

JOURNAL OF COMMISSION WORK SESSION
November 15, 2011

City Commission Work Session

Mayor Winters presiding

CALL TO ORDER: 5:30 p.m.

ROLL CALL: City Commissioners present: Michael J. Winters, Bill Bronson, Fred Burow, Mary Jolley, and Robert Jones. Also present were the City Manager; Deputy City Manager; Directors of Fiscal Services, Planning and Community Development, and Public Works; Police Captain Dave Bowen; and the Administrative Secretary.

1. MUNICIPAL BUILDING ENERGY AUDIT REPORT (O.F. 1621)

Marrison-Maierle, Inc. Mechanical Engineer Brad Kastelitz presented a PowerPoint presentation overview of the City of Great Falls Municipal Building Energy Audits. In June of 2009 the City of Great Falls applied for and received grant money to conduct energy audits on City-owned buildings to identify areas that would increase energy efficiency, reduce energy consumption, and reduce energy costs through efficiency improvements. The locations for the audits included the Civic Center, the Library, the Police Station, Fire Station #1, Fire Station #2, and the Central Garage/Shop.

Mr. Kastelitz explained the process included a historical plan review; site walkthrough, evaluation, and assessment; utility bill analysis; creating an energy model; identifying conservation measures; and providing a report.

The Library currently uses an annual average (2008-2010) of \$28,000 for electricity and natural gas, with an energy use index of approximately 83.8 per square foot per year, as compared to an average of 151.82. Mr. Kastelitz suggested energy conservation measures (ECM) with paybacks between 15-20 years. Recommendations included adding a variable frequency drive to the existing multi-zone air handler's supply fans; adding demand controlled ventilation; and replacing the existing boiler. He also recommended decommissioning the under slab ductwork that was rusty, moldy, and full of water and installing new ductwork in the basement.

Fire Station #2 uses approximately \$6,500 in electricity and natural gas for a year. The energy use index was 135, as compared to an average of 101. None of the savings opportunities represented a great payback. Mr. Kastelitz suggested replacing the split system in the Dorm Area and implementing the lighting control.

Annual energy usage for the Central Garage/Shop is approximately \$34,300. The energy use index was 223, as compared to an average of 185. Mr. Kastelitz reviewed energy conservation measures, recommending adding waste oil unit heaters that would provide a payback in four and a half years. Commissioner Jolley questioned how the heaters exhaust. Mr. Kastelitz responded the heaters exhaust outside the building. Additional recommendations included lighting control and replacing the existing unit heaters with energy efficient models.

Energy usage for the Civic Center is approximately \$4,000 per month. The energy use index was 78, as compared to an average of 135. Mr. Kastelitz suggested savings opportunities that included a recommendation to insulate all the steam piping and fix dysfunctional Pneumatic Steam Valves. There are areas of the building that must either have the windows open in the winter because of so much heat off the pipes or running cooling to compensate. Commissioner Burow questioned if the problem would be eliminated if the piping was insulated. Mr. Kastelitz responded that is correct. An additional recommendation was replacing Pneumatic Controls with direct digital controls.

Mayor Winters questioned the shelf life of recommendations, particularly those with a 50 year payback. Mr. Kastelitz responded those savings opportunities are not recommended. He reported all savings opportunities that were investigated.

Mr. Kastelitz reported there are multiple areas in the Civic Center without mechanical ventilation. He also recommended decommissioning or repairing the evaporative coolers in the Convention Center.

City Manager Greg Doyon questioned the life and efficiency of the current boiler. Mr. Kastelitz responded that though the boiler is old, there is life remaining. The burner was reported to be operating at a very good 85% efficiency during the walk-through. He added that it would not make sense to change the boiler unless the overall system was replaced.

Fire Station #1 uses approximately \$12,000 of energy a year. The energy use index was 102, as compared to an average of 101. He reviewed energy conservation measures, and recommended lighting controls occupancy sensors and maintenance of ventilation systems.

The Police Station uses \$23,600 in energy a year. The energy use index was 109 compared to a 104 average. Mr. Kastelitz recommended demand controlled ventilation on the existing air handler; envelope improvements, replacing concrete masonry unit (CMU) walls with insulated wood framed walls, and sealing cracks; abandoning the existing system and installing natural gas furnaces, unit heaters, and packaged rooftop units; installing VFD's on the air handling unit; and lighting control occupancy sensors. He believes the CMU walls are a hazard because they move when pushed against.

Commissioner Jones questioned which walls move when pushed. Mr. Kastelitz responded the CMU block walls that infill windows are located around the building. Many of them have cracks to the outside and should be sealed and secured.

Mr. Kastelitz reviewed energy conservation practices including sealing the building envelope, conserving water, and computer equipment practices.

Mr. Kastelitz provided a brief PowerPoint presentation on performance contracting by Brian Solan, P.E., of Ameresco to assist in implementing energy efficiencies.

Mr. Doyon stated the information will be provided for the budgeting process next year for capital planning for City facilities. He added that it does make sense to have someone who specializes in the process monitor that long-term investment. If there is interest from the Commission, a request would be made for a direct presentation based on the recommendations from the energy audit report. He added there are short-term recommendations that departments can implement.

ADJOURN

There being no further discussion, Mayor Winters adjourned the work session of November 15, 2011, at 6:17 p.m.