered. The metric *time-to-close* is the length of time from when a customer service request is made until the work order is complete, or “what the customer sees.”

To shorten this time, we worked with Financial Systems Administration (FSA) and developed a warehouse improvement plan. We knew that the University of Oklahoma was successfully using *just-in-time* (JIT) inventory, and we visited their operation as a team to see how they do it.

JIT is a methodology for increasing efficiency and decreasing waste, and materials are then purchased as needed, thus reducing inventory storage costs. In other words, inventory is not stored waiting for a need to arise. This new methodology eliminates the cost of housing inventory and reduces losses from obsolescence, breakage, and theft. Facilities and Services (FS) has successfully moved the Electrical Shop to a JIT inventory process. Where it makes sense, FS will be transitioning other FS shops to JIT within the next few months.
Skeen Hall
College of Agricultural, Consumer, and Environmental Sciences
NMSU Budget Model

It is the unanimous belief of the FS leadership team that NMSU is in need of a different budget model that will drive positive behavior. Whether zero-based, RCM, or some other methodology, the budget model is not conducive to accountability and excellence and in our case, requires us to focus excessively on earning revenue.

The NMSU budget model has a significant impact on the Facilities and Services funding and operation. Budget reduction exercises in 2010, 2011, 2015, 2016, and 2017 – most every year – were generally across-the-board, thus penalizing well-managed departments that were already controlling costs. In addition, a large component of the FS budget is based upon recovery or recharge, and this amount was mostly held constant over the years, meaning that the pressures to earn budget were increased.

To help improve the overall university budget, salary savings were held centrally. For example, when FS starts an assistant director above entry level, these funds must be pulled from internal budget. Then, when the person leaves, the difference between entry and actual salary paid is swept back to the central budget, and the process starts all over again. This mechanism has created a significant erosion of budget for a large department like FS and our salary dollars are now an excessively large percentage of our total budget, making the purchase of materials a challenge.
This chart above showing **Campus Density** is similar to the one displayed earlier illustrating the users of space. When FS benchmarks with peers using staff per gross-per-square-foot (GSF), we are efficient; when we use staff-to-student, we do not compare so well. It should be obvious that the ratio of staff, students, and faculty to space – density – is not where it needs to be.

The AVP of Facilities felt so strongly that NMSU was mired in an untenable budget model that he proposed a research paper to APPA. This proposal was accepted and in 2018, Glen Haubold and David Reynolds published *Issues with Recovery and Recharge in Higher Education*. This research was so well received that it was added to the APPA Body of Knowledge, the text that serves as the foundational text for APPA’s Institute for Facilities Management, as well as the body of knowledge needed to know to pursue APPA’s Certified Educational Facilities Professional (CEFP) credential and the Educational Facilities Professional (EFP) certificate. There are many other ways to accomplish the goal of funding non-maintenance work in addition to the one used by NMSU.

NMSU has consistently provided NMSU Facilities Operations with around $1 million dollars in Building and Repair and Renewal funds. With a new budget model, this might be reviewed for a permanent transfer.

**Comprehensive and Competitive Compensation**

When we teach Supervisor’s Toolkit, there is a PowerPoint slide where we talk about reasons for poor performance:
1. No rewards for good work;
2. No repercussions for poor performance; and
3. People see that nothing happens one way or the other.

FS recognizes performance with newsletters, but this is the only tool in our toolbox other than discipline for poor performance. There are three significant challenges or opportunities as relates to compensation in FS:
1. The Deloitte study and the subsequent Transforming NMSU process reduced layers and supervisory span while recommending that the number of directors be reduced through attrition. Consequently, a large number of middle-level managers across campus found employment elsewhere, mostly the ones that were especially attractive to other organizations. While FS fared fairly well, the result is that NMSU is a much more challenging place to work, and the overall performance level of many units has declined. In addition, those mid-to-upper level managers and directors we count on the most have not seen merit raises or inline increases in years.
2. The licensed trades positions have reached the point where we are unable to recruit and hire plumbers and HVAC personnel. Electricians and building trades positions are not quite as difficult but are still challenging to fill. FS is fortunate to have a methodology that
allows us to reduce the positions to unlicensed facilities technicians, pay for training, licensing, and then promote those who complete the requisite years and pass the test, but this is more expensive than it would be if we simply could hire licensed trades personnel.

3. The City of Las Cruces has established a minimum wage, or rather, a sequence of progressive increases. At the beginning of the decade, the custodial turnover was an astonishing 2%, but now we find ourselves training custodians for the city, county, and Las Cruces public schools, all of which pay more than NMSU and offer similar benefits. As with the licensed trades, this is penny-wise and pound-foolish.

**Holistic Information Technology (IT) Support**

The recently completed efficiency studies for our custodial and maintenance departments indicated that accelerating our program to equip staff with handheld devices for inspections and work orders could be justified through the savings. Environmental Health Safety and Risk Management and the Fire Department would also benefit greatly from an investment in technology resources. With the recent reductions and moves in ICT, we have been unable to identify funding but are continuing to purchase new systems as we can through operational funds. We list this because there would be a return on investment if we can obtain the additional resources to make investments.

We have worked with Fastenal on potentially outsourcing the warehouse in part or in whole. Facilities and Services was not part of the testing for the new procurement system, and we recently discovered that AiM is not currently compatible with Jaegger, our new procurement system. This is important because it will negate some of the benefits if we use Fastenal. The past few years have seen a lot of discussion about the physical organization in ICT with little results.

**Hazardous Materials Disposal**

Funding for hazardous materials disposal can be accomplished in one of two general ways:

1. The department or user pays for disposal of the waste they generate, or
2. Disposal of the hazardous waste is managed and funded centrally.

The advantage to the first method is that costs are allocated where incurred. The downside to this is that users can be inadvertently encouraged to pour chemicals down the drain. When costs are managed centrally, the departments are
generally more amenable to proper disposal, but then everyone pays for institutional compliance.

In the 2012 timeframe, an effort to reduce the F&A rate led to a $100,000 reduction in EHS&RM hazardous waste disposal budget. The budget has never been restored despite a proposal to increase the Plant O&M Costs to make up the difference.

**NON-INSTRUCTIONAL REPAIR AND RENOVATION FUNDING**

The Counselors of Real Estate wrote in their full report:

However, we respectfully challenge some of the methods used to make education at NMSU more affordable. Beginning with the simple example, keeping on-campus parking costs low does not substantially inure to the benefit of low-income students. Rather, it encourages or abets off-campus living, fosters a commuting mentality, and projects an indifference to the college experience that many view as a critical part of a university’s ultimate success.

In the more complex matter of low-cost student housing, a low-cost imperative invariably leads to lower-quality housing, resulting in the proverbial ‘race to the bottom.’ This renders a university less competitive in attracting higher-quality students, which in the end diminishes the value of the institution. These low-cost policies are, in our view, unnecessary and counter-productive. An on-campus market-rate charge, based on what financially capable students can afford, should be set for all students. Lower-income students should then be awarded need-based housing scholarships.  

Auxiliaries such as the Corbett Union, Pan American Center, Residential Living and Housing, the Golf Course, and Athletics generally are required to be self-supporting through revenues and student fees. This graph to represents the funding gap for facilities repair and renovation in these areas. This shortfall is not limited to Residential Living and Housing; the Corbett Student Union, Pan Am arena, and the Athletic facilities are all significantly below repair and renovation targets.

The Residential Living and Housing maintenance project at $11 million will be a beginning for catching up on stewardship, and this effort should be maintained. Repairs were completed in the summer of 2018 and are scheduled to continue in 2019.

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Athletics has many unaddressed needs, the most concerning of which are the ADA improvements that are needed at Memorial Stadium and in Pan Am and the failing roof at Coca Cola. The University Architect has been working with Athletics on an Athletic Facility Master Plan that is almost complete. There is additional discussion about funding sources in subsequent sections.

**Utility Tunnel Deterioration**

The campus has approximately 15,000 linear feet of tunnel that conveys steam, chilled water, fiber, domestic water, natural gas, and electricity. Structural integrity inspections in 2013 and 2016 revealed numerous deficiencies, and repairs began in 2015. Facilities and Services has commissioned a study and an update, and expenditures to date have been $2.7 million spread over three projects.
The study categorized the areas for repair into the following sections:

**Category A:**
Highest priority sections of the tunnel that are in danger of imminent failure or are severely deteriorated.

**Category B:**
High priority sections of the tunnel that are compromised and require prompt repairs before increased deterioration occurs.

**Category C:**
Medium priority areas that should be monitored and repaired within three to five years.

**Category D:**
Low priority where the condition is isolated and not likely to spread or affect the structural integrity of the tunnel.

The average repair cost of Category A is $2,525 per linear foot. With approximately 1,420 linear feet of category A level deficiencies, the estimated repair cost is $3,585,500. There are approximately 2,820 linear feet of category B level deficiencies with an estimated repair cost of $7,120,500.

We have started a program to reduce driving on pedestrian walkways and over the tunnel and are adding xeriscape in areas around the tunnel to reduce water intrusion, two activities that contribute to the concrete deterioration. It is imperative that we arrest the deterioration, as there are many other critical infrastructure needs.

**Roadway Condition**
In April of 1999, NMSU executed a road exchange agreement with the New Mexico Department of Transportation such that NMSU owns all roadways within the triangle bordered by University Avenue, Interstate 25, and Interstate 10, with the exception of Sam Steel and Triviz. The maintenance is coming due on these streets, just as with the tunnels.

As can be seen in the chart about targets, the strategies that have been employed in Facilities and Services are beginning to pay off, as asset stewardship and reinvestment are hitting the bottom of the target. We have changed the way the repair and renovation funds are allocated,
and we group expenditures to support the state funds. For example, Building Repair and Renewal funds are used to replace and enhance infrastructure in advance of the new art facility.

The Performance Contract also helped reduce the backlog. A public-private partnership is an innovative relationship where the private partner assumes some or all of the risk and seeks private financing. In our case, subordinate lien bonds were employed, and the Performance Contractor guaranteed the energy savings.

The need to catch up on the roads remains and is significant. We just applied for and received a grant from the NMDOT local government road fund for $127,000, and when coupled with our $250,000, the project will replace about three long blocks of Espina at the west entrance to campus. We are evaluating the roadways and streets and creating an assessment and repair plan.

**Team 2 - Administrative Assistant Coverage Ratios**

Deloitte Findings

**Synergies with EHS&RM, Fire Department, and Police Departments**

Environmental Health Safety and Risk Management (EHS&RM) as well as the Fire Department report to Facilities and Services and the Police Department reports directly to the Chancellor. When we worked through the Transforming NMSU organizational review, there was a discussion about the synergies that might be available with a Public Safety Department but no action taken.

Facilities and Services takes efficiency seriously. When Deloitte conducted the Activity Analysis during the Transforming Process, FS was so efficient with administrative coverage ratios that the
unweighted average had to be normalized without our data.\textsuperscript{10} Certainly, FS has 100 custodians that skew this metric, but that is definitely not the entire story, as FS centralized into a small business center years ago to reduce administrative costs.

Also, the culture in EHS&RM and in the Fire Department is one of proactivity and prevention, and we think this philosophy would transfer to the Police Department with positive results.

\textbf{Space Management, Reduction, and Utilization}

Given the student, staff, and faculty reductions of the last few years, NMSU has an abundance of space. Also, utilization of the space we have could be improved. NMSU has a Space Committee that is making inroads, but there is an opportunity to do more.

This chart is from Sightlines and our maintenance and custodial consultants have commented on this challenge as well. The bottom line is that space has increased while enrollment has declined.

Space management is such a “hot button” with the Higher Education Department that the Chancellor signed a letter last summer committing to hold square footage to 2015 levels.

Consider a room with 100 seats and an 8-hour day. Utilization is the number of hours that the classroom is in use, expressed as a percentage. Fill ratio is the number of seats occupied when the classroom is scheduled. Mostly, the goal is to achieve optimal scheduling by matching the physical classroom size to the number of students enrolled on the class.

Facilities is an active player in these efforts because optimizing space means that we can target our improvements to space and technology for maximum benefit. In addition, we are using central scheduling to provide information to emergency responders about where activities are taking place on campus.

The ultimate goal of the Space Committee is to establish a system of utilization targets and provide incentives to reach those goals, and Facilities and Services has developed a space reduction and demolition plan.

**Thoughtful Alternative Funding Sources**

The land-grant mission has been described as a figurative “three-legged stool” representing teaching, research, and extension. FS supports this mission and Vision 2025 by creating a physical environment conducive to instruction, installing reliable infrastructure that supports research, and partnering with extension to develop facilities that support public service. We believe that modern and attractive facilities play a critical role in recruitment, student amenities promote retention, and robust infrastructure with flexible space attracts researchers. When we project the currently available funding sources, we think that NMSU will find it challenging to compete with the many universities that are constructing new academic, residential, and research facilities and that alternative funding should be sought.

The Performance Contract was a herculean effort that was not well understood at the state level, and the initiative took from 2009 until the contract was signed until 2015. In fact, the project was
made possible only by a legislative change that we championed. Performance Contracting is now recognized as a viable alternative financing method in the state of New Mexico as a result. FS supports Aggie Development at every opportunity, and we helped evaluate outsourcing the residential living and housing operations to EdR Collegiate Housing in toto until the economics and long-term commitment of the proposal proved impractical and unwise.

There are different alternative financing models that monetize any revenue stream. Universities have received upfront payments for outsourcing dining, custodial, grounds, and maintenance, and have cashed in on their housing stock in return for an operating agreement. Ohio State and the University of Oklahoma essentially sold their utility plants; Ohio State received $1.105 billion in 2017 for theirs, notwithstanding that the university will incur charges in excess of $55 million annually. In an earlier agreement, Ohio State privatized their parking for a whopping $483 million. Both of these are 50-year agreements.

We are somewhat more conservative. As with the EdR evaluation, we foresee significant changes in higher education over the next 50 years, and many of these monetization strategies may not work out. We know that Oklahoma State University has already had issues with their utility plant concession.

INTO is an organization that focuses on expanding higher education opportunities for students worldwide and developing new programs to integrate international students into the academic community through partnerships. INTO will help build physical capacity in classrooms, offices, and residence halls to support significant enrollment growth, and we think conversations with this firm could be revisited as a way to expand enrollment and improve facilities.11

FS led the way with the Performance Contract, and we evaluated a waste-heat boiler installation that could generate electrical power from the production of steam. We had thought that that there might be an opportunity to couple some form of power generation with the Agricultural Educational Facilities improvements as a way to make use of the manure generated in agricultural operations. While this idea turned out not to be practical, it illustrates the way we think.

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11 INTO company website, https://intoglobal.com/the-into-advantage
We do not see that there is an immediate “quick fix” and have more traditional ideas. One way to generate revenue that has gained traction across higher education is the Facilities Fee, and we think that this idea would be appropriate for NMSU to consider. Colorado State University has a model we like, but there are others that are similar at Florida State University, University of Nebraska Lincoln, and Boise State University. We were particularly impressed with a presentation on the program developed by the University of North Carolina Charlotte.  

FS remains committed to exhausting every thoughtful creative alternative, and the Facilities Fee is one that could be leveraged for financing as it has at other prestigious institutions.

**Activity Center**

We mentioned funding sources but listed the Activity Center separately because of the importance. A flashy space for recreation and student gathering is almost a must these days, and in most schools, this facility is an auxiliary funded by student fees as it is at UTEP.

NMSU students loaned their bonding capacity to NMSU for the Center for the Arts and their name was put on the facility, and this study was completed in 2014 with the intention of one day renovating the Activity Center. There are numerous hurdles remaining, the most onerous of which is an increase in student fees, but recreation center upgrades are an imperative and NMSU should work to identify funding.

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NMSU utilized an on-campus landfill for the disposal of municipal solid waste and construction debris from 1974 to 1989. The former landfill has been capped, closed, and NMSU has been actively monitoring the landfill area for methane generation and groundwater constituents of concern. The landfill location is convenient to Aggie Memorial Stadium, and therefore NMSU has coordinated with New Mexico Environment Department to obtain approval to utilize the area for vehicle parking in the future. To ensure the safety of the public, access will not be granted sooner than October 2019. If methane were to be detected above environmental regulatory standards, public access would be denied until safety can be guaranteed.

The landfill closure is mentioned because there have also been groundwater concerns associated with the landfill and additional stations for groundwater monitoring were added two years ago. Both methane and groundwater are within limits at this time, but an exceedance could delay the projected use for a parking lot or require the need for additional monitoring.
CURRENT CONSTRUCTION

**DEVASTALI HALL**
*Design Firm:* RMKM Architecture  
*Contractor:* HB Construction, Inc.  
*MACC (maximum allowable construction cost):* $18M  
*Project Cost:* $23,019,337  
*Bid Amount:* $16,878,242  
*Completion:* August 2019

This project was funded by the 2016 General Obligation Bond legislative appropriation but was set in motion by a donor with an $800,000 donation. Devasthali Hall will provide a new home for the Art program and will ultimately lead to the demolition of Dan Williams and Dan Williams Annex, although funding is unavailable at this time.

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**JUNIPER HALL**
*Design Firm:* Parkhill Smith & Cooper  
*Contractor:* HB Construction, Inc.  
*MACC (maximum allowable construction cost):* $15.8M  
*Project Cost:* $21,500,000  
*Bid Amount:* $15,061,357  
*Completion:* June 2019

In June 2016, NMSU issued a Request for Proposal for a Student Housing Developer for the New Mexico State University Student Housing Portfolio. This RFP was awarded to EdR, one of the largest collegiate housing developers and a firm that is well known for the privatization of the entire housing portfolio of the University of Kentucky.13

After nearly seven months of evaluating the proposal and working with EdR, NMSU decided to sell revenue bonds and construct the new residence hall as a campus project instead. NMSU also included $11 million in the bond sale for strategic renovations to existing facilities.

The new residence hall will feature semi-suite or shared rooms with a common bathroom, a laundry, and a courtyard with the Spanish Renaissance Revival design of other NMSU structures such as Rhodes-Garrett-Hamiel Hall.

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University courses will be hosted in a multi-purpose classroom that will be part of the 300 bed, 76,000 square-foot facility. This space can be divided into two rooms, and the partitions may be removed for activities that require additional floor area.

**Maintenance Project for Residence Halls**
The $11 million issuance will make many needed cosmetic and infrastructure repairs to Rhodes-Garret-Hamiel (RGH), Garcia, Vista Del Monte, Pinion, Chamisa Village (I and II) residence halls. These projects will take place throughout 2018 and 2019 and will include bathroom and tile restoration, new flooring, painting, closet and bathroom doors replacement, new hallway lights, several roof repairs and a replacement, HVAC upgrades and repairs, and in the case of RGH, a structural and plumbing repair in the basement.

The renovations will be coordinated with residents and the summer conferences to minimize inconvenience and disruption.

**Campus Entrances and Triviz Underpass**
This New Mexico Department of Transportation (NMDOT) project will completely rebuild the University Avenue and Interstate 25 exchange and is significant enough that the engineer has established a website with details.¹⁴

The final design is complete, and the project should go out for bid in late spring 2019 with a construction start in fall. Two traffic circles will be installed, and the project will create an underpass such that Triviz carries traffic underneath University Avenue. This work will cause a traffic disruption the likes of which have not been experienced before on campus and the construction will occur over the following 18 months.

The University Architect and the University Engineer are co-chairing a committee to provide oversight to our portion of the work and to represent NMSU’s interests in the planning.

NMSU surrendered a strip of land to NMDOT and will be compensated $450,000 that will help with construction costs. This will be a singular opportunity to improve the primary entrances to campus. The funding level for support has been a challenge, and this is in many ways a once-in-lifetime opportunity to enhance the front porch of the campus.

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FS worked with the College of Agricultural, Consumer, and Environmental Sciences two years ago to develop a facility Master Plan for the College, and the first of two phases was approved by the legislature for placement on the 2018 General Obligation Bond. The three new facilities in this phase are illustrated above: a Biomedical Research Facility that will be shared with the College of Arts and Sciences; a Feed Milling and Processing Facility; and a Food Science and Safety Facility, otherwise known as the “Meat Lab.”

The General Obligation Bond passed in the fall of 2018, and design will be starting on these facilities for completion in the fall of 2021.
Chamisa Village
(Residence Hall)

New Mexico State University
Duck Pond and Spiritual Center
As we write this, Vision 2020 is being re-written as NMSU Leads 2025. We adapted our alignment tool to the new format, and it is included.
Strategic Priorities

GOAL 1
Advance Student Success and Mobility

### Improving Student Success StratPlan 2025

<table>
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<tr>
<th>Goals</th>
<th>Objectives</th>
<th>KPIs</th>
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<td>Objective 1.1</td>
<td>Construct two new facilities</td>
<td>1-1 Juniper on time/budget&lt;br&gt;1-2 Devasthal on time/budget</td>
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<tr>
<td></td>
<td>Design 2018 GOB Ag projects</td>
<td>2-1 Complete through schematic design</td>
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<td></td>
<td>Space program improvements</td>
<td>3-1 Improve utilization&lt;br&gt;3-2 Improve fill ratio</td>
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<td>Support base map for marketing</td>
<td>4-1 Implement summer 2019</td>
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<td></td>
<td>Service delivery to Aux &amp; Athletics</td>
<td>5-1 Work order time&lt;br&gt;5-2 Opening day work orders</td>
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</tbody>
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| Objective 1.1 | Implement ERM | 6-1 Staff in place & program started |
| | Lab inspections & Trainings | 7-1 # of inspections<br>7-2 # of trainings |
| | Inspect community colleges | 8-3 # of visits<br>8-4 # of deficiencies |
| | Lead LPLC | 9-5 No violations or findings |
| | Campus safety initiatives | 10-1 Camera project on time/budget |

Determine all goals, objectives and KPIs that apply. The content below is only for reference. Identify only the goal(s) the StratPlan 2025 Strategy currently meet(s). Every Goal must have at least one corresponding objective and every objective must have at least one corresponding KPI for selected objective.
GOAL 4
Build a Robust University System (Develop Critical Infrastructure)

Objective 4.2 Cultivate faculty and staff excellence

Objective 4.3 Establish operational excellence through a metric-driven, service-oriented approach (Develop metric-driven decision-making processes that drive operational efficiencies)

Objective 4.4 Identify grand challenges that mobilize the University system to execute solutions (Provide superior stewardship of NMSU’s investment in plant, equipment, and buildings, also supports 1.1 “Align physical resources”)

Objective 4.4: Identify grand challenges that mobilize the university system to execute solutions (Support water at Heritage farm and solar initiative)

We think should be university KPI (barely meet now)

Strategic Initiatives / Global Grand Challenges

Objective 4.4: Identify grand challenges that mobilize the university system to execute solutions (Support water at Heritage farm and solar initiative)
Doña Ana County Community College (DACC)
East Mesa Campus