

The Saskatchewan Legislative Building Rehabilitation Project

by Greg Indzeoski

The Saskatchewan Legislative Building is presently undergoing an emergency rehabilitation project with a primary objective of stabilizing the building's foundation. The rehabilitation project will not only correct structural deficiencies of the building caused by shifting, but will ensure the safety of those visiting and working in Saskatchewan's most prestigious historical building. This article looks at the Rehabilitation Project.

The Saskatchewan Legislative Building is one of the province's most important historical buildings. Constructed at the turn of the 19th century, the building was, and still is today, a sign of the spirit and determination of the people of Saskatchewan.

Over the past 87 years, the building has served not only as the centrepiece for government, but also as a vital link, through tourism and education, to Saskatchewan's heritage. Each year, over 50,000 visitors come to see the Legislative Building and are left in awe of its magnificence.

But time has taken its toll on the Saskatchewan Legislative Building. Piles installed in 1908 to support the 167 metre long structure are considered to be undersized by today's standards. Building modifications over the years coupled with changing soil conditions has placed a strain on the original pile foundation. As a result, the building has shifted, in some instances causing Tyndall stone fragments—some the size of dinner plates—to break away from the building. Numerous cracks have also appeared on the Tyndall stone exterior and on a number of the marble columns which grace the building's spacious rotunda.



For that reason, a four-year commitment has been made by the Province of Saskatchewan to stabilize the building's foundation and ensure the safety of those visiting and working in the Legislative Building. The Saskatchewan Legislative Building Rehabilitation Project will not only stabilize the building's sinking foundation, but will also provide an opportunity to upgrade fire code

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and accessibility standards and ensure the building remains a vital part of the province's future.

The Early Years

It was 1905, and the birth of Saskatchewan as a province, when the Premier at the time, Walter Scott, proposed the idea of a home for the assembly and all public service departments. Prior to the construction of the Saskatchewan Legislative and Executive Buildings, the Assembly sat in the old Northwest Territorial Government Building located in Regina.

The province purchased a 168-acre site south of the Regina business community as the new home for the Legislature. Seven leading architectural firms were part of a competition to choose a firm for the project. Included in those, were firms from the United States, Great Britain, and Canada.

The project was awarded to the firm of E & W.S. Maxwell of Montreal, who drew up the plans. The construction work was then carried out by Peter Lyall & Sons of Montreal.

The design called on the firms to take into account a number of factors, including the call for a dominating feature such as a dome or tower to act as a landmark. It was originally proposed the building be clad in red brick and pale bluff stone, however the building was ultimately faced with Tyndall limestone supplied by quarries in Manitoba.

In the fall of 1908, the initial driving of the concrete piles began. On October 4, 1909, the Governor General of Canada, Earl Grey, officially laid the cornerstone at a gala ceremony. By the end of 1910, the bulk of the interior work was complete to the point where government offices could move in. In January 1912, the province's Legislative Assembly met for the first time in the newly constructed chamber.

Thirty-four different types of marble, some from as far away as the Island of Cyprus, add to the magnificence of the building's interior. Ornate plaster work graces the legislative building's hallways while finely crafted woodwork is a predominant feature of the Legislative Assembly.

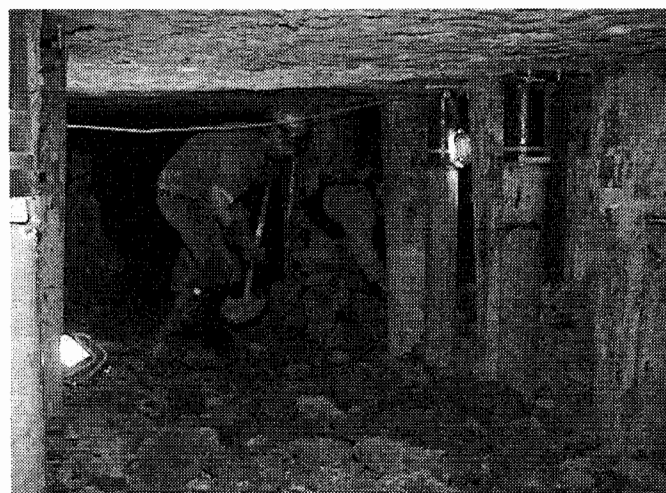
In 1912, a cyclone devastated many parts of Regina. Fortunately, the storm caused only minor damage to the Legislative Building and repairs were complete in time for the official opening on October 12, 1912. His Royal Highness, The Duke of Connaught, dedicated the building at an extravagant opening ceremony complete with fireworks, flag waving, and beautiful decorations along city streets. The grandeur of the building immediately caught the attention of not only all of Saskatchewan, but of all of Canada.

Because of the significance of this historic building, it has been diligently maintained over the decades. Ground floor renovations and mechanical work was completed in the 1960's and 1970's. However, constant monitoring of the building by engineering consultants has found the foundation under the Dome, North, South and East Wings is shifting and causing the structure to sink into the earth below. The building's West Wing was stabilized in 1983, but the current rehabilitation project marks the most significant restoration of the building to date.

Rehabilitation Project

In March 1997, the government of Saskatchewan announced the rehabilitation project. Stabilizing the building's foundation, along with initial design work to ensure the success of this project, comprise phase 1 of the rehabilitation project. It is during this phase that approximately 1,800 pre-cast concrete piles will be installed under the building using a process known as underpinning.

The underpinning phase involves the greatest amount of work of the entire four-year restoration project. To install the nearly 1,800 piles, construction crews have had to gain access directly below the building. Utilizing an access ramp located on the building's south side, construction crews will need to excavate approximately 10,000 metres of earth from under the Dome, North, South and East Wings. This will be accomplished using small bobcats to do a majority of the digging. Jackhammers have also been used to break away concrete that



Workers under the building

formed the base of the previous one metre high crawl space. Enough earth has now been dug on the building's East Wing to provide for a three metre high work area the length of the building and supply sufficient space to install the new piles. This will also form the new three metre high crawl space which will make it easier to work on the mechanical systems that are attached to the bottom of the building's concrete floor.

The excavation is proceeding in stages. As crews excavate the earth exposing the old piles, new piles are installed and the process continues.

The pre-cast concrete piles are fabricated in one-metre segments and are hydraulically jacked into the earth below using the underside of the building as a reaction point. Additional pile segments are then added on to the lowered section and the jacking continues until the sufficient number of pile sections required to meet strict specifications have been met. Piles are installed to a minimum depth of 10 metres. To give a better idea of how many piles are necessary, if you were to take all pile segments and place them on top of one another, it would stretch 25 kilometres.

Existing piles may have to be removed to make way for new piles or may simply remain in place. Engineering consultants will also determine whether to raise or lower sections of the building to correct the shifting that has occurred. If carried out, this will be done using hydraulic jacks that have been strategically placed according to design specifications, on various piles.

While underground, work will also be done on the existing heating, electrical and ventilation systems that run under the building.

Phase II and the Master Plan

The rehabilitation project also presents an opportunity to upgrade accessibility and fire code standards in the building. This phase of the project is currently in design mode, but will include upgraded accessibility to those with mobility impairments and the installation of a fire sprinkler system.

The current rehabilitation project will also include the development of a master plan. This will document all physical, operational and code-related building deficiencies. The plan will then establish a sense of order to these deficiencies so they can be addressed in a logical and meaningful way. The plan will establish conservation based guidelines for continued rehabilitation of the building that are consistent with the heritage characteristics of the building.

Heritage Approach

The provincial arm of government overseeing the project, Saskatchewan Property Management Corporation, has been working very closely with the Heritage Office of Saskatchewan Municipal Affairs, Culture and Housing, to ensure all heritage aspects are followed in all phases of construction. All changes will comply with the requirements of *The Heritage Property Act* as they apply to provincially designated properties.

The Saskatchewan Legislative Building remains open to the public and to those who work there during the course of the four-year project. Current and future sittings of the Legislative Assembly will not be affected by the underpinning project.

As the Rehabilitation Project proceeds, regular updates including photographs and a virtual tour under the building will appear on an Internet site whose address is: <http://www.legrehab.gov.sk.ca>.