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Ground Broken for Bruce Power's Fire Training Facility

NA Engineering Associates Inc. is prime consultant for highly-specialized facility.

In October, ground was broken for the construction of the new Fire Training Facility at Bruce Power in Tiverton, Ontario (see photo above). When completed, this facility will be utilized by Bruce Power's Emergency Response Team to conduct both indoor and outdoor live fire training, self-rescue training, and physical-assessment activities and drills.

The Fire Training Facility will incorporate live-fire props, used to approximate anticipated fire situations. The facility will also include various building systems to support these environments.

NA Engineering Associates Inc. was engaged as the prime consultant to undertake the design of the new Fire Training Facility by Bruce Power. Our firm completed the design work for structural, mechanical, electrical, and civil disciplines on the project -- and also led a team of specialist sub-consultants.

The Facility was designed to address the unique demands of fire training exercises, able to effectively withstand and remove the heat, flame, smoke and water from repeated training sessions.

During the construction phase, NA Engineering Associates Inc. has been providing a daily site presence to perform coordination and quality assurance tasks, ensuring that this facility is constructed in accordance with the design intent.

The Fire Training Facility is being constructed by Alberici Constructors Ltd, and is scheduled for completion in December of 2014.

NA Geomatics Inc. Celebrates Third Anniversary

A recent addition to the NA Group of Companies celebrates the third anniversary of its inception.

In 2010, NA Geomatics Inc. (Ontario Land Surveyors) was formed to complement the NA Group of Companies. The company celebrated the third anniversary of its inception this fall.

The professional "marriage" of Engineers and Surveyors is not a new idea. In the late 1800's and early 1900's it was not uncommon for an individual to hold a degree in Architecture, Engineering AND Surveying.

Land Surveying has been an indispensable part in the development of human civilization since the beginning of recorded history and it is needed in the planning and execution of almost every form of construction.

In Ontario, when the majority of the Townships were laid out in the early 1800's, the work was very physical involving a crew of 12 to 14 men who slugged through forest, swamp and uninhabited areas using such equipment as "chains" (66 feet in length).

Today, land surveying often involves just one person with a robotic total station or GPS equipment, the data from which is collected to an accuracy of a few millimeters.

NA Geomatics Inc. offers services in cadastral (legal), engineering and topographical surveying, retracement of property boundaries, reference plans for easements, severances and route surveys, surveyor's real property reports, draft and final plans of subdivisions or condominium applications, land use planning and development plans and applications, as well as applications under the Boundaries Act and complex title issue.

Peter G. Moreton O.L.S., O.L.I.P., C.L.S., is the manager of NA Geomatics Inc, and has been in private practice for some 28 years, most recently as Assistant Examiner of Surveys with the Ministry of Government Services in the Policy and Regulatory Services Branch.

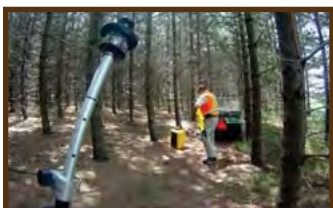
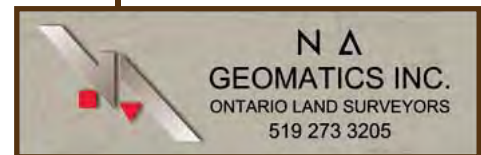
Visit <http://geomatics.naeng.com/> for more information!



Historical Surveyor Bush Camp



Surveyor's chain





The Stratford-Perth Archives Facility

NA Engineering Associates Inc. recently worked in close coordination with the County of Perth, developing detailed Design Requirements for their new Stratford-Perth Archives Facility. The requirements included mechanical, electrical, structural, civil, and architectural disciplines.

Close interaction with the County archivist (and County personnel) resulted in design requirements that will service the ever growing Perth archives collection. State-of-the-art archives storage (including very specific electrical and mechanical systems for humidity controls and protection) were designed as part of the project.

The new facility will include: a preservation laboratory, a digitization laboratory, contaminated collection rooms, an exhibition gallery area and ancillary service spaces. The new Stratford Perth Archives Facility will serve the community for many years into the future.

The Hamilton-Wentworth Detention Centre Mechanical & Electrical Condition Assessment

The Hamilton-Wentworth Detention Centre is a secure detention facility, operated by the Ministry of Community Safety and Correctional Services. It is comprised of a six-storey building, a service garage, and an outdoor area enclosed by a twenty-foot high wall. Our firm was retained to perform a condition assessment of the facility's existing HVAC equipment and controls, as well as the existing power systems. Site inspections were conducted and a comprehensive analysis of equipment was completed.

The existing mechanical HVAC equipment was investigated and preliminary heat load calculations were performed. Several items of mechanical equipment were identified for replacement. In addition, recommendations were made for upgrades to the mechanical controls system and to improve energy-efficiency.

An analysis of the electrical system from the main substation to the distribution panels (including short circuit and power quality analyses) was conducted. While the normal and emergency power distribution were found to be adequate for the needs of the building, the age and reliability of the existing electrical distribution equipment left the facility vulnerable to potential safety hazards in the event of equipment failure. Recommendations were made for upgrades to the existing equipment as well as the emergency generator.

Reports describing these findings were prepared, which proposed several options for consideration to correct the issues identified. The reports are complete with construction phasing, budget estimates and 10-year plans.



A Canadian Landmark Gets A New Roof

The Douglas Point Reactor Building was the first commercial-scale CANDU (Canada Deuterium Uranium) reactor. The plant first generated electricity in January of 1967 and it operated commercially between 1968 and 1984.

The Douglas Point Power Plant (including the Reactor Building) was "retired" on May 5, 1984. The entire plant is now referred to as the Douglas Point Waste Management Facility, and is currently in a planned shutdown state for the next 50 to 100 years. The site is owned and managed by Atomic Energy of Canada Ltd (AECL).

The Reactor Building itself remains one of the most readily identifiable structures behind the fence-line at Bruce Power. The building can be immediately recognized by both its height and its distinct dome roof.

NAE was retained in early 2013 to prepare the Technical Scope of Work for the dome roof replacement and railing / structural upgrades for this historic facility. We also conducted engineering assessments, oversaw the load testing of a number of fall arrest elements and assisted AECL during the tendering phase.

NAE provided daily site inspections during the construction phase, which involved a substantial scaffold, and a unique spray foam roofing system.



NA Engineering Associates Inc. Provides Exterior Upgrades for a Provincial Building

The Province of Ontario operates a number of buildings located at the intersection of Highway 402 and Christina St. in Sarnia. A provincial courthouse, registry office, and a couple of Ministry of Correctional Services building are all located on this site.

A small administrative building in the complex had been clad with an exterior insulated finish system (EIFS) applied with a rather distinctive finish. The windows were in poor condition and needed to be replaced.

NA Engineering Associates Inc. were retained to prepare specifications and tender documents to replace the windows, repair damaged/deteriorated areas of the EIFS system and redo the EIFS system in the area of the windows.

The construction work is just finishing up! The final result is a fresh updated look to the building with brand new windows.

Site Review for Rambri Management in Stratford

Rambri Management Inc. is the developer for a cluster of commercial and industrial buildings at the intersection of Erie Street and Lorne Avenue in Stratford, Ontario. Their latest development includes a group of five building sites (with two tenancies established prior to the start of the construction).

NA Engineering Associates Inc. was retained by the owner to perform a review of the site, offer alternatives for development scenarios and storm water management proposals.

Challenging conditions on this site required the development of several iterations of phased stormwater retention areas that met with the municipality's design criteria, and that suited the phased approach to the development of the site.

In addition to storm sewer servicing, sanitary sewers, water distribution, and site electrical distribution were designed and implemented to suit each tenant's requirements.

After the Midas Muffler franchise tenancy was secured for the front middle building, NA Engineering Associates Inc. was engaged to re-design the prototype Midas building for the Canadian climate (and construction techniques). Mechanical, Electrical and Structural systems were all modified to meet the needs of the tenants and satisfy the requirements of Midas corporate and budget constraints.

A pitched-roof Midas prototype was chosen to provide a softer urban landscape. Major modifications to the building included removing bays to suit the site and client requirements. Other modifications included changing the construction from block to masonry veneer wood frame, upgrading of mechanical and electrical systems, installation of new plumbing and electronic sign boards and rearranging the interior spaces to better suit the needs of the tenant. Field review was completed to satisfy OBC requirements.



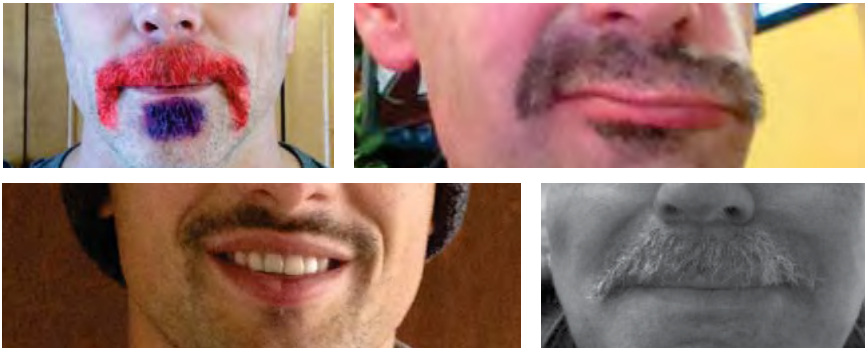
*Proudly celebrating twenty
years in business*

SAVE THE DATE

In June of 2014 NA Engineering Associates Inc. Celebrates 20 years in business. Watch for the celebration event information in our next newsletter.

NA Engineering Associates Inc. Supports Our Communities' Annual Christmas Food Drive

Each year, NAE's three offices participate in our firm's annual food drive, with staff members donating both food and cash donations for local food banks in Stratford, London, and Kincardine. The donations are all matched by NA Engineering Associates Inc. Thanks to all our staff for their generous donations.



Movember returns!

For the third-year running, NA Engineering Associates Inc. participated in Movember -- an event designed to raise funds (and awareness) in support of men's health issues. A large number of staff participated by growing their moustaches, donating money, and furthering the awareness component of the effort by distributing health advocacy information.

Movember (as an international organization and charity) primarily addresses issues related to prostate cancer, testicular cancer, and men's mental health. Every November, they seek "to have an everlasting impact on men's health."

Our staff always enjoys participation in Movember, and has enjoyed great success raising-money over the past few years. This year raised the most money so far, having raised almost \$5,000 by the final week of November. Thanks to everybody who donated!



NAE Staff Go Colour Running In Summer, Sponsor A Run in the Fall

In late summer, staff members from each of NA Engineering Associates Inc's offices trekked to London to participate in the Colour Run -- a 5km fun-run at the Western Fairgrounds.

As the team completed each kilometer of the race, they were blasted with varying colors of paint dust (and crossed the finish-line looking like a bag of Skittles). Each member of the team had a great run, with several people setting personal-best times for 5km.

Colour-runners from our firm included: Tristan Harwood, Brittany Wilson, Cheryl Young, Simon Culliton, and Jake Nicholson. Thanks to Tristan for organizing NAE's participation in the event.

In September, we were the corporate sponsor for the Rotary Club of Kincardine's 5.5km Beachside Run. The event was a complete success, with some of our firm acting as race volunteers.

