HVAC Project Activity

The Nebraska State Capitol Heating, Ventilation and Air Conditioning Replacement Project is continuing to move forward. Consultants spent the spring finalizing plans and the Office of the Capitol Commission prequalified contractors. The project was opened to bidding and the apparent low bidder is Sampson Construction. Once the Phase I contract is signed, offices will be moved and construction will begin.

Key to the energy savings associated with the project is the geothermal wellfield. The wellfield is part of the closed loop system which will provide the base load heating and cooling for the Capitol system. Test wells were drilled at two different locations on the wellfield site during March. With the information gathered from these two wells, consultants were able to provide a general view of underground conditions at the site. Conditions such as depth to water and the nature of the water, fresh or saline, will have bearing on the well field design, as will the layers of the underground rock strata, limestone or sandstone, and depth of each layer. Using the data from the test wells, consultants determined there will need to be 225 wells drilled 670 feet deep to handle the Capitol load.

Above: Test wells drilled on the wellfield site in March allowed engineers to study the subsoil structure and plan for the most efficient configuration of the geothermal wells.
The dedication and skill of the Office of the Capitol Commission’s Maintenance staff is the reason the 1960’s era heating and cooling system in the Nebraska State Capitol is still functioning. The failing system is getting harder to repair with parts impossible to find or too expensive. Thankfully, the first phase of the replacement project will begin soon. Since switching over to chilled water this spring two induction units have leaked and four pumps have been repaired. Who knows what the cooling season ahead will present to staff.

Already Maintenance Specialist Zac Hanna, the team’s newest member, had his mechanical skills tested rebuilding his first pump, and during a recent induction unit failure, the leaking pipe within the coils was determined to be irreparable. Plumber Jeff Gillett and Shop Supervisor Michael Jordan were able to find a functional unit in a stockpile of old units salvaged from a tower renovation project. Together they installed the replacement unit. It is teamwork and a dwindling supply of old equipment that has enabled staff to keep the system functioning well past its lifespan.

During the next eight years of the HVAC Replacement Project, staff will work with contractors during demolition phases to salvage functioning parts and replenish their stockpiles. As the project progresses and the new system is installed in each quadrant, the remaining equipment will continue to need repairs. Staff will retain the best of the removed units and thermostats until the entire system is replaced. At that point, their HVAC related work will change from repairs to preventative maintenance, changing filters, and monitoring the system to keep it operating efficiently.

Zac Hanna, a native of Pawnee City, was hired in January as a Facility Maintenance Specialist. Working to support OCC’s plumber, electrician and HVAC specialist, Zac uses his years of experience in the mechanical trades in all aspects of Capitol maintenance.

Noelle Pinneo joined the OCC team in February. A native of Lincoln, she grew up near the Capitol and enjoys old buildings. Travel in Europe introduced her to great cathedrals, so working in the Capitol is a natural fit for her. As Administrative Assistant, Noelle supports staff in OCC’s mission; she is Clerk to the Nebraska Capitol Commission.
Preparations for the HVAC project and the eventual move of every office in the Nebraska State Capitol are enabling Office of the Capitol Commission staff to restore an area of the building modified during the 1960’s back to its original configuration. This first of many restoration projects involved the return of a door to its original location. The door had been removed, modified and reinstalled a few feet away. Modifications included removing and replacing hinges and locks, changing door trim, door closing hardware and thresholds. The move from one location in a small corridor to another involved the creation of a false wall and door casing which damaged the original linoleum floor.

After disassembling the two doorways staff repaired the damage and returned the corridor and doorway to its original configuration. While Cabinet Maker Mike Marshall repaired the door and door casing in the shop, Mason Dan Kratky went to work reinstalling the door closer and threshold. He then removed glued down carpet and repaired the linoleum floor. Linoleum is a far more durable surface for a corridor than the carpet installed to cover the floor damage caused by the 1960’s project.

Above left, after carpentry staff removed the improperly located door, OCC mason Dan Kratky began work preparing for the reinstallation of the door and restoring the corridor floor to its original condition. Above right, the door and floor restored.

Above, most doors in the Capitol operate with a hydraulic door closer to prevent slamming. During his floor work Kratky uncovered the original door closer location which had been filled with mortar and covered with carpet, and reused the original hole.

Above right, changing the location and operation of the door required the addition of hinges. Installing hinges in the original door was very crudely done. Carpentry staff filled in the hole during the restoration of the door.

Above, after installing the door closer and adding concrete to hold it in place, fill voids, and level the floor, Kratky sets the slate threshold. The linoleum will be cleaned of glue, foreground, and repaired. Right, OCC keeps a stock of the Battleship Linoleum, some removed from service due to changes in adaptive use space. These pieces are then used to repair damage in other locations where the durable material is still functional.
Caring for the Collection

Proper storage of the Nebraska Capitol Collections is key to the long term preservation and restoration work of the Office of the Capitol Commission. After years of research, planning and fabrication, the textile storage vault is complete. Retired Capitol original rugs, removed from service and stored wherever there was space, now have a permanent and secure home. During the HVAC Replacement Project rugs which are still in service will be removed from preservation space to prevent damage during the project and stored in the vault. Later when they are permanently retired they will return to the rug storage vault once again.

Like the Capitol Archive, the textile vault meets standards for proper museum quality storage. The floors and walls are painted with low-VOC paint, the overhead pipes in the space are encased to prevent leaking and temperature and humidity will be monitored. Rugs will be placed on racks specially designed for the purpose.

Above, one rug has been placed in temporary storage in the newly completed space. This rug rests on saw horses and a small metal pipe, the previous method of storage, which put stress on the rug. Right, each support frame is bolted to the floor and ceiling for stability. The rugs to be stored may weigh up to 1000 pounds. For ease of placement and access, preservation architects devised a special trolley system to raise and lower the bar joists into place on the brackets.

Below center, the rugs will be rolled on large PVC pipes which will more uniformly bear the weight of the rug and minimize stretching. Left and right, the tubes will be placed on bar joists fitted with curved brackets to support and stabilize the weight as the rugs are handled. As used during Capitol construction to move the heavy marble columns, a chain hoist and simple physics will help move the heavy rugs up and into place.
Behind the Scenes

Corridor lights

When visitors and staff walk through the first floor corridors of the Nebraska State Capitol they may not realize there’s anything hidden behind the ceiling above. During the 1960’s heating system upgrade and the addition of cooling, ducts and pipes were installed to carry cooled air into parts of the Capitol not easily accessible. On ground floor the placement of duct work involved lowering corridor ceilings to cover the HVAC system. A suspended lay-in ceiling was installed for ease of access. Existing light fixtures were reused in the new ceiling, but modified by shortening the chains to hang at the same level as before. Once removed, the original chain links were discarded.

The current HVAC Upgrade Project will not retain the existing duct system. The project will restore the corridors to their original height allowing the clerestory windows to be fully exposed and the hanging lights returned to their original location and appearance. As they are removed for ceiling demolition, the fixtures will be cleaned, rewired and re-fitted with longer chains. Once the current HVAC project is completed the first floor corridors will be transformed back to original appearance.

Right, maintenance staff prepare to install a restored lamp in the south center corridor. Below, Tahir Karimi and Zac Hanna work together to secure the lamp using the new decorative acorn cap-nuts patinated to match the restored finish.

Above, new cap-nuts were ordered to replace steel hex-nuts used to secure the modified lamps to the ceiling. Right, machinist John MacKichan makes a basket to hold the hardware in a solution he used to patinate the cap-nuts with a bronze finish.

Left, reproduced lamp chain with the decorative finial awaits the start of the HVAC Project. The new longer chains will be installed on the existing lamps, right, restoring them to their original design.
Every detail in the Nebraska State Capitol contributes to the magnificence of the building. The dramatic black and white figures and symbols Hildreth Meiere created for the floor are among the most recognized and remembered aspects of the Capitol. Few visitors or staff consider the importance of the more subtle rugs chosen for the floors of preservation spaces in the building. These usually unnoticed furnishings contribute to the comfort and function of the rooms they occupy while enhancing the appearance of the space. During construction, the Nebraska Capitol Commission invested in very high quality custom wool rugs. Maintaining these rugs in service and in storage once they are retired due to wear is an important part of the preservation program of the Office of the Capitol Commission. Having these original rugs to use as guides for replication means the furnished interiors can be restored to their original appearance and beauty. Unfortunately, prior to the creation of the Capitol Archive some of the rugs were lost, and are now visible only in photographs, making replication very difficult.

Using a vault near the Archive, OCC created a special climate stabilized storage area for the Capitol’s original textiles. Special storage racks were fabricated and installed to hold the rugs, some up to 50 feet long and 30 feet wide. This special storage will allow Capitol Preservation Architects easier access to the original rugs as they work to match color and pattern in the replication process. Replication and reinstallation of rugs specially designed to enhance the chambers they occupy furthers the mission of preserving Bertram G. Goodhue’s architectural masterpiece for future generations of Nebraskans.

When the original carpet and runners in the West Chamber needed replacing, the decision was made to use commercially available carpet. Left, the red and gold patterned carpet visually competed with the room’s furnishings and did not enhance the appearance of the room.

An early black and white photograph, above, of the Supreme Court shows the original carpet in place. The photograph provides very limited information for preservation architects to use in replicating the carpet.

During the 1994-95 restoration of the Warner Legislative Chamber, OCC preservation architects were able to use the original carpet still in service left, to create replacement runners, right, for the areas under the balconies.

Above, using a runner preserved in storage, staff replicated the original carpet. The restored carpet contributes to the overall color scheme of the room and creates a dignified environment for the state’s lawmakers to conduct business.
CAPITOL EVENTS

CORNHUSKER GIRLS STATE
June 7, 2018
The American Legion Auxiliary sponsored inauguration of Girls State leaders in the second floor rotunda at 2:00 p.m.

CORNHUSKER BOYS STATE
June 8, 2018
The American Legion sponsors Boys State visits to the Capitol and state government offices, beginning in the second floor rotunda at 1:00 p.m.

GIRL AWARDS CEREMONY
June 9, 2018
The Girl Scouts Spirit of Nebraska Homestead Service Center sponsored awards ceremony in the second floor rotunda at 2:00 p.m.

MARI SANDOZ CELEBRATION DISPLAY
June 11-18, 2018
The Mari Sandoz Heritage Society display will include information on Sandoz’s ties to the Capitol and surrounding neighborhood.

ELDER ABUSE AWARENESS LIGHTING
June 15, 2018
The Capitol will be lit purple in the evening for World Elder Abuse Awareness Day.

INDEPENDENCE DAY
July 4, 2018
The Capitol will be open for tours from 10:00 a.m. to 5:00 p.m.

HUNGER AWARENESS LIGHTING
August 31, 2018
The Capitol will be lit orange to recognize September as National Hunger Awareness Month.

LABOR DAY
September 3, 2018
The Capitol will be open for tours from 10:00 a.m. to 5:00 p.m.

HISPANIC HERITAGE MONTH DISPLAY
September 17-28, 2017
The Nebraska Latino-American Commission will sponsor a display featuring Hispanic Heritage in Nebraska in the first floor rotunda.

BAR INDUCTION
September 27, 2018
The Nebraska Supreme Court will hold a swearing-in ceremony for newly admitted members of the Nebraska Bar Association at 10:00 a.m. in the second floor rotunda.

COLUMBUS DAY
October 8, 2018
The Capitol will be open for tours from 10:00 a.m. to 5:00 p.m.

SWEARING IN CEREMONY
October 10, 2018
The Administrative Offices of Probation will swear in new probation officers in the second floor rotunda at 1:30 p.m.

STATE PATROL GRADUATION
October 26, 2018
The Nebraska State Patrol will celebrate the graduation of Camp 59 in the second floor rotunda at 10:00 a.m.

DAY OF THE DEAD DISPLAY
October 29November 5, 2017
The Nebraska Latino-American Commission will sponsor a display in the first floor rotunda.

licensing recognition ceremony
November 2, 2018
The Nebraska Board of Engineers and Architects will recognize architects and engineers licensed in Nebraska during the past year in the second floor rotunda at 3:00 p.m.

veterans day holiday
November 12, 2018
The Capitol will be open for tours from 10:00 a.m. to 5:00 p.m.

GUIDED TOURS are offered Monday-Friday hourly from 9:00 am to 5:00 p.m., except at noon. Saturday and Holidays from 10:00 a.m. to 5:00 p.m., except at noon and Sunday from 10:00 a.m. to 4:00 p.m. Please call 402.471.0448 or visit www.capitol.org for more information.
2018 OCC Ornament Features Sower

The Office of the Capitol Commission continues its series of holiday ornaments based on Capitol decoration and artistic detail with *The Sower* by Lee Lawrie. *The Sower* is one of the most recognizable icons on the Capitol and was used on the 2017 Sesquicentennial license plate. The 19' tall figure, hand broadcasting seeds, represents the state’s agricultural heritage and emphasizes the chief purpose of men in forming societies is to sow for nobler modes of living. To purchase this year’s ornament, or previous year’s ornaments, please contact the Landmark Store at 402-471-2062. For more information about the products carried by the Nebraska State Historical Society’s Landmark Store at the Capitol, please visit www.history.nebraska.gov/. Proceeds from the sale of this ornament provides an additional source of funding for the preservation and restoration of the Nebraska State Capitol.