



Legislative Post Audit Performance Audit Report Highlights

Department of Corrections: Comparing the Merits of Lease and Bond Options for Replacing Lansing Correctional Facility

July 2017 • R-17-011

QUESTION 1: *How do the Costs, Benefits, and Risks of Bonding Versus Leasing Compare as a Way to Pay for the Improvements to the Lansing Correctional Facility?*

Background Information

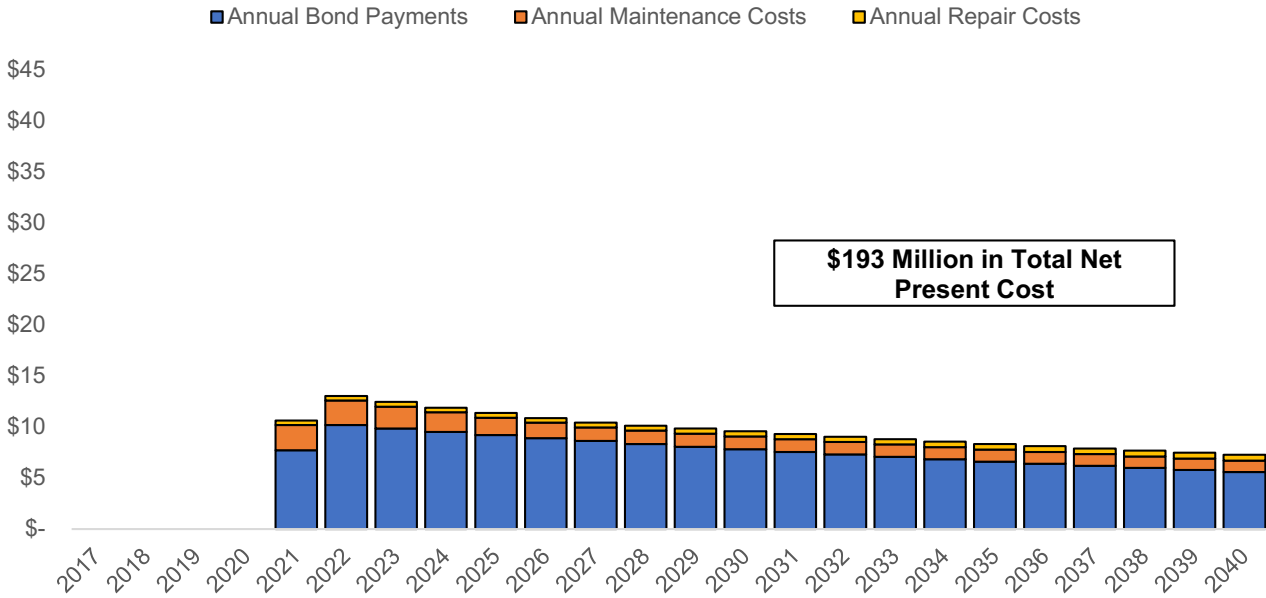
With its original facility completed in 1867, Lansing Correctional Facility (Lansing) is the oldest and largest correctional facility in the state. As of June 2017, Lansing had a population of more than 2,300 inmates. For fiscal year 2017, it employed almost 600 staff and had an operating budget of more than \$40 million. The original part of the prison is still in use, and houses maximum security inmates.

The Kansas Department of Corrections (KDOC) currently plans to rebuild Lansing's medium security unit so it can hold medium and maximum security inmates. A request for proposals for this project was issued in April 2017. KDOC officials are not considering renovating the existing facilities due to their age and outdated design. To make the project budget neutral, the prison design must be updated so fewer correctional officers are required.

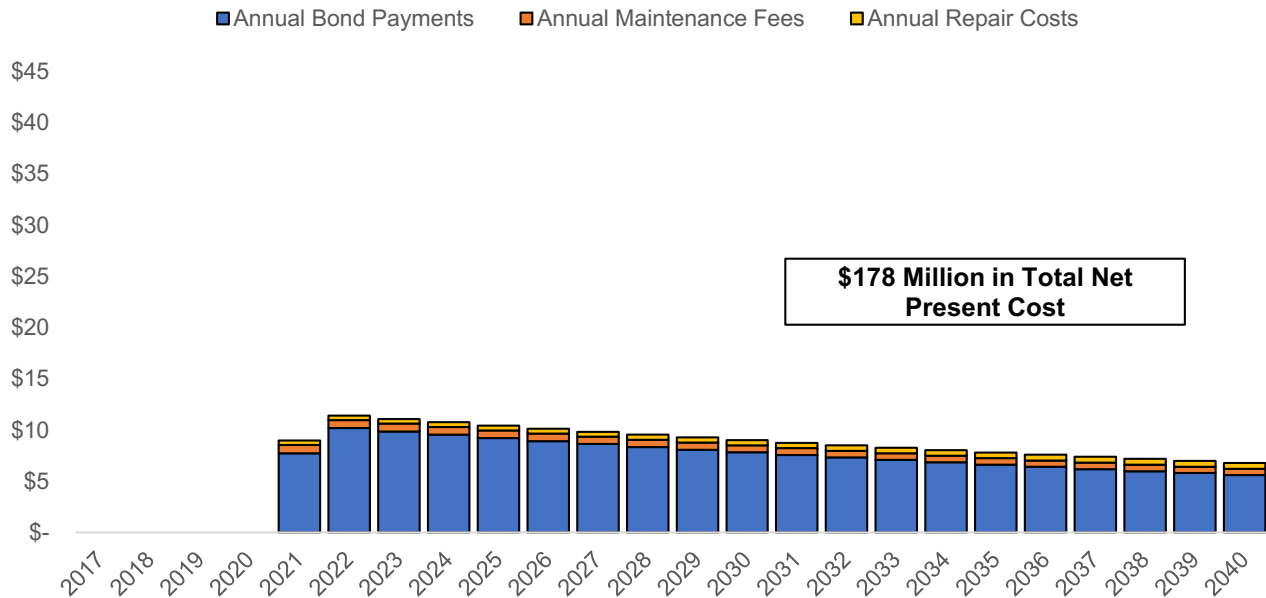
- KDOC is considering both state financing (bonding) and contractor financing (leasing) for Lansing. Regardless of which option is chosen, the state will continue to operate the facility. (p. 7)
 - *With bond financing, the state would issue bonds to pay for construction of the new facility and would own it from the beginning.*
 - *With lease-purchase financing, a private firm would build and own the new facility, then lease it to the state for a period of time before eventually selling it to the state.*
- We used a life-cycle cost model to estimate which option would be most cost effective. (p. 9)
 - *A life-cycle cost model is commonly used to estimate the costs associated with different project options to identify which is least expensive over time.*
 - *We considered the following costs: design and construction costs, ongoing maintenance costs, rehabilitation and repair costs, annual bond debt service payments, annual lease payments, and the final purchase price.*
 - *Finally, we discounted the cash flows to current dollars to calculate the net present cost of each option.*
- Our analysis found bond financing with contracted maintenance would likely be the most cost effective option, with an estimated net present cost of \$178 million over 20 years. (p. 13)
 - *Bond financing with state maintenance had an estimated net present cost of \$193 million over 20 years.*
 - *A 20-year lease-purchase agreement with either a final purchase payment or the purchase price built into the lease payments had an estimated net present cost of \$206 million over 20 years.*
- These results differ from KDOC's preliminary estimates, which were missing key variables and used inconsistent assumptions that tended to favor a lease-purchase option (p. 16)
- The state's two options for rebuilding Lansing create some additional risks and benefits for the state. (p. 17)
 - *If KDOC chooses a lease-purchase option, there are some additional contract risks that will require legal counsel with skills specific to lease financing for large scale construction projects.*
 - *A lease-purchase contract lowers the state's risks related to construction costs, property damage, and ongoing repairs.*
 - *Regardless of whether lease or bond financing is used, relying on contracted maintenance increases the risk that necessary maintenance will be deferred.*

**Figure 1-3
Payments Made During Bond Repayment Period
(Discounted to Net Present Cost)**

Design-Build with Reduced State Maintenance Cost (In Millions) (a)



Design-Build-Maintain with Contracted Maintenance (In Millions) (b)

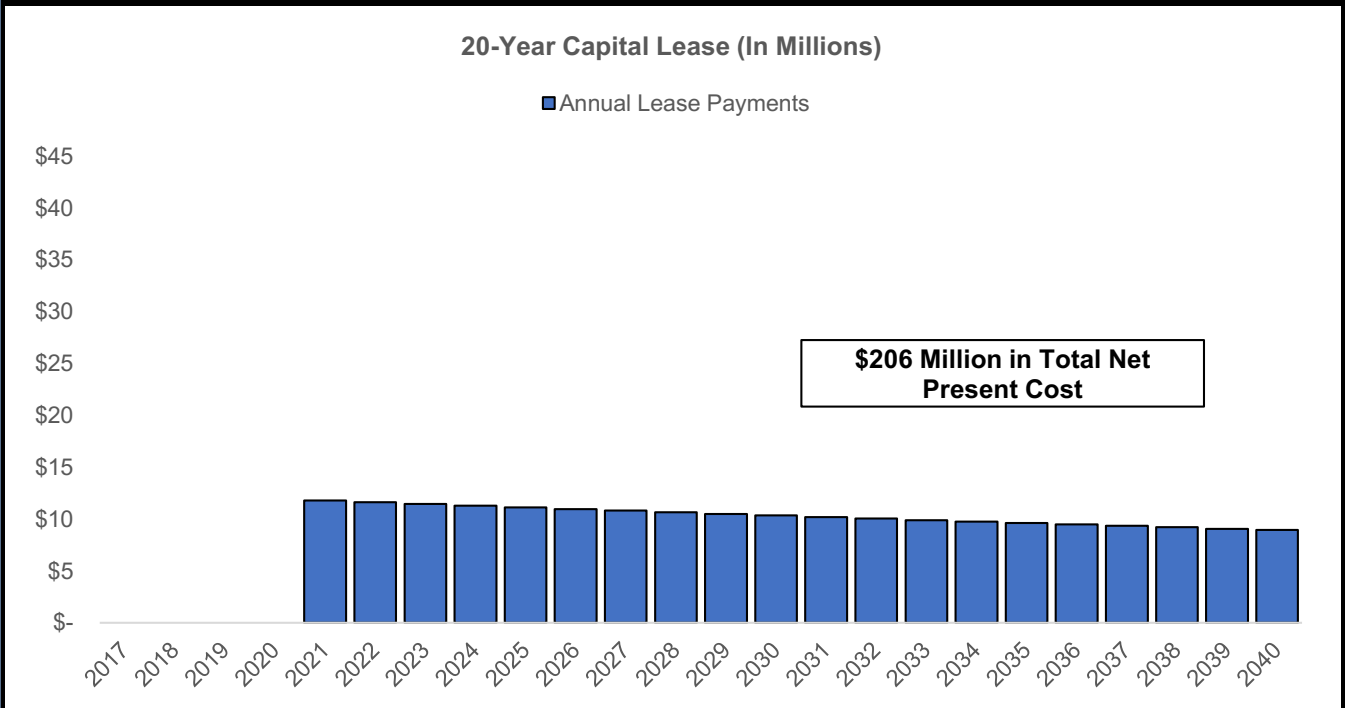
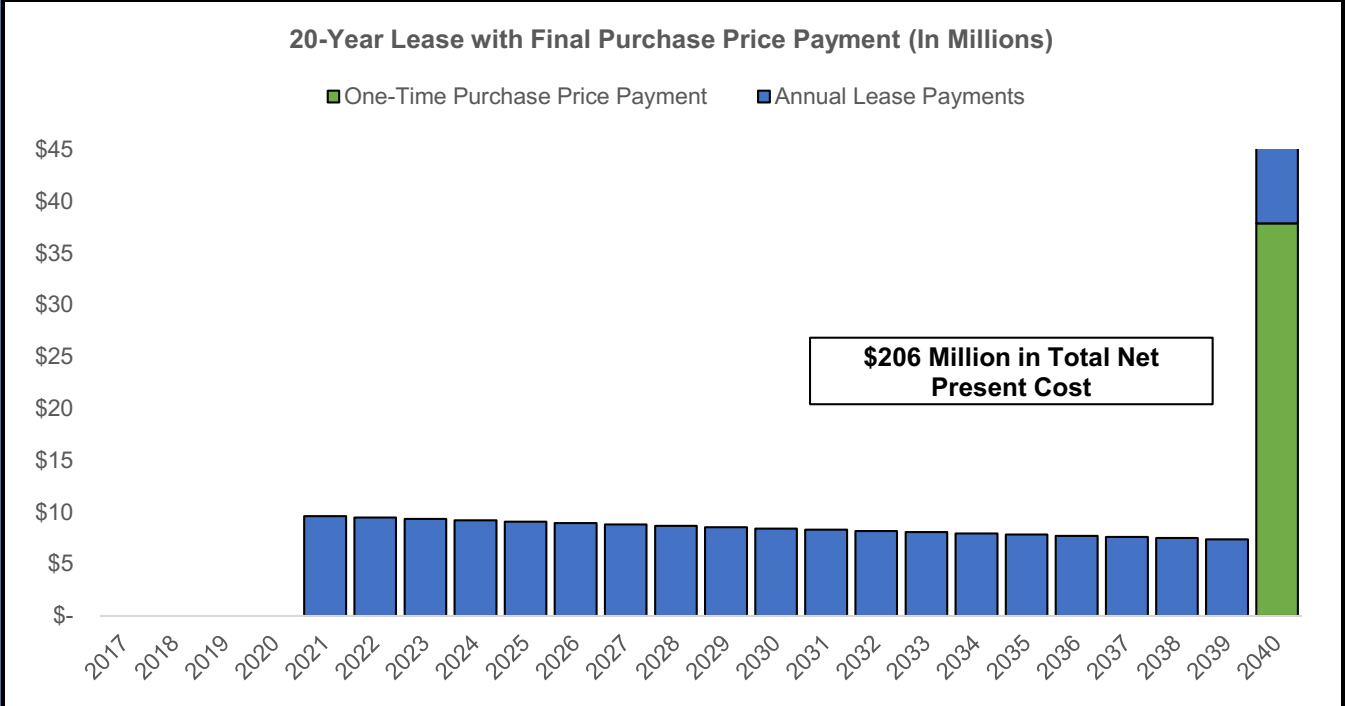


(a) Reflects a 40% maintenance cost reduction compared to the existing facility because the new facility is newer and less labor intensive, with these savings phased in gradually during the first seven years of operation.

(b) Includes 20 years of contracted maintenance followed by state maintenance provision at the reduced rates described in footnote (a).

Source: LPA research and LPA analysis of information from Kansas Department of Corrections and Kansas Development Finance Authority (audited).

**Figure 1-4
Payments Made During Lease Term
(Discounted to Net Present Cost)**



Source: LPA research and LPA analysis of information from Kansas Department of Corrections and Kansas Development Finance Authority (audited).

SUMMARY OF RECOMMENDATIONS

Recommendations for the Kansas Department of Corrections (p. 19)

KDOC should evaluate the proposals it receives using a life-cycle cost model that takes all relevant factors into account and ensure any cost comparisons use consistent assumptions.

If KDOC chooses a lease-purchase contract, it should consult with independent outside counsel and ensure the final contract includes a final purchase price.

KDOC should conduct a review of Lansing's maintenance needs and develop a plan to scale down its maintenance staff.

AGENCY RESPONSE

Department officials agreed with the findings and indicated they would implement the recommendations. (p. 22)

HOW DO I REQUEST AN AUDIT?

By law, individual legislators, legislative committees, or the Governor may request an audit, but any audit work conducted by the division must be directed by the Legislative Post Audit Committee. Any legislator who would like to request an audit should contact the division directly at (785) 296-3792.

Legislative Division of Post Audit

800 SW Jackson Street,
Suite 1200
Topeka, Kansas 66612

Telephone (785) 296-3792
Website: <http://www.kslpa.org/>

Scott Frank
Legislative Post Auditor

For more information on this
audit report, please contact:

Meghan Flanders
(785) 296-3792
Meghan.Flanders@lpa.ks.gov



PERFORMANCE AUDIT REPORT

**Department of Corrections: Comparing the
Merits of Lease and Bond Options for
Replacing the Lansing Correctional Facility**

**A Report to the Legislative Post Audit Committee
By the Legislative Division of Post Audit
State of Kansas
July 2017**

Legislative Division of Post Audit

The **Legislative Division of Post Audit** is the audit arm of the Kansas Legislature. Created in 1971, the division's mission is to conduct audits that provide the Legislature with accurate, unbiased information on the performance of state and local government. The division's audits typically examine whether agencies and programs are effective in carrying out their duties, efficient with their resources, or in compliance with relevant laws, regulations and other requirements.

The division's audits are performed at the direction of the **Legislative Post Audit Committee**, a bipartisan committee comprising five senators and five representatives. By law, individual legislators, legislative committees, or the Governor may request a performance audit, but the Legislative Post Audit Committee determines which audits will be conducted.

Although the Legislative Post Audit Committee determines the areas of government that will be audited, the audits themselves are conducted independently by the division's professional staff. The division's reports are issued without any input from the committee or other legislators. As a result, the findings, conclusions, and recommendations included in the division's audits do not necessarily reflect the views of the Legislative Post Audit Committee or any of its members.

The division conducts its audit work in accordance with applicable government auditing standards set forth by the U.S. Government Accountability Office. These standards pertain to the auditor's

professional qualifications, the quality of the audit, and the characteristics of professional and meaningful reports. The standards also have been endorsed by the American Institute of Certified Public Accountants (AICPA) and adopted by the Legislative Post Audit Committee.

LEGISLATIVE POST AUDIT COMMITTEE

Representative John Barker, Chair
Representative Tom Burroughs
Representative Daniel Hawkins
Representative Don Schroeder
Representative Ed Trimmer

Senator Rob Olson, Vice-Chair
Senator Elaine Bowers
Senator Anthony Hensley
Senator Laura Kelly
Senator Julia Lynn

LEGISLATIVE DIVISION OF POST AUDIT

800 SW Jackson
Suite 1200
Topeka, Kansas 66612-2212
Telephone: (785) 296-3792
Fax: (785) 296-4482
Website: <http://www.kslpa.org>

Scott Frank, Legislative Post Auditor

HOW DO I REQUEST AN AUDIT?

By law, individual legislators, legislative committees, or the Governor may request an audit, but any audit work conducted by the division must be directed by the Legislative Post Audit Committee. Any legislator who would like to request an audit should contact the division directly at (785) 296-3792.

The Legislative Division of Post Audit supports full access to the services of state government for all citizens. Upon request, the division can provide its audit reports in an appropriate alternative format to accommodate persons with visual impairments. Persons with hearing or speech disabilities may reach the division through the Kansas Relay Center at 1-800-766-3777. The division's office hours are 8:00 a.m. to 5:00 p.m., Monday through Friday.



LEGISLATURE OF KANSAS
LEGISLATIVE DIVISION OF POST AUDIT

800 SOUTHWEST JACKSON STREET, SUITE 1200
TOPEKA, KANSAS 66612-2212
TELEPHONE (785) 296-3792
FAX (785) 296-4482
WWW.KSLPA.ORG

July 31, 2017

To: Members, Legislative Post Audit Committee

This report contains the findings, conclusions, and recommendations from our completed performance audit, *Department of Corrections: Comparing the Merits of Lease and Bond Options for Replacing the Lansing Correctional Facility*. The audit was requested by Representative Adam Lusker. The audit team included Meghan Flanders, Andy Brienzo, and Josh Rueschhoff. Chris Clarke was the audit manager.

We would be happy to discuss the findings, conclusions, and recommendations, presented in this report with any legislative committees, individual legislators, or other state officials.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Frank', written in a cursive style.

Scott Frank
Legislative Post Auditor

Table of Contents

Introduction	1
Overview of the Lansing Correctional Facility Rebuilding Project.....	3
Question 1: How do the Costs, Benefits, and Risks of Bonding Versus Leasing Compare as a Way to Pay for the Improvements to the Lansing Correctional Facility?	7
Conclusions and Recommendations.....	19
Appendix A: Agency Response.....	21

Department of Corrections: Comparing the Merits of Lease and Bond Options for Replacing the Lansing Correctional Facility

Background Information

The Kansas Department of Corrections (KDOC) is a cabinet-level agency responsible for the state's nine correctional facilities. In February 2017, KDOC announced it would explore options for constructing a new facility in Lansing to replace some of the existing Lansing Correctional Facility structures, one of which was built in the 1860s.

One option the department is considering is to have a private company build a new prison and lease it back to the state. KDOC officials preliminarily estimated a private contractor could construct a facility for about \$140 million, which it would recoup over time through annual lease payments of up to \$13.5 million a year. Alternatively, the department is also considering more traditional bond financing to pay for the project. In June 2017, the Legislature approved up to \$155 million in bond authority, which would cost the state about \$12 million in annual debt service.

Legislators expressed interest in knowing more about the differences in costs, the potential risks, and the potential benefits of each option.

Objectives, Scope and Methodology

On April 28, 2017, the Legislative Post Audit Committee approved a request from Representative Adam Lusker for an audit to compare the costs of leasing versus bonding for construction of a new correctional facility in Lansing, as well as the potential risks and benefits of those financing options. This performance audit answers the following question:

1. How do the costs, benefits, and risks of bonding versus leasing compare as a way to pay for the improvements to the Lansing Correctional Facility?

To answer this question, we interviewed KDOC officials and reviewed the information they used to prepare their preliminary cost estimates for bonding and leasing options. We developed a life-cycle cost model using data from KDOC, the Kansas Development Finance Authority (KDFFA), and other sources. Using this model, we compared the potential costs of each financing option. Finally, we conducted additional research and interviews with KDOC and KDFFA to gather other potential risks and benefits associated with the financing options.

Our cost analysis is based on estimated design and construction costs. Since final proposals for Lansing are not due to KDOC until August 2017, we could not use actual cost proposal information in our analysis. Consequently, it is likely the actual results will change after the final bids are received and reviewed.

We did not do any work related to KDOC's internal controls because it was outside the scope of this audit.

***Compliance with
Generally Accepted
Government Auditing
Standards***

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Overview of the Lansing Correctional Facility Rebuilding Project

Lansing Correctional Facility is the State's Oldest and Largest Prison

Lansing Correctional Facility (Lansing) is the oldest correctional facility in the state. KDOC oversees the state's nine correctional facilities including Lansing, which is the oldest prison in the state. Completed in 1867, the original part of the prison sits on 11 acres and houses maximum security inmates. In 1985, KDOC built a medium security facility on 46 acres adjacent to the original building. Finally, the East Unit sits on 85 acres and houses minimum security male inmates.

As of June 2017, Lansing had a population of more than 2,300 inmates, making it the state's largest prison. Lansing's average daily population for fiscal year 2017 was 2,328. The maximum security facility has a capacity of 994, the medium has a capacity of 783, and the minimum has a capacity of 628 inmates, for a total capacity of 2,405.

For fiscal year 2017, Lansing employed almost 600 staff and had an operating budget of more than \$40 million. Lansing is authorized for a total of 682 staff positions. However, because of high turnover, many of these positions are not filled. As of May 2017, only 592 positions were filled, including 431 uniformed staff (such as correctional officers) and 161 non-uniformed staff (including secretaries, maintenance workers, and administrators).

Approximately 82% of Lansing's \$40 million budget is spent on salaries and wages. The remainder is spent on other operational expenses like utilities, inmate transportation, clothing, fuel, office supplies, and maintenance materials.

KDOC Currently Plans to Rebuild the Lansing Correctional Facility

KDOC issued a request for proposals (RFP) to rebuild Lansing in April 2017. The Kansas Department of Administration's Office of Procurement and Contracts posted KDOC's request for qualified bidders on April 6, 2017. The deadline for qualified bidders to submit proposals is August 4, 2017. KDOC officials anticipate awarding a contract around September 1, 2017, and finalizing it in mid-October.

The bidding process for proposals is sealed, which means no bid information will be available to KDOC until after the August deadline. Bid documents will not be available to the public until either a contract is awarded or all bids are rejected. Each contractor will separately submit technical specifications and a cost proposal to the Office of Procurement and Contracts. KDOC will first receive the technical specifications of each proposal and conduct a

technical evaluation for each. Once this is finished, KDOC will receive and analyze the cost proposals to make its final decision.

KDOC is not considering renovating Lansing. According to KDOC officials, renovating and continuing to utilize Lansing’s existing maximum and medium security units is not a realistic option and is therefore not under consideration. Because of the age of the facility, renovating these units would be expensive and would likely require extensive work, making it more difficult to secure financing for renovation than for replacement. Also, a renovation would not update Lansing’s overall design, which officials told us is needed to allow the facility to operate more efficiently and ensure the total project is budget neutral.

KDOC Officials Contend the Rebuilding Project Will be Budget Neutral Because the New Facility Will Operate More Efficiently

In presenting the Lansing rebuilding project to the Legislature, officials have contended it will be budget neutral. KDOC estimates the total cost for the project could be as much as \$155 million, and in June 2017 the Legislature approved a bond authority in this amount. We did not evaluate whether the project would be budget neutral, but KDOC officials told us the new facility would be significantly more efficient than the existing facility and estimated the potential savings achieved through these efficiencies would result in a project that was budget neutral.

A new facility likely would need fewer correctional officers to operate, which would result in savings. Currently, the maximum and medium security facilities are separate from each other. As a result, staffing is duplicated between them. For example, the maximum and medium security facilities each have their own kitchens, clinics, and laundries. Inmates supply the labor to run areas like the kitchen and laundry, but corrections officers must be present to supervise them. Building a new prison to house both maximum and medium security inmates would consolidate these common areas and eliminate duplicative correctional positions.

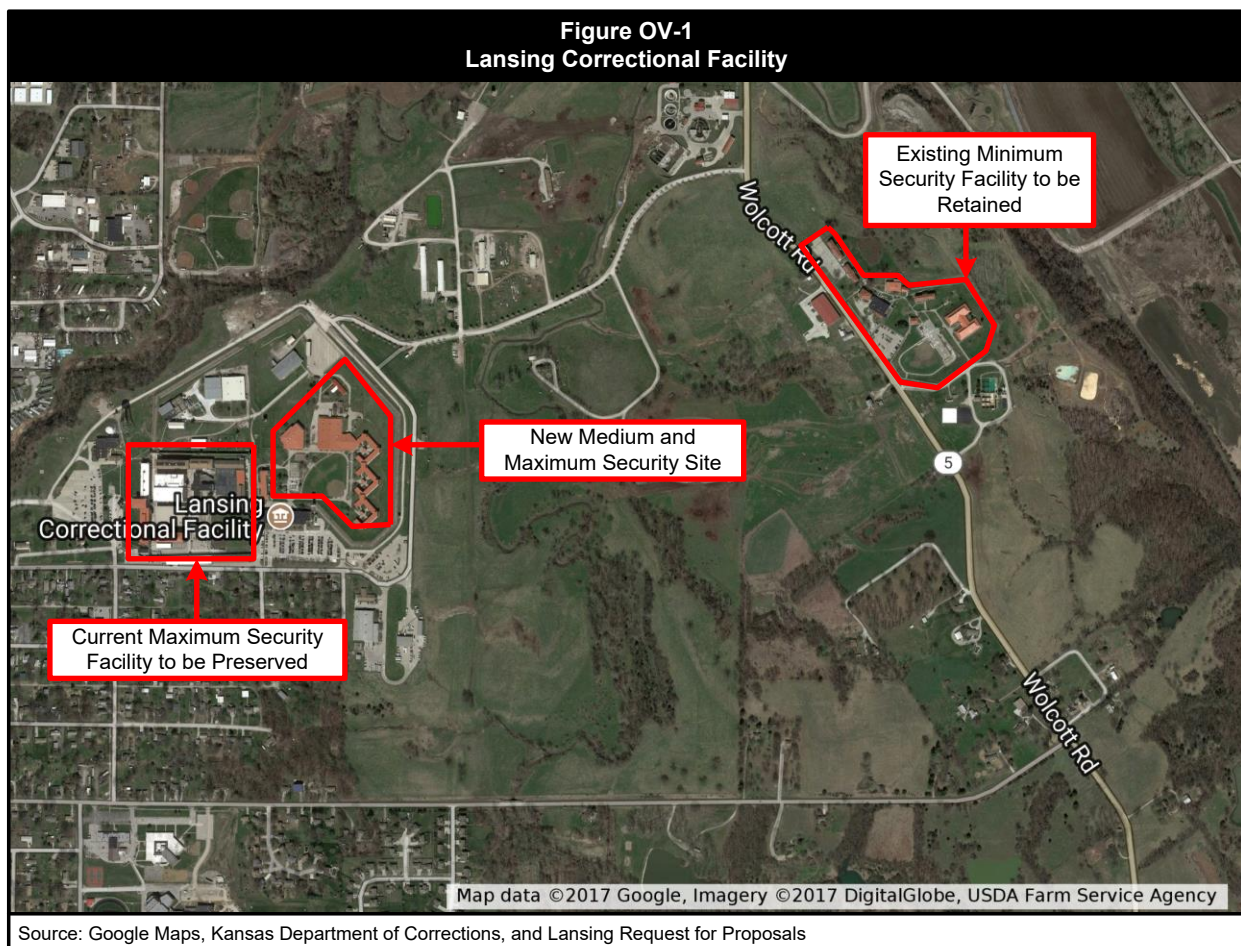
Also, the oldest part of Lansing—the maximum security unit—has long rows of cells rather than square pods of cells like many modern prisons. Prior renovations of the building required KDOC to add pillars along these rows, obscuring correctional officers’ vision. As a result, officials told us the prison needs more staff than a modern facility with square pods would require. Currently, a correctional officer can only supervise about 80 inmates at a time in this part of the facility, whereas officers in newer parts of the prison can supervise about 128 inmates.

Lansing also would likely achieve savings by decreasing utility and supply expenses. In addition to creating staffing efficiencies,

a new facility should be more energy efficient, which would lower Lansing’s energy costs. In addition, a new facility would likely reduce some supply costs. For example, currently KDOC must special order parts for some equipment because it is so old suppliers no longer keep these parts in stock.

Some Lansing Structures Will Remain the Same, While Others Would be Replaced

KDOC plans to keep some structures and demolish others. The agency would no longer use the oldest part of the prison—but would preserve it. On the other hand, the department would demolish the 46-acre medium security facility and replace it with a new structure to hold both maximum and medium security inmates. Officials plan for the 85-acre, minimum security East Unit to remain as it is, unless it could also be rebuilt while keeping the overall project budget neutral. Other buildings, such as an administration building and a farm operation, would be unaffected by the rebuilding effort. **Figure OV-1** below is a map of Lansing’s grounds and highlights the different structures in the project.



Question 1: How do the Costs, Benefits, and Risks of Bonding Versus Leasing Compare as a Way to Pay for the Improvements to the Lansing Correctional Facility?

Bond financing with contracted maintenance would likely be the most cost-effective option; however, both financing options come with certain risks and benefits. KDOC is considering both state financing (bonding) and contractor financing (leasing) for the Lansing improvement project (p. 7). We used a Life-Cycle Cost Model to estimate which financing option would be most cost effective (p. 9). Our analysis found bond financing with contracted maintenance would likely be the most cost-effective option (p. 13). These two financing options for rebuilding Lansing create some additional risks and benefits for the state, primarily related to contract terms and project costs (p. 17).

KDOC is Considering Both State Financing and Contractor Financing for the Lansing Improvement Project

KDOC plans to replace the medium and maximum security units at Lansing and is currently requesting bids from contractors for the project. Contractors may submit proposals for both state-financed and contractor-financed design, construction, and maintenance. KDOC officials have not expressed a preference for either financing option.

KDOC is considering both state financing (bonding) and contractor financing (leasing) for the project. Bonding would require the state to make annual debt service payments on bonds issued by the Kansas Development Finance Authority (K DFA). The annual bond payments would be the same throughout the 20-year repayment period. Leasing would require the state to make payments to the contractor that owns the facility (the contractor would arrange its own financing to cover its construction costs). The payments would escalate each year according to the terms of the contract.

With bond financing, the state would issue bonds to pay for construction of the new facility and would own it from the beginning. As *Figure 1-1* on page 8 shows, KDOC requested proposals for two types of bond-financed contracts:

- **A design-build contract makes the contractor responsible for demolishing the old facilities and building new ones.** That includes all design, procurement, construction, and furnishings associated with the new state-owned facility. KDOC would own the new facility and continue to employ its own staff to maintain it.

- A **design-build-maintain contract** is similar to a design-build but also makes the contractor responsible for maintenance of the new state-owned facility. Under this scenario, KDOC would not employ state staff for maintenance. Instead, KDOC would pay a fee for the contractor to maintain the facility.

**Figure 1-1
Comparison of Contract Types Being Considered for Lansing Correctional Facility**

	Bond Financing		Lease Financing	
	Design-Build	Design-Build-Maintain	Final Purchase Required	Capital Lease
Financing				
Source	KDFA Bonds	KDFA Bonds	Contractor Financing	Contractor Financing
Annual Payments	Debt Service ^(a)	Debt Service ^(a) + Maintenance Fee ^(b)	Lease Payment ^(b) (Final Purchase Payment Required)	Lease Payment ^(b) (Purchase Price Built Into Payments)
Payment Period	20 years	20 years	20-40 years	20-40 years
Ownership				
During Payment Period	State	State	Contractor	Contractor
After Payment Period	State	State	State	State
Construction				
Design and Construction - Including demolition, design, construction management, construction, and furnishing.	Contractor	Contractor	Contractor	Contractor
Operations - Including administrative staff, IT staff, management, custodial staff, and corrections officers.	State	State	State	State
Maintenance - Including staffing and materials for the repair and replacement of equipment and furnishings.	State	Contractor	Contractor	Contractor
<small>(a) Fixed payment that does not change throughout the payment period. (b) Includes an annual escalator consistent with the expected inflation rate. Source: Kansas Department of Corrections and Kansas Development Finance Authority (audited).</small>				

With lease-purchase financing, a private firm would build and own the new facility, then lease it to the state for a period of time before eventually selling it to the state. KDOC is considering one general type of contractor financing and ownership, with the possibility of different payment structures. A lease-purchase contract means the contractor is responsible for financing the new facility and owns it until the end of the lease. It would also be responsible for designing, constructing, furnishing, and maintaining the facility. The state would own the facility at the end of the lease term. The size of the final purchase price would depend on how the lease payments are structured. For example, in a capital lease there would be no final purchase price because it is built in to the lease payments.

Regardless of which financing option is chosen to pay for new facilities, the state will continue to operate Lansing. The Legislature's June 2017 appropriations bill requires the state to continue to operate Lansing, even if a private company provides maintenance for the new facility or the new facility is privately owned during a lease period. This means all the correctional officers, support staff, and administrators would continue to be KDOC employees. It also requires the state to own the facility at the end of a lease.

Other sections of that bill require KDOC to take specific actions, like consulting with certain legislative committees and getting final approval from the State Finance Council. Also, the bill requires operational savings to be used to increase salaries for correctional officers in all state facilities, but it is currently unclear how much those savings might be or when they might be available. KDOC estimates the new facility would not be ready until fiscal year 2021, so savings will not be achieved for several years.

We Used a Life-Cycle Cost Model to Estimate Which Financing Option Would be Most Cost Effective

We conducted research and consulted with officials from the Kansas Development Finance Authority (KDFA) to create a life-cycle cost analysis model. We reviewed KDOC's preliminary cost estimates and consulted with agency officials on estimated costs. We did not use our model to assess the accuracy of KDOC's initial savings estimates, nor did we evaluate whether the project would be budget neutral. We only used the model to estimate the potential costs of the rebuilding project under different forms of financing.

A life-cycle cost model is commonly used to estimate the costs associated with different project options to identify which is least expensive over time. Variables used in the model include inflation and discount rates, a lease payment escalator, and annual maintenance costs. We also included all required annual and one-time bond and lease payments. Our model considered multiple scenarios for both bond and lease financing.

In each estimated cost scenario, we used the variables shown in **Figure 1-2** on page 10. We assumed a 40-year useful life for the facility, as this is typical for buildings. We considered a current market rate scenario and conservative rate scenario for each financing option, as shown in the figure by the ranges for each variable. The current market rate is the rate at the time we conducted our analysis. The conservative rate is slightly higher and is included because rates may change by the time the contract is negotiated.

**Figure 1-2
Variables Included in LPA Life-Cycle Cost Analysis**

Variables	Bond Financing		Lease Financing	
	Design-Build	Design-Build-Maintain	Final Purchase Required	Capital Lease
Annual Inflation Rate / Lease Escalator	1.9% - 2.6%	1.9% - 2.6%	1.9% - 2.6%	1.9% - 2.6%
Bond Interest Rate / Discount Rate	3.4% - 4.1%	3.4% - 4.1%	3.4% - 4.1%	3.4% - 4.1%
First Year Facility Rehab and Repair Cost	\$500,000	\$500,000	\$500,000 ^(a)	\$500,000 ^(a)
Annual Facility Rehab and Repair Cost Growth Rate	5%	5%	5% ^(a)	5% ^(a)
Annual State Maintenance Cost	\$1.7 Million ^(b)	---	---	---
Annual Contractor Maintenance Fee	---	\$900,000 ^(c)	Included in Lease Payment	Included in Lease Payment

(a) After 20 years the state will own the facility and will be required to pay these costs.
(b) Reflects a 40% maintenance cost reduction compared to the existing facility because the new facility is newer and less labor intensive, with these savings phased in gradually during the first seven years of operation.
(c) Reflects a 20-year private maintenance contract that would be followed by state maintenance provision at the reduced rates described in footnote (b).
Source: LPA research and LPA analysis of information from Kansas Department of Corrections and Kansas Development Finance Authority (audited).

The first step in developing the cost model is to identify the real costs of the project. These are the one-time and ongoing costs that determine how expensive the new facility will be throughout its useful life. We excluded costs that are outside the scope of the rebuilding project, such as operating costs and building utilities. As a result, we included the following cost categories in our model:

- Design and construction costs are those related to the actual design and construction of the new facility, including architectural and engineering fees, existing facility demolition, and new facility construction and furnishings.
- Ongoing maintenance costs are those related to keeping the facility in good condition, excluding janitorial services. This includes routine maintenance of the facility and its furniture, fixtures, and equipment.
- Rehabilitation and repair costs include repairing, restoring, or returning property to good condition, such as replacing the roof or a major mechanical system.

The design and construction costs are assumed to be the same, regardless of the financing mechanism. KDOC's preliminary design and construction cost estimate was close to \$155 million, so we used this figure for all financing scenarios. In reality, the contractors may not submit proposals for all the options in the RFP, and the design and construction costs may vary greatly

between the various contractors. This will could affect the overall conclusion on which option is the most cost effective once the actual proposals are submitted.

The second step in developing the cost model is to establish the financing mechanism and map out the cash flows. Bond and lease financing have some costs that are similar and some that are unique to each option. Moreover, certain costs appear at different points in the life cycle of each financing option. For example, ongoing state-provided maintenance would be required at the end of the lease period when the state takes ownership, so that cost is introduced in the lease scenario after 20 years. To accurately calculate the costs for each financing option, we included the following specific costs and introduced them at the appropriate point in each financing option's life cycle:

- Annual bond debt service payments apply only to the bond financing options and would be paid annually, beginning when the facility is complete. The bond debt service payment will be based on the bond rate at the time the bonds are issued. The bond interest rate is influenced by inflation, the state's credit rating, and other market forces. The market interest rate we considered was the rate on June 6, 2017. This rate may be higher at the time of the contract, however, which is why we also used a conservative rate in our analysis.
- Annual lease payments apply only to the lease financing options and would be made annually beginning when the facility is complete. The initial lease payment amount will be determined by the contract and the payments will increase each year due to an escalator which helps offset inflation. We considered an escalator rate based on current expected inflation rates as well as a more conservative escalator rate which reflects the possibility that future inflation expectations may change between now and the contract date.
- The final purchase price included in our lease model is based on the depreciated book value of the new facility 20 years after it is completed, assuming a 20-year lease. The state is required to own the facility at the end of a lease. There are at least two ways to accomplish this over 20 years. One is to build the purchase price into the annual lease payment, which would increase the lease payment amount. Another is to make a large final payment at the end of the lease term, with a lower annual lease payment.
- Annual maintenance costs initially differ significantly depending on which option is chosen. For state-provided maintenance costs, we assumed the state would be able to reduce its maintenance staff for the new facility by 40% over a seven-year period when compared to the costs for the existing facility. For contractor-provided maintenance, we assumed the state would pay \$2.50 per square foot to the contractor. We based this number on a private prison maintenance cost study published by the North Carolina Department of Public Safety. For the leasing options, this expense would be covered by the annual lease payment.

- Annual rehabilitation and repair costs also initially differ depending on which financing option is chosen, but would eventually transfer to the state. For bond options, the state is responsible for rehabilitation and repair. We used KDOC estimates for these costs. We also used KDOC estimates to escalate these costs each year throughout the useful life of the facility to account for future inflation and the higher expenses usually associated with an aging facility. For the lease financing options, this expense would be built into the annual lease payment.

The final step in developing the cost model is to discount the cash flows to current dollars and calculate the net present cost of each option. This is done to make all future expenditures directly comparable to one another. Because of inflation, current dollars are more valuable than future dollars. Also, current dollars are more valuable because they can be used now, which is more convenient than waiting for future dollars, even if those future dollars are worth the same amount. In consultation with KDFA and in accordance with the RFP issued by KDOC, we used the state's cost of borrowing (i.e., the bond interest rate) for these discounting calculations.

The results of our analysis are estimates based on the best information currently available; the actual proposals will likely differ. Since final proposals for improving Lansing are not due to KDOC until August 2017, we could not use actual cost proposal information in our analysis. Instead, we used data and estimates we received from KDOC and KDFA and made reasonable assumptions to fill in missing figures. KDOC provided information on estimated design and construction costs from an architecture firm with experience in designing correctional facilities, as well as information on current facility rehabilitation and repair costs, maintenance costs, and potential lease payment amounts. We worked with KDFA to understand state financing terms, current bond rates, and estimated bond payments.

In addition, these are cost estimates based on the requests made in the RFP. It is possible the state could get a better deal on financing if the financing for this project, whether lease or bond financing, were competitively bid pursuant to KDFA's typical competitive bid finance processes. As it is now, the competition for private financing is limited to companies who can also bid on design and construction. To make the private financing aspect fully competitive, a separate request for private financing proposals would need to be issued.

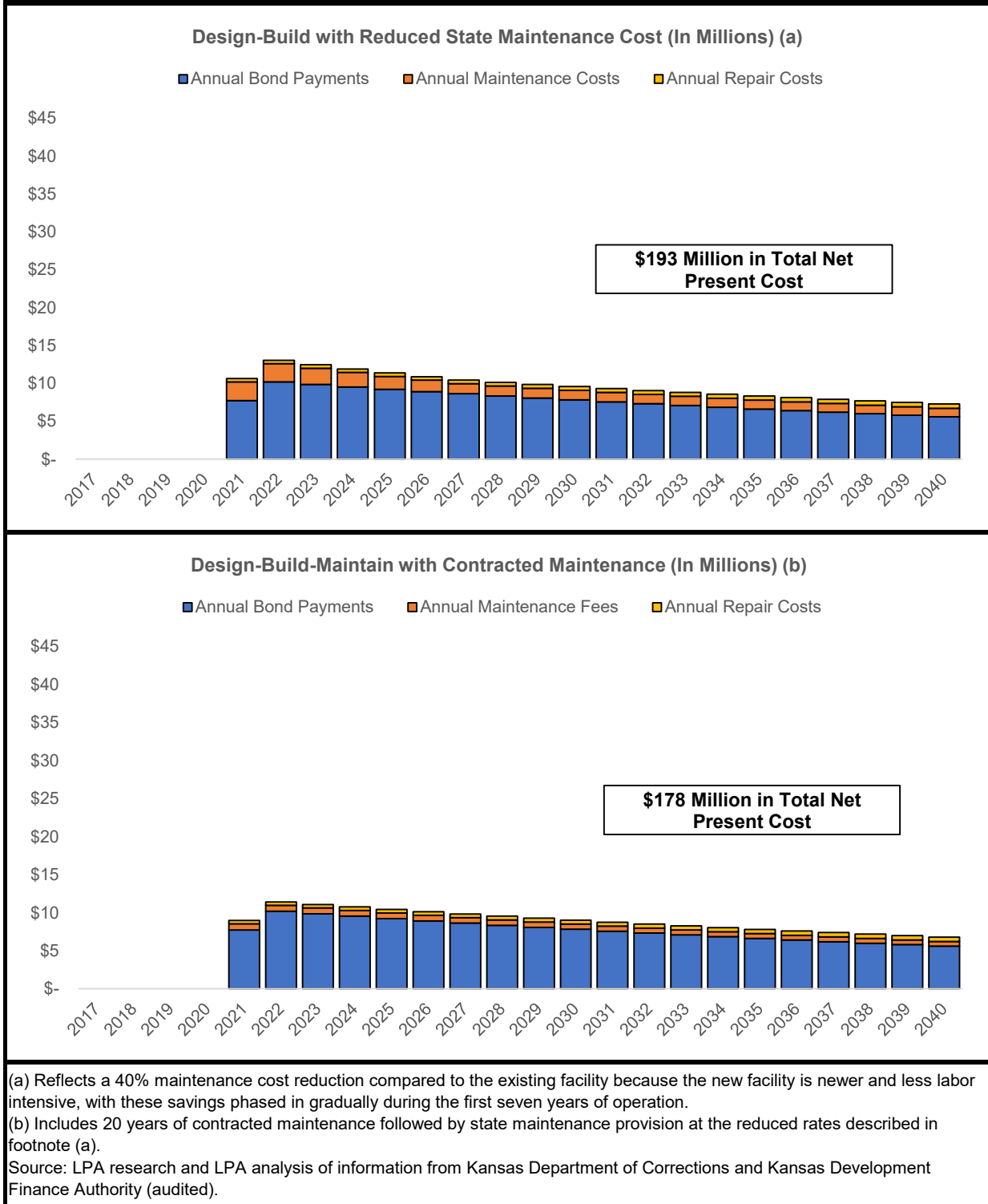
Our Analysis Found Bond Financing with Contracted Maintenance Would Likely be the Most Cost-Effective Option

Other things being equal, bond financing with contracted maintenance appears to be less expensive than leasing through a long-term lease-purchase agreement. We considered scenarios for each contract type: bond financing with state maintenance (design-build), bond financing with contracted maintenance (design-build-maintain), lease-purchase with a final purchase price, and lease-purchase with purchase price built-in (capital lease).

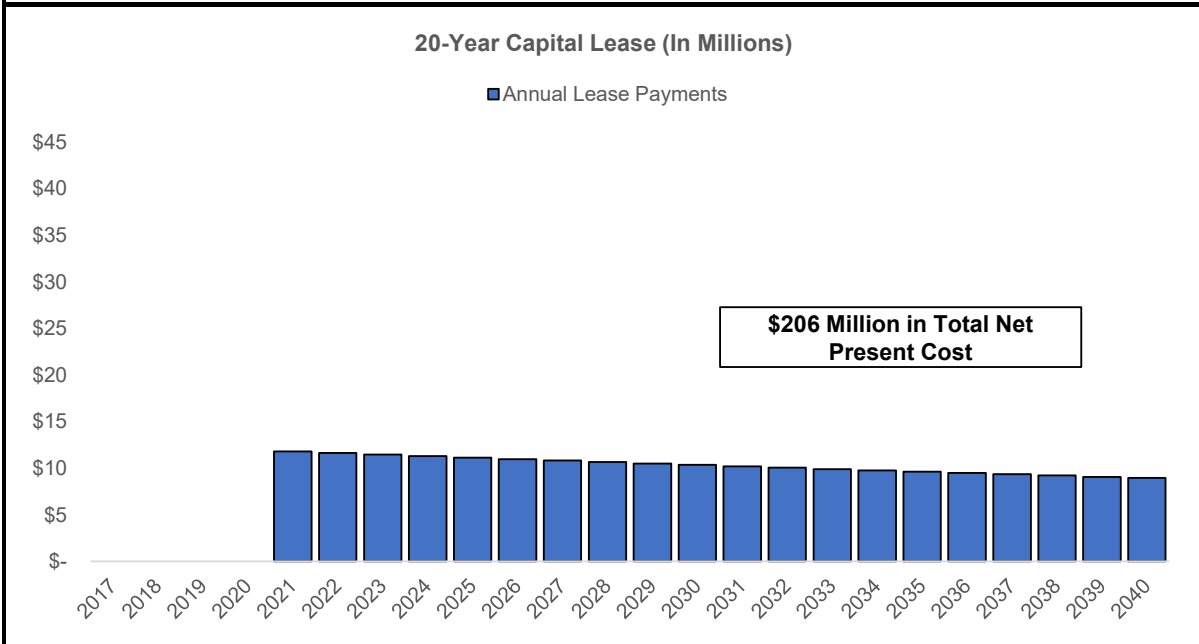
- **Bond financing with contracted maintenance (design-build-maintain)—the least expensive option—had an estimated net present cost of \$178 million over 20 years.** This scenario allows for state ownership but turns maintenance over to a contractor. As shown in **Figure 1-3** on page 14, it is more cost-effective than bond financing with state maintenance, making it the least costly option available to the state. This is because it would likely be less expensive for a contractor to maintain the new facility than for the state to do so, even with the reduced maintenance costs associated with a new facility.
- **Bond financing with state maintenance (design-build) had an estimated net present cost of \$193 million over 20 years.** This option allows for state ownership and state-provided maintenance. For state-provided maintenance costs, we assumed the state would be able to reduce its maintenance staff for the new facility by 40% over a seven-year period when compared to the costs for the existing facility. However, this is still more expensive over 20 years than contracted maintenance, as shown in **Figure 1-3**.
- **A 20-year lease-purchase agreement with a final purchase payment had an estimated net present cost of \$206 million over 20 years.** This option has the lowest initial annual payments if the state chooses to make a final purchase payment at the end of the contract instead of spreading that cost out over the lease. However, the annual lease payment will increase each year during the lease term, making the payments higher than the bond debt service payments after just a few years. This is especially true for the last year of the lease, when a large payment to purchase the facility would be due, as shown in **Figure 1-4** on page 15.
- **A 20-year lease-purchase agreement with the purchase price built into the lease payment (capital lease) had an estimated net present cost of \$206 million over 20 years.** For this option we spread the final purchase price over the annual lease payments and eliminated the large one-time purchase from the final year of the lease. Using this method, the annual lease payments are higher but the net present cost is the same as the lease-purchase agreement with lower annual lease payments and a final purchase payment mentioned in the previous bullet.
- **A 40-year lease-purchase agreement with no final purchase payment had an estimated net present cost of \$294 million over 40 years.** This is by far the most expensive option, costing approximately \$83 million more over 40 years than bond financing with contracted maintenance. Two important factors making this the most expensive option are (1) the continually increasing lease

payment and (2) ongoing costs built into the lease payment like contractor profit. Paying these costs to borrow money over 40 years will be much higher than paying them over 20 years.

Figure 1-3
Payments Made During Bond Repayment Period
(Discounted to Net Present Cost)



**Figure 1-4
Payments Made During Lease Term
(Discounted to Net Present Cost)**



Source: LPA research and LPA analysis of information from Kansas Department of Corrections and Kansas Development Finance Authority (audited).

These results are not surprising given certain structural advantages the state has in financing this type of project.

- **The state likely will have lower borrowing costs than a private contractor.** It is unlikely a contractor would be as creditworthy as the state, meaning it would likely pay a higher interest rate than the state. Also, any interest earned on state-issued bonds is tax exempt, making them attractive to investors and further lowering the interest rate for bond financing.
- **A private contractor will have to pay certain local, state, and federal taxes that the state would not have to pay.**
- **A private contractor would expect to earn a profit on the project, while the state would not.**

These results differ from KDOC's preliminary estimates which were missing key variables and used inconsistent assumptions that tended to favor a lease-purchase option. KDOC initially presented project cost estimates to the legislature in Spring 2017. We reviewed that analysis, but did not rely on it for several reasons.

- **The preliminary estimates did not include the final payment to purchase the facility at the end of a lease-purchase agreement, which understated the total cost of this option.** Because the state is required to own the facility at the end of a lease, a 20-year lease analysis should include a final purchase price. One way is to build the purchase price into the annual lease payment, increasing it. Another option is to have a lower annual lease payment and a large final purchase price at the end of the lease term. The KDOC estimate did not include either form of purchase price in a 20-year lease scenario, which significantly understated costs for the 20-year lease option.
- **The preliminary estimates did not adjust future costs to today's dollar amounts, understating lease costs compared to bond payments.** Unlike lease payments which increase over time, bond payments do not increase each year. This is important because it means future bond payments cost less today than future lease payments when they are brought back to today's dollars. This makes the total cost of the bond payments less than the total cost of the lease payments.
- **KDOC did not include bond financing with contracted maintenance in its preliminary estimates, which according to our estimates is the least expensive option.** Therefore, the bond financing costs were overstated. A more appropriate comparison would have been between lease and bond financing with a contracted maintenance option for both. Further, the state-provided maintenance costs used by KDOC did not reflect efficiencies that would be gained through the construction of a new, modernized facility. Instead, they used the maintenance costs for the current facility, which overstates the bond financing costs.

- **The preliminary estimates used lower total construction costs for leasing than for bonding.** This is misleading because it gives the impression that leasing will result in lower construction costs than bonding and will therefore be less expensive. While construction costs may vary greatly between bidders, the total construction costs for a given bidder's design should be approximately the same regardless of the proposed financing mechanism. The construction cost is also important in determining the depreciated value of the building for the final purchase price.

***The State's Two Options
for Rebuilding Lansing
Create Some Additional
Risks and Benefits for the
State***

Regardless of the option chosen, many significant factors will be determined by the final contract and will require skilled legal counsel to mitigate risks. If KDOC chooses to issue bonds to finance the project, the state has a significant amount of experience in this area. K DFA issues bonds regularly and offers legal counsel and finance experts who could help ensure the state gets the best deal on financing.

On the other hand, the state has far less experience with lease-purchase agreements. If KDOC chooses that type of option, there would be additional contract risks that will require legal counsel with skills specific to lease financing for large scale construction projects. For example, the contract will need to specify whether the state would be required to pay a final purchase price at the end of the lease term to gain ownership of the building, as well as how much this payment would be. This could greatly influence the annual lease payment amount and the overall price of the project. The contract should also specify how any disputes that may arise between the state and the contractor would be resolved, including any disputes about payments. This is especially important in a lease-purchase agreement, because the state would have less negotiating power as the lessee than as the owner of the new facility.

A lease-purchase contract lowers the state's risks related to construction costs, property damage, and ongoing repairs. The contractor would be responsible for any property damage and necessary repairs during the lease period. It would also be responsible for any contingency costs arising during construction from underground conditions at the site, which might be significant given the age of the facility.

Regardless of whether lease or bond financing is used, relying on contracted maintenance increases the risk that necessary maintenance will be deferred. If the state owns the facility but enters into a private maintenance agreement, it risks the contractor deferring maintenance. For example, a private company managing a county jail in Florida deferred maintenance totaling almost \$1

million over 20 years. A private contractor may be more motivated to keep up repairs if they own the facility; however, ultimately the final contract will define the contractor's maintenance responsibilities.

Conclusion and Recommendations

Conclusion

Large capital projects such as the Lansing Correctional Facility rebuilding project require a robust life cycle cost analysis to correctly identify the financing method that benefits the state in the long run. Such an analysis starts with identifying all costs of the project, and then mapping out the timing of those costs or cash flows, such as bond payments, lease payments and purchase price. Finally, because \$1 million today is far more valuable than \$1 million 20 years from now, the cash flows need to be discounted to current dollars in order to make valid comparisons among the options. Failure to include each of these elements—costs, timing, and discounting—could result in mistakenly selecting a financing option that is not in the best interests of the state.

Recommendations

Department of Corrections

In order to effectively analyze and weigh the potential costs of the bids ultimately submitted, the Department of Corrections should do the following:

1. Evaluate the proposals using a life-cycle cost model which takes into account the following factors: design and construction costs, ongoing maintenance costs (contractor and state), rehabilitation and repair costs and their growth rate, annual bond debt service payments, annual lease payments, the lease escalator rate, depreciation, final purchase price, and discounting future dollars to calculate the net present cost of each option (pp. 9-12).
2. Ensure that any cost comparisons use consistent assumptions, such as consistent rates of inflation, discounting methods, time periods, and all payments required to secure ownership (pp. 16-17).

If the agency chooses a lease-purchase contract, the Department of Corrections should take the following actions to protect the state's interests and manage risk:

3. Consult with independent outside counsel for advice in a private financing contract negotiation (p. 17).
4. Ensure the final contract includes the final purchase price (or an objective method of determining the final purchase price) (p. 16).

In order to maximize potential savings throughout the life of the project, the agency should take the following action if it chooses to continue to provide its own maintenance for Lansing:

5. Conduct a review of Lansing's maintenance needs and develop a plan to scale down its maintenance staff for the new facility (p. 16).

APPENDIX A
Agency Response

On July 17, 2017, we provided copies of the draft audit report to the Department of Corrections. Its response is included as this Appendix. Following the agency's written response is a table listing the department's specific implementation plan for each recommendation. We also provided copies of the draft report to the Kansas Development Finance Authority, however we did not request a formal response from them.

714 S.W. Jackson St., Suite 300
Topeka, KS 66603



Phone: (785) 296-3317
Fax: (785) 296-0014
kdocpub@doc.ks.gov
doc.ks.gov

Joe Norwood, Secretary

Sam Brownback, Governor

July 20, 2017

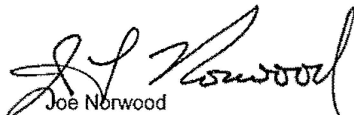
Megan Flanders, Auditor
Legislative Division of Post Audit
800 SW Jackson, Suite 1200
Topeka, KS 66612-2212

Dear Ms. Flanders:

On behalf of the Department of Corrections, I would like to take this opportunity to thank the Legislative Division of Post Audit for the professional matter in which this audit was completed. You and your staff were able to group your questions in such a way as to make efficient use of both our agencies time while still getting all of the necessary information needed to complete this audit.

As the audit states this project has not completed the RFP process. Therefore, we are open to having the Legislative Division of Post Audit along with Kansas Development Finance Authority review the final proposals once they are received and assist us in selecting the best proposal for the State of Kansas. Per the proviso for this project, once the best proposal is selected, the department is required to advise and consult with the legislative budget committee, and the joint committee on state building construction. The department must also obtain approval from the state finance council and the state building advisory commission.

Sincerely,



Joe Norwood
Secretary of Corrections

Itemized Response to LPA Recommendations

Audit Title: Comparing the Merits of Lease and Bond Options for Replacing the Lansing Correctional Facility
Agency: Department of Corrections

LPA Recommendation	Agency Action Plan
Question 1	
In order to effectively analyze and weigh the potential costs of the bids ultimately submitted, the Department of Corrections should do the following:	
1. Evaluate the proposals using a life-cycle cost model which takes into account the following factors: design and construction costs, ongoing maintenance costs (contractor and state), rehabilitation and repair costs and their growth rate, annual bond debt service payments, annual lease payments, the lease escalator rate, depreciation, final purchase price, and discounting future dollars to calculate the net present cost of each option.	The Kansas Department of Corrections (KDOC) will seek the input of KDFA and LPA as we evaluate the bids. In addition, life cycle cost is one of the evaluation factors specified in the RFP.
2. Ensure that any cost comparisons use consistent assumptions, such as consistent rates of inflation, discounting methods, time periods, and all payments required to secure ownership.	As the actual bids are received KDOC will be able to conduct the cost comparisons based on factual information rather than assumptions.
If the agency chooses a lease-purchase contract, the Department of Corrections should take the following actions to protect the state's interests and manage risk:	
3. Consult with independent outside counsel for advice in a private financing contract negotiation.	KDOC plans to consult with appropriate parties with experience in this field.
4. Ensure the final contract includes the final purchase price (or an objective method of determining the final purchase price).	This is required by the RFP.
In order to maximize potential savings throughout the life of the project, the agency should take the following action if it chooses to continue to provide its own maintenance for Lansing:	
5. Conduct a review of Lansing's maintenance needs and develop a plan to scale down its maintenance staff for the new facility.	KDOC is currently evaluating current and future maintenance needs for Lansing. In anticipation of fewer maintenance requirements for the new facility we have already begun to reduce staffing in this area through natural attrition.