

**STAFF MEETING MINUTES
LANCASTER COUNTY BOARD OF COMMISSIONERS
COUNTY-CITY BUILDING
ROOM 113 - BILL LUXFORD STUDIO
THURSDAY, FEBRUARY 16, 2017
8:30 A.M.**

Commissioners Present: Todd Wiltgen, Chair
Bill Avery, Vice Chair
Deb Schorr
Roma Amundson
Jennifer Brinkman

Others Present: Kerry Eagan, Chief Administrative Officer
Dennis Meyer, Budget and Fiscal Officer
Dan Nolte, County Clerk
Cori Beattie, Deputy County Clerk
Ann Taylor, County Clerk's Office

Advance public notice of the Board of Commissioners Staff Meeting was posted on the County-City Building bulletin board and the Lancaster County, Nebraska, web site and provided to the media on February 15, 2017.

The Chair noted the location of the Open Meetings Act and opened the meeting at 8:30 a.m.

AGENDA ITEM

1 APPROVAL OF MINUTES OF THE FEBRUARY 9, 2017 STAFF MEETING

MOTION: Avery and Schorr seconded approval of the February 9, 2017 Staff Meeting minutes. Amundson, Avery, Schorr, Brinkman and Wiltgen voted yes. Motion carried 5-0.

2 LEGISLATIVE UPDATE - Gordon Kissel, Joe Kohout and Jonathan Bradford, Kissel/E&S Associates (Legislative Consultants)

Joe Kohout, Kissel/E&S Associates, presented a legislative update and legislative bill summaries (Exhibits A-C). He recommended the Board consider taking a position on Legislative Bill (LB) 357 (Increase original certificate of title fees for vehicles transferred to Nebraska from another state and provide for voluntary contributions to brain injury programs). He noted a hearing on the bill is scheduled on February 28th.

Kerry Eagan, Chief Administrative Officer, indicated plans to testify on LB 567 (Change funding for county public assistance offices).

It was noted Judy Halstead, Lincoln-Lancaster County Health Department (LLCHD) Director, and Brent Meyer, Weed Control Superintendent, have expressed concerns regarding specific provisions in LB 327 (Appropriate funds for the expenses of Nebraska State Government for the biennium ending June 30, 2019) and Kohout explained it is merely a "shell bill."

In terms of LB 333 (Eliminates an independent review of denial of aid to the disabled), Kohout said Kissel/E&S Associates continues to work with the Nebraska Association of County Officials and the Governor's Office on acceptable language and will forward any language proposed by the Governor's Office to Eagan for review.

Jonathan Bradford, Kissel/E&S Associates, discussed LB 452 (Impose sales tax on services and change income tax rates and personal exemption amounts) and LB 468 (Change revenue and taxation provisions). He said both bills faced heavy opposition which included the Nebraska Department of Roads (NDOR), League of Municipalities, Nebraska Association of County Officials (NACO) and the Lincoln Independent Business Association (LIBA).

Kohout referenced LB 68 (Prohibit certain regulation of firearms, ammunition, and firearm accessories by counties, cities, and villages as prescribed) and said Terry Wagner, Lancaster County Sheriff, testified in a position of support with concerns. He noted there is a significant amount of opposition to the bill. Kohout said there has been correspondence between Sheriff Wagner and Senator Mike Hilgers, introducer of the bill, and said Senator Hilgers forwarded a copy of his legal interpretation of the bill. Eagan said a copy was forwarded to the County Attorney's Office.

Kohout said Liz Neeley, Executive Director, Nebraska State Bar Association, approached him about LB 312 (Change and eliminate revenue and taxation provisions) and raised a concern that the bill would create a fee on the use of legal services. He said there is no exemption in the bill for political subdivisions and suggested the Board send a letter to the Revenue Committee noting concerns.

MOTION: Schorr moved and Amundson seconded to send a letter to the Revenue Committee in opposition of Legislative Bill (LB) 312. Avery, Schorr, Brinkman, Amundson and Wiltgen voted yes. Motion carried 5-0.

Schorr said LB 178 (Provide for sexual assault protection order) would provide for protection orders in cases of sexual assault, noting protection orders are currently only issued in cases of domestic violence.

MOTION: Schorr moved and Brinkman seconded to sent a letter to the Judiciary Committee in support of Legislative Bill (LB) 178. Schorr, Brinkman, Amundson, Avery and Wiltgen voted yes. Motion carried 5-0.

Sheli Schindler, Youth Services Center (YSC) Director, appeared and expressed concern that LB 367 (Change provisions relating to payment of costs in juvenile matters) will increase transportation costs beyond YSC. Eagan said he plans to testify in opposition to the bill at the Judiciary Committee's hearing. Schorr said she will talk NACO about also providing testimony.

In response to a question from Avery, Kohout recommended the Board support LB 441 (Change eligibility provisions under the Medical Assistance Act) noting the Board has historically supported Medicaid expansion. He noted a hearing on the bill is scheduled on March 8th. Schorr said she will be testifying on the bill on behalf of NACO.

Avery also inquired about LB 438 (Increase cigarette and tobacco taxes as prescribed and provide for the distribution of funds). There was consensus to seek input from Judy Halstead, Lincoln-Lancaster County Health Department (LLCHD) Director.

Sara Hoyle, Human Services Director, appeared and reported receipt of a letter from the Nebraska Crime Commission indicating all Fiscal Year (FY) 2016 Juvenile Services funds will receive a cut of approximately 45% (Exhibit D). She said the County has contracts in place for these grants and said there will be a gap in funding. Hoyle said she is waiting to get an exact dollar figure from the Crime Commission.

Brinkman said she would like a better understanding of LB 508 (Change the population threshold for the county civil service system). **NOTE:** Discussion regarding the bill takes place later in the meeting.

A letter indicating Kissel/E&S has registered an additional client for the 2017 Legislative Session was also disseminated (Exhibit E).

3 PRELIMINARY ENGINEERING AUDIT OF COUNTY PROPERTIES -
Greg Modlish, Aaron Etzkorn and Nick Pedersen, Wildan 360 Energy Solutions (Engineering Consulting Firm); Frank Uhlarik, City Sustainability and Compliance Administrator

Greg Modlish and Aaron Etzkorn, Wildan 360 Energy Solutions, presented a preliminary assessment and preliminary engineering audit (Exhibits F & G). Copies of an investment grade audit report for the City of Lawrence, Kansas were also disseminated (Exhibit H).

Avery asked whether the Board could “cherry pick” the most egregious items in terms of energy consumption. Modlish said he would not necessarily “cherry pick” items, explaining you often get the best performance when they are amalgamated. He added they are looking for direction in terms of the scope of the project. The Chair felt the Board would need input from Don Killeen, Facilities and Properties Director, before moving forward.

Schorr inquired about the direction the City and Public Building Commission (PBC) decided to take. Frank Uhlarik, City Sustainability and Compliance Administrator, said the PBC was briefed on Tuesday and said the City is waiting until all City functions have come together with a recommendation and will scope the Investment Grade Audits (IGA's) from there.

Schorr asked about fees for services already provided and the estimated fee for the IGA. Modlish said there is no fee for services that have been provided to date and said the fee for the next step will be based on the scope of the project (a percentage). He said if an IGA is performed then shelved, a fee of 2.5% of the estimated cost of all the projects looked at will be applied.

Schorr also inquired about financing mechanisms. Modlish said municipal leases or certificates of participation (COP's) with local banking institutions could be options.

4 EMERGENCY OPERATIONS CENTER (EOC) UPDATE - Jim Davidsaver, Emergency Management Director; John Kay and David Quade, Sinclair Hille & Associates, Inc. (Architectural Firm)

Jim Davidsaver, Emergency Management Director; and John Kay and David Quade, Sinclair Hille & Associates, Inc., gave an update on relocation of the Lancaster County Emergency Management Agency, outlining space needs and the costs and challenges of the two sites that have been identified (the former Staff Secure Facility in the Youth Services Center (YSC) at 1200 Radcliff Street and the Municipal Services Center (MSC) at 949 West Bond Street) (Exhibit I). It was noted that new construction at an undetermined location was determined to be cost prohibitive.

Brinkman exited the meeting at 9:50 a.m.

In response to a question from Amundson, Sheli Schindler, Youth Services Center (YSC) Director, appeared and identified areas that could be utilized for future growth.

Brinkman returned to the meeting at 9:55 a.m.

Schorr asked whether it will be a Public Building Commission (PBC) project. Dennis Meyer, Budget and Fiscal Officer, explained the YSC is a County-owned building so if

that site is selected, the PBC would not be involved. He said there are funding options available, including applying the proceeds if Trabert Hall were sold.

Amundson asked whether the Board should seek input from Don Killeen, Facilities and Properties Director. Eagan said Killeen has expressed strong support for the YSC site.

MOTION: Avery moved and Schorr seconded to proceed with relocating the Emergency Operations Center (EOC) to space in the Youth Services Center (YSC). Brinkman, Amundson, Avery, Schorr and Wiltgen voted yes. Motion carried 5-0.

5 HP RECORDS MANAGER (HPRM) LICENSE UPDATE - Alison Lotto, Records Administrator; Cori Beattie, Deputy County Clerk

Alison Lotto, Records Administrator, said she reached out to every department not actively using HP Records Manager (HPRM) after the Mid-Year Budget Review on February 2nd (Corrections, Mental Health Crisis Center, Emergency Management, County Extension, County Assessor/Register of Deeds, County Sheriff, County Treasurer, Public Defender, Clerk of the District Court and Election Commissioner). She said the elected department heads either did not respond or indicated they were not interested at this point, with the exception of the County Treasurer's Office which is interested in putting permanent historical records in HPRM. Lotto indicated plans to work with Corrections, the Mental Health Crisis Center, and County Extension and said all of the appointed departments, with the exception of Emergency Management, will be using HPRM by the end of the year. She said Emergency Management indicated it was not interested and said it will be up to the Board on whether to mandate participation.

Lotto distributed information about the HPRM software licenses (Exhibit J) and said she believes 75% are actively used. **NOTE:** Blue designates departments that were using HPRM before she was hired, purple designates departments that were added in the last year, yellow designates departments that have made a firm commitment to increase their software licenses this year, and orange designates departments that will increase their software licenses but the number is an estimate. She pointed out a large increase in software licenses projected for County Engineering next year and said they plan to have all of their records in the system by the end of 2017 in order to provide access to their staff in the field.

At the Board's request, Jim Davidsaver, Emergency Management Director, appeared and said his department has not had a need to use HPRM, explaining his department uses the State's Grant Management System (GMS) to track its contracts and grants. He questioned how HPRM would "mesh" with that system. Schorr noted the department has other contracts and funding sources that are not connected to the State. She asked him to revisit at the issue, explaining the Board is striving for consistency across

County government. Davidsaver said his department will do whatever it can so there is consistency "across-the-board."

Lotto felt the County will need 156 software licenses by the end of Fiscal Year (FY) 2018 (see Exhibit J). She recommended that 50 licenses be taken out of dormancy, noting the cost is nominally more expensive than leaving them in dormancy for another year. Lotto also reported difficulty getting responses to queries from the Hewlett Packard (HP) account service representative, such as whether the County would be penalized in taking the software licenses out of dormancy in different "chunks" rather than at the end of a contract year, and said she may need to involve the County Attorney's Office.

Lotto also noted that the Board had expressed interest in using HPRM to manage email and the Records Center's physical records and said that will require a much larger investment in software licenses.

MOTION: Schorr moved and Brinkman seconded to: 1) Authorize an increase of 50 HP Records Manager (HPRM) software licenses; and 2) Ask the County Attorney's Office to send a letter to Hewlett Packard (HP) requesting a different account service representative. Amundson, Avery, Schorr, Brinkman and Wiltgen voted yes. Motion carried 5-0.

6 SHERIFF'S OFFICE STAFFING - Terry Wagner, County Sheriff; Todd Duncan, Chief Deputy Sheriff

Terry Wagner, County Sheriff, disseminated an organization chart for the Interdiction Unit (Exhibit K). He also submitted a request for authorization to promote a deputy sheriff who is handling forensics analysis to a supervisory (sergeant) position and to backfill that position with asset forfeiture funds (Exhibit L). He explained the position would continue until asset forfeiture funds are eliminated and the position would then be eliminated through attrition. Upgrading a deputy sheriff position would increase the budget by \$4,610 (wages and benefits) over the current budgeted amount. Wagner said he has sufficient funds in his budget to cover that expense.

Todd Duncan, Chief Deputy Sheriff, explained asset forfeiture funds cannot be used to pay for a position that is directly involved in drug interdiction as a primary duty.

Wagner said an additional vehicle would also be needed and said that cost could also be covered with asset forfeiture funds.

Avery asked if these positions would be impacted should the Board decide to institute a hiring freeze. Wagner did not feel they would, noting positions paid for by forfeited assets must be kept separate from the normal budgeting process.

MOTION: Amundson moved and Schorr seconded to authorize the County Sheriff to promote a deputy sheriff to a supervisory (sergeant) position and to hire an additional deputy sheriff and purchase a vehicle using asset forfeiture funds.

Brinkman stated she would not support the motion because she is uncomfortable with engaging in enforcement actions that directly benefit the enforcement agency.

ROLL CALL: Avery, Schorr, Amundson and Wiltgen voted yes. Brinkman voted no. Motion carried 4-1.

7 PENDING LITIGATION - David Derbin and Kayla Hathcote, Deputy County Attorneys; Sara Hoyle, Human Services Director

MOTION: Schorr moved and Brinkman seconded to enter Executive Session at 10:40 a.m. for the purpose of protecting the public interest with regards to pending litigation.

The Chair said it has been moved and seconded that the Board enter into Executive Session.

ROLL CALL: Schorr, Brinkman, Amundson, Avery and Wiltgen voted yes. Motion carried 5-0.

The Chair restated the purpose for the Board entering into Executive Session.

Schorr exited the meeting.

MOTION: Amundson moved and Brinkman seconded to exit Executive Session at 10:59 a.m. Brinkman, Amundson, Avery and Wiltgen voted yes. Schorr was absent. Motion carried 4-0.

8 GENERAL ASSISTANCE (GA) PRIMARY CARE - Sara Hoyle, Human Services Director; Judy Halstead, Lincoln-Lancaster County Health Department (LLCHD) Director

Schorr returned to the meeting at 11:00 a.m.

Judy Halstead, Lincoln-Lancaster County Health Department (LLCHD) Director, gave an update on the Health360 pilot project for General Assistance (GA) clients. **NOTE:** Health360 Integrated Care Clinic integrates mental health, substance use and primary care services. It also has an on-site pharmacy. Halstead said LLCHD has been the primary care provider for GA patients for many years and wanted to explore whether it

would be as cost effective to have them served in an integrated setting. The pilot program began in November, 2015 and 10 GA patients that would have been served by LLCHD were transitioned to the Health360 clinic. The pilot was expanded in the fall of 2015 and a total of 57 GA patients were studied. Halstead shared some preliminary data related to the project and said an initial review of the data showed most of the access to care and health measures were the same at both LLCHD and Health360. One significant area of difference is how nurse case management and after hours calls are handled and Halstead said nurse case management will be required going forward to provide the utilization review of services to keep costs as contained as possible. She felt the pilot project was a success, given the health outcomes, and said she and Sara Hoyle, Human Services Director, would like to authorization to move forward with asking Health360 for further information and a proposal for the services. If the proposal is not accepted, they could proceed with a full-blown request for proposal (RFP) for the services. Halstead added they would like to have a smooth transition for the 300 GA patients currently being served by LLCHD.

Brinkman asked whether there would be a reduction in force (RIF) at LLCHD if it did not provide the service. Halstead said there would, noting it would be done according to protocol and procedures on the City side.

Wiltgen asked whether this would help with Medicaid reimbursement issues. Halstead said it likely wouldn't, because most of the GA patients are not eligible for Medicaid unless they qualify under Supplemental Security Income (SSI) Disability or Social Security Disability Insurance (SSDI). She said they are not working with any Medicaid managed care companies for the GA population because they are not eligible for Medicaid. The back billing for services to Medicaid is on a straight fee-for-service scale for those GA patients who become SSI/SSDI eligible.

There was no objection to LLCHD asking for a proposal, as outlined.

In response to a question from Wiltgen, Halstead estimated that \$750,000 to \$1,200,000 would benefit LLCHD if Legislative Bill (LB) 438 (Increase cigarette and tobacco taxes as prescribed and provide for the distribution of funds) is passed.

9 COUNTY AUDIT - Ben Hart, Allen, Gibbs & Houlik (AGH), LLC., (Certified Public Accountants (CPA's) and Advisors); Dennis Meyer, Budget and Fiscal Officer

Ben Hart, Allen, Gibbs & Houlik (AGH), LLC, presented the audit of the County's basic financial statements for the fiscal year that ended June 30, 2016, a required communications letter, and a letter related to Information Security Governance (see Exhibits M & N). He said AGH can provide reasonable assurance that the financial statements prepared and audited are free of any material misstatements. Hart said

AGH is recommending the County establish a separation of business unit entities to better track grants received and a procedure in which the Grants Coordinator is integral as part of the grants process.

Dennis Meyer, Budget and Fiscal Officer, noted several driving forces this year: Public Building Commission (PBC) projects, specifically the Mental Health Crisis Center and 605 Building; increases to cash balances; activity in the General Fund; and bonded debt for the Lancaster County Correctional Facility Joint Public Agency (JPA), which is a blended component.

Wiltgen inquired about accounting for depreciation. Hart said there are two different perspectives within the financial statements: 1) Economic resources perspective which takes into account all activities, including depreciation and capitalization of assets; and 2) Current resources perspective in which any funds taken in are spent out. He said depreciation is not part of the later. Wiltgen said he believes Lancaster County is an "outlier" in government in that it has accounted for depreciation when determining indirect costs. Hart said it sets up a cash reserve for replacement of capital assets so it works in the County's favor.

Meyer also noted the County is looking at moving to service-based budgeting and said he may need to consult with AGH. Hart indicated he supports moving to service-based budgeting rather than zero-based budgeting.

NOTE: A copy of the audit is on file in the County Clerk's Office and is also available on the County's website: <http://lancaster.ne.gov/budget/pdf/16audit.pdf>.

10 NOTICE OF AFFIRMATION FOR THE LINCOLN SALTILLO QUIET ZONE - Roger Figard, Railroad Transportation Safety District (RTSD) Executive Director; Rick Haden, Felsburg Holt & Ullevig (Engineering Consulting Firm)

Roger Figard, Railroad Transportation Safety District (RTSD) Executive Director, said there are currently six quiet zones in Lancaster County (Exhibit O). **NOTE:** A quiet zone is a railroad grade crossing at which trains are prohibited from sounding their horns in order to decrease the noise level for nearby residential communities. Once established, a quiet zone must be periodically re-evaluated to demonstrate that safety requirements continue to be met. A report must be submitted every five years for each quiet zone affirming that the safety measures are in effect. He said the RTSD contracted with Felsburg Holt & Ullevig to study and affirm that the safety measures are in place (see Exhibit P for the notice of affirmation for the Lincoln Saltillo Quiet Zone).

ACTION ITEMS

- A. Resolution No. R-17-0014 In the Matter of the Chief Executive Officer Statement for Affirmation of the Lincoln Saltillo Quiet Zone 5-Year Affirmation

MOTION: Schorr moved and Brinkman seconded to approve Resolution No. R-17-0014. Amundson, Avery, Schorr, Brinkman and Wiltgen voted yes. Motion carried 5-0.

11 605 BUILDING FURNITURE UPDATE TO AMEND TOTAL PURCHASE (ACTION REQUIRED) - Bob Walla, Purchasing Agent

Bob Walla, Purchasing Agent, said the original bid recommendation did not include storage towers (see B-16-0303). He said the additional cost will be \$29,127.42.

MOTION: Schorr moved and Brinkman seconded to approve the revised bid amount (\$698,645.51). Avery, Schorr, Brinkman, Amundson and Wiltgen voted yes. Motion carried 5-0.

NOTE: A copy of the amended bid recommendation is on file in the County Clerk's Office.

12 ACTION ITEMS

- A. Resolution No. R-17-0014 In the Matter of the Chief Executive Officer Statement for Affirmation of the Lincoln Saltillo Road Quiet Zone 5-Year Affirmation

Item was moved forward on the agenda.

13 ADMINISTRATIVE OFFICER REPORT

- A. Nebraska Association of County Officials (NACO) Southeast District Meeting (Friday, March 24, 2017, Mahoney State Park, Ashland, Nebraska)

Amundson, Brinkman, Schorr and Wiltgen indicated plans to attend the event.

- B. Review of Breast Feeding Policy

Brinkman disseminated copies of the City of Lincoln Breastfeeding Policy (Exhibit Q) noting the policy established a goal regarding what a Nursing Mothers Rooms should

be. She said she asked Judy Halstead, Lincoln-Lancaster County Health Department (LLCHD) Director, to have her staff review the policy and see if they have any suggested revisions. Brinkman said she will also make the City Council aware of her request and said hopefully a joint City/County Breastfeeding Policy that is more up to date can be developed.

C. Information Services Policy Committee (ISPC) - Security Advisory Group

Eagan agreed to participate in the group. Allison Lotto, Records Administrator, appeared and said she would like to observe the discussions. There was no objection to her request.

RETURNING TO ITEM 2

Discussion took place regarding LB 508 (Change the population threshold for the county civil service system). Eagan explained that the bill is intended to address the Civil Service component that was eliminated from the 2015-2016 Legislative Session's LB 742. He noted Lancaster County had three main objections from having to move from its Civil Service System to Douglas County's Civil Service System under the 400,000 population threshold: 1) It would change the makeup of the Personnel Policy Board; 2) Lancaster County would lose its authority to transfer functions from another political subdivision to the County with protections for the existing employees; and 3) All directors would move into the Classified System. Avery and Brinkman indicated they had been contacted by parties who oppose the legislation. It was suggested that they inform those parties that they should have their lobbyist relay their concerns regarding the legislation to the County's lobbyist.

14 DISCUSSION OF BOARD MEMBER MEETINGS

A. Information Services Policy Committee (ISPC) - Wiltgen

Wiltgen said they discussed the Security Advisory Group and the City's and County's external and internal websites. Schorr said Dennis Meyer, Budget and Fiscal Director, has indicated the Board could use Keno Funds to improve the County's website because it is a direct service to constituents.

Wiltgen noted the City has a new Finance Director and said he plans to make a decision on the replacement options for the payroll system used by the City and County his priority.

B. Parks and Recreation Advisory Board - Schorr

Schorr reported on plans for a strategic planning initiative for Wilderness Park.

- C. Region V Services Executive Committee - Wiltgen
- D. Region V Services Governing Board- Wiltgen
- E. Region V Systems Governing Board - Wiltgen
- F. Region V Systems Executive Committee - Wiltgen

Wiltgen said he was unable to attend the Region V Services and Region V Systems meetings, due to illness.

G. Meeting with Mayor - Wiltgen/Avery

Avery said the Mayor indicated he is "leaning" towards improving the North 84th Street and Havelock Avenue intersection.

H. Public Building Commission (PBC) - Amundson/Brinkman

Brinkman said they received an update on the 605 Building and approved change orders. She said they also discussed: 1) Leasing space in the 605 Building to the State for a three-year period in the space that is allocated for future District Court expansion; and 2) Space for a Nursing Mother's Room in the 605 Building; and 3) Options to address the parking shortage on the government campus. Brinkman said the PBC also received a presentation on the preliminary energy audit and said their initial reaction was that the amount of funds required to invest in the energy enhancements did not seem to justify the payback amount.

In response to a question from Wiltgen, Brinkman said Property Management will prepare a proposal for an updated audio/visual connection for Room 113 (The Bill Luxford Studio).

I. Board of Health - Avery

Avery said they received briefings from the Lincoln Police Department (LPD) on call trends for individuals with mental health issues and opioid issues and a briefing on hazardous waste.

15 DISCUSSION OF OTHER MEETINGS ATTENDED

There were no meeting reports.

16 SCHEDULE OF BOARD MEMBER MEETINGS

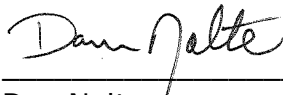
Informational only.

17 EMERGENCY ITEMS

There were no emergency items.

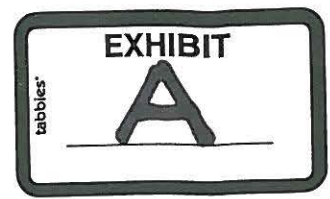
18 ADJOURNMENT

MOTION: Schorr moved and Amundson seconded to adjourn the meeting at 12:27 p.m. Brinkman, Avery, Amundson, Schorr and Wiltgen voted yes. Motion carried 5-0.



Dan Nolte
Lancaster County Clerk





KISSEL / E&S
ASSOCIATES

A Limited Liability Company Associated with Erickson and Sederstrom, P.C.

Joseph D. Kohout, *Partner*

Suite 400 Cornhusker Plaza / 301 S. 13th Street / Lincoln, NE 68508-2571

Telephone (402) 476-1188 / Facsimile (402) 476-6167

Email jkohout@kisseles.com / Website www.kisseles.com

LEGISLATIVE MEMORANDUM

TO: Lancaster County Board of Commissioners

FROM: Gordon E. Kissel
Joseph D. Kohout
Jonathan G. Bradford

DATE: February 15, 2017

RE: Weekly Update

Good morning. Today is day 31 of the 2017 Legislature. The Legislature continues its process of engaging in morning debate and conducting committee hearings in the afternoons.

On Monday, the Legislature passed, on Final Reading, LB22, the governor's proposed budget-adjustment bill, as well as LB119, the bill to push back the certification of state aid to school districts. Both bills have now been presented to the Governor, though neither bill has yet been signed. Tuesday and Wednesday mornings were again spent debating the rules. The body successfully voted - 45-1 - to extend the temporary rules through day 50. The Legislature will now begin full debate on proposed bills that have made it through the committee process, but come day 50 the rules debate may begin anew.

As far as scheduling goes, it is important to note that they will adjourn today at noon and reconvene on Tuesday for the President's Day holiday.

LANCASTER COUNTY LEGISLATIVE PRIORITIES

LB508 (Hilgers) Change the population threshold for the county civil service system. The bill was introduced on January 18th, and has now officially been referred to the Government, Military and Veterans Affairs Committee. The hearing on this bill has been set for February 22, 2017.

We did become aware that NAPE/AFSCME will be opposing the bill - even though they did not oppose the bill openly during the interim study hearing in 2015, during the hearing on LB742 in 2016 and only after the bill advanced to General File did they advise Senator Hansen of the concerns about the civil service provisions.

POSITION: SUPPORT

LB567 (Bolz) *Change funding for county public assistance offices.* The bill was introduced on January 18th, and has now officially been referred to the Government, Military and Veterans Affairs Committee. The bill has been set for public hearing on February 22, 2017.

POSITION: SUPPORT

LB441 (Morfeld) *Change eligibility provisions under the Medical Assistance Act.* This years' Medicaid Expansion Bill. LB441 makes those persons described under section 1902 (a)(10)(A)(i)(VIII) of the federal Social Security Act eligible under the Medical Assistance Act. The department must submit a state plan amendment to cover newly eligible individuals, and such amendment must request as the alternative benefit plan a benchmark benefit package as defined in section 1937(b)(1) 18 (D) of the federal Social Security Act, as amended, 42 U.S.C. 1396u-7(b)(1)(D), as such act and section existed on January 1, 2017, for Secretary-approved coverage that shall include full Medicaid benefit coverage, including mandatory and optional coverage, under section 68-911 22 in the amount, duration, and scope in effect on January 1, 2017, and any additional wraparound benefits required under federal law. The hearing has been set for March 8, 2017.

POSITION: RECOMMEND SUPPORT

LB357 (Bolz) *Increase original certificate of title fees for vehicles transferred to Nebraska from another state and provide for voluntary contributions to brain injury programs.* LB357 places a fee of twenty-five dollars for each original certificate of title issued to a person by a county for a vehicle or trailer being titled in Nebraska from another state after the first original title is issued. LB357 also allows for voluntary contributions of \$2 to be made as a donation to programs for persons suffering from brain injury. The hearing has been scheduled for February 28, 2017.

POSITION: SUPPORT

LB47 (Watermeier) *Change provisions relating to the payment of fees and costs associated with grand juries and the deaths of incarcerated persons.* The hearing on this bill was held before the Judiciary Committee. Mr. Eagan testified on behalf of Lancaster County. The bill remains held in Committee.

POSITION: SUPPORT

LB327 (Speaker Scheer at the Request of the Governor) *Appropriate funds for the expenses of Nebraska State Government for the biennium ending June 30, 2019.* This is the Governor's Appropriation bill. We have become aware, as per a communication from Brent Meyer that there is a provision to reduce the amount of funding provided by LB1038 in last session from \$975,000 to \$487,500 for the Nebraska Department of Agriculture to get to their 8% reduction. The bill has been referred to the Appropriations committee, but a hearing date has not yet been scheduled.

POSITION: CONCERNS EXPRESSED BY JUDY HALSTEAD AND BRENT MEYER ABOUT REDUCTIONS IN SPECIFIC AREAS

LB81 (Blood) *Change the application fee for handgun certificates.* LB81 changes the fee charged for each application for a handgun certification from five dollars to twenty-five dollars. The bill was advanced to General File in its Green Form.

POSITION: SUPPORT

LB127 (Groene) *Change notice requirements under Open Meetings Act.* LB 127 provides for a change in the open meetings law, in Sec. 84-1411 of the statute. It strikes language for political subdivisions to publicize meeting designated by each political body and requires them to publish such notice in a newspaper of general circulation in each county within the public entities jurisdiction as well as any other method designated by the public body. The newspaper notice does not have to be published in every county but must have a general circulation within the county. This proposal is also not intended to apply to state

agencies but just political subdivision. A significant amendment was offered at the time of the hearing that would re-write the bill. The bill remains held in Committee
POSITION: OPPOSE

LB152 (Craighead) Change and eliminate provisions relating to the fees for recording and filing certain documents. LB152 eliminates sunset dates of January 1, 2018 for provisions relating to the fees for recording and filing certain documents. LB152 also eliminates the six-dollar uniform fee, payable to the Secretary of State, for presenting and filing and indexing and filing and indexing each notice of lien or certification of notice affecting lien on a property. The bill remains held in Committee
POSITION: SUPPORT

LB333 (Riepe at the Request of the Governor) Eliminate an independent review of denial of aid to the disabled. LB333 requires that a disability persist for more than a year before a person can be considered disabled. LB333 also eliminates the requirement that the Department of Health and Human Services conduct an independent medical review when Social Security denies benefits to an individual on the basis of the duration of the individual's disability. The hearing on this measure was on January 25, 2017. A letter was sent to Senator Riepe and members of the Health and Human Services Committee under Chairman Wiltgen's signature.

There has been some movement on the part of the Governor's Office to address the concerns raised by Lancaster County, Douglas County and NACO. Conversations continue but the bill remains held in Committee.
POSITION: OPPOSE

LB468 (Krist) Change revenue and taxation provisions. LB468 eliminates the Personal Property Tax Relief Act exemption and compensating exemption factor for tax years 2018 and 2019. LB468 also eliminates an exemption from taxation for the first ten thousand dollars of valuation on tangible property for tax years 2018 and 2019. LB468 also eliminates the reduction in the value of tangible personal property owned by each railroad, care line company, public service entity, and air carrier for tax years 2018 and 2019. LB468 ends reimbursement to taxing subdivisions for tax revenue that will be lost because of personal property tax exemptions for tax years 2018 and 2019.

LB468 allows resident individuals from electing to subtract from federal gross adjusted income the extraordinary dividends paid on and the capital gain from sale or exchange of capital stock for taxable years beginning before January 1, 2018 and taxable years beginning on or after January 1, 2020. LB468 ends the credit to the Game and Parks Commission Capital Maintenance Fund on July 1, 2017, and ends the credit to the Highway Trust Fund on or after July 1, 2017 and before July 1, 2019. Since an emergency exists, this act takes effect when passed and approved into law.

The hearing on this measure was yesterday.
POSITION: OPPOSE

LANCASTER COUNTY ELECTED OFFICIALS/DEPARTMENT HEADS PRIORITIES

LB310 (Fricson) Change provisions relating to bridge carrying capacities and weight limits. This bill has been referred to the Transportation and Telecommunications Committee for public hearing. Engineer Dingman asked a question of us regarding the bills origin. In checking with Senator Friesen's office, the bill was brought to them by NACO through the Roads Superintendents subgroup.

There was some correspondence between Larry Dix, Joe Kohout, Pam Dingman and others to get her in touch with the folks who had prepared LB310. The hearing on this measure was held on Monday, February 6, 2017. The bill remains held in Committee.

LB51 (Schumacher) Change provisions relating to sales of real property for nonpayment of taxes. This bill was heard by the Revenue Committee. The Lancaster County Treasurers Office testified in a neutral capacity after a meeting the morning of the hearing between representatives of NACO, Larry Dix and Senator Schumacher. Senator Schumacher offered an amendment at the hearing that would alleviate the concerns raised by the Treasurer's Office. The bill remains held in Committee.

LB68 (Hilgers) Prohibit certain regulation of firearms, ammunition, and firearm accessories by counties, cities, and villages as prescribed. We were asked to work with Eric Gerard, Lincoln City Lobbyist, on this. During deliberations on this measure on Thursday, February 9, 2017 by the Board, they agreed to follow Sheriff Wagner's lead. During testimony on February 10, 2017, Sheriff Wagner, offered testimony in support with concerns.

LB434 (Ebke) Change videoconferencing provisions relating to certain juvenile hearings. LB434 requires any telephone or videoconference juvenile evidentiary hearings to ensure the preservation of due process or rights of all parties. The bill has been referred to the Judiciary committee and is scheduled for a public hearing on March 9, 2017.

LB658 (Wayne) Provide for expert witness appointment as prescribed in certain juvenile proceedings. LB658 grants the right to one appointed expert witness during any adjudication or disposition proceeding to the parent, guardian, or custodian of the juvenile who is the subject of the proceeding. If the parent, guardian, or custodian is indigent, the reasonable fees and expenses of such expert witness will be paid by the county. The bill has been referred to the Judiciary committee and is scheduled for a public hearing on March 9, 2017.

LB544 (Watermeier) Provide for elimination of the office of clerk of the district court as prescribed. LB544 allows, in any county that does not have an elected clerk of the district court, for the duties of the clerk of the district court to be performed pursuant to an agreement between the State Court Administrator and the county board. LB544 also allows for a county to vote to eliminate the office of the clerk of the district court when a vacancy occurs. The bill was referred to the Judiciary Committee.

LB163 (Vargas) Require additional polling places prior to elections in certain counties LB163 requires election commissioners in counties with populations of more than one hundred thousand to establish at least three voting locations. No hearing date has been scheduled on this matter.

LB625 (Larson) Change the Property Assessed Clean Energy Act. LB625 allows a municipality to create a clean energy assessment district anywhere within the municipality, except a district may not be created that includes any area within the corporate boundaries of any city or village located in whole or in part within such county. The hearing on this measure was on Tuesday, February 14, 2017 and Candace Meredith testified in a neutral capacity on an amendment suggested by NACO. We expect the bill to move with that amendment attached.

LB145 (Hansen) Provide for a hearing to determine financial ability to pay fines and costs and traffic citations and provide for community service. LB145 allows for a sentencing judge or magistrate to conduct a post-hearing sentence to determine if the offender has the financial ability to pay the fines or costs associated with their infraction. If the magistrate or judge determines that the offender is able to pay the fine, but the offender refuses, the magistrate or judge may sentence the offender to imprisonment or community service. If the

offender is found unable to pay the fine, the magistrate or judge may impose the sentence without costs and fines, discharge the costs and fines from the offender, or order community service as part of the sentence. If the offender is found able to pay the costs or fines in installments, the magistrate or judge may enter an order specifying the terms of a payment arrangement.

LB145 also allows for individuals who are arrested for failure to pay costs and fines to be provided a hearing in which their financial ability to pay those fines and costs can be assessed. A person who believes themselves to be financially unable to pay court costs and fines may request a hearing after an order has been issued against them.

LB395 (*Morfeld*) *Change provisions relating to conditions of and ability to post bail.* LB395 requires a court to consider all methods of bond and conditions of release to avoid pretrial incarceration. If an appearance bond is required, the court shall appoint counsel to indigent defendants. To determine if a defendant is indigent, the judge must consider the defendant's financial ability to pay a bond. The court may also order a defendant to be supervised by an approved person or organization or a pretrial services program.

HEARINGS BEFORE THE NEXT STAFF MEETING

Today: **LB369 (Lowe) Change provisions relating to fees charged by the register of deeds – Government, Military, and Veterans Affairs**

LB369 eliminates the provision that ended the ten-dollar fee received by the register of deeds and the county clerk for recording a deed, mortgage, or release, recording and indexing of a will, recording and indexing of a decree in a testate estate, recording proof of publications, or recording any other instrument. LB369 allocates two dollars and fifty cents of this fee to the preservation and maintenance of public records.

LB369 eliminates the uniform fee for presenting for filing and indexing and for filing and indexing each notice of lien or certificate of notice affecting the lien.

LB369 also eliminates the provision that ended the uniform fee for presenting for filing, releasing, continuing, or subordinating or for filing, releasing, continuing, or subordinating each tax lien.

LB382 (Erdman) Change provisions relating to budget limitations – Government, Military, and Veterans Affairs

LB382 makes, for FY2017-18, the last prior year's total of restricted funds for counties equal to the last prior year's total of restricted funds minus the last prior year's restricted funds budgeted by counties plus the last prior year's amount of restricted funds budgeted by counties for capital improvements.

LB243 (Bolz) Require reporting of certain information concerning assaults that occur in state Institutions – Judiciary

If a person is assaulted in a secure state institution by another person housed or held in such institution, LB243 requires the administrators of secure state institutions to inform the victim of the assault of all disciplinary actions that are

being taken and their results, as well as inform the appropriate county attorney of such assault.

LB245 (Bolz) Provide for a corrections-related emergency and overtime as prescribed – Judiciary

LB245 requires that employees of the Department of Corrections must have at least eight consecutive hours off work before a shift. Overtime of such employees is also limited to thirty-two hours during a period of two consecutive weeks. However, in the event of a serious disturbance at a correctional facility, the director may declare an emergency and the overtime restrictions may be suspended for up to two weeks or until the director rescinds the declaration.

LB250 (Harr) Change provisions relating to probationers' rights – Judiciary

LB250 takes away a probationer's right to a prompt consideration of a motion or information to revoke probation when the probationer has failed or refused to report to their probation officer as ordered by the court.

LB258 (Hansen) Provide opportunity for inmates to obtain state identification card or driver's license before discharge – Judiciary

LB258 provides for inmates the opportunity to obtain a state identification card or a motor vehicle operator's license prior to release.

LB251 (Harr) Redefine agricultural or horticultural purposes for revenue and taxation purposes – Revenue

LB251 requires that, when determining whether a parcel of land is primarily used for agricultural or horticultural purposes, no regard may be given to whether some or all of the parcel is platted and subdivided into separate lots or developed with improvements such as streets, sidewalks, curbs, gutters, sewer lines, water lines, or utility lines.

LB266 (Friesen) Change the valuation of agricultural land and horticultural land – Revenue

LB266 requires that, for the purposes of school district taxation, agricultural and horticultural land be taxed at a percentage of its actual value. For the 2018 tax year, the percentage will be fifty. For the 2019 tax year, the percentage will be forty. For the 2020 tax year and years after, the percentage will be thirty.

LB266 also allows for the commission to increase or decrease the value of real property. For the purpose of school district taxation, agricultural and horticultural tax ranges may be: 44 to 50 for tax year 2018; 34-40 for tax year 2019; and 24-30 for tax years 2020 and after.

State aid means, for agricultural and horticultural land, a percentage of the actual

value of the land. For tax year 2018, 47%, for tax year 2019, 37%, and for tax years 2020 and after, 27%.

Tuesday: **LB327 (Scheer) Appropriate funds for the expenses of Nebraska State Government for the biennium ending June 30, 2019 – Appropriations**

LB194 (Vargas) Change provisions of the Credit Services Organization Act, Delayed Deposit Services Licensing Act, and Nebraska Installment Loan Act – Banking, Commerce & Insurance

LB194 prohibits Credit Services Organizations from charging any brokerage or other fees or charges in connection with a loan governed by the Nebraska Installment Loan Act. LB194 also adds definitions for the Delayed Deposit Services Licensing Act. LB194 provides that any delayed deposit loan that is made by a person who is not licensed as required is void and the person making the deposit has no right to collect, receive, or retain any principle, interest, fees, or other charges associated with such loan. LB194 also changes the nonrefundable application fee from five hundred dollars to one thousand dollars.

LB194 also raises the asset requirement of an applicant from twenty-five thousand dollars available for operating the delayed deposit service business to fifty thousand dollars. LB194 raises the fee required for requesting a change of location a branch or designated principle place of business from one hundred fifty dollars to five hundred dollars.

LB194 stipulates the documentation requirement for each delayed deposit loan transaction and what information should be contained in the written agreement. Licensee are also required to openly display a schedule of all finance charges, fees, interest, other charges, and penalties for all services provided.

LB194 creates various restrictions on Delayed Deposit Loans. LB194 makes Delayed Deposit Loans precomputed loans that are payable in substantially equal installments of principle, fees, interest, and charges combined. The total monthly payment may not exceed the greater of either five percent of the borrower's verified gross post-tax monthly income or six percent of the borrower's verified net post-tax monthly income. Before initiating any transaction, the licensee must make a reasonable determination of the borrower's verified income. The only fees a licensee may receive are interest of no more than thirty-six percent per annum, a month maintenance fee of either five percent of the loan amount or twenty dollars, and other charges permitted for the presentation of nonnegotiable instruments. All fees collected may not exceed fifty percent of the original loan amount. In the event of a default, the licensee may exercise all civil means authorized by law to collect the face value of the loan. The licensee may not collect fees as a result of the default. Licensees are not allowed to charge a fee associated with prepayment of a loan. Licensees are not allowed to lend any amount greater than \$500, plus allowable fees and interest, to any borrower. Borrowers will have the right to rescind a loan on or before 5 p.m. the next business day following the transaction. Licensees are not allowed to enter into

more than one delayed deposit loan with the same borrower at any one time. The written loan agreement for a delayed deposit loan may provide that the entire unpaid loan balance be due and payable if the loan has been in default for ten days.

LB194 also creates a duty of licensees to report, on an annual basis, certain information regarding their operations to the director.

LB286 (Craighead) Adopt the Nebraska Flexible Loan Act and change provisions of the Delayed Deposit Services Licensing Act – Banking, Commerce & Insurance

LB286 adopts the Nebraska Flexible Loan Act. This act prohibits a person, unless they are exempted, from engaging in the business of making a flexible credit loan to a resident without first obtaining a license as a flexible credit lender. The director must issue a license to an applicant within sixty days after receiving a complete application unless the applicant is insolvent, fails to demonstrate financial responsibility, failed to pay the required fee of \$500, or fails to maintain at least twenty-five thousand dollars in readily available assets. All advertisements of a licensee must comply with the federal Truth in Lending Act. Licensees are prohibited from providing a flexible credit loan to a consumer with more than one outstanding flexible credit loan. LB286 also includes interest rate caps for certain categories of consumers. LB286 stipulates that, for closed-end credit, the term of the flexible credit loan may not exceed twenty-four months.

LB386 (Lindstrom) Change time period a licensee under the Delayed Deposit Services Licensing Act may hold a check – Banking, Commerce & Insurance

LB386 prohibits licensees from holding or agreeing to hold a check for more than forty days.

LB43 (Hilkemnan) Change provisions relating to surcharges for 911 service – Transportation and Telecommunications

LB43 limits the monthly surcharge that a governing body may impose on telephone numbers within the service area to one dollar per month. Wireless carriers may collect a surcharge of up to seventy cents.

LB156 (Friesen) Eliminate a termination date under the 911 Service System Act – Transportation and Telecommunications

LB156 eliminates Section 86-1030 from the 911 Service System Act

LB389 (Friesen) Adopt the Small Wireless Facilities Act – Transportation and Telecommunications

LB389 adopts the Small Wireless Facilities Act. The purposes of this Act are to secure public access to advanced wireless technology and information, promote the public benefits from such wireless technology, and confirm that

communications service providers and facilities have a right to occupy and utilize public rights-of-way. The Act allows communications service providers and facilities providers to place poles and wireless facilities in an authority right-of-way. An authority may require an application for a permit for such placement. The authority must approve the application unless it does not meet the applicable industry construction standards. Approved permits shall remain valid for at least ten years and be approved automatically for at least three five-year periods. Small wireless facilities shall be permitted use in all zoning districts other than areas outside the authority right-of-way that are zoned and used for single family residential use.

LB472 (Bostelman) Change provisions relating to signs and advertising on highways – Transportation and Telecommunications

LB472 only allows the Department of Roads to require permits for advertising signs, displays, and devices placed along or upon the Highway Beautification Control System

LB262 (Groene) Change provisions relating to undeveloped vacant land under the Community Development Law – Urban Affairs

LB262 prohibits tax-increment financing from being used for the acquisition, planning, and preparation for development or disposal of undeveloped vacant land. LB262 also prohibits undeveloped vacant land from being declared or designated blighted and substandard in order to qualify for the use of tax increment financing unless such land meets the definition of a blighted area.

LB489 (Groene) Redefine development project under the Community Development Law – Urban Affairs

LB489 removes other improvements in accordance with the development plan from the definition of development project under the Community Development Law.

LB597 (Groene) Provide for application process through county assessor and Tax Commissioner prior to using tax-increment financing – Urban Affairs

LB597 requires any governing body that seeks to use tax-increment financing to submit an application to the county assessor. This application must include the information reasonably required to determine the eligibility of the governing body, the redevelopment plan, and the parcel or parcels for such tax-increment financing. This application will be forward by the county assessor to the Tax Commissioner if the county assessor determines that the certain requirements of the application have been met. The Tax Commissioner will then review the application to ensure all provision of the Constitution of Nebraska, the Community Development Law, and tax-increment financing have been satisfied.

Wednesday: **LB192 (Pansing Brooks) Change and modernize provisions relating to the qualifying and summoning of Jurors – Judiciary**

The purpose of LB192 is to provide adequate compensation of the jury commissioner and to permit a change in such salary as soon as the change may become operative under the Constitution of Nebraska. The salary of the jury commissioner is to be fixed by the district judges in an amount not to exceed three thousand dollars. LB192 also eliminates a provision excusing nursing mothers from serving on juries. LB192 contains duties of a jury commissioner designed to ensure adequate selection of qualified potential jurors.

LB312 (Briese) Change and eliminate revenue and taxation provisions – Revenue

LB312 eliminates Motor vehicles, motorboat trade-ins, newspapers, laundromats, and telefloral deliveries from being included under “consumer goods” for the purpose of a report created by the department for the purpose of reviewing the major tax exemptions for which state general funds are used to reduce the impact of revenue lost due to a tax expenditure. From the same report, under “nonprofits, governments, and exempt entities” the Nebraska lottery, admissions to school events, and fine art purchases by a museum are eliminated. From the same report, all provisions are eliminated under “services purchased for nonbusiness use” and replaced with only household professional services. Prepaid calling arrangements are also eliminated from “telecommunications.”

LB312 also removes the exemptions under gross income received for animal specialty services for the purpose of determining gross receipts for providing a service. Other sources of gross are added to the definition of gross receipts for providing a service are added in section 2.

LB312 allows the credit from trading in motor vehicles, motorboats, all-terrain vehicles and utility-type vehicles to be used when computing the Sales price. LB312 removes prepared food, food, and food ingredients served by public or private schools from sales tax exemption. Fees and admissions charged by a public or private school are also removed from sales tax exemption. Fees and admissions charged for participants in any activity provided by a nonprofit are also removed from sales tax exemption.

LB312 removes from the definition of “food and food ingredients” soft drinks, candy, and bottled water.

LB312 allows for a refundable credit against the income tax up to ten percent of the allowed federal credit for taxable years beginning or deemed to being before January 1, 2018 and seventeen percent for taxable years beginning or deemed to begin on or after January 1, 2018.

LB312 requires the Tax Commissioner, from the amounts collected under the Nebraska Revenue Act of 1967, credit to the Excess Revenue Property Tax

Credit Fund an amount equal to the net increase in state tax revenue received as a result of the changes made by this legislative bill.

LB312 creates the Excess Revenue Property Tax Credit Fund. This fund will be sued to provide a property tax credit to owners of real property. To determine the amount of this credit, the county treasurer shall multiply the amount disbursed to the county by the ration of the real property valuation of the parcel to the total real property valuation in the county. The amount dispersed to each county will be equal to the amount in the Excess Revenue Property Tax Credit Fund multiplied by the ration of the real property valuation in the county to the real property valuation in the state.

LB313 (Briese) Change the sales tax rate and the earned income tax credit and provide property tax credits – Revenue

LB313 changes the sales tax rate to six and one-half percent on the operative date of this act. LB313 also allows for a refundable tax credit of 17% of the federal credit allowed for taxable years beginning or deemed to begin on or after January 1, 2018. LB313 also creates the Excess Revenue Property Tax Credit Fund. This fund shall be used to provide a property tax credit to owners of real property.

LB563 (McCollister) Impose sales tax on certain services and eliminate certain sales tax exemptions – Revenue

LB563 eliminates sales and use tax exemptions for newspapers, laundromats, telefloral deliveries, the Nebraska Lottery, maintenance and repair services, personal care services, lawn care, gardening, storage and moving services, and taxi, limousine and other transportation services. LB563 also includes new provisions under the definition for gross receipts for receiving a service.

This concludes our report for this week.

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC



Document	Senator	Position	Committee	Hearing Date	Status	Description
LB369	Lowe		Government, Military and Veterans Affairs	02/16/2017	In Committee 01/17/2017	<p>Change provisions relating to fees charged by the register of deeds</p> <p><i>LB369 eliminates the provision that ended the ten-dollar fee received by the register of deeds and the county clerk for recording a deed, mortgage, or release, recording and indexing of a will, recording and indexing of a decree in a testate estate, recording proof of publications, or recording any other instrument. LB369 allocates two dollars and fifty cents of this fee to the preservation and maintenance of public records.</i></p> <p><i>LB369 eliminates the uniform fee for presenting for filing and indexing and for filing and indexing each notice of lien or certificate of notice affecting the lien. LB369 also eliminates the provision that ended the uniform fee for presenting for filing, releasing, continuing, or subordinating or for filing, releasing, continuing, or subordinating each tax lien.</i></p>
LB382	Erdman		Government, Military and Veterans Affairs	02/16/2017	In Committee 01/17/2017	<p>Change provisions relating to budget limitations</p> <p><i>LB382 makes, for FY2017-18, the last prior year's total of restricted funds for counties equal to the last prior year's total of restricted funds minus the last prior year's restricted funds budgeted by counties plus the last prior year's amount of restricted funds budgeted by counties for capital improvements.</i></p>
LB243	Bolz		Judiciary	02/16/2017	In Committee 01/13/2017	<p>Require reporting of certain information concerning assaults that occur in state institutions</p> <p><i>If a person is assaulted in a secure state institution by another person housed or held in such institution, LB243 requires the administrators of secure state institutions to inform the victim of the assault of all disciplinary actions that are being taken and their results, as well as inform the appropriate county attorney of such assault.</i></p>
LB245	Bolz		Judiciary	02/16/2017	In Committee 01/13/2017	<p>Provide for a corrections-related emergency and overtime as prescribed</p> <p><i>LB245 requires that employees of the Department of Corrections must have at least eight consecutive hours off work before a shift. Overtime of such employees is also limited to thirty-two hours during a period of two consecutive weeks. However, in the event of a serious disturbance at a correctional facility, the director may declare an emergency and the overtime restrictions may be suspended for up to two weeks or until the director rescinds the declaration.</i></p>
LB250	Harr		Judiciary	02/16/2017	In Committee 01/13/2017	<p>Change provisions relating to probationers' rights</p> <p><i>LB250 takes away a probationer's right to a prompt consideration of a motion or information to revoke probation when the probationer has failed or refused to report to their probation officer as ordered by the court.</i></p>
LB258	Hansen		Judiciary	02/16/2017	In Committee 01/13/2017	<p>Provide opportunity for inmates to obtain state identification card or driver's license before discharge</p> <p><i>LB258 provides for inmates the opportunity to obtain a state identification card or a motor vehicle operator's license prior to release.</i></p>
LB251	Harr		Revenue	02/16/2017	In Committee 01/13/2017	<p>Redefine agricultural or horticultural purposes for revenue and taxation purposes</p> <p><i>LB251 requires that, when determining whether a parcel of land is primarily used for agricultural or horticultural purposes, no regard may be given to whether some or all of the parcel is platted and subdivided into separate lots or developed with improvements such as streets, sidewalks, curbs, gutters, sewer lines, water lines, or utility lines.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB266	Friesen	Monitor	Revenue	02/16/2017	In Committee 01/13/2017	<p>Change the valuation of agricultural land and horticultural land</p> <p><i>LB266 requires that, for the purposes of school district taxation, agricultural and horticultural land be taxed at a percentage of its actual value. For the 2018 tax year, the percentage will be fifty. For the 2019 tax year, the percentage will be forty. For the 2020 tax year and years after, the percentage will be thirty.</i></p> <p><i>LB266 also allows for the commission to increase or decrease the value of real property. For the purpose of school district taxation, agricultural and horticultural tax ranges may be: 44 to 50 for tax year 2018; 34-40 for tax year 2019; and 24-30 for tax years 2020 and after.</i></p> <p><i>State aid means, for agricultural and horticultural land, a percentage of the actual value of the land. For tax year 2018, 47%, for tax year 2019, 37%, and for tax years 2020 and after, 27%.</i></p>
LB327	Scheer	Oppose	Appropriations	02/21/2017	In Committee 01/17/2017	<p>Appropriate funds for the expenses of Nebraska State Government for the biennium ending June 30, 2019</p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB194	Vargas		Banking, Commerce and Insurance	02/21/2017	In Committee 01/12/2017	<p>Change provisions of the Credit Services Organization Act, Delayed Deposit Services Licensing Act, and Nebraska Installment Loan Act</p> <p><i>LB194 prohibits Credit Services Organizations from charging any brokerage or other fees or charges in connection with a loan governed by the Nebraska Installment Loan Act. LB194 also adds definitions for the Delayed Deposit Services Licensing Act. LB194 provides that any delayed deposit loan that is made by a person who is not licensed as required is void and the person making the deposit has no right to collect, receive, or retain any principle, interest, fees, or other charges associated with such loan. LB194 also changes the nonrefundable application fee from five hundred dollars to one thousand dollars. LB194 also raises the asset requirement of an applicant from twenty-five thousand dollars available for operating the delayed deposit service business to fifty thousand dollars. LB194 raises the fee required for requesting a change of location a branch or designated principle place of business from one hundred fifty dollars to five hundred dollars.</i></p> <p><i>LB194 stipulates the documentation requirement for each delayed deposit loan transaction and what information should be contained in the written agreement. Licensee are also required to openly display a schedule of all finance charges, fees, interest, other charges, and penalties for all services provided.</i></p> <p><i>LB194 creates various restrictions on Delayed Deposit Loans. LB194 makes Delayed Deposit Loans precomputed loans that are payable in substantially equal instalments of principle, fees, interest, and charges combined. The total monthly payment may not exceed the greater of either five percent of the borrower's verified gross post-tax monthly income or six percent of the borrower's verified net post-tax monthly income. Before initiating any transaction, the licensee must make a reasonable determination of the borrower's verified income. The only fees a licensee may receive are interest of no more than thirty-six percent per annum, a month maintenance fee of either five percent of the loan amount or twenty dollars, and other charges permitted for the presentation of nonnegotiable instruments. All fees collected may not exceed fifty percent of the original loan amount. In the event of a default, the licensee may exercise all civil means authorized by law to collect the face value of the loan. The licensee may not collect fees as a result of the default. Licensees are not allowed to charge a fee associated with prepayment of a loan. Licensees are not allowed to lend any amount greater than \$500, plus allowable fees and interest, to any borrower. Borrowers will have the right to rescind a loan on or before 5 p.m. the next business day following the transaction. Licensees are not allowed to enter into more than one delayed deposit loan with the same borrower at any one time. The written loan agreement for a delayed deposit loan may provide that the entire unpaid loan balance be due and payable if the loan has been in default for ten days.</i></p> <p><i>LB194 also creates a duty of licensees to report, on an annual basis, certain information regarding their operations to the director.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB286	Craighead		Banking, Commerce and Insurance	02/21/2017	In Committee 01/13/2017	Adopt the Nebraska Flexible Loan Act and change provisions of the Delayed Deposit Services Licensing Act <i>LB286 adopts the Nebraska Flexible Loan Act. This act prohibits a person, unless they are exempted, from engaging in the business of making a flexible credit loan to a resident without first obtaining a license as a flexible credit lender. The director must issue a license to an applicant within sixty days after receiving a complete application unless the applicant is insolvent, fails to demonstrate financial responsibility, failed to pay the required fee of \$500, or fails to maintain at least twenty-five thousand dollars in readily available assets. All advertisements of a licensee must comply with the federal Truth in Lending Act. Licensees are prohibited from providing a flexible credit loan to a consumer with more than one outstanding flexible credit loan. LB286 also includes interest rate caps for certain categories of consumers. LB286 stipulates that, for closed-end credit, the term of the flexible credit loan may not exceed twenty-four months.</i>
LB386	Lindstrom		Banking, Commerce and Insurance	02/21/2017	In Committee 01/17/2017	Change time period a licensee under the Delayed Deposit Services Licensing Act may hold a check <i>LB386 prohibits licensees from holding or agreeing to hold a check for more than forty days.</i>
LB43	Hilkemann		Transportation and Telecommunicati ons	02/21/2017	In Committee 01/09/2017	Change provisions relating to surcharges for 911 service <i>LB43 limits the monthly surcharge that a governing body may impose on telephone numbers within the service area to one dollar per month. Wireless carriers may collect a surcharge of up to seventy cents.</i>
LB156	Friesen		Transportation and Telecommunicati ons	02/21/2017	In Committee 01/10/2017	Eliminate a termination date under the 911 Service System Act <i>LB156 eliminates Section 86-1030 from the 911 Service System Act.</i>
LB389	Friesen		Transportation and Telecommunicati ons	02/21/2017	In Committee 01/17/2017	Adopt the Small Wireless Facilities Act <i>LB389 adopts the Small Wireless Facilities Act. The purposes of this Act are to secure public access to advanced wireless technology and information, promote the public benefits from such wireless technology, and confirm that communications service providers and facilities have a right to occupy and utilize public rights-of-way. The Act allows communications service providers and facilities providers to place poles and wireless facilities in an authority right-of-way. An authority may require an application for a permit for such placement. The authority must approve the application unless it does not meet the applicable industry construction standards. Approved permits shall remain valid for at least ten years and be approved automatically for at least three five-year periods. Small wireless facilities shall be permitted use in all zoning districts other than areas outside the authority right-of-way that are zoned and used for single family residential use.</i>
LB472	Bostelman		Transportation and Telecommunicati ons	02/21/2017	In Committee 01/19/2017	Change provisions relating to signs and advertising on highways <i>LB472 only allows the Department of Roads to require permits for advertising signs, displays, and devices placed along or upon the Highway Beautification Control System</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB262	Groene		Urban Affairs	02/21/2017	In Committee 01/13/2017	Change provisions relating to undeveloped vacant land under the Community Development Law <i>LB262 prohibits tax-increment financing from being used for the acquisition, planning, and preparation for development or disposal of undeveloped vacant land. LB262 also prohibits undeveloped vacant land from being declared or designated blighted and substandard in order to qualify for the use of tax-increment financing unless such land meets the definition of a blighted area.</i>
LB489	Groene		Urban Affairs	02/21/2017	In Committee 01/19/2017	Redefine development project under the Community Development Law <i>LB489 removes other improvements in accordance with the development plan from the definition of development project under the Community Development Law.</i>
LB597	Groene		Urban Affairs	02/21/2017	In Committee 01/20/2017	Provide for application process through county assessor and Tax Commissioner prior to using tax-increment financing <i>LB597 requires any governing body that seeks to use tax-increment financing to submit an application to the county assessor. This application must include the information reasonably required to determine the eligibility of the governing body, the redevelopment plan, and the parcel or parcels for such tax-increment financing. This application will be forward by the county assessor to the Tax Commissioner if the county assessor determines that the certain requirements of the application have been met. The Tax Commissioner will then review the application to ensure all provision of the Constitution of Nebraska, the Community Development Law, and tax-increment financing have been satisfied.</i>
LB508	Hilgers	Support	Government, Military and Veterans Affairs	02/22/2017	In Committee 01/20/2017	Change the population threshold for the county civil service system <i>LB508 changes the threshold requiring the formation of a Civil Service Commission from three hundred thousand inhabitants of a county to four hundred inhabitants.</i>
LB567	Bolz	Support	Government, Military and Veterans Affairs	02/22/2017	In Committee 01/20/2017	Change funding for county public assistance offices <i>LB567 requires the state to pay the cost for the office and service facilities used for the administration of the public assistance programs.</i>
LB192	Pansing Brooks		Judiciary	02/22/2017	In Committee 01/12/2017	Change and modernize provisions relating to the qualifying and summoning of jurors <i>The purpose of LB192 is to provide adequate compensation of the jury commissioner and to permit a change in such salary as soon as the change may become operative under the Constitution of Nebraska. The salary of the jury commissioner is to be fixed by the district judges in an amount not to exceed three thousand dollars. LB192 also eliminates a provision excusing nursing mothers from serving on juries. LB192 contains duties of a jury commissioner designed to ensure adequate selection of qualified potential jurors.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB312	Briese		Revenue	02/22/2017	In Committee 01/17/2017	<p>Change and eliminate revenue and taxation provisions</p> <p><i>LB312 eliminates Motor vehicles, motorboat trade-ins, newspapers, laundromats, and telefloral deliveries from being included under "consumer goods" for the purpose of a report created by the department for the purpose of reviewing the major tax exemptions for which state general funds are used to reduce the impact of revenue lost due to a tax expenditure. From the same report, under "nonprofits, governments, and exempt entities" the Nebraska lottery, admissions to school events, and fine art purchases by a museum are eliminated. From the same report, all provisions are eliminated under "services purchased for nonbusiness use" and replaced with only household professional services. Prepaid calling arrangements are also eliminated form "telecommunications."</i></p> <p><i>LB312 also removes the exemptions under gross income received for animal specialty services for the purpose of determining gross receipts for providing a service. Other sources of gross are added to the definition of gross receipts for providing a service are added in section 2.</i></p> <p><i>LB312 allows the credit from trading in motor vehicles, motorboats, all-terrain vehicles and utility-type vehicles to be used when computing the Sales price.</i></p> <p><i>LB312 removes prepared food, food, and food ingredients served by public or private schools from sales tax exemption. Fees and admissions charged by a public or private school are also removed from sales tax exemption. Fees and admissions charged for participants in any activity provided by a nonprofit are also removed from sales tax exemption.</i></p> <p><i>LB312 removes from the definition of "food and food ingredients" soft drinks, candy, and bottled water.</i></p> <p><i>LB312 allows for a refundable credit against the income tax up to ten percent of the allowed federal credit for taxable years beginning or deemed to being before January 1, 2018 and seventeen percent for taxable years beginning or deemed to begin on or after January 1, 2018.</i></p> <p><i>LB312 requires the Tax Commissioner, from the amounts collected under the Nebraska Revenue Act of 1967, credit to the Excess Revenue Property Tax Credit Fund an amount equal to the net increase in state tax revenue received as a result of the changes made by this legislative bill.</i></p> <p><i>LB312 creates the Excess Revenue Property Tax Credit Fund. This fund will be sued to provide a property tax credit to owners of real property. To determine the amount of this credit, the country treasurer shall multiply the amount disbursed to the county by the ration of the real property valuation of the parcel to the total real property valuation in the county. The amount dispersed to each county will be equal to the amount in the Excess Revenue Property Tax Credit Fund multiplied by the ration of the real property valuation in the county to the real property valuation in the state.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB313	Briese		Revenue	02/22/2017	In Committee 01/17/2017	Change the sales tax rate and the earned income tax credit and provide property tax credits <i>LB313 changes the sales tax rate to six and one-half percent on the operative date of this act. LB313 also allows for a refundable tax credit of 17% of the federal credit allowed for taxable years beginning or deemed to begin on or after January 1, 2018. LB313 also creates the Excess Revenue Property Tax Credit Fund. This fund shall be used to provide a property tax credit to owners of real property.</i>
LB563	McCollister		Revenue	02/22/2017	In Committee 01/20/2017	Impose sales tax on certain services and eliminate certain sales tax exemptions <i>LB563 eliminates sales and use tax exemptions for newspapers, laundromats, telefloral deliveries, the Nebraska Lottery, maintenance and repair services, personal care services, lawn care, gardening, storage and moving services, and taxi, limousine and other transportation services. LB563 also includes new provisions under the definition for gross receipts for receiving a service.</i>
LB179	Bolz		Health and Human Services	02/23/2017	In Committee 01/12/2017	Change provisions relating to transition of young adults to independence <i>LB179 requires any child who is in a court-ordered out-of-home placement in the six months prior to attaining nineteen years of age to receive information regarding the Young Adult Bridge to Independence Act. The Office of Probation is required to identify such individuals and provide the information. LB179 also provides factors for a court to consider when deciding whether it is necessary for the juvenile to remain in the court-ordered out-of-home placement. LB179 also provides for medical care under the medical assistance program for young adults for such juveniles.</i>
LB297	McCollister		Health and Human Services	02/23/2017	In Committee 01/13/2017	Create Children and Juveniles Data Pilot Project <i>LB297 creates the Children and Juveniles Data Pilot Project. The purpose of this project is to identify how existing state agency data systems currently used to account for the use of all services, programs, and facilities by children and juveniles in the State can be used to establish an independent, external data warehouse. The Children and Juveniles Data Pilot Project Advisory Group is also created to oversee the pilot project. The advisory group will consist of the Inspector General of Nebraska Child Welfare, the State Court Administrator, the probation administrator of the Office of Probation Administration, the executive director of the Nebraska Commission on Law Enforcement and Criminal Justice, the Commissioner of Education, the executive director of the Foster Care Review Office, the director of the University of Nebraska at Omaha Juvenile Justice Institute, the Chief Information Officer of the Officer of Chief Information Officer, the Director of Children and Family Services of the Division of Children and Family Services of the Department of Health and Human Services, the Director of Developmental Disabilities of the Division of Developmental Disabilities of the Department of Health and Human Services, the Director of Behavioral Health of the Division of Behavioral Health of the Department of Health and Human Services, and the Director of Medicaid and Long-Term Care of the Division of Medicaid and Long-Term Care of the Department of Health and Human Services.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB298	Baker		Health and Human Services	02/23/2017	In Committee 01/17/2017	<p>Change provisions relating to the Nebraska Strengthening Families Act and a task force</p> <p><i>LB298 clarifies that the immediate and public dissemination of a current picture and information about a child who is missing from a foster or out-of-home placement is not restricted by certain confidentiality requirements. However, the disseminated information may not include the fact that the child is in the care, custody, or control of the Department of Health and Human Services or the Officer of Probation Administration. LB298, beginning July 1, 2017, makes the Normalcy Task Force the Nebraska Strengthening Families Act Committee. This committee shall monitor and make recommendations regarding the implementation in Nebraska of the federal Preventing Sex Trafficking and Strengthening Families Act. LB298 also clarifies the Legislatures intent to recognize the importance of parental rights and the different rights that exists dependent on a variety of factors.</i></p> <p><i>LB298 also requires the department or officer to ensure the presence of a written normalcy plan describing how the department or office will ensure all children have access to age or developmentally appropriate activities.</i></p>
LB178	Bolz		Judiciary	02/23/2017	In Committee 01/12/2017	<p>Provide for sexual assault protection order</p> <p><i>LB178 allows for any victim of sexual assault o file a petition and affidavit for a sexual assault protection order. This protective order shall be effective for two years unless renewed. Any knowing violation of such protective order will be a Class I Misdemeanor. LB178 also affords full faith and credit to sexual assault protection orders issued in other states or jurisdictions.</i></p>
LB191	Pansing Brooks		Judiciary	02/23/2017	In Committee 01/12/2017	<p>Provide for renewals of domestic violence protection orders</p> <p><i>LB191 allows for victims of domestic abuse to file a petition and affidavit to renew a protection order thirty days before the expiration of the previous protection order. The renewal period shall be effective for one year beginning the day of expiration of the previous order.</i></p>
LB289	Pansing Brooks		Judiciary	02/23/2017	In Committee 01/13/2017	<p>Change provisions and penalties relating to pandering, human trafficking, labor trafficking, and sex trafficking and prohibit solicitation of a trafficking victim</p> <p><i>LB289 makes pandering a Class II felony. LB289 also includes services under the definition of Labor for the purpose of defining "Labor Trafficking." LB289 also eliminates the "knowing" requirement for sex trafficking of a minor, and includes solicitation in the offense. LB289 makes labor or sex trafficking of a minor a Class IC Felony, unless the actor uses or threatens force on a victim under the age of sixteen, in such case the charge would be a Class IB Felony. LB289 also makes solicitation of a trafficking victim a Class II Felony. LB289 exempts trafficking victims from being charged if they benefit from or participate in the trafficking venture.</i></p>
LB394	Morfeld		Judiciary	02/23/2017	In Committee 01/17/2017	<p>Change provisions relating to possession of a deadly weapon by person subject to a domestic violence protection order</p> <p><i>LB394 makes subjects of a current and validly issued harassment protection order who are in possession of a firearm, knife, or brass knuckles guilty of the offense of possession of a deadly weapon by a prohibited person.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB487	Morfeld		Judiciary	02/23/2017	In Committee 01/19/2017	<p>Provide exception to certain crimes for persons witnessing or experiencing drug overdoses and provide protection from civil liability for emergency responders and peace officers administering naloxone</p> <p><i>LB487 exempts a person from violating the Uniform Controlled Substance Act if: such person made a good faith request for emergency medical assistance in response to a drug overdose of himself, herself, or another; such person was the first person to make a request for medical assistance as soon as the drug overdose was apparent; the evidence for the violation of the UCSA was obtained as the result of the drug overdose and request for medical assistance; such requesting person remained on the scene until medical assistance arrived; and such requesting person cooperated with medical assistance or law enforcement.</i></p> <p><i>LB487 also prohibits administrative action, criminal prosecution, and civil liability against an emergency responder or peace officer who, in good faith, administers naloxone to a person who is apparently experiencing an opioid-related overdose.</i></p>
LB232	Kolterman		Revenue	02/23/2017	In Committee 01/13/2017	<p>Provide a property tax exemption for property leased to the state or a governmental subdivision</p> <p><i>LB232 includes property leased to the state or to a governmental subdivision by the person or entity holding legal title to the property within the definition of property of the state and its governmental subdivisions. Therefore, this leased property is exempt from property taxes.</i></p>
LB236	Erdman		Revenue	02/23/2017	In Committee 01/13/2017	<p>Change provisions relating to the inclusion of multiple lots in one parcel</p> <p><i>LB236 allows for two or more vacant lots, if owned by the same person, to be considered one parcel for the purpose of property taxes unless such lots have any property taxes or special assessments that are certified but not yet due, are due, or are delinquent if property taxes or special assessments on such lots have been sold at a tax sale.</i></p>
LB238	Erdman		Revenue	02/23/2017	In Committee 01/13/2017	<p>Change provisions of the Nebraska Budget Act relating to certifying taxable values</p> <p><i>LB238 allows the certification of taxable values to be provided to the governing body or board either by mail, electronically, or by notifying such governing body or board of the place on the county assessor's website where the current taxable values are located.</i></p>
LB249	Harr		Revenue	02/23/2017	In Committee 01/13/2017	<p>Expand business inventory property tax exemption</p> <p><i>LB249 expands business inventory property tax exemptions to personal property that is equipment useable for construction, agriculture, or manufacturing.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB299	Ebke		Government, Military and Veterans Affairs	02/24/2017	In Committee 01/17/2017	<p>Adopt the Occupational Board Reform Act and change procedures for rules and regulations</p> <p><i>LB299 adopts the Occupational Board Reform Act. The purpose of this act is to require occupational boards to respect the fundamental right of an individual to pursue an occupation and to ensure that occupational boards and individual members of occupational boards avoid liability under federal antitrust laws. The act allows for individuals with criminal history to petition the relevant occupational board to determine if such criminal history would disqualify them from certification. An individual's criminal history will only disqualify them for a felony conviction, that felony conviction is expressly listed as a disqualifying offense, and the occupational board concludes that the state has an important interest in protecting public safety.</i></p> <p><i>LB299 also creates the Office of Supervision of Occupational Boards. The purpose of this board is to monitor occupational boards and ensure compliance with the act.</i></p> <p><i>LB299 also creates the Legislative Office of Occupational Regulations. The duties and responsibilities of the Office as specified in Section 23 of the act.</i></p>
LB482	Smith		Government, Military and Veterans Affairs	02/24/2017	In Committee 01/19/2017	<p>Adopt the Government Neutrality in Contracting Act</p> <p><i>LB482 adopts the Government Neutrality in Contracting Act. The purpose of this act is to provide for the efficient procurement of goods and services by governmental units and to promote the economical, nondiscriminatory, and efficient administration and completion of construction projects funded, assisted, or awarded by a governmental entity. The Act requires that a governmental unit ensure that any requests for proposals or bid specification for a public contract do not contain a term that requires, prohibits, encourages, or discourages bidders, contractors, or subcontractors from entering into a collective-bargaining agreement or a term that discriminates based on status as a party or nonparty to, or the willingness or refusal to enter into, a collective-bargaining agreement relating to construction under a public contract.</i></p>
LB300	Krist		Judiciary	02/24/2017	In Committee 01/17/2017	<p>Eliminate the statute of limitations on civil actions for sexual assault of a child</p> <p><i>LB300 eliminates the statute of limitations for civil actions arising from sexual assault of a child.</i></p>
LB367	Krist	Oppose	Judiciary	02/24/2017	In Committee 01/17/2017	<p>Change provisions relating to payment of costs in juvenile matters</p> <p><i>LB367 requires the county to pay the costs associated with transportation when a peace officer takes a juvenile into temporary custody and a probation officer determines the need for detention or an alternative placement. LB367 requires the Office of Probation Administration to pay for costs that are related to treatment or service provisions.</i></p>
LB253	Crawford		Revenue	02/24/2017	In Committee 01/13/2017	<p>Authorize intergovernmental service agreements under the County Industrial Sewer Construction Act and provide for a special tax levy</p> <p><i>LB253 allows for any county, city, village, or sanitary and improvement district to enter into a service agreement with any joint entity or joint public agency which owns or operates or proposes to own or operate any sewerage disposal system and plant. LB253 also grants any county, city, village, or sanitary and improvement district to levy a special tax to ensure payment of the service agreement.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB288	Harr		Revenue	02/24/2017	In Committee 01/13/2017	Change provisions relating to service of notice when applying for a tax deed and the laws governing tax sale certificates <i>LB288 permits the use of certified mail and designated delivery in order to serve notice upon every person in actual possession or occupancy of real property that qualifies as an owner-occupant. If certified mail or designated delivery service is used, the certified mail return receipt of a copy of the signed delivery receipt must be filed with and accompany the return of service. Since an emergency exists, this act takes effect when passed and approved according to law.</i>
LB498	Brewer		Revenue	02/24/2017	In Committee 01/20/2017	Change provisions relating to transfer of homestead exemptions <i>LB498 stipulates that, for purposes of such determination, the January 1 through August 15 ownership and occupancy requirement shall not apply.</i>
LB602	Erdman		Revenue	02/24/2017	In Committee 01/20/2017	Change and eliminate provisions relating to the valuation of agricultural land <i>LB602 states that the actual value of agricultural and horticultural land for purposes of taxation means the capitalized net earning capacity that the land produced without regard to any value that the land might have for other purposes or uses.</i> <i>LB602 requires that agricultural and horticultural land used primarily for those purposes will constitute a separate and distinct class of property for purposes of property taxation. LB600 prohibits the following from being classified as agricultural or horticultural land: farm home sites and land used for grazing of animals kept primarily for personal use. LB602 requires that any agricultural and horticultural land that qualifies for valuation using the capitalized net income approach be valued upon the basis of the agricultural income. Any agricultural or horticultural land assessment values will be based upon an eight-year Olympic average of crop income derived from the reported income from each county's productivity information chart.</i>
LB244	Bolz		Business and Labor	02/27/2017	In Committee 01/13/2017	Change provisions relating to mental injury and mental illness for workers' compensation <i>LB244 allows frontline state employees to receive workers' compensation for mental injuries if they can establish, by preponderance of the evidence, that their employment conditions causing the mental injury or illness were extraordinary and unusual and that the medial causation between the mental injury or illness and the employment. A frontline employee means an employee of the Department of Corrections or the Department of Health and Human Services whose duties involve regular and direct interaction with high-risk individuals.</i>
LB354	Kolowski		Business and Labor	02/27/2017	In Committee 01/17/2017	Adopt the Wage Disclosure Act <i>LB354 adopts the Wage Disclosure Act. This act makes it unlawful for an employer to screen job applicants based on their current or prior wages, request or require that a job applicant disclose his or her current or prior wages, or seek information regarding an applicant's current or prior wages. Violations of this act will be a Class IV misdemeanor.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB415	Kolterman		Nebraska Retirement Systems	02/27/2017	In Committee 01/17/2017	<p>Provide and change notification requirements and duties and benefits for certain retirement system members, change certain annuity and disability benefit provisions, and provide duties for school districts and the Public Employees Retirement Board relating to retirement</p> <p><i>Under LB415, termination of employment for county employees does not occur if: an employee enters into an employer-employee relationship in any capacity with the same or another county which participates in the Retirement System for Nebraska Counties; if the employee provides services to an employer participating in an retirement system provided for in the Class V School Employees Retirement Act, the Nebraska State Patrol Retirement Act, the School Employees Retirement Act, or the State Employees Retirement Act; or if the member accepted an early retirement incentive and, within three years after accepting and ceasing such employment, subsequently provides services any capacity to an employer participating in the above mentioned retirement systems.</i></p> <p><i>On or after July 1, 2017, a retired member of a retirement system who is hired or rehired in any capacity by an employer participating in the above-mentioned retirement plans must: certify under oath that, prior to retirement, they did not have a prearranged agreement to work after retirement with that employer; and meet the requirements for termination of employment as defined. Any retired member that complies with these requirements will participate in the retirement system as a new member and make contributions to the retirement system commencing upon reemployment. Upon termination of such new employment, the member will receive, in addition to the retirement benefit which commenced at the time of the previous retirement: if the member has accrued ten year or more of vesting credit after their return to employment, a retirement benefit shall be calculated solely on the basis of the vesting credit accrued and earned after the member's return to employment and as adjusted to reflect any payment in other than the normal form; or if the member has not accrued ten or more years of vesting credit after their return to employment, a refund equal to the member's accumulated contributions which were credited to the member after the return to employment. A member's vesting credit which was accrued prior to a previous employment may not be considered as part of the member's vesting credit after their return to employment for any purpose of the County Employees Retirement Act.</i></p> <p><i>Under LB415, termination of employment for School employees does not occur if: an employee enters into an employer-employee relationship in any capacity within 180 days with the same or another county which participates in the School Employees Retirement Act; if the employee provides services to an employer participating in an retirement system provided for in the Class V School Employees Retirement Act, the Nebraska State Patrol Retirement Act, the School Employees Retirement Act, or the State Employees Retirement Act; or if the member accepted an early retirement incentive and, within three years after accepting and ceasing such employment, subsequently provides services any capacity to an employer participating in the above mentioned retirement systems.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
						<p><i>A retired member of a retirement system who is hired or rehired in any capacity by an employer participating in the above-mentioned retirement plans must: certify under oath that, prior to retirement, they did not have a prearranged agreement to work after retirement with that employer; and meet the requirements for termination of employment as defined. Any retired member that complies with these requirements will participate in the retirement system as a new member and make contributions to the retirement system commencing upon reemployment. Upon termination of such new employment, the member will receive, in addition to the retirement benefit which commenced at the time of the previous retirement: if the member has accrued ten year or more of vesting credit after their return to employment, a retirement benefit shall be calculated solely on the basis of the vesting credit accrued and earned after the member's return to employment and as adjusted to reflect any payment in other than the normal form; or if the member has not accrued ten or more years of vesting credit after their return to employment, a refund equal to the member's accumulated contributions which were credited to the member after the return to employment. A member's vesting credit which was accrued prior to a previous employment may not be considered as part of the member's vesting credit after their return to employment for any purpose of the School Employees Retirement Act.</i></p> <p><i>An employer is required to notify the board and the State Department of Education of the date upon which the termination of employment has occurred and provide such information as the board deems necessary. A member hired on or after July 1, 2017, or a member who has taken a refund or retirement and is rehired may retire if the member is at least 60 years of age and the sum of the member's attained age and creditable service totals ninety, or if the member is at least 65 and has completed at least five years of credible service. If the annuity of such a member begins at a time when the sum of the member's attained age and credible service totals ninety and the member is at least 60, the annuity will not be reduced. However, this only applies to members who have acquired the equivalent of five years of service or more as a school employee under the retirement system.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
						<p><i>Under LB415, termination of employment for Nebraska State Patrol members does not occur if: an employee enters into an employer-employee relationship in any capacity within 180 days with the same or another county which participates in the School Employees Retirement Act; if the employee provides services to an employer participating in an retirement system provided for in the Class V School Employees Retirement Act, the Nebraska State Patrol Retirement Act, the School Employees Retirement Act, or the State Employees Retirement Act; or if the member accepted an early retirement incentive and, within three years after accepting and ceasing such employment, subsequently provides services any capacity to an employer participating in the above mentioned retirement systems. The employer involved in the termination of the employment and the officer shall certify that, prior to retirement, there was no prearranged agreement to return to work in any capacity. A retired officer of a retirement system who is hired or rehired in any capacity by an employer participating in the above-mentioned retirement plans must: certify under oath that, prior to retirement, they did not have a prearranged agreement to work after retirement with that employer; and meet the requirements for termination of employment as defined. Any retired officer that complies with these requirements will participate in the retirement system as new member and make contributions to the retirement system commencing upon reemployment. Upon termination of such new employment, the member will receive, in addition to the retirement benefit which commenced at the time of the previous retirement: if the member has accrued ten year or more of vesting credit after their return to employment, a retirement benefit shall be calculated solely on the basis of the vesting credit accrued and eared after the member's return to employment and as adjusted to reflect any payment in other than the normal form; or if the member has not accrued ten or more years of vesting credit after their return to employment, a refund equal to the member's accumulated contributions which were credited to the member after the return to employment. A member's vesting credit which was accrued prior to a previous employment may not be considered as part of the member's vesting credit after their return to employment for any purpose of the Nebraska State Patrol Retirement Act.</i></p> <p><i>Under LB415, termination of employment for State employees does not occur if: an employee enters into an employer-employee relationship in any capacity with the same or another county which participates in the Retirement System for Nebraska Counties; if the employee provides services to an employer participating in an retirement system provided for in the Class V School Employees Retirement Act, the Nebraska State Patrol Retirement Act, the School Employees Retirement Act, or the State Employees Retirement Act; or if the member accepted an early retirement incentive and, within three years after accepting and ceasing such employment, subsequently provides services any capacity to an employer participating in the above mentioned retirement systems.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
						<i>On or after July 1, 2017, a retired member of a retirement system who is hired or rehired in any capacity by an employer participating in the above-mentioned retirement plans must: certify under oath that, prior to retirement, they did not have a prearranged agreement to work after retirement with that employer; and meet the requirements for termination of employment as defined. Any retired member that complies with these requirements will participate in the retirement system as a new member and make contributions to the retirement system commencing upon reemployment. Upon termination of such new employment, the member will receive, in addition to the retirement benefit which commenced at the time of the previous retirement: if the member has accrued ten year or more of vesting credit after their return to employment, a retirement benefit shall be calculated solely on the basis of the vesting credit accrued and earned after the member's return to employment and as adjusted to reflect any payment in other than the normal form; or if the member has not accrued ten or more years of vesting credit after their return to employment, a refund equal to the member's accumulated contributions which were credited to the member after the return to employment. A member's vesting credit which was accrued prior to a previous employment may not be considered as part of the member's vesting credit after their return to employment for any purpose of the State Employees Retirement Act.</i>
LB66	Hansen		Banking, Commerce and Insurance	02/28/2017	In Committee 01/09/2017	Change provisions relating to stacking of coverage under the Uninsured and Underinsured Motorist Insurance Coverage Act <i>LB66 permits the stacking of separate policies for individuals living together when determining the limit of insurance coverage available to an injured person for any one accident.</i>
LB357	Bolz	Support	Transportation and Telecommunications	02/28/2017	In Committee 01/17/2017	Increase original certificate of title fees for vehicles transferred to Nebraska from another state and provide for voluntary contributions to brain injury programs <i>LB357 places a fee of twenty-five dollars for each original certificate of title issued to a person by a county for a vehicle or trailer being titled in Nebraska from another state after the first original title is issued. LB357 also allows for voluntary contributions of \$2 to be made as a donation to programs for persons suffering from brain injury.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB95	Crawford		Urban Affairs	02/28/2017	In Committee 01/09/2017	<p>Change provisions relating to the Community Development Law and tax-increment financing</p> <p><i>LB95 requires that each city which has approved one or more redevelopment plans which are financed in whole or in part through the use of tax-increment financing to establish an auditing plan to provide for regular review of each such redevelopment plan. The Auditor of Public Accounts has the power to audit, or cause to be audited, any authority established when the Auditor determines such an audit is necessary or when requested by the governing body.</i></p> <p><i>LB95 also requires that, prior to declaring an area in need of development, the governing body must conduct a study or analysis on whether the area is substandard and blighted. A public hearing will also be conducted on this question, with proper notice given to the community. Each neighborhood association that desires to receive such notice must register with their city's planning department the area they would wish to be notified on.</i></p> <p><i>LB95 requires that redevelopment plans that include the use of tax-increment financing shall not provide for the reimbursement of costs incurred prior to the approval of the redevelopment plan, except those costs related to the preparation of the redevelopment plan, the substandard and blighted study, or the cost-benefit analysis.</i></p> <p><i>Redevelopment plans which include the use of tax-increment financing must, after five years and every five years thereafter, conduct a review and update of a cost-benefit analysis. This report should include tax shifts, public infrastructure and community public service needs impacts, impacts on employers and employees, impacts on student populations of school districts, and other impacts determined to be relevant. Each city approving such a redevelopment plan must retain copies of all such redevelopment plans and supporting documents associated with that plan for a period of time required under applicable records retention schedules.</i></p> <p><i>LB95 also allows for redevelopment contracts for plans that include the use of tax-increment financing to include a provision requiring that all ad valorem taxes levied upon real property in a redevelopment project be paid on time in order for such redevelopment project to received tax-increment financing. To the extent that a redevelopment plan divides the ad valorem taxes levied upon only a portion of the real property in a redevelopment project, such portion shall be clearly related to the redevelopment plan.</i></p>
LB496	Stinner		Urban Affairs	02/28/2017	In Committee 01/20/2017	<p>Define and redefine terms under the Community Development Law</p> <p><i>LB496 includes the construction of workforce housing, in cities of the first and second class and villages, into the definition of redevelopment project under the Community Development Law. LB496 also includes a definition for workforce housing. Workforce housing means single-family or multi-family housing for which the municipality receives a housing study that is current, prepares an incentive plan for construction targeted to house existing or new workers, holds a public hearing on such incentive plan with notice, and after the public hearing finds that such incentive plan is necessary to prevent the spread of blight and substandard conditions within the municipality.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB75	Wayne		Government, Military and Veterans Affairs	03/01/2017	In Committee 01/09/2017	Provide for restoration of voting rights upon completion of a felony sentence or probation for a felony <i>LB75 restores voting rights to felons immediately after completion of their sentence or probation.</i>
LB314	Murante		Government, Military and Veterans Affairs	03/01/2017	In Committee 01/17/2017	Change state and municipal election provisions to conform to prior legislation <i>LB314 requires cities to file a certified copy of the economic development program with the election commissioner or county clerk no later than fifty days prior to a special election or not later than March 1 prior to a primary or general election. LB314 also eliminates a provision prohibiting the use of General Funds being appropriated for the purpose of a voter registration list. LB314 also makes the penalty for a Class IV felony up to two years' imprisonment and twelve months of post-release supervision.</i>
LB451	Murante		Government, Military and Veterans Affairs	03/01/2017	In Committee 01/19/2017	Change various provisions relating to elections as prescribed <i>LB451 eliminates a provision prohibiting the election commissioner from becoming a candidate for an elected officer during their term of office or within thirty days of leaving office. LB451 also changes provision relating to the appointment for vacant legislative seats. LB451 also provides that any person using an early voting or absentee ballot must sign a voter oath to be contained with the ballot.</i> <i>LB451 requires that, if the filing deadline for the elective officer is after March 1 of the year in which the election is held, the candidate must file supplementary statements on or before the filing deadline. If the candidate files to appear on the ballot for election during the calendar year in which the election is held, the candidate must file a statement of financial interests of the preceding calendar year with the commission on or before March 1 of the year. A statement of financial interest must be preserved for a period of no less than five years.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB344	Albrecht		Health and Human Services	03/01/2017	In Committee 01/17/2017	<p>Change credentialing and regulation of mental health substance abuse centers</p> <p><i>LB344 allows the board to issue a license to those who hold a license or certification that is current in another jurisdiction that authorized the applicant to provide alcohol and drug counseling, has at least two hundred seventy hours of counseling education, has at least three years of full-time counseling practice and has passed a counseling examination.</i></p> <p><i>LB344 also includes provisions regarding approved educational programs. These programs are accredited by the Commission on Accreditation for Marriage and Family Therapy Education, the Counsel for Accreditation of Counseling and Related Educational Program, the Counsel on Rehabilitation Education, the Council on Social Work Education, or The American Psychological Association for a doctoral degree program enrolled in by a person who has a master's degree or its equivalent in psychology.</i></p> <p><i>LB344 allows those who have received a doctoral degree of the equivalent of a master's degree to be qualified to be a licensed mental health practitioner. LB344 also allows those who have been in active practice in the appropriate discipline for at least five years following initial licensure or certification in another jurisdiction and has passed the Nebraska jurisprudence examination to be issued a license by the board.</i></p> <p><i>LB344 makes ineligible for SNAP those with one or two felony convictions for possession or use of a controlled substance unless they are participating in, since the date of conviction, a substance abuse program that is nationally accredited or provided in a mental health substance use treatment center licensed under the Health Care Facility Licensure Act.</i></p> <p><i>LB344 requires health care facilities applying for a license as a mental health substance use treatment center to designate whether the license is to be issued to provide services for mental health disorders only, for substance use disorders only, or for both mental health and substance use disorders.</i></p>
LB500	Brewer		Judiciary	03/01/2017	In Committee 01/20/2017	<p>Authorize the carrying of concealed handguns by qualified active and retired law enforcement officers</p> <p><i>LB500 allows an individual who is a qualified law enforcement officer or qualified retired law enforcement officer and who is carrying the required identification may carry a concealed handgun anywhere in the State of Nebraska. For law enforcement officers, such identification shall be photogenic and issued by the employing governmental entity. For retired officers, the identification shall be either a photographic identification issued from the agency from which the individual separated in good standing or a photographic identification issued and a certificate issued by the individual's state of residence.</i></p>

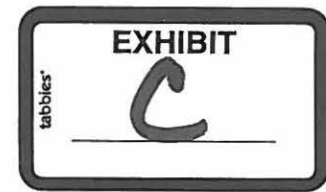
Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB385	Lindstrom		Revenue	03/01/2017	In Committee 01/17/2017	Change provisions relating to the burden of proof and who may appeal under the Tax Equalization and Review Commission Act <i>LB385 allows those with a relationship to the taxpayer to execute an appeal on behalf of the taxpayer. The specific relationships are: A person or entity with a contract executed by the taxpayer, a person with the power of attorney, a person with a durable power of attorney, and a person who is a trustee of an estate. LB385 requires the county board of equalization, in appeals regarding the assessed value of the property that has been increased by more than 5%, to prove by a preponderance of the evidence that the assessed value reflects the property's actual value.</i>
LB555	Smith		Revenue	03/01/2017	In Committee 01/20/2017	Change and eliminate provisions of the Tax Equalization and Review Commission Act <i>LB555 allows commissioners who live within fifty miles of the state office building to be reimbursed for mileage for actual round trip travel. Commissioners who live more than fifty miles may be reimbursed for mileage for one round trip per week and shall be paid a per diem at the federal per diem rate for each day worked at the state office building. LB555 also makes the filing fee for each appeal or petition filed with the commission fifty dollars if the taxable value of each parcel involved in the appeal is one million dollars or less, and a fee of one hundred dollars if the taxable value of each parcel involved is more than one million dollars.</i>
LB201	Lowe		Judiciary	03/02/2017	In Committee 01/12/2017	Change provisions relating to perjury and the issuance of search warrants <i>LB201 allows for law enforcement officers to request the assistance of any other law enforcement officer in executing a search warrant if the person or place to be searched is not within the named officer's jurisdiction. LB201 also allows for unsworn statements to be made under the penalty of perjury and subject to the same punishments as perjury.</i>
LB259	Hansen		Judiciary	03/02/2017	In Committee 01/13/2017	Provide for competency determinations in cases pending before county courts <i>LB259 provides for competency determinations in cases pending before county courts.</i>
LB589	Crawford		Judiciary	03/02/2017	In Committee 01/20/2017	Provide for depositions of a child victim or child witness <i>LB589 prohibits depositions of a child being taken when the child has undergone a video-recorded forensic interview at a child advocacy center, except by agreement of the parties or by approval of the court. If a request to depose a child is granted, the court must make any protective order that justice requires to protect the child from emotional harm, distress, harassment, undue influence, or intimidation.</i>
LB400	Hilkemann		Revenue	03/02/2017	In Committee 01/17/2017	Change provisions relating to motor vehicle fees and taxes <i>LB400 makes all refunds for motor vehicle registrations based upon the number of unexpired time remaining from the date of the event, not the date of presentation to the county treasurer.</i>
LB531	Harr		Revenue	03/02/2017	In Committee 01/20/2017	Change sales tax collection fees for motor vehicles <i>LB531 allows the county treasurer to deduct and withhold for the use of the county general fund an additional one-half of one percent of all amount in excess of three thousand dollars remitted each month.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB444	Walz		Judiciary	03/03/2017	In Committee 01/19/2017	Prohibit cities and counties from canceling health insurance coverage for injured law enforcement officers <i>LB444 prohibits cities and counties from canceling health insurance for law enforcement officers who suffered serious bodily injury while in the line of duty.</i>
LB577	Hilgers		Judiciary	03/03/2017	In Committee 01/20/2017	Create offense of assault on a peace officer, firefighter, or out-of-hospital emergency care provider by ambush <i>A person commits the offense of assault on a peace officer, firefighter, or out-of-hospital emergency care provider by ambush if they knowingly and intentionally attack such a person while they are engaged in the performance of their official duties and the attacker either attacks without warning from a concealed position or approaches an unsuspecting officer and intentionally or knowingly causes serious bodily injury. This offense is a Class IB Felony and required a minimum sentence of forty years and possibly a fine up to one hundred thousand dollars.</i>
LB623	Wishart		Judiciary	03/03/2017	In Committee 01/20/2017	Change and eliminate provisions and penalties relating to assault on an officer, certain employees, or a health care professional <i>LB623 eliminates provisions that specify assaults on officials and replaces them with the term "public officer."</i>
LB228	Harr		Revenue	03/03/2017	In Committee 01/12/2017	Change provisions relating to rent-restricted housing projects <i>LB228 allows the Department of Revenue, on behalf of the committee, to forward income and expense statements from owners of rent-restricted housing projects to the county assessor of each county in which the housing project is located.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC



Document	Senator	Position	Committee	Hearing Date	Status	Description
LB7	Krist	Monitor	Judiciary	01/18/2017	In Committee 01/09/2017	Provide for suspension of medical assistance under the medical assistance program for detainees in public institutions <i>LB7, relating to jail and correctional facilities, would suspend medical assistance under the medical assistance program for detainees in a public institution. Currently, section 47-706 only suspends medical assistance to inmates of a public institution. LB7 would amend this section to cover detainees as well as inmates.</i>
LB8	Krist		Judiciary	01/18/2017	General File 01/23/2017	Provide for graduated response sanctions and incentives relating to juvenile probation <i>LB8 acts to change, eliminate, and harmonize provisions of the Nebraska Juvenile Code. LB8 also provides for a graduated response program, to replace the current administrative sanctions program, designed to utilize a series of sanctions, incentives, and services to facilitate a juvenile's continued progress toward changing behavior and successful completion of the probationary period. A state-wide standardized graduated response program may be developed by the Office of Probation Administration with the help of interested parties, such as judges, probations officers, county attorneys, defense attorneys, juveniles, and parents. Graduated response incentives should be designed to provide positive reinforcement as well as encourage and support positive behavior change and successful completion of the probationary period, including the possible reduction or elimination of imposed conditions. Sanctions should be immediate, certain, consistent, and fair in regards to the behavior that needs to be addressed.</i>
LB10	Krist		Judiciary	01/18/2017	General File 01/23/2017	Increase number of judges of the separate juvenile court as prescribed <i>LB10 would increase, from five to six, the number of juvenile court judges in counties having four hundred thousand inhabitants or more.</i>
LB22	Scheer	Oppose	Appropriations	01/17/2017	Approved by Governor (E- Clause) 02/15/2017	To provide, change, and eliminate provisions relating to appropriations and to reduce appropriations <i>LB22 is the Governor's budget reduction bill for the remainder of FY2016-17.</i>
LB26	Murante		Judiciary	01/19/2017	In Committee 01/09/2017	Change service requirements for harassment protection orders <i>LB26 changes the requirement of service of notice for harassment protection orders. Service would not be required for prosecuting a violation of a protection order if the respondent has actual knowledge of the harassment protection order.</i>
LB27	Murante		Government, Military and Veterans Affairs	01/19/2017	In Committee 01/09/2017	Change requirements for state agency contracts and powers and duties of the Auditor of Public Accounts as prescribed <i>LB27 requires that all information requested by the auditor be received by September 20. Information not received by this date shall be deemed delinquent, and the auditor may assess the political subdivision a late fee of twenty dollars per day. Political subdivisions that fail to provide the requested information by September 20 will also be subject to an audit, based on the auditor's discretion. LB27 also adds a restriction that state agency contracts may not be amended to extend the duration of the contract for a period of more than fifty percent of the initial contract term. Purchasing or lease contracts entered into by the state purchasing bureau may also not be amended to extend the duration of the contract for a period of more than fifty percent of the initial contract term. LB27 also creates a duty of the Auditor of Public Accounts to assess a fourteen percent interest rate on delinquent payments of any fees for audits and services owed to the Auditor of Public Accounts. LB27 also allowed the Auditor of Public Accounts to share working papers with certain agencies during either an ongoing audit or after the completion of an audit.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB36	Harr		Government, Military and Veterans Affairs	01/20/2017	In Committee 01/09/2017	<p>Provide for review by state agencies of occupational credentials and provide for a critical assessment document</p> <p><i>LB36 makes additions to the Administrative Procedure Act. The purpose of LB36 is to require state agencies to review rules and regulations pertaining to the issuance of occupational credentials and complete and release a critical assessment document.</i></p> <p><i>Beginning January 1, 2018, The Department of Health and Human Services must review its rules and regulations pertaining to the issuance of occupational credentials. Beginning January 1, 2023, and every five years thereafter, the department must review those rules and regulations.</i></p> <p><i>Beginning January 1, 2019, the Department of Labor shall review its rules and regulations pertaining to the issuance of occupational credentials. Beginning January 1, 2014, and every five years thereafter, the department must review those rules and regulations.</i></p> <p><i>Beginning January 1, 2020, every other agency must review its rules and regulations pertaining to the issuance of occupational credentials. Beginning January 1, 2025, and every five years thereafter, all agencies must review those rules and regulations.</i></p> <p><i>Section six of LB36 provides guidelines for agencies that are conducting a review of their rules and regulations and what things they should be looking for and addressing. A requirement of a public hearing is also included.</i></p>
LB43	Hilkemann		Transportation and Telecommunications	02/21/2017	In Committee 01/09/2017	<p>Change provisions relating to surcharges for 911 service</p> <p><i>LB43 limits the monthly surcharge that a governing body may impose on telephone numbers within the service area to one dollar per month. Wireless carriers may collect a surcharge of up to seventy cents.</i></p>
LB47	Watermeier	Support	Judiciary	01/19/2017	In Committee 01/09/2017	<p>Change provisions relating to the payment of fees and costs associated with grand juries and the deaths of incarcerated persons</p> <p><i>LB47 allows for all costs of an autopsy or grand jury to be paid by the county in which the person died, unless the person died in a state correctional facility. Compensation to those serving on a grand jury will also be paid by the county, unless the case involves an inmate who died while serving a sentence a state correctional facility.</i></p>
LB51	Schumacher	Neutral	Revenue	01/19/2017	In Committee 01/09/2017	<p>Change provisions relating to sales of real property for nonpayment of taxes</p> <p><i>LB51 allows land banks to offer to pay the amount of taxes, interest, and costs due on the real property that is for sale, and bid an interest rate as described in section 77-1807. Automatically accepted bids from a land bank must include an offer to pay and an interest rate bid. LB51 eliminates provisions that have expired and a provision permitting a round robin format for the sale of real estate. LB51 prohibits bidders at public auctions from colluding with each other to obtain an unfair interest rate. Sales that are the product of collusion are voidable by the county board. LB51 further stipulates how interest will be allocated upon the sale of real estate.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB53	Schumacher		Judiciary	02/08/2017	In Committee 01/09/2017	Change provisions relating to mandatory minimum sentencing and sentencing of habitual criminals <i>LB53 allows sentencing judges, when they feel that imposition of a mandatory minimum sentence to be improper, to order a three-judge panel to determine whether or not the mandatory minimum is proper and what the proper sentence should be. Sentencing judges would also be allowed to conduct hearings that will aid their determination whether the mandatory minimum sentence is proper. Arguments may be presented by each attorney during the determination of a proper sentence.</i>
LB55	Schumacher		Transportation and Telecommunications	01/30/2017	In Committee 01/09/2017	Change a duty of landowners relating to the frequency of mowing roadside weeds <i>LB55 requires landowners to mow to the middle of all public roads and drainage ditches along their lands at least three times each year. The first before June 5, the second before July 10, and the third before August 15.</i>
LB66	Hansen		Banking, Commerce and Insurance	02/28/2017	In Committee 01/09/2017	Change provisions relating to stacking of coverage under the Uninsured and Underinsured Motorist Insurance Coverage Act <i>LB66 permits the stacking of separate policies for individuals living together when determining the limit of insurance coverage available to an injured person for any one accident.</i>
LB68	Hilgers	Monitor	Government, Military and Veterans Affairs	02/10/2017	In Committee 01/09/2017	Prohibit certain regulation of firearms, ammunition, and firearm accessories by counties, cities, and villages as prescribed <i>LB68 prohibits cities of the primary class from prohibiting carrying of concealed weapons. Except as prohibited, Cities, but not counties, do have the power to regulate the ownership, possession, transportation, carrying, registration, transfer, or storage of firearms, ammunition, or firearm accessories.</i>
LB71	Pansing Brooks		Appropriations		In Committee 01/09/2017	Change appropriations relating to the Nebraska Tree Recovery Program <i>LB71 changes the appropriation from two hundred fifty thousand to three million dollars from the general fund in order to fund tree removal, disposal, and replacement.</i>
LB72	Schumacher		Banking, Commerce and Insurance	02/13/2017	In Committee 01/09/2017	Provide for governmental unit bond priority under the Nebraska Governmental Unit Security Interest Act and rename the act <i>LB72 renames the Nebraska Governmental Unity Security Interest Act to the Nebraska Governmental Unit Security Interest and Pledge Act. The NGUSIPA governs the perfection, priority, and enforcement of all security interests created governmental units. LB72 makes the pledge of any bond-pledged revenue source by a governmental unit to the payment of the principle, premium, and interest on bonds valid and binding and deemed continuously perfected from the time of the bonds or notes or other financing obligations are issued. Specific terms for different types of bonds are set forth in Section 5 of LB72.</i>
LB75	Wayne		Government, Military and Veterans Affairs	03/01/2017	In Committee 01/09/2017	Provide for restoration of voting rights upon completion of a felony sentence or probation for a felony <i>LB75 restores voting rights to felons immediately after completion of their sentence or probation.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB76	Wayne		Government, Military and Veterans Affairs		In Committee 01/09/2017	Require notice for Secretary of State regarding completion of felony sentence for purposes of voting rights <i>After completion of a probationary period, LB76 requires a copy of the order that releases the felon from his probation to be provided to the Secretary of State no later than ten days after the order is given. The Secretary of State will then make not of the completion of the felony sentence upon receipt of an abstract from the Department of Corrections. The clerk of any court in which a person was convicted must also complete an abstract detailing who has completed their felony sentence and who is not included in the order to restore civil rights after completion of their probationary period. The department is also to prepare an abstract each month reflecting which person have completed their probationary period and deliver it to the Secretary of State. The parol administrator must also prepare an abstract each month that reflects each person which a felony conviction who has completed their parole term.</i>
LB78	Crawford		Transportation and Telecommunications	01/30/2017	In Committee 01/09/2017	Change provisions relating to relinquishment or abandonment of any portion of a state highway system <i>LB78 allows for department, political, and governmental subdivisions to negotiate the terms or conditions of any relinquishment of a public highway that the state has decided to abandon. This petition and a written memorandum of understanding will be filed as a public record. After the filing of the petition and memorandum, the section of the highway becomes the responsibility of the subdivision. If there is an unforeseen economic change, the subdivision is allowed to request a renegotiation of the terms and conditions of the relinquishment.</i>
LB80	Blood		Government, Military and Veterans Affairs	01/18/2017	Select File 01/25/2017	Provide for unclassified service under the County Civil Service Act <i>LB80 includes Law clerks and students employed by the country attorney or public defender as unclassified service under the County Civil Service Act.</i>
LB81	Blood	Support	Judiciary	02/02/2017	General File 02/06/2017	Change the application fee for handgun certificates <i>LB81 changes the fee charged for each application for a handgun certification from five dollars to twenty-five dollars.</i>
LB86	Blood		Transportation and Telecommunications	01/23/2017	General File 02/06/2017	Eliminate a requirement regarding opening bridge bids <i>LB86 eliminates the requirement that bridge bids be opened in the presence of the county board.</i>
LB89	Hughes		Government, Military and Veterans Affairs	01/19/2017	General File 02/02/2017	Change published notice of hearing requirements under the Nebraska Budget Act as prescribed <i>LB89 changes the requirement for notice of a public hearing from five days to four calendar days. Four calendar days will include the date of publication but not the day of the hearing.</i>
LB90	Hughes		Government, Military and Veterans Affairs	01/19/2017	In Committee 01/09/2017	Require public entity provide accommodations where Auditor of Public Accounts employee conducts audit or examination <i>LB90 requires public entities to provide suitable accommodations when any employee of the Auditor of Public Accounts conducts an audit or examination of them.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB93	Hansen		Judiciary	01/19/2017	General File 02/06/2017	Adopt the Automatic License Plate Reader Privacy Act <i>LB93 adopts the Automatic License Plate Reader Privacy Act. The act provides that an automatic license plate reader system may only be used by a law enforcement agency as an alert for the purpose of identification, by a parking enforcement entity for regulating the use of a parking facility, for the purposes of controlling access to a secured area, for the purpose of electronic toll collection, and to assist weighing stations in performing their duties. The data captured from an automatic license plate reader system may not be retained except for situations specified in section 4 of the act. Any government entity that does use an automatic license plate reader must adopt a use policy and display that policy on their website, adopt a privacy policy to ensure that the captured information is not shared in violation of this act, and report annually to the Nebraska Commission on Law Enforcement and Criminal Justice on its automatic license plate reader practices and usage. The report should follow the specifications outlined in subsection (3)(a) of section 6 of this act. Plate data that is capture and evidence derived therefrom ay not be received into evidence in any trial, hearing, or other proceeding, and any person who violates this act will be subject to damages.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB95	Crawford		Urban Affairs	02/28/2017	In Committee 01/09/2017	<p>Change provisions relating to the Community Development Law and tax-increment financing</p> <p><i>LB95 requires that each city which has approved one or more redevelopment plans which are financed in whole or in part through the use of tax-increment financing to establish an auditing plan to provide for regular review of each such redevelopment plan. The Auditor of Public Accounts has the power to audit, or cause to be audited, any authority established when the Auditor determines such an audit is necessary or when requested by the governing body.</i></p> <p><i>LB95 also requires that, prior to declaring an area in need of development, the governing body must conduct a study or analysis on whether the area is substandard and blighted. A public hearing will also be conducted on this question, with proper notice given to the community. Each neighborhood association that desires to receive such notice must register with their city's planning department the area they would wish to be notified on.</i></p> <p><i>LB95 requires that redevelopment plans that include the use of tax-increment financing shall not provide for the reimbursement of costs incurred prior to the approval of the redevelopment plan, except those costs related to the preparation of the redevelopment plan, the substandard and blighted study, or the cost-benefit analysis.</i></p> <p><i>Redevelopment plans which include the use of tax-increment financing must, after five years and every five years thereafter, conduct a review and update of a cost-benefit analysis. This report should include tax shifts, public infrastructure and community public service needs impacts, impacts on employers and employees, impacts on student populations of school districts, and other impacts determined to be relevant. Each city approving such a redevelopment plan must retain copies of all such redevelopment plans and supporting documents associated with that plan for a period of time required under applicable records retention schedules.</i></p> <p><i>LB95 also allows for redevelopment contracts for plans that include the use of tax-increment financing to include a provision requiring that all ad valorem taxes levied upon real property in a redevelopment project be paid on time in order for such redevelopment project to received tax-increment financing. To the extent that a redevelopment plan divides the ad valorem taxes levied upon only a portion of the real property in a redevelopment project, such portion shall be clearly related to the redevelopment plan.</i></p>
LB98	Friesen		Revenue	02/02/2017	In Committee 01/09/2017	<p>Extend certain levy authority for natural resources districts</p> <p><i>LB98 extends tax levy authority for natural resources districts to FY2025-26 instead of fiscal year 2017-2018.</i></p>
LB102	Hilkemann		Judiciary	01/19/2017	In Committee 01/10/2017	<p>Change a penalty relating to tampering with witnesses or informants</p> <p><i>LB102 makes tampering with a witness, informant, or jury a Class IV felony, unless the tampering occurs as an attempt to change the outcome of a felony charge, in which case it is a Class II felony.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

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LB107	Crawford		Judiciary	02/08/2017	In Committee 01/10/2017	<p>Prohibit sexual assault of a patient, client, or student as prescribed</p> <p><i>LB107 establishes that a health professional commits the offense of sexual abuse of a patient or client if the professional subjects a patient or client who is at least sixteen years of age but less than nineteen years of age to sexual penetration or sexual contact. A health profession to subjects such a patient to sexual penetration is guilty of sexual abuse of a patient or client in the first degree, which is a Class IIA felony. A health professional who subjects such patient or client to sexual contact is guilty of sexual abuse of a patient or client in the second degree, which is a Class IIIA felony.</i></p> <p><i>LB107 establishes that a volunteer or employee of a school who subjects a student who is at least sixteen but less than nineteen years of age to sexual penetration is guilty of sexual abuse of a student in the first degree, which is a Class IIA felony. If such volunteer subjects such student to sexual contact, they are guilty of sexual abuse of a minor in the second degree, which is a Class IIIA felony.</i></p> <p><i>LB107 establishes that a person who is a volunteer or an employee of a youth center who subjects a patient or client who is at least sixteen but less than nineteen to sexual penetration is guilty of sexual abuse of a patient or client in the first degree, which is a Class IIA felony. If such volunteer subjects such client or patient to sexual contact, they are guilty of sexual abuse of a minor in the second degree, which is a Class IIIA felony.</i></p> <p><i>LB107 establishes that a person who occupies a special position of trust who subjects a child who is at least sixteen but less than nineteen years of age to sexual penetration is guilty of sexual abuse of a child in the first degree, which is a Class IIA felony. If such person subjects such child to sexual contact, they are guilty of sexual abuse of a child in the second degree, which is a Class IIIA felony.</i></p> <p><i>Consent is not a defense under any section of LB107.</i></p>
LB108	Crawford		Judiciary	02/08/2017	In Committee 01/10/2017	<p>Require guidelines to ensure safety of minor or dependent whose parent or guardian is arrested</p> <p><i>LB108 requires that, beginning July 1, 2018, each police department, sheriff's office, and state patrol must establish guidelines for officer to ensure child safety upon the arrest of a parent or guardian. If, upon questing during the booking process, the arrested person is identified as a custodial parent or guardian, they are to be given two phone calls at no cost to a relative or other person for the purpose of arranging for the care of a minor.</i></p>
LB110	Kolterman		Nebraska Retirement Systems	01/24/2017	General File 02/10/2017	<p>Change duties and requirements relating to certain retirement plan reporting and change duties of the Auditor of Public Accounts and the Public Employees Retirement Board</p> <p><i>LB110 creates and end date for reporting requirements of December 31, 2017. After December 31, 2017 providers of defined benefit pension plans are required to prepare and electronically file an annual report with the Auditor of Public Accounts. This report should include the level of benefits of participants in the plan, number of members who are eligible, total present value of benefits, funding sources, and a copy of a full actuarial analysis of each such defined benefit plan. If such a report is not submitted within six months after the end of the year, the Auditor may audit the provider.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB111	Hansen		Government, Military and Veterans Affairs		In Committee 01/10/2017	Provide for nonpartisan election of county officers <i>LB111 requires that county officers be elected on a nonpartisan ballot.</i>
LB112	Hansen		Government, Military and Veterans Affairs		In Committee 01/10/2017	Permit registered voters moving within Nebraska without reregistering to vote provisionally <i>LB112 requires the Secretary of State to adopt and promulgate rules and regulations that establish procedures for election commissioners and county clerks to ensure that there is no fraud in provisional voting. LB112 allows for individuals who have moved but still reside in Nebraska to utilize provisional ballots.</i> <i>LB112 also adds twelve months' post-release supervision as a punishment for election falsification.</i>
LB113	Hansen		Urban Affairs	01/17/2017	General File 01/19/2017	Change population threshold provisions relating to municipalities and eliminate obsolete provisions <i>LB113 makes changes that would place the following language into all sections regarding city population thresholds: "as determined by the most recent federal decennial census or the most recent revised certified count by the United States Bureau of the Census"</i>
LB127	Groene	Oppose	Government, Military and Veterans Affairs	02/02/2017	In Committee 01/10/2017	Change notice requirements under Open Meetings Act <i>LB 127 provides for a change in the open meetings law, in Sec. 84-1411 of the statute. It strikes language for political subdivisions to publicize meeting designated by each political body and requires them to publish such notice in a newspaper of general circulation in each county within the public entities jurisdiction as well as any other method designated by the public body. The newspaper notice does not have to be published in every county but must have a general circulation within the county. This proposal is also not intended to apply to state agencies but just political subdivision.</i>
LB139	Crawford		Government, Military and Veterans Affairs		In Committee 01/10/2017	Authorize change to nonpartisan election of county officers <i>LB139 allows for county boards to adopt resolutions that submits a question to voters on whether they would like the election of county officers to be a nonpartisan ballot. If the voters answer the question in favor of nonpartisan ballots, then the county must utilize nonpartisan ballots for the election of officers.</i>
LB144	Friesen		Education	02/06/2017	In Committee 01/10/2017	Change agricultural and horticultural adjusted valuations for calculating state aid to schools <i>LB144 changes agricultural and horticultural adjusted valuations for calculating state aid to schools.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB145	Hansen	Monitor	Judiciary	03/16/2017	In Committee 01/10/2017	<p>Provide for a hearing to determine financial ability to pay fines and costs and traffic citations and provide for community service</p> <p><i>LB145 allows for a sentencing judge or magistrate to conduct a post-hearing sentence to determine if the offender has the financial ability to pay the fines or costs associated with their infraction. If the magistrate or judge determines that the offender is able to pay the fine, but the offender refuses, the magistrate or judge may sentence the offender to imprisonment or community service. If the offender is found unable to pay the fine, the magistrate or judge may impose the sentence without costs and fines, discharge the costs and fines from the offender, or order community service as part of the sentence. If the offender is found able to pay the costs or fines in installments, the magistrate or judge may enter an order specifying the terms of a payment arrangement.</i></p> <p><i>LB145 also allows for individuals who are arrested for failure to pay costs and fines to be provided a hearing in which their financial ability to pay those fines and costs can be assessed. A person who believes themselves to be financially unable to pay court costs and fines may request a hearing after an order has been issued against them.</i></p>
LB146	Hansen		Judiciary	01/25/2017	General File 01/30/2017	<p>Provide for set-asides of convictions for infractions</p> <p><i>LB146 allows for convictions of infractions to be set aside after completion of the sentence imposed.</i></p>
LB151	Stinner		Government, Military and Veterans Affairs	01/19/2017	In Committee 01/10/2017	<p>Change and provide for duties of the Auditor of Public Accounts and certain audited entities</p> <p><i>LB151 requires any entity that is audited or examined to provide to the Auditor of Public Accounts a detailed written description of any corrective action to be taken in response to the audit on or before six months after the issuance of a report by the Auditor of Public Accounts. The Auditor of Public accounts must then electronically submit a report of any findings of such investigation to the Governor, the appropriate standing committee, and the Appropriations of the Committee. LB151 also eliminates the duty of Auditor of Public Accounts to conduct all audits and examinations in a timely manner and in accordance with the standards for audits of government organizations, program, activities, and functions published by the Comptroller General of the United States.</i></p>
LB152	Craighead	Support	Government, Military and Veterans Affairs	02/03/2017	In Committee 01/10/2017	<p>Change and eliminate provisions relating to the fees for recording and filing certain documents</p> <p><i>LB152 eliminates sunset dates of January 1, 2018 for provisions relating to the fees for recording and filing certain documents. LB152 also eliminates the six-dollar uniform fee, payable to the Secretary of State, for presenting and filing and indexing and filing and indexing each notice of lien or certification of notice affecting lien on a property.</i></p>
LB156	Friesen		Transportation and Telecommunicati ons	02/21/2017	In Committee 01/10/2017	<p>Eliminate a termination date under the 911 Service System Act</p> <p><i>LB156 eliminates Section 86-1030 from the 911 Service System Act.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB158	Pansing Brooks		Judiciary	01/26/2017	General File 02/06/2017	Change provisions relating to appointment of counsel for juveniles <i>LB158 eliminates certain provisions and stipulates that counsel be appointed for a juvenile in all cases in which a court petition is filed alleging jurisdiction of a juvenile. The juvenile and their parent or guardian will be told of the juvenile's right to counsel if they cannot afford to appoint their own. If a juvenile waives their right to counsel, they may at any time rescind such waiver and the court shall reappoint counsel for the juvenile.</i>
LB159	McCollister		Urban Affairs	01/24/2017	General File 01/25/2017	Change provisions relating to when special assessments are payable for cities of the metropolitan class <i>LB159 allows for the creation of a payment schedule of at least ten years but less than twenty when the total cost of a special improvement exceed five thousand dollars.</i>
LB162	Krist		Judiciary	01/27/2017	In Committee 01/10/2017	Change provisions relating to criminal mischief and change and provide additional penalties for bribing or tampering with witnesses, informants, or jurors <i>LB162 changes "felony criminal mischief" to "felony criminal damage to property." LB162 also makes it a Class III felony to bribe or tamper with a witness or juror except when the bribery or tampering of a witness or juror occurs during a proceeding or investigation for a violation of any statute punishable as a Class IIA felony or higher, in which it will be a Class IIA felony.</i>
LB163	Vargas	Monitor	Government, Military and Veterans Affairs		In Committee 01/10/2017	Require additional polling places prior to elections in certain counties <i>LB163 requires election commissioners in counties with populations of more than one hundred thousand to establish at least three voting locations.</i>
LB164	Geist		Transportation and Telecommunications	01/24/2017	General File 02/06/2017	Change provisions relating to trailers, commercial motor vehicle disqualification provisions, accident reports, and motor vehicle records disclosure and authorize the Department of Motor Vehicles to keep and sell certain registration and certificate of title records <i>LB164 eliminates the term "cabin trailer" from provisions. LB164 also provides a more exhaustive list of the types of registration and certificates of title records the department can sell.</i>
LB166	Kolterman		Health and Human Services	01/27/2017	In Committee 01/12/2017	Change provisions of Uniform Controlled Substances Act and Pharmacy Practice Act <i>LB166 requires all pharmacies to complete a controlled-substance inventory whenever there is a change in the pharmacist-in-charge. LB166 also includes a definition for an emergency situation in which Schedule II controlled substances may be administered. Other regulations are also included for when pharmacies deal in controlled substances. Other provisions deal with the conduct of pharmacists and provisions for reporting unethical conduct.</i>
LB176	Bostelman		Natural Resources	01/26/2017	General File 01/31/2017	Eliminate obsolete provisions related to milldams <i>LB176 repeals sections 56-101, 56-115, 56-124, 56-125, 56-126, and 56-127, Reissue Revised Statutes of Nebraska. Section 56-101 has to deal with and acquisition and procedure for acquiring dam sights using eminent domain. Section 56-115 has to deal with the procedure for determining damages from stagnant or overflow water. Section 56-124 has to deal with the right of entry on adjoining lands for the repairs of milldams. Section 56-125 has to deal with recovery for damages arising from the repair of a milldam on adjoining lands. Section 56-126 has to deal with recovery of a mill owner for damages regarding injury to their property. Section 56-127 has to deal with when a municipal corporation is allowed to acquire a milldam site.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB178	Bolz		Judiciary	02/23/2017	In Committee 01/12/2017	Provide for sexual assault protection order <i>LB178 allows for any victim of sexual assault to file a petition and affidavit for a sexual assault protection order. This protective order shall be effective for two years unless renewed. Any knowing violation of such protective order will be a Class I Misdemeanor. LB178 also affords full faith and credit to sexual assault protection orders issued in other states or jurisdictions.</i>
LB179	Bolz		Health and Human Services	02/23/2017	In Committee 01/12/2017	Change provisions relating to transition of young adults to independence <i>LB179 requires any child who is in a court-ordered out-of-home placement in the six months prior to attaining nineteen years of age to receive information regarding the Young Adult Bridge to Independence Act. The Office of Probation is required to identify such individuals and provide the information. LB179 also provides factors for a court to consider when deciding whether it is necessary for the juvenile to remain in the court-ordered out-of-home placement. LB179 also provides for medical care under the medical assistance program for young adults for such juveniles.</i>
LB180	Bolz		Judiciary	01/26/2017	General File 01/30/2017	Provide for bridge orders transferring juvenile court jurisdiction of a juvenile to a district court <i>LB180 provides criteria for granting a bridge order which terminates the juvenile court's jurisdiction over the juvenile's custody, physical care, and visitation and grants it to a district court.</i>
LB183	Hughes		Government, Military and Veterans Affairs		In Committee 01/12/2017	Authorize change of nomination and election provisions for county officers <i>LB183 allows for the county boards in counties with a population of fifteen thousand or fewer to adopt a resolution requiring a submission of a question to the voters regarding whether or not the election of county officers should be partisan or not. If the voters answer the question in favor of nonpartisan elections, all subsequent elections shall be as such until another question is submitted to the voters. Such question may not be submitted to the voters more than once every three years.</i>
LB189	Howard		Appropriations		In Committee 01/12/2017	Appropriate funds to the Department of Health and Human Services for recruitment and retention of caseworkers <i>LB189 appropriates \$500,000 from the General Fund for FY2017-18 and \$500,000 from the General Fund for FY2018-19 to the Department of Health and Human Services for Program 33 to be used specifically for the recruitment and retention of caseworkers for child welfare.</i>
LB191	Pansing Brooks		Judiciary	02/23/2017	In Committee 01/12/2017	Provide for renewals of domestic violence protection orders <i>LB191 allows for victims of domestic abuse to file a petition and affidavit to renew a protection order thirty days before the expiration of the previous protection order. The renewal period shall be effective for one year beginning the day of expiration of the previous order.</i>
LB192	Pansing Brooks		Judiciary	02/22/2017	In Committee 01/12/2017	Change and modernize provisions relating to the qualifying and summoning of jurors <i>The purpose of LB192 is to provide adequate compensation of the jury commissioner and to permit a change in such salary as soon as the change may become operative under the Constitution of Nebraska. The salary of the jury commissioner is to be fixed by the district judges in an amount not to exceed three thousand dollars. LB192 also eliminates a provision excusing nursing mothers from serving on juries. LB192 contains duties of a jury commissioner designed to ensure adequate selection of qualified potential jurors.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB193	Pansing Brooks		Judiciary	02/10/2017	In Committee 01/12/2017	<p>Change provisions relating to courts</p> <p><i>LB193 changes terminology of statutes dealing with courts. The term "docket" is replaced with "file." The term "trial docket" is used to reference the lower court's schedule. LB193 requires clerks to enter judgements in the judgment index instead of the judgment record or journal.</i></p> <p><i>LB193 requires sheriffs to file a notice on the record whenever the levy of attachment or execution on real estate is to be used as notice. LB193 also allows offers for settlements for the recovery of money to be served on the parties' attorneys as well as the parties themselves.</i></p> <p><i>LB193 requires clerks to send a the final order after the entry of any final judgment either through the United States mail or by service through the court's electronic case management system. LB193 requires that sureties for stays of execution be recorded on the register of actions and entered by the clerk on the judgment index.</i></p> <p><i>LB193 requires every clerk to maintain and preserve a file and record of all papers delivered to them in every action or special proceedings. Retention and disposition of the records shall be determined by the State Records Administrator pursuant to the Records Management Act. The clerk of the district court is required to maintain records on the court's electronic case management system. Retention and disposition of the records shall be determined by the State Records Administrator pursuant to the Records Management Act. The case file is required to be in chronological order and contain the pleadings, orders, court actions, judgement, verdicts, postjudgement actions, and other documents in the case file. The case file may be maintained as an electronic document through the court's electronic case management system. The file may also be maintained in a paper volume and disposed of when determined by the State Records Administrator pursuant to the Records Management Act.</i></p> <p><i>LB193 requires the trial docket be available for the court on the first day of each month. The docket must set forth each case pending in the order of the filing of the complaint to be called for trial.</i></p> <p><i>LB193 adds new definitions that apply to clerk of other courts of record. Definitions for Fee Record, General Index, Judge's Notes, Judgment Index, Register of Actions, and Trial Docket are added.</i></p> <p><i>LB193 requires, whenever there is a transfer order from county court to district court, the county court must file the Certification of the proceedings, all original documents of the action, certification of the transcript of the register of actions, and the certification of the court costs within ten days.</i></p> <p><i>LB193 requires that, when there is a change of venue, the clerk of the original court must file all original documents and a certification of the transcript of the register of cations, certification of the proceedings, and certification of the court costs to the clerk of the new court.</i></p> <p><i>LB193 requires that the stenography notes of a court reporter be preserved and sealed.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
						<i>LB193 requires the clerks of the district court to use the court's electronic case management system provided by the state as the record of receipts and reimbursements.</i>
						<i>LB193 eliminates the requirement that the foreman and secretary of volunteer fire departments file in the office of the clerk of the district court a certified copy of the rolls of their respective companies on the first day of April and October in each year.</i>
						<i>LB193 requires juvenile court judges to keep a record of all proceeding of the court in every case. These case files will contain the pleadings, order, court actions, judgments, postjudgment actions, and other documents. The case file may be maintained as an electronic document through the court's electronic case management system. The case file may also be maintained in a paper volume and disposed of when determined by the State Records Administrator pursuant to the Records Management Act.</i>
						<i>LB193 requires the State Court Administrator to make available petitions for pregnant women who want to get abortions without parental consent on a website maintained by the Supreme Court.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB194	Vargas		Banking, Commerce and Insurance	02/21/2017	In Committee 01/12/2017	<p>Change provisions of the Credit Services Organization Act, Delayed Deposit Services Licensing Act, and Nebraska Installment Loan Act</p> <p><i>LB194 prohibits Credit Services Organizations from charging any brokerage or other fees or charges in connection with a loan governed by the Nebraska Installment Loan Act. LB194 also adds definitions for the Delayed Deposit Services Licensing Act. LB194 provides that any delayed deposit loan that is made by a person who is not licensed as required is void and the person making the deposit has no right to collect, receive, or retain any principle, interest, fees, or other charges associated with such loan. LB194 also changes the nonrefundable application fee from five hundred dollars to one thousand dollars. LB194 also raises the asset requirement of an applicant from twenty-five thousand dollars available for operating the delayed deposit service business to fifty thousand dollars. LB194 raises the fee required for requesting a change of location a branch or designated principle place of business from one hundred fifty dollars to five hundred dollars.</i></p> <p><i>LB194 stipulates the documentation requirement for each delayed deposit loan transaction and what information should be contained in the written agreement. Licensee are also required to openly display a schedule of all finance charges, fees, interest, other charges, and penalties for all services provided.</i></p> <p><i>LB194 creates various restrictions on Delayed Deposit Loans. LB194 makes Delayed Deposit Loans precomputed loans that are payable in substantially equal instalments of principle, fees, interest, and charges combined. The total monthly payment may not exceed the greater of either five percent of the borrower's verified gross post-tax monthly income or six percent of the borrower's verified net post-tax monthly income. Before initiating any transaction, the licensee must make a reasonable determination of the borrower's verified income. The only fees a licensee may receive are interest of no more than thirty-six percent per annum, a month maintenance fee of either five percent of the loan amount or twenty dollars, and other charges permitted for the presentation of nonnegotiable instruments. All fees collected may not exceed fifty percent of the original loan amount. In the event of a default, the licensee may exercise all civil means authorized by law to collect the face value of the loan. The licensee may not collect fees as a result of the default. Licensees are not allowed to charge a fee associated with prepayment of a loan. Licensees are not allowed to lend any amount greater than \$500, plus allowable fees and interest, to any borrower. Borrowers will have the right to rescind a loan on or before 5 p.m. the next business day following the transaction. Licensees are not allowed to enter into more than one delayed deposit loan with the same borrower at any one time. The written loan agreement for a delayed deposit loan may provide that the entire unpaid loan balance be due and payable if the loan has been in default for ten days.</i></p> <p><i>LB194 also creates a duty of licensees to report, on an annual basis, certain information regarding their operations to the director.</i></p>
LB197	Kolowski		Government, Military and Veterans Affairs		In Committee 01/12/2017	<p>Provide for electronic application for an early voting ballot</p> <p><i>LB197 allows for the creation of an early voting application process in which applicants with a valid Nebraska motor vehicle license or state identification card may electronically apply for a ballot for early voting after the ballots become available.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB199	McCollister		Judiciary	01/27/2017	In Committee 01/12/2017	Eliminate certain state aid to counties for law enforcement and jail operations <i>LB199 repeals sections 23-362 and 23-362.01, Reissue Revised Statutes of Nebraska. Both these sections that provide funds for counties in which Indian Reservations are located for the purpose of law enforcement and jail operations.</i>
LB200	Lowe		Government, Military and Veterans Affairs	01/27/2017	In Committee 01/12/2017	Provide that the county surveyor shall perform the duties of county highway superintendent in certain counties as prescribed <i>LB200 requires a county surveyor in counties with a population of seventy-five thousand but less than one hundred fifty thousand inhabitants to perform all the duties and possess all the powers and functions of the county highway superintendent.</i>
LB201	Lowe		Judiciary	03/02/2017	In Committee 01/12/2017	Change provisions relating to perjury and the issuance of search warrants <i>LB201 allows for law enforcement officers to request the assistance of any other law enforcement officer in executing a search warrant if the person or place to be searched is not within the named officer's jurisdiction. LB201 also allows for unsworn statements to be made under the penalty of perjury and subject to the same punishments as perjury.</i>
LB202	Lowe		Judiciary	02/03/2017	In Committee 01/12/2017	Create the offense of obstructing government operations by refusing to submit to a chemical test authorized by search warrant <i>LB202 creates the offense of obstructing government operations if a person intentionally and willfully refuses to submit to a chemical test authorized by a search warrant.</i>
LB207	Krist		Executive Board	01/20/2017	General File 01/27/2017	Change provisions relating to powers and duties of the Office of Inspector General of Nebraska Child Welfare <i>LB207 requires the Office of Inspector General of Nebraska Child Welfare to investigate death or serious injury in foster homes when the officer, upon review, determines the death or serious injury did not occur by chance. LB2017 also prohibits personnel action from being taken against an employee because of a disclosure of information by the employee which the employee reasonably believes evidences wrongdoing.</i>
LB212	Hansen		Business and Labor	01/23/2017	In Committee 01/12/2017	Adopt the In the Line of Duty Compensation Act <i>LB212 requires compensation to be paid if a law enforcement officer or firefighter is killed in the line of duty. For deaths occurring during 2018, compensation shall be fifty thousand dollars. For deaths occurring 2019 and each subsequent year, compensation shall be the compensation of the previous year increased by the Consumer Price Index.</i>
LB216	Harr		Executive Board	01/30/2017	In Committee 01/12/2017	Adopt the Redistricting Act <i>LB216 creates an Independent Redistricting Citizen's Advisory Commission for the purpose of assisting the Legislature in the process of redistricting in 2021 and thereafter. LB216 also creates The Redistricting Fund for the purpose of assisting the commission for travel and actual expenses of the members of the commission. Principles are provided for the commission to follow in the course of their duties in sections 28 and 29.</i>
LB217	Harr		Revenue	02/02/2017	In Committee 01/12/2017	Change provisions relating to the accrual of interest on denied and reduced homestead exemptions <i>LB217 allows for interest to accrue on the amount of tax due thirty days after the county assessor receives approval from the county board to remove or reduce a homestead exemption from the tax rolls of the county.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB219			Nebraska Retirement Systems	01/31/2017	In Committee 01/12/2017	<p>Change retirement system provisions relating to authorized benefit elections and actuarial assumptions</p> <p><i>LB219 requires that, for county employees hired on or after January 1, 2018, the mortality assumption used for purposes of converting the member cash balance account must be a mortality table using a unisex rate that is fifty percent male and fifty percent female that is recommended by the actuary and approved by the board.</i></p> <p><i>LB219 requires that, for judges hired after July 1, 2017, the determinations will be based on a mortality table using seventy-five percent of the male table and twenty-five percent of the female table and an annuity rate specified by the board. Both the mortality table and the annuity rate must be recommended by the actuary and approved by the board.</i></p> <p><i>LB219 requires that, for school employees hired after July 1, 2017, the determinations will be based on a mortality table using twenty-five percent of the male table and seventy-five percent of the female table and an annuity rate specified by the board. Both the mortality table and the annuity rate must be recommended by the actuary and approved by the board.</i></p> <p><i>LB219 requires that, for State Patrol Officers hired after July 1, 2017, the determinations will be based on a mortality table using seventy-five percent of the male table and twenty-five percent of the female table and an annuity rate specific by the board. Both the mortality table and the annuity rate must be recommended by the actuary and approved by the board.</i></p> <p><i>LB219 requires that, for state employees hired on or after January 1, 2018, the mortality assumption used for purposes of converting the member cash balance account must be a mortality table using a unisex rate that is fifty percent male and fifty percent female that is recommended by the actuary and approved by the board.</i></p>
LB228	Harr		Revenue	03/03/2017	In Committee 01/12/2017	<p>Change provisions relating to rent-restricted housing projects</p> <p><i>LB228 allows the Department of Revenue, on behalf of the committee, to forward income and expense statements from owners of rent-restricted housing projects to the county assessor of each county in which the housing project is located.</i></p>
LB230	Watermeier		Executive Board	01/26/2017	General File 02/02/2017	<p>Create the Nebraska Economic Development Advisory Committee</p> <p><i>LB230 creates the Nebraska Economic Development Advisory Committee with the purpose to gather input on issues pertaining to economic development and discuss proactive approaches on economic development.</i></p>
LB232	Kolterman		Revenue	02/23/2017	In Committee 01/13/2017	<p>Provide a property tax exemption for property leased to the state or a governmental subdivision</p> <p><i>LB232 includes property leased to the state or to a governmental subdivision by the person or entity holding legal title to the property within the definition of property of the state and its governmental subdivisions. Therefore, this leased property is exempt from property taxes.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB233	Smith		Revenue	01/25/2017	General File 02/02/2017	<p>Change revenue and taxation provisions</p> <p><i>LB233 eliminates a provision prohibiting licensed organizations from conducting lotteries or raffles within the boundaries of any Class 6 or Class 7 county without specific authorization through ordinance or resolution. LB233 also allocates the Nebraska affordable housing tax credit among some or all of the qualified partners, members or shareholders if it is a partnership, LLC or corporation that owes the qualified project. If such a qualified partner decides to transfer, sell, or assign all or part of their ownership interest, including their interest in the authorized tax credits, they must notify the Department of Revenue of the transfer, sale, or assignment and provide the tax identification number of the new owner prior to the end of the tax year for which the credits are to be used.</i></p> <p><i>LB 233 requires that, for any funds returned under the homestead exemption, the county treasure must electronically file a report with the Property Tax Administrator, that indicated the amount of funds distributed to each taxing unit in the county in the year the funds were returned, any collection fee retained by the county in such year, and the amount of unused credits returned.</i></p> <p><i>LB233 also changes the date under which a large data project or tier 4 or 6 project receives their exemption under the Nebraska Advantage act to the first January 1 after the property was placed in service. Additionally, those who file an application that described a large data center or tier 5 project that is sequential to a tier 2 large data center project for which the entitlement period has expired shall receive the exemption of all property, such as computer systems, beginning any January 1 after the date the property was placed into service.</i></p>
LB236	Erdman		Revenue	02/23/2017	In Committee 01/13/2017	<p>Change provisions relating to the inclusion of multiple lots in one parcel</p> <p><i>LB236 allows for two or more vacant lots, if owned by the same person, to be considered one parcel for the purpose of property taxes unless such lots have any property taxes or special assessments that are certified but not yet due, are due, or are delinquent if property taxes or special assessments on such lots have been sold at a tax sale.</i></p>
LB238	Erdman		Revenue	02/23/2017	In Committee 01/13/2017	<p>Change provisions of the Nebraska Budget Act relating to certifying taxable values</p> <p><i>LB238 allows the certification of taxable values to be provided to the governing body or board either by mail, electronically, or by notifying such governing body or board of the place on the county assessor's website where the current taxable values are located.</i></p>
LB243	Bolz		Judiciary	02/16/2017	In Committee 01/13/2017	<p>Require reporting of certain information concerning assaults that occur in state institutions</p> <p><i>If a person is assaulted in a secure state institution by another person housed or held in such institution, LB243 requires the administrators of secure state institutions to inform the victim of the assault of all disciplinary actions that are being taken and their results, as well as inform the appropriate county attorney of such assault.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB244	Bolz		Business and Labor	02/27/2017	In Committee 01/13/2017	Change provisions relating to mental injury and mental illness for workers' compensation <i>LB244 allows frontline state employees to receive workers' compensation for mental injuries if they can establish, by preponderance of the evidence, that their employment conditions causing the mental injury or illness were extraordinary and unusual and that the medial causation between the mental injury or illness and the employment. A frontline employee means an employee of the Department of Corrections or the Department of Health and Human Services whose duties involve regular and direct interaction with high-risk individuals.</i>
LB245	Bolz		Judiciary	02/16/2017	In Committee 01/13/2017	Provide for a corrections-related emergency and overtime as prescribed <i>LB245 requires that employees of the Department of Corrections must have at least eight consecutive hours off work before a shift. Overtime of such employees is also limited to thirty-two hours during a period of two consecutive weeks. However, in the event of a serious disturbance at a correctional facility, the director may declare an emergency and the overtime restrictions may be suspended for up to two weeks or until the director rescinds the declaration.</i>
LB249	Harr		Revenue	02/23/2017	In Committee 01/13/2017	Expand business inventory property tax exemption <i>LB249 expands business inventory property tax exemptions to personal property that is equipment useable for construction, agriculture, or manufacturing.</i>
LB250	Harr		Judiciary	02/16/2017	In Committee 01/13/2017	Change provisions relating to probationers' rights <i>LB250 takes away a probationer's right to a prompt consideration of a motion or information to revoke probation when the probationer has failed or refused to report to their probation officer as ordered by the court.</i>
LB251	Harr		Revenue	02/16/2017	In Committee 01/13/2017	Redefine agricultural or horticultural purposes for revenue and taxation purposes <i>LB251 requires that, when determining whether a parcel of land is primarily used for agricultural or horticultural purposes, no regard may be given to whether some or all of the parcel is platted and subdivided into separate lots or developed with improvements such as streets, sidewalks, curbs, gutters, sewer lines, water lines, or utility lines.</i>
LB253	Crawford		Revenue	02/24/2017	In Committee 01/13/2017	Authorize intergovernmental service agreements under the County Industrial Sewer Construction Act and provide for a special tax levy <i>LB253 allows for any county, city, village, or sanitary and improvement district to enter into a service agreement with any joint entity or joint public agency which owns or operates or proposes to own or operate any sewerage disposal system and plant. LB253 also grants any county, city, village, or sanitary and improvement district to levy a special tax to ensure payment of the service agreement.</i>
LB256	Briese		Urban Affairs	01/31/2017	In Committee 01/13/2017	Adopt the Vacant Property Registration Act <i>LB256 adopts the Vacant Property Registration Act. The purpose of this act is to promote the health, safety, and welfare of Nebraska residents by providing authority for municipalities to enact vacant property registration ordinances. These ordinances should allow communities to identify and register vacant properties, collect fees to compensate for the public costs of vacant properties, plan for the rehabilitation of vacant properties, and encourage the occupancy of vacant properties. These registration ordinances may apply to either residential or commercial buildings, but not to property owned by the federal government, the State of Nebraska, or any political subdivision.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB258	Hansen		Judiciary	02/16/2017	In Committee 01/13/2017	Provide opportunity for inmates to obtain state identification card or driver's license before discharge <i>LB258 provides for inmates the opportunity to obtain a state identification card or a motor vehicle operator's license prior to release.</i>
LB259	Hansen		Judiciary	03/02/2017	In Committee 01/13/2017	Provide for competency determinations in cases pending before county courts <i>LB259 provides for competency determinations in cases pending before county courts.</i>
LB261	Hansen		Business and Labor	02/13/2017	In Committee 01/13/2017	Adopt the Nebraska Worker Adjustment and Retraining Notification Act <i>LB261 adopts the Nebraska Worker Adjustment and Retraining Notification Act. The purpose of this act is to protect workers and communities by requiring advance notification of large-scale employment loss. The act requires an employer, before ordering a mass layoff, to provide notice to possibly affected parties at least sixty days in advance. For actions that will result in employment loss for two hundred fifty or more employees, such notice must give one hundred twenty days in advance. This notice must include the number of employees who will be terminated, a statement of the reasons for the mass layoff, a statement of any employment that may be available at other establishments, a statement of employee rights, and a statement concerning information about public programs available to the employee. LB261 also allows for an employee, the Attorney General, the commissioner, or an affected city, village, or county who has been aggrieved by an employer's failure to comply with the notice requirement to proceed with a civil action against the employer.</i>
LB262	Groene		Urban Affairs	02/21/2017	In Committee 01/13/2017	Change provisions relating to undeveloped vacant land under the Community Development Law <i>LB262 prohibits tax-increment financing from being used for the acquisition, planning, and preparation for development or disposal of undeveloped vacant land. LB262 also prohibits undeveloped vacant land from being declared or designated blighted and substandard in order to qualify for the use of tax-increment financing unless such land meets the definition of a blighted area.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB263			Transportation and Telecommunications	02/07/2017	In Committee 01/13/2017	<p>Change provisions relating to vehicle certificates of title, registration, and license plates and provide for implementation of an electronic dealer services system by the Department of Motor Vehicles</p> <p><i>LB263 requires the Department of Motor Vehicles to implement an electronic dealer services system. A licensed dealer may voluntarily participate in the system and provide titling and registration services. Any licensed dealer who chooses to participate may collect from a purchaser of a vehicle all appropriate certification of title fees, notation of lien fees, registration fees, motor vehicle taxes and fees, and sales taxes. All fees collected must be remitted to the appropriate authorities. Any licensed dealer who chooses to participate shall use this system to electronically submit title, registration, and lien information to the Vehicle Title and Registration System. License plates, registration certificates, and certificates of title will be delivered as provided under the Motor Vehicle Certificate of Title Act and the Motor Vehicle Registration Act.</i></p> <p><i>LB263 limits a political subdivisions liability for any claim based on negligent issuances of a certificate of title under the Motor Vehicle Certification of Title Act and the State Boat Act when such title is issued upon an application filed electronically by an approved licensed dealer participating in the electronic dealer services system.</i></p> <p><i>LB263 also provides that, if a certificate of title is an electronic certificate of title record, the name of the owner may be changed electronically without the need to print a new certificate of title.</i></p>
LB266	Friesen	Monitor	Revenue	02/16/2017	In Committee 01/13/2017	<p>Change the valuation of agricultural land and horticultural land</p> <p><i>LB266 requires that, for the purposes of school district taxation, agricultural and horticultural land be taxed at a percentage of its actual value. For the 2018 tax year, the percentage will be fifty. For the 2019 tax year, the percentage will be forty. For the 2020 tax year and years after, the percentage will be thirty.</i></p> <p><i>LB266 also allows for the commission to increase or decrease the value of real property. For the purpose of school district taxation, agricultural and horticultural tax ranges may be: 44 to 50 for tax year 2018; 34-40 for tax year 2019; and 24-30 for tax years 2020 and after.</i></p> <p><i>State aid means, for agricultural and horticultural land, a percentage of the actual value of the land. For tax year 2018, 47%, for tax year 2019, 37%, and for tax years 2020 and after, 27%.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB268	Schumacher		Judiciary	02/01/2017	In Committee 01/13/2017	<p>Change court and other provisions relating to medical assistance reimbursement <i>LB268 gives county courts concurrent original jurisdiction with the district court to determine contribution rights under section 68-919. LB268 changes the fee schedule for recording certificates of foreclosure.</i></p> <p><i>LB268 requires notice of appointment of personal representatives to be provided to DHHS if the decedent was 55 years or older. The notice must be provided to the department in a delivery manner and at an address designated by the department. Any notice that fails to conform with such manner is void and constitutes neither notice to the department nor a waiver application.</i></p> <p><i>LB268 changes the term "Medicaid" to "medical assistance" for purposes of reimbursement of claims after a trustor has died. If no medical assistance payment is due, DHHS may waive this restriction after receipt of the trustee's request.</i></p> <p><i>LB268 allows for part of a deed filing fee to be used for preserving and maintaining public records of a register of deeds office that has been consolidated with another county officer and for the modernization and technology needs relating to those records.</i></p> <p><i>LB268 eliminates the uniform fee, payable to the Secretary of State, for presenting for filing and indexing and for filing and indexing each notice of lien or certificate or notice affecting the lien pursuant to the Uniform Federal Lien Registration Act.</i></p> <p><i>LB268 also changes the Medical Assistance Act. LB268 requires any applicant for medical assistance to disclose their interests in any real estate, trust, corporation, LLC, or other entity. Applicants must also disclose any income derived from such interests and whether the income is generated directly or indirectly. Any assistance obtained after a willful failure to disclose will be deemed unlawfully obtained and recovery may be sought. If, during the transferor's lifetime, an interest in real estate is irrevocably transfers to a related transferee for less than full consideration, the related transferee will be subject to a lien in favor of the State of Nebraska for medical assistance reimbursement to the extent necessary to secure payment subject to stipulated restrictions. LB268 also states that a medical provider shall have the authority of a guardian and conservator for the limited purpose of making application for medical assistance on behalf of a person whom the provider is treating if the person is unconscious or otherwise unable to apply for medical assistance and does not have an existing power of attorney or a court-appointed official to apply on their behalf. When DHHS provides medical assistance to a person because of third party's wrongful act or negligence, the department has the right to recover the medical assistance costs from that third party.</i></p>
LB271	Hilgers		Transportation and Telecommunications	01/23/2017	General File 02/06/2017	<p>Authorize the Department of Roads to assume certain responsibilities under federal environmental laws and provide for limited waiver of the state's sovereign immunity <i>LB271 allows the Department of Roads to assume all or part of the responsibilities of the United States Department of Transportation concerning environmental assessment and review. LB271 also waives the State of Nebraska's immunity from civil liability solely for the compliance, discharge, or enforcement of the assumed responsibilities.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB275	Hughes		Transportation and Telecommunications	02/06/2017	In Committee 01/13/2017	Provide duties for law enforcement officers and rights and duties for private property owners regarding abandoned vehicles <i>LB275 allows for law enforcement officers and private property owners to remove or cause removal of an abandoned vehicle from private property upon request of the private property owner whose property the vehicle is abandoned on.</i>
LB277	Wayne		Government, Military and Veterans Affairs		In Committee 01/13/2017	Change population requirements for election precincts <i>LB277 lowers the population requirements for election precincts from one thousand seven hundred fifty registered voters to one thousand registered voters.</i>
LB278	Kolterman		Nebraska Retirement Systems	02/03/2017	In Committee 01/13/2017	Redefine disability and change disability retirement application and medical examination provisions for various retirement acts <i>LB278 requires, in order for disability retirement applications, that the member of the state, county or school retirement plan be initially diagnosed with a physical or mental impairment, or become disabled while the member was an active participant in the plan. LB278 also requires a medical examination prior to a member being retired as a result of disability and the expense of the board. LB278 also allows for the board to require any disability beneficiary under the age of fifty-five to undergo annual medical examinations.</i>
LB280	Crawford		Government, Military and Veterans Affairs	02/09/2017	In Committee 01/13/2017	Change provisions relating to the Address Confidentiality Act <i>LB280 allows victims of trafficking to apply to the Secretary of State to have a different address, other than their real one, designated as their address. LB280 also requires the State Treasurer to transfer XX dollars from the Records Management Cash Fund to the Secretary of State Administration Cash Fund to defray the costs of implementing these changes on July 1, 2017.</i>
LB286	Craighead		Banking, Commerce and Insurance	02/21/2017	In Committee 01/13/2017	Adopt the Nebraska Flexible Loan Act and change provisions of the Delayed Deposit Services Licensing Act <i>LB286 adopts the Nebraska Flexible Loan Act. This act prohibits a person, unless they are exempted, from engaging in the business of making a flexible credit loan to a resident without first obtaining a license as a flexible credit lender. The director must issue a license to an applicant within sixty days after receiving a complete application unless the applicant is insolvent, fails to demonstrate financial responsibility, failed to pay the required fee of \$500, or fails to maintain at least twenty-five thousand dollars in readily available assets. All advertisements of a licensee must comply with the federal Truth in Lending Act. Licensees are prohibited from providing a flexible credit loan to a consumer with more than one outstanding flexible credit loan. LB286 also includes interest rate caps for certain categories of consumers. LB286 stipulates that, for closed-end credit, the term of the flexible credit loan may not exceed twenty-four months.</i>
LB288	Harr		Revenue	02/24/2017	In Committee 01/13/2017	Change provisions relating to service of notice when applying for a tax deed and the laws governing tax sale certificates <i>LB288 permits the use of certified mail and designated delivery in order to serve notice upon every person in actual possession or occupancy of real property that qualifies as an owner-occupant. If certified mail or designated delivery service is used, the certified mail return receipt of a copy of the signed delivery receipt must be filed with and accompany the return of service. Since an emergency exists, this act takes effect when passed and approved according to law.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB289	Pansing Brooks		Judiciary	02/23/2017	In Committee 01/13/2017	<p>Change provisions and penalties relating to pandering, human trafficking, labor trafficking, and sex trafficking and prohibit solicitation of a trafficking victim</p> <p><i>LB289 makes pandering a Class II felony. LB289 also includes services under the definition of Labor for the purpose of defining "Labor Trafficking." LB289 also eliminates the "knowing" requirement for sex trafficking of a minor, and includes solicitation in the offense. LB289 makes labor or sex trafficking of a minor a Class IC Felony, unless the actor uses or threatens force on a victim under the age of sixteen, in such case the charge would be a Class IB Felony. LB289 also makes solicitation of a trafficking victim a Class II Felony. LB289 exempts trafficking victims from being charged if they benefit from or participate in the trafficking venture.</i></p>
LB290	Vargas		Government, Military and Veterans Affairs		In Committee 01/13/2017	<p>Provide for voter registration upon application for driver's license, state identification card, or certain benefits</p> <p><i>LB290 requires the Department of Motor Vehicles, with assistance from the Secretary of State, to prescribe a voter registration application which may be used to register to vote or change address for voting purposes at the same time a person is applying for a driver's license or state identification card. This application must be designed in such a way so that the elector's information can be transmitted to the election commission or county clerk, unless the elector specifies on the form that they do not want to register to vote.</i></p> <p><i>LB290 also allows for the Secretary of State to enter into agreements with the Commissioner of Education and the chief executive officer of the Department of Health and Human Services to prescribe an electronic voter registration application</i></p>
LB291	Larson		Revenue		In Committee 01/13/2017	<p>Adopt the Special Economic Impact Zone Act</p> <p><i>LB291 adopts the Special Economic Impact Zone Act. The purpose of this act is to utilize the tax incentives provided in the act to encourage the formation and expansion of businesses on reservations in Nebraska. This act designates each reservation in the state as a special economic impact zone. For taxable years beginning on or after January 1, 2018, a qualified business located in a special economic impact zone may exclude any income derived from sources within a special economic impact zone when calculating its income tax liability to the state. Beginning January 1, 2018, such businesses are also exempt from the sales and use taxes due for the first ten million dollars of eligible purchases made each year.</i></p> <p><i>LB291 also requires that, when allocating any federal low-income housing tax credits, the authority must give a bonus to any project located in a special economic impact zone.</i></p> <p><i>LB291 also allows for the governing bodies of federally recognized Indian Tribes to enter into revenue sharing agreement with the Department of Revenue.</i></p>
LB294	Smith		Transportation and Telecommunications	02/07/2017	In Committee 01/13/2017	<p>Provide for a reciprocity agreement with a foreign country for mutual recognition of motor vehicle operator licenses</p> <p><i>LB294 allows for the Department of Motor Vehicles to enter into a reciprocity agreement with a foreign country to provide for the mutual recognition and reciprocal exchange of a valid operator's license issued by this state or the foreign country if the department determines that the licensing standards of the foreign country are comparable to those of the state. Commercial driver's licenses may not be included in such agreement</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB297	McCollister		Health and Human Services	02/23/2017	In Committee 01/13/2017	<p>Create Children and Juveniles Data Pilot Project</p> <p><i>LB297 creates the Children and Juveniles Data Pilot Project. The purpose of this project is to identify how existing state agency data systems currently used to account for the use of all services, programs, and facilities by children and juveniles in the State can be used to establish an independent, external data warehouse. The Children and Juveniles Data Pilot Project Advisory Group is also created to oversee the pilot project. The advisory group will consist of the Inspector General of Nebraska Child Welfare, the State Court Administrator, the probation administrator of the Office of Probation Administration, the executive director of the Nebraska Commission on Law Enforcement and Criminal Justice, the Commissioner of Education, the executive director of the Foster Care Review Office, the director of the University of Nebraska at Omaha Juvenile Justice Institute, the Chief Information Officer of the Officer of Chief Information Officer, the Director of Children and Family Services of the Division of Children and Family Services of the Department of Health and Human Services, the Director of Developmental Disabilities of the Division of Developmental Disabilities of the Department of Health and Human Services, the Director of Behavioral Health of the Division of Behavioral Health of the Department of Health and Human Services, and the Director of Medicaid and Long-Term Care of the Division of Medicaid and Long-Term Care of the Department of Health and Human Services.</i></p>
LB298	Baker		Health and Human Services	02/23/2017	In Committee 01/17/2017	<p>Change provisions relating to the Nebraska Strengthening Families Act and a task force</p> <p><i>LB298 clarifies that the immediate and public dissemination of a current picture and information about a child who is missing from a foster or out-of-home placement is not restricted by certain confidentiality requirements. However, the disseminated information may not include the fact that the child is in the care, custody, or control of the Department of Health and Human Services or the Officer of Probation Administration. LB298, beginning July 1, 2017, makes the Normalcy Task Force the Nebraska Strengthening Families Act Committee. This committee shall monitor and make recommendations regarding the implementation in Nebraska of the federal Preventing Sex Trafficking and Strengthening Families Act. LB298 also clarifies the Legislatures intent to recognize the importance of parental rights and the different rights that exists dependent on a variety of factors.</i></p> <p><i>LB298 also requires the department or officer to ensure the presence of a written normalcy plan describing how the department or office will ensure all children have access to age or developmentally appropriate activities.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB299	Ebke		Government, Military and Veterans Affairs	02/24/2017	In Committee 01/17/2017	<p>Adopt the Occupational Board Reform Act and change procedures for rules and regulations</p> <p><i>LB299 adopts the Occupational Board Reform Act. The purpose of this act is to require occupational boards to respect the fundamental right of an individual to pursue an occupation and to ensure that occupational boards and individual members of occupational boards avoid liability under federal antitrust laws. The act allows for individuals with criminal history to petition the relevant occupational board to determine if such criminal history would disqualify them from certification. An individual's criminal history will only disqualify them for a felony conviction, that felony conviction is expressly listed as a disqualifying offense, and the occupational board concludes that the state has an important interest in protecting public safety.</i></p> <p><i>LB299 also creates the Office of Supervision of Occupational Boards. The purpose of this board is to monitor occupational boards and ensure compliance with the act.</i></p> <p><i>LB299 also creates the Legislative Office of Occupational Regulations. The duties and responsibilities of the Office as specified in Section 23 of the act.</i></p>
LB300	Krist		Judiciary	02/24/2017	In Committee 01/17/2017	<p>Eliminate the statute of limitations on civil actions for sexual assault of a child</p> <p><i>LB300 eliminates the statute of limitations for civil actions arising from sexual assault of a child.</i></p>
LB304	Crawford		Urban Affairs	01/31/2017	In Committee 01/17/2017	<p>Change provisions relating to the Nebraska Housing Agency Act</p> <p><i>LB304 eliminates the provisions limiting more than three members of a housing agency from being residents of the same incorporated community within a county. LB304 also changes the amount of time housing agencies must wait before disposing of abandoned personal property from forty-five days to fourteen days. LB304 also eliminates a provision requiring each local housing agency to file with the governing body of the city or country a copy of the five-year plan and annual plan.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB305	Crawford		Business and Labor	02/06/2017	In Committee 01/17/2017	<p>Adopt the Paid Family Medical Leave Insurance Act</p> <p><i>LB305 adopts the Paid Family Medical Leave Insurance Act. The act allows for covered individuals to take paid family medical leave to care for a new child, because the covered individual has a serious health condition, to care for a family member, to care for a covered service member, or for other qualifying exigencies. The weekly benefits to be paid, for a covered individual whose individual average weekly wage is not more than 20% of the state average, an amount equal to 95% of the individuals average weekly wage. For individuals, whose weekly wage is more than 20% of the state average, the weekly benefits will be equal to 90% of such individuals average weekly wage. Claims for family medical leave benefits must be filed with the commissioner.</i></p> <p><i>LB305 also creates the Paid Family Medical Leave Insurance Fund. On the operative date of this act, the State Treasurer shall transfer four million dollars from the Nebraska Health Care Cash Fund to this fund to pay the upfront administrative costs. The four million dollars will be paid back from the Fund according to the outlined payment schedule. Every year on December 31, from 2021 to 2024, \$800,000 will be paid back from the Fund.</i></p> <p><i>LB305 also allows for covered individuals to take intermittent leave, and mandates that covered employees returning from leave be restored to the position held prior to the leave.</i></p>
LB307	Brasch		Judiciary	02/09/2017	In Committee 01/17/2017	<p>Provide for mediation, child abuse prevention, and civil legal services fees in certain proceedings</p> <p><i>LB307 requires the clerk of the court to collect an additional fifty-dollar mediation fee and a twenty-five-dollar child-abuse prevention fee for each complaint filed. For each paternity determination or parental support proceeding, a civil legal service fee of fifteen dollars will be collected.</i></p>
LB310	Friesen	Monitor	Transportation and Telecommunications	02/06/2017	In Committee 01/17/2017	<p>Change provisions relating to bridge carrying capacities and weight limits</p> <p><i>LB310 requires counties to firmly post or attach to a bridge a notice if the bridges carrying capacity is less than the limits of twenty thousand points per axel. Any person who drives across such posted bridge that weighs greater than the limit may not recover from the county any damages associated with any injury or damage arising therein. They are also guilty of a Class III misdemeanor.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB312	Briese		Revenue	02/22/2017	In Committee 01/17/2017	<p>Change and eliminate revenue and taxation provisions</p> <p><i>LB312 eliminates Motor vehicles, motorboat trade-ins, newspapers, laundromats, and telefloral deliveries from being included under "consumer goods" for the purpose of a report created by the department for the purpose of reviewing the major tax exemptions for which state general funds are used to reduce the impact of revenue lost due to a tax expenditure. From the same report, under "nonprofits, governments, and exempt entities" the Nebraska lottery, admissions to school events, and fine art purchases by a museum are eliminated. From the same report, all provisions are eliminated under "services purchased for nonbusiness use" and replaced with only household professional services. Prepaid calling arrangements are also eliminated form "telecommunications."</i></p> <p><i>LB312 also removes the exemptions under gross income received for animal specialty services for the purpose of determining gross receipts for providing a service. Other sources of gross are added to the definition of gross receipts for providing a service are added in section 2.</i></p> <p><i>LB312 allows the credit from trading in motor vehicles, motorboats, all-terrain vehicles and utility-type vehicles to be used when computing the Sales price.</i></p> <p><i>LB312 removes prepared food, food, and food ingredients served by public or private schools from sales tax exemption. Fees and admissions charged by a public or private school are also removed from sales tax exemption. Fees and admissions charged for participants in any activity provided by a nonprofit are also removed from sales tax exemption.</i></p> <p><i>LB312 removes from the definition of "food and food ingredients" soft drinks, candy, and bottled water.</i></p> <p><i>LB312 allows for a refundable credit against the income tax up to ten percent of the allowed federal credit for taxable years beginning or deemed to being before January 1, 2018 and seventeen percent for taxable years beginning or deemed to begin on or after January 1, 2018.</i></p> <p><i>LB312 requires the Tax Commissioner, from the amounts collected under the Nebraska Revenue Act of 1967, credit to the Excess Revenue Property Tax Credit Fund an amount equal to the net increase in state tax revenue received as a result of the changes made by this legislative bill.</i></p> <p><i>LB312 creates the Excess Revenue Property Tax Credit Fund. This fund will be sued to provide a property tax credit to owners of real property. To determine the amount of this credit, the county treasurer shall multiply the amount disbursed to the county by the ration of the real property valuation of the parcel to the total real property valuation in the county. The amount dispersed to each county will be equal to the amount in the Excess Revenue Property Tax Credit Fund multiplied by the ration of the real property valuation in the county to the real property valuation in the state.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB313	Briese		Revenue	02/22/2017	In Committee 01/17/2017	Change the sales tax rate and the earned income tax credit and provide property tax credits <i>LB313 changes the sales tax rate to six and one-half percent on the operative date of this act. LB313 also allows for a refundable tax credit of 17% of the federal credit allowed for taxable years beginning or deemed to begin on or after January 1, 2018. LB313 also creates the Excess Revenue Property Tax Credit Fund. This fund shall be used to provide a property tax credit to owners of real property.</i>
LB314	Murante		Government, Military and Veterans Affairs	03/01/2017	In Committee 01/17/2017	Change state and municipal election provisions to conform to prior legislation <i>LB314 requires cities to file a certified copy of the economic development program with the election commissioner or county clerk no later than fifty days prior to a special election or not later than March 1 prior to a primary or general election. LB314 also eliminates a provision prohibiting the use of General Funds being appropriated for the purpose of a voter registration list. LB314 also makes the penalty for a Class IV felony up to two years' imprisonment and twelve months of post-release supervision.</i>
LB316	Murante		Government, Military and Veterans Affairs		In Committee 01/17/2017	Change election provisions relating to technology and funding <i>LB316 allows for election signatures to be written in ink or affixed electronically. LB316 also creates the Election Technology Fund. The primary purpose of this fund is to ensure the longevity of the state's election technology. The Secretary of State must make periodic requests for appropriation for the fund in order to ensure the ability to purchase new technology on a statewide basis as necessary. LB316 allows for electronic aspects authorized under the Election Act to be used to tabulate ballots. LB316 also allows eliminates a provision allowing for the consolidation of precincts and polling places into fewer and larger for the use of electronic voting systems.</i>
LB317	Hughes		Urban Affairs	01/24/2017	General File 01/25/2017	Provide for a relevy or reassessment of a special assessment for cities of the second class or villages as prescribed <i>LB317 allows special assessments to be relevied or reassessed whenever the special assessment is found to be invalid and uncollectable.</i>
LB327	Scheer	Oppose	Appropriations	02/21/2017	In Committee 01/17/2017	Appropriate funds for the expenses of Nebraska State Government for the biennium ending June 30, 2019
LB333	Scheer	Oppose	Health and Human Services	01/25/2017	In Committee 01/17/2017	Eliminate an independent review of denial of aid to the disabled <i>LB333 requires that a disability persist for more than a year before a person can be considered disabled. LB333 also eliminates the requirement that the Department of Health and Human Services conduct an independent medical review when Social Security denies benefits to an individual on the basis of the duration of the individual's disability.</i>
LB334	Scheer		Health and Human Services	01/25/2017	In Committee 01/17/2017	Change Department of Health and Human Services provisions relating to families <i>LB334 eliminates a provision that creates a pilot project of the process of locating and engaging family members in the life of a child who is a ward of the state. LB334 also eliminates provisions requiring contracted providers of family finding services and family members of the children which were part of the pilot project to participate in family finding.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB337	Smith		Revenue	02/08/2017	In Committee 01/17/2017	<p>Change income tax rates and provide for deferrals of the rate changes</p> <p><i>Beginning November 2019 and every November thereafter, LB337 requires the Tax Rate Review Committee to examine the expected rate of growth in net General Fund receipts from the Current Fiscal year to the upcoming fiscal year. If the expected rate of growth does not exceed three and one-half percent, the Committee shall declare that the income tax rate reduction under section 77-2715.03 be deferred. If such a deferral is declared, the highest individual income tax rate under 77-2715.03 for the current year will remain in place. For 2020 through 2026, this deferral will remain in effect until the Committee finds that the expected rate of growth exceeds four and two-tenths percent for the upcoming fiscal year. For 2027 and thereafter, and deferrals will remain in effect until the Committee finds that the expected rate of growth exceeds three and one-half percent for the upcoming fiscal year.</i></p> <p><i>LB337 also adds additional tax bracket tables.</i></p>
LB338	Brasch		Revenue	02/08/2017	In Committee 01/17/2017	<p>Adopt the Agricultural Valuation Fairness Act</p> <p><i>LB338 adopts the Agricultural Valuation Fairness Act. Agricultural and horticultural land will be valued at its agricultural use value as determined by the Act regardless of any value which such land might have for other purposes. In order for land to receive agricultural use value, it must be located outside the corporate boundaries any district, city, or village and be used for agricultural or horticultural purposes. LB338 requires the county assessor to use an income-approach calculation to determine the agricultural use value for each year.</i></p> <p><i>LB338 also requires the Property Tax Administration to establish capitalization rates to be applied to each class or subclass of agricultural and horticultural land in each county.</i></p>
LB339	Friesen		Transportation and Telecommunications	01/30/2017	In Committee 01/17/2017	<p>Merge the Department of Aeronautics into the Department of Roads and rename as the Department of Transportation</p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB344	Albrecht		Health and Human Services	03/01/2017	In Committee 01/17/2017	<p>Change credentialing and regulation of mental health substance abuse centers</p> <p><i>LB344 allows the board to issue a license to those who hold a license or certification that is current in another jurisdiction that authorized the applicant to provide alcohol and drug counseling, has at least two hundred seventy hours of counseling education, has at least three years of full-time counseling practice and has passed a counseling examination.</i></p> <p><i>LB344 also includes provisions regarding approved educational programs. These programs are accredited by the Commission on Accreditation for Marriage and Family Therapy Education, the Counsel for Accreditation of Counseling and Related Educational Program, the Counsel on Rehabilitation Education, the Council on Social Work Education, or The American Psychological Association for a doctoral degree program enrolled in by a person who has a master's degree or its equivalent in psychology.</i></p> <p><i>LB344 allows those who have received a doctoral degree of the equivalent of a master's degree to be qualified to be a licensed mental health practitioner. LB344 also allows those who have been in active practice in the appropriate discipline for at least five years following initial licensure or certification in another jurisdiction and has passed the Nebraska jurisprudence examination to be issued a license by the board.</i></p> <p><i>LB344 makes ineligible for SNAP those with one or two felony convictions for possession or use of a controlled substance unless they are participating in, since the date of conviction, a substance abuse program that is nationally accredited or provided in a mental health substance use treatment center licensed under the Health Care Facility Licensure Act.</i></p> <p><i>LB344 requires health care facilities applying for a license as a mental health substance use treatment center to designate whether the license is to be issued to provide services for mental health disorders only, for substance use disorders only, or for both mental health and substance use disorders.</i></p>
LB345	Craighead		Banking, Commerce and Insurance	03/06/2017	In Committee 01/17/2017	<p>Eliminate an experience requirement for abstracters</p> <p><i>LB345 eliminates a provision requiring at least one year of verified land title-related experience satisfactory to the board for individuals desiring to become a registered abstracter.</i></p>
LB349	Hilkemann		Judiciary	01/27/2017	General File 02/06/2017	<p>Change provisions relating to the maintenance and administration of the State DNA Sample and Data Base Fund</p> <p><i>LB349 makes the State DNA Sample and Data Base Fund maintained and administered by the Nebraska State Patrol.</i></p>
LB353	Baker		Judiciary	02/01/2017	In Committee 01/17/2017	<p>Change claim, award, and judgment payment provisions under the Political Subdivisions Tort Claims Act</p> <p><i>LB353 requires that any claim, award, or judgment pursuant to the Political Subdivisions Tort Claims Act be paid in the same manner as other claims, awards, or judgments against the political subdivision.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB354	Kolowski		Business and Labor	02/27/2017	In Committee 01/17/2017	Adopt the Wage Disclosure Act <i>LB354 adopts the Wage Disclosure Act. This act makes it unlawful for an employer to screen job applicants based on their current or prior wages, request or require that a job applicant disclose his or her current or prior wages, or seek information regarding an applicant's current or prior wages. Violations of this act will be a Class IV misdemeanor.</i>
LB357	Bolz	Support	Transportation and Telecommunications	02/28/2017	In Committee 01/17/2017	Increase original certificate of title fees for vehicles transferred to Nebraska from another state and provide for voluntary contributions to brain injury programs <i>LB357 places a fee of twenty-five dollars for each original certificate of title issued to a person by a county for a vehicle or trailer being titled in Nebraska from another state after the first original title is issued. LB357 also allows for voluntary contributions of \$2 to be made as a donation to programs for persons suffering from brain injury.</i>
LB359	Kolterman		Judiciary	02/15/2017	In Committee 01/17/2017	Authorize damages for property taxes and special assessments paid on property lost through adverse possession <i>LB359 allows persons who have lost title to real property due to a successful claim of adverse possession to recover damages for all taxes and special assessments paid during the period of adverse possession.</i>
LB365	Blood		Government, Military and Veterans Affairs	02/02/2017	In Committee 01/17/2017	Change provisions relating to access to public records and provide for fees <i>LB365 makes, for nonresidents of Nebraska, the actual added cost used as the basis for the calculation of a fee for records include a charge for the existing salary or pay obligation to the public officers or employees, including a charge for the services of an attorney to review the requested public records.</i>
LB367	Krist	Oppose	Judiciary	02/24/2017	In Committee 01/17/2017	Change provisions relating to payment of costs in juvenile matters <i>LB367 requires the county to pay the costs associated with transportation when a peace officer takes a juvenile into temporary custody and a probation officer determines the need for detention or an alternative placement. LB367 requires the Office of Probation Administration to pay for costs that are related to treatment or service provisions.</i>
LB369	Lowe		Government, Military and Veterans Affairs	02/16/2017	In Committee 01/17/2017	Change provisions relating to fees charged by the register of deeds <i>LB369 eliminates the provision that ended the ten-dollar fee received by the register of deeds and the county clerk for recording a deed, mortgage, or release, recording and indexing of a will, recording and indexing of a decree in a testate estate, recording proof of publications, or recording any other instrument. LB369 allocates two dollars and fifty cents of this fee to the preservation and maintenance of public records.</i> <i>LB369 eliminates the uniform fee for presenting for filing and indexing and for filing and indexing each notice of lien or certificate of notice affecting the lien. LB369 also eliminates the provision that ended the uniform fee for presenting for filing, releasing, continuing, or subordinating or for filing, releasing, continuing, or subordinating each tax lien.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB370	Lowe		Judiciary		In Committee 01/17/2017	Eliminate requirement to obtain certificate or complete background check to receive or transfer a handgun <i>LB370 eliminates the requirement to obtain a certificate to purchase, lease, rent, or receive transfer of a handgun from the chief of police or sheriff. LB370 also makes the Nebraska State Patrol, for purposes of background checks for handguns, unable to access patient records from institutions associated with the Department of Health and Human Services.</i>
LB371	Crawford		Judiciary	02/01/2017	General File 02/06/2017	Eliminate condemnation authority of the State Fire Marshal <i>LB371 eliminates the requirement that the county attorney of any county assist the State Fire Marshal in condemnation proceedings.</i>
LB373	Schumacher		Revenue		In Committee 01/17/2017	Change and eliminate revenue and taxation provisions SUMMARY ON SEPARATE DOCUMENT
LB378	McCollister		Appropriations		In Committee 01/17/2017	Appropriate funds to the Department of Correctional Services <i>LB378 appropriates \$5,000,000 from the General Fund for FY2016-17 to the Department of Correctional Services, for Program XXX. The appropriation shall only be used to house prison inmates at county jails where such inmates have been classified as community corrections inmates and are housed at county jails in the general area where the inmates on parole or release will be located</i>
LB381	Harr		Judiciary	02/01/2017	In Committee 01/17/2017	Change provisions relating to jury sequestration <i>LB381 allows the court to order a jury sequestered during trial or after a case is finally submitted to the jury on the court's own motion or on motion by a party for good cause shown. LB381 also prohibits jurors that are sequestered from reading, listening, or viewing any reports of the case in the media.</i>
LB382	Erdman		Government, Military and Veterans Affairs	02/16/2017	In Committee 01/17/2017	Change provisions relating to budget limitations <i>LB382 makes, for FY2017-18, the last prior year's total of restricted funds for counties equal to the last prior year's total of restricted funds minus the last prior year's restricted funds budgeted by counties plus the last prior year's amount of restricted funds budgeted by counties for capital improvements.</i>
LB383	Quick		Urban Affairs	01/31/2017	In Committee 01/17/2017	Change membership provisions for certain community redevelopment authorities, citizen advisory review committees, and planning commissions <i>LB383 prohibits members of planning commissions from also being members of a community redevelopment authority. LB383 also prohibits members of planning commissions from being members of a citizen advisory review committee.</i>
LB384	Lindstrom		Banking, Commerce and Insurance	02/06/2017	General File 02/09/2017	Change the rate of interest to be charged on installment loans <i>LB384 changes the interest rate charged on installment loans under the Nebraska Installment Loan Act to twenty-nine percent per annum.</i>
LB385	Lindstrom		Revenue	03/01/2017	In Committee 01/17/2017	Change provisions relating to the burden of proof and who may appeal under the Tax Equalization and Review Commission Act <i>LB385 allows those with a relationship to the taxpayer to execute an appeal on behalf of the taxpayer. The specific relationships are: A person or entity with a contract executed by the taxpayer, a person with the power of attorney, a person with a durable power of attorney, and a person who is a trustee of an estate. LB385 requires the county board of equalization, in appeals regarding the assessed value of the property that has been increased by more than 5%, to prove by a preponderance of the evidence that the assessed value reflects the property's actual value.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB386	Lindstrom		Banking, Commerce and Insurance	02/21/2017	In Committee 01/17/2017	Change time period a licensee under the Delayed Deposit Services Licensing Act may hold a check <i>LB386 prohibits licensees from holding or agreeing to hold a check for more than forty days.</i>
LB389	Friesen		Transportation and Telecommunicati ons	02/21/2017	In Committee 01/17/2017	Adopt the Small Wireless Facilities Act <i>LB389 adopts the Small Wireless Facilities Act. The purposes of this Act are to secure public access to advanced wireless technology and information, promote the public benefits from such wireless technology, and confirm that communications service providers and facilities have a right to occupy and utilize public rights-of-way. The Act allows communications service providers and facilities providers to place poles and wireless facilities in an authority right-of-way. An authority may require an application for a permit for such placement. The authority must approve the application unless it does not meet the applicable industry construction standards. Approved permits shall remain valid for at least ten years and be approved automatically for at least three five-year periods. Small wireless facilities shall be permitted use in all zoning districts other than areas outside the authority right-of-way that are zoned and used for single family residential use.</i>
LB392	Larson		Natural Resources	02/09/2017	In Committee 01/17/2017	Adopt the Wind Friendly Counties Act <i>LB392 adopts the Wind Friendly Counties Act. The Act requires the Director of Agriculture to establish a process to recognize and assist efforts of the counties to create, maintain, or expand winder energy opportunities.</i>
LB394	Morfeld		Judiciary	02/23/2017	In Committee 01/17/2017	Change provisions relating to possession of a deadly weapon by person subject to a domestic violence protection order <i>LB394 makes subjects of a current and validly issued harassment protection order who are in possession of a firearm, knife, or brass knuckles guilty of the offense of possession of a deadly weapon by a prohibited person.</i>
LB395	Morfeld	Monitor	Judiciary	03/16/2017	In Committee 01/17/2017	Change provisions relating to conditions of and ability to post bail <i>LB395 requires a court to consider all methods of bond and conditions of release to avoid pretrial incarceration. If an appearance bond is required, the court shall appoint counsel to indigent defendants. To determine if a defendant is indigent, the judge must consider the defendant's financial ability to pay a bond. The court may also order a defendant to be supervised by an approved person or organization or a pretrial services program.</i>
LB399	Wayne		Urban Affairs	01/31/2017	In Committee 01/17/2017	Change provisions relating to housing commissions <i>LB399 allows the chief elected official of cities of the metropolitan class to appoint seven adult persons to an established local housing agency. LB399 also requires any commissioner of a local housing agency to attain a commissioner's certification from the National Associate on Housing and Redevelopment Officials at their own expense.</i>
LB400	Hilkemann		Revenue	03/02/2017	In Committee 01/17/2017	Change provisions relating to motor vehicle fees and taxes <i>LB400 makes all refunds for motor vehicle registrations based upon the number of unexpired time remaining from the date of the event, not the date of presentation to the county treasurer.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB405	Baker		Judiciary	03/15/2017	In Committee 01/17/2017	<p>Change provisions relating to DNA samples, DNA records, and thumbprints under the DNA Identification Information Act</p> <p><i>LB405 allows for the detention, arrest, adjudication, and conviction of a person based upon a DNA record, DNA sample, or thumb or fingerprint even if the DNA sample, DNA records, or thumb or fingerprint was obtained for inclusion or was placed in the State DNA Data Base, Combined DNA Index System, or State DNA Sample Bank by mistake. Law enforcement agencies or their employee that mistakenly submit the information for inclusion shall not be criminally or civilly liable if mistake was made in good faith.</i></p>
LB413	Kolterman		Nebraska Retirement Systems	02/03/2017	In Committee 01/17/2017	<p>Change a retirement application timeframe for judges and Nebraska State Patrol officers as prescribed and change supplemental lump-sum cost-of-living adjustments under the Judges Retirement Act</p> <p><i>LB413 requires a judge's application for retirement to be filed no more than one hundred twenty days in advance of qualifying for retirement. LB413 also changes the word "adjustment" to "payment" in terms of lump-sum cost of living. LB413 also changes the definition of Officer to exempt law enforcement officers who have been granted an appointment conditioned on satisfactory completion of a training program approved by the Nebraska Police Standards Advisory Council.</i></p>
LB415	Kolterman		Nebraska Retirement Systems	02/27/2017	In Committee 01/17/2017	<p>Provide and change notification requirements and duties and benefits for certain retirement system members, change certain annuity and disability benefit provisions, and provide duties for school districts and the Public Employees Retirement Board relating to retirement</p> <p><i>Under LB415, termination of employment for county employees does not occur if: an employee enters into an employer-employee relationship in any capacity with the same or another county which participates in the Retirement System for Nebraska Counties; if the employee provides services to an employer participating in a retirement system provided for in the Class V School Employees Retirement Act, the Nebraska State Patrol Retirement Act, the School Employees Retirement Act, or the State Employees Retirement Act; or if the member accepted an early retirement incentive and, within three years after accepting and ceasing such employment, subsequently provides services any capacity to an employer participating in the above mentioned retirement systems.</i></p> <p><i>On or after July 1, 2017, a retired member of a retirement system who is hired or rehired in any capacity by an employer participating in the above-mentioned retirement plans must: certify under oath that, prior to retirement, they did not have a prearranged agreement to work after retirement with that employer; and meet the requirements for termination of employment as defined. Any retired member that complies with these requirements will participate in the retirement system as a new member and make contributions to the retirement system commencing upon reemployment. Upon termination of such new employment, the member will receive, in addition to the retirement benefit which commenced at the time of the previous retirement: if the member has accrued ten year or more of vesting credit after their return to employment, a retirement benefit shall be calculated solely on the basis of the vesting credit accrued and earned after the member's return to employment and as adjusted to reflect any payment in other than the normal form; or if the member has not accrued ten or more years of vesting credit after their return to employment, a refund equal to the member's accumulated contributions which were credited to the member after the return to employment. A member's vesting credit which was accrued prior to a previous employment may not be considered as part of the member's vesting credit after their return to employment for any purpose of the County Employees Retirement Act.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
						<p><i>Under LB415, termination of employment for School employees does not occur if: an employee enters into an employer-employee relationship in any capacity within 180 days with the same or another county which participates in the School Employees Retirement Act; if the employee provides services to an employer participating in a retirement system provided for in the Class V School Employees Retirement Act, the Nebraska State Patrol Retirement Act, the School Employees Retirement Act, or the State Employees Retirement Act; or if the member accepted an early retirement incentive and, within three years after accepting and ceasing such employment, subsequently provides services any capacity to an employer participating in the above mentioned retirement systems.</i></p>
						<p><i>A retired member of a retirement system who is hired or rehired in any capacity by an employer participating in the above-mentioned retirement plans must: certify under oath that, prior to retirement, they did not have a prearranged agreement to work after retirement with that employer; and meet the requirements for termination of employment as defined. Any retired member that complies with these requirements will participate in the retirement system as a new member and make contributions to the retirement system commencing upon reemployment. Upon termination of such new employment, the member will receive, in addition to the retirement benefit which commenced at the time of the previous retirement: if the member has accrued ten year or more of vesting credit after their return to employment, a retirement benefit shall be calculated solely on the basis of the vesting credit accrued and earned after the member's return to employment and as adjusted to reflect any payment in other than the normal form; or if the member has not accrued ten or more years of vesting credit after their return to employment, a refund equal to the member's accumulated contributions which were credited to the member after the return to employment. A member's vesting credit which was accrued prior to a previous employment may not be considered as part of the member's vesting credit after their return to employment for any purpose of the School Employees Retirement Act.</i></p>
						<p><i>An employer is required to notify the board and the State Department of Education of the date upon which the termination of employment has occurred and provide such information as the board deems necessary. A member hired on or after July 1, 2017, or a member who has taken a refund or retirement and is rehired may retire if the member is at least 60 years of age and the sum of the member's attained age and creditable service totals ninety, or if the member is at least 65 and has completed at least five years of credible service. If the annuity of such a member begins at a time when the sum of the member's attained age and creditable service totals ninety and the member is at least 60, the annuity will not be reduced. However, this only applies to members who have acquired the equivalent of five years of service or more as a school employee under the retirement system.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
						<p><i>Under LB415, termination of employment for Nebraska State Patrol members does not occur if: an employee enters into an employer-employee relationship in any capacity within 180 days with the same or another county which participates in the School Employees Retirement Act; if the employee provides services to an employer participating in a retirement system provided for in the Class V School Employees Retirement Act, the Nebraska State Patrol Retirement Act, the School Employees Retirement Act, or the State Employees Retirement Act; or if the member accepted an early retirement incentive and, within three years after accepting and ceasing such employment, subsequently provides services any capacity to an employer participating in the above mentioned retirement systems. The employer involved in the termination of the employment and the officer shall certify that, prior to retirement, there was no prearranged agreement to return to work in any capacity. A retired officer of a retirement system who is hired or rehired in any capacity by an employer participating in the above-mentioned retirement plans must: certify under oath that, prior to retirement, they did not have a prearranged agreement to work after retirement with that employer; and meet the requirements for termination of employment as defined. Any retired officer that complies with these requirements will participate in the retirement system as new member and make contributions to the retirement system commencing upon reemployment. Upon termination of such new employment, the member will receive, in addition to the retirement benefit which commenced at the time of the previous retirement: if the member has accrued ten year or more of vesting credit after their return to employment, a retirement benefit shall be calculated solely on the basis of the vesting credit accrued and earned after the member's return to employment and as adjusted to reflect any payment in other than the normal form; or if the member has not accrued ten or more years of vesting credit after their return to employment, a refund equal to the member's accumulated contributions which were credited to the member after the return to employment. A member's vesting credit which was accrued prior to a previous employment may not be considered as part of the member's vesting credit after their return to employment for any purpose of the Nebraska State Patrol Retirement Act.</i></p> <p><i>Under LB415, termination of employment for State employees does not occur if: an employee enters into an employer-employee relationship in any capacity with the same or another county which participates in the Retirement System for Nebraska Counties; if the employee provides services to an employer participating in a retirement system provided for in the Class V School Employees Retirement Act, the Nebraska State Patrol Retirement Act, the School Employees Retirement Act, or the State Employees Retirement Act; or if the member accepted an early retirement incentive and, within three years after accepting and ceasing such employment, subsequently provides services any capacity to an employer participating in the above mentioned retirement systems.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
						<p><i>On or after July 1, 2017, a retired member of a retirement system who is hired or rehired in any capacity by an employer participating in the above-mentioned retirement plans must: certify under oath that, prior to retirement, they did not have a prearranged agreement to work after retirement with that employer; and meet the requirements for termination of employment as defined. Any retired member that complies with these requirements will participate in the retirement system as a new member and make contributions to the retirement system commencing upon reemployment. Upon termination of such new employment, the member will receive, in addition to the retirement benefit which commenced at the time of the previous retirement: if the member has accrued ten year or more of vesting credit after their return to employment, a retirement benefit shall be calculated solely on the basis of the vesting credit accrued and earned after the member's return to employment and as adjusted to reflect any payment in other than the normal form; or if the member has not accrued ten or more years of vesting credit after their return to employment, a refund equal to the member's accumulated contributions which were credited to the member after the return to employment. A member's vesting credit which was accrued prior to a previous employment may not be considered as part of the member's vesting credit after their return to employment for any purpose of the State Employees Retirement Act.</i></p>
LB417	Riepe		Health and Human Services	02/01/2017	In Committee 01/17/2017	<p>Change and eliminate provisions relating to public health and welfare</p> <p><i>LB417 eliminates provisions concerning the alternative response implementation plan. LB417 also eliminates a provision requiring associations that receive juveniles under the Nebraska Juvenile Code to report to the department its condition, management, and competency. LB417 also eliminates a provision requiring the department to submit an annual summary and analysis of the medical assistance program to the Medicaid Reform Council. LB417 eliminates a provision requiring the department to report to the Governor, the Legislature, and the Medicaid Reform Council on the implementation of rules and regulations, Medicaid state plan amendments, and waivers adopted under the Medical Assistance Act and their effects.</i></p> <p><i>LB417 eliminates provisions requiring the divisions to notify the Governor and Legislature when the occupancy of the licensed psychiatric hospital beds of any regional center reaches twenty percent or less of its capacity. LB417 also eliminates provision that have been outdated.</i></p> <p><i>LB417 allows senior volunteers to receive transportation expenses, one free meal, and an annual physical examination. LB417 eliminates provisions that provided senior volunteers with an hourly stipend.</i></p> <p><i>LB417 requires the department to make annual grants in an amount not to exceed twenty-five thousand dollars. As a condition to receiving a grant, an application must obtain at least ten percent matching funds from local sources. LB417 also requires the department to develop a quality assurance plan to promote and monitor quality relating to services for persons with developmental disabilities.</i></p>
LB418	Briese		Transportation and Telecommunications	01/31/2017	General File 02/10/2017	<p>Update certain references to federal regulations regarding motor vehicles and motor carriers</p> <p><i>LB418 changes the date from "2016" to "2017." LB418 also adopts the rules of practice for FMCSA. LB418 also updates civil penalty amounts to match federal regulations for commercial carriers.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB420	McCollister		Business and Labor	03/13/2017	In Committee 01/17/2017	Adopt the Fair Chance Hiring Act <i>LB420 adopts the Fair Chance Hiring Act. This act prohibits employers and employment agencies from asking an applicant to disclose information concerning the applicants criminal record or history unless such disclosure is needed to determine if the applicant meets the minimum employment qualifications of the position. Such positions include those in which a criminal history record information check is required by law or federal or state law specifically disqualifies an applicant with a criminal background even if such law allows for a waiver that would allow such applicant to be employed.</i>
LB422	Murante		Government, Military and Veterans Affairs		In Committee 01/17/2017	Change provisions of the Election Act <i>LB422 changes the meaning of "registered voter" to mean an elector who has a valid voter registration record on file with the election administrator in the county of their residence.</i>
LB423	Murante		Government, Military and Veterans Affairs		In Committee 01/17/2017	Change provisions relating to counties <i>LB423 changes the language from "all counties having" to "each county that has."</i>
LB424	Ebke		Judiciary	03/17/2017	In Committee 01/17/2017	Provide for earned time and discontinue use of good time in the Department of Correctional Services <i>LB424 provides for an earned time credit and discontinues the use of good time. For sentences imposed on or after the operative date of this act, the department may apply earned time only to eligibility for parole or mandatory supervision. If a committed offender commits an offense or violates a rule of the department during the actual term of imprisonment, the department may forfeit all or any part of the committed offender's accrued earned time, or place all or part of the accrued time under suspension. If parole or mandatory supervision of a committed offender is revoked, the committed offender shall forfeit all earned time previously accrued. LB424 requires the department to establish a policy regarding the suspension of earned time. This policy should provide that the department will consider the severity of an offense or violation when determining if earned time should be suspended and during any period that earned time is suspended, it may not be used for purposes of granting privileges or to compute eligibility for parole.</i>
LB426	Murante		Government, Military and Veterans Affairs		In Committee 01/17/2017	Change expense reimbursement provisions for state officers and agencies
LB427	Vargas		Education	01/30/2017	In Committee 01/17/2017	Require breastfeeding accommodations for student-parents <i>LB427 requires schools to provide private or appropriate facilities for accommodation for milk expression and storage for breast feeding student-mothers.</i>
LB431	Erdman		Government, Military and Veterans Affairs	01/26/2017	In Committee 01/19/2017	Change provisions relating to cash reserves under the Nebraska Budget Act <i>LB431 prohibits governing bodies from referencing cash reserves in their actual and estimated revenue that exceed fifty percent of the total amount received from personal and real property taxation. Since an emergency exists, this act takes effect when passed and approved according to law</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB432	Erdman		Government, Military and Veterans Affairs	01/26/2017	In Committee 01/19/2017	Eliminate provisions of the Nebraska Budget Act relating to allowances for delinquent taxes and anticipated litigation <i>LB432 eliminates provisions that allowed governing bodies, when certifying the amount needed for a budget, to make allowances for delinquent taxes not exceeding five percent of the amount required plus the actual percentage of delinquent taxes for the preceding tax year and for any estimated tax loss from any pending or anticipated litigation which involves taxation. Since an emergency exists, this act takes effect when passed and approved according to law.</i>
LB434	Ebke	Monitor	Judiciary	03/09/2017	In Committee 01/19/2017	Change videoconferencing provisions relating to certain juvenile hearings <i>LB434 requires any telephone or videoconference juvenile evidentiary hearings to ensure the preservation of due process or rights of all parties.</i>
LB435	Ebke		Judiciary	03/15/2017	In Committee 01/19/2017	Change provisions relating to escape <i>LB435 makes escape a Class IIA felony.</i>
LB437	Craighead		Government, Military and Veterans Affairs		In Committee 01/19/2017	Change requirements for independent instrumentalities under the Taxpayer Transparency Act <i>LB437 includes a definition for independent instrumentalities. Independent instrumentality means a body created by the laws of this state which may sue and be sued and with respect to which the state, by law, does not provide indemnification. LB437 allows, in lieu of providing copies of each active contract, an independent instrumentality may provide a link to copies of such contracts that are stored on a severed owned or managed by it. LB437 also allows independent instrumentalities to provide information that is necessary to accomplish the purposes of the Taxpayer Transparency Act by providing the State Treasurer with a link to a web site or document containing such information that is stored on a server owned or managed by the independent instrumentality. Since an emergency exists, this act takes effect when passed and approved according to law.</i>
LB441	Morfeld		Health and Human Services	03/08/2017	In Committee 01/19/2017	Change eligibility provisions under the Medical Assistance Act <i>LB441 makes those persons described under section 1902 (a)(10)(A)(i)(VIII) of the federal Social Security Act eligible under the Medical Assistance Act. The department must submit a state plan amendment to cover newly eligible individuals, and such amendment must request as the alternative benefit plan a benchmark benefit package as defined in section 1937(b)(1) 18 (D) of the federal Social Security Act, as amended, 42 U.S.C. 1396u-7(b)(1)(D), as such act and section existed on January 1, 2017, for Secretary-approved coverage that shall include full Medicaid benefit coverage, including mandatory and optional coverage, under section 68-911 22 in the amount, duration, and scope in effect on January 1, 2017, and any additional wraparound benefits required under federal law.</i>
LB444	Walz		Judiciary	03/03/2017	In Committee 01/19/2017	Prohibit cities and counties from canceling health insurance coverage for injured law enforcement officers <i>LB444 prohibits cities and counties from canceling health insurance for law enforcement officers who suffered serious bodily injury while in the line of duty.</i>
LB445	Chambers		Executive Board	02/02/2017	In Committee 01/19/2017	Prohibit lobbyist-provided meals and beverages for legislators during session in the State Capitol <i>LB445 prohibits meals and beverage from being provided anywhere in the State Capitol building to members of the Legislature by any lobbyist while the Legislature is in session.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB447	Chambers		Judiciary	02/08/2017	General File 02/14/2017	Eliminate certain mandatory minimum penalties <i>LB447 eliminates mandatory minimum sentences for Class ID and Class IC felonies.</i>
LB451	Murante		Government, Military and Veterans Affairs	03/01/2017	In Committee 01/19/2017	Change various provisions relating to elections as prescribed <i>LB451 eliminates a provision prohibiting the election commissioner from becoming a candidate for an elected officer during their term of office or within thirty days of leaving office. LB451 also changes provision relating to the appointment for vacant legislative seats. LB451 also provides that any person using an early voting or absentee ballot must sign a voter oath to be contained with the ballot.</i> <i>LB451 requires that, if the filing deadline for the elective officer is after March 1 of the year in which the election is held, the candidate must file supplementary statements on or before the filing deadline. If the candidate files to appear on the ballot for election during the calendar year in which the election is held, the candidate must file a statement of financial interests of the preceding calendar year with the commission on or before March 1 of the year. A statement of financial interest must be preserved for a period of no less than five years.</i>
LB458	Harr		Government, Military and Veterans Affairs	01/27/2017	In Committee 01/19/2017	Change provisions relating to the County Purchasing Act <i>LB458 excludes any purchase or lease of personal property or services by or on behalf of a county from the definition of purchasing or purchase for purposes of the County Purchasing Act.</i>
LB463	Watermeier		General Affairs	01/30/2017	In Committee 01/19/2017	Change a provision relating to appointment to certain cemetery boards <i>LB463 allows a mayor of a city with fewer than twenty-five thousand residents to appoint members to a cemetery board from among citizens at large from the county in which the village is located.</i>
LB468	Krist	Oppose	Revenue	02/15/2017	In Committee 01/19/2017	Change revenue and taxation provisions <i>LB468 eliminates the Personal Property Tax Relief Act exemption and compensating exemption factor for tax years 2018 and 2019. LB468 also eliminates an exemption from taxation for the first ten thousand dollars of valuation on tangible property for tax years 2018 and 2019. LB468 also eliminates the reduction in the value of tangible personal property owned by each railroad, care line company, public service entity, and air carrier for tax years 2018 and 2019. LB468 ends reimbursement to taxing subdivisions for tax revenue that will be lost because of personal property tax exemptions for tax years 2018 and 2019.</i> <i>LB468 allows resident individuals from electing to subtract from federal gross adjusted income the extraordinary dividends paid on and the capital gain from sale or exchange of capital stock for taxable years beginning before January 1, 2018 and taxable years beginning on or after January 1, 2020. LB468 ends the credit to the Game and Parks Commission Capital Maintenance Fund on July 1, 2017, and ends the credit to the Highway Trust Fund on or after July 1, 2017 and before July 1, 2019. Since an emergency exists, this act takes effect when passed and approved into law.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB470	Larson		General Affairs	02/06/2017	In Committee 01/19/2017	Change provisions of the Nebraska County and City Lottery Act relating to the manner of play of keno, use of electronic tickets, and authorized methods of payment <i>LB470 allows the use of electronic tickets when playing keno. A lottery operator that does use electronic tickets must take reasonable measure to prevent participation in the keno lottery by a person outside the licensed premises. LB470 also prohibits the use of credit cards to pay for keno beginning January 1, 2018.</i>
LB472	Bostelman		Transportation and Telecommunications	02/21/2017	In Committee 01/19/2017	Change provisions relating to signs and advertising on highways <i>LB472 only allows the Department of Roads to require permits for advertising signs, displays, and devices placed along or upon the Highway Beautification Control System</i>
LB473	Walz		Business and Labor	03/13/2017	In Committee 01/19/2017	Require rest periods for employees <i>LB473 prohibits employers from requiring any employee to work without a rest period of at least fifteen minutes for every four hours worked. No reduction in compensation may be made for such rest period.</i>
LB479	Groene		Government, Military and Veterans Affairs	01/26/2017	In Committee 01/19/2017	Change public hearing provisions and redefine a term under the Nebraska Budget Act <i>LB479 adds joint entity created pursuant to the Interlocal Cooperation Act that receives tax funds to the definition of Governing Body for the Nebraska Budget Act. LB479 also requires governing bodies to hold public hearings on proposed budgets on a separate day from any regularly scheduled meeting. At such hearing, the governing body must make a detailed presentation and make available a written copy of the budget.</i>
LB480	McCollister		Banking, Commerce and Insurance	02/13/2017	In Committee 01/19/2017	Provide requirements relating to health benefit plan coverage for insureds in jail custody <i>LB480 prohibits an insurer offering a health benefit plan from denying reimbursement for any service or supply covered by the plan or cancel the plan if the insured is in the custody of a jail pending disposition of charge, the insured receives publicly funded medical care while in such custody, and the care was provided by an employee or contractor who meets the credentialing requirements of the plan. LB480 requires health benefit plans to reimburse the political subdivision for the costs of covered services provided to the insured who is in custody.</i>
LB481	Kuehn		Health and Human Services	02/02/2017	In Committee 01/19/2017	Provide for drug product selection for interchangeable biological products <i>LB481 allows for drug product selection concerning interchangeable biological products. LB481 also adjusts definitions under the Nebraska Drug Product Selection Act.</i>
LB482	Smith		Government, Military and Veterans Affairs	02/24/2017	In Committee 01/19/2017	Adopt the Government Neutrality in Contracting Act <i>LB482 adopts the Government Neutrality in Contracting Act. The purpose of this act is to provide for the efficient procurement of goods and services by governmental units and to promote the economical, nondiscriminatory, and efficient administration and completion of construction projects funded, assisted, or awarded by a governmental entity. The Act requires that a governmental unit ensure that any requests for proposals or bid specification for a public contract do not contain a term that requires, prohibits, encourages, or discourages bidders, contractors, or subcontractors from entering into a collective-bargaining agreement or a term that discriminates based on status as a party or nonparty to, or the willingness or refusal to enter into, a collective-bargaining agreement relating to construction under a public contract.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB487	Morfeld		Judiciary	02/23/2017	In Committee 01/19/2017	<p>Provide exception to certain crimes for persons witnessing or experiencing drug overdoses and provide protection from civil liability for emergency responders and peace officers administering naloxone</p> <p><i>LB487 exempts a person from violating the Uniform Controlled Substance Act if: such person made a good faith request for emergency medical assistance in response to a drug overdose of himself, herself, or another; such person was the first person to make a request for medical assistance as soon as the drug overdose was apparent; the evidence for the violation of the UCSA was obtained as the result of the drug overdose and request for medical assistance; such requesting person remained on the scene until medical assistance arrived; and such requesting person cooperated with medical assistance or law enforcement.</i></p> <p><i>LB487 also prohibits administrative action, criminal prosecution, and civil liability against an emergency responder or peace officer who, in good faith, administers naloxone to a person who is apparently experiencing an opioid-related overdose.</i></p>
LB488	Groene		Natural Resources	02/15/2017	In Committee 01/19/2017	<p>Adopt the Water Conservation Grant Act</p> <p><i>LB488 adopts the Water Conservation Grant Act. The act allows for the department to being accepting applications for water conservation grants if they determine that the states that are subject to a multi-state compact have agreed to count any reduction in water usages in determining Nebraska's compliance with the multi-state compact. LB488 requires that ground water that is not used for irrigation purposes be considered used when a natural resources district calculates irrigation caps under an integrated management plan created pursuant to the Act.</i></p> <p><i>LB488 also creates the Water Conservation Grant Fund. The Fund shall be used to fund water conservation grants awarded under the Act.</i></p>
LB489	Groene		Urban Affairs	02/21/2017	In Committee 01/19/2017	<p>Redefine development project under the Community Development Law</p> <p><i>LB489 removes other improvements in accordance with the development plan from the definition of development project under the Community Development Law.</i></p>
LB492	Harr		Judiciary	02/15/2017	In Committee 01/19/2017	<p>Adopt the Self-Service Storage Facilities Act and authorize certain liens</p> <p><i>LB492 adopts the Self-Service Storage Facilities Act. LB492 prohibits an operator from knowingly permitting a leased space at a self-service storage facility to be used for residential purposes. LB492 requires an occupant, upon reasonable request from the operator, to allow the operator to enter a leased space for purposes of inspection or repair. LB492 establishes that, upon the date in which personal property is placed in a leased space, the operator shall have a lien upon the occupant's personal property for delinquent rent, late fees, labor, or other charges incurred pursuant to a rental agreement. This lien is enforceable once the occupant is in default for forty-five days. The operator may then, after providing the appropriate notice, hold a public sale. LB492 also grants the operator the right to deny the occupant access for any default rent or charges.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB496	Stinner		Urban Affairs	02/28/2017	In Committee 01/20/2017	Define and redefine terms under the Community Development Law <i>LB496 includes the construction of workforce housing, in cities of the first and second class and villages, into the definition of redevelopment project under the Community Development Law. LB496 also includes a definition for workforce housing. Workforce housing means single-family or multi-family housing for which the municipality receives a housing study that is current, prepares an incentive plan for construction targeted to house existing or new workers, holds a public hearing on such incentive plan with notice, and after the public hearing finds that such incentive plan is necessary to prevent the spread of blight and substandard conditions within the municipality.</i>
LB498	Brewer		Revenue	02/24/2017	In Committee 01/20/2017	Change provisions relating to transfer of homestead exemptions <i>LB498 stipulates that, for purposes of such determination, the January 1 through August 15 ownership and occupancy requirement shall not apply.</i>
LB500	Brewer		Judiciary	03/01/2017	In Committee 01/20/2017	Authorize the carrying of concealed handguns by qualified active and retired law enforcement officers <i>LB500 allows an individual who is a qualified law enforcement officer or qualified retired law enforcement officer and who is carrying the required identification may carry a concealed handgun anywhere in the State of Nebraska. For law enforcement officers, such identification shall be photogenic and issued by the employing governmental entity. For retired officers, the identification shall be either a photographic identification issued from the agency from which the individual separated in good standing or a photographic identification issued and a certificate issued by the individual's state of residence.</i>
LB501	Brewer		Judiciary	03/08/2017	In Committee 01/20/2017	Change prohibition on locations where permit holder may carry a concealed weapon <i>LB501 requires that, in order for a permit holder to violate the section, there must be a posted conspicuous notice that carrying a concealed handgun is prohibited and the property owner must make a request that the permit holder leave, which the permit holder defies. LB501 also makes this violation a Class II misdemeanor.</i>
LB502	Brewer		Judiciary	03/23/2017	In Committee 01/20/2017	Adopt the Permitless Concealed Carry Act <i>LB502 adopts the Permitless Concealed Carry Act. To be eligible to carry a concealed handgun under this act, the person shall be at least twenty-one years of age, be a citizen or legal resident of the United States, not be prohibited from possessing a handgun, and not be prohibited from purchasing or possessing a handgun under 18 U.S.C. 992. This Act does not change the current restrictions on the carrying of weapons onto private property and other provisions. Any violation of this Act is a Class II misdemeanor for the first violation and a Class I misdemeanor for any subsequent violation.</i>
LB503	Brewer		Business and Labor	03/20/2017	In Committee 01/20/2017	Prohibit certain provisions in collective-bargaining agreements <i>LB503 prohibits the deduction of wages of a public employee, either directly or indirectly, on behalf of a collective-bargaining organization except as required by a collective-bargaining agreement entered into between a public employer and a representative of its employees prior to the effective date of this act.</i>
LB508	Hilgers	Support	Government, Military and Veterans Affairs	02/22/2017	In Committee 01/20/2017	Change the population threshold for the county civil service system <i>LB508 changes the threshold requiring the formation of a Civil Service Commission from three hundred thousand inhabitants of a county to four hundred inhabitants.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB510	Ebke		Government, Military and Veterans Affairs		In Committee 01/20/2017	Provide a restriction on installment contracts for the purchase of real or personal property by political subdivisions <i>LB510 prohibits political subdivisions from entering into installment contracts for the purchase of real or personal property that require a total outstanding obligation exceeding twenty-five million dollars.</i>
LB511			Education		In Committee 01/20/2017	Change provisions for payment of educational costs for state wards and students in residential settings <i>LB511 requires the resident school district to pay the cost of education and any required transportation associated with education for any student who is a ward of the state or resident in certain residential settings except as provided. DHHS shall pay the costs of education and transportation for a student who is a ward of the state, does not reside in a foster family home, and is placed in a school district other than the school district in which they resided at the time they became a ward of the state. DHHS shall pay the costs of education and transportation for any student that is a ward of the state and is placed in an institution which maintains an approved special education program. DHHS shall pay the costs of education and transportation for a student who is a ward of the state, is eighteen years of age or younger, and is placed in a county detention home.</i> <i>LB511 also requires that, except as provided in the Nebraska Indian Child Welfare Act, a child shall continue to attend the same school as prior to placement outside their home unless a determination is made that continued attendance at such school would not be in the best interests of the child.</i>
LB514	Bolz		Appropriations		In Committee 01/20/2017	State intent to appropriate funds for a Justice Reinvestment Initiative Coordinator <i>LB514 states the intent of the Legislature to appropriate one hundred thousand dollars to the University of Nebraska at Omaha for fiscal year 2017-18 to fund the position of Justice Reinvestment Initiative Coordinator at the University of Nebraska at Omaha College of Public Affairs and Community Service Nebraska Center for Justice Research.</i>
LB516	Pansing Brooks		Judiciary	03/09/2017	In Committee 01/20/2017	Change provisions relating to a report on juvenile facilities <i>LB516 requires juvenile facilities to redact all personal identifying information from their quarterly report. LB516 also make intentional or knowingly failure to comply with this section a Class V misdemeanor.</i>
LB517	Pansing Brooks		Judiciary	02/10/2017	In Committee 01/20/2017	Change provisions regarding transfer of property upon death <i>LB517 makes divorce or annulment of a marriage, except as provided by the express terms of a governing instrument made between the divorced individuals, revokes any revocable disposition or appointment of property, provision in a governing instrument conferring a general or nongeneral power of appointment on the divorced individual's spouse or relative of the spouse, or nomination of the divorced spouse to serve in any fiduciary or representative capacity. The divorce or annulment also severs the interests of the former spouses in property held by them at the time of the divorce or annulment as joint tenants with the right of survivorship, transforming the interests of the former spouses to equal tenancies in common.</i>

Kissel ESS Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB520	Hansen		Judiciary	03/08/2017	In Committee 01/20/2017	Require notification when persons prohibited by state or federal law obtain a handgun or concealed carry permit <i>LB520, if a prohibited person files an application to obtain a handgun or concealed carry permit, requires the forwarding of the denied application to the Nebraska Commission on Law Enforcement and Criminal Justice. The commission is then required to evaluate whether local law enforcement should be alerted based on the application. Law enforcement agencies are also required to report certain statistics related to rejected applications and noticed received from the commission.</i>
LB529	Harr		Judiciary	03/16/2017	In Committee 01/20/2017	Authorize county courts sitting as probate courts in cases of guardianship to authorize abortions in judicial by-pass cases <i>LB529 allows county courts sitting as a probate court in the case of a pregnant woman for whom a guardian has been appointed to authorize abortions in judicial by-pass cases.</i>
LB530	Harr		Executive Board	02/08/2017	In Committee 01/20/2017	Change requirements for providing information to the Legislative Fiscal Analyst and provide for withholding appropriations <i>LB530 requires the Legislative Fiscal Analyst, beginning July 1, 2017, to notify the State Treasurer and the Director of Administrative Services to withhold the appropriations for any officer, board, commission, or department which does not furnish the required information until such information is received.</i>
LB531	Harr		Revenue	03/02/2017	In Committee 01/20/2017	Change sales tax collection fees for motor vehicles <i>LB531 allows the county treasurer to deduct and withhold for the use of the county general fund an additional one-half of one percent of all amount in excess of three thousand dollars remitted each month.</i>
LB532	Kolterman		Nebraska Retirement Systems	02/13/2017	In Committee 01/20/2017	Change provisions relating to a military service credit for certain retirement plans as prescribed <i>LB532, for military service rendered on or after January 1, 2018, requires that county employees, school employees, State Patrol Officers and judges who are reemployed pursuant to 38 U.S.C. 4301 be treated as not having incurred a break in service by reason of their period of military service. Such service will be credited for purposes of determining the nonforfeitability of the member's accrued benefits and the accrual of benefits under the plan. LB532 makes the county employing the member liable for funding any obligation of the plan to provide the benefits based upon such period of service. The state will be liable to fund the obligation of the plan for judges and State Patrol Officers. The employer shall be liable for funding any obligations for the school employee.</i>
LB539	Krist		Executive Board	02/08/2017	General File 02/14/2017	Change investigation and report provisions relating to the Office of Inspector General of the Nebraska Correctional System <i>LB539 requires the department of corrections to report all cases of death or serious injury of an employee when acting in their capacity as an employee as soon as reasonably possible. The department must also report all cases where an employ is hospitalized in response to an injury received when acting in their capacity as an employee. LB539 prohibits the Inspector General from interviewing any person who has already been interviewed by a law enforcement agency in connection with a relevant ongoing investigation of a law enforcement agency without consent of the prosecuting attorney.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB544	Watermeier	Monitor	Judiciary	02/15/2017	In Committee 01/20/2017	Provide for elimination of the office of clerk of the district court as prescribed <i>LB544 allows, in any county that does not have an elected clerk of the district court, for the duties of the clerk of the district court to be performed pursuant to an agreement between the State Court Administrator and the county board. LB544 also allows for a county to vote to eliminate the office of the clerk of the district court when a vacancy occurs.</i>
LB545	Watermeier		Appropriations		In Committee 01/20/2017	Provide for fund transfers relating to the Property Tax Credit Cash Fund <i>LB545 requires the State Treasurer to transfer from the General Fund to the Property Tax Credit Cash Fund: Four hundred twenty-four million dollars for tax year 2018; Six hundred twenty-four million dollars for tax year 2019; Eight hundred twenty-four million dollars for tax year 2020.</i>
LB555	Smith		Revenue	03/01/2017	In Committee 01/20/2017	Change and eliminate provisions of the Tax Equalization and Review Commission Act <i>LB555 allows commissioners who live within fifty miles of the state office building to be reimbursed for mileage for actual round trip travel. Commissioners who live more than fifty miles may be reimbursed for mileage for one round trip per week and shall be paid a per diem at the federal per diem rate for each day worked at the state office building. LB555 also makes the filing fee for each appeal or petition filed with the commission fifty dollars if the taxable value of each parcel involved in the appeal is one million dollars or less, and a fee of one hundred dollars if the taxable value of each parcel involved is more than one million dollars.</i>
LB556	Halloran		Judiciary	03/08/2017	In Committee 01/20/2017	Change provisions relating to firearms and create the offenses of use of a facsimile or nonfunctioning firearm to commit a felony and possession of a firearm by a prohibited juvenile offender <i>LB556 creates the offense of use of a facsimile firearm or nonfunctioning firearm to commit a felony. This offense is a Class IIA felony, and shall be treated as separate and distinct from the felony being committed.</i> <i>LB556 also creates the offense of possession of a firearm by a prohibited juvenile offender. This offense applies to those under the age of 25, who have previously been adjudged as a juvenile who commit certain specified offenses. It is a Class III felony.</i>
LB559	Schumacher		Banking, Commerce and Insurance	03/07/2017	In Committee 01/20/2017	Prohibit the collection of interchange fees on specified taxes and fees relating to electronic payment transactions <i>LB559 excludes the from the amount of an interchange fee charged for an electronic payment transaction the amount of any tax or fee imposed by state or local government that is calculated as a percentage of an electronic payment transaction amount and listed separately on the payment invoice. This act will apply to electronic payment transactions processed on or after October 1, 2017.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB560	Schumacher		Judiciary	03/22/2017	In Committee 01/20/2017	<p>Change restrictive housing and inmate discipline provisions</p> <p><i>LB560 changes the status of solitary confinement to mean confinement in an isolated cell, alone or with a cell mate, for an average of twenty-two or more hours per day, with limited human interaction or constructive activity, and in an environments that ensures maximum control. LB560 allows inmates to have been confined in restrictive housing for more than nineteen days to seek review of the decision to place them in restrictive housing. The review shall be conducted by the district court of the county in which the correctional facility is located.</i></p> <p><i>LB560 requires that any inmate placed in restrictive housing be done so in the least restrictive manner consistent with maintaining order in the facility and pursuant to the rules and regulations. LB560 also prohibits any member of a vulnerable population from being placed in restrictive housing.</i></p>
LB562	McCollister		Judiciary	03/17/2017	In Committee 01/20/2017	<p>Require a monthly report from the Department of Correctional Services as prescribed</p> <p><i>LB562 requires the Department of Correctional Services to prepare a monthly report including the number of committed offenders at or past their parole eligibility dates who have not received appropriate programming, the number and type of vacant position for behavioral health staff, and the number of inmates who have achieved community-custody status but are not in community-custody facilities.</i></p>
LB563	McCollister		Revenue	02/22/2017	In Committee 01/20/2017	<p>Impose sales tax on certain services and eliminate certain sales tax exemptions</p> <p><i>LB563 eliminates sales and use tax exemptions for newspapers, laundromats, telefloral deliveries, the Nebraska Lottery, maintenance and repair services, personal care services, lawn care, gardening, storage and moving services, and taxi, limousine and other transportation services. LB563 also includes new provisions under the definition for gross receipts for receiving a service.</i></p>
LB567	Bolz	Support	Government, Military and Veterans Affairs	02/22/2017	In Committee 01/20/2017	<p>Change funding for county public assistance offices</p> <p><i>LB567 requires the state to pay the cost for the office and service facilities used for the administration of the public assistance programs.</i></p>
LB570	Friesen		Revenue	03/09/2017	In Committee 01/20/2017	<p>Provide a property tax exemption for all tangible personal property</p> <p><i>LB570 exempts all tangible personal property from property tax beginning January 1, 2019.</i></p>
LB576	Brewer		Revenue	03/09/2017	In Committee 01/20/2017	<p>Limit increases in property tax bills</p> <p><i>LB576 prohibits an owner's property tax bill for 2017 and 2018 from exceeding their property tax bill for 2016.</i></p>
LB577	Hilgers		Judiciary	03/03/2017	In Committee 01/20/2017	<p>Create offense of assault on a peace officer, firefighter, or out-of-hospital emergency care provider by ambush</p> <p><i>A person commits the offense of assault on a peace officer, firefighter, or out-of-hospital emergency care provider by ambush if they knowingly and intentionally attack such a person while they are engaged in the performance of their official duties and the attacker either attacks without warning from a concealed position or approaches an unsuspecting officer and intentionally or knowingly causes serious bodily injury. This offense is a Class 1B Felony and required a minimum sentence of forty years and possibly a fine up to one hundred thousand dollars.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB578	McDonnell		Health and Human Services	03/15/2017	In Committee 01/20/2017	<p>Change medicaid reimbursement provisions relating to ground emergency medical transportation</p> <p><i>LB578 allows eligible providers to receive, in addition to the rate of payment, supplemental Medicaid reimbursement pursuant to a specified pay schedule. Participation in the supplemental reimbursement program by an eligible provider is voluntary. If a government entity elects to seek supplemental reimbursement on behalf of an eligible providers, they must clarify that the claimed expenditures for are eligible for federal financial participation, provide evidence supporting the certification as specified by the division, submit data as specified to determine the appropriate amounts of qualifying expenditures, and maintain any specified records.</i></p> <p><i>LB578 also requires the department to design and implement an intergovernmental transfer program relating to Medicaid managed ground emergency medical transportation services to be implemented on the date federal approval is obtained. Participation in intergovernmental transfers is voluntary on the party of the transferring entity. The intergovernmental transfer program shall also be implemented without any additional expenditure from the General Fund. Each eligible provider or governmental entity must agree to reimburse the department for any costs associated with implementing such a program.</i></p>
LB581	McDonnell		Government, Military and Veterans Affairs		In Committee 01/20/2017	<p>Require lobbyists to disclose conflicts of interest to principals and provide for cancellation of contracts</p> <p><i>LB581 requires every lobbyist to present a disclosure statement to their principle including: the name, permanent residence address, and office address of the lobbyist; a description of the business activity of the lobbyist; the name of every other principle represented by such lobbyists, the nature of the business of such principle, the amounts or sums given or to be given to the lobbyists as compensation and an identification of such matters on which the lobbyists expects to lobby; a description of any business association of the lobbyist; any information which the lobbyist possess that might constitute a conflict of interest; and a notice that a principle has the right to cancel the contract by mailing a written notice before midnight of the third business day after receipt. Any person violating these requirements will be guilty of a Class III misdemeanor.</i></p> <p><i>LB581 also provides principles with the right to cancel a lobbying contract until midnight of the third business day after the lobbyist has presented a disclosure statement.</i></p>
LB584	Friesen		Transportation and Telecommunications	01/30/2017	General File 02/10/2017	<p>Change provisions relating to mowing of weeds</p> <p><i>LB584 prohibits those employed by or under contract with a county or township from mowing roadside ditches before July 1 of any year.</i></p>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB585	Linehan		Judiciary	03/17/2017	In Committee 01/20/2017	Change provisions relating to dangerous dogs, seizure of animals, and animal control authorities <i>LB585 requires the county attorney where an animal is seized to file an application for a hearing to determine the disposition and the cost for the care of the animal within thirty days after seizure. LB585 also changes the definition of dangerous dog. The requirement of animal control authority records has been eliminated, and a dog can be considered dangerous if it has conflicted serious bodily injury on a domestic animal without provocation that required medical treatment. LB585 prohibits any person knowingly, recklessly, or negligently owning, keeping, or harboring a dangerous dog without complying with specific laws.</i>
LB589	Crawford		Judiciary	03/02/2017	In Committee 01/20/2017	Provide for depositions of a child victim or child witness <i>LB589 prohibits depositions of a child being taken when the child has undergone a video-recorded forensic interview at a child advocacy center, except by agreement of the parties or by approval of the court. If a request to depose a child is granted, the court must make any protective order that justice requires to protect the child from emotional harm, distress, harassment, undue influence, or intimidation.</i>
LB591	Crawford		Urban Affairs	02/07/2017	In Committee 01/20/2017	Provide for enforcement of building codes under the Contractor Registration Act <i>LB591 requires each contractor who files an application with the department to include, if applicable, any previous revocation from the registry for failure to comply with applicable state and local business codes.</i> <i>LB591 allows the commissioner to issue a notice of revocation to a contractor when an investigation reveals that the contractor has willfully failed to take corrective action to bring one or more buildings into compliance with applicable building codes. The registration may temporarily be reinstated pending a hearing on the revocation if the contractor can make a showing of corrective action. In order for the commissioner to initiate an investigation, there must be a written complaint that includes signed substantiation of a potential code violation from an inspector, code official, State Energy Office, or a certified building official and the complainant must have taken reasonable steps to obtain compliance with building codes through local code officials. If the commissioner decides to issue a citation for failure to comply, they must provide the contract with a proposed timeframe for taking corrective action.</i>
LB597	Groene		Urban Affairs	02/21/2017	In Committee 01/20/2017	Provide for application process through county assessor and Tax Commissioner prior to using tax-increment financing <i>LB597 requires any governing body that seeks to use tax-increment financing to submit an application to the county assessor. This application must include the information reasonably required to determine the eligibility of the governing body, the redevelopment plan, and the parcel or parcels for such tax-increment financing. This application will be forward by the county assessor to the Tax Commissioner if the county assessor determines that the certain requirements of the application have been met. The Tax Commissioner will then review the application to ensure all provision of the Constitution of Nebraska, the Community Development Law, and tax-increment financing have been satisfied.</i>
LB599	Groene		Revenue	03/09/2017	In Committee 01/20/2017	Exempt certain improvements on land from taxes as prescribed <i>LB599 exempts from personal property tax any improvements on land of infrastructure, redevelopment, or new construction intended for business or housing purposes until occupied, sold, or leased.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB602	Erdman		Revenue	02/24/2017	In Committee 01/20/2017	Change and eliminate provisions relating to the valuation of agricultural land <i>LB602 states that the actual value of agricultural and horticultural land for purposes of taxation means the capitalized net earning capacity that the land produced without regard to any value that the land might have for other purposes or uses.</i> <i>LB602 requires that agricultural and horticultural land used primarily for those purposes will constitute a separate and distinct class of property for purposes of property taxation. LB600 prohibits the following from being classified as agricultural or horticultural land: farm home sites and land used for grazing of animals kept primarily for personal use. LB602 requires that any agricultural and horticultural land that qualifies for valuation using the capitalized net income approach be valued upon the basis of the agricultural income. Any agricultural or horticultural land assessment values will be based upon an eight-year Olympic average of crop income derived from the reported income from each county's productivity information chart.</i>
LB607	Kintner		Revenue		In Committee 01/20/2017	Provide a homestead exemption for certain first responders <i>LB607 provides homestead exemptions for first responders who are drawing compensation from the state or a political subdivision or is receiving workers' compensation benefits because of a one hundred percent disability received in the line of duty.</i>
LB613	Wayne		Revenue		In Committee 01/20/2017	Change provisions relating to property tax exemptions under the Nebraska Housing Agency Act <i>LB613 requires any housing agency or controlled affiliate provide notice of a property tax exemption to the county assessor on or before December 31 of the year preceding the year for which the exemption is sought.</i>
LB619	Wayne		Government, Military and Veterans Affairs		In Committee 01/20/2017	Permit certain counties to conduct elections by mail <i>LB619 allows the election commissioner to apply to the Secretary of State to mail ballots for elections.</i>
LB623	Wishart		Judiciary	03/03/2017	In Committee 01/20/2017	Change and eliminate provisions and penalties relating to assault on an officer, certain employees, or a health care professional <i>LB623 eliminates provisions that specify assaults on officials and replaces them with the term "public officer."</i>
LB624	Wishart		Government, Military and Veterans Affairs	02/03/2017	In Committee 01/20/2017	Provide procedure to withhold from the public law enforcement officers' residential addresses in county records <i>LB624 requires the county assessor and register of deeds to withhold from the public the residential address of a law enforcement officers who applies and pays a \$25 fee.</i>
LB625	Larson	Monitor	Urban Affairs	02/14/2017	In Committee 01/20/2017	Change the Property Assessed Clean Energy Act <i>LB625 allows a municipality to create a clean energy assessment district anywhere within the municipality, except a district may not be created that includes any area within the corporate boundaries of any city or village located in whole or in part within such county.</i>

Kissel E&S Associates
105th Legislature, 1st Regular Session
LC

Document	Senator	Position	Committee	Hearing Date	Status	Description
LB628	Larson		Government, Military and Veterans Affairs	02/10/2017	In Committee 01/20/2017	Prohibit ordinances and resolutions prohibiting certain short-term rentals of residential property <i>LB628 prohibits cities, villages, and counties from adopting or enforcing an ordinance or resolutions that prohibits the use of property as a short-term rental. Short-term rental means a residential property that is rented wholly or partly for a fee for a period not longer than thirty days. However, LB628 allows the regulations of short-term rentals by cities, villages, and counties.</i>
LB656	Baker		Judiciary	03/09/2017	In Committee 01/20/2017	Provide for claims against the state by persons wrongfully incarcerated <i>LB656 makes a successful claimant one who had a claim against a political subdivision arising from their wrongful incarceration or conviction, which claim was precluded by the provisions of the State Tort Claims Act or the Political Subdivisions Tort Claims Act and who obtained a final judgment against such political subdivision from a federal court under 42 U.S.C. 1983 for a violation of their rights protected by the Constitution and arising out of such wrongful incarceration. A successful claimant and the political subdivision against which the claimant obtained final judgment may file a claim with the State Claims Board for full payment of such judgment, or any part of such judgment, which exceeds the available financial resources and revenue of the political subdivision required for its ordinary purpose.</i>
LB658	Wayne	Monitor	Judiciary	03/09/2017	In Committee 01/20/2017	Provide for expert witness appointment as prescribed in certain juvenile proceedings <i>LB658 grants the right to one appointed expert witness during any adjudication or disposition proceeding to the parent, guardian, or custodian of the juvenile who is the subject of the proceeding. If the parent, guardian, or custodian is indigent, the reasonable fees and expenses of such expert witness will be paid by the county.</i>
LB663	Kuehn		Government, Military and Veterans Affairs		In Committee 01/20/2017	Require a copy of a lobbying contract for lobbyist registration as prescribed <i>LB663 requires a copy of the lobbying contract for lobbyist registration if the principle receives public funds including taxes, fees, and grants.</i>
LB664	Kuehn		Government, Military and Veterans Affairs		In Committee 01/20/2017	Prohibit a political subdivision from using taxes or fees to employ a lobbyist <i>LB664 prohibits a political subdivision from using revenue from any tax or fee to employ or contract with a lobbyist.</i>
LB665	Kuehn		Government, Military and Veterans Affairs		In Committee 01/20/2017	Require a statement of activity regarding certain lobbying activity <i>LB665 requires every lobbyist who is registered or required to be registered file with the Clerk of the Legislature a statement activity within 24 hours after the lobbyist's initial contact with an official in the executive branch of an official in the legislative branch regarding a legislative bill. The statement must indicate the legislative bill number, the name of the lobbyist, and the principle for whom the contact was made.</i>



Pete Ricketts
Governor



STATE OF NEBRASKA

NEBRASKA COMMISSION ON LAW ENFORCEMENT AND CRIMINAL JUSTICE

(Nebraska Crime Commission)

Darrell Fisher, Executive Director

301 Centennial Mall South

P.O. Box 94946

Lincoln, Nebraska 68509-4946

Phone (402) 471-2194

FAX (402) 471-2837

Memo

To: Juvenile Services Aid Subgrantees

From: Darrell Fisher, Executive Director

Cc: Lisa Stamm Chief of Grants Division, Vanessa Humaran Juvenile Services Grants Administrator

Date: February 15, 2017

Re: Budget Reduction

Governor Pete Ricketts has recommended budget reductions for FY2016/2017 to state agencies which is being reviewed by the Legislature. State appropriated grant programs at the Nebraska Crime Commission may be affected by any subsequent action taken by the Legislature.

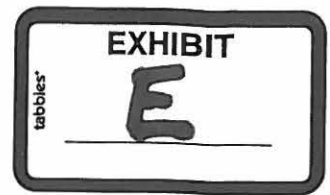
In anticipation of action, effective immediately: All funds that have not been disbursed by the Nebraska Crime Commission to 2013, 2014, and 2015 Juvenile Services are hereby retained by the Nebraska Crime Commission. FY 2016 Juvenile Services funds will receive a cut of approximately 45%. All subgrantees will be notified individually by Vanessa Humaran regarding amounts that will be de-obligated.

This is a challenging time in the economy for government agencies. It is a reminder that timely submission of reports are vital when managing State grant funds that can dissipate when State general funds experience budget reductions. Moving forward, project period extensions will not be granted, until notified otherwise by the Nebraska Crime Commission. Please hold all questions until you have been individually notified by Vanessa Humaran.

Respectfully,

Darrell Fisher
Executive Director

Nebraska Commission on Law Enforcement and Criminal Justice



KISSEL/E&S
ASSOCIATES

A Limited Liability Company Associated with Erickson and Sederstrom, P.C.

Joseph D. Kohout, *Partner*

Suite 400 Cornhusker Plaza / 301 S. 13th Street / Lincoln, NE 68508-2571
Telephone (402) 476-1188 / Facsimile (402) 476-6167
Email jkohout@kisseles.com / Website www.kisseles.com

February 16, 2017

Mr. Kerry Eagan, Administrator
Lancaster County Board of Commissioners
555 S. 10th Street
Lincoln, NE 68508

RE: Client Update

Dear Mr. Eagan,

We are sending this letter pursuant to our contract with the Lancaster County Board of Commissioners. Please be advised that since the beginning of session, we have registered for the following client for the 2017 Session:

General Motors LLC (only for LB627)

Please feel free to contact me with any questions you might have.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph D. Kohout". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Joseph D. Kohout

C: Board of Commissioners
Mr. Gordon Kissel

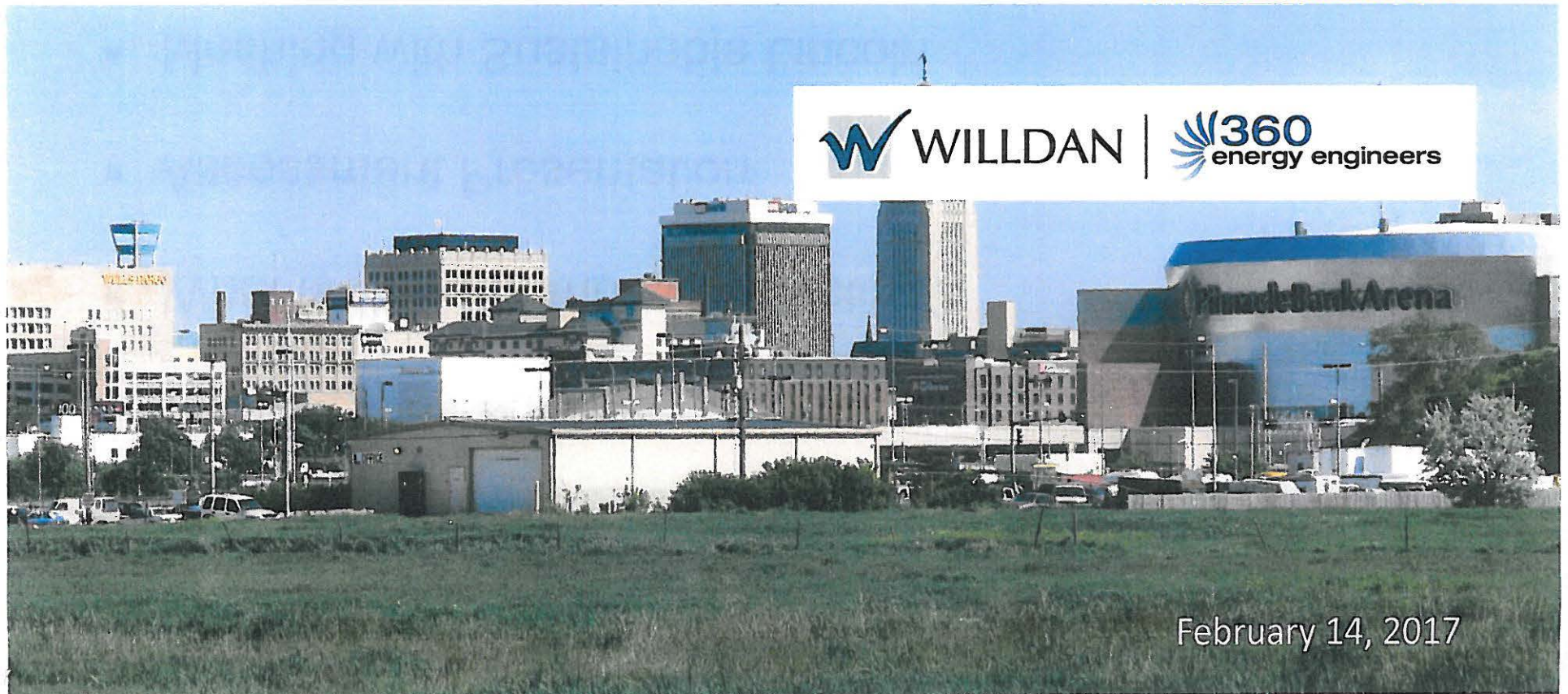
EXHIBIT

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Lancaster County, Nebraska

Preliminary Assessment Presentation



February 14, 2017

Agenda

- Introductions & Roles
- What is Performance Contracting?
- Assessment Presentation
- Meshing with Sustainable Lincoln
- Preliminary Financials
- Next Steps
- Questions & Answers

Challenges

- Capital Budget constraints
- Operating Budget restrictions
- Deferred maintenance
 - Aging Equipment
 - Equipment Failures
- Low utility rates are good, but energy reduction strategies may not cover the full cost of necessary improvements
- Energy costs on the rise
- Green expectations of voters
- Must continue delivery of services

Solutions

- Leverage utility & operational savings to accomplish necessary improvements at a lower per dollar cost
- Properly engineered systems will have a longer lifecycle and a lower lifecycle cost
- Programming funding for improvements virtually eliminates deferred maintenance
- Maintenance going forward is much simpler and less costly
- Budget is known
- Measurable and reportable sustainability achievements
- Uninterrupted delivery of services

Performance Contracting

Program Goals:

- Improve energy efficiency
- Reduce utility and operational costs
- Upgrade facilities and systems
- Support sustainability and greenhouse gas reduction goals
- Results are guaranteed

Next Phases:

- Investment grade audits (financial commitment)
- Develop financing plan
 - Stand-alone projects yield least value
 - Comprehensive projects yield best value
 - Municipal lease
 - Green bonds
 - CoP's

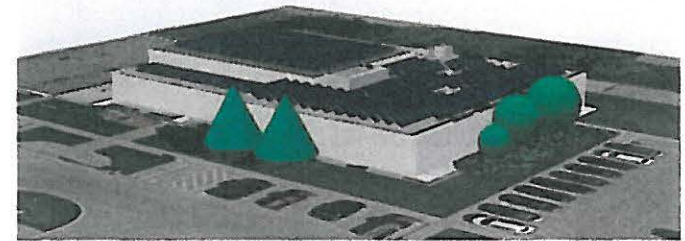
Execute projects and monitor savings

Preliminary Assessment

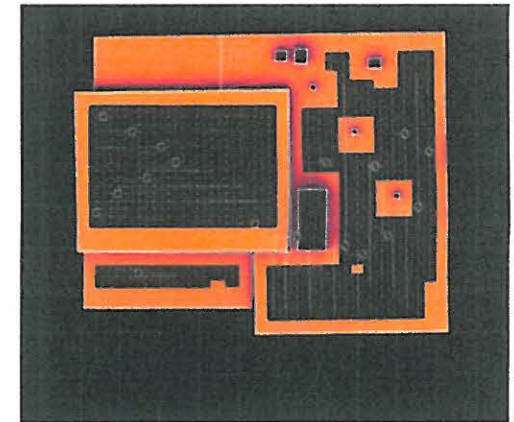
A decorative blue triangle is located in the bottom right corner of the slide, pointing towards the left. It has a gradient from a lighter blue on the left to a darker blue on the right.

County Extension Office

- LED Lighting replacement – exterior only
- Replace HVAC Equipment
- Retro-Commission Delta Building Controls
- Replace Roofing outer membrane and add insulation
- Replace Windows with double pane, low emissivity coating & double-thermally broken frames
- Seal building envelope
- Up to 42% Energy Savings
- Turn-key cost estimate - \$893,000
- Install 26.5kW Solar PV system for electrical savings of 31.35%



County Extension Office with Solar Panels

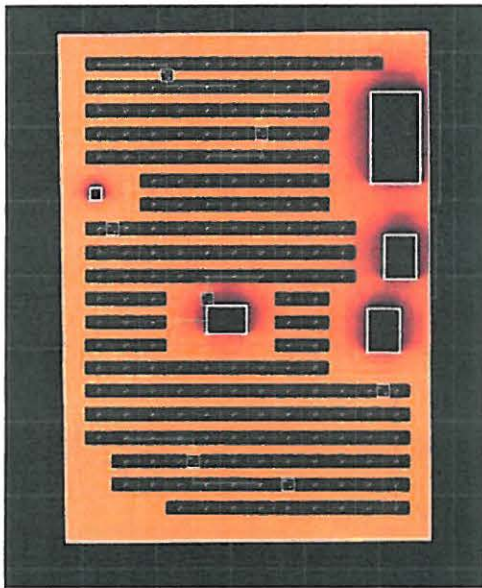


Irradiance Analysis with Solar Panels

County Engineering



Engineering Office with Solar Panels



Irradiance Analysis with Solar Panels

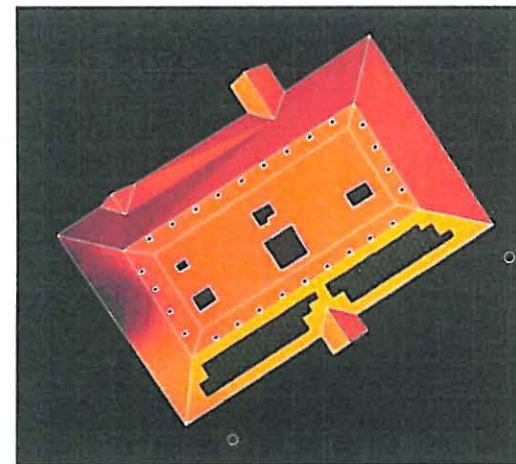
- LED Lighting replacement
- Replace HVAC Equipment
- Retro-Commission Delta Building Controls
- Seal building envelope
- Up to 42% Energy Savings
- Turn-key cost estimate \$686,000
- Install 54.6 kW Solar PV system for electrical savings of 39.2%

Motor Vehicle Office

- LED Lighting replacement – exterior only
- Replace HVAC Equipment
- Install new Building Controls
- Replace Roof
- Install properly sized gutters and downspouts
- Seal building envelope
- Up to 40% Energy Savings
- Turn-key cost estimate building improvements - \$1,201,000
- Install 26.5 kW Solar PV system for electrical savings of 31.35%

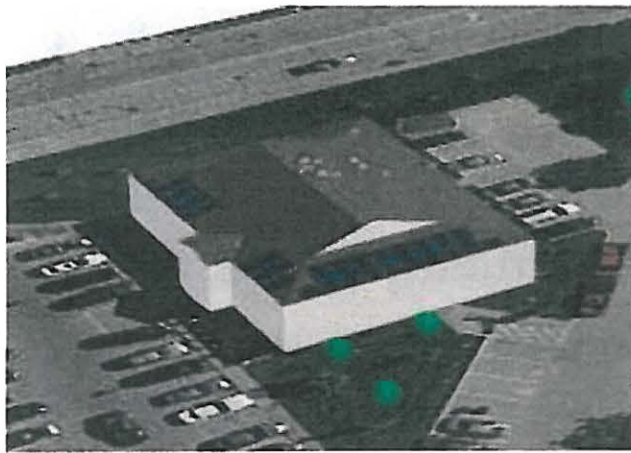


Motor Vehicle Office with Solar Panels

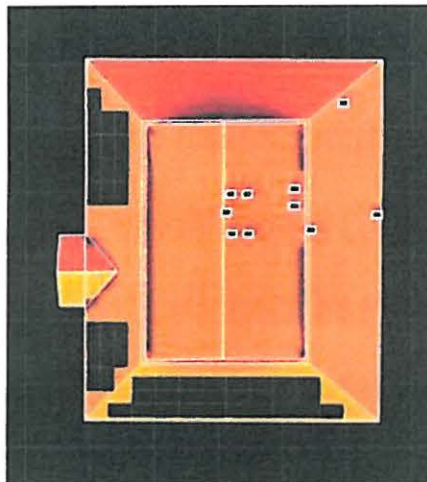


Motor Vehicle Office with Solar Panels

Drivers License Building



Drivers License Building with Solar Panels

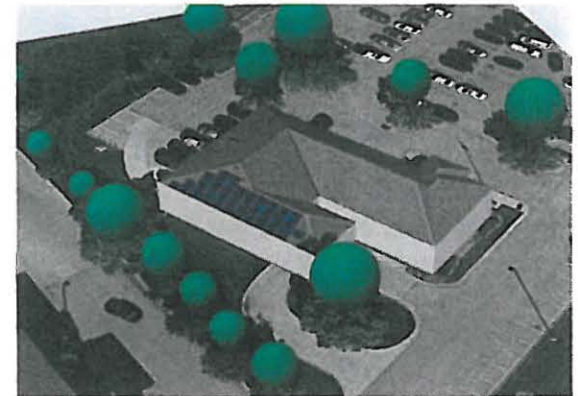


Irradiance with Solar Panels

- LED Lighting replacement – exterior only
- Replace HVAC Equipment
- Install new Building Controls
- Replace Roof
- Install properly sized gutters and downspouts
- Seal building envelope
- Up to 40% Energy Savings
- Turn-key cost estimate \$516,500
- Install 26.5 kW Solar PV system for electrical savings of 31.35%

Election Commission

- LED Lighting replacement – exterior only
- Replace HVAC Equipment
- Install new Building Controls
- Seal building envelope
- Add proper gutters and downspouts
- Up to 21% Energy Savings
- Turn-key cost estimate \$102,000
- Install 12.6kW Solar PV system for electrical savings of 21%



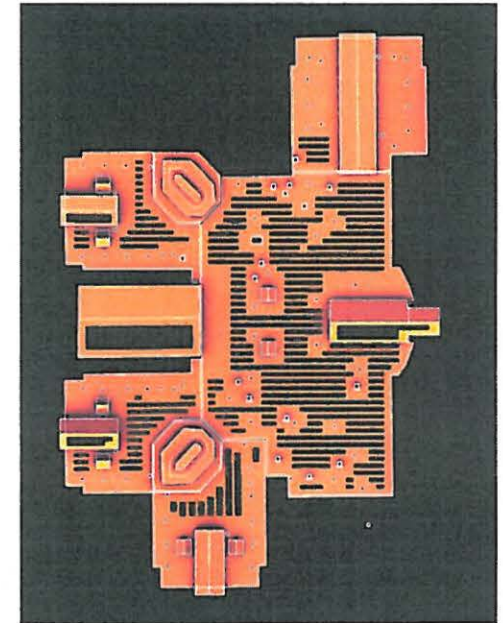
Election Office with Solar Panels



Irradiance Analysis with Solar Panels

Youth Services

- LED Lighting replacement – exterior only
- Replace HVAC Equipment
- Install new Building Controls
- Replace roofing outer membrane and add insulation
- Seal building envelope
- Polarized Air Filtration
- Laundry Ozone System
- Up to 42% Energy Savings
- Turn-key cost estimate \$2,574,000
- Install 39.9 kW Solar PV system for electrical savings of 5.7%



Irradiance Analysis with Solar Panels



Youth Services with Solar Panels

Meshing with Sustainable Lincoln

Increase Energy Efficiency in Buildings Building Systems Savings – Potential kW

Building Name	Address	Total Energy Savings
Motor Vehicles Building	615 N. 45th St.	40%
County Extension, Engineering & Shops	444 Cherry Creek Rd	42%
Election Commission	601 N. 46th St.	20%
Driver's testing	500 W. O St.	33%
Youth Services Center	1200 Radcliff St.	43%

Meshing with Sustainable Lincoln

Increase Use of Renewable Energy Solar Photovoltaic – Potential 360 kW

Building Name	Address	Array Size (kW)	Electrical Energy Savings
Motor Vehicles Building	615 N. 45th St.	26.47	31.35%
County Extension office	444 Cherry Creek Rd	8.4	15.59%
County Engineering Office	444 Cherry Creek Rd	54.6	39.21%
Election Commission	601 N. 46th St.	12.6	20.98%
Driver's testing	500 W. O St.	14.1	16.71%
Youth Services Center	1200 Radcliff St.	39.9	5.69%

Preliminary Financials



Financials: County Operated Facilities

- Est. Annual Budget - \$471,235
- Total Est. Cost - \$5,296,100
- 30 yr. Legislative Test - +\$651,439
- True Cost per dollar of construction - \$0.35 (20 yr.)
- By leveraging utility and operational savings and programming necessary improvements the County derives a 65% discount on the lifecycle cost of facility improvements.
- Facilities are improved
- Deferred Maintenance is reduced or eliminated
- Maintenance budget is known & dramatically reduced

Financials: Solar

County Solar – All Sites

Site/Size	Turn-key Cost Estimate	Max Possible Utility Rebate (one time)	SITC @ 30%	Net Project Cost	30 Yr. Avg. Annual Savings	Payback with SITC
County Extension :: Solar PV (8.4 kW)	\$33,000	\$3,990	\$9,900	\$19,110	\$1,727	17.5
County Engineering & Shop :: Solar PV (54.6 kW)	\$210,000	\$25,935	\$63,000	\$121,065	\$7,647	25.1
County Election Commission :: Solar PV (12.5 kW)	\$41,000	\$5,985	\$12,300	\$22,715	\$1,827	19.7
County Motor Vehicle :: Solar PV (26.5 kW)	\$86,000	\$11,875	\$25,800	\$48,325	\$7,668	10.3
County Driver's Testing :: Solar PV (14 kW)	\$46,000	\$6,698	\$13,800	\$25,502	\$2,076	19.5
Youth Services :: Solar PV (40 kW)	\$210,000	\$18,953	\$63,000	\$128,047	\$6,529	31.1
Totals	\$626,000	\$261,236	\$187,800	\$364,764	\$27,474	13.3

Best Solar Opportunities

1. Motor Vehicle Building

10.3 year simple payback – Highly visible with over 500,000 visitors per year

2. County Extension

17.5 year simple payback –

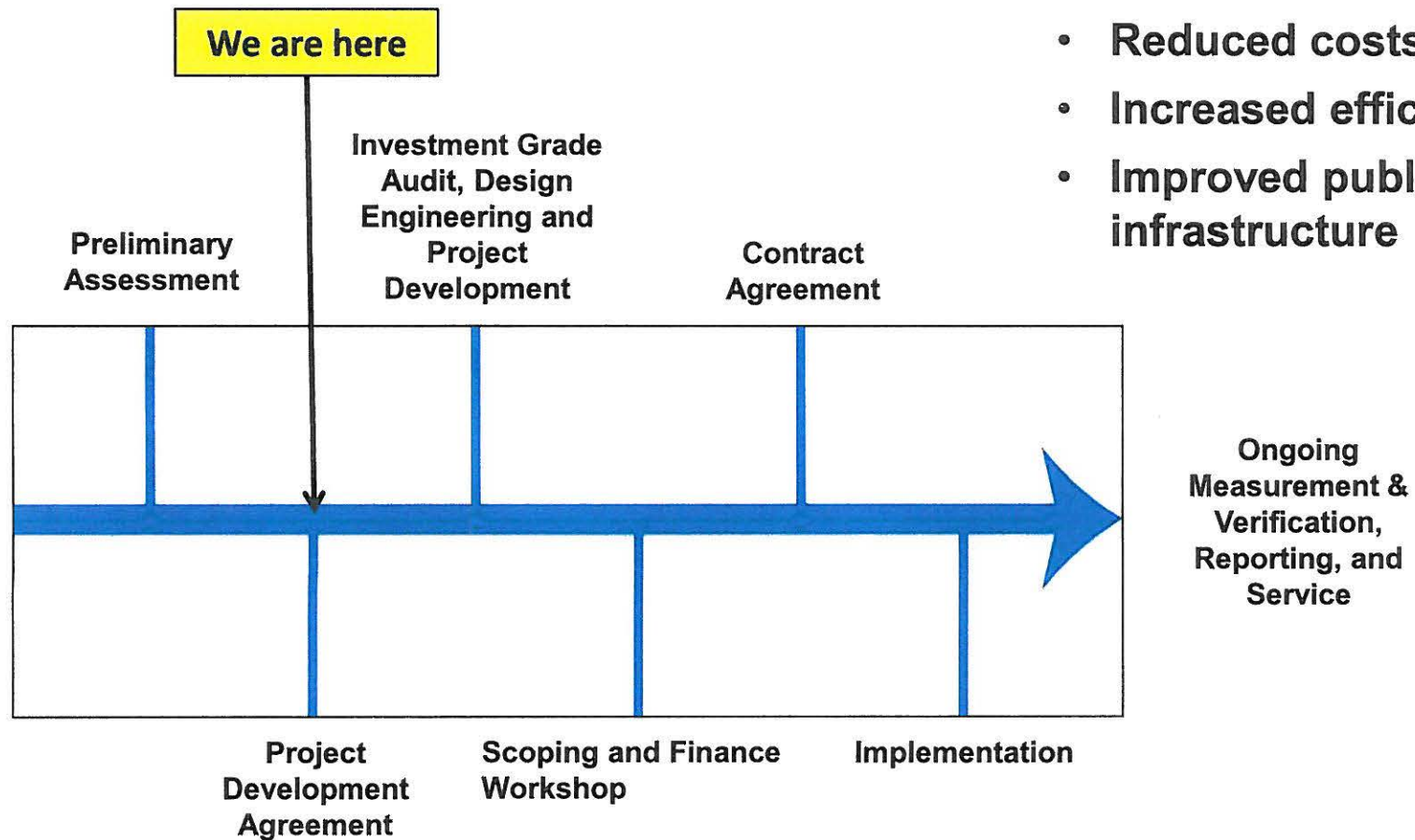
3. County Drivers Testing

19.5 year simple payback –
Highly visible

4. County Election Commission

19.7 year simple payback – Highly visible - Across parking lot from Motor Vehicles

The Process



Results:

- Reduced costs
- Increased efficiency
- Improved public infrastructure

Thank You!

Greg Modlish

(785) 813-6851

gmodlish@Willdan.com

Lancaster County, Nebraska



PRELIMINARY ENGINEERING AUDIT



TABLE OF CONTENTS

Executive Summary.....	1
Facility Assessments	3
Facility Improvement Opportunities	22
Utility Cost and Energy Consumption.....	41
Financial Overview.....	45
Technical Approach	47
Company Background	53
Next Steps.....	54
Design Services Agreement.....	55

Executive Summary

Through a joint procurement process facilitated by the City of Lincoln’s purchasing department, the City of Lincoln, NE, Lancaster County, NE and the Lincoln-Lancaster Public Building Commission (collectively called “Client”) selected 360 Energy Engineers, a Willdan Energy Solutions company, to perform a Preliminary Engineering Audit at the following facilities:

County Owned & Operated Facilities

- County Extension (444 Cherrycreek Rd, Lincoln, NE 68528)
- Engineering office and shops (444 Cherrycreek Rd, Lincoln, NE 68528)
- Election Commission Office (601 N 46th St, Lincoln, NE 68503)
- Motor Vehicle Office (625 N 46th St, Lincoln, NE 68503)
- Driver’s License Testing Office (500 W O St, Lincoln, NE 68528)
- Youth Services (1200 Radcliff St, Lincoln, NE 68512)

PBC Operated Facilities

- City-County Property Management (“K” Street Plant - 440 S 8th St Lincoln, NE 68508)
- Downtown Senior Services (1005 O St #300, Lincoln, NE 68508)
- Health Department (3140 N St, Lincoln, NE 68510)
- Northeast Senior Center (6310 Platte Ave, Lincoln, NE 68507)

The Information Services building at 233 S 10th St. was also included in the original scope of the Audit but was removed due to the City’s imminent divestiture of the building.

The Preliminary Engineering Audit conducted by 360 Energy Engineers identified a number of opportunities for County to upgrade its facilities as they look at proactively addressing aging and failing building envelope infrastructure, ineffective and inefficient HVAC and building controls systems, energy wasting lighting systems and other aging infrastructure. The County is at a significant decision point: it can decide to continue to defer addressing the problematic systems and infrastructure or look at the facilities on a clean slate and plan these needed improvements in a proactive manner that will result in more comfortable, reliable and cost effective systems and infrastructure for many years to come.

During this study, our engineering team focused heavily on the aging envelope and HVAC systems at the various facilities as well as lighting and renewable energy, namely solar photovoltaic systems. Aging envelope and HVAC systems have a direct and adverse effect on the comfort and operation of facilities. Our approach is to look at long-term solutions that make the most sense for our Client’s best interest and not short-term fixes that will not resolve the systemic issues facing the facilities.



Engineering Audit Goal:

To determine priorities and possible solutions that resolve comfort issues at the various facilities and replace antiquated and ineffective envelope, HVAC, lighting, and controls infrastructure. Additionally, provide Energy Star ratings and the ability to track carbon footprint reductions.

Estimates:

The costs and savings outlined in this report are based on engineers’ estimates. Final figures will be provided based on actual contractor bids at the conclusion of the Investment Grade Audit and Design Services.

Next Step:

The next engineering step for the County is to move forward with the Investment Grade Engineering Audit. The financial commitment for this design service is 2.5% of the estimated cost of the agreed upon scope of work.

The goal is to solve the imminent issues with these problematic systems and provide a funding vehicle that allows the County to implement these needed improvements in a fiscally responsible manner that fits into the overall plan for future use and operation of the facilities. Our engineering team has weighed the cost and benefit of multiple options and paths the County could potentially take in addressing systems replacements and improvements in their facilities.

Several facility improvement measures (FIM) were identified by 360 Energy Engineers' Professional Engineers (PEs) and Certified Energy Managers (CEMs) as they conducted this building infrastructure needs assessment. The information in this Preliminary Audit report is intended to provide realistic projections of estimated construction cost, energy and maintenance savings potential, and detailed descriptions of potential upgrades to building systems as a resource to aid the County in collaborative decision making with our team on the systems and upgrades that provide the greatest value and represent the ideal long-term solutions.

The next engineering step is to perform an Investment Grade Audit (IGA). During the IGA, our team will complete design engineering of the systems and facility improvements that fit the needs of your facilities, along with any additional facility improvements you request. We will also provide in-depth details of the facility improvement opportunities, final pricing, and their annual energy and maintenance savings impact. To facilitate this process and to obtain the most accurate pricing and best value, 360 will produce complete equipment specifications, bid packages including construction drawings, and manage the competitive bid process.

During the Investment Grade Audit and throughout our work together, 360 Energy Engineers will provide the County a world-class experience, expertise and value.

- Our team of engineers will complete 100% design of the systems being upgraded, leaving nothing about your project to chance.
- 360 Energy Engineers is an independent firm with no bias or agenda to utilize certain equipment or systems. Our goal is to design solutions that optimize the performance of and deliver the best value for your facilities.
- Decades of experience and a flexible approach mean the project developed for your facilities will yield the maximum benefits to your budget and buildings.
- Through efficient operation and an independent structure, 360 Energy Engineers delivers higher quality at a lower cost than any competitor in the industry.

We hope to continue to serve the City of Lincoln, Lancaster County, and the PBC as you collectively move forward with addressing your facilities and look forward to the opportunity to prove ourselves as a valuable partner in helping you address needed building improvements.

Sincerely,



Greg Modlish

Municipal Business Leader

Midwest

Facility Assessments

County Engineering & Extension Campus

General

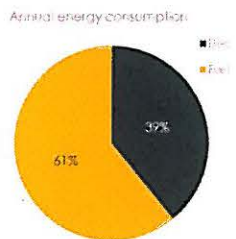
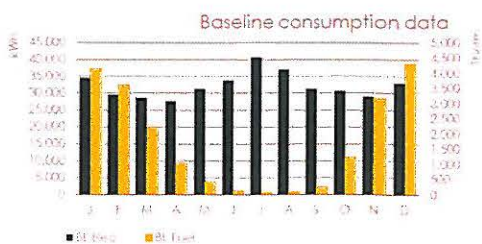
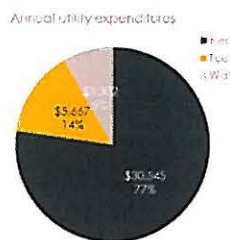
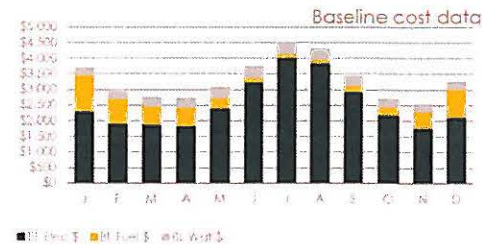
444 Cherry Creek Rd., Lincoln, NE 68528

The Lancaster County-University of Nebraska Extension Office is an approximately 14,500 square foot facility built in 1984-1985. A storage addition was installed to the north/rear of the facility. The building is comprised of offices, auditorium and other typical office and conference spaces.

The Lancaster County Engineering Office is an approximately 7,700 square foot facility built in 1995-1996 and attached to the west of the Extension Office. The building is comprised of offices and other typical office and conference spaces.

The Lancaster County Shops and Material Yard is an approximately 48,400 square foot of three facilities. The main shop facility was built in 1986 along with the Extension Office.

Utility Cost and Energy Consumption



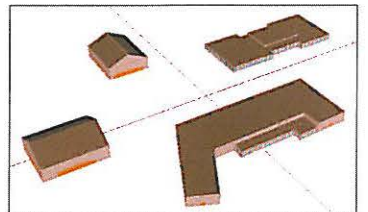
Extension Office



Engineering office



County shop



eQuest energy model



Bubbling on roof

Building Envelope

The Extension Office building envelope was observed to be comprised of the original building construction. The exterior walls consist of pre-cast insulated concrete panels for the lower portion of the exterior wall and metal wall panels on the upper portion. The interior assembly consists of framed metal stud walls with 6" blanket insulation and drywall interior finish. The floor slab is 4" thick slab on grade with rigid 2" foundation insulation. The roof consists of a steel decking over open web steel joists. Roofing layers are tapered insulation and adhered (no ballast) modified bitumen cap sheet, which is



Single-pane window unit



Rubber roofing membrane



Deteriorating window seals

original to the facility and 30 years old. Windows are single-paned with aluminum frame, which appears to be thermally un-broken.

The Engineering Office building envelope was observed to be comprised of the original building construction, with many similarities to the Extension Office. The exterior walls consist of pre-cast insulated concrete panels for the lower portion of the exterior wall and metal wall panels on the upper portion. The interior assembly consists of framed metal stud walls with 6" blanket insulation and drywall interior finish. The floor slab is 4" thick slab on grade with rigid 2" foundation insulation. The roof consists of a steel decking over open web steel joists. Roofing layers are tapered insulation and rock-ballasted EPDM, which is original to the facility and 30 years old. Windows are double-paned with aluminum frame, which is an improvement over the windows at the Extension Office. It was observed that the window connection to the building structure as well as the window glass to frame connection seals have deteriorated, potentially compromising the insulative properties of the window system.

The Engineering Shop building envelope was observed to be comprised of the original building construction. The exterior walls consist of pre-cast insulated concrete panels for the lower portion of the exterior wall and metal wall panels on the upper portion. The interior assembly consists of framed metal stud walls with 6" blanket insulation and drywall interior finish. The floor slab is 4" thick slab on grade with rigid 2" foundation insulation. The roof is a sloped standing seam metal over all facilities and was observed to be in good condition. Blanket insulation is attached to the underside of the metal roof. Windows are single-paned with aluminum frame, which appears to be thermally un-broken.

Summary of envelope needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing roofing system at the Extension Office has operated beyond its expected service life and in need of replacement. Insulation properties are not determined at this time but may be short of modern energy code required R-30 continuous.	Replace existing Extension Office roofing outer membrane and add insulation as necessary to meet modern energy efficiency code. Core sample will determine current insulation thickness.
Existing windows at the Extension Office and Shop building are poor insulators with a single pane of glass and non-thermally broken aluminum frame.	Replace all existing windows at the Extension Office and Shop buildings with double-paned, low-emissivity coating and double-thermally broken frames.
All existing building construction has areas of substantial air infiltration resulting from worn door hardware, deteriorating window joint seal caulking and loose structural connections.	Determine areas of significant and correctable air leakage and infiltration and replace hardware and sealants and add new sealant to areas without.

Mechanical Systems

The primary source of heating and cooling for the Extension Office is classified as a variable air volume terminal, constant volume packaged direct-expansion, hot water natural gas heating. Two rooftop air handlers service the facility, split between the office area and the auditorium/lobby area. The rooftop air handlers consist of a fresh air, economizer and filter section, a direct expansion cooling coil, a natural gas heating furnace, supply air fan and compressor and air-cooled condenser section. These rooftop air handlers are original 1985 putting them into their 31st service year, well beyond the median service life of 15 years (ASHRAE Owing and Operating Costs). A modern rooftop unit has a much higher efficiency in cooling compared to these existing units. The main rooftop units serve cooled air (~55°F) to the individual variable air volume terminals and reheat coils for space temperature control of each zone. Heating at these reheat terminals is achieved with a hydronic heating water system, although, that was not the original design. On the original building plans, the VAV boxes had electric reheat coils, which was common at the time of construction due to fuel prices. In 1993, the VAV boxes and reheat terminals were replaced with a new VAV box with hot water reheat coil and a new hot water piping system, central gas atmospheric heating water boiler, circulating pump and all accessories were installed. This puts the VAV boxes, coils, and hot water boiler at 23 years of operation. The boxes have a median service life of 20 years and the boiler (flexible water tube) a 25-year median service life. All of this equipment has operated to its median service life. In addition, the boiler has begun to have failures and require extensive maintenance to continue operation. In addition, a dedicated split heat pump was installed for two dedicated conference space and shipping/receiving. These units are well beyond their expected service life of 15 years.

The primary source of heating and cooling for the Engineering Office building is classified as a variable air volume terminal, variable volume split direct-expansion, hot water natural gas heating. One rooftop air handler services the entire building. The rooftop air handler consists of a fresh air economizer and filter section, a direct expansion cooling coil, a natural gas heating furnace, and supply air fan. The direct-expansion cooling coil is connected to a separate air-cooled condenser-compressor unit. This rooftop air handler and condenser-compressor unit was original in 1996, putting it into its 20th service year, well beyond the median service life of 15 years (ASHRAE Owing and Operating Costs). A modern rooftop unit has a much higher efficiency in cooling compared to these existing units. The main rooftop units serve cooled air (~55°F) to the individual variable air volume terminals and reheat coils for space temperature control of each zone. Heating at these reheat terminals is achieved with a hydronic heating water system. The heating water boiler was recently replaced with a new high efficiency condensing gas hot water boiler. This puts the VAV boxes and reheat coils at 20 years of operation. The boxes have a median service life of 20 years.

The Shop Buildings are primarily heated and exhausted only using gas infrared tube heaters, which are efficient in heating large high bay spaces. These spaces receive a cooling effect through large rooftop exhaust fans. The office spaces and breakrooms in the shop are heated and cooled through residential furnaces and air-conditioners. This equipment is newly installed and in good condition, except for the sign shop, which has an older split air-conditioner that should be replaced. The vehicle storage building is neither heated nor cooled. The Sheriff storage facility is heated and cooled with newer rooftop units.



1993 hot water boiler



1986 DX/Gas VAV rooftop unit



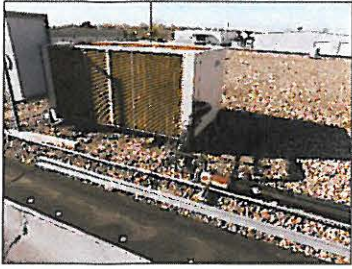
Stand-alone split heat pump



VAV box and HW piping



1996 rooftop air handler



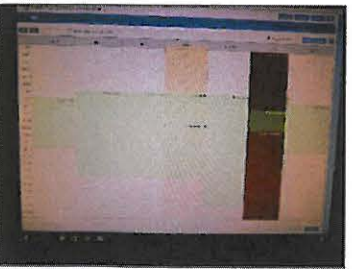
1996 condenser-compressor



Typical infrared heater



Rooftop unit graphic



Scheduling page



Engineering office graphic
Engineering office AHU

Summary of HVAC needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
All HVAC equipment at the Extension Office has operated beyond its median service life and is inefficient by today's standards.	Replace rooftop VAV units, VAV boxes and reheat coils, hot water boiler, pumps and conference room split heat pumps at the Extension Office.
The Engineering Office VAV rooftop unit and split compressor-condenser has operated beyond its median service life and is inefficient by today's standards.	Replace the rooftop VAV air handler and condenser-compressor with a packaged, high efficiency unit.
The existing split air-conditioner for the sign shop has operated beyond its expected service life	Replace split air-conditioner.

Building Automation Control System

Extension Office - A Delta building automation controls system was installed as part of a renovation for HVAC temperature control. The system includes all of the controllers and other hardware to operate the system and provide a front end of the building staff. This system is stand-alone for just the extension office. From the front-end graphics, it appears the two large VAV rooftops are actually being controlled as a constant volume unit with a bypass duct for pressure relief as the system is truly variable volume control of spaces. This is not the most efficient way to control these VAV systems as the fan runs at a constant speed and power draw. Instead of relieving supply duct static pressure by bypassing between the supply and return, a variable frequency drive should be used to lower fan speed in response to pressure, saving power draw. The VAV boxes take air in quantities needed for cooling or heating to satisfy their respective space temperature. It is likely that the sequences are more traditional, not lending themselves to the most optimal and efficient possible, requiring more hot water reheat energy. The control system includes scheduling and setup/setback capabilities. The systems are scheduled from 6:00am to 6:00pm most days with some exceptions. This allows the equipment to be turned off at night and the building temperatures to float, reducing energy consumption. Optimizing these systems will further reduce the

Engineering Office - A Delta building automation controls system was installed for HVAC temperature control. The system includes all of the controllers and other hardware to operate the system and provide a front end of the building staff. This system is stand-alone for just the engineering office. The VAV boxes take air in quantities needed for cooling or heating to satisfy their respective space temperature. It is likely that the sequences are more traditional and not optimized, requiring more hot water reheat energy. The control system includes scheduling and setup/setback capabilities. The systems are scheduled from 5:00am to 6:00pm most days with some exceptions. This allows the equipment to be turned off at night and the building temperatures to float, reducing energy consumption. Optimizing these systems will further reduce the energy consumption of the facility.

The offices and breakroom of the Shop building are operated on a Johnson Controls digital system with a front end. The front end does not include graphic floorplans. The main shop

heating only equipment, weed control and sign shop HVAC systems are operated on stand-alone thermostats. The Sheriff storage building rooftop units are operated on stand-alone thermostats. The Johnson Controls system is not very user friendly and rather overkill for the two systems it serves. It is recommended that the system be replaced with a Delta Control system extended from the engineering office. The thermostats controlling all other should also be added to this system to allow for scheduling

Summary of building automation control needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing control systems are modern, however, will need to be re-purposed and optimized for the new HVAC systems	Retro-commission existing control systems, replacing hardware only where existing equipment cannot control new equipment and sequences.
Existing Shop office and breakroom JCI control system is disconnected from Engineering office system and doesn't cover all HVAC equipment	Extend Delta system from Engineering Office to cover ALL HVAC equipment and systems in the shops.



Engineering Office AHU graphic



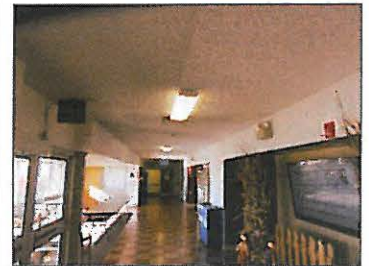
Typical standard thermostat

Lighting Systems

The lighting throughout the building is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. The staff did note that they have begun to replace the existing fluorescent tubes and ballasts with new LED tubes and drivers through an incentive provided by Lincoln Electric System. The Staff can continue to replace existing lighting with LED bulbs or 360 EE can include a true, ballast free, LED system in a proposed project. Removing ballasts can result in significant operational savings.

Summary of lighting needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Standard-efficiency T8s are present throughout the building.	Continue to replace lighting with LED



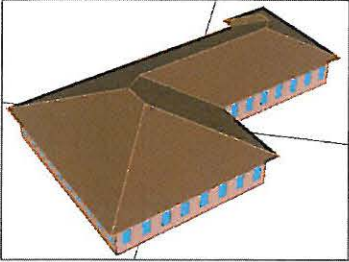
Existing fluorescent light fixture



Fluorescent can fixture



Election Commission



eQuest energy model



2001 double paned windows

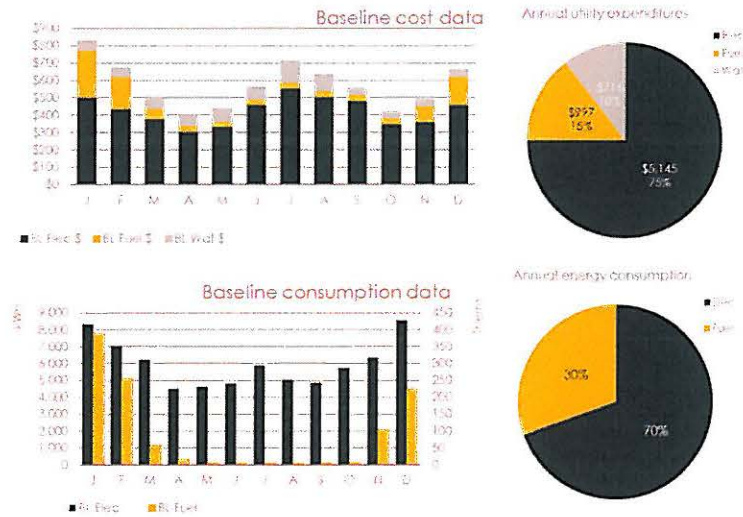
Lancaster County Election Commission

General

601 N 46th St, Lincoln, NE 68503

The Lancaster County Election Commission building is an approximately 6,660 square foot facility built that was renovated for the County uses in 2001, along with a small office addition. The facility includes office space, conference rooms, break room, workrooms and storage areas for the Election Commission use.

Utility Cost and Energy Consumption



68

Building Envelope

The new building is constructed of face brick, sheathing and metal studs with batt insulation. Windows are double paned aluminum. The roof is a sloped wooden framing with asphalt shingles. The attic is insulated with loose fill, R38 minimum, which is a sufficient quantity of insulation.

Summary of envelope needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing building construction has areas of substantial air infiltration resulting from worn door hardware, deteriorating window joint seal caulking and loose structural connections.	Determine areas of significant and correctable air leakage and infiltration. Replace hardware and sealants and add new sealant to areas without.

Mechanical Systems

The primary source of heating and cooling in the building is with split system heat pumps with gas furnaces, also known as a dual-fuel heat pump. The installation year of these systems is 2004, 1995, 2015, and 2001. Two of these four systems have operated beyond their 15-18 year median service life and should be replaced. Dual fuel heat pumps represent the most utility cost efficient arrangement in a light commercial application by utilizing high efficiency reverse cycle heat pumps for heat until it gets too cool outside and the fuel is switched to low cost natural gas heat.

Summary of HVAC needs and recommendations:

Need/Observation	Energy Conservation Opportunity/Building Improvement
Two of the dual fuel heat pump systems are past their useful life	Replace the two systems beyond their life

Building Automation Control System

The HVAC systems are operated with a standard thermostats and no central building energy management control system.

Summary of building automation control needs and recommendations:

Need/Observation	Energy Conservation Opportunity/Building Improvement
No energy management control system exists	Install new HVAC temperature and energy management control system

Lighting Systems

The lighting in the Election Commission building is primarily T8 fluorescent lamps. The fixtures appear to be in good condition, making them good candidates for retrofit with LED lamps. A standard T8 lamp consumes 32 watts and uses an unreliable ballast that can require frequent replacement. LED retrofit lamps use only 12 watts while providing the same amount of light output as a standard 32-watt T8 lamp. LED light provides better task lighting for the building's occupants.

LED lamps also outperform fluorescent lamps in longevity. A standard fluorescent lamp is rated to last 25,000 hours while a comparable LED lamp will last over 50,000 hours. Additionally, LED retrofits do not require a ballast. Removing the ballasts from light fixtures will reduce maintenance expenses. An LED lighting retrofit will reduce maintenance costs with increased longevity, no ballasts, and an overall more reliable performance.

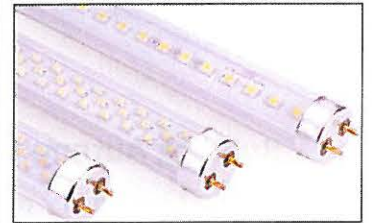
No advanced lighting controls such as occupancy sensors or daylight harvesting sensors were identified in the facility. Adding these devices would help maximize the energy savings potential for a lighting retrofit project.

Summary of lighting needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Standard-efficiency T8s are present throughout the building.	Retrofit existing T8 fixtures with LED lamps to improve lighting, reduce maintenance, and save energy.
Occupancy sensors were not found in the facility.	Install occupancy sensors to reduce unneeded energy usage.



Existing fluorescent lighting



LED retrofit tubes

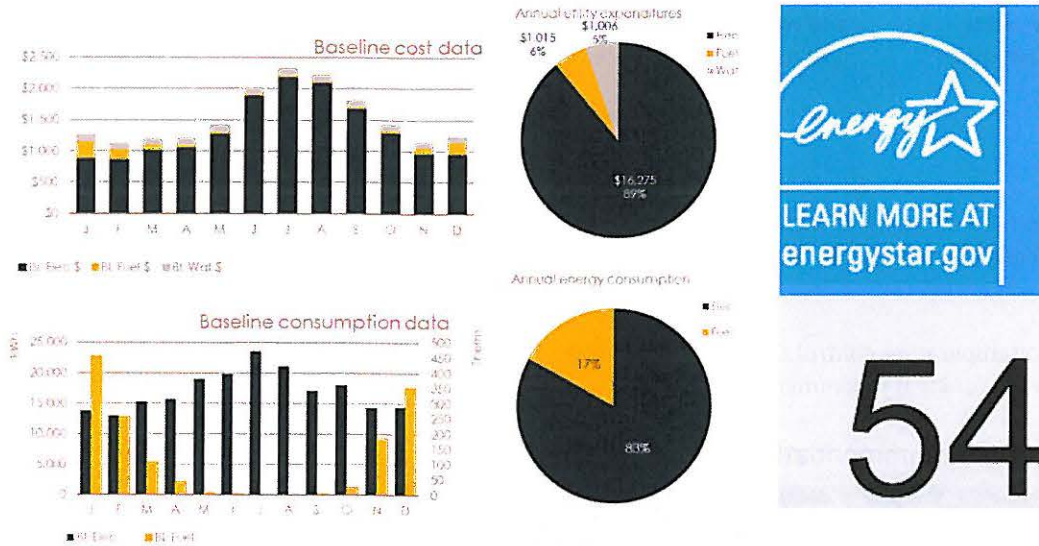
Lancaster County Motor Vehicle Office

General

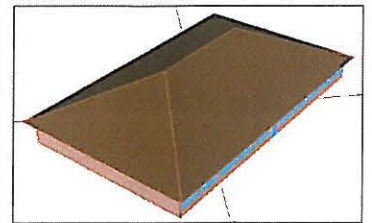
625 N 46th St, Lincoln, NE 68503

The Lancaster County Motor Vehicle Office is an approximately 6,600 square foot facility built in 1995. The building consists of a large waiting area, service desks and administrative offices, restrooms and other conference rooms.

Utility Cost and Energy Consumption



Motor Vehicle Office



eQuest energy model



Undersized gutters and downspouts



Cracks in bricks

Building Envelope

The building envelope was observed to be comprised of the original building construction. The exterior walls consist of face brick/block veneer, wood framing, 6" batt insulation, sheathing, vapor barrier and drywall. The floor slab is 4" thick slab on grade with rigid 2" foundation insulation. The roof is a wooden framed truss with 12" batt insulation in attic and shingles sloped at 6" per 12". Windows are double-paned with aluminum frame, which appears to be in acceptable condition.

There were several cracks observed in the brick veneer wall which indicates a settling of the building. The gutters installed on the roof are a small residential gutter with downspouts. The gutters are not large enough to properly collect and transport the water in a rain event which results in overflow near the foundation.

Summary of envelope needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing roofing system has operated beyond its expected service life and in need of replacement. Gutter and downspout systems are undersized for rain load	Replace existing roof shingle system and install new gutters and downspouts of commercial grade and capacity.
Existing building construction has areas of substantial air infiltration resulting from worn door hardware, deteriorating window joint seal caulking and loose structural connections.	Determine areas of significant and correctable air leakage and infiltration and replace hardware and sealants and add new sealant to areas without.

Mechanical Systems

Heating, cooling and ventilation is accomplished with three single zone packaged rooftop units installed as part of the original building. These units have been in operation for 21 years, putting them well beyond their median service life of 15 years.

In addition, there are only two temperature control zones in the building which creates comfort issues. To alleviate this, a new HVAC system with improved zoning is recommended.

Summary of HVAC needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing rooftop units provide poor temperature control for the building thermal zoning and have operated beyond their median service life	Replace the existing HVAC system with new HVAC system to improve temperature control and overall life cycle cost

Building Automation Control System

The HVAC systems are operated with a standard thermostats and no central building energy management control system.

Summary of building automation control needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
No energy management control system exists	Install new HVAC temperature and energy management control system



Fluorescent lighting in the office area



Typical fluorescent fixtures



LED retrofit lamps



Wall-mount occupancy sensors for restrooms, conference rooms, and private offices

Lighting Systems

The lighting in the Motor Vehicle Office is primarily T8 fluorescent lamps with some incandescent bulbs. The fixtures appear to be in good condition, making them good candidates for retrofit with LED lamps. A standard T8 lamp consumes 32 watts and uses an unreliable ballast that can require frequent replacement. LED retrofit lamps use only 12 watts while providing the same amount of light output as a standard 32-watt T8 lamp. LED light is much cleaner and provides greater task lighting for the building's occupants. LED lamps also outperform fluorescent lamps in longevity.

A standard fluorescent lamp is rated to last 25,000 hours while a comparable LED lamp will last over 50,000 hours. Additionally, LED retrofits do not require a ballast. Removing the ballasts from light fixtures will reduce maintenance expenses. An LED lighting retrofit will reduce maintenance costs with increased longevity, no ballasts, and an overall more reliable performance.

No advanced lighting controls such as occupancy sensors or daylight harvesting sensors were identified in the facility. Adding these devices would help maximize the energy savings potential for a lighting retrofit project.

Summary of lighting needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Standard-efficiency T8s are present throughout the building.	Retrofit existing T8 fixtures with LED lamps to improve lighting, reduce maintenance, and save energy.
Occupancy sensors were not found in the facility.	Install occupancy sensors to reduce unneeded energy usage.

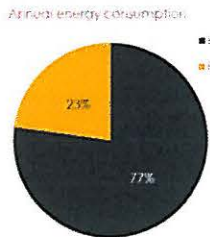
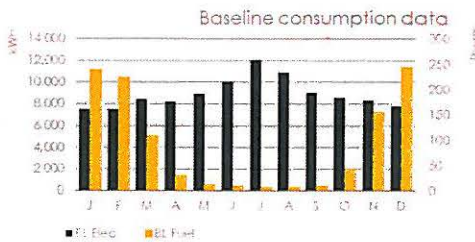
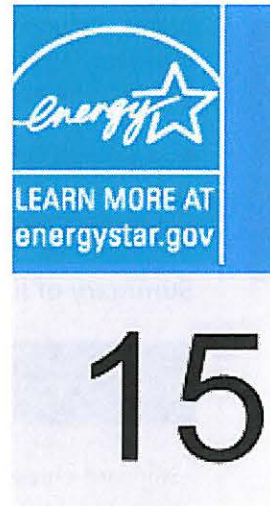
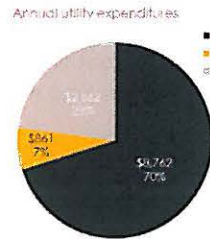
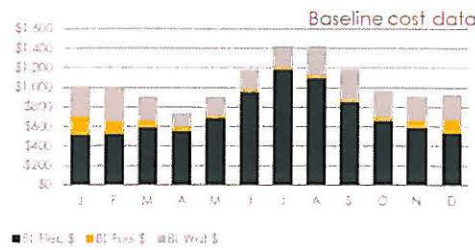
Lancaster County Driver's License Office

General

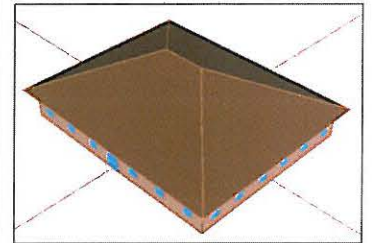
500 W O St, Lincoln, NE 68528

The Lancaster County Driver's License Office is an approximately 5,300 square foot facility built in 1991. The building consists of a waiting area, service desks and administrative offices, restrooms and other conference rooms.

Utility Cost and Energy Consumption



Driver's License Office



eQuest energy model



Deteriorating window seals

Building Envelope

The building envelope was observed to be comprised of the original building construction. The exterior walls consist of face brick/block veneer, wood framing and interior drywall. The floor slab is 4" thick slab on grade with rigid 2" foundation insulation. The roof is a wooden framed truss with 6" batt insulation in attic and sloped shingle roof. Windows are double-paned with aluminum frame, which appears to be in acceptable condition. The seals around the windows are showing significant deterioration.

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing roofing system has operated beyond its expected service life and in need of replacement. Gutter and downspout systems are undersized for rain load	Replace existing roof shingle system and install new gutters and downspouts of commercial grade and capacity.
Existing building construction has areas of substantial air infiltration resulting from worn door hardware, deteriorating window joint seal caulking and loose structural connections.	Determine areas of significant and correctable air leakage and infiltration and replace hardware and sealants and add new sealant to areas without.



Attic insulation



Older furnaces and cooling coils



Older air-conditioner



Older furnaces and cooling coils

Mechanical Systems

Heating, cooling and ventilation is accomplished with three furnaces and split air conditioner systems. Most of the equipment has operated beyond its useful life and should be replaced with a higher efficiency and longer life system similar to that proposed at the Motor Vehicle building.

Summary of HVAC needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing split systems provide poor temperature control and have operated beyond their median service life	Replace the existing HVAC system with new HVAC system to improve temperature control and overall life cycle cost.

Building Automation Control System

The HVAC systems are operated with a standard thermostats and no central building energy management control system.

Summary of building automation control needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
No energy management control system exists	Install new HVAC temperature and energy management control system.

Lighting Systems

The lighting in the Driver’s License Office is primarily T8 fluorescent lamps with some incandescent bulbs. The fixtures appear to be in good condition, making them good candidates for retrofit with LED lamps. A standard T8 lamp consumes 32 watts and uses an unreliable ballast that can require frequent replacement. LED retrofit lamps use only 12 watts while providing the same amount of light output as a standard 32-watt T8 lamp. LED light provides better task lighting for the building’s occupants.

LED lamps also outperform fluorescent lamps in longevity. A standard fluorescent lamp is rated to last 25,000 hours while a comparable LED lamp will last over 50,000 hours. Additionally, LED retrofits do not require a ballast. Removing the ballasts from light fixtures will reduce maintenance expenses. An LED lighting retrofit will reduce maintenance costs with increased longevity, no ballasts, and an overall more reliable performance.

No advanced lighting controls such as occupancy sensors or daylight harvesting sensors were identified in the facility. Adding these devices would help maximize the energy savings potential for a lighting retrofit project.

Exterior metal halide flood lights will be replaced with LED flood lights that use less than half as much electrical energy.

Summary of lighting needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Standard-efficiency T8s are present throughout the building.	Retrofit existing T8 fixtures with LED lamps to improve lighting, reduce maintenance, and save energy.
Occupancy sensors were not found in the facility.	Install occupancy sensors to reduce unneeded energy usage.
Metal Halide flood lights should be replaced with more efficient lighting technology	Replace exterior metal halide flood lights with LED equivalents.



Existing fluorescent lighting



LED retrofit lamps



Existing metal halide flood lights



LED flood light for signage lighting

Lancaster County Youth Services

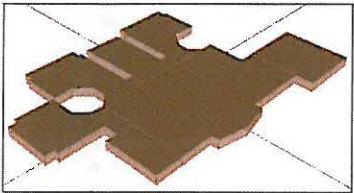
General

1200 Radcliff St, Lincoln, NE 68512

The Lancaster County Youth Services building is an approximately 58,200 square foot facility built in 1999-2000. The building serves as a juvenile detention center and includes all cell spaces and other service areas.



Youth Services building



eQuest energy model

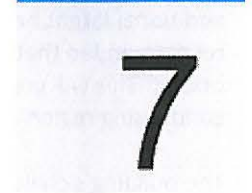
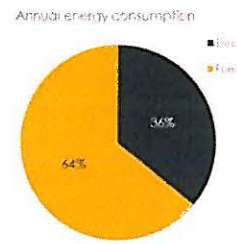
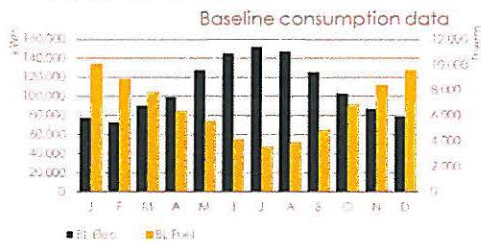
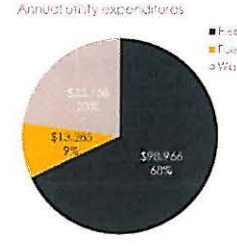
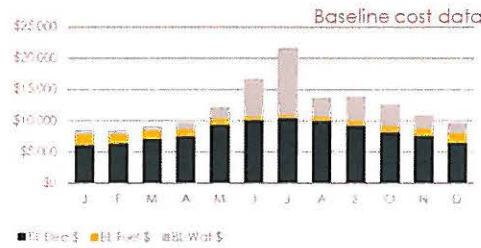


Roof



Standing water on roof

Utility Cost and Energy Consumption



Building Envelope

The building envelope consists of block walls with pre-stressed concrete exterior paneling. Due to the security of the facility, there is very little window glass/frame area. The roof is a modified bitumen outer layer over tapered insulation. The roof was observed to be reaching the end of its 20-year life showing many bubbles.

Summary of envelope needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing roofing system has operated near the end of its expected service life and in need of replacement.	Replace existing roofing outer membrane and add insulation as necessary to meet modern energy efficiency code. Core sample will determine current insulation thickness.
Existing building construction has areas of substantial air infiltration resulting from worn door hardware, deteriorating window joint seal caulking and loose structural connections.	Determine areas of significant and correctable air leakage and infiltration and replace hardware and sealants and add new sealant to areas without.

Mechanical Systems

The primary source of heating and cooling in the facility is chilled water and hot water. The air systems consist of multi-zone air handlers for the secure detention areas and variable volume with fan terminal boxes for the offices and non-secure areas of the building.

The multi-zone air handling units are constant volume and consist of a chilled and hot water deck, blending air to each zone's desired supply temperature at the constant airflow to satisfy set-point. These systems are very inefficient due to the constant power drawn by the fan and the blending of cold and hot air. A much more efficient approach can be employed by converting these systems to variable volume, constant temperature and minimizing the amount of simultaneous heating and cooling and reducing fan power. The variable volume systems serving the office areas consist of a main variable volume air handler serving fan powered variable air volume terminals with hot water reheat for space temperature control. Entry and exit stairwells are heated only with hot water unit heaters.

The building's heating hot water is generated by four vertical tubeless forced draft standard efficiency heating water boilers and a duty-standby set of constant flow pumps. These boilers have adequate part load efficiency being a forced draft control, however, they cannot operate at an any efficiency greater than 82-84% because they cannot extract the additional latent heat through condensation of the combustion byproducts. It is recommended that these boilers be replaced with high efficiency condensing hot water boilers. This will greatly improve gas efficiency by allowing boilers to operate in a condensing region and produce 90%+ fuel efficiency.

The building's chilled water for all coils is generated by two water-cooled chiller modules located in the mechanical room, two 50s and 30-ton nominal set of machines. The chilled water distribution system is served with a set of constant flow duty-standby set of base-mounted centrifugal pumps. It was noted that these pumps were powered by starters and not by variable frequency drives, although some of the chilled water valves are two-way. In this arrangement, as the two-way valves close and system pressure increases, the pumps are simply riding back on their curve, which is not the most efficient method for pump control. The condenser water cooling the chillers consists of a set of constant flow duty-standby condenser water pumps and a field of closed-loop vertical wells below grade. The intent of this system was to use the thermal mass to create a consistent heat sink for rejection. Based on observations and history, this design failed and the thermal mass was not adequate to take on the entire heat of rejection from the systems. This caused the returning condenser loop temperatures to climb to levels that the chiller cannot operate within for meeting the chilled water capacity. As a result, two dry coolers were installed to reject additional heat, although those tended to add more heat to the system on most days as the outdoor dry-bulb. temperature was greater than the condenser water temperature. As a last resort, the staff has begun to drain the condenser water and replace it with fresh city water, effectively creating a once-thru cooling system. This practice is wasteful and not acceptable for the facility. To combat this problem, it is recommended that a new modular heat pump chiller system be designed and installed to allow for heat rejection as hot water to be used for the heating hot water and domestic heating water systems. This chiller will also reverse cycle to remove heat from the ground when available and generate heating water for the building to supplement the boilers. In addition, the dry coolers should be replaced with an evaporative cooling tower to allow for optimal operation of the existing well field through winter dry-season to pre-cool the ground before spring/summer cooling season.



Multi-zone control actuators



Modular chillers



Heating water boilers



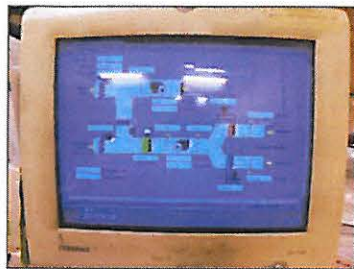
Domestic water heaters



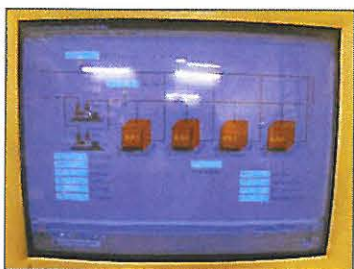
Well-field location

Summary of HVAC needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing Multi-zone air handling units are a very inefficient method of HVAC	Convert the existing constant volume multi-zone air handlers to variable volume multi-zone air handler
Current boilers are not very efficient over the entire loading of the building	Replace boilers with high efficiency condensing hot water boilers
Existing chiller geothermal heat rejection method is not functional and the existing chiller is nearing the latter part of its 20-25 year operating life	Install new heat pump/heat recovery modular chiller system and evaporative cooling tower to optimally operate the chilled water system, recover waste heat and pre-cool the ground-loop for cooling season



Control system AHU



Control system boiler plant

Building Automation Control System

The HVAC systems are operated with a Honeywell direct digital control and building automation system installed as part of the original building in 2002. This system is antiquated from an efficient sequence standpoint, operates on an ancient computer and unsupported operating system and is in need of commissioning to ensure correct performance. The systems are currently operated as constant volume, variable temperature air handlers with multi-zone mixing dampers. This strategy, while very effective at multi-space temperature control, is very inefficient and can be converted to a variable volume, constant temperature system.

Summary of building automation control needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Existing control system is antiquated	Replace existing control system and employ more efficient control strategies

Lighting Systems

The lighting in the Lancaster County Youth Services facility is primarily T8 fluorescent lamps with some fixtures retrofitted to LED. The fixtures appear to be in good condition, making them good candidates for a complete LED retrofit. A standard T8 lamp consumes 32 watts and uses an unreliable ballast that can require frequent replacement. LED retrofit lamps use only 12 watts while providing the same amount of light output as a standard 32-watt T8 lamp. LED light provides better task lighting for the building's occupants.

LED lamps also outperform fluorescent lamps in longevity. A standard fluorescent lamp is rated to last 25,000 hours while a comparable LED lamp will last over 50,000 hours. Additionally, LED retrofits do not require a ballast. Removing the ballasts from light fixtures will reduce maintenance expenses. An LED lighting retrofit will reduce maintenance costs with increased longevity, no ballasts, and an overall more reliable performance.

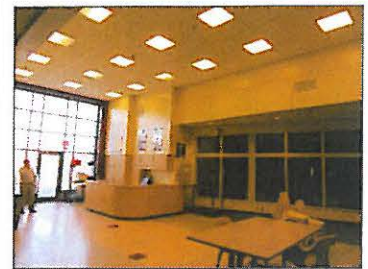
The metal halide lights in the gymnasium are inefficient and expensive to maintain. For this application, new high-bay LED fixtures can save electrical energy, reduce maintenance expense, and improve lighting.

No advanced lighting controls such as occupancy sensors or daylight harvesting sensors were identified in the facility. Adding these devices would help maximize the energy savings potential for a lighting retrofit project.

Exterior metal halide exterior area lights will be replaced with LED lights that use less than half as much electrical energy.

Summary of lighting needs and recommendations:

Need/Observation	Energy Conservation Opportunity/ Building Improvement
Standard-efficiency T8s are present throughout the building.	Retrofit existing T8 fixtures with LED lamps to improve lighting, reduce maintenance costs, and save energy.
Inefficient metal halide lights are used in the gymnasium.	Install new high-bay LED fixtures to improve lighting, reduce maintenance costs, and save energy.
Occupancy sensors were not found in the facility.	Install occupancy sensors to reduce unneeded energy usage.



Existing fluorescent lighting



Existing metal halide luminaires in gymnasium



LED retrofit lamps

Facility Improvement Opportunities

Mechanical HVAC System Opportunities

New Variable Refrigerant Flow HVAC Systems

Building and system affected: Motor Vehicle Department and Driver's License Testing

The Motor Vehicle Department and Driver's License Testing building's entire HVAC systems have reached end of life and, in addition, the buildings suffer from poor temperature control and zoning. In lieu of simply replacing the existing equipment, which does not have a very long life and will not alleviate the temperature control and zoning issues, it is recommended that a new HVAC system be considered.

Based on the layout, function and daily operation of the facilities, a system should have the following features:

- Provide individual temperature and heat/cool mode control across the various smaller thermal zones.
- Provide energy efficient operation over the entire season and share energy across the building's simultaneous loads in the fall and spring when some zones may be in heating and some in year-round cooling.
- Provide improved indoor air quality by incorporating a dedicated outside air and exhaust system with efficient energy recovery
- Provide system with longer operating life and simpler maintenance by installing fewer components in the elements.

To meet these requirements, the best system to select for this size of facility, its function and layout is the variable refrigerant flow/volume (VRF/V) system. Variable Refrigerant Flow (VRF) systems first appeared in Japan in 1982 and are now used throughout the world with increasing presence in the U.S. VRF systems are large-capacity, sophisticated versions of ductless multi-split air-conditioning or heat pump systems, which include multiple indoor evaporators connected to a single condensing unit containing one or multiple inverter-driven (variable-speed) compressors. VRF systems have the additional capability of connecting ducted style fan coil units. Furthermore, they do not provide ventilation, so a separate ventilation system is typically necessary, which improves space comfort and indoor air quality.

The term variable refrigerant flow refers to the ability of the system to control the amount of refrigerant flowing to each of the evaporators, enabling the use of many evaporators of differing capacities and configurations, individualized comfort control, simultaneous heating and cooling in different zones, and heat recovery from one zone to another.

Each condensing unit uses two or three compressors, including an inverter-driven variable-speed compressor. Larger systems combine multiple condensing units to achieve more system capacity. The inverter driven compressors coupled with efficient indoor unit fan operation results in heating and cooling efficiencies that are comparable to high-efficiency water-cooled systems. The advantages of this system for the buildings include:

Benefits:

- Improved occupant comfort
- Reduced energy usage & costs
- Replacement of outdated equipment



VRF ceiling cassettes



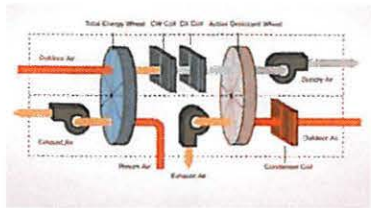
Example of VRF layout



VRF outdoor units



Cut-away of the VRF outdoor unit



Energy Recovery Dedicated Outside Air Unit

- Allows for exchanging heat from one zone to another for buildings with large load diversities.
- Responds well to fluctuations in space load conditions.
- Suitable for retrofitting buildings without disturbing the structure.
- Design flexibility allows various size and style indoor units (ceiling recessed, wall-mounted or floor console) to be added to any single outdoor unit, easing adaptation to future expansion or reconfiguration.
- Feature standardized configurations and sophisticated controls which allow for near plug-and-play commissioning.
- Many zones are possible, each with precise individual set-point control, an advantage of a variable speed compressor.
- Energy consumption is relatively low compared to central or ducted systems due to elimination of duct losses and the high part-load efficiency of multiple, variable speed compressors.
- Systems are lightweight and modular and easily transportable compared to larger centralized equipment.

This new system will come complete with a robust energy management and temperature control system to allow for energy efficient operation of all equipment to ensure that the facility uses the least amount of utilities possible while providing a comfortable environment.



High efficiency condensing hot water boiler plant

Boiler Replacement with Condensing Boilers

Building and system affected: Youth Services Building and Extension Office.

This energy conservation opportunity includes the replacement of the current standard hot-water boilers at the Youth Services Building and Extension Office. The existing hot-water boilers at this facility are original to the building's construction and are not as efficient as a modern condensing boiler.

The existing hot-water boilers will each be replaced with several, smaller, natural-gas fired, condensing boilers. The installation of the smaller condensing boilers will allow for the heating system to operate at efficiencies above 90%. The ability of the boilers to modulate down provides an increase in system efficiency at part-load conditions, which is where a vast majority of boiler operation occurs. This increase in boiler efficiency will decrease the amount of fuel used by the boilers, both during part and full-load conditions.

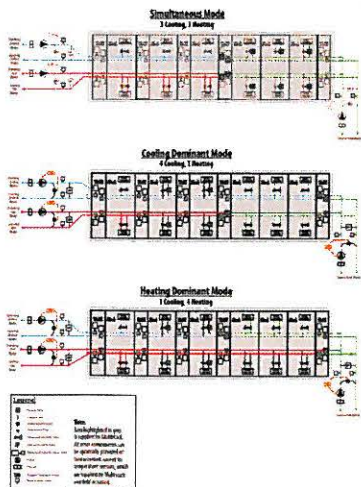


Heat pump/recovery chiller

Replace Existing Water-Cooled Chiller with Heat-Pump Chiller

Building and system affected: Youth Services Building.

This energy conservation opportunity shall involve replacing the existing modular water-cooled chiller which was part of the original building construction. This chiller only has the capability to generate chilled water and reject its total heat through the condenser water loop to the closed-loop ground-source well field. This well field has lost the ability to take all of the heat and results in the loop overheating and inefficient chiller operation, with staff resorting to drastic measures. A heat pump chiller would reverse its cycle in the heating system when chilled water is not needed. Heat is then extracted out of the ground loop by the energy of the compressor and that total heat is available to heat the building, with the gas boiler system to supplement as needed. In the times of the year when both chilled and hot water is needed, the chiller will operate in heat recovery mode and take the heat generated through chilled water creation and pass it to the hot water system, with the net sent out to the well field. This will effectively harvest "free" heat that is otherwise sent to the well field to cut back on boiler gas usage.



Heat pump and heat recovery chiller operation

By using a heat pump and heat recovery chiller, the well field capacity can be properly used like a battery, charging it in cooling season and draining it in the winter. The new chiller will be more efficient than the existing chiller when producing chilled water, will be more cost efficient in producing heating water, and offset gas usage in the mild seasons by recovering heat from the cooling process.

Optimize Closed-loop Ground Well System

Building and system affected: Youth Services Building.

The existing well field installed for heat rejection at the Youth Services building was stand-alone without any supplemental heat rejection source. This meant that the capacity of the field was subject to the natural ability to dissipate/diffuse heat through the soil properties.

A more optimal method to controlling the ground well system capacity is to add a supplemental source of heat rejection to the ambient air. In the climate of Lincoln, like most Midwestern cities, the moisture of the content of the air is reduced through the winter and into early spring until temperatures begin to rise and rain begins to fall. These dryer conditions allow for an effective window of supplemental heat rejection to, in a sense, “pre-cool” the ground well field in anticipation of the cooling load.

This measure would use a new, or existing evaporative cooling tower which is said to be budgeted for install in early 2017. This cooling tower will allow the existing building staff to solve the current issue of the well field over-heating and get their cooling system back to normal design operation. Once that tower is in place and as part of the new heat pump chiller installation, a turn-key optimization hardware/software package will be installed and commissioned to use the cooling tower to reject heat from the well field in dryer late winter/early spring weather when it is very effective due to low ambient moisture conditions. This will allow the ground well system to have more available capacity to accept heat from the chilled water system when entering the warmer months.

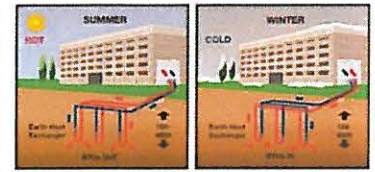
Savings will be achieved by reducing the temperatures in the condenser water loop through the added capacity of the well field through pre-conditioning. A chiller’s efficiency is partly tied to the “lift”, or difference between the chilled water loop temperature and the condenser water loop temperature. There will be a negative impact of running the new cooling tower fan during the late winter, early spring, however, this will be minimal as compared to the savings at the chiller. In addition, the optimization hardware/software package will monitor the power consumed and through trial and error, optimize the operation of the heat rejection timing to use the least amount of total electric power between the chiller and cooling tower.

Conversion of Constant-Air-Volume Multi-zone System to Variable Air Volume

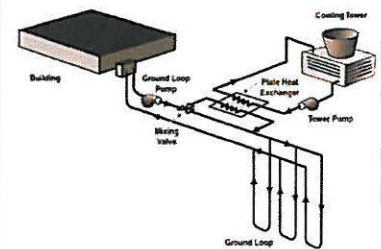
Building and system affected: Youth Services Building.

Retrofits involving conversion from CV to VAV are perhaps the most widely employed energy-saving retrofit to commercial HVAC systems, because typical airflow requirements for VAV systems are only about 60 percent that of CV systems. VAV systems also cool only the air volume required to meet demand, rather than meeting demand by simultaneously heating and cooling large volumes of air. The conversion of an older constant-volume multi-zone system to a modern, energy-efficient variable air volume system is a task to be undertaken with serious consideration and expert analysis.

This conservation opportunity will encompass upgrading the current constant air volume (CAV) multi-zone air-handling units (AHUs) to variable air volume (VAV) multi-zone. A traditional CAV multi-zone system requires the heating and cooling coils to operate simultaneously while the fan runs constantly at full speed. Hot and cold air is blended through mixing dampers located off the fan to control the volume of air supplied from separate hot and cold-deck to send to the zone. These dampers are controlled simultaneously by a single linkage, and are modulated inversely proportional to each other. For example, when the hot-deck damper is 75% open, the cold-deck damper is only 25% open. The fan supplies a constant volume through the system



Closed-loop geothermal wells



Hybrid, optimized closed loop geothermal wells with evaporative cooling tower



Variable frequency drive

and the air is tempered based on the percentages of hot and cold air sent into the space. This operation, though effective for space temperature control, is largely inefficient.

In order to more efficiently temper the space, it is recommended that the current CAV multi-zone systems' controls be modified to operate the systems as multi-zone VAV systems. In a multi-zone VAV system, the hot and cold-deck damper actuators (existing) are operated independently to simulate the operation of a traditional VAV shut-off box. For example, if the zone needs cooling, the hot-deck damper will remain closed while the cold-deck damper modulates the volume of the constant-temperature cold-deck air entering the space to satisfy the space temperature set-point. This eliminates nearly all instances of blending hot and cold air and reduces the overall volume of air delivered by the AHU at part-load conditions. At this condition, the supply and return fan speed will be modulated so that the multi-zone system is not over-pressurized.

Savings from this energy conservation measure occur in two ways. First of all, the variable speed fan operation will lead to energy savings by reducing the fan's speed at part-load conditions. Second of all, the decrease of simultaneous heating and cooling will lead to savings as well. The overall load on the heating and cooling coils is decreased, and thus, the amount of energy used up by chillers and boilers will decrease as well.

Polarized-Media Air Filtration

Building and system affected: Youth Services.

The HVAC equipment located at the Youth Services building use the standard pleated air filters to filter out large particles from the air being used to condition and ventilate spaces. In order to provide clean air for the occupants of the building, large amounts of outdoor air are introduced into the building to dilute the contaminants in the circulated air.

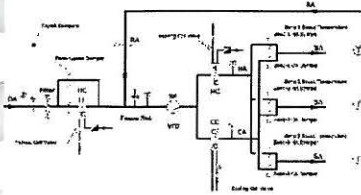
Polarized-media air filters offer several advantages over the standard filters. Standard filters are designed to capture large particles in the air in order to protect the HVAC equipment they are used in. Polarized-media air filters not only capture large particles to protect equipment, they also capture much smaller particles that can affect the quality of the air and health of the occupants. Not only does it improve the quality of the air, but when using a polarized-media filter, less outdoor air is required to dilute the circulating air because the circulating air is cleaner. Polarized-media air filters also require less maintenance due to the longer life of the individual filters.

Savings will be achieved by replacing standard air filters with polarized-media air filters. The electrostatic air filters will improve indoor air quality and will require less outdoor air, thus decreasing the amount of energy used to heat and cool ventilation air.

Install New High-Efficiency Rooftop Units

Building and system affected: County Extension, Engineering Office, NE Senior Center.

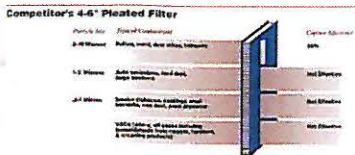
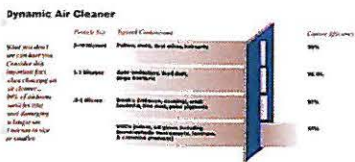
The rooftop units serving above facilities have operated well past their expected service lives and are very inefficient by today's standards. Efficiency levels for packaged rooftop units have gradually increased over the past 15 years. Units in the large VAV size range now have EERs as high as 12.7. Units in the small packaged size have efficiencies exceeding 17 SEER. Each existing packaged VAV rooftop unit at the County Extension and Engineering Office will be replaced with a new packaged rooftop unit. Savings will be achieved by reducing power consumption over the entire loading range of the cooling service and improving fan efficiency.



VAV Multi-zone schematic



Polarized air cleaner



Efficiency of a polarized filter

Install New Variable Air Volume Terminals

Building and system affected: County Extension.

The existing VAV terminals at the County Extension Office have operated beyond their useful life. By replacing the existing VAV boxes with new terminals each would receive a new damper with low leakage, new airflow measuring device and clean hot water coil. The new damper and airflow measuring device will ensure that only the exact airflow is delivered as demanded by each space and prevent leak-by, reducing fan energy consumption. A cleaner hot water coil will ensure maximum heat transfer, reducing the energy use by the fan to provide more air and the boiler system to provide hotter water to compensate for a dirty coil.

Install New Unitary Heat Pumps and Furnace Systems

Building and system affected: Election Commission Office and Northeast Senior Center.

The existing dual fuel furnace and split heat pumps at the Election Commission Office that have operated beyond their life will be replaced with new, higher efficiency equipment. At the Northeast Senior Center, the old furnaces will be replaced with new high efficiency units. The new heat pumps will be sized for the appropriate capacity of the existing heating and cooling needs. Replacing old equipment increases the efficiency of the heating and cooling processes, which will lower the amount of energy consumed.



New high efficiency rooftop unit



New VAV terminal



High efficiency heat pump and condensing gas furnace



New high efficiency Geothermal heat pump

Replace Older Geothermal Heat Pumps

Building and system affected: Health Department.

The units serving the older original portion of the Health Department were originally traditional water-source heat pumps served by a cooling tower and boiler and all installed in the mid-1990s, putting them in need of replacement. These units now operate in a geothermal system that may see much lower loop temperatures.

New geothermal heat pumps are built to be much more efficient and effective at comfort control with multiple staging capability. All of the existing mid-1990s heat pumps would be replaced with new geothermal heat pumps, increasing their efficiency greatly.

Replace Older Water Source Heat Pumps with Hybrid

Building and system affected: Downtown Senior Center.

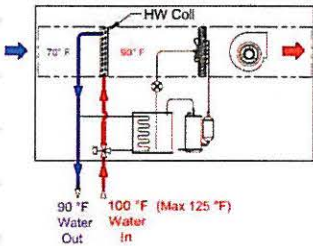
The system heating and cooling the Downtown Senior Center is a traditional water-source heat pump system (WSHP). This system uses the compressor at each unit when in cooling and in heating to drive heat between the room air and water loop, depending on season. This means that in heating, a compressor is used for heating at the expense of costly electricity compared to cheaper natural gas. In addition, these units have operated well past their useful service life and are in need of replacement.

In lieu of replacing with a new traditional water source heat pumps, it is recommended that an alternative hybrid water source heat pump be used. Like their predecessors, these Hybrid WSHPs still utilize a compressor for cooling. Unlike their predecessors, they utilize a hot water coil for heating. Thus, there is no compressor to run in heating, leading to less utility cost, less noise, and less wear and tear on the compressor. The main loop will then be operated between 85°F and 120°F. To do this, the refrigerant to water heat exchangers are shell-and-tube instead of helical coil, able to run higher refrigerant pressures in cooling at higher water temperatures. The shell and tube is also more efficient sized and operating in cooling only versus a helical coil sized for heating and operated in cooling and heating. Savings will be achieved by reducing the electricity consumed during heating mode.

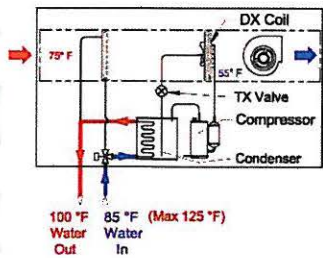
Replace Electric Boiler with Condensing Gas Boilers

Building and system affected: Downtown Senior Center.

To further reduce the use of high cost electricity for heating at the Downtown Senior Center, it is recommended that the existing electric boiler, which is operating beyond its useful life, be replaced with high efficiency condensing gas hot water boilers. Savings will be achieved by exchanging electrical cost for some natural gas cost.



Hybrid heat pump in heating mode



Hybrid heat pump in cooling mode



High efficiency condensing hot water boiler plant

Replace Force Draft Fluid Cooler with High-Efficiency Induced Draft Unit

Building and system affected: Downtown Senior Center.

The water source heat pump loop at the Downtown Senior Center is tempered by a 1980s, forced-draft cooling tower. A forced draft cooler is a much less energy efficient model than induced draft design models. For the same capacity, an induced draft model requires less than 50% of the fan horsepower as a forced draft model. This is due to its compact design requiring higher static pressure blower of the force draft design. Due the unit's age and the energy savings potential of replacing this with an induced draft model, its replacement is recommended.

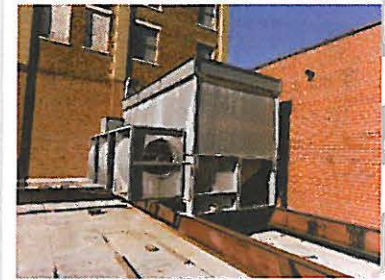
Building Central Exhaust Energy Recovery

Building and system affected: Downtown Senior Center.

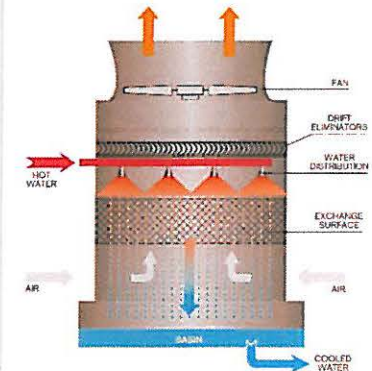
This energy conservation opportunity includes the installation of an energy recovery device to allow for energy transfer between the intake air of the make-up air unit and a new exhaust system pulling building air for proper pressurization from the top of the atrium, which tends to trap stratify warm air at the top.

A large constant-air-volume make-up air unit (MAU) provides fresh air for ventilation requirements to each of the tower's floors. Year-round, the MAU operates to maintain a supply air temperature of 60°F in heating and 80°F in cooling. This requires large amounts of energy consumption to heat the cold outside air during the winter months, and cool down the warm outside air during the summer months. The air from the building could be exhausted from out of the atrium and utilized to help pre-heat or pre-cool incoming outside air for the MAU, reducing the energy consumed by the heating and cooling systems. In order to recover the large amount energy being wasted through the exhaust air, new duct work and an enthalpy wheel will be installed to allow energy transfer between the inlet air stream for the MAU and the exhaust air stream.

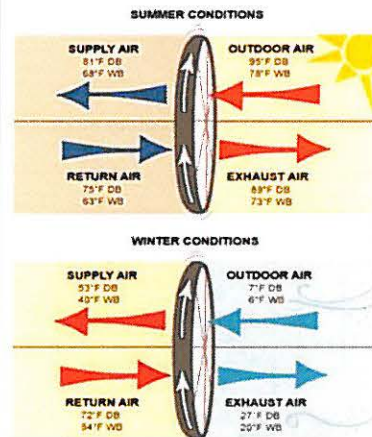
Savings will be achieved by providing the make-up air unit with preconditioned outdoor air. Utilizing the free energy transfer between the inlet air and the exhaust air will reduce the amount of mechanical heating and cooling required to meet the supply air temperature set-point of the MAU, thus reducing the amount of energy consumed by the system.



Existing forced draft cooling tower



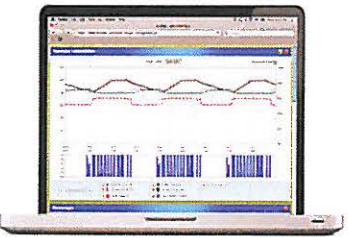
Principles of induced draft tower



Principles of enthalpy recovery wheel



Example energy recovery air handler



Wireless t-stat and software

Building Automation System Opportunities

Web-Based Energy Management Thermostats

Building and system affected: Motor Vehicle, Driver's Testing, Northeast Senior Center, and Election Commission.

In an effort to further reduce energy consumption and costs, as well as ease the time burden associated with maintaining individual thermostat settings through your facilities, web-based energy management thermostats would be connected to a single, web-accessible graphical user interface (GUI) to allow for centralized schedule management, reporting, and troubleshooting all major heating and cooling equipment throughout the buildings indicated. This system would allow individual zones to have different occupied or unoccupied temperature schedules, as well as alert the building operators to errors and routine maintenance. This system would maximize your buildings' efficiency, reduce energy consumption, and deliver significant cost savings. Energy management thermostats are perfect for situations where a simple thermostat just isn't enough and a full-scale building automation system would be costly and overly complex. This system is the newest WiFi enabled technology offered for the commercial market that addresses all of the basic energy management needs of small commercial and institutions buildings.

In addition to energy management features, the system will also send maintenance personnel regular maintenance reminders and alerts based on your system's performance. Furthermore, the system's reports feature allows you to track the performance of multiple locations, analyze system reports, conduct remote diagnostics and assess performance, all from the web.

Replace Existing Direct Digital Control System

Building and system affected: County Shop, Youth Services, Property Management Facility (K-Street), and Downtown Senior Center.

This encompasses upgrading antiquated hardware, programming and graphics on the existing control systems within these facilities, which are all systems that have operated beyond their expected life and no longer serve the building operators well. The systems are difficult to manage, making it less effective at performing energy conservation strategies. New controls will be installed on this equipment that will ultimately provide a much better interface for the user, making energy management and troubleshooting much easier. Furthermore, improved control sequences will be implemented as described below in this section to improve energy performance and comfort.

Re-Commissioning of Existing Direct Digital Control System

Building and system affected: County Extension, Engineering & Health Department.

This energy conservation opportunity will encompass recommissioning the control systems in the County Extension and Health Department buildings. These systems are modern and serviceable, simply needing some programming and strategy changes.

The existing control systems will be re-commissioned so they operate more efficiently. The operation and set-points of all the systems, including all energy recovery units, will be adjusted so that the systems are operating correctly and as efficiently as possible. Control sequences at both buildings will be redesigned and implemented when deemed necessary. This will lower the runtime of the equipment as well as the amount of cooling or heating produced during part-load conditions. This will also decrease energy spent wastefully cooling or heating the spaces during periods when no one is occupying the building. New energy efficient strategies to be possibly implemented are described below.

Air Systems Control Strategies for Optimal Energy Performance

Optimize HVAC Operating Schedules (Space Temperature Setback and Setup)

Building and system affected: All Buildings except for those that operate 24/7.

This control feature will involve implementing optimized night setup and setback temperatures using energy management controls for most of the building spaces. The current HVAC systems have no ability to automatically be shut off when the building is not occupied, maintaining normal temperatures throughout these areas. Controls with setup and setback temperatures will be implemented for the HVAC systems. The setup and setback temperatures will be 55°F during the heating mode and 90°F during the cooling mode.

Optimal Start of HVAC Systems Based On Outdoor Air Conditions

Building and system affected: All Buildings except for those that operate 24/7.

Equipment start times are normally set earlier than necessary to ensure proper comfort is maintained even during hot or cold weather. An optimal start feature would automatically compensates building start times for changes in weather. If weather is extreme, then equipment is started early enough to properly condition the building before it is occupied. During mild weather, equipment start times can be delayed to obtain more energy savings.

A complementary feature, Optimal Stop, is used to save energy at the end of each day. This feature takes advantage of a building's "flywheel" effect. In mild weather, equipment can be stopped earlier than usual without adversely effecting indoor temperatures.

Zone-Level Intermediate Setback Control

Building and system affected: All Buildings except for those that operate 24/7.

This energy conservation opportunity includes integrating the new lighting occupancy controls (see Lighting System Recommendations) with the controls on the new air handlers and fan-coil units in order to automatically adjust the temperature set-point and ventilation rates in each room based on occupancy. With so many spaces having variable occupancy patterns, these controls provide a much more manageable and effective means to manage energy use than laboriously entering time schedules in a control system for each space.

When occupancy is sensed by the occupancy sensor, the thermostat goes into an occupied mode (i.e. programmed set-points) and full ventilation is provided. If a unit is scheduled on and no occupancy is sensed during that time, the thermostat goes into an unoccupied mode (e.g., intermediate setback set-point) and ventilation air is shut off until occupancy is sensed again. This setback temperature would be between the scheduled occupied and unoccupied set-points, such that when occupancy is again sensed, the space can quickly return to the occupied set-point. For example, if the design occupied and unoccupied cooling season temperatures set-points were 74°F and 85°F for a space, the intermittent setback temperature might be 78°F, allowing the unit to more quickly respond to an occupied signal than it would if cooling down from 85°F. During scheduled unoccupied periods, the occupancy control functionality of the unit could be turned off, forcing the space to remain at the unoccupied temperature set-point even if occupancy was detected.

Demand-Based Ventilation Control (DCV)

Building and system affected: Extension Office large conference rooms, City-County Property Management 3rd Floor.

This conservation opportunity will include the installation of carbon dioxide (CO₂) sensors in spaces with high variances in occupancy. In these spaces, large quantities of ventilation air are provided at a constant rate to satisfy the ventilation requirements at a worse-case scenario – full occupancy. Typically, these spaces are not fully occupied, thus are not required to receive the large ventilation rate which requires significant additional heating and cooling.

This control strategy will determine the minimum amount of ventilation needed to provide acceptable indoor air quality at all times. This will be accomplished through dynamically controlling the ventilation rate to each space to maintain CO₂ levels that correspond to acceptable air quality for each space. This in turn, significantly lowers the amount of energy needed to temper the outdoor air to maintain comfortable conditions in the spaces.

Differential Enthalpy Economizer Control of Major Air Handling Equipment

Building and system affected: County Engineering, Extension, Youth Services, City-County Property Management 3rd Floor.

The existing air handling systems utilize a fixed enthalpy economizer strategy for free cooling. This strategy is effective at utilizing outdoor air for cooling when the outdoor air conditions are suitable. However, a fixed enthalpy strategy is not the most efficient method of air-side free cooling.

In theory, outdoor air can be utilized to assist in cooling when the energy content (enthalpy) of the outdoor air is less than that of the air being returned from the building to the air handling unit. The current strategy measures the enthalpy of the outdoor air and compares that with an assumed (fixed) enthalpy for the building's return air. This assumed value is currently 28.5 Btu/lb. of dry air, which corresponds, for example, to 75°F at 50% relative humidity among other combinations of temperature and humidity. When the return air's enthalpy is 28.5 Btu/lb., this strategy is ideal. However, when the building's dynamic environmental conditions result in an enthalpy greater than 28.5 Btu/lb. - which occurs frequently - and the outdoor air enthalpy is between 28.5 Btu/lb. and the actual return air enthalpy, the current strategy will not utilize outdoor air free cooling when it would be beneficial to do so. Return air enthalpy sensors will be installed on all major air handling systems that have economizer capabilities and the controls sequences will be modified to incorporate a differential enthalpy economizer control strategy.

Supply-Air Temperature Reset

Building and system affected: County Extension, Engineering, Youth Services, City-County Property Management 3rd Floor.

Most cooling coils are designed to deliver 53° to 55°F air to satisfy cooling requirements on the hottest day of the year. During periods of milder weather, this temperature can be automatically reset upward to improve system efficiency by reducing wasteful reheating of already cooled air. Supply-air temperature reset can be accomplished in a few different ways.

The most common reset strategy is to implement a simple proportional reset based on the outside air temperature; on a hot day, the supply-air temperature (SAT) is set to its design (or original) value, and when the weather is cooler, the SAT is increased. This is usually specified in a table that lists two outside temperatures and the corresponding SAT. For example, at 95°F outside temperature, the SAT is set to 53°F; at 65°F outside temperature the SAT is set at 68°F. The SAT is then reset proportionally between these two points. With a proportional reset system, building operating staff will often provide better comfort if they “tune” the reset parameters based on observed performance. Some buildings will require a colder SAT on mild days due to higher internal loads (people, lights, office equipment) or due to higher solar gain through windows. Conversely, buildings with efficient lighting systems and high-performance glazing may achieve good comfort with a warmer SAT at the same outside conditions.

For HVAC systems that include digital controls at the zone level, it is also possible to reset the SAT based on the “worst-case zone” approach. Under this scenario, the SAT set-point is reset so that the zone with the greatest cooling requirement has its zone damper fully opened to provide 100 percent flow. All other zones, which have lower cooling requirements, will automatically adjust the VAV damper to maintain comfort.

For VAV systems, particularly those with VSDs installed, it is important to consider the impact of SAT reset on fan power; if the SAT is reset too high, then the energy saved due to reduced reheat will be overshadowed by increased fan power requirements.

Variable-Air-Volume Static Pressure Reset

Building and system affected: County Extension, Engineering, Youth Services.

This control strategy would involve implementing a static pressure reset control strategy for the VAV air handling units. The existing air handling units currently operate under an industry-standard, constant static pressure set-point. The VAV zone box dampers are then modulated and reheat coils enabled to control space temperature. This type of sequence has been the accepted or “standard” type of sequence in the past, but as energy consumption has become more of a concern, more efficient control sequences have been developed and should be implemented.

A static pressure reset control strategy will operate the fan more efficiently, while maintaining the same level of comfort control. Instead of controlling fan speed to a constant static pressure set-point, the fan speed will be controlled by VAV box need, to ensure that at least one of the system’s VAV box dampers is fully open. This will make the static pressure of the system dynamic and will allow the fan speed to decrease more during part-load conditions than under the current operation. The new sequence should control the supply fan speed off of zone damper positions. High limit and low limit set-points for duct static pressure would also be implemented to ensure that no damage occurs to the existing duct work. These limits should be obtained from the manufacturer, or calculated by a professional engineer.

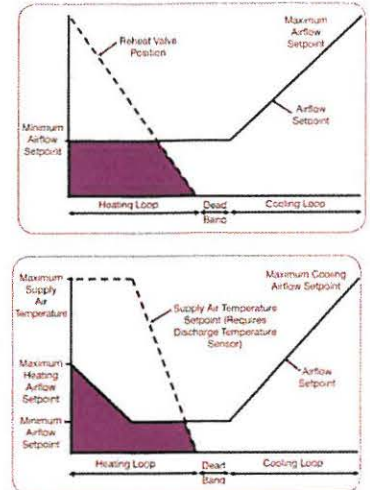
Implementation of this strategy will not require any additional hardware to be installed on the control system; however, the controls sequences will need to be modified so that supply fan speed is no longer controlled off the static pressure set-point, instead the supply fan speed will be controlled by zone damper positions. The sequence should modulate the fan speed to ensure that at least one of the VAV zone dampers is always 95% open. High limit and low limit set-points for duct static pressure will also need to be implemented to ensure that no damage occurs to the existing duct work. These limits should be obtained from the manufacturer, or calculated by a professional engineer. Performance maximization would provide the monitoring of systems to ensure cooling or dehumidification requirements are met throughout the year, and provide adjustment of static pressure reset parameters, if necessary.

Dual Maximum VAV Control

Building and system affected: County Extension, Engineering, Youth Services.

VAV boxes with reheat coils are traditionally controlled as a supply airflow set-point is reset from the zone maximum airflow set-point when the space is at full cooling proportionally down to the zone minimum when no cooling is required. This minimum airflow rate is maintained as the space temperature falls through the dead band into heating mode. The heating coils then activate and modulate to maintain the space at the heating set-point until the hot water valve is full open. This logic is effective at maintaining comfort in spaces, but results in large amounts of reheat energy. As an alternative, more modern control strategies very often use Dual Maximum logic, where a separate maximum heating airflow set-point is calculated, independent from the maximum cooling airflow set-point. Heating coils are still modulated to provide adequate heating to spaces, but the lower supply airflow means less reheat is required, and can save significant fan energy at the air handling units supplying VAV boxes.

Benefits of dual maximum logic over traditional VAV reheat logic include lower fan energy and lower cooling energy use, improved thermal comfort by not pushing zone temperature to heating set-points during the cooling season, and reduced stratification due to supply air temperature control.



Dual maximum VAV control

Lower VAV Minimum Box Flow Set-points

Building and system affected: County Extension, Engineering, Youth Services.

When traditional shut-off VAV systems are designed, the engineer typically calculates a minimum heating flow requirement for each zone served by the system. Anytime the zone is in the heating mode the zone damper modulates to maintain that minimum heating flow set-point, and the supply air is reheated (after being cooled at the air handler) from the supply air temperature up to the temperature required to meet the zones heating requirements. Many of the existing zone dampers for the facility are operating to maintain heating minimum flow rates of over 60% of the design cooling supply air flows.

The reason the amount of heating supply air is a concern is because when a zone is in the heating mode its reheat coils are required to heat the total amount of air entering the zone from the cooling supply air temperature, currently 55°F, up to the required supply air temperature. All of the energy used to heat the supply air from 55°F to roughly 70°F (space temperature) is considered waste heat, because supply air with temperatures below 70 °F is useless in the heating mode. Therefore, any excess air that is being provided to the zones is requiring extra heat to be wasted in the process of heating the air from 55 °F to 70 °F.

It is recommended that the minimum heating supply airflows for each zone be optimized to reduce the amount of air provided to each space during the heating mode. For zones similar to those in the GEB and COM Buildings, the minimum heating airflows would be set to the minimum ventilation requirements for the areas. For other areas, that require minimum flows above the minimum ventilation requirement, it is recommended that a heating minimum airflow reset be implemented. A more modern type of operation will reduce the amount of reheat energy consumed by the zones during the heating mode, while still maintaining space heating requirements.

Heating energy is saved throughout all months of the year due to a decrease in the amount of wasted reheat energy being consumed. Electrical fan energy savings will also result from reducing the VAV box minimum heating airflows, due to the reduced amount air the fan needs to supply.

Replace 3-way valves with 2-way and convert pumping to variable speed

Building and system affected: County Extension, Engineering, Youth Services.

In order to improve operating efficiency and controllability of the retrofitted system, the replacement of all existing chilled and heating water valves located on air handling units, variable-air-volume boxes and fin-tube convectors would be performed. The system could then be balance to new water flows determined from calculated building loads, and the secondary loop would then be converted to a variable flow system with variable frequency drives on the building pumps.

Energy savings and improved controllability will come in part from installing new valves and a variable frequency drive on the secondary heating water loop. The new installation will enable the system to achieve energy savings through lower pumping energy.

Chilled water temperature set point reset

Building and system affected: Youth Services.

A chiller's power consumption will increase as its leaving water temperature decreases. For this reason, operating a chiller at a constant year-round temperature, as the existing chillers operate, is wasteful when warmer water temperatures will suffice. The chilled water reset feature adjusts chilled water temperature upwards as cooling needs decrease. Building and system conditions are monitored to insure that the zone or coil needing the most cooling is always satisfied.

Hot water temperature reset

Building and system affected: County Extension, Engineering, Youth Services.

A hot water boiler's operating efficiency is proportional to its return water temperature. As the return water temperature decreases the boiler efficiency increases. For this reason, operating a boiler at a constant year-round temperature, as the existing boilers operate, is wasteful when cooler water temperatures will suffice. The hot water reset feature reduces hot water temperature as heating demand decreases. Building and system conditions are monitored to insure that the zone or coil needing the most heating is always satisfied. As a result, heating energy is saved during part-load conditions due to increased boiler efficiency.

Lighting System Opportunities

LED Lighting Retrofits

Building and system affected: All buildings

This opportunity includes replacing all 32-watt T8 lamps and ballasts with the latest and most efficient product in lighting technology – LED lamps. LED lamps use only 38% as much electrical energy as 32-watt T8s.

LED lamps also have extremely long life. The rated life of the lamp is 50,000 hours, compared to typical T8 lamps, which are rated at 20,000 or 25,000 hours. The performance of the LED lamp is also guaranteed by the manufacturer for five years, whereas T8 fluorescent lamps have only a one-year warranty.

Additionally, unlike fluorescent lamps, LED lamps do not require ballasts to operate. LEDs have a built-in driver that converts AC current to DC current to power the diodes, and this driver is covered by the manufacturer's five-year warranty as well. This further reduces the maintenance cost of LED lamps over fluorescents.

All existing fluorescent lamps will be replaced with super-efficient 12 watt LED lamps to provide a uniform lamp type throughout the building. Selection of retrofits will be made based on a full lighting survey to be conducted during an investment grade audit. These selections will be based on current space lighting density, space density requirement, and existing fixture type and configuration with an end goal of reduced number of post retrofit lamps and increased energy efficiency over traditional lamp-for-lamp and ballast replacements.

Exterior LED Lighting

Building and system affected: All buildings

Well-designed outdoor lighting is cost-effective, controls light by directing it where it is needed, reduces glare, distributes illumination evenly, and reduces light trespass. The most common lamps used for outdoor lighting are high-intensity discharge (HID) metal halide. In recent years, LED lamps have become high quality sources for outdoor lighting as well, offering good color quality and better control options than HID sources. The following points are important in the design of exterior lighting:

- Pick the appropriate design illumination level. An average of 1 foot-candle (or less) is usually sufficient.
- Use whiter light sources. Recent research, although not yet codified, shows that the whiter light produced by LEDs provides better "see-ability" than an equivalent amount of yellowish light from HID lamps.
- Provide controls. Use time clocks, photo cells, or motion detectors to run the lights only when needed or to dim them as appropriate.

Occupancy-Based Lighting Control

Building and system affected: All buildings

Reducing the connected load of the lighting system represents only one part of the potential for maximizing energy savings. The other part is minimizing the use of that load through automatic controls. Automatic controls switch lighting based on occupancy. In situations

Lighting Benefits:

- Reduced Energy Costs
- Improved light quality
- Decreased maintenance



Existing fluorescent lighting



LED retrofit lamps

where lighting may be on longer than needed, left on in unoccupied areas, or used when sufficient daylight exists, 360 Energy Engineers would install automatic controls.

Occupancy sensors detect the presence of people in a room and automatically turn off lights in unoccupied areas. They are suited for areas that are intermittently occupied, meaning unoccupied for two hours or more per day, and where lights typically remain on when the space is unoccupied. Restrooms, private offices, and conference rooms are excellent applications for occupancy sensors.

Site observations revealed that a majority of the lighting fixtures in the buildings remain on many times when spaces are not being occupied. Energy used for lighting could be significantly reduced by turning off lighting fixtures in spaces when they are unoccupied.

Daylighting Control

Building and system affected: Youth Services Center entryway and rooms exposed to skylights; K Street Complex storage areas; Motor Vehicle Office.

Systems that use daylight to supplement electric lighting offer the potential to cut energy use, reduce peak demand, and create a more desirable indoor environment. However, it takes careful planning to achieve all the possible benefits from a daylighting system. In implementing this measure, 360EE focuses on these four basic principles to produce an effective daylighting system:

- Bring in the light. Light can be brought into a building via conventional glazing, light shelves, skylights, and clerestory windows or with more advanced approaches such as light pipes or specialized reflective materials.
- Eliminate glare. Direct sunlight can cause very uneven luminance ratios that are distracting or even painful to occupants. A good design combats glare using translucent materials and bouncing direct light off surfaces such as painted walls, perforated metal, or fabrics.
- Adjust electric lights as appropriate. Without lighting controls, daylighting will not save any energy. Automatic controls that sense ambient daylight are the best approach, because they ensure that electric lighting will be reduced when enough daylight is available.
- Commission the system. Many daylighting systems fail to deliver the expected benefit because they are not commissioned. Commissioning consists of adjusting photosensors and ensuring proper sensor placement so that the electric lighting system responds properly to the presence of daylight.

Lighting occupancy sensors:



Building Envelope Improvements

Replace Existing Windows

Building and system affected: County Extension, Shop, Northeast Senior Center.

Windows represent the largest source of unwanted heat loss and heat gain in the facility. This is due to the current windows providing less insulation (have lower R-values) than the walls or roofs, and because the windows represent a common source of air leakage. The window or glazing systems of the building are beginning to fail. These failing systems are single-pane glass. These facilities, considering the condition of many of the windows, presents an excellent opportunity to use the latest in advanced window design, which will provide savings and comfort. Options include:

- Spectrally selective glass. This type of glass can maximize or minimize solar gain and shading depending on the chosen selectivity.
- Double-glazed, low-e systems. Layers of low-e film are stretched across the interior air space between glass panes, and windows with this feature offer R-values as high as 8.
- Gas filled windows. Using argon or krypton gas between glass panes, this technology minimizes the convection currents and conduction through the gas-filled space, reducing overall heat transfer through the window.

Building Envelope Sealing and Weather Stripping

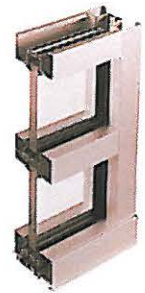
Building and system affected: All Buildings.

For the building envelope, air infiltration is often a major energy drain that can be addressed. Outside air can penetrate a building through a variety of places, most commonly the windows, doors, walls, and roof. In general, a building envelope should meet recommended infiltration standards. A frequent result of infiltration problems is an increase in building heating, cooling, and/or electrical loads (when, for example, occupants may bring in space heaters or fans). In addition, the escape of conditioned air forces the air-handling system to work longer and harder to provide the required space temperature. To reduce air infiltration, each major area of infiltration will be sealed with appropriate materials and techniques such as weather stripping on doors; sealing and caulking on windows; and proper insulation distribution in walls, ceilings, and roofing.

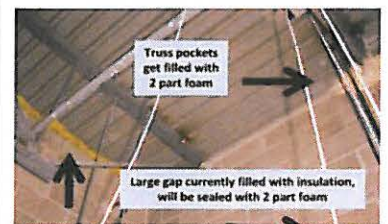
Reducing infiltration will result in a reduction in heating and cooling loads. Typical savings for a large office building range up to 5 percent of heating and cooling costs.

Window Replacement Benefits:

- Improved efficiency
- Improved Aesthetics
- Improved comfort



Efficient window section

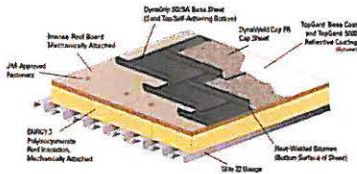


Roof Replacement

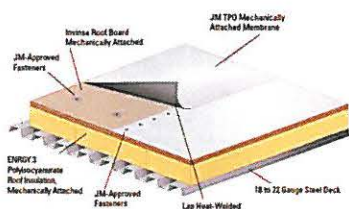
Building and system affected: Extension Office, Youth Services, City-County Property Management (K-Street), and Northeast Senior Center.

This energy conservation opportunity will include replacing the existing built-up roof of the building with a new built-up roof. The existing roof of the building is the original, installed during the construction of the building. The roofs are all showing signs of deterioration and has leakage problems. The thermal resistance of the roof is typical of a roof of its age. It is recommended that a new built-up roof be installed to replace the existing roof. The new roof would alleviate the leakage problems currently being experienced. In addition, the new roof would have better thermal properties and would reduce the amount of energy consumed to condition the building.

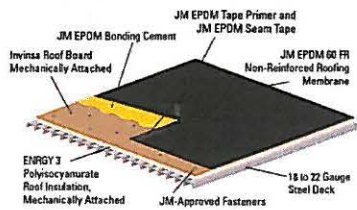
Savings would occur due to the increase in thermal resistance of the roof. The increase in thermal resistance would decrease the amount of energy needed to condition the building. Other savings would be released due to less roof-related maintenance problems.



Modified Bitumen type roofing



TPO type roofing



EPDM type roofing

Shingle Roof, Gutter and Downspout Replacements

Building and system affected: Driver's License and Motor Vehicle.

The roofing systems on the Driver's License and Motor Vehicle buildings are sloped shingle and due for replacement soon. In addition, the gutters and downspouts that were originally installed are a residential capacity and cannot handle heavy rains, resulting in water overflowing the gutter around the building.

The scope would replace the shingle roof, providing a long last roofing system. In addition, the existing gutters and downspouts will be replaced with larger, commercial size materials to better handle water away from the building, reducing the potential for foundation problems.

Solar Photovoltaic PV

Building and system affected: XXX system in the YYY building.

Photovoltaic panels will be installed on the roof to generate electricity to offset a portion of the building's electrical use. Solar is considered to be one of the cleanest forms of energy available for electricity and thermal energy usage in a facility. By utilizing the energy from the sun, photovoltaic panels convert the spectrum of incoming wave lengths of energy into electricity for usage or storage throughout the facility. Since the sun's energy is available typically when the building is occupied, this energy is best used for consumption in electrical equipment.

The current high cost of photovoltaic panels makes solar PV a difficult payback. Also, another major drawback of photovoltaic is their extremely low conversion efficiency, roughly 8-12% that makes this technology difficult to install with a positive economic impact.

A XXX kW photovoltaic system will be installed in the [location]. These panels will be interconnected into building's electrical system so that power generated can be used by the electricity using end-use devices throughout the building. Electricity generated by the photovoltaic system will directly offset metered electrical usage and demand thus significantly reducing electricity supplied to the building by the utility company

Solar Energy Opportunities

Rooftop Solar Photovoltaic Systems

Building and system affected: All buildings

Solar is considered to be one of the cleanest forms of energy available for electricity and thermal energy usage in a facility. By utilizing the energy from the sun, photovoltaic panels convert the spectrum of incoming wave lengths of energy into electricity for usage or storage throughout the facility. Since the sun’s energy is available typically when the building is occupied, this energy is best used for consumption in electrical equipment.

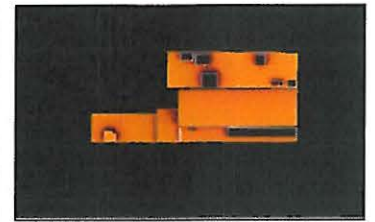
The design of a rooftop solar photovoltaic system requires careful analysis of irradiance (available sunlight), obstructions, and facility requirements. Analysis software is used to determine the irradiance potential at each geographic location. After determining the obstructions (including neighboring buildings and trees), the designer can layout an array of solar panels to determine the maximum capacity of the rooftop system. Building energy modeling software maps the hourly building electrical load to determine how much electrical energy will be saved each hour of a typical year. Using this method, an accurate prediction of electrical savings can be determined.

A preliminary design was completed for each building to determine potential savings. The table below shows the recommended solar PV array that will be installed on each building. The size of the array can typically be adjusted to meet financial or savings goals.

Building Name	Address	Array Size (kW)	Electrical Energy Savings
Motor Vehicles Building	615 N. 45th St.	26.47	31.35%
County Extension office	444 Cherry Creek Rd	8.4	15.59%
County Engineering Office	444 Cherry Creek Rd	54.6	39.21%
Election Commission	601 N. 46th St.	12.6	20.98%
Driver's testing	500 W. O St.	14.1	16.71%
Youth Services Center	1200 Radcliff St.	39.9	5.69%

Solar PV System Benefits:

- Reduced Energy Costs
- Renewable Energy Generation
- Reduced Carbon Footprint



Irradiance chart of K Street Complex rooftop



Rendering of K Street Complex with Solar PV Array



Rendering of Engineering Building with Solar PV Array



Rendering of Motor Vehicle Building with Solar PV Array

Utility Cost and Energy Consumption

Cost

Electricity

The facilities included in this preliminary audit are serviced with electrical power by the Lincoln Electrical System (LES). The Motor Vehicle, Election Commission, Northeast Senior Center, and Driver's License Testing are billed on the Small Commercial, Non-demand Rate as follows:

- Customer Charge - \$6.50 per month
- Facilities Charge per month
 - \$16.60 single-phase (\$14.25 in 2016)
 - \$51.50 three-phase (\$45.00 in 2016)
- Energy Charge
 - Summer (June 1 - Sept. 30): 9.08¢ per kWh for secondary (9.09¢ in 2016)
 - Winter (Oct. 1 - May 31): 6.06¢ per kWh for secondary (6.13¢ in 2016)

The Downtown Senior Center, Health Department, Extension Office, Engineering Office and Shops are on the Small Commercial Demand, Secondary Service Rate as follows:

- Customer Charge - \$25.00 per month
- Demand/Facilities Charge per month: \$14.90 per kW secondary
- Energy Charge
 - Summer (June 1 - Sept. 30): 3.40¢ per kWh secondary
 - Winter (Oct. 1 - May 31): 2.57¢ per kWh secondary

The City-County Property Management Building (K-Street) is on Small Commercial Demand, Primary Service Rate as follows:

- Customer Charge - \$25.00 per month
- Demand/Facilities Charge per month: \$13.65 per kW primary
- Energy Charge
 - Summer (June 1 - Sept. 30): 3.25¢ per kWh primary
 - Winter (Oct. 1 - May 31): 2.40¢ per kWh primary

The Youth Services Building is on the Large Commercial Demand Rate as follows:

- Customer Charge - \$275.00/month
- Demand/Facilities Charge per month: \$20.95 per kW secondary (\$19.95 in 2016)
- Energy Charge
 - Summer (June 1 - Sept. 30): 2.85¢ per kWh secondary
 - Winter (Oct. 1 - May 31): 2.44¢ per kWh secondary (2.37¢ in 2016)

With the source of heating at the Health Department and Downtown Senior Center being electric heat pumps, the heating electric consumption is metered and billed separately on the Heating Service rate as follows:

- Customer Charge - \$5.30 per month
- Facilities Charge per month: \$179.95 large service (\$169.70 in 2016)
- Energy Charge
 - Summer (June 1 - Sept. 30): 8.67¢ per kWh (8.74¢ in 2016)
 - Winter (Oct. 1 - May 31): 5.17¢ per kWh (5.23¢ in 2016)

The retail price of electricity in the commercial sector of the west north central region, which includes the states of Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota, is \$ 0.0920 per kWh (Energy Information Administration, Electric Power Monthly). This, however, does not take into account demand charges, which are relatively high for several of the larger buildings. On the whole, the rates paid for electricity at these facilities is lower than average for the region.

Fuel

The facilities included in this preliminary audit are serviced with natural gas fuel by Black Hills energy in transportation of the fuel. In the case of smaller facilities, Black Hills also retails the natural gas. For the larger facilities, the actual natural gas is purchased through a third party marketer, either Continuum or Centerpoint.

Fuel costs tend to be less tied to a fixed rate structure like electricity and therefore fluctuate throughout the season based on market conditions. In the last 12-months, the average cost of natural gas used by all facilities was \$ 1.00 per Therm (Th), where a Th is a unit of measure equaling 100,000 Btu's of energy. A cubic foot of natural gas contains between 950 to 1,150 Btu's of heat resulting from combustion, depending on environmental factors. As a comparison, the retail price of natural gas in the commercial sector of the west north central region is \$ 0.58 per Th, so the County is paying a much higher price than the regional average.

District Energy

The City-County Property Management (K-Street) building, like several other buildings nearby, are serviced with cooling and heating energy by a central district plant. Chilled water is provided for an average cost of \$ 330.00 per MMBtu or \$3.96 per Ton-hr. Heating water is provided at an average cost of \$ 10.85 per MMBtu, or \$1.085 per Therm.

Assuming the average seasonal efficiency of a chilled water system would be 0.9 kW per Ton, the average cost of chilled water paid is \$ 4.4 per kWh, which is roughly one hundred times more expensive when compared to consuming electricity to produce chilled water on site. However, the ownership costs of a chiller would be much higher. Hot water is more reasonably priced near the cost of natural gas.

Water/Sewer

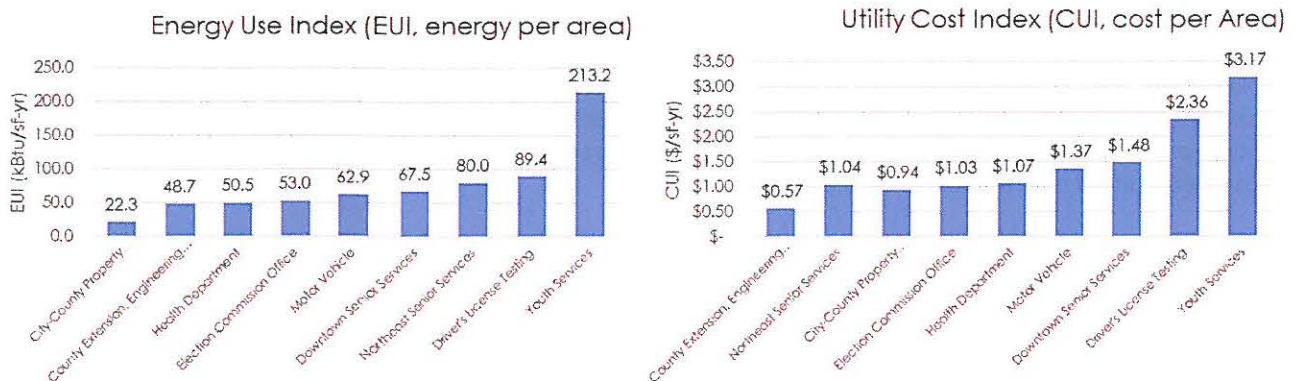
The facilities included in this preliminary audit are serviced with water and sewer by the City of Lincoln. This service is billed either monthly or bi-monthly, depending on the size of the facility, at the following rates:

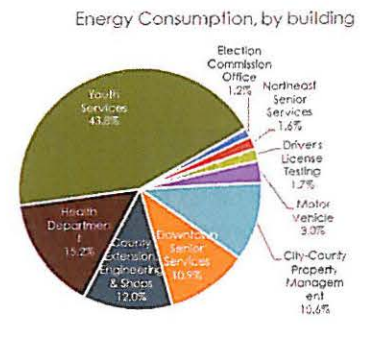
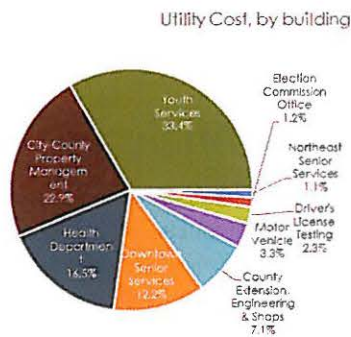
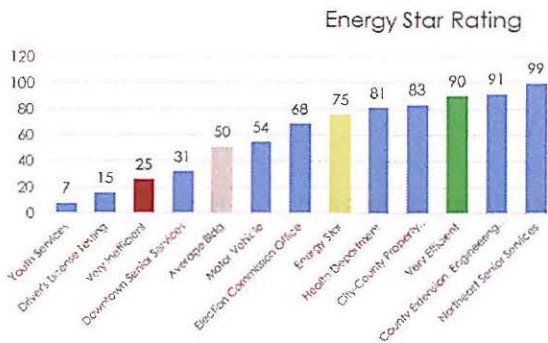
- Customer Charge: Varies at a fixed rate per month depending on meter connection size.
- Water:
 - \$ 1,344 per 100 cubic feet for the first 8,000 cubic feet in a single month
 - \$ 1,911 per 100 cubic feet for all 100 cubic feet over 8,000 cubic feet
- Sewer:
 - \$ 1.859 per 100 cubic feet for all water consumed

The total cost of water consumed and disposed is \$ 3.77 per 100 cubic feet or \$ 5.04 per 1,000 gallons. The cost of water charged in the Lincoln city limits is quite low, although no regional data is readily available. This minimizes the impact of a water conservation based project, which becomes an option over \$ 8.00 per 1,000 gallons, as the payback for that type of work would be limited. Because of this, no water conservation projects are recommended at this time.

Baseline Cost, Energy and Benchmark

The information below shows the utility consumption and costs for all buildings using several relevant metrics. Major takeaways include how significant of an outlier the Youth Services building is on a per square foot basis. While it is simple to understand that the building should be much higher due to its 24/7/365 use, it is also very low in energy efficiency when compared to like facilities on the Energy Star rating scale. The Energy Star chart also identifies five of the buildings which have measureable room for energy efficiency improvement, particularly Youth Services, Driver's License Testing, and Downtown Senior Services. On the contrary, the Health Department, Property Management (K-Street) building, Engineering Office/Shop, Extension Office and Northeast Senior Center do not have much room for energy improvement. Lastly, the relative significance of where the energy is consumed and utility costs are spent is shown in the pie charts. Here it can be seen that the Youth Services is by far the most significant. These types of metrics and data points are all to be considered when planning for a project to make the largest impact on utility costs.





Utility Incentives

Electric

- LES Sustainable Energy Program – HVAC, Controls, and Lighting Projects

The facilities in the scope of this project are serviced by LES (Lincoln Electric System). LES provides incentive funds through their Sustainable Energy Program. These funds are available to commercial customers who install energy-efficient HVAC, energy management control, and lighting equipment.

In most cases, the incentive amount is determined by LES after design parameters are established. After we have submitted a proposed design to LES, they will determine the exact incentive amount. These incentives are capped at 50% of the installed cost. Additionally, no LES customer can collect more than \$100,000 per year in combined incentives under the Sustainable Energy Program.

- LES Net Metering – Small Solar Installations

LES participates in a net metering program. This program provides energy credits to customers who add energy to the distribution system from a renewable source. Any solar, wind, or other renewable energy generator under 25kW qualifies for this program if installed according to LES requirements.

- LES Renewable Generation Program - Large Solar Installations

The LES Renewable Generation program is designed for solar energy generators sized between 25kW and 100kW. Qualifying systems in this program received net metering credits as well as a one-time capacity payment of \$1,000 per kW installed. This payment reflects the total distribution capacity requirement that is reduced by the installation of a customer-owned system. Since the customer is adding capacity, LES is providing monetary compensation.

Fuel

No Natural Gas incentives or rebates are currently available to Black Hills Energy Customers.

Financial Overview

Overview of all Measures Analyzed

The following tables outline the costs, annual energy, maintenance and total budget savings and financial performance from a simple payback perspective of every project considered and analyzed by 360 Energy Engineers during the Preliminary Engineering Audit. These energy conservation measures and facility improvement opportunities are a starting point to continue to hone in on developing the projects that make the most sense for Client and its future facility goals. Additional improvements can certainly be explored by 360 Energy Engineers during the Investment Grade Engineering Audit (IGA) at the direction of the Client.

These improvements analyzed were selected based on observations by our engineering team as well as conversations with County administration, facilities staff, and building occupants. Our goal is to provide the County with the information to make educated decisions about potential energy-conservation and facility-improvement projects.

County Facilities

Year	Utility & Maintenance Cost	Utility Savings	Maintenance Savings	Rebate and Avoided Cost	Total Savings	Debt Payment	Net Cash Flow
2017	\$600,245	-	-		-	\$0	-
2018	\$258,061	\$108,502	\$21,689	\$230,000	\$360,191	(\$540,068)	(\$179,877)
2019	\$372,503	\$111,757	\$22,340	\$130,200	\$264,297	(\$540,068)	(\$275,772)
2020	\$387,584	\$115,110	\$23,010	\$130,200	\$268,320	(\$540,068)	(\$271,749)
2021	\$403,118	\$118,563	\$23,700	\$130,200	\$272,463	(\$540,068)	(\$267,605)
2022	\$419,117	\$122,120	\$24,411	\$130,200	\$276,731	(\$540,068)	(\$263,337)
2023	\$435,597	\$125,784	\$25,143	\$130,200	\$281,127	(\$540,068)	(\$258,941)
2024	\$452,571	\$129,557	\$25,898	\$130,200	\$285,655	(\$540,068)	(\$254,414)
2025	\$470,054	\$133,444	\$26,675	\$130,200	\$290,319	(\$540,068)	(\$249,750)
2026	\$488,062	\$137,447	\$27,475	\$130,200	\$295,122	(\$540,068)	(\$244,946)
2027	\$506,609	\$141,571	\$28,299	\$130,200	\$300,070	(\$540,068)	(\$239,999)
2028	\$525,714	\$145,818	\$29,148	\$130,200	\$305,166	(\$540,068)	(\$234,903)
2029	\$545,391	\$150,192	\$30,023	\$130,200	\$310,415	(\$540,068)	(\$229,654)
2030	\$565,659	\$154,698	\$30,923	\$130,200	\$315,821	(\$540,068)	(\$224,247)
2031	\$586,535	\$159,339	\$31,851	\$130,200	\$321,390	(\$540,068)	(\$218,679)
2032	\$608,037	\$164,119	\$32,807	\$130,200	\$327,126	(\$540,068)	(\$212,943)
2033	\$760,384	\$169,043	\$33,791		\$202,833	-	\$202,833
2034	\$783,195	\$174,114	\$34,804		\$208,918	-	\$208,918
2035	\$806,691	\$179,337	\$35,849		\$215,186	-	\$215,186
2036	\$830,892	\$184,717	\$36,924		\$221,641	-	\$221,641
2037	\$855,819	\$190,259	\$38,032		\$228,291	-	\$228,291
	\$11,661,836	\$2,915,490	\$582,792		\$5,551,081	(\$8,101,027)	(\$2,549,946)

By leveraging utility and operational savings, avoiding future costs, and programming necessary facility improvements the County derives a 58% discount on the lifecycle cost of those improvements.

Financial Notes

All pricing in this report is a conceptual estimate performed by 360 Energy Engineers. Actual pricing will be established at the conclusion of the IGA and will be based on subcontractor pricing of 360 Energy Engineers' final design prior to County moving forward with a project.

Cost estimates shown on this page are the estimated turnkey project cost – including all design, engineering, materials, labor, construction management, commissioning, and performance maximization.

Financing Assumptions

Round Project Cost: \$6,069,700
 Finance Period: 15 yrs.
 Interest Rate: 4%
 Energy Escalation Rate: 3%
 General Inflation: 3%
 Length of Analysis: 20
 Term of Loan: 15
 Payments/Yr.: 4
 Down Payment: \$0

County Solar

Financing Assumptions

Round Project Cost: \$626,000; Finance Period: 15 yrs.; Interest Rate: 4%; Energy Escalation Rate: 3%; General Inflation: 3%; Length of Analysis: 30; Term of Loan: 15; Payments/Yr.: 4; Down Payment: \$0

Site/Size	Turn-key Cost Estimate	Max Possible Utility Rebate (one time)	SITC @ 30%	Net Project Cost	30 Yr. Avg. Annual Savings	Payback with SITC
County Extension :: Solar PV (8.4 kW)	\$33,000	\$3,990	\$9,900	\$19,110	\$1,727	17.5
County Engineering & Shop :: Solar PV (54.6 kW)	\$210,000	\$25,935	\$63,000	\$121,065	\$7,647	25.1
County Election Commission :: Solar PV (12.5 kW)	\$41,000	\$5,985	\$12,300	\$22,715	\$1,827	19.7
County Motor Vehicle :: Solar PV (26.5 kW)	\$86,000	\$11,875	\$25,800	\$48,325	\$7,668	10.3
County Driver's Testing :: Solar PV (14 kW)	\$46,000	\$6,698	\$13,800	\$25,502	\$2,076	19.5
Youth Services :: Solar PV (40 kW)	\$210,000	\$18,953	\$63,000	\$128,047	\$6,529	31.1
Totals	\$626,000	\$73,436	\$187,800	\$364,764	\$27,474	13.3

This includes solar photovoltaic energy systems at the County Extension, engineering & Shop, Election Commission, Motor Vehicle Department, Drivers Testing, and Youth Services. The percentage of electrical energy savings is presented below.

The Solar Investment Tax Credit is available to private entities to reduce the initial outlay of capital for solar pv systems. 360 Energy Engineers will develop a creative financing package that includes third party ownership so that the County can reap the benefits of the SITC even though it is a public agency.

The LES rebate program offers significant assistance to the installation of solar pv systems as well. The initial rebates are in excess of 10% of the cost of the system helping to further reduce the capital outlay required.

By leveraging the SITC the County will have a highly visible success in using renewable energy in freshly improved, energy efficient facilities.

Building Name	Address	Array Size (kW)	Electrical Energy Savings
Motor Vehicles Building	615 N. 45th St.	26.47	31.35%
County Extension office	444 Cherry Creek Rd	8.4	15.59%
County Engineering Office	444 Cherry Creek Rd	54.6	39.21%
Election Commission	601 N. 46th St.	12.6	20.98%
Driver's testing	500 W. O St.	14.1	16.71%
Youth Services Center	1200 Radcliff St.	39.9	5.69%

Technical Approach

Our Philosophy

Innovative designs and customized solutions create an opportunity for your project to be successful, but the detailed analysis and planning that goes into our solutions ensure that success. Our team completes its energy analysis and project design and review in-house, refusing to leave the success of your project in the hands of unconcerned third parties. Our in-house engineering team commits the time, effort, and expertise necessary to properly design every facet of your customized solution.

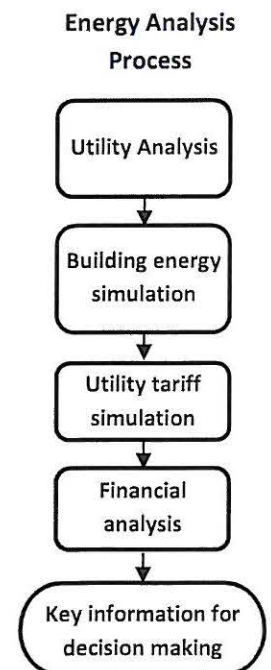
For Lincoln-Lancaster County, each aspect of the project is identified, analyzed and engineered by 360 Energy Engineers' professional engineers to produce full designs, including drawings and specifications, for each project. This allows 360 Energy Engineers to receive competitive bids from contractors without jeopardizing the performance or quality of the project. This competition, coupled with solutions engineered for maximum value, results in the lowest costs possible to be passed directly on to Lincoln-Lancaster County.

This approach is uncommon for most performance contracting projects, where broad, undefined concepts are usually passed to a single contractor to price a turn-key solution. Not knowing details such as sizing, routing, equipment features, etc., the contractor has no other option but to make grossly conservative assumptions and price accordingly to make sure there is money to cover unknown issues during installation.

Energy Savings Analysis Methodology

In order to evaluate how the Client's facilities use energy, formulate specific opportunities for energy conservation and accurately calculate energy savings, 360 Energy Engineers' engineers perform a detailed analysis process that encompasses:

- Analyzing utility data to establish a base year's utility consumption, including normalizing energy use for weather.
- Running energy analyses using DOE-2.2 (eQUEST interface). By inputting weather files, building geometry, material properties, equipment schedules, and system components, the program computes building loads and outputs building energy use.
- Building a detailed simulation of each facility's utility tariff to obtain an accurate annual dollar savings
- Performing a comprehensive financial analysis of each conservation measure being considered to provide owner/decision makers with the data needed to make informed decisions.



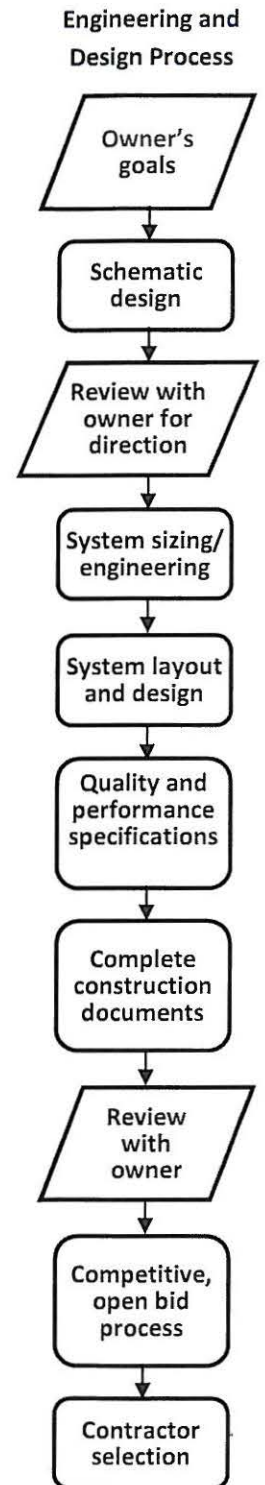
Design and Engineering Methodology

360 Energy Engineer’s approach to project design and engineering is what differentiates us from our competition. 360 Energy Engineers prides itself on being a true engineering company, contrasting most performance contracting companies that broker most aspects of the project, including engineering and design, to subcontractors. We develop a complete set of construction documents detailing our innovative designs and customized solutions. These documents are used to solicit competitive, consistent bids from contractors, and they are ultimately the roadmap for the contractor s to use to ensure a successful project. Once the project is designed, our engineers remain heavily involved in the construction management process, guaranteeing that the intent and particulars of their design are properly installed, preventing contractors from omitting, neglecting, or modifying essential components of their original design. Through this constant and focused attention to detail, we deliver on the promise of our customized solutions and innovative designs – providing you a project of incomparable value.

Comprehensive and competent design and implementation not only create a high quality project, they create a smaller project price tag. In traditional performance contracting projects, clients pay significant premiums to fund the exorbitant risk for the performance contractor and its subcontractors. This risk results from the limited clarity and detail provided before the performance contractor commits to a guaranteed price. Establishing pricing on conceptual designs and estimates results in both the performance contractor and subcontractors hedging prices with hefty risk premiums. It also prevents the ability to attain competitive apples-for-apples bids from contractors, further confusing what the owner is actually getting for their money.

Below is a table which compares and contrasts 360 Energy Engineers’ engineering approach to traditional performance contracting.

360 Energy Engineers	Traditional PC	Advantage to 360 approach
Identify root of issues	Identify old equipment	Search for underlying cause of problems
Develop holistic solutions	Select new equipment	Diagnose problems not symptoms
Complete project design	Equipment replacement	Provide value of professional design
Create complete bidding documents	Identify basic project components for bidding	Competitive, low-cost bids instead of high pricing to cover risk of PC’s vague scope
Detailed drawings and specifications	Favored contractors fill in the blanks	Eliminates risk to contractors, leading to lower pricing and superior quality
Product independence	Proprietary products	Best products to address your specific needs
On-staff design engineers	Contractors do design	Qualified engineers fully develop solutions



System Selection Criteria Methodology (optional)

The projects that will be developed, designed, and competitively bid by 360 Energy Engineers on behalf of the County will be focused on six main goals: economics, indoor environment quality, ease of maintenance, reliability, building physical and aesthetic requirements, and additional requests from the entity. It is an important collaborative effort between our team of engineers and the district to weigh multiple options with the end goal to move forward with the systems that make the most sense based on criteria important to Lincoln-Lancaster County.

Economics

This includes factors such as first cost, energy and maintenance costs, typically evaluated as the overall life-cycle cost. 360 Energy Engineers approach is to provide comparison of systems in both a first cost and life-cycle cost model.

Indoor Environmental Quality (IEQ)

This is the system's ability to provide a comfortable environment (Temperature, humidity and air movement), quiet and good air quality. It is critical for a healthy and productive learning environment within the schools.

Ease of Maintenance

While maintenance and contractors are available in Southwest Kansas, not all systems can be serviced by these firms. Preference is for a system that can be maintained immediately, which is often times local contractors. 360 Energy Engineers will work closely with the hospital to determine high quality contractors and utilize existing contractors comfortable with the district systems.

Reliability

This is the system's probability and frequency of breaking down and potentially interfering with the facilities operation. Redundancy and backup is also a key factor in assessing a system's reliability specifically for a district.

Building Physical and Aesthetic Requirements

In retrofit projects, your system choices are limited due to space and building construction constraints. Additionally, the noticeability and appearance of the equipment is important when you want occupants' attention to be focused on the architectural features of the building.

Additional Requests from Client

We recognize that often times the County has additional requests on certain systems, manufacturers, etc. and it is important to us to incorporate any additional decision-making criteria required by personnel, decision-makers, and the community in weighing the benefit/drawbacks to potential systems in the facilities.

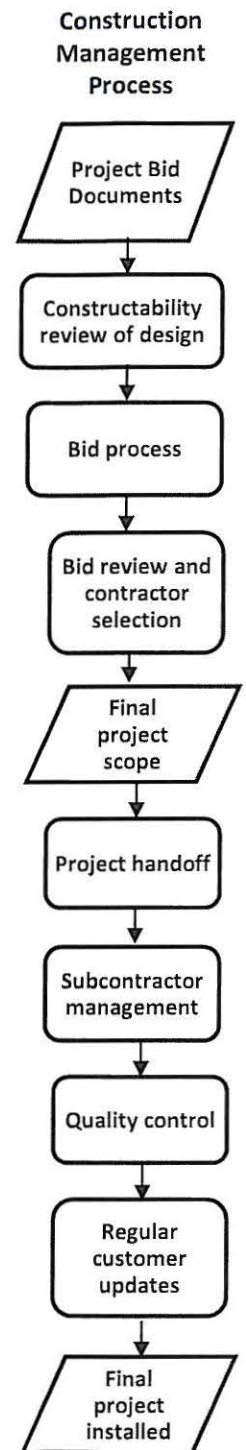
Construction Management Methodology

Project implementation through 360 Energy Engineers eliminates many of the hassles associated with the typical construction process. Our construction team's top priority is to ensure that the installed project meets our client's needs and the engineer's design. 360 Energy Engineers' construction manager oversees every aspect of the project's implementation and ensures that the project is built as designed.

360 Energy Engineers' construction management coordinates the contracting efforts with the owner and engineer. This careful coordination is essential to ensure the project is completed with minimal disruption to the owner's operations, is installed in a timely manner, is delivered on budget, and performs as the engineer intended. By acting as the sole source of accountability for your project, 360 Energy Engineers' construction team ensures that you receive the highest-quality, most cost-effective project installed in your facilities.

Below is a table which compares and contrasts 360 Energy Engineers construction management approach to the traditional performance contracting approach.

360 Energy Engineers	Traditional PC	Advantage to 360 approach
Ensure quality implementation	Verify project progress	Verifies quality defined in engineer's design and maximizes performance
Inspect all work by contractors	Contractor designed most work	Contractor meets design requirements rather than being given free reign
Verify compliance with engineer's design	Ask contractor if work is per design	Maximizes performance through system life and reduces total operating costs
Pay contractors when work complete per design	Pay contractors upon receiving invoice	Your money is protected until contractor has completed quality installation
Professional engineer who designed project performs final inspection	Contractor who designed and installed project gives approval	You ultimately get what you pay for with 360EE, contractor is free to cut corners with PC.
Complete system commissioning	Control system validation	Assurance that all systems perform as designed with 360EE, validation that controls appear to manipulate system properly with PC.



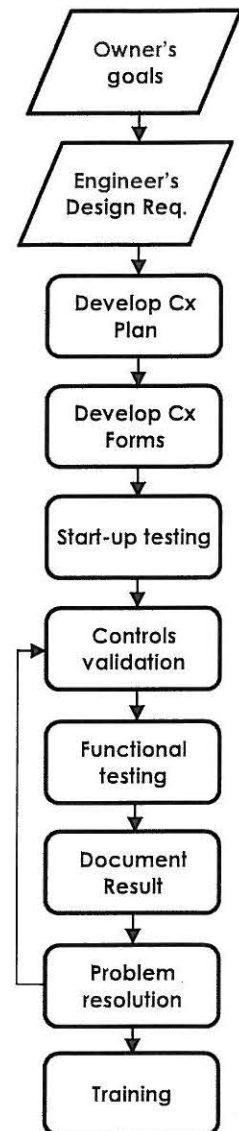
Commissioning Methodology

360 Energy Engineers' primary goal on each project is to transform the owner's goals and requirements into the function of their building systems. In order to achieve this goal, 360 Energy Engineers' utilizes a systematic commissioning process that eliminates the common disconnects between the owner's goals, 360EE's engineering and design, contractor installation and final operation of each building system. Our polished commissioning process is just one of several reason why, project after project, we stand out from our competition.

360 Energy Engineers' commissioning is predominantly a quality assurance function – a verification of system performance, relying on enhanced field testing upon completion of construction. As with all quality assurance activities, simply testing the end product does not guarantee performance and may only serve to highlight performance deficiencies to be corrected. In order to gain the greatest possible benefit from the commissioning process, 360 Energy Engineers' commissioning process contains all of the following elements:

- Continual Quality Assurance. 360EE's engineers and construction team make concerted efforts to continually build quality into all phases of the project, not just at the final performance testing. They carefully monitor construction progress and verify compliance with contract documents and overall standards of quality.
- The Commissioning Plan. This document is developed by 360 Energy Engineers engineering and construction teams to define the scope and format of the commissioning process and the responsibilities of all involved parties. The Commissioning Plan is provided to all commissioning team members to inform them of the intent and scope of the commissioning work, to ensure inclusion in the project scope, and to expedite the commissioning process.
- Preparation for Testing. To prepare for the system performance testing, 360 Energy Engineer's construction team and the contractors carefully examine the construction documents, submittals and contract revision documents. The contractors develop and provide signed start-up forms (and/or Pre-functional Test Checklists) to 360EE's construction team for review and approval prior to beginning test and balance (TAB) and functional test activities. Using these forms, each contractor must verify that the systems are installed in compliance with the construction documents, are clean and properly prepared for operation, are fully functional for test and balance, and ready for functional testing. 360's engineers write all Functional Test Procedures, which identify the specific functional tests to be performed.
- Functional Testing. Functional testing is performed by experienced and qualified technicians of the contractor(s) responsible for installation as facilitated witnessed and documented by 360 Energy Engineers. Functional testing verifies proper sequencing, operation and performance of installed equipment and systems under realistic operating conditions. The functional testing follows the written Functional Test Procedures with test results documented for permanent record.
- Documentation. Startup forms, TAB forms, and Functional Test Procedures are developed to guide the commissioning process. Specific written documentation is maintained for all other commissioning activities. Commissioning reports are generated by 360EE's construction team to document project issues, deficiencies and status of construction and/or testing. Reports and resolution are tracked for the duration of the project. At the end of the commissioning process, all documentation is assembled and summarized in the final commissioning report.
- Problem Resolution. When a report is issued to address an identified deficiency, 360EE's construction manager forwards it to the appropriate parties to initiate corrective action in an expeditious manner. 360EE's engineers are relied on for design modification and issuance of final design details and the contractors are relied on for implementation of that design.

360 Energy Engineers' Commissioning Plan



Measurement and Verification Methodology

The measurement and verification (M&V) process is often the most confusing part of a performance contract. 360 Energy Engineers' approach is designed to provide a clear path to measurable energy savings. Instead of measuring the success of the project based on simplified prescriptive calculations laden with assumptions, all provided by and in favor of the performance contracting company, 360 Energy Engineers prefers to measure savings at the meter, where it counts, using the International Performance Measurement and Verification Protocol (IPMVP) Option C: Whole Facility. This approach is uniformly recommended to be used on facilities where several energy conservation opportunities (ECMs) have been implemented, or where the ECM is expected to affect all equipment in a facility, which is nearly always the case with a comprehensive energy conservation project.

Recommended M&V Method:

- IPMVP Option C: Whole Facility verification for electric and propane savings
- IPMVP Option A: Retrofit Isolation for water conservation measures

Company Background

360 Energy Engineers is a privately held, product independent company with an unbiased, clean-slate approach to developing solutions that make sense for our customers' specific situation and needs. We have an unwavering commitment to offer our clients substantially greater value in their energy efficiency and capital improvement projects by exemplifying three vital characteristics not available from any standard engineering firm or traditional performance contracting company. By focusing on our clients' priorities and needs, providing superior engineering, and proudly demonstrating the true costs of our projects, our solutions offer unparalleled value.

These three core tenants that make up the foundation of our company are Superior Engineering, Incomparable Value, and Client Commitment. We look forward to the opportunity to prove our philosophy and approach to developing and implementing successful projects for Lancaster County and the Public Building Commission.

Superior Engineering

The innovative and meticulous design efforts of our experienced team of engineers leave nothing about your project to chance. Our team's engineering approach, which is characterized by innovative solutions, customized strategies, careful analysis and design, and most importantly communication with the County is meant to provide you with solutions to your energy and facility needs that far surpass those from any other company. Not only does our team commit the time and attention to provide you with quality observation, analysis, engineering and design, we are adamant to ensure understanding of the project direction by our clients throughout the entire process.

Incomparable Value

360 Energy Engineers' structure and approach allow us to deliver our unmatched commitment and superior engineering at a lower price than traditional performance contractors or the typical design-bid-build process. Most importantly, we are able to deliver this better price without making the sacrifices to engineering, construction, support and overall quality that are routine in performance contracting and traditional construction practices. To prove our superior value, every component of the cost of our solutions is laid out simply for our clients to understand prior to implementing a project.

Client Commitment

Our firm commitment to meeting the needs of our clients not only leads to better projects, it leads to projects at lower costs. We spend the time to educate each client on our innovative process, to listen and collaborate at each step along the way, and to work tirelessly to ensure each client's ultimate satisfaction. By working closely with and valuing the input of every client, we are able to deliver a higher-quality project that more effectively satisfies their needs – and to do so at a price that is superior to that of traditional engineering services and performance contracting firms.



360 Energy Engineers President and lead Professional Engineer (PE), Scott McVey, spent time as the Energy Manager for Kansas University



360 Energy Engineers has two professional engineers (PE) on staff licensed in Nebraska completing full design and stamping of projects.

Next Steps

Below is an approximation of the schedule of events to complete an energy efficiency and facility improvement project with 360 Energy Engineers. 360 Energy Engineers will work with your administration to ensure that their priorities dictate the timeline whenever possible.

All timeline information is preliminary, and is subject to change based on a variety of conditions, including the scope of project that County selects to pursue; the timeliness with which each step is begun; and the availability of 360 Energy Engineers' Professional Engineers and Certified Energy Managers.

The Client Commitment requested is 2.5% of the estimated cost of the agreed upon IGA Scope of Work. This is included and financed as part of the necessary project engineering costs if the County moves forward with a project.

Recommended Next Step:

1. *Move forward with Investment Grade Engineering Audit (IGA):* Contingent contract for design and turn-key project development services from 360 Energy Engineers.

Anticipated Schedule

	Date	Cost	Notes
Begin Preliminary Audit	November 9, 2017	-	Engineering analysis
Present Preliminary Audit	January 19, 2017	-	Proceed with IGA
Reconvene Staff Representatives	February 2, 3 or 6, 2017	-	Determine final scope for IGA
Lancaster County Board Staff Meeting	9:00 AM February 16, 2017	-	Present Prelim Findings and IGA Request
Lancaster County Board Meeting	9:00 AM February 21, 2017	-	IGA Approval
Begin Investment Grade Audit	February 23, 2017	TBD	Finalize scope, savings and price
Present Final Project to County Board Staff Meeting	July 13, 2017	TBD	County selects final scope
Present Final Project to County Board for Approval	July 18, 2017	TBD	County approves contract
Building Improvements Begin	August 7, 2017	-	Work managed by 360EE
Building Improvements Completed	December 18, 2017	-	All selected projects complete
Complete Performance Verification	July 1, 2019	-	Track progress toward savings

Design Services Agreement

This agreement is entered into on _____, 2017, between 360 Energy Engineers (ESCO), and _____ (Client), for the performance of design and analysis services to determine the scope of improvements, energy and maintenance savings potential, and guaranteed project price for Client facilities.

Client Responsibilities

County agrees to provide the following to ensure successful completion of design and analysis services:

- Facilities: Complete access to Client facilities for the purpose of performing energy efficiency analysis.
- Personnel: Access to key personnel to discuss facility priorities, system requirements and financial information.
- Building Plans: Temporary loans of any building plans to provide insights to design intent and construction.
- Utility Data: Access to utility data for baseline generation and energy savings projections.

ESCO Responsibilities

ESCO agrees to provide the following as a result of these design and analysis services:

- Scope: Final scope of work for selected facility upgrades.
- Savings: Final energy and maintenance savings potential for each facility upgrade.
- Price: Final price for design and analysis services rendered, as well as individual project components.

Cost Commitments

Client is under no obligation to pay for these design and analysis services provided at least one of the following:

- Project Implementation: Client implements an engineered savings project with ESCO.
- Insufficient savings: ESCO fails to identify facility improvements with savings potential of \$ _____ or greater.

In the event that none of the above conditions are met, Client agrees to pay ESCO a sum of 2.5% of the total estimated cost of the agreed upon scope of work to be designed, or \$ _____. Payment to ESCO shall be made within 30 days of the completion of this Design Service.

Customer

360 Energy Engineers

Signature

Date

Signature

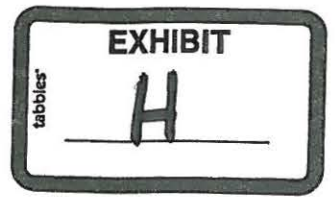
Date

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Title

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Title



City of Lawrence
Investment Grade Audit Report



Table of Contents

- Table of Contents3
- Executive Summary5
- Project Overview7
- Facility Assessments7
- Baseline Utility Analysis25
- Energy Conservation Measures.....32
 - ECM Summary 32
 - Savings Methodologies 35
 - ECM Descriptions 36
 - Improvements Not Recommended 74
- Utility Rate Analysis83
 - Rate Analysis 83
- Financial Analysis85
 - Summary of Project Financials 85
- Technical Approach87

Appendix A: Savings Calculations and Equations

Appendix B: Summary of Utility Bills

Appendix C: eQUEST Reports

Appendix D: Baseline and Proposed Lighting Tables

Appendix E: Area Lighting GPS Data

Executive Summary

The Investment Grade Engineering Audit conducted by 360 Energy Engineers has identified a number of opportunities for the City of Lawrence to improve its energy efficiency and facility performance through the implementation of an energy conservation project. Through comprehensive energy calculations based on actual utility rates, 360 Energy Engineers has identified **\$435,477 in annual energy savings** potential. Additional **maintenance savings of \$128,900 annually** has also been calculated.

360 Energy Engineers conducted a detailed evaluation of many Public Works and Parks and Recreation facilities for the City of Lawrence. A description of the facilities existing construction – as well as its mechanical, electrical, controls and other systems – can be found in the Facility Analysis section of this report. Dozens of opportunities were identified by 360 Energy Engineers' Professional Engineers and Certified Energy Managers as they conducted this detailed study for the City. This information is intended to provide accurate projections of energy savings potential, detailed data regarding potential upgrades to building systems, and the resources to aid the City of Lawrence in implementing building improvements that represent ideal long-term solutions.

Following final design and subcontractor procurement, the next step will be to perform the installation of the Energy Conservation Measures identified. During the construction phase of the project, 360 Energy Engineers' team will work diligently to ensure that the project is installed as designed, maximizing energy and maintenance performance for decades to come. During the construction period – and beyond – 360 Energy Engineers hopes to demonstrate its commitment to providing Lawrence with incomparable experience, expertise and value.

- Continued oversight and involvement of licensed Professional Engineers to ensure that the project is installed per their design details and intent.
- On-site construction management to oversee project installation by selected contractors, coordinate scheduling and minimize disruptions to occupied spaces.
- Effective commissioning of all functional systems, verifying correct installation and performance.
- Ongoing performance maximization to continuously commission all systems and ensure efficient, low-maintenance operation with maximum comfort.
- Decades of experience and a flexible approach mean the project developed for your facilities will yield the maximum benefits to your budget and buildings.
- Through efficient operation and an independent structure, 360 Energy Engineers delivers higher quality at a lower cost than any competition in the industry.

360 Energy Engineers feels strongly that our industry experience, engineering and energy conservation expertise, and superior value will make us the clear choice for your energy conservation or facility improvement projects. We hope to continue to serve you as you move forward to address your energy and facility needs.

Sincerely,



Joseph Huria

Vice President of Business Development

(785) 218-6549

jhuria@360energyengineers.com

Project Overview

Summary Table of Energy Conservation Measures

Comprehensive List of Projects Identified											
City Of Lawrence											
Energy Efficiency Measures		Energy Savings					Maintenance Savings				
ID #	Description	Electric Energy (kWh)	Electric Demand (kW)	Electric Cost (\$)	Natural Gas (Therm)	Gas Cost (\$)	Total Utility (\$)	Labor (\$)	Material (\$)	Total (\$)	Total Savings (\$)
1	City-Wide: Building LED Retrofits, Replacements & Controls	1,815,535	4,221	\$152,003	-22,081	\$0	\$152,003	\$8,800	\$27,200	\$35,900	\$187,900
2	City-Wide: Building Weatherization	38,677	0	\$3,868	13,529	\$9,200	\$13,068	\$0	\$0	\$0	\$13,100
3	Parks and Rec: Parks Area Lighting	157,716	435	\$16,967	0	\$0	\$16,967	\$500	\$2,000	\$2,400	\$19,400
4	Parks and Rec: Sports Field Lighting	44,214	510	\$6,981	0	\$0	\$6,981	\$5,300	\$1,100	\$6,300	\$13,300
5	Parks and Rec: Advanced Timers for Tennis/Basketball Courts	6,912	0	\$636	0	\$0	\$636	\$0	\$0	\$0	\$700
6	Public Works: Web Based Thermostats	39,114	-3	\$3,163	5,546	\$4,719	\$7,882	\$500	\$500	\$1,000	\$8,900
7	Public Works: City-Wide Pole Lighting (Downtown, Parking Lots, etc.)	282,322	769	\$30,315	0	\$0	\$30,315	\$600	\$3,400	\$4,000	\$34,300
8	Public Works: DDC Upgrades and Optimization	542,986	981	\$53,657	20,734	\$14,591	\$68,248	\$1,000	\$2,000	\$2,900	\$71,100
9	Airport Terminal: Split System HVAC Replacements	7,027	33	\$825	170	\$145	\$970	\$500	\$700	\$1,100	\$2,100
10	City Hall: Replace Cabinet Heaters	51,759	39	\$2,953	-4	-\$4	\$2,949	\$100	\$100	\$200	\$3,100
11	City Hall: Replace Windows	44,628	175	\$5,556	0	\$0	\$5,556	\$1,700	\$2,000	\$3,600	\$9,100
12	Community Building: Replace Aging Packaged Units	22,008	126	\$2,783	315	\$268	\$3,051	\$1,600	\$2,100	\$3,700	\$6,700
13	Community Building: Replace Roof	317	2	\$39	90	\$77	\$116	\$0	\$0	\$0	\$200
14	Community Health: Install Electronic Air Cleaner Filtration	23,045	93	\$3,121	2,898	\$2,028	\$5,149	\$800	\$100	\$900	\$6,000
15	Community Health: Replace Air Cooled Chiller	104,629	642	\$18,883	2	\$1	\$18,884	\$5,900	\$12,700	\$18,500	\$37,400
16	Community Health: Replace Boilers	0	0	\$0	0	\$0	\$0	\$1,900	\$3,500	\$5,300	\$5,300
17	Community Health: Replace Roof	762	4	\$123	263	\$184	\$307	\$0	\$0	\$0	\$400
18	East Lawrence Rec Center: Replace Outdated Packaged Units	16,653	84	\$1,974	164	\$164	\$2,138	\$1,100	\$1,000	\$2,000	\$4,200
19	Fire Station #2: Replace Outdated Rooftop Units	6,947	25	\$758	-12	-\$10	\$748	\$400	\$400	\$700	\$1,500
20	Fire Station #3: Replace Aging Rooftop Units	6,771	24	\$753	-18	-\$15	\$738	\$600	\$500	\$1,100	\$1,900
21	Fire Station #3: Replace Roof	879	4	\$103	204	\$173	\$276	\$400	\$200	\$500	\$800
22	Fire Station #5: Solar Power Installation	141,928	61	\$12,583	0	\$0	\$12,583	\$0	\$0	\$0	\$12,600
23	Holcom Rec Center: New Packaged HVAC System	51,484	211	\$5,791	-602	-\$512	\$5,279	\$600	\$900	\$1,500	\$6,800
24	Holcom Rec Center: Sports Field Lighting and New Poles	0	0	\$0	0	\$0	\$0	\$0	\$0	\$0	\$0
25	Indoor Aquatic Center: Energy & Indoor Air Quality Improvements	354,670	693	\$29,033	60,053	\$42,037	\$71,070	\$7,700	\$15,200	\$22,900	\$93,900
26	Lawrence Arts Center: Replace Air Cooled Chiller	73,460	247	\$8,230	0	\$0	\$8,230	\$3,400	\$7,200	\$10,500	\$18,700
27	New Hampshire Parking Garage: Wall Pack HVAC Replacements	16,719	41	\$1,639	-1,843	-\$1,567	\$72	\$200	\$300	\$500	\$600
28	Outdoor Aquatic Center: Boiler Replacement	0	0	\$0	0	\$0	\$0	\$400	\$900	\$1,200	\$1,200
29	Outdoor Aquatic Center: HVAC System Renovations	2,833	5	\$285	0	\$0	\$285	\$100	\$200	\$300	\$600
30	Prairie Park: Split System HVAC Renovation	0	0	\$0	0	\$0	\$0	\$600	\$900	\$1,500	\$1,500
31	Solid Waste Office: Replace Packaged Unit	8,439	33	\$959	17	\$17	\$976	\$200	\$200	\$400	\$1,400
32	Vehicle Maintenance Office: Add Ductless Mini Split for Server Room	0	0	\$0	0	\$0	\$0	\$0	\$0	\$0	\$0

Facilities in Scope

	Facility	Address	Sq. Ft.
1	Community Health Building	200 Maine St.	88,000
2	Indoor Aquatic Center	4706 Overland Dr.	44,000
3	Library	707 Vermont St.	85,000
4	Eagle Bend Clubhouse	1250 East 902 Road	3,000
5	Airport Terminal	1920 Airport Rd.	7,500
6	Airport Maintenance Facility	1920 Airport Rd.	10,500
7	Airport Community Hangar	1920 Airport Rd.	15,000
8	Fire/Med #5	1911 Stewart Ave.	26,000
9	Fire/Med #4	2121 Wakarusa Dr.	11,000
10	Fire/Med #3	3708 W. 6th St.	7,000
11	Fire and Rescue Training	1941 Haskell Ave. #5	6,500
12	Fire/Med #2	2128 Harper St.	11,000
13	Parking/AnimalControl/Transit	935 New Hampshire St.	2,300
14	Lawrence Arts Center	940 New Hampshire St.	55,000
15	City Hall	6 E. 6th St.	28,000
16	Carnegie Building	9th & Vermont	12,000
17	Union Pacific Depot	North Lawrence	5,000
18	East Lawrence Rec Center	1245 East 15th Street	18,000
19	Prairie Park Nature Center	2730 Harper St.	5,500
20	South Park Admin Office	1141 Massachusetts St.	4,800
21	Community Building	115 West 11th Street	30,000
22	Holcom Park Rec Center	2700 West 27th Street	19,500
23	Sports Pavilion	100 Rock Chalk Lane	181,000
24	Solid Waste Division	1140 Haskell	2,600
25	Street Division Office	1120 Haskell	3,200
26	YSI Sports Complex (Buildings)	W. 27th	3,300
27	27th St. Maintenance Building	W. 27th	5,000
28	Airport Hangar A	1920 Airport Rd.	12,000
29	Airport Hangar B	1920 Airport Rd.	12,000
30	Airport Hangar C	1920 Airport Rd.	12,000
31	New Hampshire Parking Garage	935 New Hampshire	128,000
32	Riverfront Parking Garage	Riverfront Plaza	136,000
33	Outdoor Aquatic Center	727 Kentucky St.	6,300
34	Vehicle Maintenance Garage	1141 Haskell	14,500
35	North Lawrence Pump Station	734 N. 2nd St	600
36	Street Division Salt Dome - Wakarusa	Wakarusa Drive	3,000
37	Street Division Salt Dome - Haskell	1128 Haskell	3,000
38	Street Division - Red Barn	1120 Haskell	7,000
39	Parks & Rec Maintenance	1050 E. 11th Street	6,900

Summary of Annual Energy Use

Consumption	Total Energy (MBtu/yr)	Electric Energy (kWh/yr)	Electric Demand (kW/yr)	Natural Gas (MBtu/yr)
Usage for Entire Site **	61049	10,876,039	33,453	23940

Cost	Total Energy Cost	Electric Cost	Natural Gas Cost
Baseline Energy Cost (In Scope)	\$1,228,960	\$1,069,201	\$159,758.80

Notes:

MBtu = 10⁶ Btu

*Annual electric demand savings (kW/yr) is the % sum of the monthly demand savings

**Usage period is the 12 month billing period of 2015

KSF = 10³ square feet

1 MBtu = 293.3 kWh

Expected Annual Percentage Savings Expected If All Recommended ECMs Are Implemented

Consumption	Total Energy (MBtu/yr)	Electric Energy (kWh/yr)	Electric Demand (kW/yr)	Natural Gas (MBtu/yr)
Total Proposed Project Savings	21,150	3,873,843	9,501	7,943
Usage for Entire Site **	61,028	10,876,039	33,453	23,946
% Total Site Usage Saved	34.70%	35.60%	28.40%	33.20%

	Site Area
Project Square Footage (KSF)	1,031
Total Site Square Footage (KSF)	1,031
% Total Site Area Affected	100%

Notes:

MBtu = 10⁶ Btu

*Annual electric demand savings (kW/yr) is the sum of the monthly demand savings

**Usage period is the 12 month billing period of 2015

KSF = 10³ square feet

1 MBtu = 293.3 kWh

Facility Assessments

See Facility Assessments section

ECM Descriptions

See Energy Conservation Measures section

Contact Information:

Joseph Hurla
Vice President of Business Development
(785) 218-6549
jhurla@360energyengineers.com

Scott McVey
Director
(785) 218-6824
smcvey@360energyengineers.com

Nick Pedersen
Engineer
(913) 221-6973
npedersen@360energyengineers.com

Facility Assessments

City Hall

- **General:** The City Hall building is a 28,000 square foot office building that includes several small private offices, an open lobby, and several large meeting rooms. This facility includes offices for several City departments including Public Works, Planning, Utilities, the City Manager, and the City Commission Chambers. City Hall has a basement floor with four additional floors. This facility is open during normal business hours with some extended hours for the City Commission chambers.
- **Building Envelope:** The facility has a brick finish with a flat roof. Large windows cover much of the north and south walls. The modified bitumen roof is displaying some degradation of the mineral layer.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%. City staff has installed several LED retrofit tubes and luminaires throughout City Hall.
- **HVAC Systems:** The existing HVAC system for City Hall consists of a rooftop packaged unit with electric reheat VAV boxes. Some areas in the building are served by a VRF system. Electric cabinet unit heaters serve the stairwells and vestibules, although the temperature controls for these units no longer function correctly.
- **Energy Management Systems:** The existing HVAC system is controlled by a Johnson Controls BAS.
- **Operating Hours:** 8am to 5pm, Monday through Friday, with biweekly City Commission meetings on the 1st floor until 10pm.



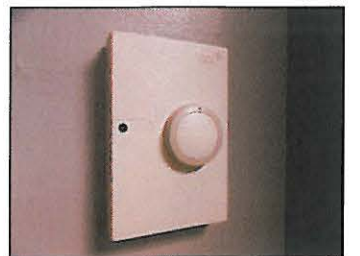
Existing City Hall windows



Existing T8 Lighting



New chiller on roof



Existing EMS thermostat

Community Health



Brick and window envelope



Existing building boilers



100-ton chiller

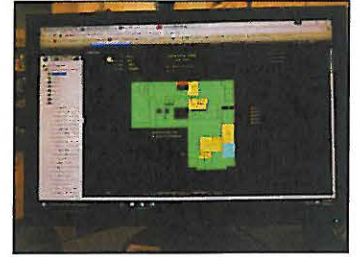


Automated Logic interface

- **General:** The Community Health building is an 88,000 square foot office building that includes several small private offices, an a shared corridor on each floor, and several large meeting rooms. This facility includes offices for the Douglas County Health Department, the Visiting Nurses Association, and the Bert Nash Community Mental Health Center. This facility operates during normal business hours with varying occupancy levels. The Community Health Building was constructed in 1999, and it has not had any major renovations or additions.
- **Building Envelope:** The facility has a brick finish with a large, flat roof. The perimeter offices include large windows. The modified bitumen roof is displaying some degradation of the mineral layer.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%. City staff has installed several LED retrofit lamps in the pendant fixtures installed in the large conference rooms. City staff has replaced many special Cold Cathode Tubes that were originally installed above soffits throughout much of the building. These Cold Cathode Tubes were replaced with T8 fluorescent luminaires.
- **HVAC Systems:** The existing HVAC system for the Community Health Center consists of a 100 ton chiller on the roof, ten condensing boilers in the central mechanical room, multiple large air handlers, and many VAV boxes.
- **Energy Management Systems:** The existing HVAC system is controlled by an Automated Logic BAS.
- **Operating Hours:** 8am to 5pm, Monday through Friday.

Library

- **General:** The Library is an 85,000 square foot building that was completely reconstructed in 2014. This facility includes large, open spaces; several small offices; and an auditorium. This facility is open to the public from 9am to 9pm on weekdays with reduced hours on the weekends.
- **Building Envelope:** The facility is constructed of mixed materials, including pre-cast panels and large window walls. The flat roof was installed in 2014 and shows no signs of wear or degradation.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T5 fluorescent fixtures with solid state ballasts. These lamps are rated at 25 watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output.
- **HVAC Systems:** The existing HVAC system for the Library consists of rooftop packaged units with VAV boxes. The VAV boxes use electric reheat.
- **Energy Management Systems:** The existing HVAC system is controlled by a full DDC system.
- **Operating Hours:** 9am to 9 pm, Monday through Friday; 9 am to 9 pm on Saturday; and 12 pm to 8 pm on Sunday.



Library DDC Controls Interface



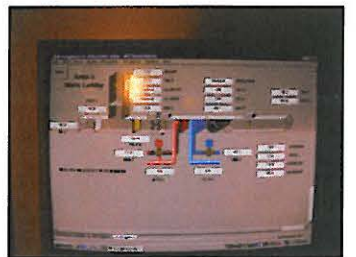
Library building lighting

Arts Center

- **General:** The Lawrence Arts Center is a 55,000 square foot building that was constructed in 2000. This facility includes large, open studios; several small offices; a large auditorium; and a two-story atrium. This facility is open from 9am to 9pm with reduced hours on Sundays.
- **Building Envelope:** The facility is constructed of mixed materials, including brick, metal, and glass.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. Several CFL and Metal Halide recessed cans are installed throughout the building.
- **HVAC Systems:** The existing HVAC system for the Arts Center consists of a large rooftop chiller, two boilers, and multiple air handlers.
- **Energy Management Systems:** The existing HVAC system is controlled by an antiquated BAS.
- **Operating Hours:** 9am to 9 pm, Monday through Saturday; 9 am to 5 pm on Sunday.



Arts Center Chiller



Antiquated EMS at Arts Center

Streets Division Complex



Incandescent lighting



Streets division thermostat



Existing Solid Waste T8 Lighting



Solid Waste HVAC Unit

- **General:** The Streets Division Complex includes a 3,200 square foot office building, the "Red Barn", storage sheds, large parking lots for city-owned vehicles and maintenance. The Streets Division Complex operated during normal business hours except during harsh weather events when the sand trucks and plows are deployed.
- **Building Envelope:** The office building is a wood-frame structure with residential-style siding and a sloped, shingled roof. The doors, windows, and siding appear to be in adequate condition. The Red Barn is a metal building with large bay doors that are typically open during operating hours.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%.
- **HVAC Systems:** The existing HVAC system for the office building is a residential style split system.
- **Energy Management Systems:** The existing HVAC system is controlled by traditional stand-alone thermostats.
- **Operating Hours:** 7 am to 4:30 pm Monday through Friday

Solid Waste

- **General:** The solid waste facility is a 2,600 square foot office building including several small private offices, open lobby, and employee locker rooms. This facility is the central hub for the solid waste division workers coming and going throughout the day making trips from residential neighborhoods to the waste dump.
- **Building Envelope:** The facility has a brick finish with an asphalt shingle roof. Visible moisture between window panes are an indicator of window failure.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%.
- **HVAC Systems:** The current HVAC for the facility consists of a single-zone packaged air handler located to the South of the facility. This packaged unit was relocated from a nearby fire station and has reached the end of its service life. The unit is ducted into the facility and provides gas heating and dx cooling for the spaces. With an uncertain future for the facility moving forward, a simple unit replacement will ensure proper heating and cooling for the facility regardless of the function.
- **Energy Management Systems:** The current packaged unit is controlled by a traditional thermostat.
- **Operating Hours:** 6 am to 5 pm Monday through Friday.

Vehicle Maintenance

- **General:** The Vehicle Maintenance Garage is a 14,500 square foot facility including several large garage bays, open office space, conference room, and parts storage. This facility is responsible for maintaining operation of all the city vehicles including fire and medical, solid waste, and other public works automobiles.
- **Building Envelope:** The facility has a brick exterior with several large overhead roll up doors surrounding the building.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%. The shop bays have 400 watt metal halide luminaires which are very maintenance intensive and use more than twice as much energy than a comparable LED.
- **HVAC Systems:** With a large open shop environment, it is very difficult to heat and cool the facility. The garage bays are heated with gas unit heaters hung from the ceiling of the facility. There are also several small evaporative coolers to help moderate the temperature in the summer. To ventilate the space, a large exhaust system is located in the shop mezzanine and provides fresh air to the spaces to limit the carbon monoxide levels. The office space and parts storage area are conditioned by a single split-system located in a mechanical closet. A small conference room is located on the second floor, along with some small offices that have now been converted to storage areas. To condition this portion of the building, a single-zone packaged unit is located on the roof. In the conference room, there is a small server room closet that must be cooled to prevent the equipment from over-heating. Having a server on this second floor, the packaged unit must maintain operation even while the conference room is unoccupied to continuously cool the server. De-coupling these two spaces would enable the existing unit to be able to setback its zone temperature, saving the current wasted energy.
- **Energy Management Systems:** The current packaged unit and split-system is controlled by a traditional thermostat. The shop heaters are controlled by unitary thermostats as well. The ventilation system has a central controller to monitor air quality and ventilate the space appropriately.
- **Operating Hours:** 6 am to 5 pm, Monday through Friday.



Gas-fired unit heater



Residential split system



Stand-alone thermostat

Airport Terminal



Outdated airport furnace



Airport Terminal T8 Lighting



Metal halide lighting at New Hampshire parking garage



Riverfront garage T5 lighting

- **General:** The Airport Terminal is a 7,500 square foot facility including office space, occupant lounge, and large front lobby.
- **Building Envelope:** The facility has a stone façade and wood siding exterior with large windows surrounding the exterior. Skylights and large windows facing the tarmac allow large amounts of natural light into the occupied space.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. The facility also has a large amount of CFL lamps lighting many of the spaces. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output.
- **HVAC Systems:** Three split systems condition the facility. The current units are reaching the end of their service life and are in need of replacement. The mismatched outdoor condensing units are coupled to three Trane furnaces located in mechanical closets.
- **Energy Management Systems:** The current split-systems are controlled by traditional thermostats.
- **Operating Hours:** 6 am to 9 pm daily.

New Hampshire Parking Garage

- **General:** The New Hampshire Parking Garage is one of three large parking facilities located in downtown Lawrence. This facility includes the City's Transit, Parking Division, and Animal Control Office. These spaces are located on the first floor of the facility.
- **Lighting Systems:** The lighting throughout the garage is primarily high output 250 watt and 175 watt metal halide fixtures. Several original metal halide luminaires in the stairwells have recently been replaced with LED wall packs. Some building wall packs still remain metal halide and are in need of replacement.
- **HVAC Systems:** The transit office, parking and animal control, and the maintenance shop in the basement are conditioned by three wall-hung Bard packaged units. These units use electric heat during the winter and are quite costly to operate.
- **Energy Management Systems:** The current packaged units are controlled by traditional thermostats.

Riverfront Parking Garage

- **General:** The Riverfront Parking Garage is a two-level concrete parking structure.
- **Lighting Systems:** The ground level of the parking garage has a mix of 30ft area lights and decorative globes mounted on the adjoining building as well as entry gates and columns. Both types of luminaires are metal halide technology, and can be replaced with equivalent LED luminaires. The lower level of the parking garage has a large number of HE Williams Model 96 T5 Fluorescent fixtures. These fully-enclosed, low-profile, wrap-around fixtures are well suited for garage lighting, but replacements with LED fixtures will ultimately lower utility bills and reduce maintenance.

Fire/Med #2

- **General:** The Fire/Med #2 building is a single-story firehouse built in 2002. This facility includes a large truck bay, sleeping doms, a meeting room, a kitchen, and a living room. This facility is generally occupied every hour of every day.
- **Building Envelope:** The facility was constructed with mixed materials.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. The facility also has a large amount of CFL lamps lighting many of the spaces. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output.
- **HVAC Systems:** Rooftop packaged units provide both heating and cooling to this facility.
- **Energy Management Systems:** The current systems are controlled by traditional thermostats.



Highbay fluorescent lighting at Fire/Med #2

Fire/Med #3

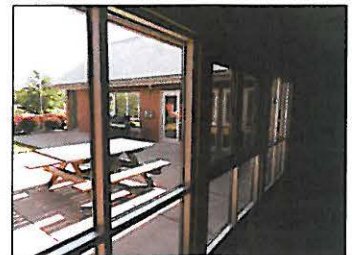
- **General:** The Fire/Med #3 building is a single-story firehouse built in 1968 with a major renovation in 2003. This facility includes a large truck bay, sleeping doms, a meeting room, and a kitchen space. This facility is generally occupied every hour of every day.
- **Building Envelope:** Ground-level windows were replaced as part of the 2003 renovation. However, several clerestory windows are original to the building and do not provide an adequate thermal barrier or protection against heat infiltration. The roof is in poor condition and should be replaced soon.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output.
- **HVAC Systems:** Rooftop packaged units provide both heating and cooling to this facility.
- **Energy Management Systems:** The current systems are controlled by traditional thermostats.



Traditional thermostat at Fire/Med #3

Fire/Med #4

- **General:** The Fire/Med #4 building is a single-story firehouse built in 2006. This facility includes a large truck bay, sleeping doms, a meeting room, a kitchen space, and a living room. This facility is generally occupied every hour of every day.
- **Building Envelope:** The facility was constructed with mixed materials.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. The facility also has a large amount of CFL lamps lighting many of the spaces. Fluorescent technology provides poor



Windows at Fire/Med #4



Lighting at Fire/Med #4



Fire & Rescue Training Center
HVAC



Pump #1 at North Lawrence
Pump Station

visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output.

- HVAC Systems: Rooftop packaged units provide both heating and cooling to this facility. Electric reheat allows for individual control in each sleeping dorm at an increased utility cost.
- Energy Management Systems: The current systems are controlled by a BAS.

Fire and Rescue Training Center

- General: The Fire and Rescue Training Center building is a single-story building constructed in 1968. This facility has an identical floorplan as Fire/Med #3 before that facility's renovation. This facility includes a large truck bay, a meeting room, a kitchen space, and small storage areas. This facility is relatively unoccupied except for scheduled training sessions.
- Building Envelope: The facility is constructed of primarily brick with some cast-in-place concrete.
- Lighting Systems: The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output.
- HVAC Systems: Rooftop packaged units provide both heating and cooling to this facility.
- Energy Management Systems: The current systems are controlled by standard thermostats.

North Lawrence Pump Station

- General: The North Lawrence Pump Station is a small building that protects two large pumps, a smaller sump pump, and all related controls. This building is unoccupied.
- Building Envelope: The building is constructed of brick and siding with a sloped, shingled roof.
- Lighting Systems: This facility has some fluorescent luminaires with very low run hours. A few metal halide wallpacks are mounted to the building exterior for security. The nearby 2nd Street Underpass is illuminated by HID wallpacks with several HID ceiling mount luminaires in the walkway tunnels.
- HVAC Systems: A small unit heater protects the mechanical and electrical equipment at an operable temperature.

Indoor Aquatic Center

- **General:** The Indoor Aquatic Center is a 44,000 square foot building that was constructed in 2001. This facility includes two large pool areas, locker rooms, an event room, storage areas, and an office area. The facility operates from 5:15 am to 8:45 pm with reduced hours on the weekends.
- **Building Envelope:** The facility is constructed of brick and concrete panel.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%.
- **HVAC Systems:** The Indoor Aquatic Center HVAC system includes rooftop package units, specially-designed duct paths, and a heating water boiler.
- **Energy Management Systems:** The current systems are controlled by a DDC system.
- **Operating Hours:** 5:15 am to 8:45 pm, Monday through Friday; 9 am to 8:45 pm Saturday; 12 pm to 8 pm Sunday.



IAC rust from poor ventilation



Lighting at IAC

Outdoor Aquatic Center

- **General:** The Outdoor Aquatic Center main building (6300 square feet) includes a pump room, a meeting room, a lounge, locker rooms, and storage areas. A concession stand shares a roof with the main building and is connected via attic space. The Outdoor Aquatic Center operates from 5:15am to 8:45pm with reduced hours on Sundays. The Aquatic Center only operates during summer months.
- **Building Envelope:** The building is built primarily of stone and concrete with a sloped, shingled roof.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. Metal Halide area lights provide both full illumination of the pool area and security lighting at night.
- **HVAC Systems:** A single air handler provides conditioned air to the building.
- **Operating Hours:** 5:15 am to 8:45 pm, Monday through Friday; 9 am to 8:45 pm Sunday. Closed from September to the end of May.



OAC Pool



OAC Exterior Lighting

Carnegie Building



Carnegie Building Lighting



Boiler at Carnegie Building



Community Building RTUs



Community Building lighting

- **General:** The Carnegie Building is a 12,000 square foot facility built in 1904 with an addition constructed in the 1930s. The most recent building renovation was completed in 2011. This facility includes a large event space, meeting rooms, and several office areas.
- **Building Envelope:** The building is constructed of brick and stone with a flat roof. Recent renovations and repairs have kept the building in adequate condition.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T5 fluorescent fixtures with solid state ballasts. These lamps are rated at 25 watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output.
- **HVAC Systems:** The Carnegie Building is conditioned with a hydronic system utilizing a small boiler and dx condensing units. The air handler for the HVAC system is located in an attic space above a storage room.
- **Operating Hours:** 8 am to 5 pm, Monday through Friday. Special events as scheduled on nights and weekends.

Community Building

- **General:** The Community Building is a 30,000 square foot facility located in downtown Lawrence. This recreation center includes a basketball court, cardio room, weights room, ballet dance hall, and other common assembly spaces used for various functions. The facility is operated daily as the downtown rec building from 7 a.m. to 9 p.m. throughout the week with reduced hours on the weekend.
- **Building Envelope:** The facility is comprised of a brick exterior with a rubber EPDM membrane roof.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%. The gymnasium lights were replaced recently with high output T5 fixtures that are doing a fantastic job of lighting the court. When these eventually lamps fail, it is recommended to convert the lighting systems to an LED alternative to lower the operating and maintenance costs.
- **HVAC Systems:** Twelve single-zone packaged rooftop units heat and cool the facility. During a previous renovation, the old racquetball room was repurposed as a cardio room. When this change was made, a new RTU was placed above this room to meet the new space needs. The remaining eleven RTUs are in need of replacement. Many of the units are over 20 years old and starting to cause issues for the maintenance staff. Several units on the facility walkthrough were noted to have persistent issues.
- **Energy Management Systems:** The existing rooftop units are controlled by a central control system accessible to the Parks and Recreation Administration from the

maintenance office. This enables the system to be controlled with more advanced control sequences and can enable the system to run in a more efficient manner.

- Operating Hours: 7 am to 9 pm, Monday through Friday; 10 am – 6 pm Saturday.

Holcom Recreation Center

- General: The Holcom Recreation Center is a 19,500 square foot facility located in the central part of Lawrence. This recreation center includes a basketball court, workout room, rec room, and other common assembly spaces used for various functions. The facility is operated daily from 8 a.m. to 6:30 p.m. throughout the week and reduced hours on Saturday.
- Building Envelope: The facility is comprised of a concrete block exterior with a standing seam metal siding.
- Lighting Systems: The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%. The gymnasium lights were replaced recently with high output T5 fixtures that are doing a fantastic job of lighting the court. When these eventually lamps fail, it is recommended to convert the lighting systems to an LED alternative to lower the operating and maintenance costs.
- HVAC Systems: The facility is currently conditioned with four air handling units with DX cooling coils and hot water heat. Two of the air handlers were recently rebuilt and received a new condensing unit. The remaining air handlers are located in the gymnasium and are very difficult to maintain, requiring a lift to access the equipment for service. The condensing unit for the gym air handlers is past its expected service life and in need of replacement. Additionally, the current Ajax boiler has many issues. The steel tube design is very inefficient and provides poor heating at part-load conditions. With poor efficiency and aging equipment, a new heating source is required for the facility.
- Energy Management Systems: The existing HVAC equipment is controlled by a central control system accessible to the Parks and Recreation Administration from the maintenance office. This enables the system to be controlled with more advanced control sequences and can enable the system to run in a more efficient manner.
- Operating Hours: 7 am to 9 pm, Monday through Friday; 10 am to 6 pm Saturday; 1 pm to 6 pm Sunday.



Holcom Center high-bay lighting



Holcom Center boiler



Holcom Center cooling unit

East Lawrence Recreation Center



Building Entrance



Packaged rooftop unit



Outdated rooftop unit



Existing sports field lighting

- **General:** The East Lawrence Recreation Center is an 18,000 square foot facility located in East Lawrence. This recreation center includes a basketball court, workout room, rec room, gymnastics room, and assembly spaces used for various functions. The facility is operated daily from 8 a.m. to 6:30 p.m. throughout the week and reduced hours on Saturday.
- **Building Envelope:** The facility is comprised of a concrete block exterior, brick façade, and a rock-ballasted roof.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%. The gymnasium lights were replaced recently with high output T5 fixtures that are doing a fantastic job of lighting the court. When these eventually lamps fail, it is recommended to convert the lighting systems to an LED alternative to lower the operating and maintenance costs. The main recreation lobby has high wattage metal halide fixtures to illuminate the space. These fixtures use considerably more energy than an LED equivalent and produce poor light quality.
- **HVAC Systems:** The facility is currently conditioned with four packaged rooftop units. The gymnasium rooftop unit was recently replaced due to failure. The remaining rooftop units condition the lobby, rec room, gymnastics, and an assembly room. The three rooftops are reaching the end of their service life and need to be replaced.
- **Energy Management Systems:** The existing rooftop units are controlled by a central control system accessible to the Parks and Recreation Administration from the maintenance office. This enables the system to be controlled with advanced control sequences and can enable the system to run in an efficient manner.
- **Operating Hours:** 7 am to 9 pm, Monday through Friday; 10 am to 6 pm Saturday and Sunday.

Youth Sports Complex

- **General:** The Youth Sports Complex is a 55-acre sporting complex, including 23 soccer fields, 5 football fields, and 8 baseball diamonds. These fields are used by Parks and Recreation for the city youth sports leagues. Along with the sports fields, there are several small restrooms and a concession stand facility.
- **Building Envelope:** The concession stand is made of concrete block exterior.
- **Lighting Systems:** All of the lighting in this complex is metal halide antiquated technology. Sports field lighting provides safety for the players and is a crucial component to the daily operation of these facilities. While these lights have significantly lower run hours compared to an office building, clear lighting, safety, and system maintenance are compelling reasons to replace these aging systems.
- **HVAC Systems:** The concession stand has a split-system to condition the space.

- **Energy Management Systems:** The current split-systems are controlled by traditional thermostats.

27th Street Maintenance

- **General:** The 27th Street Maintenance shop is a 5,000 square foot facility near the Youth Sports Complex. This facility houses all of the necessary equipment to maintain and operate the Youth Sports Complex fields as well as the Clinton Lake Softball Complex. There are a few offices in the facility that are occupied by Parks and Recreation staff and maintenance personnel.
- **Building Envelope:** The shop is constructed with vertical metal siding with a standing seam metal roof.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32-watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. An 18-watt LED will provide the same amount of light as a 32-watt fluorescent lamp, resulting in an energy savings of over 43%.
- **HVAC Systems:** The office space has a split-system and personal terminal air conditioners. These units do an adequate job of conditioning the spaces and are not recommended for replacement. Once the units do fail, a one-for-one replacement would ensure continued operation of the facility. The shop area has a make-up air system to ventilate the space.
- **Operating Hours:** 7 am to 5 pm, Monday through Friday.



Outdated furnaces

Prairie Park Nature Center

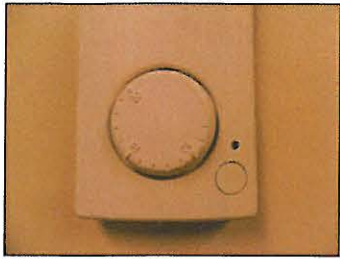
- **General:** The Prairie Park Nature Center is a 5,500 square foot interactive and educational facility. This facility houses a wide variety of animals and educational material showing off wildlife found in Kansas. This facility is open from 9 a.m. to 5 p.m. Tuesday through Saturday with reduced hours on Sunday.
- **Building Envelope:** The facility is constructed with a stucco finish and a standing seam metal roof. The facility has a large amount of window area facing the prairie to the East of the facility.
- **Lighting Systems:** The lighting throughout the facility is primarily standard-efficiency T8 fluorescent fixtures with solid state ballasts. These lamps are rated at 32 watts. Fluorescent technology provides poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output. The facility also has a large amount of compact fluorescent lamps lighting some areas of the exhibit.
- **HVAC Systems:** Currently there are four split-systems conditioning the exhibit, office area, and educational learning classroom. These units are unable to provide proper amounts of ventilation air to the space in order to supply improved air quality. An air filtration system was installed to filter out some of the particulates from the air and make the facility more enjoyable for the occupants. Although some improvement was reported, a strong odor from the animals is still present in the facility.



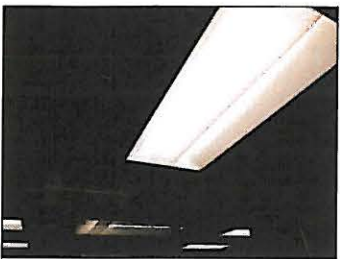
Outdated furnaces



Condensing units



Existing DDC thermostat



P&R Admin Lighting



UP Depot thermostat



Exterior Depot Lighting

- **Energy Management Systems:** The existing split-systems are controlled by a central control system accessible to the Parks and Recreation Administration from the maintenance office. This enables the system to be controlled and scheduled remotely.
- **Operating Hours:** 9 am to 5 pm, Tuesday through Saturday; 1 pm to 4 pm Sunday.

Parks and Recreation Administration Office

- **General:** The Park and Recreation Administration Office is a 4,800 square foot office building that includes several small private offices, an open lobby, and a large conference room. This facility is the main office for the Parks and Rec administrators.
- **Building Envelope:** The Park and Recreation Administration Office is a single-story brick building with aluminum-framed windows.
- **Lighting Systems:** The lighting throughout the facility is primarily T5 fluorescent fixtures. These lamps are rated at 28 watts and are marginally more efficient than the more common T8 lamps. Fluorescent technology provides relatively poor visibility compared to more modern lighting solutions and use significantly more energy to produce the same amount of light output.
- **HVAC Systems:** The Park and Recreation Administration Office is serviced by residential-style split systems that are appropriate for a facility of this size and type.
- **Energy Management Systems:** The existing split-systems are controlled by a central control system accessible to the Parks and Recreation Administration from the maintenance office. This enables the system to be controlled and scheduled remotely.
- **Operating Hours:** 8 am to 5 pm, Monday through Friday.

Union Pacific Depot

- **General:** The Union Pacific Depot is a 5,000 square foot facility built in 1889. The most recent building renovation was completed in 1996. This facility includes a large community room and a small theater for events. A reception area is used as the Lawrence Visitors Center, which is open during normal business hours.
- **Building Envelope:** The building is constructed of brick and stone with a multi-faceted shingled roof. Recent renovations and repairs have kept the building in adequate condition.
- **Lighting Systems:** The lighting throughout the facility is primarily compact fluorescent fixtures with some T8 fluorescent luminaires.
- **HVAC Systems:** The Union Pacific Depot is conditioned with a hydronic system utilizing a small boiler and dx condensing units. The air handler for the HVAC system is located in an attic space above a storage room.
- **Energy Management Systems:** The existing system is controlled by a central control system accessible to the Parks and Recreation Administration from the maintenance office. This enables the system to be controlled and scheduled remotely.
- **Operating Hours:** 9 am to 5 pm, Monday through Saturday; 1 pm to 5 pm Sunday.

Baseline Utility Analysis

Summary of Utility Bills

Refer to the Appendix for a summary of each building's utility bills.

Base Year Energy Use by Building

The tables shown below are the baseline data calculated for each building with multiple ECMs planned. Facilities with a "-" shown may have natural gas usage but the usage was not relevant for this study.

		27th St Maint Bldg	Airport Community Hangar	Airport Hangar A	Airport Hangar B	Airport Hangar C	Airport Maintenance	Airport Terminal	Art Center	Carnegie Building	City Hall
Electricity	Area (GSF)	5,000	16,500	12,000	12,000	12,000	10,500	4,500	40,000	12,000	36,000
	Annual Cost (\$)	\$963	\$4,111	\$826	\$3,924	\$3,903	\$5,425	\$7,592	\$77,900	\$25,758	\$95,954
	Annual Cons. (kWh)	9,584	43,129.86	8,158.43	28,056	27,915	46,786	70,681	718,599	237,078	930,955
	Annual Dem. (kW)	28	82.71	24.58	286	284	185	182	2,286	750	2,329
	\$ / GSF	\$0.19	\$0.25	\$0.07	\$0.33	\$0.33	\$0.52	\$1.69	\$1.95	\$2.15	\$2.67
	kWh / GSF	1.9	2.6	0.7	2.3	2.3	4.5	15.7	18.0	19.8	25.9
Fuel	kBtu / GSF	6.5	8.9	2.3	8.0	7.9	15.2	53.6	61.3	67.4	88.2
	Annual Cost (\$)	-	-	-	-	-	\$2,576	\$2,459	\$15,116	\$7,383	\$1,149
	Annual Cons. (Therm)	-	-	-	-	-	3,440	2,938	24,060	10,946	1,322
	\$ / GSF	-	-	-	-	-	\$0.25	\$0.55	\$0.38	\$0.62	\$0.03
Total	kBtu / GSF	-	-	-	-	-	32.8	65.3	60.2	91.2	3.7
	Annual Cost (\$)	\$963	\$4,111	\$826	\$3,924	\$3,903	\$8,001	\$10,051	\$93,016	\$33,141	\$97,103
	Annual Energy (kBtu)	32,701	147,165	27,838	95,731	95,250	503,640	534,974	4,857,962	1,903,544	3,308,750
	\$ / GSF	\$0.19	\$0.25	\$0.07	\$0.33	\$0.33	\$0.76	\$2.23	\$2.33	\$2.76	\$2.70
	kBtu / GSF	6.5	8.9	2.3	8.0	7.9	48.0	118.9	121.4	158.6	91.9

		Community Building	Community Health Building	Eagle Bend Golf	East Lawrence Rec	Fire and Rescue Training	Fire/Med #2	Fire/Med #3	Fire/Med #4	Fire/Med #5	Holcom Rec Center
Electricity	Area (GSF)	31,300	87,300	2,000	18,500	5,368	11,637	7,389	11,637	23,843	19,200
	Annual Cost (\$)	\$32,107	\$117,825	\$1,103	\$32,051	\$3,310	\$12,838	\$11,398	\$24,156	\$78,605	\$23,082
	Annual Cons. (kWh)	295,449	1,001,245	11,352	289,119	27,039	119,386	105,204	227,641	782,150	211,856
	Annual Dem. (kW)	1,001	4,396	26	1,112	131	363	320	696	1,612	727
	\$ / GSF	\$1.03	\$1.35	\$0.55	\$1.73	\$0.62	\$1.10	\$1.54	\$2.08	\$3.30	\$1.20
	kWh / GSF	9.4	11.5	5.7	15.6	5.0	10.3	14.2	19.6	32.8	11.0
Fuel	kBtu / GSF	32.2	39.1	19.4	53.3	17.2	35.0	48.6	66.7	111.9	37.7
	Annual Cost (\$)	\$3,378	\$14,583	-	\$5,552	\$2,145	\$3,832	\$3,150	\$2,419	\$2,940	\$4,224
	Annual Cons. (Therm)	4,579	23,173	-	6,438	2,996	5,262	4,179	2,909	4,111	5,995
	\$ / GSF	\$0.11	\$0.17	-	\$0.30	\$0.40	\$0.33	\$0.43	\$0.21	\$0.12	\$0.22
Total	kBtu / GSF	14.6	26.5	-	34.8	55.8	45.2	56.6	25.0	17.2	31.2
	Annual Cost (\$)	\$35,485	\$132,408	\$1,103	\$37,603	\$5,455	\$16,670	\$14,548	\$26,575	\$81,545	\$27,306
	Annual Energy (kBtu)	1,466,014	5,733,690	38,736	1,630,315	391,861	933,562	776,871	1,067,643	3,079,907	1,322,383
	\$ / GSF	\$1.13	\$1.52	\$0.55	\$2.03	\$1.02	\$1.43	\$1.97	\$2.28	\$3.42	\$1.42
	kBtu / GSF	46.8	65.7	19.4	88.1	73.0	80.2	105.1	91.7	129.2	68.9

		Indoor Aquatic Center	Library	New Hampshire Parking Garage	North Lawrence Pump Station	Outdoor Aquatic Center	Parking/Animal Control	Parks & Rec Maintenance	Prairie Park	Solid Waste	South Park Admin
	Area (GSF)	45,000	62,245	157,577	580	14,500	2,300	6,905	5,400	2,669	4,850
	Annual Cost (\$)	\$125,436	\$87,687	\$28,269	\$1,209	\$4,178	\$5,224	\$1,258	\$8,199	\$9,688	\$4,121
	Annual Cons. (kWh)	1,479,704	844,567	304,854	12,602	41,159	47,361	12,524	71,599	90,481	33,279
Electricity	Annual Dem. (kW)	3728	2,980	438	26	126	180	36	285	272	165
	\$ / GSF	\$2.79	\$1.41	\$0.18	\$2.08	\$0.29	\$2.27	\$0.18	\$1.52	\$3.63	\$0.85
	kWh / GSF	32.9	13.6	1.9	21.7	2.8	20.6	1.8	13.3	33.9	6.9
	kBtu / GSF	112.2	46.3	6.6	74.1	9.7	70.3	6.2	45.2	115.7	23.4
	Annual Cost (\$)	\$62,678	-	-	-	-	-	-	\$845	\$841	\$926
Fuel	Annual Cons. (Therm)	98,523	-	-	-	-	-	-	865	851	999
	\$ / GSF	\$1.39	-	-	-	-	-	-	\$0.16	\$0.32	\$0.19
	kBtu / GSF	218.9	-	-	-	-	-	-	16.0	31.9	20.6
	Annual Cost (\$)	\$188,114	\$87,687	\$28,269	\$1,209	\$4,178	\$5,224	\$1,258	\$9,044	\$10,529	\$5,047
Total	Annual Energy (kBtu)	14,901,260	2,881,782	1,040,204	42,999	140,440	161,602	42,734	330,806	393,834	213,453
	\$ / GSF	\$4.18	\$1.41	\$0.18	\$2.08	\$0.29	\$2.27	\$0.18	\$1.67	\$3.95	\$1.04
	kBtu / GSF	331.1	46.3	6.6	74.1	9.7	70.3	6.2	61.3	147.6	44.0

		Sports Pavilion	Street Division - Office	Union Pacific Depot	Vehicle Maintenance
	Area (GSF)	181,000	3,152	5,000	6,300
	Annual Cost (\$)	\$156,089	\$4,069	\$7,342	\$19,103
	Annual Cons. (kWh)	1,745,367	34,789	64,787	161,263
Electricity	Annual Dem. (kW)	5,344	135	233	767
	\$ / GSF	\$0.86	\$1.29	\$1.47	\$3.03
	kWh / GSF	9.6	11.0	13.0	25.6
	kBtu / GSF	32.9	37.7	44.2	87.3
	Annual Cost (\$)	\$18,351	\$713	\$1,636	\$2,865
Fuel	Annual Cons. (Therm)	29,375	645	2,167	3,683
	\$ / GSF	\$0.10	\$0.23	\$0.33	\$0.45
	kBtu / GSF	16.2	20.5	43.3	58.5
	Annual Cost (\$)	\$174,440	\$4,782	\$8,978	\$21,968
Total	Annual Energy (kBtu)	8,892,939	183,205	437,762	918,552
	\$ / GSF	\$0.96	\$1.52	\$1.80	\$3.49
	kBtu / GSF	49.1	58.1	87.6	145.8

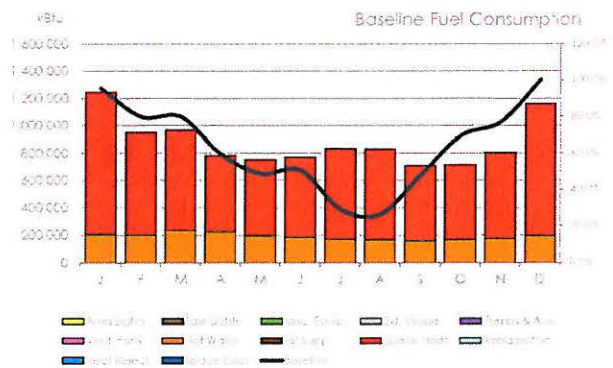
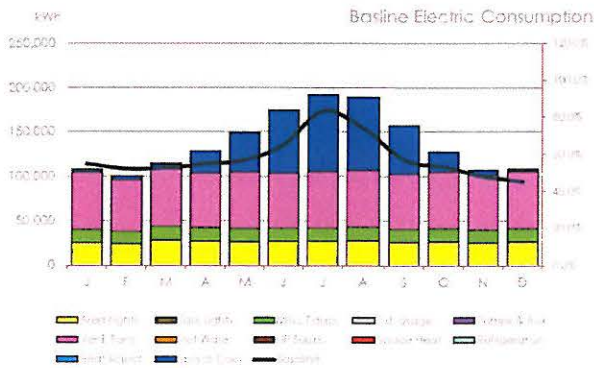
The baseline energy consumption evaluation was developed with a building-specific utility analysis. This analysis used actual reported utility consumption as defined by monthly utility bills. The data from the utility bills was normalized to typical local weather conditions using TMY3 (Typical Meteorological Year, version 3) data. A linear regression analysis was performed to generate the relationship between energy use and actual degree-days. A typical year's degree-days are then applied into this correlation to obtain a typical year's utility usage. In the case of natural gas, only heating degree-days were used because it assumed that temperature-dependent consumption gas only applies to the heating months. Cooling degree-days were used to correlate electrical demand (kW) and consumption (kWh) for space cooling. The baseline data is used for both bin analyses and to calibrate computer simulation building models.

The baseline for all lighting consumption and demand was generated through a comprehensive lighting audit performed to document all fixtures, lighting controls, circuiting, and operation. Each fixture in every building was analyzed to determine: existing wattage, lumen output, ballast factor, and rated run hours. Tables showing the tabulated baseline data for the lighting project are listed in the appendix. Calculations used to determine total lighting load, consumption, and cost are also available in the appendix.

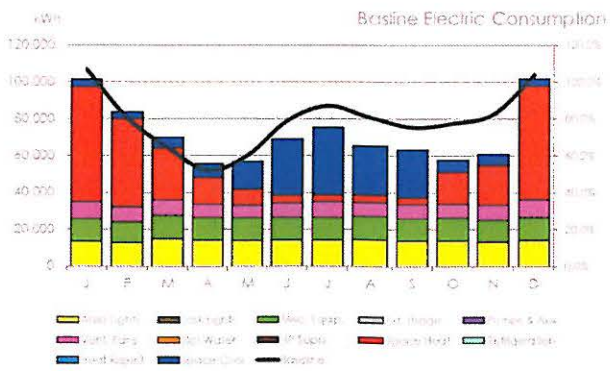
End-Use Reconciliation with Base Year

The charts below demonstrate end-use reconciliation with the base year data. The dark blue line represents the calculated baseline energy use.

Indoor Aquatic Center

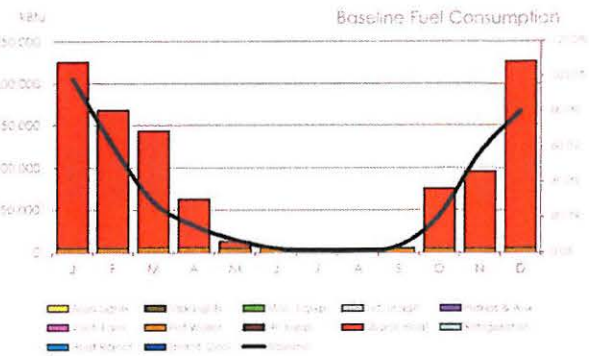
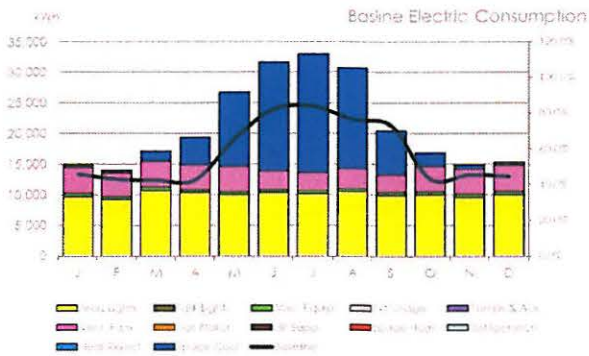


City Hall*

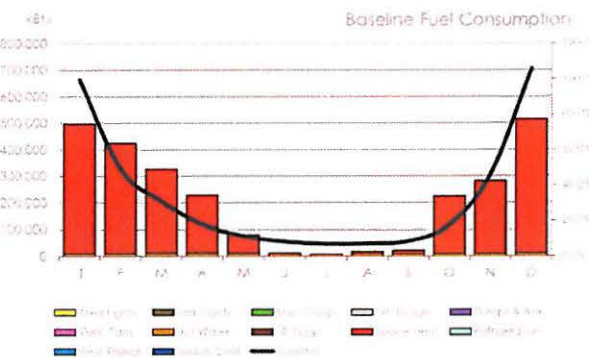
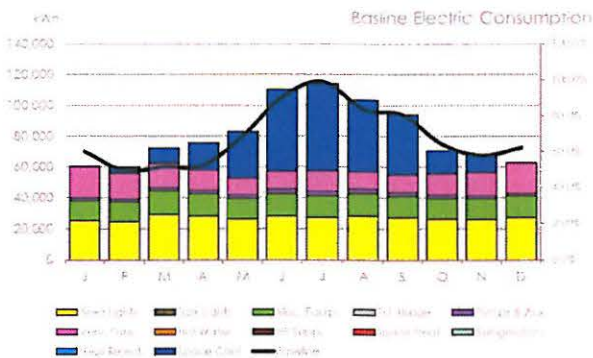


*City Hall gas usage was negligible, and not considered as part of this study.

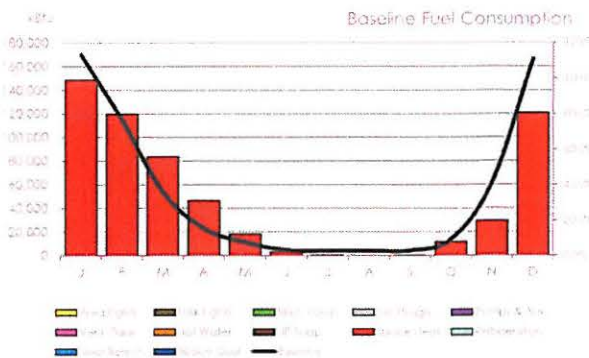
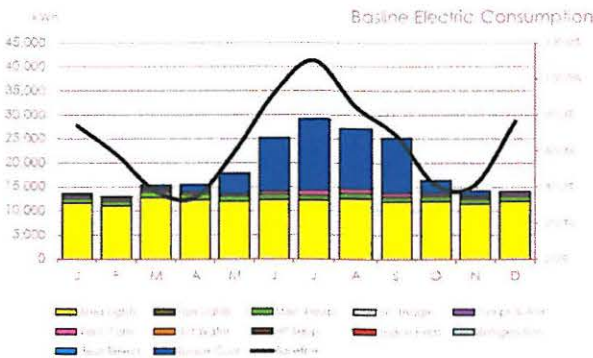
Holcom Rec Center



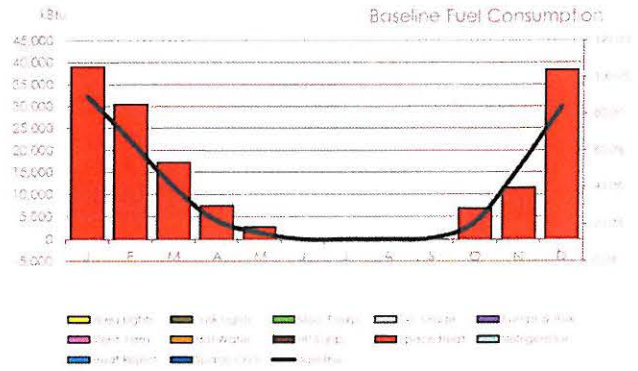
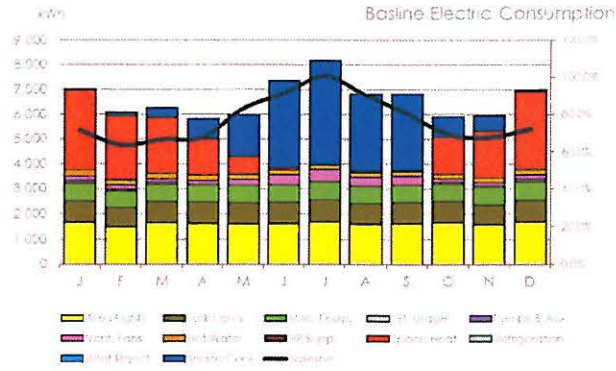
Community Health Building



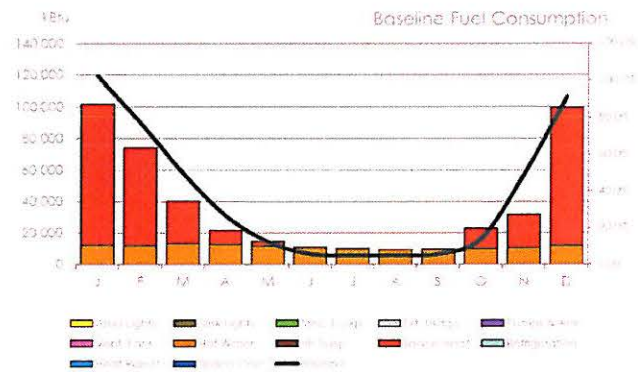
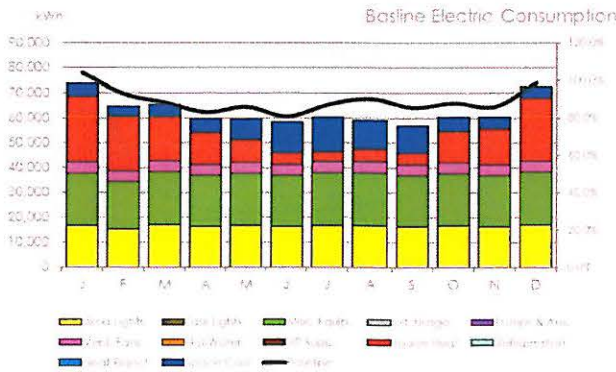
Community Building



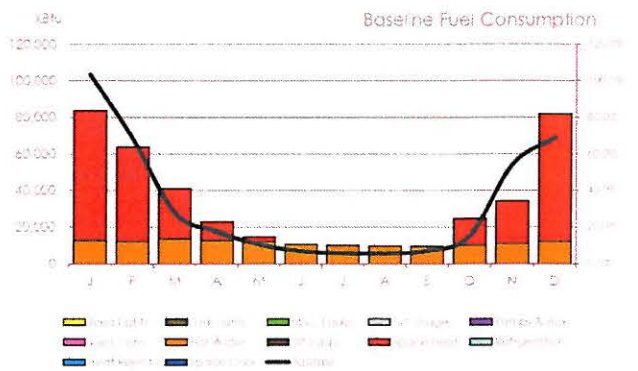
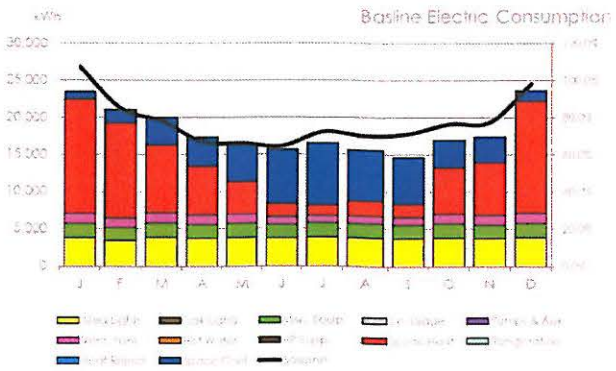
Prairie Park Nature Center



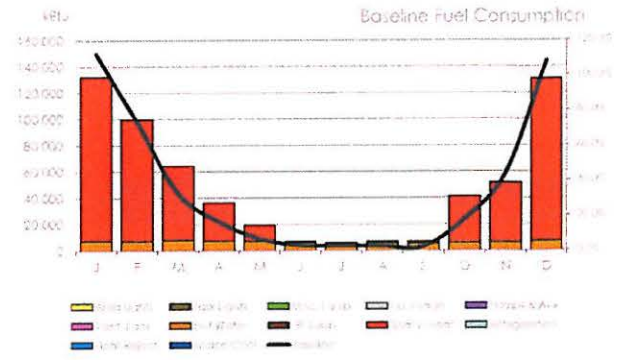
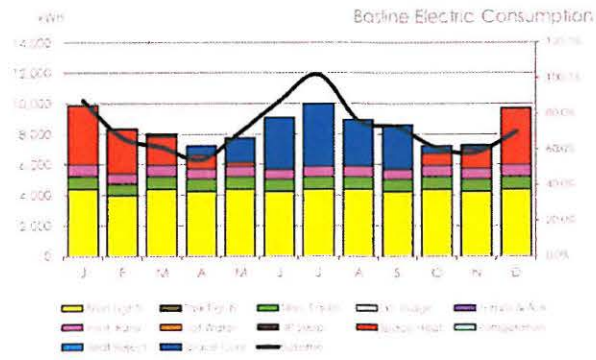
Fire/Med #5



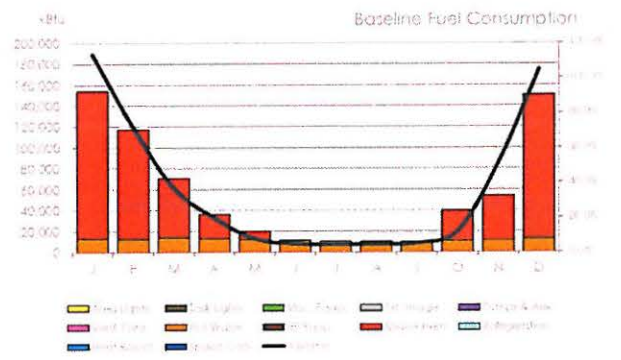
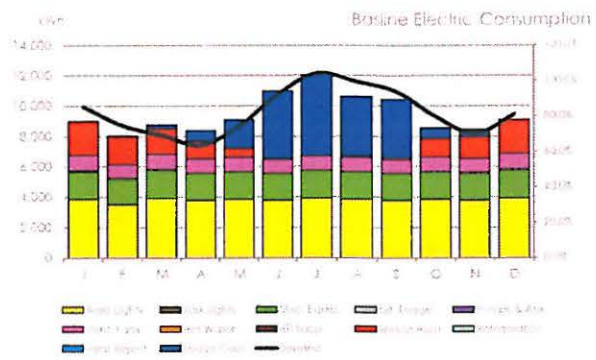
Fire/Med #4



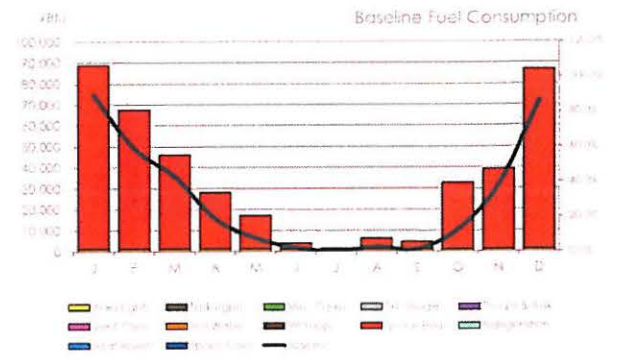
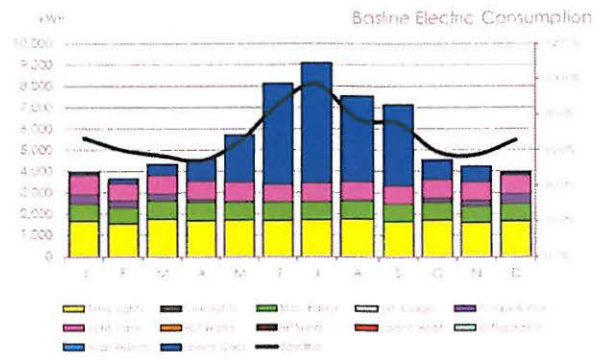
Fire/Med #3



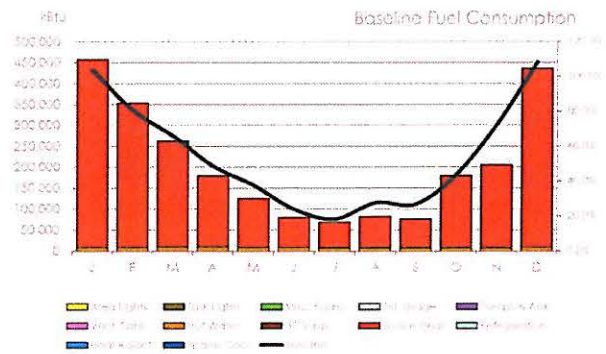
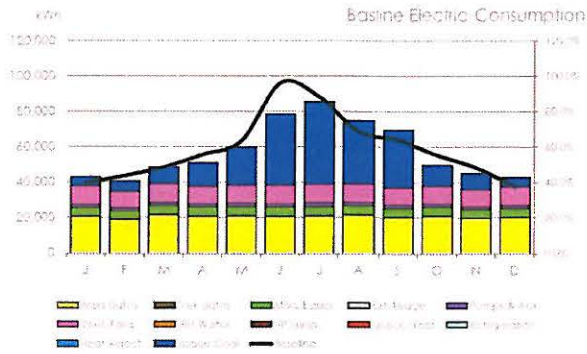
Fire/Med #2



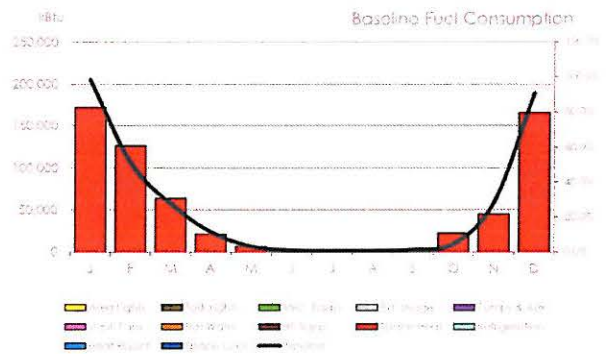
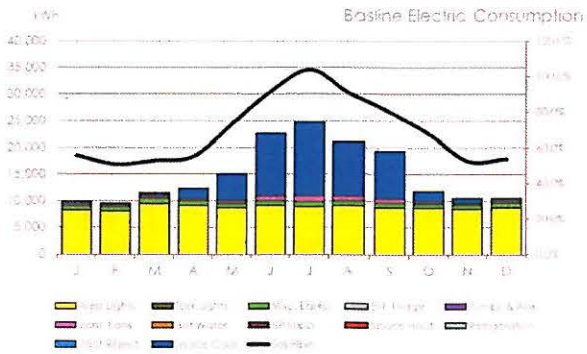
Airport Terminal



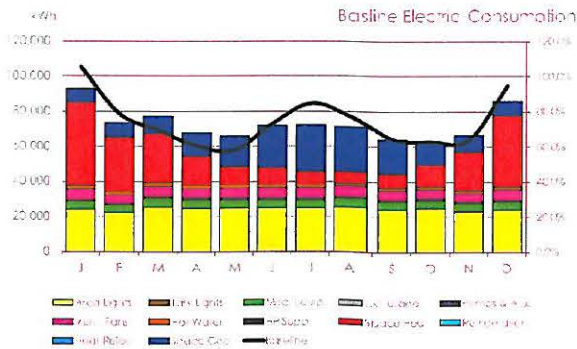
Arts Center



East Lawrence Recreational Center



Library*



*The library has no natural gas utility use

Energy Conservation Measures

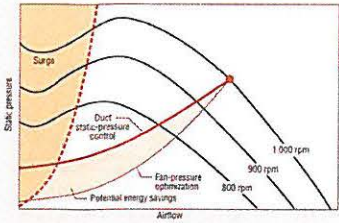
This section includes all of the Energy Conservation Measures analyzed for the City of Lawrence. Facility baseline consumption and cost are shown in the tables below. This section includes ECM savings methodology and estimated savings, as well as descriptions of the ECMs and the benefits they provide to the City of Lawrence.

ECM Summary Table 1, Savings by Project

Comprehensive List of Projects Identified											
Energy Efficiency Measures		Energy Savings					City Of Lawrence				
ID #	Description	Electric Energy (kWh)	Electric Demand (kW)	Electric Cost (\$)	Natural Gas (Therm)	Gas Cost (\$)	Total Utility (\$)	Labor (\$)	Material (\$)	Total (\$)	Total Savings (\$)
1	City-Wide: Building LED Retrofits, Replacements & Controls	1,815,535	4,221	\$152,003	-22,081	\$0	\$152,003	\$8,800	\$27,200	\$35,900	\$187,900
2	City-Wide: Building Weatherization	38,677	0	\$3,868	13,529	\$9,200	\$13,068	\$0	\$0	\$0	\$13,100
3	Parks and Rec: Parks Area Lighting	157,716	435	\$16,967	0	\$0	\$16,967	\$500	\$2,000	\$2,400	\$19,400
4	Parks and Rec: Sports Field Lighting	44,214	510	\$6,981	0	\$0	\$6,981	\$5,300	\$1,100	\$6,300	\$13,300
5	Parks and Rec: Advanced Timers for Tennis/Basketball Courts	6,912	0	\$636	0	\$0	\$636	\$0	\$0	\$0	\$700
6	Public Works: Web Based Thermostats	39,114	-3	\$3,163	5,546	\$4,719	\$7,882	\$500	\$500	\$1,000	\$8,900
7	Public Works: City-Wide Pole Lighting (Downtown, Parking Lots, etc.)	282,322	769	\$30,315	0	\$0	\$30,315	\$600	\$3,400	\$4,000	\$34,300
8	Public Works: DDC Upgrades and Optimization	542,986	981	\$53,657	20,734	\$14,591	\$68,248	\$1,000	\$2,000	\$2,900	\$71,100
9	Airport Terminal: Split System HVAC Replacements	7,027	33	\$825	170	\$145	\$970	\$500	\$700	\$1,100	\$2,100
10	City Hall: Replace Cabinet Heaters	51,759	39	\$2,953	-4	-\$4	\$2,949	\$100	\$100	\$200	\$3,100
11	City Hall : Replace Windows	44,628	175	\$5,556	0	\$0	\$5,556	\$1,700	\$2,000	\$3,600	\$9,100
12	Community Building: Replace Aging Packaged Units	22,008	126	\$2,783	315	\$268	\$3,051	\$1,600	\$2,100	\$3,700	\$6,700
13	Community Building: Replace Roof	317	2	\$39	90	\$77	\$116	\$0	\$0	\$0	\$200
14	Community Health: Install Electronic Air Cleaner Filtration	23,045	93	\$3,121	2,898	\$2,028	\$5,149	\$800	\$100	\$900	\$6,000
15	Community Health: Replace Air Cooled Chiller	104,629	642	\$18,883	2	\$1	\$18,884	\$5,900	\$12,700	\$18,500	\$37,400
16	Community Health: Replace Boilers	0	0	\$0	0	\$0	\$0	\$1,900	\$3,500	\$5,300	\$5,300
17	Community Health: Replace Roof	762	4	\$123	263	\$184	\$307	\$0	\$0	\$0	\$400
18	East Lawrence Rec Center: Replace Outdated Packaged Units	16,653	84	\$1,974	164	\$164	\$2,138	\$1,100	\$1,000	\$2,000	\$4,200
19	Fire Station #2: Replace Outdated Rooftop Units	6,947	25	\$758	-12	-\$10	\$748	\$400	\$400	\$700	\$1,500
20	Fire Station #3: Replace Aging Rooftop Units	6,771	24	\$753	-18	-\$15	\$738	\$600	\$500	\$1,100	\$1,900
21	Fire Station #3: Replace Roof	879	4	\$103	204	\$173	\$276	\$400	\$200	\$500	\$800
22	Fire Station #5: Solar Power Installation	141,928	61	\$12,583	0	\$0	\$12,583	\$0	\$0	\$0	\$12,600
23	Holcom Rec Center: New Packaged HVAC System	51,484	211	\$5,791	-602	-\$512	\$5,279	\$600	\$900	\$1,500	\$6,800
24	Holcom Rec Center: Sports Field Lighting and New Poles	0	0	\$0	0	\$0	\$0	\$0	\$0	\$0	\$0
25	Indoor Aquatic Center: Energy & Indoor Air Quality Improvements	354,670	693	\$29,033	60,053	\$42,037	\$71,070	\$7,700	\$15,200	\$22,900	\$93,900
26	Lawrence Arts Center: Replace Air Cooled Chiller	73,460	247	\$8,230	0	\$0	\$8,230	\$3,400	\$7,200	\$10,500	\$18,700
27	New Hampshire Parking Garage: Wall Pack HVAC Replacements	16,719	41	\$1,639	-1,843	-\$1,567	\$72	\$200	\$300	\$500	\$600
28	Outdoor Aquatic Center: Boiler Replacement	0	0	\$0	0	\$0	\$0	\$400	\$900	\$1,200	\$1,200
29	Outdoor Aquatic Center: HVAC System Renovations	2,833	5	\$285	0	\$0	\$285	\$100	\$200	\$300	\$600
30	Prairie Park: Split System HVAC Renovation	0	0	\$0	0	\$0	\$0	\$600	\$900	\$1,500	\$1,500
31	Solid Waste Office: Replace Packaged Unit	8,439	33	\$959	17	\$17	\$976	\$200	\$200	\$400	\$1,400
32	Vehicle Maintenance Office: Add Ductless Mini Split for Server Room	0	0	\$0	0	\$0	\$0	\$0	\$0	\$0	\$0

ECM Summary Table 2, Savings by Building

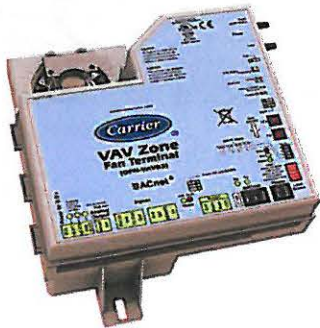
Building	ECM Description	ECM ID	Post-Project Savings				
			Electric Usage (kWh)	Electric Demand (kW)	Electric Cost Savings (\$)	Gas Usage (Therm)	Gas Cost Savings (\$)
27th St. Maintenance Building	Building LED Retrofits, Replacements & Controls	1	3,069	9	\$299	-48	\$0
Airport Community Hanger	Building LED Retrofits, Replacements & Controls	1	25,474	49	\$1,572	0	\$0
Airport Hangar A	Building LED Retrofits, Replacements & Controls	1	5,485	16	\$370	0	\$0
Airport Hangar B	Building LED Retrofits, Replacements & Controls	1	16,679	164	\$1,786	0	\$0
Airport Hangar C	Building LED Retrofits, Replacements & Controls	1	16,628	163	\$1,780	0	\$0
Airport Maintenance Facility	Building LED Retrofits, Replacements & Controls	1	22,232	59	\$1,465	0	\$0
	Building Weatherization	2	1473.6	0	147.36	578.5	393.41
	Web Based Thermostats	6	752	21	\$73	445	\$301
Airport Terminal	Building LED Retrofits, Replacements & Controls	1	15,393	33	\$968	-241	\$0
	Building Weatherization	2	615.8	0	61.58	207.1	140.8
	Web Based Thermostats	6	7,742	6	\$692	1,432	\$1,217
	HVAC System Replacements	9	7,027	33	\$825	170	\$145
Art Center	Building LED Retrofits, Replacements & Controls	1	43,670	150	\$4,325	-684	\$0
	Building Weatherization	2	1231.6	0	123.16	414.1	281.6
	Public Works: DDC Upgrades & Optimization	8	76,517	226	\$7,928	14,450	\$10,115
	Replace Air Cooled Chiller	26	73,460	247	\$8,230	0	0
Carnegie Building	Building LED Retrofits, Replacements & Controls	1	10,750	28	\$1,034	-165	\$0
	Building Weatherization	2	318.6	0	31.86	102.8	69.94
City Hall	Building LED Retrofits, Replacements & Controls	1	29,667	81	\$2,520	-569	\$0
	Building Weatherization	2	615.8	0	61.58	207.1	140.8
	Public Works: DDC Upgrades & Optimization	8	20,141	183	\$4,897	0	0
	Replace Cabinet Unit Heaters	10	51,759	39	\$2,953	-4	-\$4
	Replace Windows	11	44,628	175	\$5,556	0	0
Community Building	Building LED Retrofits, Replacements & Controls	1	48,521	113	\$4,696	-755	\$0
	Building Weatherization	2	1040.3	0	104.3	374.5	254.66
	Replace Aging Rooftop Units	12	22008	126	2783	315	268
	Replace Roof	13	317	2	39	90	77
Community Health Building	Building LED Retrofits, Replacements & Controls	1	167,552	598	\$17,328	-2,822	\$0
	Building Weatherization	2	6525.8	0	652.58	2194.3	1492.11
	Public Works: DDC Upgrades & Optimization	8	97457	475	14573	5767	4037
	Install Electronic Air Cleaner Filtration	14	23045	93	3121	2898	2028
	Replace Air-Cooled Chiller	15	104629	642	18883	2	1
	Replace Boilers	16	0	0	0	0	0
	Replace Roof	17	762	4	123	263	184
Eagle Bend Golf	Building LED Retrofits, Replacements & Controls	1	3,509	7	\$330	-45	\$0
	Building Weatherization	2	359.2	0	35.92	120.8	82.13
East Lawrence Rec Center	Building LED Retrofits, Replacements & Controls	1	31,004	86	\$3,148	-471	\$0
	Building Weatherization	2	1214.5	0	121.45	408.4	277.69
	Replace RTU-2, 3, & 4	18	16653	84	\$1,974	164	\$164
Fire and Rescue Training	Building LED Retrofits, Replacements & Controls	1	13,285	33	\$1,263	-208	\$0
	Building Weatherization	2	1207.5	0	120.75	434.7	295.58
	Web Based Thermostats	6	4986	-4	390	1675	1424
Fire/Med #2	Building LED Retrofits, Replacements & Controls	1	33,502	90	\$3,297	-419	\$0
	Building Weatherization	2	2332.2	0	233.32	839.9	571.16
	Web Based Thermostats	6	0	0	0	0	0
	Replace Two Older Rooftop Units	19	6947	25	758	-12	-10
Fire/Med #3	Building LED Retrofits, Replacements & Controls	1	8,458	13	\$758	-133	\$0
	Building Weatherization	2	2890.5	0	289.05	1040.6	707.58
	Web Based Thermostats	6	0	0	0	0	0
	Replace Rooftop Units	20	6771	24	753	-18	-15
	Replace Roof	21	879	4	103	204	173
Fire/Med #4	Building LED Retrofits, Replacements & Controls	1	18,163	50	\$1,768	-265	\$0
	Building Weatherization	2	2333.2	0	233.32	839.9	571.16
	Public Works: DDC Upgrades & Optimization	8	61244	-9	5172	517	439
Fire/Med #5	Building LED Retrofits, Replacements & Controls	1	59,294	173	\$5,844	-840	\$0
	Building Weatherization	2	3098.5	0	309.85	1115.5	758.51
	Public Works: DDC Upgrades & Optimization	8	120207	-138	9617	0	0
	Solar Power Installation	22	141928	61	12583	0	0



Static Pressure Curve



VAV Terminal Boxes



VAV Zone Controller

more during part-load conditions than under the current operation. The new sequence should control the supply fan speed off of zone damper positions. High limit and low limit setpoints for duct static pressure would also be implemented to ensure that no damage occurs to the existing duct work.

Variable Air Volume Terminals Controls Optimization

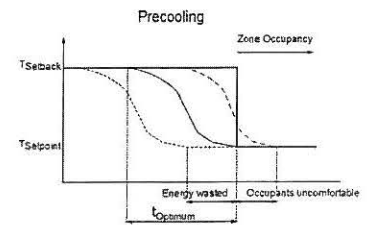
The non-auditorium spaces are conditioned by VAV boxes with hot water coils. These boxes control airflow proportional to cooling demands in the cooling mode and constant air volume in the heating mode. Although a common mode of control, this operation does not meet the requirements of ASHRAE 90.1 – Energy Standard for Buildings due to its inefficient operation during part-load heating. A dual-maximum or reverse-acting control on these boxes yield much improved energy performance over the current box control.

360 Energy Engineers recommends reprogramming all VAV controllers to implement dual-maximum airflow control. Currently, the VAV box modulates the volume damper down from the zone maximum airflow setpoint (when the space is at full cooling) to the zone minimum (when no cooling is required). This minimum airflow rate is then maintained as the space temperature falls through the dead-band into heating mode. As the VAV box transitions into heating mode, the hot water heating coil simultaneously opens while the minimum airflow jumps to the heating minimum setpoint. The hot water reheat coil then modulates up to maintain the space at the heating setpoint until the control valve is fully open. This logic, shown in the figure below, is effective at maintaining comfort in spaces, but results in large amounts of wasted reheat energy. As an alternative, more modern control strategies very often use Dual Maximum logic, where a separate maximum heating airflow setpoint is calculated, independent from the maximum cooling airflow setpoint. Heating elements are still modulated to provide adequate heating to spaces, but the lower supply airflow in heating means less reheat is required, and can save significant fan energy at the air handling units supplying VAV boxes. This strategy is shown on the second image on the following page.

correspond to acceptable air quality for each space. This significantly lowers the amount of energy needed to temper the outdoor air to maintain comfortable conditions in the spaces.

Optimal Start/Stop of HVAC Systems Based On Outdoor Air Conditions

Equipment start times are normally set earlier than necessary to ensure proper comfort is maintained even during hot or cold weather. An optimal start feature incorporated into 360EE's design would automatically compensate building start times for changes in weather. In extreme weather, equipment would be started early enough to properly condition the building before it is occupied. During mild weather, equipment start times can be delayed to obtain more energy savings.



Smart Control Strategy

Conversion from Constant Air Volume (CAV) Variable Temperature to Variable Air Volume (VAV) Constant Temperature

Retrofits involving conversion from CAV to VAV are perhaps the most widely employed energy-saving retrofit to commercial HVAC systems. Many of the large air handling units currently serving the Lawrence Arts Center operate with constant airflow, modulating the discharge air temperature in response to changing heating and cooling loads. While this does effectively control temperature in the space, these systems use significantly more energy and result in high space humidity in cooling mode (leading to occupant discomfort) when compared to systems with modulating airflow.



Single Zone Constant Volume Air Handling Unit

VAV systems cool only the air volume required to meet demand, rather than meeting demand by constantly heating and cooling large volumes of air. Typical VAV systems are configured to provide 55°F discharge air in response to varying cooling loads. This constant low air temperature ensures moisture is consistently removed from the air, dehumidifying the space very effectively. Implementation of this conversion will require the addition of Variable Frequency Drives (VFDs) to the motors, allowing the fan to slow down and speed up. Fan energy consumption is proportional to the cube of the fan speed, meaning a 50% reduction in fan speed results in a power reduction of 88%.

Variable-Air-Volume Static Pressure Reset

This control strategy involves implementing a static pressure reset control strategy for the VAV air handling units in the Arts Center. The existing air handling units currently operate under an industry-standard, constant static pressure setpoint. The VAV zone box dampers are then modulated and hot water reheat coils enabled to control space temperature. This type of sequence has been the accepted or "standard" type of sequence in the past, but as energy consumption has become more of a concern, more efficient control sequences have been developed and should be implemented.



Variable Speed Fan Drive

A static pressure reset control strategy will operate the fan more efficiently, while maintaining the same level of comfort control. Instead of controlling fan speed to a constant static pressure setpoint, the fan speed will be controlled by VAV box need, to ensure that at least one of the system's VAV box dampers is fully open. This will make the static pressure of the system dynamic and will allow the fan speed to decrease

Lawrence Arts Center Improvements

New DDC Controls with Optimized Control Strategies

Upgrading Existing Direct Digital Control System

This project includes upgrading antiquated hardware, programming and graphics on the existing Johnson Metasys control system. The existing control system is over 15 years old, and relies on an antiquated computer running old software on a slow operating system. All air handling units, VAV terminals, and central plant equipment are currently controlled by this system. The system is difficult to manage and does not allow for effective remote control or monitoring, making it less effective at performing energy conservation strategies.

A new, comprehensive DDC system will be installed on all equipment along with an upgraded workstation that will ultimately provide a much better interface for the user, making energy management and troubleshooting much easier. Remote management and monitoring of the system will allow facilities staff to identify problems and receive error alerts without even being in the facility. Furthermore, improved control sequences will be implemented as described below in this section to improve energy performance and comfort.

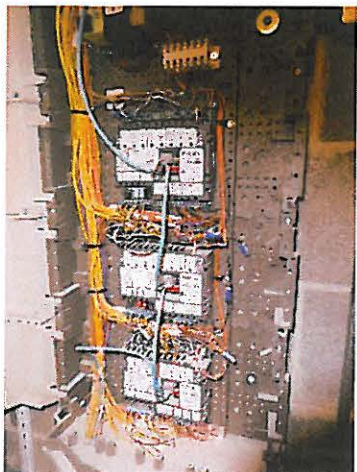
Zone Level Design Strategies

Optimize HVAC Operating Schedules (Space Temperature Setback and Setup)

This control feature will involve implementing optimized night setup and setback temperatures using energy management controls for most of the building spaces in the Arts Center. The existing schedules and setpoints are relatively conservative with room for improvement, resulting in significant potential energy savings. The setup and setback temperatures will be 60°F during the heating mode and 85°F during the cooling mode. The typical occupied setpoints will be maintained to ensure the comfort for all visitors and performers in the facility.

Utilize Demand-Based Ventilation Control

360EE's design of a new DDC system in the Arts Center will include the installation of carbon dioxide (CO₂) sensors in spaces with high variances in occupancy such as the auditoriums. In these spaces, large quantities of ventilation air are provided at a constant rate to satisfy the ventilation requirements at a worst-case scenario – full occupancy. Typically, these spaces are not fully occupied, so they are not required to receive the large ventilation rate which requires significant additional heating and cooling. This control strategy will determine the minimum amount of ventilation needed to provide acceptable indoor air quality at all times. This will be accomplished through dynamically controlling the ventilation rate to each space to maintain CO₂ levels that



Aging Metasys Controllers



Antiquated Graphics on Windows 98 Operating System

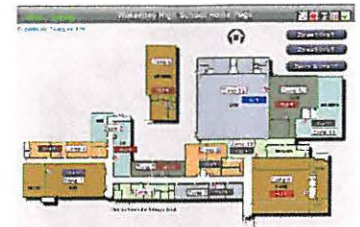


CO₂ zone Sensor for Demand Controlled Ventilation

Replace Chiller

The existing air cooled chiller is nearing the end of its recommended service life of 20 years. The existing chiller is quite inefficient compared to newer units with the latest available technology. Many options are available for air cooled chillers, with each manufacturer touting the "most efficient" or "best" equipment. 360 Energy Engineers' product independence and engineering expertise allows for an unbiased analysis of available equipment, ultimately leading to a specific recommendation given the needs of the specific facility where the unit will be installed. A high-efficiency scroll chiller with variable speed condenser fans is available for a lower first cost than some alternatives, but still provides the performance and efficiency of a higher cost unit.

- Optimize HVAC operating schedules (space temperature setback and setup)
- Optimal start of HVAC systems based on outdoor air conditions
- Zone-level intermediate setback control with occupancy sensors
- Differential enthalpy economizer control of air handling units
- Air handler static pressure setpoint trim-and-respond reset based on demand
- Dual maximum VAV control to reduce overcooling and reheat swing waste
- Widen zone temperature dead-band
- Lower VAV minimum box flow setpoints in conjunction with new electronic air cleaners
- Variable speed pumping of heating water
- Chilled water temperature setpoint reset
- Boiler sequencing control for optimal energy performance



Building Control System Layout

Replace Boilers

The heating water system at the Community Health Building consists of ten, small, single stage condensing hot water boilers. These boilers have been in operation for nearly twenty years, which is roughly the expected life of the equipment. End of life is evident by persistent failures and repairs. Based on condition and age, these boilers are due for replacement.



Failing Twenty Year-Old Condensing Boilers in Community Health Building

In lieu of a direct replacement of the ten single stage condensing boilers, four-to-six larger modulating condensing hot water boilers will be installed. These boilers will have higher turndown to match the load, which will improve energy efficiency. By having fewer pieces of equipment installed, there will be fewer to maintain. The boilers installed will also be more robust and more reliable than the currently failing boilers. The existing boiler models, which were a failed first generation of condensing boilers, are known for their heat exchanger failure.



Modern Condensing Boiler With Higher turndown

Replace Roof

The Community Health Building's roof is a modified bituminous system that is original to the building's construction in 1999. The roof shows substantial de-mineralization. De-mineralization of cap-sheets occurs when weather, over time, washes away the aggregate minerals and rocks from the underlying felt. Bare felt areas can cause exposure of the membrane to direct sunlight and UV radiation, which causes rapid membrane deterioration. Some deterioration has likely already occurred, and, if left untreated, will lead to premature roof failure. The top sheet can be re-impregnated with additional minerals to extend the life of the roof a few more years. However, the roof would still need to be replaced soon, so 360EE recommends a full roof replacement.



Substantial De-Mineralization on Community Health Building Roof

Community Health Building Improvements

Install Electronic Air Cleaner Filtration



Typical standard pleated air filters



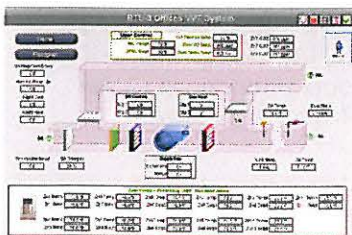
High efficiency electronic air cleaner

The six large air handlers in the Community Health Building feature standard, pleated air filters to filter out large particles from the air that is used to condition and ventilate spaces. In order to provide clean air for the occupants of the building, large amounts of outdoor air are introduced into the building to dilute the contaminants in the circulated air.

Polarized-media air filters offer several advantages over the standard filters. Standard filters are designed to capture large particles in the air in order to protect the HVAC equipment in which they are used. Polarized-media air filters not only capture large particles to protect equipment, they also capture much smaller particles that can affect the quality of the air and health of the occupants. Not only does it improve the quality of the air, less outdoor air is required to dilute the circulating air because this outdoor air is now cleaner. Polarized-media air filters also require less maintenance due to the longer life of the individual filters.

Savings will be achieved by replacing standard air filters with polarized-media air filters. The electrostatic air filters will improve indoor air quality and will require less outdoor air, thus decreasing the amount of energy used to heat and cool ventilation air.

Upgrade HVAC Control System



Advanced Control System Interface

This energy conservation opportunity will include recommissioning the control system in the Community Health Building. The building is currently being operated by an Automated Logic DDC control system. This system was installed and originally commissioned in 1998, and while it utilizes some energy efficient strategies, there is room for improvement as technology has advanced a large measure over the past twenty years. In addition, some of the system's hardware, such as the controllers and reheat valves, have been failing as of late and need to be replaced as part of the upgrade.

The existing Automated Logic control system will be re-commissioned so they operate more efficiently. The operation and setpoints of all the systems, including all energy recovery units, will be adjusted so that the systems are operating correctly and as efficiently as possible. Control sequences will be redesigned and implemented when deemed necessary. This will lower the runtime of the equipment as well as the amount of cooling or heating produced during part-load conditions. This will also decrease energy spent wastefully cooling or heating the spaces during periods when no one is occupying the building. Failed or aging controllers, valves, and other hardware will be evaluated and replaced as needed. The following individual strategy improvements will be implemented and commissioned into the system:



New Control Valve

This scope of work will include expanding the system in the Community Health building over to Fire Stations #4 and #5 to create a uniform energy management and automation system to effectively control temperature, energy, and receive proactive maintenance alerts to improve operations.

Savings will be achieved by improving the operating control strategies for the equipment and scheduling areas of the buildings. One example is the office area in Station #5. This space can be setup with temperature setbacks outside of business hours.

Station #2: Replace Two Older RTUs

The three rooftop units installed at Fire Station #2 were installed in 2001, putting them beyond their expected 15 year service life. The unit serving the sleeping quarters was recently replaced with a new, smaller unit, to correct humidity issues. This leaves two units that are less efficient than today's standards and in need of replacement.

This scope will replace the two older rooftop units with new high efficiency rooftop units capable of improved temperature and humidity control while using less energy.

Station #5: Solar Power Installation

Fire Station #5 was designed with a south-facing, angled roof that is naturally suited for photovoltaic panels. The standing-seam metal roof will last for decades, further proving that this is a perfect site for solar power. An approximately 100W photovoltaic power system will produce over 137,000kWh annually, greatly reducing the City's energy spend and environmental impact. An internet-based monitoring system will allow all users the ability to quickly and effectively see the performance of the photovoltaic system. The construction of a solar power system for Fire Station #5 will be a high profile success for the City of Lawrence.



Digital HVAC controls at FS#5



Older RTU at FS#2



Fire Station #5 at 1911 Stewart Ave.



Computer Rendering of a 100kW PV Array on the roof of Fire Station #5.

Fire/Medical Buildings Improvements

Station #3: Replace Rooftop Units



Older RTU at FS#3



Newer High Efficiency Rooftop Unit

Fire Station #3 has four rooftop units providing heating and cooling. Three are original from 2003. One of the units was installed in 2000. This older unit originally served much more area through underfloor ductwork than it currently serves. Most rooms were removed from this rooftop unit and placed on to the 2003 rooftop units. Likely, there is air escaping through this unused underfloor duct network, which is wasteful.

This scope will replace all of the four older rooftop units with new high efficiency rooftop units capable of improved temperature and humidity control while using less energy. For the oldest unit at Fire Station #3 serving the underfloor system no longer used, a new, properly sized and selected high efficiency rooftop unit will be located over the dining area in which it serves. New ductwork will be installed and the underfloor ductwork will no longer be used.

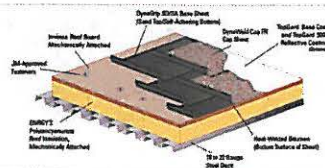


Roof deterioration at FS#3

Station #3: Replace Roof

The existing roof is a built-up roof with rock ballast covering. This roof is beginning to fail in some spots. During our facility audit, we witnessed visible water damage in the main corridor. In order to prevent more water infiltration which can lead to mold and potential equipment damage, the roof is in need of replacement. This scope will include a complete tear off of the existing roofing system down to the deck and replacement with a new high-performing modified bitumen roofing system and appropriate insulation thickness and slope.

Savings will be achieved by improving the thermal resistance of the roofing system, which is the largest surface area through which heat is gained and lost contributing to energy consumption of the HVAC equipment.



Modified Bitumen Roof

Stations #4 and #5: Uniform HVAC DDC Controls Installation



Digital HVAC controls at FS#4

Fire Station #2 and the Fire Training Center both operate HVAC equipment through standard thermostats with no front-end graphic and automation systems. Fire Station #3 also runs most of its equipment through standard thermostats, except for the sleeping quarters which use a simple digital control system for the variable air volume HVAC system. These buildings will be improved with web-enabled thermostats as described earlier in this report. Fire Station #4 and Fire Station #5 have variable air volume systems that utilize a digital control system for temperature control.

of the unit could be turned off, forcing the space to remain at the unoccupied temperature setpoint even if occupancy was detected.

Disable reheat systems in summer months

For the VAV reheat systems, 360EE will identify zones that do not require significant reheat during the summer months and disable these. Many facilities with electric reheat systems have successfully shut off the reheat coils at the breaker during the cooling season, leading to significant energy savings. In conjunction with this change, it may be necessary to adjust the supply-air temperature to avoid overcooling certain spaces, and it may be necessary to leave the reheat coil breakers active in certain spaces (such as interior zones) in order to maintain comfort.



VAV Box With Electrical Reheat

Replace Vestibule and Stairwell Cabinet Unit Heaters

The current electric heaters located at each exterior door are original to the building's 1980 construction and do not function properly. These units, when enabled to heat in the cooler months, operate at 100% capacity, making the vestibules stifling hot during the winter. This expensive heat that is generated with costly electricity is wasted each time someone enters or leaves the building.



Electric Cabinet Heater at Main Entry

Replace Windows

The existing windows at City Hall represent the largest source of unwanted heat loss and heat gain. This is primarily due to the current windows having poor seals, thus being a common source of air leakage. Additionally, the window or glazing systems throughout City Hall are beginning to fail. Specifically, the glazing seals on many windows have broken causing glass discoloration. Considering the condition of many of the windows throughout City Hall, installation of new windows with the latest in advanced window design will provide energy savings and comfort.

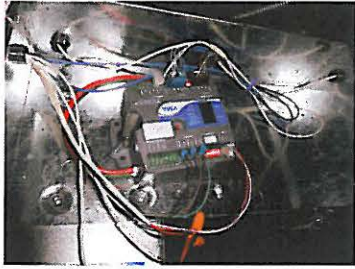


City Hall South Facing Windows

360 Energy Engineers recommends that all non-atrium windows be replaced with a proper window system that meets stringent energy performance requirements and satisfies aesthetic concerns.



Efficient Window Section



New DDC Controller on VAV Box

City Hall Improvements

Optimize Control Strategies

Optimize HVAC Operating Schedules

This control feature will involve marginally improving night setup and setback temperatures using the existing energy management controls in City Hall. The current HVAC systems are scheduled effectively; however, some opportunities exist on holidays and area-specific scheduling needs.

Optimal Start of HVAC Systems Based On Outdoor Air Conditions

Equipment start times are normally set earlier than necessary to ensure proper comfort is maintained even during hot or cold weather. An optimal start feature incorporated into 360EE's design would automatically compensate building start times for changes in weather. If weather is extreme, then equipment is started early enough to properly condition the building before it is occupied. During mild weather, equipment start times can be delayed to obtain more energy savings.

A complimentary feature, Optimal Stop, is used to save energy at the end of each day. This feature takes advantage of a building's "flywheel" effect. In mild weather, equipment can stop earlier than usual without adversely effecting indoor temperatures.

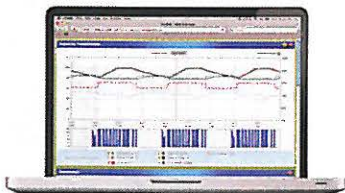
Zone-Level Intermediate Setback Control

This energy conservation opportunity includes integrating the new lighting occupancy controls with the controls on the VAV boxes in order to automatically adjust the temperature setpoint and ventilation rates in each room based on occupancy. With so many spaces in City Hall having variable occupancy patterns, these controls provide a much more manageable and effective means to manage energy use than laboriously entering time schedules in a control system for each space.

When occupancy is sensed by the occupancy sensor, the thermostat goes into an occupied mode (i.e. programmed setpoints) and full ventilation is provided. If a unit is scheduled on and no occupancy is sensed during that time, the thermostat goes into an unoccupied mode (e.g., intermediate setback setpoint) and ventilation air is shut off until occupancy is sensed again. This setback temperature would be between the scheduled occupied and unoccupied setpoints, such that when occupancy is again sensed, the space can quickly return to the occupied setpoint. For example, if the design occupied and unoccupied cooling season temperatures setpoints were 74°F and 85°F for a space, the intermittent setback temperature might be 78°F, allowing the unit to more quickly respond to an occupied signal than it would if cooling down from 85°F. During scheduled unoccupied periods, the occupancy control functionality



Lighting occupancy sensor used for intermediate setback control



Zone-Setback Trend Chart



LED Illumination of a Parking Lot

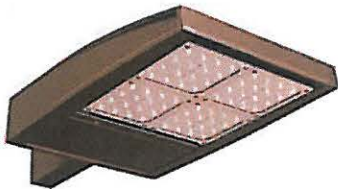
City-Wide Area Lighting

Area lighting is a crucial component to a city's overall appearance as well as safety at night. The existing pole lights in the city include pole top, cobra head, and shoebox-style area lights. The main goal of these lights is to illuminate walkways on sidewalks, paths, and some intersections across the city. Replacing the existing high wattage HID (High Intensity Discharge) Lamps with LED equivalents will increase the visibility for the public and provide increased efficiency. New LED technology consumes approximately one third of the current energy usage with significantly longer operational use. New LED fixtures will be carefully selected by 360 Energy Engineers to identify the best quality hardware for each application.



LED Cobra Head Style Luminaires

Interior spaces are often retrofitted as an economical method of installing LED lighting. The structural components of a light fixture inside of a building last for many decades. Exterior area lights are exposed to wind, rain, hail, sunlight, and vandals. The lenses and globes installed on exterior lights are often yellowed, cracked, and broken. To ensure the best exterior lighting strategy, 360 Energy Engineers replaces the light fixture at each location instead of just the lamp.



LED Replacements for Existing Shoebox Style Luminaires



LED Luminaire for Wall-Mount Illumination

Building Weatherization

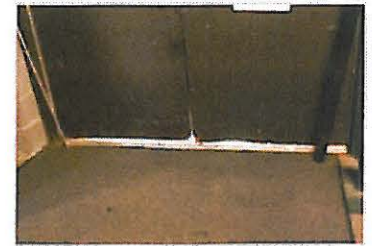
Building weatherization drives down energy consumption by sealing gaps in the building that are allowing uncontrolled flow of air through cracks, holes and gaps in the exterior of the building. This air infiltration leads to excess HVAC equipment use and occupant discomfort. The gaps will be filled with appropriate building materials, and door sweeps will be applied where needed.

Although sealing gaps sounds simple, it is a complex improvement project. Selecting appropriate fire retardant materials, polyurethane foams, and long-lasting door sweeps requires experience and a scientific understanding of both air infiltration and building materials. Additionally, local building and energy codes must be considered when applying these materials to a facility.

Implementation of building envelope measures assist with over all building performance including energy savings and carbon reduction. Building envelope measures also provide benefits in the health and safety of the people utilizing the facility.

Building Weatherization – Buildings in Scope

Facility	Address	Sq. Ft.
Community Health Building	200 Maine St.	88,000
Indoor Aquatic Center	4706 Overland Dr.	44,000
Eagle Bend Clubhouse	1250 East 902 Road	3,000
Airport Terminal	1920 Airport Rd.	7,500
Airport Maintenance Facility	1920 Airport Rd.	10,500
Fire/Med #5	1911 Stewart Ave.	26,000
Fire/Med #4	2121 Wakarusa Dr.	11,000
Fire/Med #3	3708 W. 6th St.	7,000
Fire and Rescue Training	1941 Haskell Ave. #5	6,500
Fire/Med #2	2128 Harper St.	11,000
Parking/AnimalControl/Transit	935 New Hampshire St.	2,300
Lawrence Arts Center	940 New Hampshire St.	55,000
City Hall	6 E. 6th St.	28,000
Union Pacific Depot	North Lawrence	5,000
East Lawrence Rec Center	1245 East 15th Street	18,000
Prairie Park Nature Center	2730 Harper St.	5,500
South Park Admin Office	1141 Massachusetts St.	4,800
Community Building	115 West 11th Street	30,000
Holcom Park Rec Center	2700 West 27th Street	19,500
Solid Waste Division	1140 Haskell	2,600
Street Division Office	1120 Haskell	3,200
Library	707 Vermont St.	85,000
Carnegie Building	9th & Vermont	12,000
Sports Pavilion	100 Rock Chalk Lane	181,000



Visible Gap Under Exterior Doors at Holcom Rec Center



Gap Between Doors Due to Worn Weather Stripping at Prairie Park Nature Center



Visible Gap Under Exterior Doors at The Sports Pavilion



Weatherization Sealing of Air Gap Between Wall and Roof Deck

Sports Pavilion	100 Rock Chalk Lane	181,000
Solid Waste Division	1140 Haskell	2,600
Street Division Office and Red Barn	1120 Haskell	10,200
27th St. Maintenance Building	W. 27th	5,000
Airport Hangar A, B, and C	1920 Airport Rd.	36,000
New Hampshire Parking Garage	935 New Hampshire	128,000
Riverfront Parking Garage	Riverfront Plaza	136,000
Outdoor Aquatic Center	727 Kentucky St.	6,300
Vehicle Maintenance Garage	1141 Haskell	14,500
North Lawrence Pump Station and 2 nd St. Underpass	734 N. 2nd St	600
Salt Domes and Wakarusa Fuel Station	Various	3,000
Parks & Rec Maintenance	1050 E. 11th Street	6,900

needed, left on in unoccupied areas, or used when sufficient daylight exists for daylight harvesting, 360 Energy Engineers would install automatic controls.

In large, complex buildings with many individually controlled spaces, a more advanced lighting control system will be installed. In the Community Health Building, City Hall, and the Library, an advanced lighting control system will be centrally controlled. This means that a facilities manager can remotely operate and schedule lighting. This can ensure that lights do not stay on overnight or on weekends and holidays. An advanced lighting control system can accurately measure and track the amount of energy saved through occupancy sensing, daylight harvesting, and scheduling.

Exterior bollards with integrated lights will be replaced at Prairie Park Nature Center and the Japanese Friendship Garden. The metal halide light fixtures in those bollards are inefficient and should be replaced. Since the light fixtures are integral to the bollard, the entire assembly will be replaced.

City Parking Lot #3 and City Parking Lot #5 both have aging decorative light poles. The metal poles and fixtures are faded, dented, and show signs of corrosion. The poles will be replaced with new LED light poles to provide security lighting in the parking lots.

The canopy that covers the sidewalk next to Parking Lot #3 (800 Block) is equipped with 24 flood lights in poor condition. These floodlights once used incandescent lamps, but have since been retrofitted with CFL lamps. We will replace these fixtures and all exposed conduit with LED equivalents that will efficiently provide illumination to the sidewalk.

Building LED Retrofits, Replacements, and Controls – Buildings in Scope

Facility	Address	Sq. Ft.
Community Health Building	200 Maine St.	88,000
Indoor Aquatic Center	4706 Overland Dr.	44,000
Library	707 Vermont St.	85,000
Eagle Bend Clubhouse	1250 East 902 Road	3,000
Airport Terminal	1920 Airport Rd.	7,500
Airport Maintenance Facility	1920 Airport Rd.	10,500
Fire/Med #5	1911 Stewart Ave.	26,000
Fire/Med #4	2121 Wakarusa Dr.	11,000
Fire/Med #3	3708 W. 6th St.	7,000
Fire and Rescue Training	1941 Haskell Ave. #5	6,500
Fire/Med #2	2128 Harper St.	11,000
Parking/Animal Control/Transit	935 New Hampshire St.	2,300
Lawrence Arts Center	940 New Hampshire St.	55,000
City Hall	6 E. 6th St.	28,000
Carnegie Building	9th & Vermont	12,000
Union Pacific Depot	North Lawrence	5,000
East Lawrence Rec Center	1245 East 15th Street	18,000
Prairie Park Nature Center	2730 Harper St.	5,500
South Park Admin Office	1141 Massachusetts St.	4,800
Community Building	115 West 11th Street	30,000
Holcom Park Rec Center	2700 West 27th Street	19,500



Automatic Occupancy Sensor



Aged and Distressed Pole To Be Replaced



Parking Lot #3 Canopy Lighting and Conduit To Be Replaced



Weatherization Sealing of Air Gap Between Wall and Roof Deck



Interior LED Tubes to Retrofit Fluorescent Office Fixtures

performance of multiple locations, analyzing system reports, conducting remote diagnostics and assessing performance, all from the web.

Building LED Retrofits, Lighting Replacements, and Controls

All fluorescent, incandescent, and HID lamps installed inside or directly to the exterior of city buildings will be replaced with LED lighting technology. LED lamps are 40% more efficient than the very common T8 fluorescent lamp. A single 60 watt incandescent light bulb can be replaced with a 7 watt LED. These energy efficiency changes will make a dramatic effect on the monthly electric utility charge.



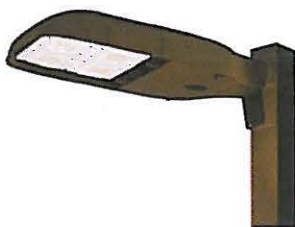
LED Lighting in Office Setting

LED lamps also have an extremely long life. The average life of an interior 4' LED lamp is 50,000 hours, compared to typical T8 fluorescent lamps, which are rated at 20,000 or 25,000 hours. The performance of the LED lamp is also guaranteed by the manufacturer for five years, whereas T8 fluorescent lamps have only a one year warranty.



Exterior Security Lighting Attached to Building

For interior building spaces, most fixtures will be retrofitted with LED lamps. This means that the fluorescent lamps and ballasts will be removed, but the metal fixture will stay in place. Installers will re-wire the fixture to insure it satisfies current electrical safety codes and requirements. LED lamps will then be installed. Gymnasiums that have recently been upgraded to T5HO fixtures (Community Recreation Building, Holcom Gymnasium, East Lawrence Recreation Center Gymnasium, and SPL) will not be retrofitted or replaced. Although LEDs use less energy than T5HO technology, the most prudent action is to continue using the high quality T5HO lamps in the gymnasiums mentioned above.



LED Light Fixture for Pole Lighting Near Buildings

For exterior spaces like security lighting and nearby pole lights, the fixtures will be completely replaced. Exterior light fixtures are exposed to severe weather and harsh sunlight. Retrofits are nearly as expensive as complete replacements, and the existing lenses are often dulled and yellow. All wall packs, security lights, and nearby pole lights will be replaced with LED fixtures. Some existing fixtures have already been replaced with LEDs. Those will remain in place where they have been professionally selected and installed.

Reducing the connected load of the lighting system represents only one part of the potential for maximizing energy savings. The other part is minimizing the use of that load through automatic controls. Automatic controls switch lighting based on occupancy. In situations where lighting may be on longer than

ECM Descriptions

This section includes descriptions of each ECM analyzed in the project, including the resulting benefits to the City of Lawrence. Existing building descriptions are available in the Facility Assessments section.

Web-Based Thermostats

Several city buildings have advanced Building Automation Systems or Direct Digital Controls that manage the heating, cooling, ventilation, and scheduling of the facility. Other buildings use simple programmable or non-programmable thermostats. The simple programmable units must be manually programmed or controlled, which often leads to inefficient set points or no control at all.

In an effort to reduce energy consumption and costs, as well as ease the time burden associated with maintaining individual thermostat settings at most city buildings, web-based energy management thermostats will be connected to a single, web-accessible graphical user interface (GUI) to allow for centralized schedule management, reporting, and troubleshooting of all major heating and cooling equipment across all buildings in the following list:

- Fire/Medical #2
- Fire/Medical #3
- Fire/Training Center
- New Hampshire Parking Garage - Maintenance
- New Hampshire Parking Garage - Parking Office
- New Hampshire Parking Garage - Transit Office
- Solid Waste Office
- Streets Division Office
- Airport Terminal
- Maintenance Hangar Office
- Vehicle Maintenance Garage Offices

This system would maximize the City's buildings efficiencies, reduce energy consumption, and deliver significant cost savings. Energy management thermostats are perfect for situations where a full-scale building automation system would be too costly and overly complex. This system is the newest WiFi enabled technology offered for the commercial market that addresses all of the basic energy management needs of small commercial buildings.

In addition to energy management features, the system will also send maintenance personnel regular maintenance reminders and alerts based on your system's performance. Furthermore, the system's reports feature allows for tracking the



Existing Stand-Alone, Non-Programmable Thermostat



Web-Based Thermostat



Thermostat Trend Data



Example Web-Based Thermostat Interface

Savings Methodologies

eQUEST

The widely-accepted building energy simulation software called eQUEST (QUick Energy Simulation Tool) was used to build energy models of buildings that will receive multiple and interactive energy conservation measures. The eQUEST software uses the DOE2 (US Department of Energy) simulation engine. Each building model was calibrated to actual utility consumption as defined by monthly utility bills, normalized to typical local weather conditions provided by TMY3 data. Once the building energy model was calibrated, eQuest was used to perform parametric simulations of various system modifications to produce real-time changes in energy consumption. Changes to the model represent implementation of the proposed ECMs. When ECMs are selected for implementation, they are run simultaneously to account for the interactive energy effects of the ECM combinations. Key eQUEST input and output data are included in Appendix C – eQUEST Reports.

Lighting Tool

An excel spreadsheet was used to model the results of lighting retrofits. This analysis tool compares the energy consumption of existing fixtures in each space to the energy consumption of the fixtures after installation of retrofits and replacements. An estimated number of run hours is applied to each fixture on an annual basis to calculate the total power consumption saved. This estimate is based on each space's function (restroom, classroom, gymnasium, etc.) and facility operating hours. The installation of lighting controls to reduce run hours is included in the analysis. In addition, LED lighting has a positive impact on the cooling system by reducing the heat gain to the space. This effect is included in the analysis. The resulting negative impact on the heating system is also included in the analysis. Calculation equations and tabulated space data are included in Appendix D – Baseline and Proposed Lighting Tables.

Air Infiltration Calculation

A detailed on-site audit established each facility's needs. A detailed analysis of each building's specific construction, age, square footage, and utility usage was documented. A scope of work was developed to detail the control of air leakage by sealing gaps, cracks, and holes using appropriate materials such as fire retardant, polyurethane foam, caulks, and appropriate weather stripping materials. The building's insulation value, geographical wind data, and effective linear measurements of doors/windows are used to calculate infiltration at the building. The infiltration rate is used to determine available savings from a comprehensive weatherization project. Calculation equations are included in Appendix A – Savings Calculations and Equations.

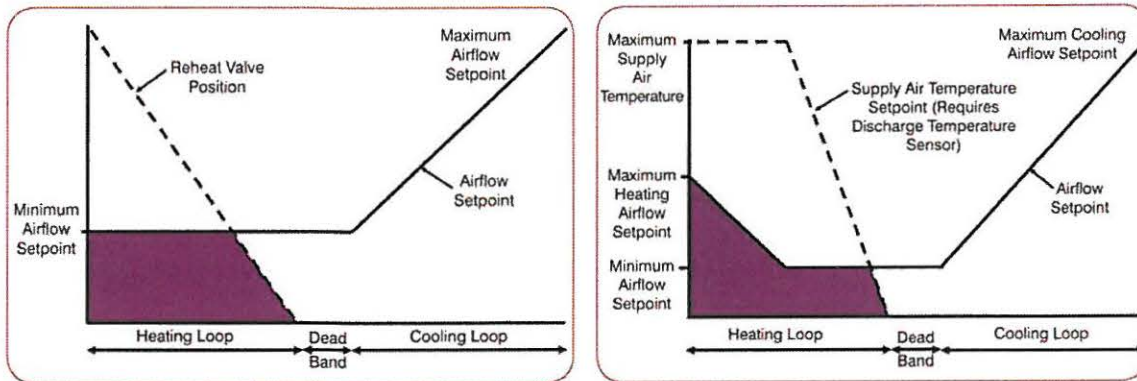
BIN Analysis

A detailed bin analysis calculation tool was developed specifically to calculate post-project consumption. This tool utilizes Typical Meteorological Year (TMY3) local weather data to determine the number of hours in each temperature "bin", where each bin has a two degree range. A baseline schedule, determined by site audits, observations, and conversations with facility personnel, was applied. For each hourly bin, including both occupied and unoccupied hours, heating and cooling runtimes proportional to a deviation from a balance point of 55°F were applied to the equipment. Fan, heating, and cooling energy are all then calculated for each of the hourly bins given the baseline schedules and temperature setpoints to establish the baseline cost of operating HVAC equipment as it currently runs. Equations used in the bin analysis are listed in Appendix A – Savings Calculations and Equations.

ECM Summary Table 2, Savings by Building, Continued

Building	ECM Description	ECM ID	Post-Project Savings				
			Electric Usage (kWh)	Electric Demand (kW)	Electric Cost Savings (\$)	Gas Usage (Therm)	Gas Cost Savings (\$)
Holcom Rec Center	Building LED Retrofits, Replacements & Controls	1	28,868	86	\$2,935	-422	\$0
	Building Weatherization	2	1193.5	0	119.35	429.7	292.17
	New Packaged HVAC System	23	51484	211	5791	-602	-512
	Sports Field Lighting	24	0	0	0	0	0
Indoor Aquatic Center	Building LED Retrofits, Replacements & Controls	1	157,046	389	\$12,570	-2,402	\$0
	Building Weatherization	2	3281.2	0	328.12	1288.2	876
	Energy & Indoor Air Quality Improvements	25	354,670	693	29033	60,053	42037
Library	Building LED Retrofits, Replacements & Controls	1	194,605	246	\$10,771	-3,049	\$0
	City-Wide Building Weatherization	2	984.4	0	98.44	0	0
	Public Works: DDC Upgrades & Optimization	8	167,420	244	\$11,470	0	0
New Hampshire Parking Garage	Building LED Retrofits, Replacements & Controls	1	213,928	305	\$21,378	0	\$0
North Lawrence Pump Station	Building LED Retrofits, Replacements & Controls	1	8,929	18	\$899	-31	\$0
Outdoor Aquatic Center	Building LED Retrofits, Replacements & Controls	1	3,997	77	\$797	-18	\$0
	Replace Pool Boiler with Condensing Boiler	28	0	0	0	0	0
	Stand Alone HVAC for Concession Stand	29	2833	5	285	0	0
Parking/Animal Control/Transit	Building LED Retrofits, Replacements & Controls	1	5,437	16	\$531	-85	\$0
	Building Weatherization	2	1350.5	0	135.05	454.1	308.79
	Web Based Thermostats	6	5775	-3	468	738	627
	Replace Wall Pack HVAC With Gas Unit Heaters	27	16719	41	1639	-1843	-1567
Parks & Rec Maintenance	Building LED Retrofits, Replacements & Controls	1	4,592	13	\$443	-77	\$0
Prairie Park Nature Center	Building LED Retrofits, Replacements & Controls	1	10,642	23	\$1,035	-109	\$0
	Building Weatherization	2	735.5	0	73.55	247.3	168.16
	Split System Replacements	30	0	0	\$0	0	\$0
Riverfront Parking Garage	Building LED Retrofits, Replacements & Controls	1	42,085	69	\$4,259	0	\$0
Solid Waste Division	Building LED Retrofits, Replacements & Controls	1	2,943	10	\$295	-46	\$0
	Building Weatherization	2	376.3	0	37.63	126.5	86.05
	Web Based Thermostats	6	6751	0	580	250	250
	Replace Package Unit	31	8439	33	959	17	17
South Park Administration Office	Building LED Retrofits, Replacements & Controls	1	7,399	16	\$689	113	\$0
	Building Weatherization	2	410.5	0	41.05	138	93.87
Sports Pavilion	Building LED Retrofits, Replacements & Controls	1	469,209	771	\$31,394	-7,351	\$0
	Building Weatherization	2	4369.7	0	436.97	1715.6	1166.6
Street Division - Office	Building LED Retrofits, Replacements & Controls	1	4,968	17	\$518	-47	\$0
	Building Weatherization	2	191.1	0	19.11	61.7	41.96
	Web Based Thermostats	6	2934	-2	232	300	300
Street Division - Red Barn	Building LED Retrofits, Replacements & Controls	1	6,072	20	\$633	-57	\$0
Salt Dome - Haskell	Building LED Retrofits, Replacements & Controls	1	42,085	69	\$4,259	0	\$0
Salt Dome - Wakarusa	Building LED Retrofits, Replacements & Controls	1	42,085	69	\$4,259	0	\$0
Union Pacific Depot	Building LED Retrofits, Replacements & Controls	1	18,984	48	\$1,938	-114	\$0
	Building Weatherization	2	527.6	0	52.76	189.9	129.15
Vehicle Maintenance	Building LED Retrofits, Replacements & Controls	1	49,026	147	\$4,840	-720	\$0
	Web Based Thermostats	6	10174	-21	728	706	600
	Add Ductless Mini Split to Server Room	32	0	0	0	0	0
Lawrence Parks and Recreation	Parks Area Lighting	3	157,715.74	435.2	16,966.52	0	0
	Sports Field Lighting	4	105315.12	1635.36	\$19,034.45	0	0
	Sports Lighting Timers	5	6912	0	635.9	0	0
Lawrence Public Works	Public Works: Pole Lighting	7	282,321.66	769.32	30,315.44	0	0

Conventional VAV Reheat Control (Left) vs. Dual Maximum VAV Reheat Control (Right)



Benefits of dual maximum logic over traditional VAV reheat logic include lower fan energy, lower cooling energy use, lower reheat energy use, improved thermal comfort by not pushing zone temperature to heating setpoints during the cooling season, and reduced stratification due to supply air temperature control. Moreover, systems which utilize dual maximum control are better able to respond to varying weather conditions, and utilize less gas and electricity during both heating and cooling seasons. 360 Energy Engineers recommends to integrate these control strategies into the new DDC control system installed in this building.

Replace Air Cooled Chiller with Premium Efficiency Unit

The existing Trane air cooled chiller is nearing the end of its rated service life, and is quite inefficient compared to newer units with the latest available technology. Many options are available for air cooled chillers, with each manufacturer touting the "most efficient" or "best" equipment. 360 Energy Engineers' product independence and engineering expertise allows for an unbiased analysis of available equipment, ultimately leading to a specific recommendation given the needs of the specific facility where the unit will be installed. A high-efficiency scroll chiller with variable speed condenser fans is available for a lower first cost than some alternatives, but still provides the performance and efficiency of a higher cost unit. The following sections outline some of the ideal features of a new air cooled chiller to be installed at the Arts Center.

Variable Speed Condenser Fans

Chillers with variable speed condenser fans, such as the Carrier 30RB chiller with Greenspeed technology, feature a high-efficiency, variable-speed condenser fan along with finely-tuned controls, which together provide premium part-load efficiency to reduce utility costs over the lifespan of the chiller. Additionally, the lower sound levels achieved at part-load conditions can be very beneficial for sensitive acoustic applications.



Existing 124 Ton Trane Chiller



Existing Helical Rotary Screw Compressor



Carrier 30RB with Greenspeed

Scroll Compressors

Although relatively new to HVAC applications, the use of scroll compressors for HVAC and refrigeration has been widespread since the mid-1980s. Scroll compressors have a successful history in HVAC applications. Acceptance has been quick, creating a demand for millions of units over the past 20 years. Scroll compressors proved their reliability in that time to be as good as or better than other technologies. Since their introduction, millions of scroll compressors have seen successful service worldwide in food and grocery refrigeration, truck transportation, marine containers, and residential and light commercial air-conditioning.

Although their full-load efficiency is generally slightly below that of a screw machine, scroll chillers' part-load efficiency (IPLV) is generally better than that of a rotary screw machine, which ultimately results in lower annual energy costs. Scroll compressors have many distinctly appealing qualities including efficiency, low sound levels, and reliability.

Library Improvements

VAV Controls and Ventilation Optimization

Reset Outdoor Air Rates to Appropriate, Code Compliant Levels

When reviewing the design mechanical plans and during our field investigation, 360 Energy Engineers noticed that all variable air volume rooftop units were bringing in an exorbitant amount of ventilation air relative to a reasonable quantity for a library. For context, a reasonable amount of outdoor air for a variable volume air handler serving a library is 25% of the total supply airflow. The VAV rooftop units in the library are bringing in 40% to 80% outdoor air, much higher than what is normal for a library building. In fact, RTU-3, which was at 80% outdoor air, was not even close to providing enough cooling to cool this amount of outdoor air. This issue prevents the unit from fully cooling and dehumidifying the spaces served. Consequently, the building often suffers high humidity and temperatures on hot and humid days.

After searching for the reasoning behind these higher-than-normal outdoor air rates, 360 Energy Engineers' team performed a thorough review of the design documents and discovered that very high density occupancy spaces such as the auditorium and meeting/activity rooms were served by the same air handlers that serve the stacks, circulation and other lower-occupant density spaces. This is generally poor design practice because it results in the primary air handing units bringing in a percentage of outdoor air to meet the ventilation requirements of the assembly spaces while significantly over ventilating other spaces. Consequently, these systems currently consume an excessive amount of cooling and heating energy.

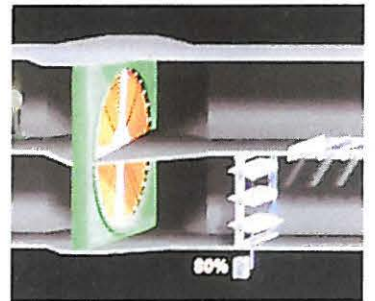
360 Energy Engineers proposes to set outdoor air rates at code-required minimums based on the 2015 International Mechanical Code. We have performed these calculations, and from making some minor adjustments to VAV box minimums, we are able to reduce outdoor air rates from 15,000 CFM as designed to 9,260 CFM, saving a significant amount of energy and greatly improving indoor environmental quality by allowing the equipment to more effectively cool and dehumidify the building.

Below is a table that compares the designed outdoor air flow rates with 360EE's Code Calculations:

Rooftop Unit Tag	Design OA Rate (CFM)	Proposed OA Rate (CFM)
RTU-1	3,000	1,390
RTU-2	3,000	1,140
RTU-3	4,500	2,370
RTU-4	4,500	4,360
	15,000	9,260



Typical VAV Rooftop Unit

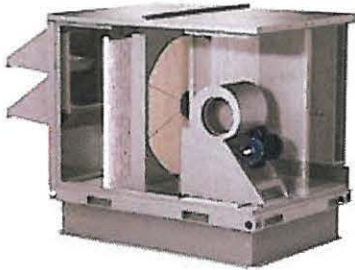


Controls-3 with OA damper 80% Open



Fully open OA Damper

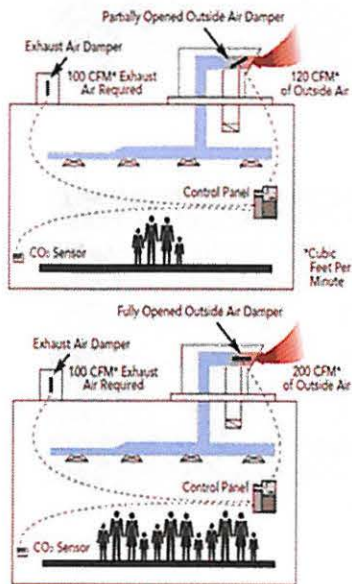
Add Dedicated Ventilation System to Auditorium



Roof-Mounted Energy Recovery Ventilator for Auditorium

To reduce outdoor airflow rates based on code minimums, the HVAC system design included serving very high density occupancy spaces, such as the auditorium, with the same unit as the main entry lobby and circulation areas, which have a much lower occupant density. Proper design practice involves providing a dedicated unit to handle ventilation air only for this space while allowing the VAV system to provide space heating and cooling. This would eliminate the need for the primary VAV air handler to bring in a percentage of outdoor air to meet the ventilation requirements of the assembly spaces while significantly over-ventilating the lower density spaces.

360 Energy Engineers recommends installing a simple roof-mounted energy recovery ventilator (ERV) to provide 775 CFM of ventilation air to the main auditorium. This will allow the primary air handler's (RTU-4) outdoor air rate to be reduced from 4,500 CFM to 1,090 CFM, saving a significant amount of energy. Furthermore, the ERV can be controlled by a CO₂ or occupancy sensor to minimize outdoor air when the room is not being used.



CO₂ Control of Ventilation

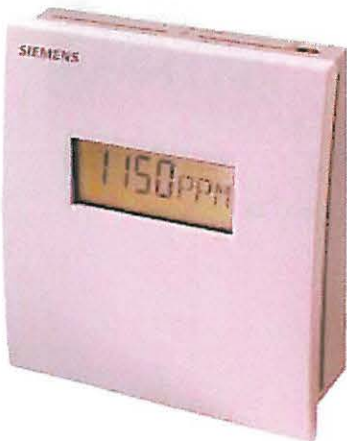
Dynamic Control of VAV Box Minimums and Air Handler Ventilation based on CO₂

This conservation opportunity includes the installation of carbon dioxide (CO₂) sensors in select spaces with high variances in occupancy such as general circulation, meeting rooms, the auditorium and offices. In these spaces, large quantities of ventilation air are provided at a constant rate to satisfy the ventilation requirements at a worse-case scenario: full occupancy. Typically, these spaces are not fully occupied, and are therefore not required to receive the large ventilation rate which requires significant heating and cooling.

This control strategy will determine the minimum amount of ventilation needed to provide acceptable indoor air quality at all times. This will be accomplished by dynamically controlling the ventilation rate at each air handler to maintain CO₂ levels in each zone that correspond to acceptable air quality for each space. Additionally, VAV terminal minimum airflow setpoints will be dynamically reset based on the ventilation requirements in the space it serves. This change significantly lowers the amount of energy needed to temper the outdoor air. This strategy will also reduce costly electric reheat energy by lowering VAV box minimums.

Dual-Maximum Control of VAV Boxes and Reheat

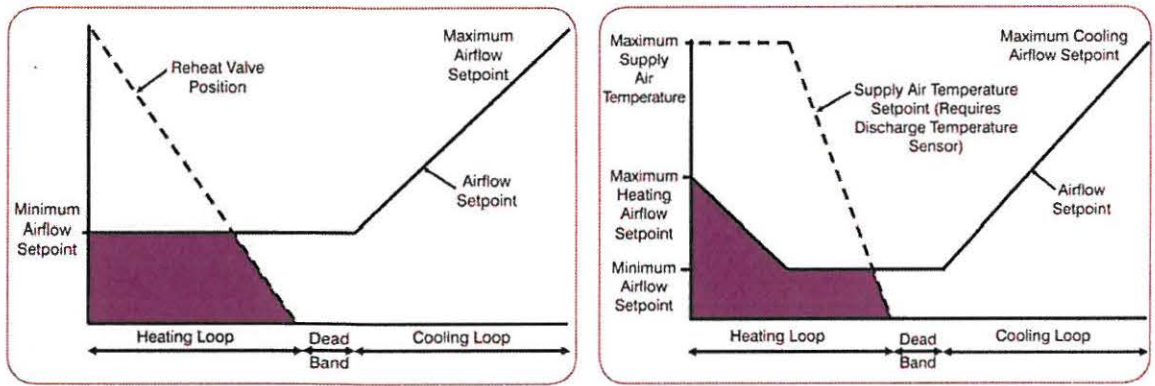
The Library's VAV boxes control airflow proportional to cooling demands in the cooling mode and constant air volume in the heating mode. Although a common mode of control, this operation does not meet the requirements of ASHRAE 90.1 – Energy Standard for Buildings, due to its inefficient operation during part-load heating. A dual-maximum or reverse-acting control on these boxes will yield improved energy performance. This benefit is compounded at the library due to its use of very costly electric heat at the VAV terminal box.



CO₂ Sensor

360 Energy Engineers recommends reprogramming all VAV controllers to implement dual-maximum airflow control. Currently, the VAV box modulates the volume damper down from the zone maximum airflow setpoint (when the space is at full cooling) to the zone minimum (when no cooling is required). This minimum airflow rate is then maintained as the space temperature falls through the dead-band into heating mode. As the VAV box transitions into heating mode, the electric heating coil simultaneously activates while the minimum airflow jumps to the heating minimum setpoint. The electric reheat coil then modulates up to maintain the space at the heating setpoint until all electric heating stages are on. This logic, shown in the figure below, is effective at maintaining comfort in spaces, but results in large amounts of wasted reheat energy. As an alternative, more modern control strategies very often use Dual Maximum logic, where a separate maximum heating airflow setpoint is calculated, independent from the maximum cooling airflow setpoint. Heating elements are still modulated to provide adequate heating to spaces, but the lower supply airflow in heating means less reheat is required, and can save significant fan energy at the air handling units supplying VAV boxes. This strategy is shown on the second image below.

Conventional VAV Reheat Control (Left) vs. Dual Maximum VAV Reheat Control (Right)



Benefits of dual maximum logic over traditional VAV reheat logic include lower fan energy and lower cooling energy use, improved thermal comfort by not pushing zone temperature to heating setpoints during the cooling season, and reduced stratification due to supply air temperature control. Moreover, systems which utilize dual maximum control are better able to respond to varying weather conditions, and utilize less power during both heating and cooling seasons. 360 Energy Engineers recommends to integrate these control strategies into the current Automated Logic control system.

Airport Terminal Improvements

HVAC System Replacements

The existing split-system heating and cooling units at the Airport Terminal are nearing the end of their useful service life. The ASHRAE life expectancy for split-system heating and cooling units is 15-18 years. With the typically inconsistent loads of an airport terminal waiting area, the building's HVAC load varies dramatically. Multi-stage DX air conditioners will run more efficiently during part-load conditions than the older models currently installed. Higher efficiency condensing furnaces will improve heating efficiency up to 98%. One of the reasons that a condensing furnace improves efficiency so much is that it uses the exhaust heat to warm up the return air before it re-enters the main heat exchanger of the furnace. Instead of venting all of that energy out into the environment, it can be used to lower utility expenses.

New Hampshire Parking Garage: Replace Wall Pack HVAC Units with Gas Heat



Parking Garage Office Wall Pack HVAC Unit

The New Hampshire Parking Garage offices (Transit, Parking, and Maintenance) each use Bard wall pack heating and cooling units. These small packaged units work well for small office spaces that do not have a wildly varying HVAC load. The currently installed units use electric heat. Although electric heaters are less expensive to install, they are much more costly over time due to the relatively high cost of electricity. Gas heat is much less expensive over time. A gas utility line is available in the alley behind the parking garage. The installation of natural gas to the office areas will make the long term utility bills much lower.

Solid Waste Office: Replace Package Unit



Existing Packaged Unit (2001) at Solid Waste Office

The existing packaged unit is in poor condition and in need of replacement. Several building occupants notified 360EE of private offices that do not adequately heat and cool during extreme outdoor conditions. A new packaged unit would provide increased efficiency and be able to modulate air flow to the building as necessary to meet the unique internal load conditions. These conditions vary dramatically as the occupancy of the building changes throughout the day (approximately 90 people visit the office daily). To control the new packaged gas heat and DX cooling unit, an internet-based thermostat would be installed to allow for remote access and control. This would allow for more advanced scheduling similar to what the city has in other buildings currently.

Vehicle Maintenance Office: Add Ductless Mini-Split for Server Room

The second floor of the Maintenance Garage is conditioned by a single zone packaged rooftop unit. This unit is responsible for heating and cooling several small offices on the second floor that are currently being utilized as storage and a small conference room that rarely gets used. The most important aspect of the load on the second floor is the server closet adjacent to the conference room. This closet accounts for almost all the load that the existing packaged unit must condition. To minimize wasted heating and cooling when the second floor is unoccupied, a ductless mini-split HVAC system will be installed in this closet to handle the load of the server. This would allow the packaged unit to be set to an unoccupied mode by an internet based thermostat controlled remotely. During nights, weekends, and holidays, the small, efficient ductless mini-split will keep the server cool without wasting energy on the rest of the second floor.



Server Closet at Vehicle Maintenance Garage Office



Ductless Mini-Split For Server Closet at Vehicle Maintenance Garage

Parks Area Lighting

Lawrence City Parks are currently lit by a combination of both metal halide and high pressure sodium HID lights. With significant run hours, and being vastly spread throughout the town, this is a perfect opportunity to install modern LED lighting solutions. All existing HID fixtures will be replaced with new LED equivalents producing increased visibility, longevity, efficiency, and overall appearance. Any existing LED fixtures already installed by the city staff will remain in place. LED technology lasts four times as long as a comparable HID lamp. This means that the maintenance staff will have fewer service calls to replace failed lamps and ballasts.



Decorative 10' Light Pole

In addition to the energy savings and long lamp life, LED technology produces a much whiter light than other commercially available lighting technologies. The whiter color of the LED has many benefits, including scientifically-proven lighting response in the human eye. Scotopic Response refers to the way the human eye responds to low light levels, and it's been proven that LED light sources provide better Scotopic lighting. This is very important in area lighting, where objects and movement on the edges of the illuminated areas may quickly become obstacles in streets and sidewalks.



Shoebox Style Light on a Tall Pole

With a holistic replacement of all the city parks lighting, the city will eliminate wasted energy while maintaining a safe and visually attractive environment for the public.

Advanced Timers for Tennis/Basketball Courts

Basketball, Tennis, Handball, and Horseshoe courts all have high wattage sports lights for night play. The Centennial Park Skate Park also has several of these high wattage lights. These lights are currently operated by park users. When playing at night, these court lights can be turned on. At midnight, the court lights automatically turn off.



Walkway Area Light

There are often times when park users turn on the lights to use the courts, then leave long before the timer turns the lights off. Veteran's Park utilizes a system that turns the lights off an hour after they have been activated to prevent lighting vacant courts. A similar system will be installed at the courts of the following parks throughout the city:

- Broken Arrow Park – Horseshoe Court
- Centennial Park – Skate Ramps
- Chief Jim McSwain Park – Basketball Court
- Deerfield Park – Basketball Court and Skate Ramps
- Edgewood Park - SLKBP Hardcourt
- Hobbs Park – Basketball Court
- Holcom Park – Basketball Court
- Holcom Park – Tennis Court
- Lyons Park – Tennis and Basketball Courts



Basketball Court With High Powered Lighting



1000W Metal Halide Lamp at Outdoor Tennis Court

The new timer system would still be active at the currently prescribed times. After a park user activates the lights, the lights will remain on for one hour. At that time, a buzzer will sound repeatedly for 45 seconds. This allows the park user to re-start the lights. If the park user is no longer at the court, the lights will turn off, reducing the electrical load from these high wattage lights. Clear instructions will be printed on weather-resistant labels at each set of lighting controls.

Parks Sports Lighting

Large, 1000W HID lamps illuminate outdoor city tennis courts, basketball courts, the Centennial Park skate park, and the Horseshoe court at Broken Arrow Park. The lamps are still fully functional, but the power requirement is very high. Replacement of these lights with low-power LEDs will provide long term savings. In addition to energy savings, LED lights last longer and provide a cleaner, whiter light with less light spillage.



Map Display of Area Lights, Including Parks Sports Lighting

360 Energy Engineers identified HID Sports Lights during the audit phase of the project. A database of lighting poles, lighting technology, and GPS locations defines the city-owned area lights in each city park. The database will be used to locate each Sports Light during the conversion to LED.

Indoor Aquatic Center

Reduce After Hours Turnover & Tune Flows with VFDs

The turnover rate (turnovers per day) refers to the time it takes to move a quantity of water, equal to the total gallons in the pool and surge vessel, through the filtration system. Minimum turnover rates for various types of pools are determined by code and professional practice. Typically, shallow areas with a lot of activity, such as play areas, require more turnovers per day than deeper lap pools. The leisure pool, for instance, is designed for a full turnover to occur every 2.4 hours. The lap pool is appropriately designed for a full turnover every 6.2 hours.

360 Energy Engineers is proposing to install variable speed drives on the pool pumps so during unoccupied periods when no activity is present, the recirculation pumps for both pools could be reset up to 8 hours. This will reduce the leisure pool flow from 755 gpm to 221 gpm and the lap pool recirculation would reduce from 1,790 gpm to 1,386 gpm. According to pump affinity laws, the energy savings would be proportional to the reduction in speed to the third power. A summary of current and proposed pump power requirements is below:

Pump	Current After-Hours Pump Horsepower	Proposed After-Hours Horsepower	Power Savings
Lap Pool	34 HP	16 HP	13 kW
Leisure Pool	14.5 HP	<1 HP	12 kW

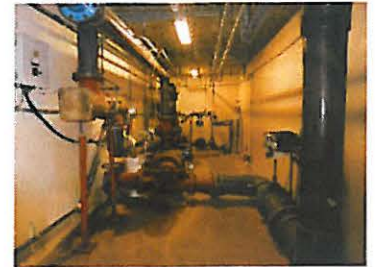
Balance Pool Pump Flows with VSDs and Eliminate Throttling Losses

The current pool recirculation and play area feature pumps do not have flow balancing devices. Given that the design head (pressure lift) requirements of these are inherently conservative, these pumps are over pumping, providing more flow than precisely engineered design flow values. This wastes energy with no real benefit.

360 Energy Engineers will properly balance recirculation pump flows to design values by changing their speed with variable speed drives. We also propose to tune the pool feature and water slide pump with variable speed drives to provide only the appropriate flow needed.

VAV Terminal Optimization

The non-natatorium spaces are conditioned by VAV boxes with hot water coils. These boxes control airflow proportional to cooling demands in the cooling mode and constant air volume in the heating mode. Although a common mode of control, this operation does not meet the requirements of ASHRAE 90.1 – Energy Standard for



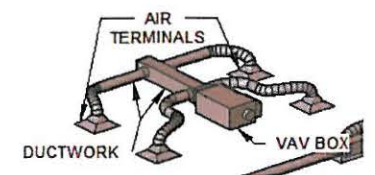
Pool Pumps



Variable Speed Drives for Pumps



Lap Pool

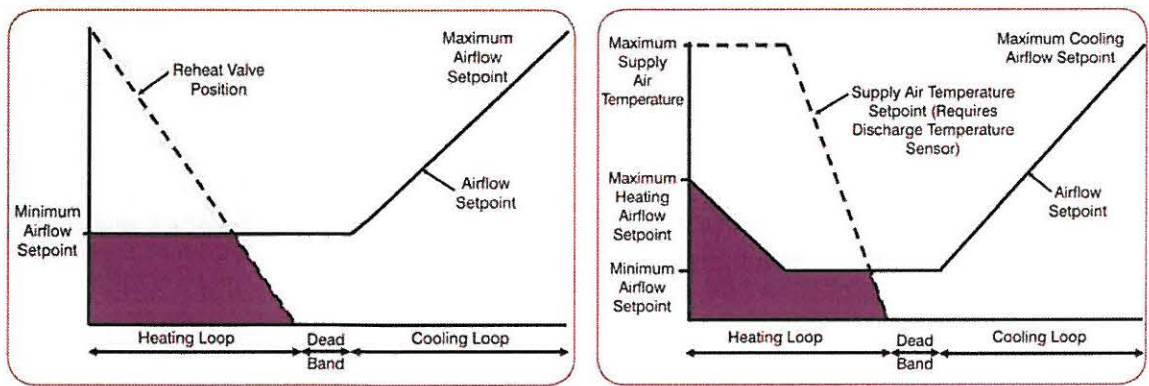


VAV Terminal Diagram

Buildings due to its inefficient operation during part-load heating. A dual-maximum or reverse-acting control on these boxes yield much improved energy performance over the current box control.

360 Energy Engineers recommends reprogramming all VAV controllers to implement dual-maximum airflow control. In the dual-maximum strategy, the VAV box modulates the volume damper down as a supply airflow setpoint is reset from the zone maximum airflow setpoint (when the space is at full cooling) proportionally down to the zone minimum (when no cooling is required). This minimum airflow rate is then maintained as the space temperature falls through the dead-band into heating mode. As the VAV box transitions into heating mode, the hot water heating coil simultaneously opens while the minimum airflow jumps to the heating minimum setpoint. The hot water reheat coil then modulates up to maintain the space at the heating setpoint until the control valve is fully open. This logic, shown in the figure below, is effective at maintaining comfort in spaces, but results in large amounts of wasted reheat energy. As an alternative, more modern control strategies very often use Dual Maximum logic, where a separate maximum heating airflow setpoint is calculated, independent from the maximum cooling airflow setpoint. Heating elements are still modulated to provide adequate heating to spaces, but the lower supply airflow in heating means less reheat is required, and can save significant fan energy at the air handling units supplying VAV boxes. This strategy is shown on the second image below.

Conventional VAV Reheat Control (Left) vs. Dual Maximum VAV Reheat Control (Right)



Benefits of dual maximum logic over traditional VAV reheat logic include lower fan energy, lower cooling energy use, lower reheat energy use, improved thermal comfort by not pushing zone temperature to heating setpoints during the cooling season, and reduced stratification due to supply air temperature control. Moreover, systems which utilize dual maximum control are better able to respond to varying weather conditions, and utilize less gas and electricity during both heating and cooling seasons. 360 Energy Engineers recommends integrating these control strategies into the current Automated Logic control system.

Replace Heating Water Boilers with Condensing



Existing Heating Water Boiler

This energy conservation opportunity includes the replacement of the existing hot-water boiler for HVAC service at the Indoor Aquatic Center. The boiler has been estimated to operate at 75% peak efficiency with decreased efficiency at part-load conditions, resulting in an average efficiency closer to 60%.

The existing hot-water boiler will be replaced with a smaller, natural-gas fired, condensing boiler. The installation of the smaller condensing boiler will allow for the heating system to operate at efficiencies well above 90%. The ability of the boiler to

modulate down provides an increase in system efficiency at part-load conditions, which is where a vast majority of boiler operation occurs. This increase in boiler efficiency will decrease the amount of fuel used by the boiler, both during part and full-load conditions.

Change Pool Temperature and Environmental Setpoints

Currently, the pool water temperatures are set at 86°F and 82°F for the leisure and lap pools respectively. Original design documentation indicates the basis of design for pool water temperatures were 82°F and 78°F for the leisure and lap pools respectively. Although these design values are a little low for comfort, reducing the pool water temperature setpoint by only a degree or two would yield significant energy savings from reduced pool heating requirements and lower load on the dehumidification system.

Replace Dehumidification Units and Mitigate IAQ Issues

Harmful chloramine gasses and air with high moisture content are largely to blame for the significant corrosion on surfaces of all three air handling units serving the pools at the Indoor Aquatic Center. The Leisure Pool unit is planned for immediate replacement due to corrosion and major component failures, and the other two units serving the Lap Pool are in similar need of major repair or replacement in the next year or two.

Modern pool dehumidifiers for large capacity applications allow exceptional moisture control in high humidity locations such as natatoriums. Units would be designed to efficiently remove moisture from the air and provide well-conditioned, comfortable air to occupants. Energy efficiency features for pool dehumidification units can include:

- Hot-gas reheat dehumidification methods where refrigeration processes remove latent heat, preserving sensible heat by recovering it from exhaust air
- Exhaust air energy recovery used for reheat
- Economizer use for dehumidification, when outside air conditions are ideal, that uses dry outside air to directly dehumidify, reducing the need for mechanical dehumidification
- Refrigerant hot-gas heat recovery for use in pool heating



Condensing Boiler Plant



Pool Setpoint Adjustment



Existing Packaged Dehumidification Unit

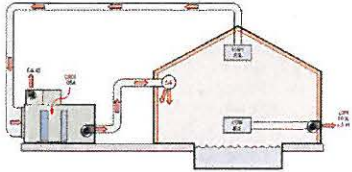


Dirty Condenser Coils

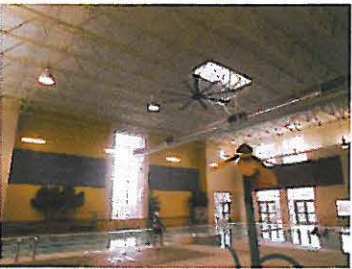
Improved Air Distribution Design and Low Source Capture Exhaust



Existing Supply Ductwork in Lap Pool and High Return



Low Source Capture Diagram



Existing Supply Ductwork in Leisure Pool

The air distribution design for both the lap pool and leisure pool, including the new design in the leisure pool promote high air velocities at the pool surfaces by aiming large amounts of air directly at the pool. Furthermore, the large ceiling fans installed in each natatorium compounds this issue. Thoroughly mixing the air in the auditorium, as is currently done, appears to address acute chloramine vapor issues at the pool surface. However, this design promotes excessive evaporation rates (up to 66% higher than normal) that result in poorer overall indoor air quality and higher dehumidification load on the HVAC units. This results in increased chemical use and increased energy consumption. It also reduces the dehumidification units' ability to maintain reasonable environmental conditions. 360 Energy Engineers recommends a much more effective air distribution design to improve indoor air quality and minimize evaporation and energy consumption. This design strategy is described below.

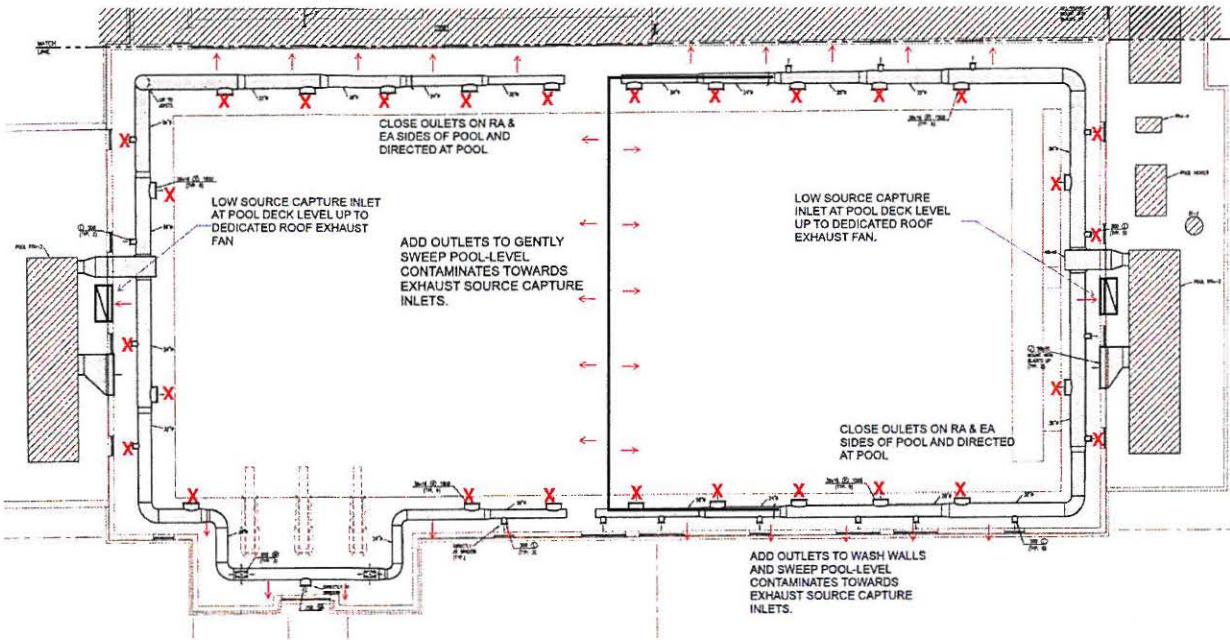
Modern natatorium design has moved away from designing ductwork to have grilles aimed at the pool water surface as is currently the case in both pools. It is more effective to pull air across the pool water surface at very low velocity (less than 30 feet per minute). Consequently, all of the air supply should be aimed at exterior walls and windows and not at the pool. Directing air away from the pool water surface reduces water evaporation by approximately 40%, reducing energy consumption. It also promotes more effective capture control of chloramine vapors when coupled with a source capture exhaust system installed at deck level.

360 Energy Engineers recommends modifying the current supply duct layouts to generally form a "U" around three sides of each pool to provide 100% of the airflow that travels across or "washes" windows and outside walls with dry supply air. In addition to improving indoor air quality, this ductwork configuration also raises the temperature of the inside surface while flushing it with the lowest dew point air in the facility, minimizing condensation on windows and doors.

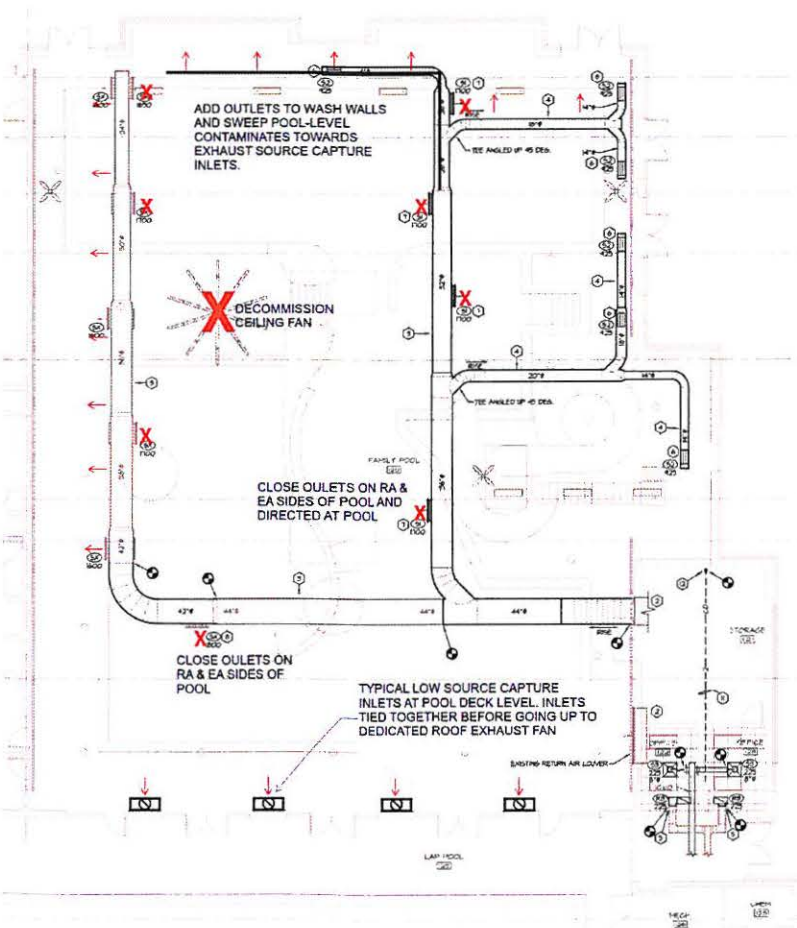
To more effectively dispose of chloramine vapors from the pool water surface, 360 Energy Engineers recommends source capture strategies in each pool to evacuate high-chloramine-concentration vapors directly from the pool surface. This source capture strategy would employ floor-level dedicated exhaust intakes on the same side of the spaces as the HVAC return air inlets. Consequently, supply air is pulled over the water surface at a low velocity so that contaminated air is moved toward a low exhaust point and exhausted directly outdoors. This low exhaust source capture strategy minimizes and prevent the recirculation of chloramines and other airborne pollutants, helping maintain the quality of supply air to the breathing zone in the pool and deck area. The absence of chloramines and corrosive pollutants also helps protect natatorium equipment and other HVAC system components.

Energy is saved by significantly lowering pool water evaporation rates, this decreasing dehumidification and pool heating requirements.

Conceptual Layout of Proposed Lap Pool Air and Exhaust Modifications

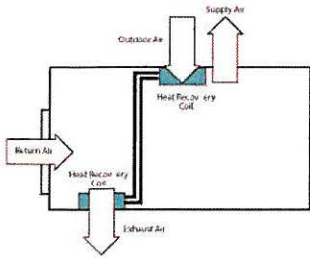


Conceptual Layout of Proposed Leisure Pool Air and Exhaust Modifications



Optimized Ventilation and Exhaust Control based on Activity

Optimized control strategies for the pool ventilation and exhaust systems would be implemented, including the installation of some new control hardware, to modulate outdoor air and exhaust airflow rates based on pool activity and contaminant levels (VOCs) measured in the natatoriums. A description of the modes of operation and corresponding control of ventilation and exhaust are described below:



Exhaust Schematic

Unoccupied Mode: Outdoor air volume is controlled as a reduced volume (generally one-half of the code required level per ASHRAE 62.1). The low source capture exhaust air will operate at 100% of its capacity, removing surface-level contaminants. The new dehumidification unit will be in recirculation mode with the dehumidifier exhaust air fan running at low volume to maintain a small negative air balance in the pool room.

Occupied Mode: Under normal pool use, outdoor air volume is controlled to the code required level (per ASHRAE 62.1). The low source capture exhaust air will operate at 100% of its capacity, removing surface-level contaminants. The new dehumidification unit's exhaust air fan will be running at medium volume to maintain a small negative air balance in the pool room.

Event Mode: Under high activity, such as swim meets or fully occupied leisure pool use, outdoor air volume is controlled to approximately 120% of the code required level (per ASHRAE 62.1). The low source capture exhaust air will operate at 100% of its capacity, removing surface-level contaminants. The new dehumidification unit's exhaust air fan will be running at high volume to maintain a small negative air balance in the pool room.

VOC-Based Control of Source Capture Exhaust System: VOC sensors with the ability to detect when interior levels of chloramines are present would be installed in the natatoriums, and the low source capture exhaust speed would be based on these levels of contaminants (VOCs). This would provide the ability to optimize the volume of exhaust air required with the energy cost of doing so and ensure a suitable pool environment for the occupants.



Decommissioned Exhaust Fan



Decommissioned Exhaust Duct

Replace Corroded Electrical Gear and Recommission Mechanical Room Exhaust

The Indoor Aquatic Center is served by relatively new electrical distribution equipment. Accelerated corrosion, caused by excessively warm and humid air, is visible on the equipment. The presence of corrosion of this magnitude indicates that internal circuit breakers may suffer from the same rust and corrosion issues. Circuit breakers in poor condition are less likely to effectively trip during a fault condition. A high risk of injury or property damage exists if a system disconnect cannot adequately open a circuit in an emergency situation. 360 Energy Engineers will replace damaged and corroded electrical panels, breakers, motor starters, and a wireway.

To protect new electrical equipment and retard future corrosion, 360 Energy Engineers also recommends to recommission some general exhaust and fresh air makeup in these spaces. The pool equipment room was recently retrofitted with a



Panelboard with Corrosion

dedicated exhaust system isolated to the surge chamber. The general equipment room exhaust was decommissioned at that time. This greatly improved the overall air quality throughout the equipment room. However, maintaining some general exhaust is recommended due to the storage of corrosive chemicals in the room, particularly in the electrical and chemical feed rooms. These rooms currently store corrosive chemicals, and exhaust will minimize corrosion and other issues within these spaces.

Replace Pool Water Heaters with Condensing Boilers

Due to heat losses to the ambient air, through the pool surfaces to the earth, and indirectly through walls, pool water must consistently be heated to maintain comfortable and desired temperatures. Currently, an atmospheric gas fired boiler operates on the roof to supply hot water to maintain 82°F-86°F water for the lap pool and recreational pool, respectively. This atmospheric combustion design yields varying operating conditions that adversely affect the performance of the boiler, especially when considering the boiler's exposure to extreme cold during winter months. The existing boiler operates between an estimated 65%-70% efficiency, which is very low for today's standards.

New boilers with operating efficiencies in excess of 93% have greater turndown capability and operate better at low load conditions than the existing equipment. Relocating the boiler inside the mechanical room would help protect it from environmental elements. The new unit would be equipped with a sealed combustion chamber for protection from chemicals stored in the mechanical room. The dramatic efficiency gains from the antiquated atmospheric boiler to a condensing boiler with 10:1 turndown will provide significant savings in fuel energy for pool water heating.



Existing Pool Boilers



Modern Condensing Pool Boiler

Holcom Recreation Center Improvements

New Packaged HVAC Systems



Gymnasium Air Handler



Aging AJAX Boiler



New Packaged Unit



Ice Field with Existing 1500W Metal Halide Lighting

Holcom Recreation Center is conditioned by four air handlers, two for the gym and two for the remainder of the facility. These air handlers utilize hot water for heating and have DX condensing units for cooling. The hot water is generated by an Ajax boiler that is beginning to fail and is in need of replacement. Two of the air handlers were recently rebuilt, receiving new internal components and outdoor condensing units. These two units serve the front portion of the building including the weight room, rec room, lockers, and front lobby. The other two units are mounted to the gymnasium ceiling. These units have experienced many issues recently and are a concern with very difficult access to service the units during failure.

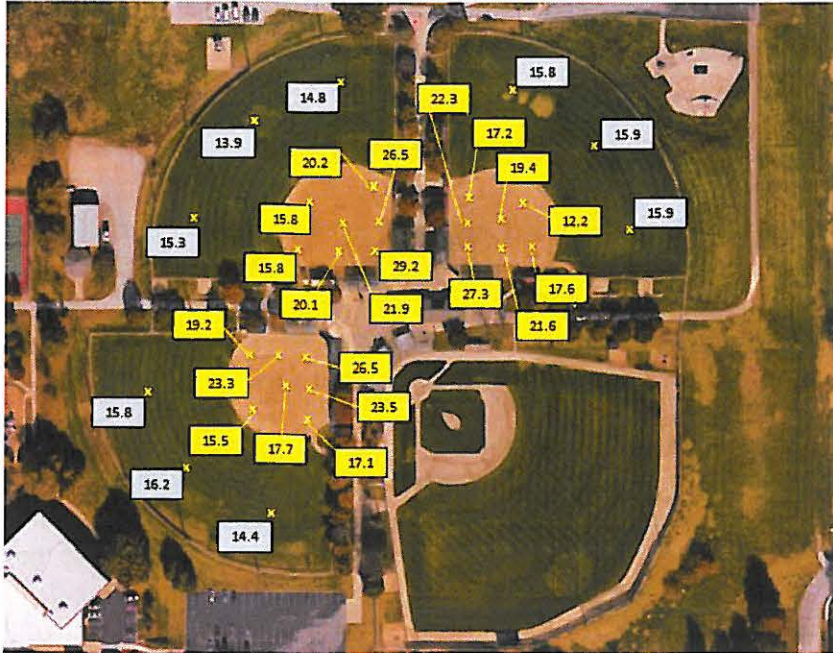
To improve the HVAC strategy, new packaged units will be installed to the North of the facility near the existing condensing units. Commercial outdoor packaged systems contain all components needed for heating, cooling and ventilation in one factory-fabricated, weather-tight unit. Heating is provided by low-cost natural gas while cooling is provided by direct expansion of refrigerant. Recent advancements in compressor technology, such as variable speed and digital scroll, have allowed for much better cooling part-load performance than the existing DX systems serving the Holcomb Recreation Center.

With the gymnasium air handlers removed, the remaining two air handlers will be fitted with gas furnace duct heaters. These duct heaters will provide heating for the two air handlers, eliminating the need for a new boiler to be installed. The complex and costly boiler maintenance, as well as the required annual boiler inspections, will no longer be required for this facility.

Sports Field Lighting

The four baseball fields at Holcom Sports Complex (Red, Gold, Blue, and Ice Fields) are illuminated by 1500 watt metal halide lamps mounted on 80 foot wooden poles installed in 1970. The wooden poles are in poor condition, showing visual splits and cracks. They are warped and at least one has been removed due to safety concerns.

The existing metal halide lights are past their recommended useful life, and they do not adequately light the playing surface. According to Little League® International's 2015 Lighting Standards and Safety Audit, the required average lighting level is 50 foot-candles in the infield and 30 foot-candles in the outfield. The diagram below shows that the current light levels are well below the standard:

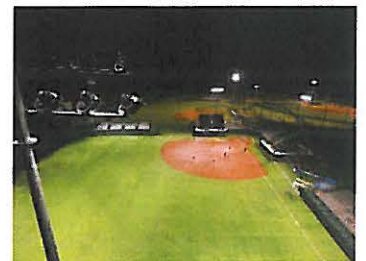


Blue boxes indicate outfield measurements, Yellow boxes indicate infield measurements. All measurements taken on a clear night. All measurements shown are in foot-candles (fc).

The replacement lights can potentially be either Metal Halide or LED. As a newer technology, LED lamps have a slightly higher initial cost. However, the total energy usage of LEDs is much lower than Metal Halides, resulting in a lower lifetime cost. LEDs will provide a cleaner, whiter light, improving the visibility of both players and fans watching the game. Additionally, LEDs turn on almost instantly, reducing the warm-up time seen in Metal Halide lamps.



Southwest Field Illuminated by Existing Lighting



Ball Field Illuminated by LED Lights

Community Building Improvements

Replace Aging Rooftop Units



Existing Packaged Unit (1993)

The community center has twelve packaged gas/DX rooftop units that provide heating and cooling for all spaces in the facility. Most of these units are well past their rated service life of 15 years and are in need of replacement. Of the twelve units currently installed, one was replaced in 2015 and will remain in place. The remaining rooftop units will all be replaced with new packaged units.

The new units will include high efficiency digital scroll compressors and variable speed fans to modulate air flow in the facility as needed throughout the day. These new units will also have increased cooling efficiency providing additional utility savings during operation. The units will be controlled by digital controllers, so they can be added to the existing control system interface used by the Parks and Recreation facilities staff.



Rooftop Hail Damage

Replace Roof



Rubber Membrane Roof

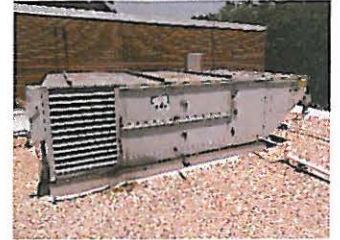
The existing EPDM rubber membrane roof is beginning to fail. Many soft spots were noted on the facilities walkthrough indicating saturated and damaged roof insulation which can cause moisture to enter the facility. A new modified bitumen roofing system will be installed after tearing off the existing membrane and damaged insulation. A modified bitumen roof has many advantages over membrane roofing systems, including increased longevity, flexibility to prevent brittleness in cold weather, high tensile strength, and reflective mineral coatings.

Savings will be achieved by improving the thermal resistance of the roofing system, which is the largest surface area through which heat is gained and lost contributing to energy consumption of the HVAC equipment.

East Lawrence Recreation Center Improvements

Replace Rooftop Units 2, 3, & 4

The East Lawrence Recreation Center is conditioned by four packaged rooftop units. One unit has been recently replaced due to failure and will be excluded from the scope of this project. The remaining three units are in need of replacement as they are nearly 20 years in age and have reached the end of their rated service life. With increased efficiencies due to technological advancement such as variable speed and digital scroll compressors, the facility will not only have lower operating costs but provide increased comfort for the occupants. The existing units are controlled by a central digital control system by Parks and Recreation. The new units would be fitted with digital controllers and be able to be accessed remotely similar to the current system.



Packaged Rooftop Unit (1996)

Outdoor Aquatics Center Improvements

Stand-Alone HVAC for Concession Stand

The concession stand area is detached from the main building at the outdoor aquatic center. However, these areas are served by a common HVAC system. This causes ineffective cooling in the concession area due to the very long duct run from the air handler to the concession stand. 360EE recommends installing a dedicated cooling-only mini split system to solve comfort issues in the concession areas.



Ductless Mini-split

Replace Pool Boiler with Condensing Boilers

To prepare the pool for swimming in June, pool water must be heated in the spring. Currently, an atmospheric gas fired boiler operates on the roof to supply hot water for pool heating. This atmospheric burner design yields varying operating conditions that adversely affect the performance of the boiler. The existing boiler operates just over 80% efficient. Modern condensing boilers can achieve well over 90% efficiency, which is a substantial increase as energy costs continue to rise.

The dramatic efficiency gains from the antiquated atmospheric boiler to a condensing boiler with 10:1 turndown will provide significant savings in fuel energy for pool water heating. However, this project will yield a poor payback due to the low annual operating hours of the boiler. This boiler typically operates for only two months annually.



Outdoor Condensing Unit



Pool Water Heater

Improvements Not Recommended

The projects described in this section were analyzed by 360 Energy Engineers. While each project has its merits, these projects are not recommended for action at this time.

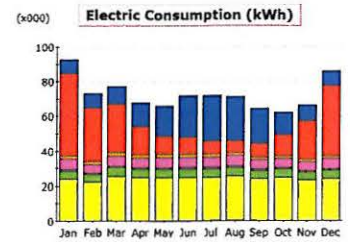
Add Gas Boiler and Hot Water VAV Boxes at The Library

Electric resistance heat is very costly when compared to heat produced by natural gas fired equipment. While not immediately obvious from an efficiency standpoint, it is apparent when analyzed from a cost standpoint. Electricity's cost per unit of energy is 4.7 times that of natural gas' cost per unit of energy for the City of Lawrence. This simply means that the building, if heated with natural gas, would cost 21% of the current cost to heat. Unfortunately, converting to natural gas as a retrofit project is expensive. Natural gas heating could have been incorporated in the design of the building renovation much more cost effectively, resulting in a much lower life cycle cost for the facility. 360 Energy Engineers has evaluated the energy savings and implementation cost of converting the Library's electrical resistance VAV terminal reheat to hot water terminal reheat.

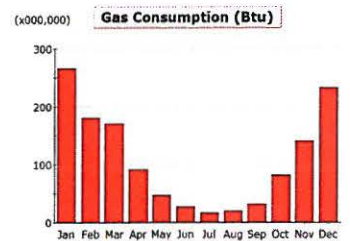
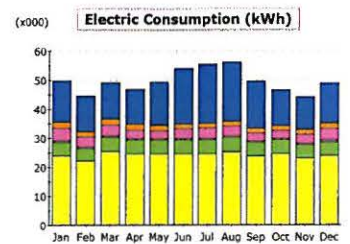
This concept is based on heating hot water generated by new high-efficiency condensing boilers capable of operating at efficiencies up to 95%. Hot water distribution piping would be installed throughout the building, and connected to existing VAV terminal boxes equipped with new hot water reheat coils. Because the existing terminal box controllers are new, they would simply require minor reprogramming to send an analog heating signal to a newly installed hot water valve instead of a digital heating signal to an electric coil. One of the primary design challenges would be determining a location for the new, small central hot water plant, which would mean sacrificing some (although minor) storage space. 360 Energy Engineers would work with facility staff to allocate space for the new hot water plant.

Although net energy savings is significant and future electrical costs are almost certain to continue to escalate at a rate that far out paces natural gas costs, this is a relatively capital intensive recommendation. However, when viewed over the system or building's life cycle, the city would benefit economically in the long term from converting this building to natural gas.

Leveraging annual utility and operational savings from other lower cost projects at the Library helps improve the financial payback of this Facility Improvement Opportunity.



Current Month Electric End Use (red is heat)



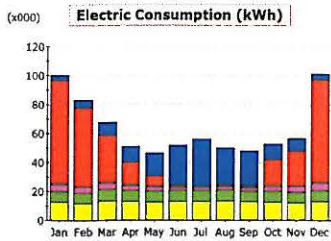
Month Elec & Gas End Use with HW Boiler (red is heat)

- Area Lighting
- Task Lighting
- Misc. Equipment
- Water Heating
- HT Pump Supp.
- Space Heating
- Exterior Usage Pumps & Aux. Ventilation Fans
- Refrigeration
- Heat Rejection
- Space Cooling

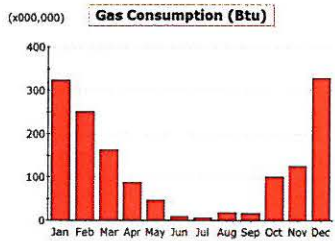
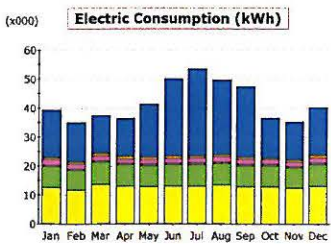


Central Hot Water Plant

Add Gas Boiler and Hot Water Reheat to VAV Boxes at City Hall



Current Monthly Electric End Use (red is heat)



Monthly Elec & Gas End Use with HW Boiler (red is heat)



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Leveraging annual utility and operational savings from other lower cost projects at City Hall helps improve the financial payback of this Facility Improvement Opportunity

Solar PV for Pumping on Tanks 5 and 6 at Venture Park

Water Storage Tanks #5 and #6 at Venture Park each have twin 50HP electric pump motors. Although these motors run infrequently, the billed electrical demand creates significant cost. A solar-powered pumping system can provide most of the power required to run these large pumps. A small array of photovoltaic panels will be installed near each pump. These panels will be ground-installed due to the abundance of space available near the tanks. Each array of photovoltaic panels will charge an array of batteries. When pumping power is required, these batteries will power the 50HP pump motors through an AC inverter.

The smaller sump and transfer pumps at Venture Park could use small-scale solar pumping methods, but their relatively small power requirement and inconsistent use pattern make it impossible to develop an estimated financial benefit.

The City of Lawrence's improvements at the Venture Park site are a wonderful example of environmental stewardship. Using solar-powered means of removing water from the site is yet another mechanism to improve that process even further.



Remote Photovoltaic Array Used for Solar-Powered Water Pumping



Pump Station at Venture Park Holding tank

Compressed Natural Gas (CNG) Solid Waste Truck Fleet Replacement

The current solid waste truck fleet is comprised of over 50 trucks, including roll-off, rear load, hook and auto side loaders (ASL). All of these vehicles are diesel powered machines with the exception of one roll-off test truck. This test truck was part of a pilot to test the effectiveness of CNG fleet vehicles. The CNG roll-off truck does not have a constant routine, making data acquisition difficult. It makes several runs a day, but is used much less than an ASL, picking up residential refuse throughout the week. The other component to the test was a filling station. The filling station installed does not have individual hose reading, which makes tracking fuel economy and operating costs much more difficult.



Existing Diesel Truck



Existing Diesel Truck



Example CNG Fueling Station

When looking at the change from all diesel to all CNG trucks there are several factors to consider. The incremental costs of the CNG truck, fueling costs, maintenance costs, and fueling station solutions, are just some of the necessary factors needed to evaluate a potential conversion. Many case studies have been conducted to quantify the opportunity. While it was favorable for some tests, current economics are not advantageous for a fleet conversion. Currently, the city pays \$2.17/Gal of diesel. The cost for a Diesel Gallon Equivalent (DGE) of CNG is \$1.90. This means that the differential in fueling costs equates to \$0.27/gal. For the evaluation, an incremental cost of \$38,000/truck was used for the added expense. To cover the cost of a filling station, \$1.1 million dollars was included per station. A fleet requires one station for every 15-25 vehicles in use.

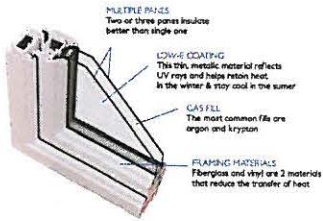
Fuel Cost Evaluation	Case Study 1	Case Study 2	Lawrence Full Fleet	Lawrence Test Fleet
CNG Fleet Size	20	30	50	5
Fueling Stations	1	2	2	1
CNG Price (DGE)	\$1.78	\$1.78	\$1.90	\$1.90
Diesel Price (Gal)	\$3.90	\$3.90	\$2.17	\$2.17
Vehicle Incremental Cost	\$760,000.00	\$1,100,000.00	\$1,900,000.00	\$190,000.00
Fueling Stations Cost	\$1,100,000.00	\$2,200,000.00	\$2,200,000.00	\$1,100,000.00
Total Capital Cost	\$1,860,000.00	\$3,300,000.00	\$4,100,000.00	\$1,290,000.00
Miles/Year/Truck	7000	7000	7000	7000
Yearly Fuel Savings	\$300,000.00	\$445,000.00	\$202,500.00	\$20,250.00
SPB of Fuel	6	7	20	64

As shown in the figure above, the cost benefit for the City of Lawrence is not as evident as for other markets that have higher fuel rates. The majority of these studies were conducted several years ago, when diesel was much more expensive than it is now. While fuel is a large portion of the quantifiable savings, there are other factors to consider. Maintenance costs on diesel fueled trucks is quite intensive and can lead to an excessive amount of down time. The maintenance for a CNG truck is much less than that of diesel. At this time, 360 Energy Engineers does not recommend the City of Lawrence to move forward with a solid waste fleet conversion from diesel to CNG.

Replace Windows at Fire Station #3



Older window at FS#3



Example of high efficiency window

When Fire Station #3 was architecturally renovated and expanded in 2003, several windows around the top perimeter of the facility were not replaced. These windows have poor thermal performance and should be replaced with high efficiency, low emissivity, double-paned windows. The large bay doors in the garage area appear to be in relatively good condition, but re-sealing and replacement of glazing would help improve thermal performance and make the space more comfortable.

The remaining original window systems will be removed and replaced with new double-paned, thermally broken, aluminum-framed systems. In addition, a low-emissivity coating on the window system will reduce radiative heat gains and losses to further improve efficiency.

Savings will be achieved by improving the thermal resistance of these window systems, which cover a large percentage of the building. This will allow for the HVAC equipment to operate at lower loads reducing utility consumption.

Photovoltaic School Beacons

The City of Lawrence recently replaced several AC-powered school zone flasher beacons with solar-powered flashers. A complete replacement of existing AC-powered beacons will take this part of the City's electrical load off of the electrical utility. Additionally, a complete replacement will develop a consistent signage throughout the City. Lastly, a complete replacement will reduce maintenance complexity and expense as the older, AC-powered beacons will all be removed.

The newest solar-powered school zone flasher system can be seen on Harper St., just south of Kennedy School. This signage is clear, easily readable, and 100% powered by the small photovoltaic array above the flasher. Replacing the older, AC-powered beacons in the city with this technology will promote safety, reduce maintenance, and improve the appearance of the City of Lawrence.



Existing School Zone Beacon
Powered by Electric Utility



Solar-Powered School Beacon
Uses No Utility Electrical Power

Replace Condensing Boilers at Lawrence Arts Center



Existing Atmospheric Boilers

The existing hot-water boilers at this facility are original to the building's construction and are nearing the end of their useful life. The boilers have been estimated to operate at 80% peak efficiency with decreased efficiency at part-load conditions, resulting in an average efficiency of around 70%.

High Efficiency, Low Temperature Heating Plant Using Condensing Boilers

The new heating water system would likely involve the use of three natural-gas fired, condensing boilers each sized at 50% of the building's heating load. This would provide full redundancy, so if one boiler was to fail, the building would still receive all of the heat it demands. Furthermore, the boilers would be specified with fully modulating burners that provide an increase in system efficiency at part-load conditions, which is where a vast majority of boiler operation occurs. This increase in boiler efficiency will decrease the amount of fuel used by the boilers.



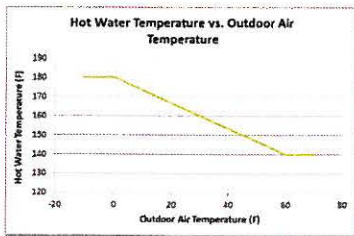
Example High Efficiency Hot Water Plant

Boiler Sequencing Control for Optimal Energy Performance

The new boiler plant would come equipped with sequencing controls programmed to operate multiple boilers for optimal system efficiency. This optimally efficient operation would include staging the boilers to maximize the number of boilers operating while minimizing their firing rates. Energy is saved by maximizing the time each boiler operates in its peak efficiency range.

Hot Water Temperature Reset Controls

A hot water boiler's operating efficiency is proportional to its return water temperature. As the return water temperature decreases the boiler efficiency increases. For this reason, operating a boiler at a constant year-round temperature, as is currently the case at the Arts Center, is wasteful when cooler water temperatures will suffice. The hot water reset feature reduces hot water temperature as heating demand decreases. Building and system conditions are monitored to insure that the zone or coil needing the most heating is always satisfied. As a result, heating energy is saved during part-load conditions due to increased boiler efficiency.



Hot Water Reset Control Logic

Reduce After Hours Turnover & Tune Flows with VFDs at Outdoor Aquatic Center

The turnover rate (turnovers per day) refers to the time it takes to move a quantity of water, equal to the total gallons in the pool and surge vessel, through the filtration system. Minimum turnover rates for various types of pools are determined by code and professional practice. Typically, shallow areas with a lot of activity, such as play areas, require more turnovers per day than deeper lap pools. The outdoor pool, for instance, is designed for a full turnover to occur every 6 hours, which is customary for this type of pool.

360 Energy Engineers evaluated installing a variable speed drive on the pool recirculation pump so that during unoccupied periods, when no activity is present, the recirculation pump for the pool could be reset for up to 8 hours of turnover. This will reduce the leisure pool flow from 755 gpm to 221 gpm and the lap pool recirculation would reduce from approximately 1,400 gpm to 1,106 gpm. According to pump affinity laws, the energy savings would be proportional to the reduction in speed to the third power. A summary of current and proposed pump power requirements is below:



Pool Recirculation Pump

Pump	Current After-Hours Pump Horsepower	Proposed After-Hours Horsepower	Power Savings
Pool Recirc.	41 HP	21 HP	17.5 kW

Timer Control for Solid Waste Truck Block Heaters

During cold winter nights, the City of Lawrence Solid Waste truck operators use GFCI receptacles on dedicated circuits to run engine block heaters. When the forecasted temperature is near or below freezing, the operators plug their trucks in at the end of shift. These 1500W block heaters keep the engine warm throughout the night to ensure the truck will start in freezing conditions the next morning.

Currently, these engine block heaters are drawing electricity throughout the night (at least 14 hours) when only 3 hours is needed to adequately warm up an engine block before starting. Time controls on the dedicated receptacles can reduce the electrical spend dramatically.

Additionally, the engine block heaters are only required when the air temperature is lower than 40 degrees. An inexpensive temperature controller can be installed to allow the heaters to run only when the air temperature requires them to do so. Surprisingly warm mornings would further reduce the electrical draw of these engine block heaters if temperature controls are added to the electrical circuits.



Solid Waste Truck Parked in Front of Block Heater Receptacle



Block Heater Receptacles on Bollards

Utility Rate Analysis

Rate Analysis

Electricity

The facilities owned by the City of Lawrence are serviced with electrical power by Westar Energy. Most facilities are billed at the Small General Service rate as follows:

- Customer charge: \$ 22.50 per monthly billing.
- Energy charge: \$ 0.069699 per kilowatt-hour (kWh) for the first 1,200 kWh, where kWh is the metered amount of electrical energy consumed between the monthly read dates.
- Energy charge: \$ 0.050723 per kilowatt-hour (kWh) over 1,200 kWh.
- Winter demand charge (October through May): \$ 4.38 per kilowatt (kW) over 5 kW, where kW is the metered peak electrical demand registered between the monthly read dates.
- Summer demand charge (June through September): \$ 8.47 per kilowatt (kW) over 5 kW, where kW is the metered peak electrical demand registered between the monthly read dates.

Small General Service also has charges for Transmission, Power Generation, Efficiency, and other surcharges and taxes. These rates are not published and change over time. During the evaluation period, a sample of recent bills was evaluated and a blended rate was calculated for the actual charge paid by the facilities. The blended rates are listed below:

- Energy charge: \$ 0.085 per kilowatt-hour (kWh), where kWh is the metered amount of electrical energy consumed between the monthly read dates.
- Winter demand charge (October through May): \$ 5.38 per kilowatt (kW), where kW is the metered peak electrical demand registered between the monthly read dates.
- Summer demand charge (June through September): \$ 8.47 per kilowatt (kW), where kW is the metered peak electrical demand registered between the monthly read dates.

When evaluating the blended utility rate paid by the City of Lawrence, it is approximately 11% higher than the regional average. The retail price of electricity in the commercial sector of the west north central region, which includes the states of Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota, is \$ 0.0823 per kWh (Energy Information Administration, Electric Power Monthly). This also does not take into account the demand charge which is higher than typical for the region. Accounting for those additional charges, the city pays well above the regional average, amplifying the effects and savings from energy conservation measures and energy related facility improvement opportunities.

Larger buildings and meters are billed at the Medium General Service, which is as follows:

- Customer charge: \$ 100.00 per monthly billing.
- Winter Energy charge (October through May): \$ 0.014627 per kilowatt-hour (kWh), where kWh is the metered amount of electrical energy consumed between the monthly read dates.
- Summer Energy charge (June through September): \$ 0.019261 per kilowatt-hour (kWh).
- Demand charge: \$ 15.615204 per kilowatt (kW), where kW is the metered peak electrical demand registered between the monthly read dates.

Medium General Service also has charges for Transmission, Power Generation, Efficiency, and other surcharges and taxes. The blended rates are listed below:

- Winter Energy charge (October through May): \$ 0.0390 per kilowatt-hour (kWh), where kWh is the metered amount of electrical energy consumed between the monthly read dates.
- Summer Energy charge (June through September): \$ 0.0470 per kilowatt-hour (kWh).
- Demand charge: \$ 22.22 per kilowatt (kW), where kW is the metered peak electrical demand registered between the monthly read dates.

When evaluating the blended utility rate paid by the City of Lawrence, it is around 50% lower than the regional average of \$ 0.0823 per kWh (Energy Information Administration, Electric Power Monthly). This however does not take into account the demand charge which is very high for the City of Lawrence Medium General Service. Accounting for those additional charges, the city pays substantially more than the regional average, amplifying the effects and savings from energy conservation measures and energy related facility improvement opportunities.

Cost of Heating with Electricity vs. Gas:

When comparing the cost of heating with electricity and natural gas, the delivered cost of the energy from the utility supplier and the efficiency to convert that utility into useful heat must be considered.

Cost of Electric Heat:

Blended Electric Rate (Westar MGS): \$0.119/kWh

Converting kWh to therms: $\frac{\$0.119}{kWh} \times \frac{1 kWh}{3412 Btu} \times \frac{100,000 Btu}{therm} = \$3.49/therm$

Note: the blended \$/kWh electric rate includes all costs associated with demand (kW) and consumption (kWh) divided by the total consumption (kWh).

Cost of Natural Gas Heat:

Current natural gas cost: \$0.70/therm

Cost to generate one therm of heat through a high-efficiency condensing boiler: $\frac{\$0.70/therm}{95\% efficiency} = \$0.74/therm$

Therefore, electricity costs nearly **5 times** more than natural gas to provide space heating at current electric and gas rates.

Financial Analysis

Summary of Project Financials

The following pages outline the costs, annual energy, maintenance, and total budget savings and financial performance from a simple payback perspective of the project analyzed and developed by 360 Energy Engineers during the Investment Grade Engineering Audit.

These improvements analyzed were selected based on observations by our engineering team as well as conversations with City of Lawrence administration, facilities staff, and building occupants. Our goal is to work closely with the City of Lawrence in an effort to provide the City with the information to make educated decisions potential energy-conservation and infrastructure-improvement projects.

THIS SECTION IS INTENTIONALLY BLANK. COMPREHENSIVE ENERGY AND MAINTENANCE SAVINGS TBD BASED ON FINAL SCOPE DEVELOPMENT, BID RESULTS, AND FINANCING TERMS.

Technical Approach

Our Philosophy

Innovative designs and customized solutions create an opportunity for the project to be successful, but the detailed analysis and planning that goes into our solutions ensure that success. Our team completes its energy analysis and project design in-house, refusing to leave the success of the project in the hands of unconcerned third parties. Our in-house engineering team commits the time, effort, and expertise necessary to properly design every facet of your customized solution.

For the City of Lawrence, each aspect of the project is identified, analyzed and engineered by 360 Energy Engineers' professional engineers to produce full designs, including drawings and specifications, for each project. This allows 360 Energy Engineers to receive competitive bids from contractors without jeopardizing the performance or quality of the project. This competition, coupled with solutions engineered for maximum value, results in the lowest costs possible for the City of Lawrence.

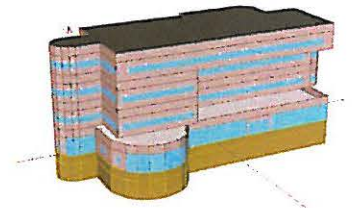
This approach is uncommon for most performance contracting projects, where broad, undefined concepts are usually passed to contractors to price a turn-key solution. Not knowing details such as sizing, routing, equipment features, etc., the contractors have no other option but to make grossly conservative assumptions and price accordingly to make sure there is money to cover unknown issues during installation.

Energy Savings Analysis Methodology

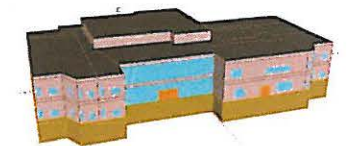
In order to evaluate how the City of Lawrence facilities use energy, formulate specific opportunities for energy conservation and accurately calculate energy savings, 360 Energy Engineers' engineers perform a detailed analysis process that encompasses:

- Investigating facilities to gain a deep understanding of the energy consuming systems' operation and efficiency.
- Utilizing a combination of mathematically accurate bin calculations and detailed lighting and water consumption analysis to calculate energy savings in terms of kilowatt hours (kWh), kilowatts (kW), and Therms (Th).
- Building a detailed simulation of each facility's utility tariff to obtain an accurate annual dollar savings
- Performing a comprehensive financial analysis of each conservation measure being considered to provide owner/decision makers with the data needed to make informed decisions.

Preliminary building energy models examples:

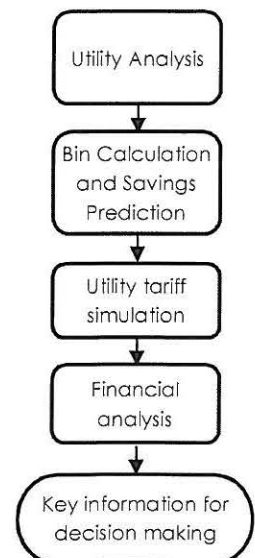


City Hall eQuest model

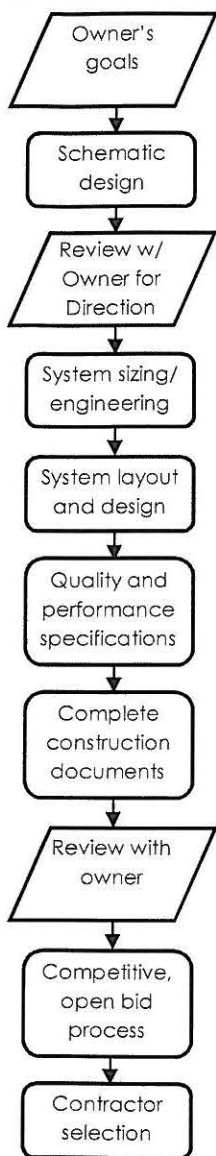


Art Center eQuest model

Energy analysis process



Engineering and Design Process



Design and Engineering Methodology

360 Energy Engineer's approach to project design and engineering is what differentiates us from our competition. 360 Energy Engineers prides itself on being a true engineering company, contrasting most performance contracting companies that broker most aspects of the project, including engineering and design, to subcontractors. We develop a complete set of construction documents detailing our innovative designs and customized solutions. These documents are used to solicit competitive, consistent bids from contractors, and they are ultimately the roadmap for the contractors to use to ensure a successful project. Once the project is designed, our engineers remain heavily involved in the construction management process, guaranteeing that the intent and details of each design are properly installed, preventing contractors from omitting, neglecting, or modifying essential components of the original design. Through this constant and focused attention to detail, we deliver on the promise of our customized solutions and innovative designs – providing you a project of incomparable value.

Comprehensive and competent design and implementation not only create a high quality project, they create a smaller project price tag. In traditional performance contracting projects, clients pay significant premiums to fund the exorbitant risk for the performance contractor and its subcontractors. This risk results from the limited clarity and detail provided before the performance contractor commits to a guaranteed price. Establishing pricing on conceptual designs and estimates results in both the performance contractor and subcontractors hedging prices with hefty risk premiums. It also prevents the ability to attain competitive bids of equal scope from contractors, further confusing what the owner is actually getting for their money.

The table below compares and contrasts 360 Energy Engineers' engineering approach to traditional performance contracting:

360 Energy Engineers	Traditional PC	Advantage to 360 approach
Identify root of issues	Identify old equipment	Search for underlying cause of problems
Develop holistic solutions	Select new equipment	Diagnose problems not symptoms
Complete project design	Equipment replacement	Provide value of professional design
Create complete bidding documents	Identify basic project components for bidding	Competitive, low-cost bids instead of high pricing to cover risk of PC's vague scope
Detailed drawings and specifications	Favored contractors fill in the blanks	Eliminates risk to contractors, leading to lower pricing and superior quality
Product independence	Proprietary products	Best products to address your specific needs
On-staff design engineers	Contractors do design	Qualified engineers fully develop solutions

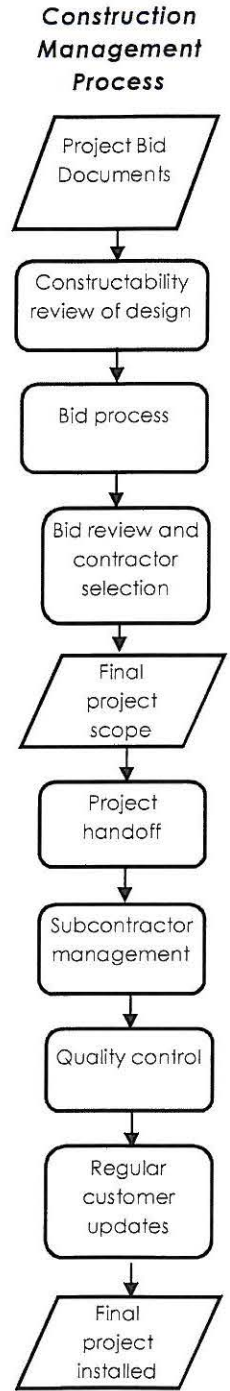
Construction Management Methodology

Project implementation through 360 Energy Engineers eliminates many of the hassles associated with the typical construction process. Our construction team's top priority is to ensure that the installed project meets our client's needs and the engineer's design. 360 Energy Engineers' construction manager oversees every aspect of the project's implementation and ensures that the project is built as designed.

360 Energy Engineers' construction management coordinates the contracting efforts with the owner and engineer. This careful coordination is essential to ensure the project is completed with minimal disruption to the owner's operations, is installed in a timely manner, is delivered on budget, and performs as the engineer intended. By acting as the sole source of accountability for your project, 360 Energy Engineers' construction team ensures that you receive the highest-quality, most cost-effective project installed in your facilities.

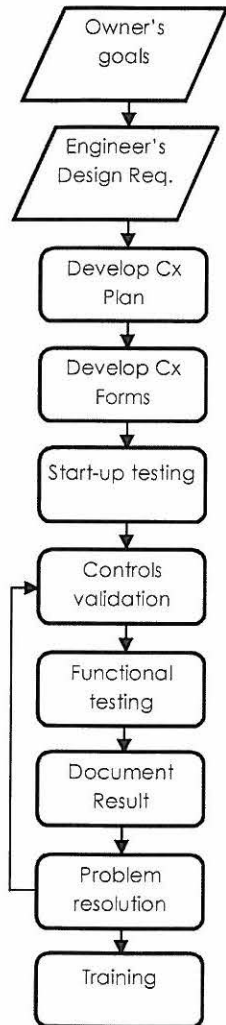
The table below compares and contrasts 360 Energy Engineers construction management approach to the traditional performance contracting approach:

360 Energy Engineers	Traditional PC	Advantage to 360 approach
Ensure quality implementation	Verify project progress	Verifies quality defined in engineer's design and maximizes performance
Inspect all work by contractors	Contractor designed most work	Contractor meets design requirements rather than being given free reign
Verify compliance with engineer's design	Ask contractor if work is per design	Maximizes performance through system life and reduces total operating costs
Pay contractors when work complete per design	Pay contractors upon receiving invoice	Your money is protected until contractor has completed quality installation
Professional engineer who designed project performs final inspection	Contractor who designed and installed project gives approval	You ultimately get what you pay for with 360EE, contractor is free to cut corners with PC.
Complete system commissioning	Control system validation	Assurance that all systems perform as designed with 360EE, validation that controls appear to manipulate system properly with PC.



Commissioning Methodology

360 Energy Engineers' Commissioning Plan



360 Energy Engineers' primary goal on each project is to transform the owner's goals and requirements into the function of their building systems. In order to achieve this goal, 360 Energy Engineers' utilizes a systematic commissioning process that eliminates the common disconnects between the owner's goals, 360EE's engineering and design, contractor installation and final operation of each building system. Our polished commissioning process is just one of several reason why, project after project, we stand out from our competition.

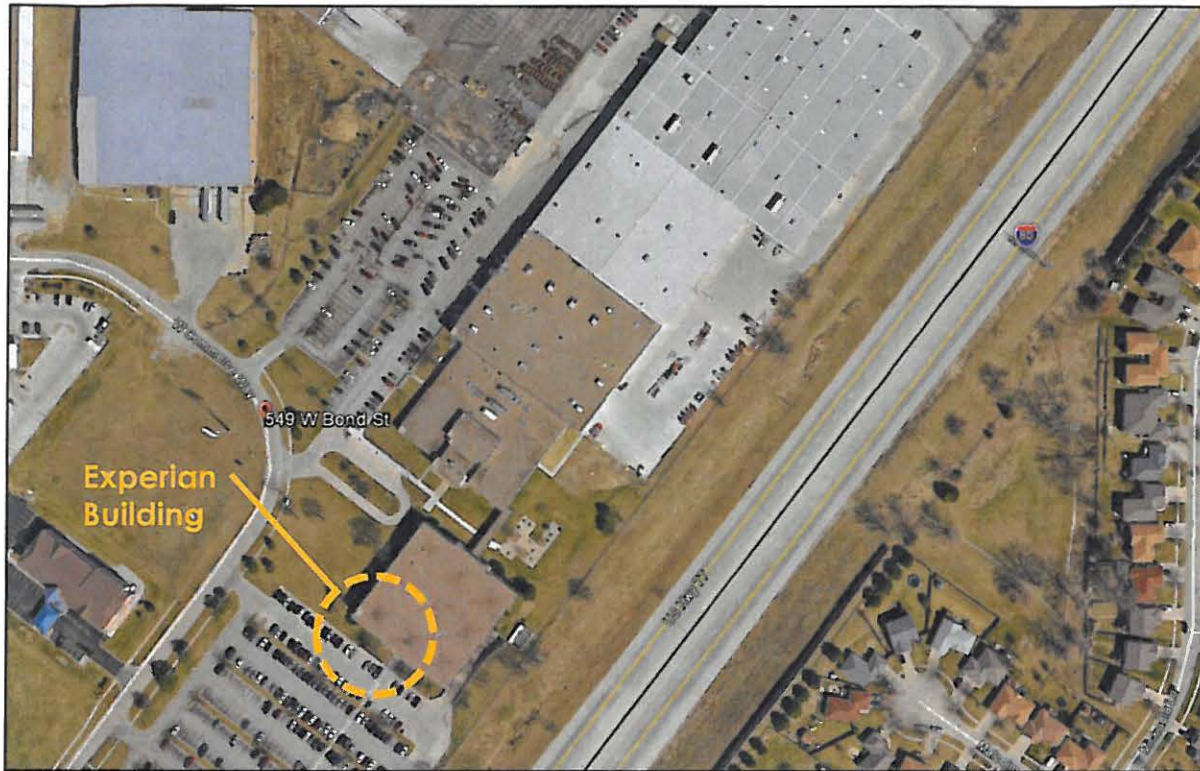
360 Energy Engineers' commissioning is predominantly a quality assurance function – a verification of system performance, relying on enhanced field testing upon completion of construction. As with all quality assurance activities, simply testing the end product does not guarantee performance and may only serve to highlight performance deficiencies to be corrected. In order to gain the greatest possible benefit from the commissioning process, 360 Energy Engineers' commissioning process contains all of the following elements:

- Continual Quality Assurance. 360EE's engineers and construction team make concerted efforts to continually build quality into all phases of the project, not just at the final performance testing. They carefully monitor construction progress and verify compliance with contract documents and overall standards of quality.
- The Commissioning Plan. This document is developed by 360 Energy Engineers engineering and construction teams to define the scope and format of the commissioning process and the responsibilities of all involved parties. The Commissioning Plan is provided to all commissioning team members to inform them of the intent and scope of the commissioning work, to ensure inclusion in the project scope, and to expedite the commissioning process.
- Preparation for Testing. To prepare for the system performance testing, 360 Energy Engineer's construction team and the contractors carefully examine the construction documents, submittals and contract revision documents. The contractors develop and provide signed start-up forms (and/or Pre-functional Test Checklists) to 360EE's construction team for review and approval prior to beginning test and balance (TAB) and functional test activities. Using these forms, each contractor must verify that the systems are installed in compliance with the construction documents, are clean and properly prepared for operation, are fully functional for test and balance, and ready for functional testing. 360's engineers write all Functional Test Procedures, which identify the specific functional tests to be performed.
- Functional Testing. Functional testing is performed by experienced and qualified technicians of the contractor(s) responsible for installation as facilitated witnessed and documented by 360 Energy Engineers. Functional testing verifies proper sequencing, operation and performance of installed equipment and systems under realistic operating conditions. The functional testing follow the written Functional Test Procedures with test results documented for permanent record.
- Documentation. Startup forms, TAB forms, and Functional Test Procedures are developed to guide the commissioning process. Specific written documentation is maintained for all other commissioning activities. Commissioning reports are generated by 360EE's construction team to document project issues, deficiencies and status of construction

and/or testing. Reports and resolution are tracked for the duration of the project. At the end of the commissioning process, all documentation is assembled and summarized in the final commissioning report.

- **Problem Resolution.** When a report is issued to address an identified deficiency, 360EE's construction manager forwards it to the appropriate parties to initiate corrective action in an expeditious manner. 360EE's engineers are relied on for design modification and issuance of final design details and the contractors are relied on for implementation of that design.

Location: Municipal Services Center



Summary: Municipal Services Center

SUMMARY		
1	Scoresheet Result	34
2	Available Net Square-Footage	4,000 NSF
3	LCEMA Net Square Footage Required	4,641 NSF
4	Hazard Vulnerability Assessment (HVA)	Poor
5	Construction Cost	\$1,000,000 - \$1,125,000
6	Difficulty of Construction	High
7	Documentation and Construction Schedule	19 Months

Challenges: Municipal Services Center

- Relocation of Experian from portion of first floor to replace floor structure
- EOC in comparatively higher hazard geographic location
- Lack of ADA compliance
- Protecting Experian fiber service during construction

Photos: Municipal Services Center



Location: Lancaster County Youth Services Center



Summary: Lancaster County Youth Services Center

SUMMARY		
1	Scoresheet Result	47
2	Available Net Square-Footage	6,670 NSF
3	LCEMA Net Square Footage Required	4,741 NSF
4	Hazard Vulnerability Assessment (HVA)	Good
5	Construction Cost	\$975,000 - \$1,100,000
6	Difficulty of Construction	Medium
7	Documentation and Construction Schedule	13 Months

Challenges: Lancaster County Youth Services Center

- Facility requires modifications to the roof structure in order to create an acceptable hardened EOC space.
- Modifications will be required to the secure fenced area to provide independent access to the EOC.

Photo: Lancaster County Youth Services Center



Lancaster County Emergency Management

Sinclair Hille Project No. 17004

Space Needs Program

01.31.2017

	Room name	Notes	# Staff	net sf	# of rooms	Total net sf	Adjacencies or Additional Information
1.0	SECURITY AND RECEPTION AREA						
1.1	Entry Vestibule	Projectile-resistant barrier, sacrificial door/blast opening		80	1	80	
1.2	Entrapment/Reception	Entrapment, security clearance, gun clearing		80	1	80	Administrative Area
Subtotal-Security and Reception Areas						160	
2.0	OPERATIONAL AREAS						
2.1	Emergency Operations Center	Storm-resistant structure, raised floor, 28 stations @ 40 SF/ea.	28	1,120	1	1,120	
2.2	Command/Logistics Conference Room	Storm-resistant structure, raised floor, view to video wall	12	300	1	300	
2.3	Unisex Restroom		1	80	1	80	
2.4	Storage Room			120	1	120	
2.5	Printer/plotter area			60	1	60	
Subtotal-Operational Areas						1,680	
3.0	ADMINISTRATIVE AREA						
3.1	LCEMA Directors Office		1	150	1	150	Office cluster
3.2	LCEMA Deputy Director Office		1	150	1	150	Office cluster
3.3	LCEMA Coordinators Office		1	150	1	150	Office cluster
3.4	Copy/Work Room/File Room	Cabinets, counters, copier/printer		150	1	150	
Subtotal-Administrative Area						600	
4.0	SUPPORT AREAS						
4.1	Quiet/Room	Collapsible sleeping furnishings, storable, flex space	2	120	1	120	Break Room, Restroom
4.2	Break Room	Sink, fridge, coffee, cabinets		120	1	120	Quiet Room, Restroom
4.3	Locker Area	24 small lockers 2'x2'. 4 full lockers, coats, personal items		160	1	160	Quiet Room/Break Room
4.4	Unisex Restroom			80	1	80	Locker, Break & Quiet Rooms
4.5	Shower	Single stall, separate access, lockable door hardware		60	1	80	Locker Area
4.6	Custodial Closet	mop sink, cleaning chemical storage		80	1	80	
4.7	Mechanical Room	Storm-resistant structure		200	1	200	
4.8	Emergency Generator/Electrical	Storm-resistant structure, generator, vent to outside, noise control		200	1	200	
4.9	General Storage			150	1	150	
4.10	Trash/Recycling			80	1	80	
Subtotal-Support Areas						0	1,270
						3,710	
						18%	668
						MEP	
						Included	
						above	
						12%	0
Net Square-Foot (NSF) Total							4,378 SF

Appendices A, B & C

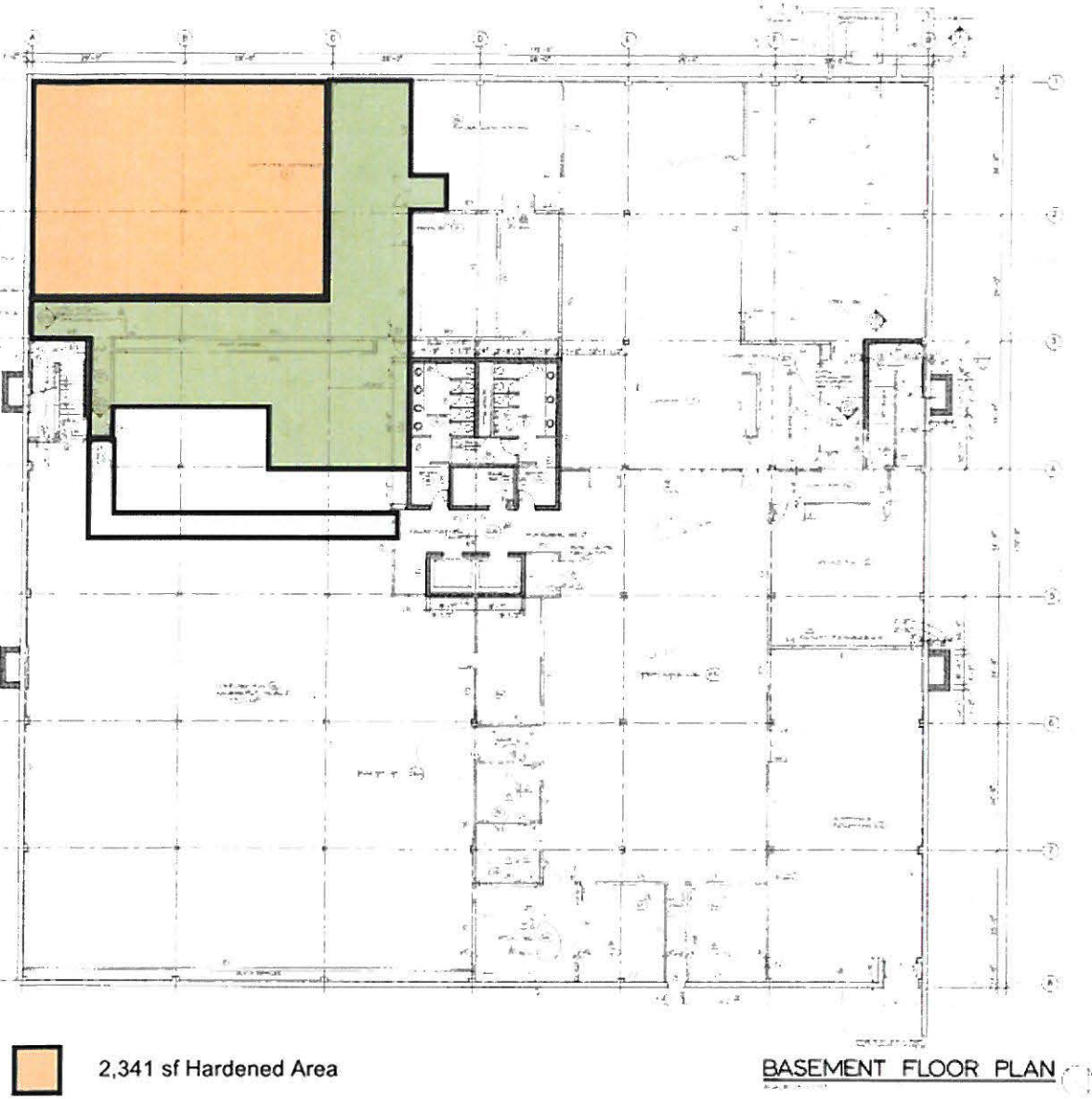
Mechanical and Electrical Narrative: Municipal Services Center

The new EOC should be designed such that the mechanical and electrical systems have 100% backup for continued operations during an event. Connection to the existing building systems can be used for normal operations provided the backup systems automatically engage in the event of loss of services. With this criteria established, the following challenges for the Municipal Services Site have been listed below:

1. The existing building heating, ventilating and air conditioning system is primarily water source heat pumps. There are two existing Dunham Bush air handling units in the lower level adjacent to the proposed space, however, these serve the raised floor data room space and are required for redundancy. The EOC space can be heated and cooled by the heat pump system for primary space conditioning. The system is not served by a standby generator so a secondary system on generator backup is required. A variable refrigerant flow (VRF) system is recommended for this space. VRF systems are incremental and capable of simultaneous heating and cooling as well as heat recovery. The main challenge with this backup system is finding a location for the heat rejection equipment in a protective environment. A protected screen wall enclosure will be required.
2. Similar to mechanical, the electrical power distribution can connect to the existing building service. A transfer switch will be required to allow installation of a generator for backup power. Ideally the generator would be located within the building walls, but with the basement location, cooling and exhaust will be an issue. A new generator located on grade in a factory built enclosure rated F4 or F5 will be required.
3. The plumbing challenge in this facility will be adding a shower. Since this is the lowest level of the facility floor cutting will be required for sanitary drain installation.
4. The existing facility is fully protected by a wet pipe sprinkler system. If wet pipe is acceptable, minor modifications to the system will be required. If the Board wishes to keep the system in the EOC dry, a pre-action system could be installed.

Overall Plan Diagram: Municipal Services Center

The plan included represents the general location and configuration of the Agency within the existing walls of the Municipal Services Center. In order to retain two means of egress from the remainder of the basement level, an additional circulation corridor would need to be provided as part of this project since placement of the Agency will cut off access to the west stair tower.

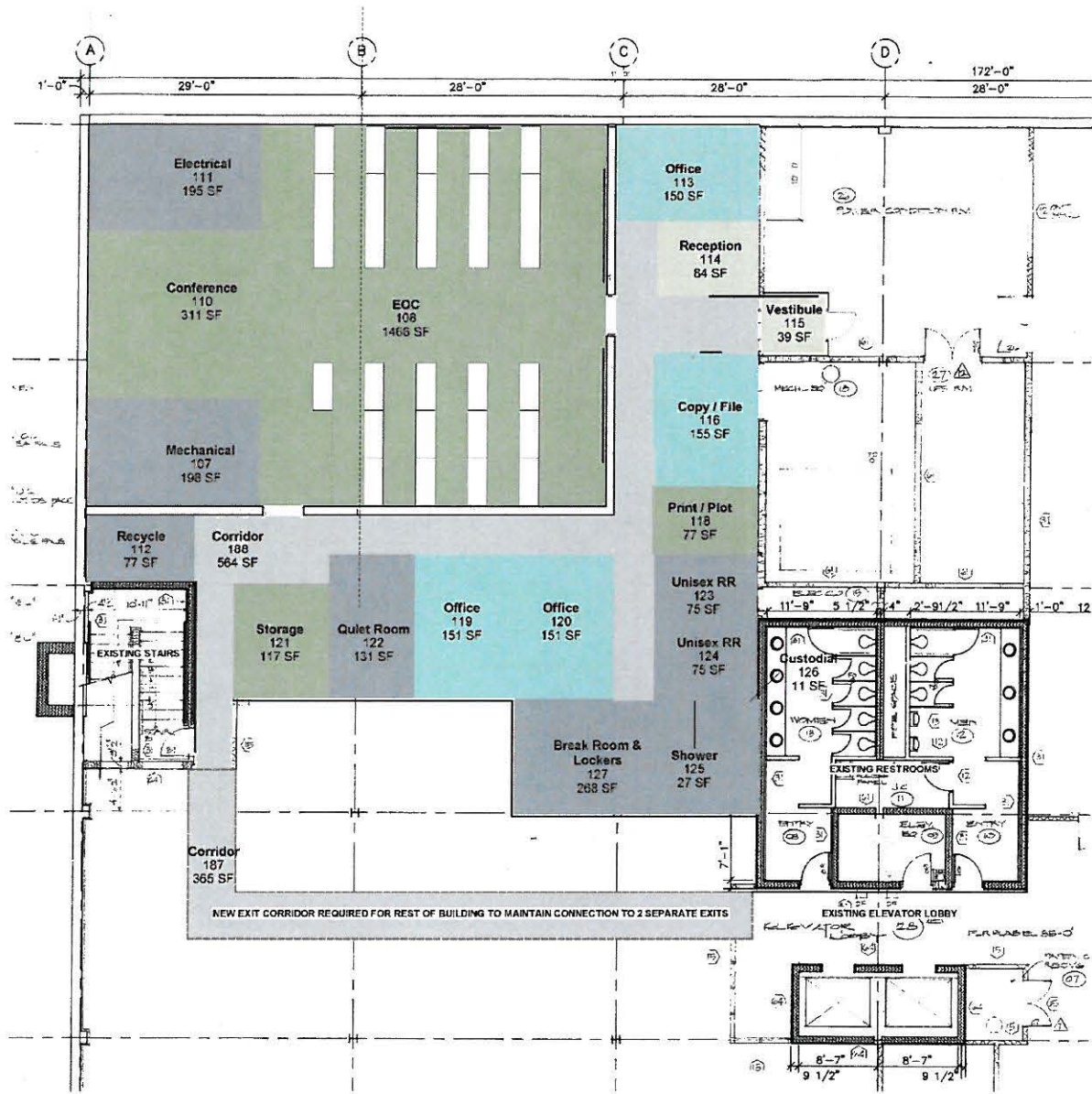


-  2,341 sf Hardened Area
-  2,300 sf Non-Hardened Area
- **4,641 sf TOTAL Available Area**
-  365 sf Additional Required for Building Exiting

BASEMENT FLOOR PLAN

Schematic Plan Diagram: Municipal Services Center

The following plan represents a very basic schematic layout of the programmed space as it might fit within the confines of the existing structure.



Space Needs Program

- ADMINISTRATIVE
- CIRCULATION
- OPERATIONAL
- SECURITY/RECEPTION
- SUPPORT

Lancaster County Emergency Management Agency Relocation Study

Facility Assessment Scoresheet: Municipal Services Center

Date: 1/31/2017

Location: Municipal Services Center, 549 W. Bond Street, Lincoln, NE

Y	?	N	Enter "U" if information unknown at time of scoring	Maximum	
6	0	0	Location and Transportation	Maximum	10
1			Is EOC centrally located allowing rapid response to all of the jurisdiction (Lancaster County)?		1
1			Is the EOC in an area that avoids congestion?		1
1			Does the EOC have adequate road network for ease of access?		1
1			Do access roads have priority emergency service from the City?		1
		0	Is the EOC in an area free from debris of collapsing buildings?		1
		0	Does the EOC meet minimum stand-off distances from parking/roads?		1
1			Does the site have adequate parking?		1
1			Is the site out of the floodplain?		1
		0	Is the site a safe distance from hazardous materials storage areas?		1
		0	Is the facility owned by Lancaster County?		1
		0	Is the EOC the sole tenant in the facility?		1
8	0	0	Structure / Survivability	Maximum	30
		0	Does EOC space meet FEMA P-361 wind hazard missile impact resistance?		8
3			Is the EOC located below grade?		3
		0	Does the non-EOC area have structural capabilities that improve its survivability?		3
			When was the building constructed?		
			1995-2017		3
1			1988-1994		1
			Pre-1988		0
			What is construction material?		
			Concrete, Pre-Cast Concrete, Reinforced Masonry		4
			Engineered/Heavy Steel Frame		2
1			Partially Reinforced Masonry		1
			Envelope		
		0	Is the area free of outdoor debris-generating sources for distance of 300-feet (storage yards etc)?		3
		0	Does the EOC have its own roof system? (i.e. not shared over building)		3
3			Is the percentage of window and door openings on exterior walls less than 7%?		3
6	0	0	Security	Maximum	15
4			Do site security features such as barriers and surveillance devices exist?		4
		0	Are there access control systems (card access, elevators, lock-out stairwells) into the facility?		3
2			Can security be increased commensurate with higher threats (additional barriers, increased surveillance)?		2
		U	Do Local Area Networks (LAN) used for emergency operations have protection from cyber attack?		2
		U	Do secure radio communications exist?		2
		U	Does facility have a secure voice capability?		2
5	0	0	Sustainability	Maximum	15
5			Can the facility support operations 24/7 for extended period of time?		5
		0	Does the facility have protected emergency backup power dedicated strictly to the EOC only?		5
		0	Does the facility have an uninterruptible power supply (UPS) dedicated strictly to the EOC only?		2
		0	Are HVAC systems protected and independent from other tenants?		3
0	0	0	Interoperability	Maximum	15
		U	Is telephone system (secure & non-secure) adequate to conduct emergency response operations?		3
		U	Are telephones connected to an in-house Private Branch Exchange (PBX)?		3
		U	Are there systems for communicating with key emergency services (police, fire, EMS, HAZMAT, Public Works)?		3
		U	Does the communications network satisfy requirements (radio, telephone, cell, frequency spectrum)?		3
		U	Can telecommunications be configured to support scale of emergency response activities?		3
9	0	0	Flexibility	Maximum	15
3			Does the facility meet the overall SF requirement for LCEMA?		3
3			Is there adequate SF for the hardened EOC space?		3
		0	Is there adequate floor to floor height (volume) for the EOC?		3
3			Does the facility have capability to conduct routine, recurring, or periodic joint training exercises?		3
		0	Is there capability to expand in the future?		3
34	0	0	TOTALS	Possible Points:	100

Lancaster County Emergency Management Agency Relocation Study

Opinion of Probable Construction Cost: Municipal Services Center

Lancaster County Emergency Management Agency Relocation






Site: Municipal Services Center

Address: 549 W. Bond Street, Lincoln, NE

Date: 1/31/2017

Item	Description		Material and Labor Total
1	Sitework		\$ 25,000.00
2	General Demolition		\$ 55,000.00
3	General Construction		\$ 290,000.00
4	Structural Construction		\$ 90,000.00
5	Mechanical / HVAC		\$ 75,000.00
6	Plumbing and Fire Protection		\$ 40,000.00
7	Electrical		\$ 155,000.00
8	Security and Information Technology Pathways		\$ 20,000.00
9		SUBTOTAL	\$ 750,000.00
10	General Conditions	15%	\$ 112,500.00
11	Design Contingency	10%	\$ 86,250.00
12	Construction Contingency	10%	\$ 94,875.00
13	Escalation	3%	\$ 31,308.75
14		CONSTRUCTION SUBTOTAL	\$ 1,074,933.75
15		4,641 sf Estimated Cost/Square Foot	\$ 231.62

Preliminary Project Schedule: Municipal Services Center

Activity	Months	Graphical Representation
Experian Relocation	6	
Design & Construction Documents	3	
Bidding & Award of Contract	1	
Construction	8	
Move in and Occupancy	1	
TOTAL DURATION	19	

Mechanical and Electrical Narrative: Youth Services Center

The new EOC should be designed such that the mechanical and electrical systems have 100% backup for continued operations during an event. Connection to the existing building systems can be used for normal operations provided the backup systems automatically engage in the event of loss of services. With this criteria established, the following challenges for the Youth Services Site have been listed below:

1. The existing building HVAC system are packaged air handling units with single duct fan power terminal units. Cooling is provided by a modular chiller connected to a geothermal ground loop supplemented by dry coolers. Building heating water is provided by modular gas fired hydronic boilers. The existing chillers and boilers are located in a below grade mechanical room and are well protected. The area under consideration for the EOC is served by a constant volume multi-zone air handling unit with heating and cooling coils connected to the central plant. The EOC space can be heated and cooled by the multi-zone unit for primary space conditioning. The system is served by a stand by generator but the penthouse location of the multi-zone is not storm rated so a secondary system on generator backup in a secure location is required. As with the Municipal Services Center, a variable refrigerant flow (VRF) system is recommended. The challenge of finding a secure location for the heat rejection equipment is easily solved by taking space inside the rated walls to create a mechanical room. The room will need to be on an outside wall to allow for storm rated louvers for air intake and an exhaust fan for heat rejection. A gas fired unit heater will provide emergency heat when needed.
2. The electrical power distribution can connect to the existing building service. A transfer switch will be required to allow installation of a generator for backup power. Similar to mechanical, an electrical room within the rated enclosure can house the generator and transfer switch.
3. The primary plumbing challenge will be the need to modify the roof drainage system due to the new roof structure required. Many of the existing toilet and shower facilities can be reused.
4. The existing facility is fully protected by a wet pipe sprinkler system. If wet pipe is acceptable, minor modifications to the system will be required. If the Board wishes to keep the system in the EOC dry, a pre-action system could be installed.

Overall Plan Diagram: Youth Services Center

The plan included represents the general location and configuration of the Agency within the existing walls of the Youth Services Center. The configuration of the Agency within the existing walls of the space can be accomplished without compromising the egress requirements of the Youth Services Center. Accommodations would need to be made for retaining access to the remaining area not needed by the Agency.



-  2,493 sf Hardened Area
-  2,248 sf Non-Hardened Area
- 4,741 sf TOTAL Available Area**

Schematic Plan Diagram: Youth Services Center

The following plan represents a very basic schematic layout of the programmed space as it might fit within the confines of the existing structure.



Space Needs Program

- ADMINISTRATIVE
- CIRCULATION
- OPERATIONAL
- SECURITY/RECEPTION
- SUPPORT

Lancaster County Emergency Management Agency Relocation Study

Facility Assessment Scoresheet: Youth Services Center

Date: 1/31/2017

Location: Youth Services Center, 1200 Radcliff Street, Lincoln, NE

Y	?	N	Enter 'U' if information unknown at time of scoring	Maximum	
8	0	0	Location and Transportation	Maximum	10
1			Is EOC centrally located allowing rapid response to all of the jurisdiction (Lancaster County)?		1
		0	Is the EOC in an area that avoids congestion?		1
1			Does the EOC have adequate road network for ease of access?		1
1			Do access roads have priority emergency service from the City?		1
1			Is the EOC in an area free from debris of collapsing buildings?		1
		0	Does the EOC meet minimum stand-off distances from parking/roads?		1
1			Does the site have adequate parking?		1
1			Is the site out of the floodplain?		1
1			Is the site a safe distance from hazardous materials storage areas?		1
1			Is the facility owned by Lancaster County?		1
		0	Is the EOC the sole tenant in the facility?		1
13	0	0	Structure / Survivability	Maximum	30
		0	Does EOC space meet FEMA P-361 wind hazard missile impact resistance?		8
		0	Is the EOC located below grade?		3
3			Does the non-EOC area have structural capabilities that improve its survivability?		3
			When was the building constructed?		
3			1995-2017		3
			1988-1994		1
			Pre-1988		0
			What is construction material?		
			Concrete, Pre-Cast Concrete, Reinforced Masonry		4
			Engineered/Heavy Steel Frame		2
1			Partially Reinforced Masonry		1
			Envelope		
3			Is the area free of outdoor debris-generating sources for distance of 300-feet (storage yards etc.)		3
3			Does the EOC have its own roof system? (i.e. not shared over entire building)		3
		0	Is the percentage of window and door openings on exterior walls less than 7%?		3
9	0	0	Security	Maximum	15
4			Do site security features such as barriers and surveillance devices exist?		4
3			Are there access control systems (card access, elevators, lock-out stairwells) into the facility?		3
2			Can security be increased commensurate with higher threats (additional barriers, increased surveillance)?		2
		U	Do Local Area Networks (LAN) for emergency operations have adequate protection against cyber attack?		2
		U	Do secure radio communications exist?		2
		U	Does facility have a secure voice capability?		2
5	0	0	Sustainability	Maximum	15
5			Can the facility support operations 24/7 for extended period of time?		5
		0	Does the facility have protected emergency backup power dedicated strictly to the EOC only?		5
		0	Does the facility have an uninterruptible power supply (UPS) dedicated strictly to the EOC only?		2
		0	Are HVAC systems protected and independent from other tenants?		3
0	0	0	Interoperability	Maximum	15
		U	Is telephone system (secure & non-secure) adequate to conduct emergency response operations?		3
		U	Are telephones connected to an in-house Private Branch Exchange (PBX)?		3
		U	Are there systems for communicating with key emergency services (police, fire, EMS, HAZMAT, Public Works)?		3
		U	Does the communications network satisfy requirements (radio, telephone, cell, frequency spectrum)?		3
		U	Can telecommunications be configured to support scale of emergency response activities?		3
12	0	0	Flexibility	Maximum	15
3			Does the facility meet the overall SF requirement for LCEMA?		3
3			Is there adequate SF for the hardened EOC space?		3
		0	Is there adequate floor to floor height (volume) for the EOC?		3
3			Does the facility have capability to conduct routine, recurring, or periodic joint training exercises?		3
3			Is there capability to expand in the future?		3
47	0	0	TOTALS	Possible Points:	100

Lancaster County Emergency Management Agency Relocation Study

Opinion of Probable Construction Cost: Youth Services Center

Lancaster County Emergency Management Agency Relocation





Site: Youth Services Center

Address: 1200 Radcliff Street, Lincoln, NE

Date: 1/31/2017

Item	Description		Material and Labor Total
1	Sitework		\$ 15,000.00
2	General Demolition		\$ 60,000.00
3	General Construction		\$ 190,000.00
4	Structural Construction		\$ 155,000.00
5	Mechanical / HVAC		\$ 75,000.00
6	Plumbing and Fire Protection		\$ 25,000.00
7	Electrical		\$ 140,000.00
8	Security and Information Technology Pathways		\$ 20,000.00
9		SUBTOTAL	\$ 680,000.00
10	General Conditions	15%	\$ 102,000.00
11	Design Contingency	10%	\$ 78,200.00
12	Construction Contingency	10%	\$ 86,020.00
13	Escalation	3%	\$ 28,386.60
14		CONSTRUCTION SUBTOTAL	\$ 974,606.60
15		4,741 sf Estimated Cost/Square Foot	\$ 205.57

Preliminary Project Schedule: Youth Services Center

Activity	Months	Graphical Representation
Design & Construction Documents	3	
Bidding & Award of Contract	1	
Construction	8	
Move in and Occupancy	1	
TOTAL DURATION	13	

Lancaster County Emergency Management Agency Relocation Study

Opinion of Probable Construction Cost: New Site (Yet to be Determined)

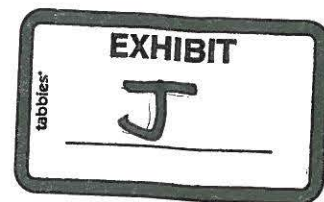
Lancaster County Emergency Management Agency Relocation

Site: To be Determined

Address: Unknown

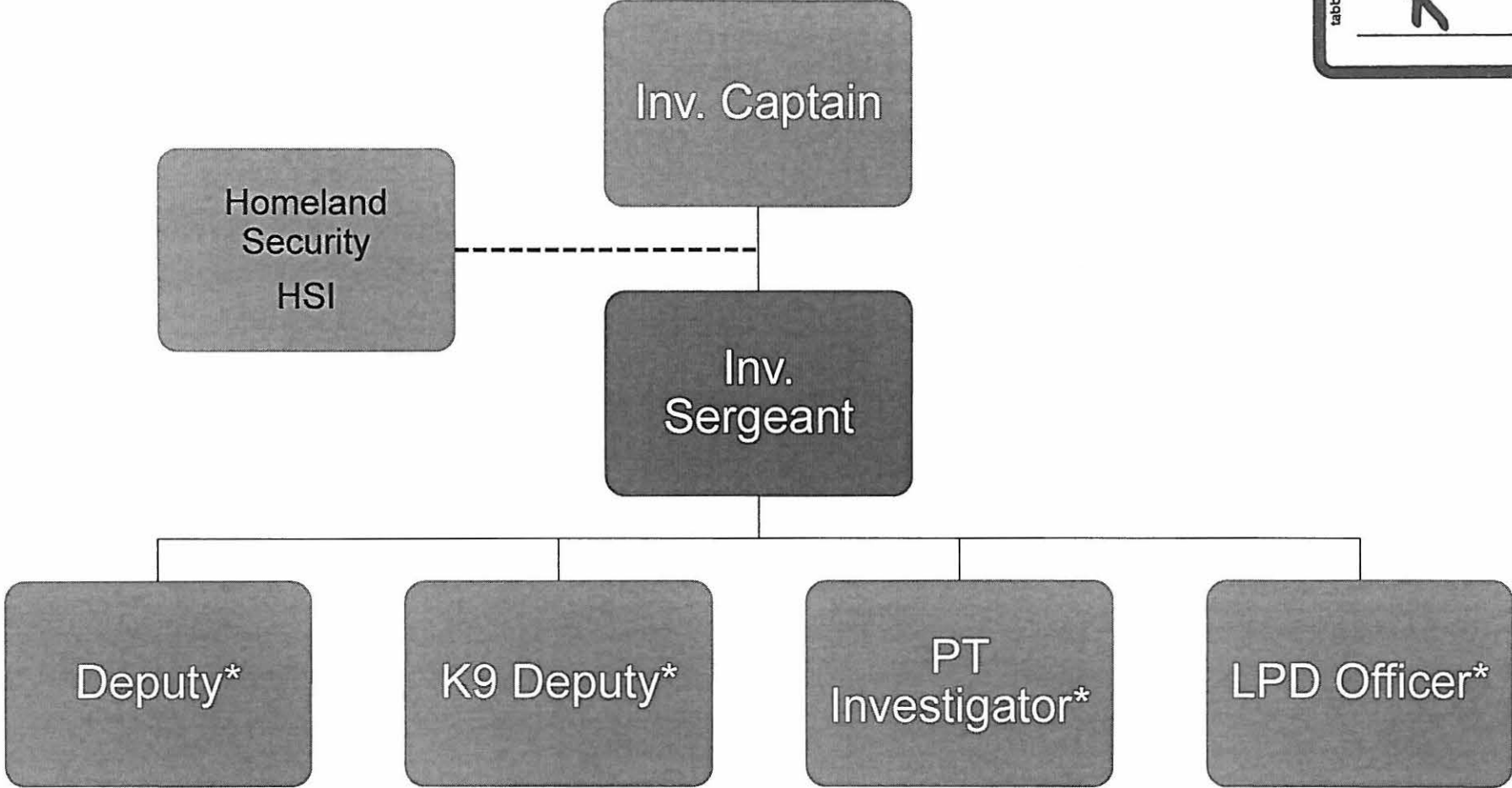
Date: 1/31/2017

Item	Description		Material and Labor Total
1	Sitework		\$ 250,000.00
2	General Demolition		\$ -
3	General Construction		\$ 1,250,000.00
4	Structural Construction		\$ -
5	Mechanical / HVAC		\$ -
6	Plumbing and Fire Protection		\$ -
7	Electrical		\$ -
8	Security and Information Technology Pathways		\$ -
<hr/>			
9		SUBTOTAL	\$ 1,500,000.00
10	General Conditions	15%	\$ 225,000.00
11	Design Contingency	10%	\$ 172,500.00
12	Construction Contingency	10%	\$ 189,750.00
13	Escalation	3%	\$ 62,617.50
<hr/>			
14		CONSTRUCTION SUBTOTAL	\$ 2,149,867.50
15		4,400 sf Estimated Cost/Square Foot	\$ 488.61
16	Land Acquisition		\$ 300,000.00
<hr/>			
17		TOTAL COST WITH PROPERTY ACQUISITION	\$ 2,449,867.50



Department	FY2016-2017	FY2017-2018
Administrative Services	3	3
Budget and Fiscal	3	3
Building and Codes	1	1
County Attorney	8	8
County Clerk	12	12
Emergency Management	3	3
Human Resources	1	1
Information Services	3	3
Planning	2	2
Property Management	3	3
Public Defender	1	1
Record Center	4	4
Register of Deeds	5	5
Safety and Training	2	2
Veterans Services	5	5
Webdrawer	1	1
Youth Services Center	6	6
Community Corrections	7	7
County Engineer	17	30
General Assistance	6	6
Purchasing	6	6
Weed Control	3	3
Board of Commissioners	2	5
County Treasurer	0	6
Human Services	2	3
Crisis Center	3	6
Election Commissioner	1	2
Sheriff	0	1
Corrections	4	15
Clerk of the District Court	1	3

HPRM Licensing Invoice					
all costs based on quotes from HP and are subject to change					
SUMMARY (TOTAL COSTS FOR 2 YEARS)					
		Base costs	add 25	add 50	add 75
Take out of dormancy in 2017-2018		22245.00	28816.44	35388.80	43262.36
Leave in dormancy for 2017-2018 and take out in 2018-2019			29150.12	36056.15	44259.79
Cost difference:			333.67	667.35	997.42
DETAILED COST BREAKDOWN					
Remove from Dormancy in 2017-2018					
	2016-2017	2017-2018	2017-2018	2017-2018	2017-2018
Licenses	125	125	150	175	200
Maintenance fee per license	73.84	88.98	88.98	88.98	88.98
Dormancy maintenance fee 2016-2017			1845.60	3692.00	6666.75
15% administrative fee (on dormancy fees)			276.84	553.80	1000.01
Total	9228.00	11122.50	15469.44	19817.30	25462.76
Remove from Dormancy in 2018-2019					
			2018-2019	2018-2019	2018-2019
Licenses			150	175	200
Price per license (based on this year)			88.98	88.98	88.98
Dormancy maintenance fee 2016-2017			1845.60	3692	6666.75
Dormancy maintenance fee 2017-2018			2224.50	4449	6673.5
15% administrative fee (on dormancy fees)			610.52	1221.15	2001.04
Total			18027.62	24933.65	33137.29
Costs for licenses out of dormancy					
		2017-2018	2018-2019	2018-2019	2018-2019
Licenses		125	150	175	200
Price per license (based on this year)		88.98	88.98	88.98	88.98
Total		11122.50	13347	15571.5	17799.6



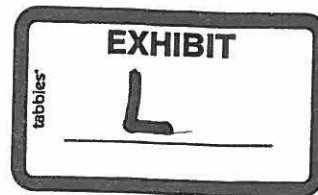
* Deputized Task Force Officers under the Dept. of Homeland Security

Office of the Sheriff Lancaster County

Terry T. Wagner
Sheriff

Todd Duncan
Chief Deputy

575 S. 10th Street, Lincoln, Nebraska 68508-2869
Phone (402) 441-6500 Fax (402) 441-8320



February 2, 2017

Todd Wiltgen, Chair
Lancaster County Board of Commissioners
555 South 10th Street
Lincoln, NE 68508

Dear Mr. Wiltgen,

In 2013, the Sheriff's Office began efforts to reduce the amount of illegal drugs coming into, and across, Lancaster County. Anticipating increased trafficking due to Colorado's legalization of marijuana and without knowing the current or future scope of the problem, two deputies began the Interdiction program on a part-time basis. As the years have gone by, the amount of illegal activity in the form of hundreds of pounds of marijuana and other drugs, the number of weapons involved in the trade, and the amount of cash traversing this county in furtherance of these criminal enterprises has been astounding. What started out as two deputies working interdiction as their other caseload permitted, has grown into a Homeland Security Task Force involving two full time deputies and a Lincoln Police Officer conducting highway interdiction, a part-time deputy conducting follow-up and forensic analysis, a part-time account clerk and Homeland Security Investigators as needed.

The effectiveness in disrupting national and international drug trafficking organizations has had local, regional and national impact. The Unit has received National accolades for the past 4 years for their outstanding work:

- 2013 Newcomer Interdiction Team of the Year;
- 2014 National Interdiction Team of the Year, Relentless Pursuit Award and National Seizure of the Month award;
- 2015 Largest Credit Card seizure in the country and top interdiction officer in the country;
- 2016 Largest High Grade Marijuana seizure in Nebraska History (1517 lbs.).

Since the Unit's inception it has make 200 felony arrests, seized 4,214 of processed marijuana, 26,641 marijuana plants worth \$240 million, 28 pounds of methamphetamine, 12 firearms and a significant amount of U.S. currency directly connected to criminal organizations. A number of fugitives have been arrested including a man who was wanted for 30 years on a federal drug indictment, a rape/murder suspect from Colorado, and a Sinaloa drug cartel lieutenant who had a federal warrant for cocaine distribution and illegal re-entry into the U.S.

In order to increase the efficiency of this Unit and maintain compliance with Federal seizure rules, I would like to change the part time deputy sheriff handling forensics analysis to full time status and hire a deputy sheriff with forfeited assets to backfill that position. This position would continue until forfeited assets are

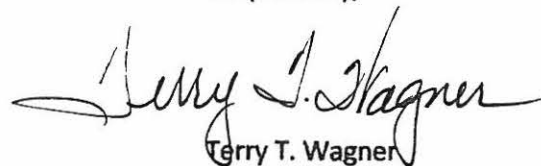
eliminated, in which case the position would also be eliminated through attrition. Because of the complexity of these cases and to ensure adequate supervisory oversight, I am proposing one of the existing positions in the Unit be converted to a supervisory (sgt.) position.

Hiring an additional deputy sheriff would increase the expenditure budget, but would be off-set with Forfeited Assets resulting in the position being revenue neutral. Upgrading an existing deputy sheriff position to sergeant would increase our budget by \$3993 wages plus \$617 in benefits (\$4,610) over our current budgeted amount.

I am requesting the Board authorize an increase in the authorized personnel strength of the Sheriff's Office by one deputy sheriff and one sergeant.

If you have any questions, don't hesitate to contact me.

Respectfully,

A handwritten signature in black ink that reads "Terry T. Wagner". The signature is written in a cursive style with a large, sweeping initial "T".

Terry T. Wagner
Lancaster County Sheriff

Board of Commissioners
Lancaster County, Nebraska

We are pleased to present this report related to our audit of the basic financial statements of Lancaster County, Nebraska for the year ended June 30, 2016. This report summarizes certain matters required by professional standards to be communicated to you in your oversight responsibility for County's reporting process.

Generally accepted auditing standards require the auditor to promote effective two-way communication between the auditor and those charged with governance. Consistent with this requirement, the following summarizes our responsibilities regarding the financial statement audit as well as observations arising from our audit that are significant and relevant to your responsibility to oversee the financial reporting process.

Required Communications

The Respective Responsibilities of the Auditor and Management

Our responsibilities under auditing standards generally accepted in the United States of America and *Government Auditing Standards* issued by the Comptroller General of the United States; the provisions of the Single Audit Act; Subpart F of 2 CFR Part 200; "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards" (Uniform Guidance) have been described to you in our arrangement letter dated July 11, 2016. Our audit of the financial statements does not relieve management or those charged with governance of their responsibilities which are also described in that letter.

Overview of the Planned Scope and Timing of the Financial Audit

We have issued a separate communication regarding the planned scope and timing of our audit and have discussed with you our identification of and planned audit response to significant risks of material misstatement.

Accounting Policies and Practices

Adoption of, or Change in, Accounting Policies - Management has the ultimate responsibility for the appropriateness of the accounting policies used by the County. Significant accounting policies are disclosed in Note 1 to the financial statements.

- Effective June 30, 2016, the County implemented GASB 72, *Fair Value Measurement and Application*, which establishes a framework for measuring fair value that requires or permits fair value measurement and enhances disclosures about fair value measurements. Fair value is defined as the exchange price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction. There is a fair value hierarchy which requires an entity to maximize the use of observable inputs when measuring fair value. The guidance requires three levels of fair value measurement based on the respective inputs.

The Government Accounting Standards Board (GASB) has issued several statements not yet implemented by the County. The County's management has not yet determined the effect these Statements will have on the County's financial statements. However, the County plans to implement all standards by the required dates. The Statements which might impact the County are discussed in Note 11 to the financial statements.

Significant or Unusual Transactions - We did not identify any significant or unusual transactions or significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

Management's Judgments and Accounting Estimates - Accounting estimates are an integral part of the preparation of financial statements and are based upon management's current judgment. The process used by management encompasses their knowledge and experience about past and current events and certain assumptions about future events. You may wish to monitor throughout the year the process used to determine and record these accounting estimates. Significant accounting estimates include the following:

- *Allowance for doubtful accounts (primarily as it relates to the Mental Health Crisis Center):* The MHCC uses the allowance method to account for estimated uncollectible accounts receivable. The allowance is determined by management, and includes all balances more than 60 days past due, plus a percentage of current balances based on past collection experience. As a basis for our conclusions, we reviewed the aging of accounts receivable, collections subsequent to year-end, and management's process for determining the allowance.
- *Claims liability recorded for claims incurred but not reported (IBNR):* To estimate IBNR for workers' compensation and general liability claims, management relies on an actuary's report. The actuary performs calculations to estimate liabilities on claims and future year costs based on inputs provided by the County's risk manager. To estimate IBNR for health claims, management relies on past history of claims incurred, and estimates of the lag time between when a claim is filed and paid. As a basis for our conclusions, we tested the inputs used by the actuary to ensure that they agreed to the underlying support provided by the County's risk manager. We also reviewed the County's health insurance liabilities for claims incurred but not paid at June 30, 2016, in comparison to the historical lag time for claim payments, to ensure amounts projected to be paid after year end were reasonable.

Audit Adjustments

We made the following adjustments to the original trial balance presented to us to begin the audit:

- 1) to adjust the liability for claims incurred but not reported for health insurance claims.

Other adjustments necessary to prepare the year-end financial statements were provided by management.

Uncorrected Misstatements

We did not identify any uncorrected misstatements.

Management Representations

In connection with our audit procedures, we have obtained a written management representation letter. This representation letter constitutes written acknowledgments by management that it has the primary responsibility for the fair presentation of the financial statements in conformity with generally accepted accounting principles. The representation letter also includes the more significant oral representations made by officers and employees during the course of the audit and includes specific representations, is intended to reduce the possibility of misunderstandings between us and County and reminds the signing officers to consider seriously whether all material liabilities, commitments and contingencies or other important financial information have been brought to our attention.

Other Disclosures

- We encountered no disagreements with management over the application of significant accounting principles, the basis for management's judgments on any significant matters, the scope of the audit, or significant disclosures to be included in the financial statements.
- We are not aware of any consultations management had with other accountants about accounting or auditing matters.
- No significant issues arising from the audit were discussed or were the subject of correspondence with management.
- We did not encounter any difficulties in dealing with management during the audit.

Other Recommendations

Schedule of Expenditures of Federal Awards

During procedures performed for the single audit part of our audit, we noted that the County may use a single general ledger cost center for multiple federal and non-federal funding sources that may support a particular activity. This makes the process of identifying federally funded activity challenging, and increases the risk that the County may inadvertently charge expenditures to an incorrect funding source. In December 2013, the OMB issued *Uniform Administrative Requirements, Cost Principles, and Audit Requirement for Federal Awards* (2 CFR Part 200) for the administration of federal awards. This guidance became effective in December 2014. Section 200.302 of the new guidance states that the financial management system of a non-Federal entity must provide for, among other things:

- Identification, in its accounts, of all Federal awards received and expended and the Federal programs under which they were received
- Records that identify adequately the source and application of funds
- Comparison of expenditures with budgeted amounts for each Federal award

In light of the new grant guidance, we continue to recommend that the County create separate cost centers for each federal funding source. This would also apply in situations where a grant may have multiple open grant years for a single grant program. For example, a grant may have funds awarded for the year October 1, 2014 to September 30, 2015, and then the County may receive new funding for the following year of October 1, 2015 to September 30, 2016. Generally, revenues and expenditures must be reported separately for each grant year. The

County's financial accounting general ledger system allows for the creation of "business units" to track activities by cost center, and in some cases, activities for federal grants were tracked within a single business unit. We recommend that the County evaluate whether "business units" could be set up for all federal funding sources.

During the procedures mentioned above, we also found the Grants Coordinator (Coordinator) was not always informed when Federal grants were awarded to the County. Not all departments are informing the Coordinator when Federal funds are applied for and received. This makes the preparation of the Schedule of Expenditures of Federal Awards (SEFA) challenging and increases the risk that Federal awards may not be recorded on the SEFA. Section 200.302(b)(1) of the Uniform Guidance requires the non-Federal entity identify Federal awards received and expended.

We recommend the County develop procedures which ensure all Federal awards are reported to the Coordinator. These procedures will lessen the risk of properly identifying Federal awards included on the SEFA.

Closing

This report is intended solely for the information and use of the Board and management, and is not intended to be and should not be used by anyone other than these specified parties. It will be our pleasure to respond to any questions you have regarding this report. We appreciate the opportunity to be of service to Lancaster County.

Allen, Gibbs & Houlik, L.C.
CERTIFIED PUBLIC ACCOUNTANTS

February 7, 2017
Wichita, KS

Board of Commissioners
Lancaster County, Nebraska

Please find attached our standard end-of-audit communications regarding the financial and single audit of the County.

In addition, as your trusted advisor we would like to share information and concerns we see occurring in the private sector and public sector that might be relevant to you. As such, below is information and recommendations we are making our public sector clients aware of related to Information Security Governance. Keep in mind this information is not as a result of our procedures performed during the course of your audit.

Information Security Governance

Today, executive managers and those charged with governance must be confident that the entity is protecting its information and the systems that process it. The potential impacts of a failure in the availability; confidentiality or integrity of critical information assets is monumental in today's environment of cybersecurity breaches.

Many organizations believe their information security practices are adequately mitigating their risks. Unfortunately, they are often surprised to discover those practices are failing to perform as expected and the consequences are usually severe. Information security is more than a technology issue. It is a **governance and management challenge** that involves risk management, accountability and reporting. And it requires executive stewardship to ensure the timely assessment of emerging threats and an organization's effective response to them.

Additional information on "Information Risk is Business Risk" can be accessed through our AGH University website located at <http://www.aghuniversity.com/webinars/archived/archived-webinars.aspx> (from the "select a topic" drop-down box, select Information Technology). Additionally, we encourage management teams to take advantage of peer networking groups, trade associations or other resources relating to IT and information risk and the most recent best practices as the constant risk evolves.

Governance Review

Additionally, a structured assessment can help develop stronger, better and more systematic approaches to information security. It will help with clearly and objectively understanding the strengths and weaknesses in current information security processes and the extent to which those processes are meeting organizational needs. Most important, it assists in generating recommendations to help protect information, facilities, people and technology.

We believe a review or assessment must be completed on a periodic basis; this assessment can be completed internally or by using an outsourced service provider. Owners and executive managers should be involved with the review and summary reports should also be shared with those charged with governance.

Vulnerability Assessment

In addition to a periodic information system governance review, the entity should also conduct periodic (at least annually or semi-annually) vulnerability assessments. There are more than **71,000 known network vulnerabilities** that can leave organizations open to significant risk. High-profile security breaches have become commonplace and many companies are susceptible to the same failures.

Network vulnerability assessments can help identify and resolve vulnerabilities before they are exploited by cybercriminals. AGH's experienced security professionals use network vulnerability assessments to discover and analyze known flaws and weaknesses.

Using automated scanners – along with their experience and judgement – our security professionals will identify existing vulnerabilities, evaluate their severity and recommend steps for fixing the underlying problems.

Comprehensive Policy and Procedure Review



Given the broad and deep scope of governmental operations, entities should consider completing a comprehensive evaluation of the adequacy and effectiveness of the entity's internal financial policies, processes and procedures, including a comparison to best practices among organizations the same size.

For entities that have experienced budget cuts in the finance or technology areas or those that have experienced turnover, a periodic review of controls is imperative. Even if either team has been stable over the years, keep in mind that even the best design of controls is only as good as the people who carry out and execute such controls.

Financial policies, procedures and processes are a key element of sound fiscal administration. When policies are effective, they can preserve or enhance the fiscal health and wealth of the organization and create efficiencies for staff members.

This comprehensive evaluation could include:

1. Evaluation of existing controls
2. Identification of financial policies that could lead to vulnerability to fraud and/or abuse
3. For those identified weaknesses and risks, recommendations for improvements

In conclusion, we continue to value our relationship with Lancaster County and we remain available at your convenience for questions regarding the aforementioned information.

This report is intended solely for the information and use of the Board and management, and is not intended to be and should not be used by anyone other than these specified parties. It will be our pleasure to respond to any questions you have regarding this report. We appreciate the opportunity to be of service to Lancaster County.

Respectfully

ALLEN, GIBBS & HOULIK, L.C.

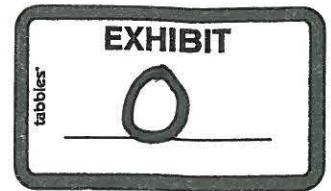


Benjamin Hart
Vice President

BOH:ilm



Railroad Transportation Safety District



lincoln.ne.gov RTSD Railroad Quiet Zones

Railroad Quiet Zones

A quiet zone is a minimum one-half mile long railroad corridor containing one or more public roadway crossings where train horns are not routinely sounded. All crossings must have flashing lights, gates, and constant warning before a quiet zone can be established. Train horns may still be sounded in the case of an equipment malfunction or if a person or vehicle is near the tracks.

There are five ways to quiet crossings. These supplemental safety measures are considered equal to use of the train horn.

- Permanent or night-time closure of roadway
- Four-quadrant gates
- Raised medians or channelization devices
- One-way streets with gates
- Wayside horns

Once established, a quiet zone must be re-evaluated periodically to demonstrate that safety requirements continue to be met. A report is submitted every five years for each quiet zone to document the supplemental safety measures that are in effect.

- Lincoln South Quiet Zone 5-Year Affirmation - October 2016 (8.13 M)
- North Lincoln Quiet Zone 5-Year Affirmation - August 2014 (4.33 M)

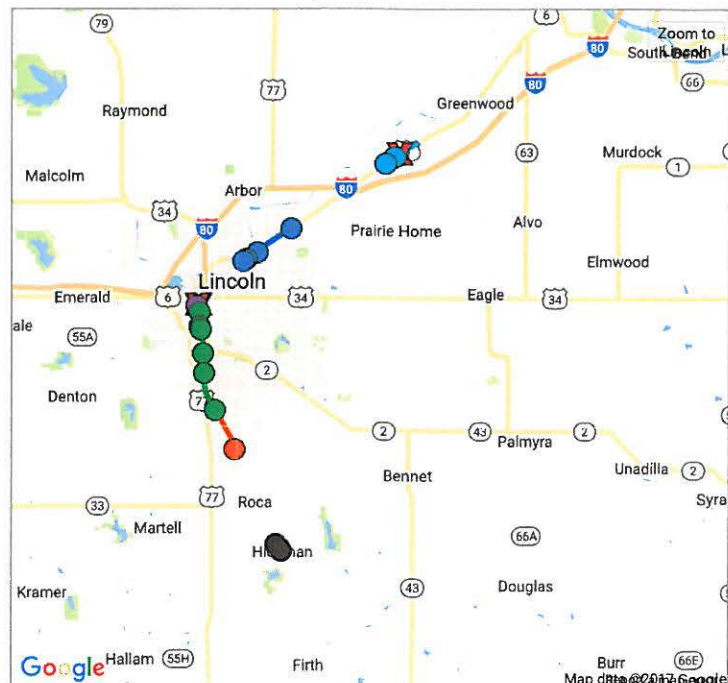
For more information about the requirements that communities must meet in order to implement a Quiet Zone, see the [FRA Final Rule](#).

Lincoln's Quiet Zones

Lincoln has four designated Quiet Zones, which include twelve crossings along the BNSF railroad.

- 1. North Lincoln Quiet Zone**
 Show on Map
 Four crossings along the BNSF tracks and Cornhusker Highway at:
 - 33rd Street
 - 35th/Adams Street
 - 44th Street
 - 70th Street
- 2. Lincoln South Salt Creek Quiet Zone**
 Show on Map
 One crossing at 1st and J streets.
- 3. Lincoln South Quiet Zone**
 Show on Map
 Six crossings, generally along the 3rd street corridor, with crossings at:
 - "D" Street
 - South Street
 - Park Blvd
 - Pioneers Blvd.
 - Old Cheney Road
 - South 14th Street
- 4. Lincoln Sattilo Road Quiet Zone**
 Show on Map
 One crossing at Sattilo Road, just west of 27th street

Map of Quiet Zones in Lancaster County



Other Lancaster County Quiet Zones

Waverly Quiet Zone

Show on Map

Two crossings along the BNSF tracks and US-6 at:

- 141st Street
- 148th Street

Hickman Quiet Zone

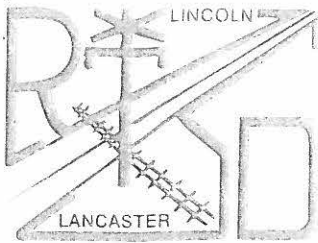
Show on Map

The Hickman Quiet Zone includes three crossings:

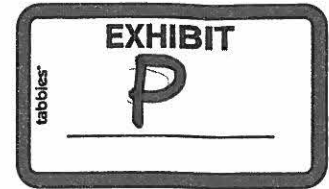
- Hickman Road
- Private Crossing
- 2nd Street

Related Links

- [Federal Railroad Administration](#)
- [Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossing](#)



RAILROAD TRANSPORTATION SAFETY DISTRICT
949 West Bond Street, Suite 200, Lincoln, NE 68521
Telephone 402-441-7711



February 15, 2017

5- Year Quiet Zone Affirmation
Name: Lincoln Saltillo Quiet Zone

The City of Lincoln and Lancaster County, NE are hereby affirming that the **Lincoln Saltillo Quiet Zone** continues to conform to the requirements of the *Final Rule*. Routine locomotive horn use at the crossings mentioned above ceased on August 3rd, 2012. The Lincoln Saltillo Quiet Zone imposed a 24-hour restriction on routine sounding of locomotive horns within its respective area. It was created pursuant to 49 CFR Sec. 222.39 (a) (1) by implementing Medians or Channelization Devices with gates as Supplementary Safety Measures (SSM's) at every public highway-rail grade crossing within the new quiet zone.

Following is the public crossing within the Lincoln Saltillo Quiet Zone in Lancaster County, Nebraska and the Supplementary Safety Measures in place.

US DOT Inventory Number	Street or Highway	Railroad Milepost	SSM Type
073296C	Saltillo Rd	0072.820	Gates with Medians

Up-to-date Grade Crossing Inventory Forms for the crossing are also provided, that reflect the current conditions to the best of our knowledge in this quiet zone. The BNSF Railway will need to check their background data to complete the updated inventory forms.

Also included is a signed statement by the Mayor of the City of Lincoln, and the Chair of the Lancaster County Board of Commissioners, certifying that the information submitted is accurate and complete to their best knowledge and belief.

Each approach to the at-grade crossings is also signed with the required "No Train Horn" (W10-9P) sign below the Highway-Rail Grade Crossing Advance-Warning Symbol Signs (W10-1) in compliance with the Manual on Uniform Traffic Control Devices (MUTCD).

The designated contact person for monitoring compliance for the Lincoln Saltillo Quiet Zone and preferred method of contact for this existing quiet zone is:

Mr. Roger A. Figard, P.E.
Executive Director
Railroad Transportation Safety District
949 West Bond Street, Suite 200
Lincoln, NE 68521

5-YEAR QUIET ZONE AFFIRMATION

LINCOLN SALTILLO QUIET ZONE LINCOLN, NEBRASKA

Notice is hereby given by the City of Lincoln and Lancaster County, Nebraska to:

Associate Administrator for Railroad Safety
Office of Railroad Safety
Federal Railroad Administration
1200 New Jersey Avenue, SE
Mail Stop 25
Washington, DC 20590

Mr. Howard Gillespie
Manager for Grade Crossing Safety &
Trespass Prevention
Federal Railroad Administration
901 Locust Street, Suite 464
Kansas City, MO 64106

Mr. French F. Thompson, III
Director of Public Projects & System Design
BNSF Railway Company
Operations Office Bldg. 3rd FL
Fort Worth, Texas 76131

Ms. Amber Stoffels, Manager of Public Projects
Colorado, Nebraska, & Wyoming
BNSF Railway Co.
3700 Globeville Road
Denver, CO 80216

Mr. Abe Anshasi, PE
Public Transportation Engineer
Nebraska Department of Roads
P.O. Box 94759
Lincoln, Nebraska 68502

Mr. Rick Haden
Felsburg Holt & Ullevig
315 S. 9th Street, Suite 201
Lincoln, NE 68508

U. S. DOT CROSSING INVENTORY FORM

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

OMB No. 2130-0017

Instructions for the initial reporting of the following types of new or previously unreported crossings: For public highway-rail grade crossings, complete the entire inventory Form. For private highway-rail grade crossings, complete the Header, Parts I and II, and the Submission Information section. For public pathway grade crossings (including pedestrian station grade crossings), complete the Header, Parts I and II, and the Submission Information section. For Private pathway grade crossings, complete the Header, Part I and II, and the Submission Information section. For grade-separated highway-rail or pathway crossings (including pedestrian station crossings), complete the Header, Part I, and the Submission Information section. For changes to existing data, complete the Header, Part I Items 1-3, and the Submission Information section, in addition to the updated data fields. Note: For private crossings only, Part I Item 20 and Part III Item 2.K. are required unless otherwise noted. An asterisk * denotes an optional field.

A. Revision Date (MM/DD/YYYY) 12/06/2016 2/15/2017	B. Reporting Agency <input type="checkbox"/> Railroad <input type="checkbox"/> Transit <input checked="" type="checkbox"/> State <input checked="" type="checkbox"/> Other	C. Reason for Update (Select only one) <input checked="" type="checkbox"/> Change in Data <input type="checkbox"/> New Crossing <input type="checkbox"/> Closed <input type="checkbox"/> Re-Open <input type="checkbox"/> Date Change Only <input type="checkbox"/> Change in Primary Operating RR <input type="checkbox"/> No Train Traffic <input checked="" type="checkbox"/> Quiet Zone Update <input type="checkbox"/> Admin. Correction	D. DOT Crossing Inventory Number 083516X ✓
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Part I: Location and Classification Information

1. Primary Operating Railroad BNSF Railway Company [BNSF] ✓		2. State NEBRASKA ✓		3. County LANCASTER ✓	
4. City / Municipality <input type="checkbox"/> In <input checked="" type="checkbox"/> Near LINCOLN ✓		5. Street/Road Name & Block Number SALTILLO RD ✓ <small>(Street/Road Name) * (Block Number)</small>		6. Highway Type & No. Not Yet Reported by State	
7. Do Other Railroads Operate a Separate Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR			8. Do Other Railroads Operate Over Your Track at Crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Specify RR		
9. Railroad Division or Region <input type="checkbox"/> None NEBRASKA ✓		10. Railroad Subdivision or District <input type="checkbox"/> None ST JOSEPH ✓		11. Branch or Line Name <input type="checkbox"/> None KC-CARLING ✓	
12. RR Milepost 0189.600 ✓ <small>(prefix) (nnnn.nnn) (suffix)</small>		13. Line Segment * 3000			
14. Nearest RR Timetable Station * HILL ST JCT		15. Parent RR (if applicable) <input checked="" type="checkbox"/> N/A		16. Crossing Owner (if applicable) <input type="checkbox"/> N/A BNSF	
17. Crossing Type <input checked="" type="checkbox"/> Public ✓ <input type="checkbox"/> Private		18. Crossing Purpose <input checked="" type="checkbox"/> Highway ✓ <input type="checkbox"/> Pathway, Ped. <input type="checkbox"/> Station, Ped.		19. Crossing Position <input checked="" type="checkbox"/> At Grade ✓ <input type="checkbox"/> RR Under <input type="checkbox"/> RR Over	
20. Public Access (if Private Crossing) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		21. Type of Train <input checked="" type="checkbox"/> Freight ✓ <input type="checkbox"/> Intercity Passenger <input type="checkbox"/> Commuter		22. Average Passenger Train Count Per Day <input type="checkbox"/> Less Than One Per Day <input checked="" type="checkbox"/> Number Per Day 0	
23. Type of Land Use <input checked="" type="checkbox"/> Open Space ✓ <input type="checkbox"/> Farm <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Recreational <input type="checkbox"/> RR Yard					
24. Is there an Adjacent Crossing with a Separate Number? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ✓ If Yes, Provide Crossing Number			25. Quiet Zone (FRA provided) <input type="checkbox"/> No <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> Partial <input type="checkbox"/> Chicago Excused Date Established 8-3-2012		
26. HSR Corridor ID <input checked="" type="checkbox"/> N/A		27. Latitude in decimal degrees (WGS84 std: nn.nnnnnn) 40.6973743 ✓		28. Longitude in decimal degrees (WGS84 std: -nnn.nnnnnnn) -96.6814059 ✓	
29. Lat/Long Source <input type="checkbox"/> Actual <input checked="" type="checkbox"/> Estimated					
30.A. Railroad Use *			31.A. State Use *		
30.B. Railroad Use *			31.B. State Use *		
30.C. Railroad Use *			31.C. State Use *		
30.D. Railroad Use *			31.D. State Use * NOE 8/3/2012		
32.A. Narrative (Railroad Use) *			32.B. Narrative (State Use) *		
33. Emergency Notification Telephone No. (posted) 800-832-5452		34. Railroad Contact (Telephone No.) 817-352-1549		35. State Contact (Telephone No.) 402-479-4515 ✓	

Part II: Railroad Information

1. Estimated Number of Daily Train Movements				
1.A. Total Day Thru Trains (6 AM to 6 PM) 22	1.B. Total Night Thru Trains (6 PM to 6 AM) 22	1.C. Total Switching Trains 0	1.D. Total Transit Trains 0	1.E. Check if Less Than One Movement Per Day How many trains per week? <input type="checkbox"/>
2. Year of Train Count Data (YYYY) 2013		3. Speed of Train at Crossing 3.A. Maximum Timetable Speed (mph) 50 3.B. Typical Speed Range Over Crossing (mph) From 1 to 50		
4. Type and Count of Tracks Main 2 Siding 0 Yard 0 Transit 0 Industry 0				
5. Train Detection (Main Track only) <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other <input type="checkbox"/> None				
6. Is Track Signaled? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		7.A. Event Recorder <input type="checkbox"/> Yes <input type="checkbox"/> No		7.B. Remote Health Monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No

U. S. DOT CROSSING INVENTORY FORM

A. Revision Date (MM/DD/YYYY) 2/15/2017 PAGE 2 B. Crossing Inventory Number (7 char.) 083516X
 12/06/2016

Part III: Highway or Pathway Traffic Control Device Information

1. Are there Signs or Signals? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2. Types of Passive Traffic Control Devices associated with the Crossing				
2.A. Crossbuck Assemblies (count) <u>2</u>		2.B. STOP Signs (R1-1) (count) <u>0</u>	2.C. YIELD Signs (R1-2) (count)	2.D. Advance Warning Signs (Check all that apply; include count) <input type="checkbox"/> None		
				<input checked="" type="checkbox"/> W10-1	<input type="checkbox"/> W10-3	<input type="checkbox"/> W10-11
				<input type="checkbox"/> W10-2	<input checked="" type="checkbox"/> W10-4	<input type="checkbox"/> W10-12
2.E. Low Ground Clearance Sign (W10-5) <input type="checkbox"/> Yes (count) <input checked="" type="checkbox"/> No		2.F. Pavement Markings <input checked="" type="checkbox"/> Stop Lines <input type="checkbox"/> Dynamic Envelope <input checked="" type="checkbox"/> RR Xing Symbols <input type="checkbox"/> None		2.G. Channelization Devices/Medians <input checked="" type="checkbox"/> All Approaches <input type="checkbox"/> Median <input type="checkbox"/> One Approach <input type="checkbox"/> None		2.H. EXEMPT Sign (R15-3) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
						2.I. ENS Sign (I-13) Displayed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2.J. Other MUTCD Signs Specify Type <u>W10-9P</u> Count <u>3</u> Specify Type _____ Count <u>0</u> Specify Type _____ Count _____			2.K. Private Crossing Signs (if private) <input type="checkbox"/> Yes <input type="checkbox"/> No	2.L. LED Enhanced Signs (List types)		
3. Types of Train Activated Warning Devices at the Grade Crossing (specify count of each device for all that apply)						
3.A. Gate Arms (count) <input checked="" type="checkbox"/> Roadway <u>2</u> Pedestrian _____	3.B. Gate Configuration <input checked="" type="checkbox"/> 2 Quad <input type="checkbox"/> Full (Barrier) Resistance <input type="checkbox"/> 3 Quad <input type="checkbox"/> Median Gates <input type="checkbox"/> 4 Quad	3.C. Cantilevered (or Bridged) Flashing Light Structures (count) Over Traffic Lane <u>0</u> <input type="checkbox"/> Incandescent Not Over Traffic Lane <u>0</u> <input type="checkbox"/> LED		3.D. Mast Mounted Flashing Lights (count of masts) <u>2</u> <input type="checkbox"/> Incandescent <input type="checkbox"/> LED <input type="checkbox"/> Back Lights Included <input type="checkbox"/> Side Lights Included		3.E. Total Count of Flashing Light Pairs <u>2</u>
3.F. Installation Date of Current Active Warning Devices: (MM/YYYY) ____/____/____ <input checked="" type="checkbox"/> Not Required		3.G. Wayside Horn <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Installed on (MM/YYYY) ____/____/____		3.H. Highway Traffic Signals Controlling Crossing <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.I. Bells (count) <u>1</u>	
3.J. Non-Train Active Warning <input type="checkbox"/> Flagging/Flagman <input type="checkbox"/> Manually Operated Signals <input type="checkbox"/> Watchman <input type="checkbox"/> Floodlighting <input type="checkbox"/> None				3.K. Other Flashing Lights or Warning Devices Count <u>0</u> Specify type _____		
4.A. Does nearby Hwy Intersection have Traffic Signals? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4.B. Hwy Traffic Signal Interconnection <input checked="" type="checkbox"/> Not Interconnected <input type="checkbox"/> For Traffic Signals <input type="checkbox"/> For Warning Signs	4.C. Hwy Traffic Signal Preemption <input type="checkbox"/> Simultaneous <input type="checkbox"/> Advance	5. Highway Traffic Pre-Signals <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Storage Distance * _____ Stop Line Distance * _____		6. Highway Monitoring Devices (Check all that apply) <input type="checkbox"/> Yes - Photo/Video Recording <input type="checkbox"/> Yes - Vehicle Presence Detection <input checked="" type="checkbox"/> None	

Part IV: Physical Characteristics

1. Traffic Lanes Crossing Railroad <input type="checkbox"/> One-way Traffic <input checked="" type="checkbox"/> Two-way Traffic <input type="checkbox"/> Divided Traffic Number of Lanes <u>2</u>	2. Is Roadway/Pathway Paved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3. Does Track Run Down a Street? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4. Is Crossing Illuminated? (Street lights within approx. 50 feet from nearest rail) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Crossing Surface (on Main Track, multiple types allowed) Installation Date * (MM/YYYY) ____/____/____ Width * _____ Length * _____ <input checked="" type="checkbox"/> 1 Timber <input type="checkbox"/> 2 Asphalt <input type="checkbox"/> 3 Asphalt and Timber <input checked="" type="checkbox"/> 4 Concrete <input type="checkbox"/> 5 Concrete and Rubber <input type="checkbox"/> 6 Rubber <input type="checkbox"/> 7 Metal <input type="checkbox"/> 8 Unconsolidated <input type="checkbox"/> 9 Composite <input type="checkbox"/> 10 Other (specify) _____			
6. Intersecting Roadway within 500 feet? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Approximate Distance (feet) <u>200 105'</u>		7. Smallest Crossing Angle <input type="checkbox"/> 0° - 29° <input type="checkbox"/> 30° - 59° <input checked="" type="checkbox"/> 60° - 90°	8. Is Commercial Power Available? * <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Part V: Public Highway Information

1. Highway System <input type="checkbox"/> (01) Interstate Highway System <input type="checkbox"/> (02) Other Nat Hwy System (NHS) <input checked="" type="checkbox"/> (03) Federal AID, Not NHS <input type="checkbox"/> (08) Non-Federal Aid		2. Functional Classification of Road at Crossing <input checked="" type="checkbox"/> (0) Rural <input type="checkbox"/> (1) Urban <input type="checkbox"/> (1) Interstate <input checked="" type="checkbox"/> (5) Major Collector <input type="checkbox"/> (2) Other Freeways and Expressways <input type="checkbox"/> (3) Other Principal Arterial <input type="checkbox"/> (6) Minor Collector <input type="checkbox"/> (4) Minor Arterial <input type="checkbox"/> (7) Local		3. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	4. Highway Speed Limit <u>55</u> MPH <input checked="" type="checkbox"/> Posted <input type="checkbox"/> Statutory
7. Annual Average Daily Traffic (AADT) Year <u>2010</u> AADT <u>7180 9050</u>		8. Estimated Percent Trucks <u>90</u> <u>5%</u>	9. Regularly Used by School Buses? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Average Number per Day <u>0</u>		10. Emergency Services Route <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Submission Information - This information is used for administrative purposes and is not available on the public website.

Submitted by ROGER FRENCH Organization LINCOLN RTSD Phone 402-241-7711 Date 2-15-2017

Public reporting burden for this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for information collection is 2130-0017. Send comments regarding this burden estimate or any other aspect of this collection, including for reducing this burden to: Information Collection Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25 Washington, DC 20590.

12 May, 02

Tracking # 17020124



EXECUTIVE ORDER

NO. = 090367

BY VIRTUE OF THE AUTHORITY VESTED IN ME by the Charter of the City of Lincoln, Nebraska:

I hereby affirm the Lincoln Saltillo Quiet Zone for the following grade crossing as more specifically set forth in the attached Notice of Affirmation, continues to conform to the requirements of the Final Rule.

U.S. DOT

Inventory Number	Street or Highway	Railroad Milepost	SSM Type
073296C	Saltillo Rd.	0072.820 Lincoln, NE	Gates with Medians

Railroads shall continue not sounding routine train horn at the above listed crossings.

The City Clerk is directed to return the executed copy of this Executive Order and the Notice of Affirmation to Janelle Carnahan in Public Works & Utilities.

Dated this 15th day of February, 2017.

Chris Beutler, Mayor

Approved as to Form & Legality:

Asst. City Attorney

Approved:

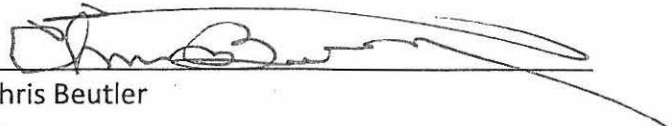
Public Works and Utilities Department

Chief Executive Officer Statement- City of Lincoln

STATEMENT BY THE MAYOR OF LINCOLN, NEBRASKA REGARDING THE NOTICE OF QUIET ZONE AFFIRMATION

I, Chris Beutler, am the Mayor of Lincoln, Nebraska, and my duties include the overall management for the City and its operations. In my capacity as Mayor, I hereby certify that the information submitted by the Lincoln-Lancaster County Railroad Transportation Safety District as part of the Notice of Quiet Zone Affirmation in continuing the **Lincoln Saltillo Quiet Zone** is accurate and complete to the best of my knowledge and belief.

2-15-17
Date

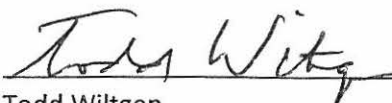

Chris Beutler
Mayor

Chief Executive Officer Statement- Lancaster County

STATEMENT BY THE CHAIR OF LANCASTER COUNTY BOARD OF COMMISSIONERS,
REGARDING THE NOTICE OF QUIET ZONE AFFIRMATION

I, Todd Wiltgen, am Chair of the Lancaster County, Nebraska Board of Commissioners, and my duties include the overall management for the County and its operations. In my capacity as Chair of the County Board of Commissioners, I hereby certify that the information submitted by the Lincoln-Lancaster County Railroad Transportation Safety District as part of its Notice of Quiet Zone Affirmation in continuing the Lincoln Saltillo Quiet Zone is accurate and complete to the best of my knowledge and belief.

2/16/17
Date



Todd Wiltgen
Chair



Breastfeeding can be one of the most satisfying experiences to a new mother as it enhances maternal bonding and provides excellent nutrition for the newborn.

Since the beginning of time, breastfeeding has been a natural part of human evolution and many cultures.

Breast milk furnishes more than 100 ingredients not found in commercial formulas, such as human antibodies that protect the newborn from infection. Those first months of proper nutrition are critical in the healthy development and growth stages of your newborn child.

Produced by the Lincoln-Lancaster Women's Commission
Designed by Citizen Information Center
& printed on recycled paper JULY/2002

Lincoln-Lancaster
Women's Commission
440 South 8th Street, Suite 100
Lincoln, NE 68508-2294
213-1

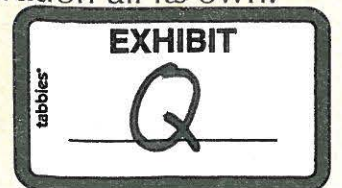
CITY OF LINCOLN
**Breastfeeding
Policy**

February
2002



Congratulations!

Motherhood is one of the most important times in a woman's life. The excitement and expectation of bringing home a little one to join the family unit is a celebration all its own.



THE CITY OF LINCOLN & LANCASTER COUNTY

support female employees in their endeavor to breastfeed. In response to the U.S. Surgeon General's report, the City of Lincoln implemented a Breastfeeding Policy in May 2001 that permits new mothers the time and place to express milk in private after returning from family and medical leave.

Contrary to modern myths, research has proven that breast milk can maintain its freshness throughout the day without any refrigeration requirements.

According to the American Academy of Pediatrics (AAP), extensive research confirms the diverse and compelling health advantages of breast milk. The AAP's 1997 policy paper on breastfeeding recommends that newborns be fed breast milk exclusively for six months and that breastfeeding continue for at least 12 months.

In addition, the U.S. Surgeon General's 2000 Blueprint on Breastfeeding states that despite multiple health and economic benefits, breastfeeding rates are too low, especially among non-white infants.

These low rates amount to a public health challenge as breastfeeding is one of the most important contributors to infant health, as well as being a factor in improving maternal health and contributing economic benefits to the family, the health care system and the workplace.

Breastfeeding is considered a primary factor in reducing infant and maternal illnesses and reducing health care costs. It's also a preventive factor in employee absenteeism as employees who breastfeed miss less work due to sick children at home.

The City of Lincoln/Lancaster County can help improve the health of infants and

support the growing number of mothers in the workforce who choose to breastfeed, as well as encourage more working mothers to breastfeed.

This policy is established to provide guidelines reducing barriers to new mothers in the City/County workforce who choose to breastfeed their infants.

POLICY

- ❖ The City of Lincoln/Lancaster County, as an employer, recognizes that working mothers are a vital part of its workforce. It shall be the policy of the City of Lincoln/Lancaster County to support mothers who choose to breastfeed their infants by enabling mothers to express and collect their milk during work hours.
- ❖ It is the goal of the City of Lincoln/Lancaster County to identify proper private space within each building occupied by City/County employees for the purpose of allowing mothers to pump breast milk by the end of 2001. These areas should, at a minimum, provide:
 1. a room with no windows or windows with blinds providing privacy
 2. a lock on the door; and,
 3. an electrical 100v outlet
- ❖ In the absence of a room that can be set aside, a private office with the above minimum requirements that can be scheduled for 15 to 20 minute sessions three times per day, may be used.
- ❖ Mothers who are breastfeeding may use their two 15-minute breaks for pumping breast milk. These employees will not be penalized when the pumping procedure extends slightly beyond their two 15-minute breaks daily. Appropriate break times will be allotted for new mothers that choose to breastfeed.

PROCEDURE

- ❖ Employees who have given birth and returned to the workforce should notify their supervisors that they intend to breastfeed their infant and would like to express their milk during work hours.
- ❖ The supervisor should contact the Personnel Department to identify an appropriate space that has been identified in the building for this purpose.
- ❖ All efforts to flex time for this purpose will be made with the supervisor's approval.

Remember to notify your supervisor of your intent and needs. If you require an advocate or assistance, please call the Lincoln-Lancaster Women's Commission office at 441-7716.

For more information and resources, contact:

- BryanLGH
Medical Center - 481-3328*
- La Leche League - 441-9509*
- Lincoln-Lancaster County
Health Department - 441- 8065*
- MilkWorks - 423-6402*
- St. Elizabeth Regional
Medical Center - 486-7471*
- WIC
441-6200 or 441-8655*

NOTIFICATION TO UTILIZE THE Breastfeeding Policy

Date _____

Supervisor _____

Department _____

RE: Activating the Breastfeeding Policy

Notification is hereby given to my direct supervisor and the Personnel Department that I intend to exercise my rights under the City/County Breastfeeding Policy for new mothers.

Having recently returned to work from a medical absence to give birth to my child, I am breastfeeding and I will require daily accommodations during working hours to express breast milk in a private location.



EMPLOYEE _____

DEPARTMENT _____

DATE _____



Remember to notify your supervisor of your intent and needs.

If you require an advocate or assistance, please call the Lincoln-Lancaster Women's Commission office at 402 / 441-7716