

## **CHES AWARD OF EXCELLENCE**



**CHES Canadian Healthcare Engineering Society**

**Emergency Room Redevelopment Project  
Norfolk General Hospital  
365 West Street  
Simcoe, Ontario  
N3Y 1T7**

**Date: March 17th 2008**

**Submitted by: CHES Member J.J. Knott,  
Director of Plant Operations  
Norfolk General Hospital**

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Name and Description of Project:

### ER Redevelopment Project

**Start Date: July 2003 – End Date: August 2005**

- ◆ 35,000 square feet of new building space
- ◆ 15,000 square feet of renovations to existing space

Upon completion this project would house a new Emergency Department(9,000) square feet, Diagnostic Imaging Department(10,000) square feet and a new ambulance bay with a decontamination shower facility.



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### Goals of the ER Redevelopment Project

The main goal of this project was to create an expanded emergency department. In doing so this would enhance the process of flow between the Emergency Department and the Diagnostic Imaging Department. It would also create additional clinical space for a diabetes education program and ongoing clinical education programs.

In addition to enhancing the flow between the two departments, space was dedicated to the Human Resources Department- a key area in the recruitment process of the hospital. The health and wellbeing of our patients has always been a fundamental part in the growth and development. Renovations to the cafeteria area included an outdoor green space environment for patients and staff to enjoy.

## COURTYARD CAFÉ GRAND OPENING



Servery



Seating Area

NEW



OLD






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### Strategies – Communication

To ensure the ER Redevelopment Project delivered on the concept of patient process and flow from start to finish, Norfolk General Hospital implemented several important strategies.

Clear communications and a relationship between the building architect and the many user groups of the hospital was key to the successful planning process.

Accountability and trust are key elements in defining Norfolk General Hospital as a community health care leader. We are responsible for delivering a quality built environment on budget.

 **Norfolk General Hospital (NGH)**

**Announcement of Emergency Room Opening and Changes to Access Routes to the Hospital**

The **Phase 2** portion of the Hospital Capital Redevelopment Project is now nearing completion.

**Opening of the new Emergency Room was on January 17th, 2005, at 7:00 a.m.**

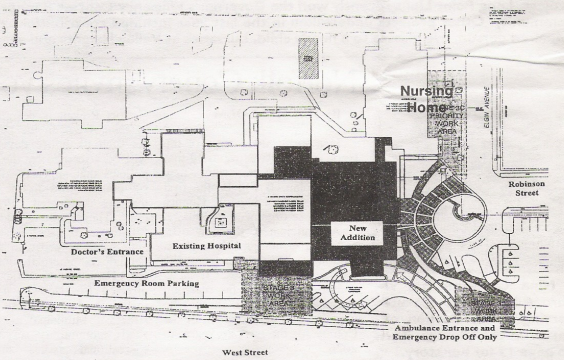
Due to the opening of the new addition, the public is asked to note the following changes to routes of entry into the hospital;

- Visitor and public access to the hospital will be through the new Main Entrance doors off the Robinson Street Parking Lot. Once inside the Hospital, visitors should follow the signed routes for access through the Hospital.
- The new Emergency Room entrance will be situated off of West Street, where a temporary set of stairs will be constructed to facilitate pedestrian access.
- Emergency Room parking will continue to be accommodated along the front lane of the Hospital, with the entrance at the far West end of the lane. Visitors to the Emergency Room will access the Emergency Department off West Street.
- The East end lane entrance will be exclusively for ambulance traffic and emergency case drop off. No public parking will be allowed on this section of laneway as it will serve as an ambulance turning area.


Changes to the existing exterior hoarding, in front of the Emergency Room area, will also be made. These changes will involve the construction of additional hoarding to close off the existing main entrance, to the Hospital, off of West Street. Visitors to the Hospital, coming in from West Street, will access the hospital using the Doctors' Entrance doors.

We regret any inconvenience, due to construction, and thank everyone for their patience during this phase of the project, knowing the improved facilities will justify the disruption.

J.J. Knott,  
Project Manager



**Announcements Announcements Announcements Announcements**

 **Norfolk General Hospital (NGH)**

**Announcement of Temporary Changes Impacting Hospital Access During Construction**

The **Phase 1** portion of the Hospital Capital Redevelopment Project is on schedule and nearing completion.

Construction of the temporary link and underground service connections between the Hospital and the Nursing Home is scheduled for completion over the next two weeks. Once finished, the new link will provide access to the hospital rear entrances, making way for the demolition of the existing link structure between the two buildings.

The Robinson Street parking lot access is complete. The reconstruction of the Hospital access lane along West Street has resulted in the **closing of the east access lane, off West Street**, to the Emergency Room (ER), until completion of the new construction. This leaves only the West access open to this lane. ER parking spaces are currently provided along the Western portion of the lane, as are patient pick-up spaces. Handicapped parking spaces are provided along the lane and handicapped parking permits are being honoured. Visitors and patients can also park in the newly constructed parking area at the West end of the Hospital, off of West Street.

**Phase 2** construction of the Hospital addition is underway and a good percentage of the foundation work is complete. Foundation walls and columns will be poured over the next few weeks, in preparation for the forming and pouring of the First Floor slab, early in the new year.

We regret any inconvenience, due to construction, and thank everyone for their patience during this phase of the project, knowing the improved facilities will justify the disruption.

J.J. Knott,  
Project Manager

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### Strategies– Communication

Peer review contract documents as they were being developed so that every foreseeable detail would be covered in the final contract documents. Thus, precluding expensive change orders and extras throughout the course of the project.

Norfolk General Hospital appointed a construction leadership team of managers and front line staff to help steer the project to a successful conclusion.

## Hospital expansion project on track

**Tiffany Mayer**  
SICMCO REFORMER

Anyone looking to improve their communication skills shouldn't tune into the next episode of Dr. Phil. They can just take their cues from the construction workers at Norfolk General Hospital.

Construction of the new emergency ward at NGH is progressing smoothly thanks to the free-flowing communication between the ranks of the chain of command. "There hasn't been anything holding us back," said Arkola Lukianchuk, superintendent of the construction site.

"Communication between the hospital and the construction crew is key to any construction job if there are problems and there hasn't been any."

Part of the ability to coordinate as many as 50 people on site at one time comes from planning ahead days in advance and knowing what comes next in the building of a two-storey, 35,000-square-foot modern emergency facility.

That's why on Thursday, a \$3-million crane could be seen hovering over the site to erect air ducts and an elevator cage. Early in the day, that feat was happening "like clockwork," said J. J. Knott, NGH project manager, who acknowledged that large projects such as this rarely stay on schedule.

Co-ordination of trades people and the work they do has played the biggest role in keeping things on track for the ward's Nov. 15 completion date, he said.

"That's why they got so far so fast. The trades really work together and communicate."

What started out as a few drawings on paper is now taking definite shape. Stonework at the front of the ward is currently underway. On Tuesday, the concrete for the main floor of the ward was poured. Workers are now marking where walls will be erected, and mechanical and electrical work is underway.

On the second floor, individual rooms have already been carved out by wall frames and a maze of wires and copper piping runs throughout.

The concrete for a bi-level link between the hospital and the Norfolk Hospital Nursing Home will be poured next week.

SEE HOSPITAL/PAGE 2



TIFFANY MAYER / STAFF

**Construction of the new emergency ward at Norfolk General Hospital is right on schedule. On Thursday, a crane was on site to erect air ducts and an elevator cage in the two-storey facility that will add 35,000 square feet to the hospital.**

Team meetings were scheduled on a bi-weekly basis in anticipation of various challenges. Issues were resolved before they developed. This greatly enhanced the flow of the project and eliminated additional concerns for the contractor and architect.

### Environment

Environmental impact has always been a concern for Norfolk General Hospital. The ER Redevelopment Project would be designed as an energy efficient infrastructure through the use of state of the art lighting and mechanical technology. Norfolk General Hospital was one of the first hospitals to utilize new CSA standards on Infection Control procedures for hospital construction. CSA standards were implemented into the specifications of the project.

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### Strategies - Design

Norfolk General Hospital wanted to create a building that enhanced and reflected the many qualities of Norfolk County. In doing so, we would imbed historical material into the foundation of this project highlighting some of the vast and rich resources from the area.



For example the stone finish, representing the huge economic impact of the rock quarries. The significant amount of wood finish to symbolize Norfolk County as being the Forestry Capital of Canada 2008; Cedar slating would exemplify the area's tobacco industry which played an important role in the early development of Norfolk County's history.

### Strategies - Design

To make the new addition warm and welcoming to patients, staff and visitors the project was built with a lot of curb appeal to blend into our natural surroundings. As a community rooted in family tradition, the entrance was given a front porch look, a symbol of a warm welcoming home. The overhanging roof lines are built in an architectural form that represents outreached hands, a symbol of both comfort and determination in the physical representation of the efforts of a community making advancements in healthcare.

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### Strategies— Design

Having a local element in the building project was an important part in the planning process. Norfolk General Hospital provided prequalified bidders with a list of local sub-trades that had an interest in participating in the project. As a result, 50% of the trades and labour were from the Norfolk County area.



### Technology

To attract new physicians and medical staff to the area, Norfolk General Hospital has a strong commitment to renewal and growth. Implementation of state-of-the-art technology would be highlighted in the ICU Renovation Project. New heart monitoring systems, new fluoroscopy and mammography units, new PACS system and a new CT scanner.

New technology, work space and overall improvements to our facility will benefit both patients and staff, present and future.



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### Barriers - Public Safety

- To ensure information flowed throughout the various levels of hospital and community, over 100 project notices were distributed over the course of the project to ensure clear communication and public safety.
- The staging of crane traffic and heavy equipment was a concern. Staff and public safety were constantly monitored with special consideration of the impact of a neighbouring public school.



- There was a significantly restricted working area for the emergency department while the new addition was under construction.
- Patients, staff and visitors would face an increase in noise and vibration throughout the hospital. Renovation project leaders measured noise levels on an ongoing basis to ensure a standard level of acceptance was being met.
- During construction, the province was experiencing a SARS epidemic which caused much concern. An increase in hospital screening would be part of the daily routine. This also prevented several meetings from being scheduled in the hospital.
- Timing and coordination of the distribution of electrical mechanical services to the rest of the hospital.

### Parking-

Parking was impacted significantly during construction. Additional construction vehicles were given space to maneuver on the hospital premise. Visitor and patient traffic would be re-routed with special consideration for ambulance dispatch and emergency arrival.





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### **Criteria- Terms of Reference**

- Outstanding success on the completion of a major capitol project
- On schedule
- On Budget
- No Outstanding Claims
- No Resulting litigation
- Good communication and relationship with the contractors was key
- A great team building exercise. Everyone appreciated being involved.
- Excellent public input. Board meetings were on top of every change order.

### **Impact**

The final results of this 16.8 million dollar ER Redevelopment project greatly improved Norfolk General Hospital for both patients and staff.

- Working space, patient flow
- State-of-the-art-technology
- Built-in modern day efficiencies
- An excellent fit with natural surroundings
- A major improvement to our parking and overall traffic flow
- Modernized, more accessible ambulance reception
- Norfolk General Hospital and the counties image was greatly enhanced amongst their peers and within province
- The project positioned Norfolk General Hospital for future economic development i.e.. Toyotetsu, Canada, Sky Power Wind Farms, Wal-Mart and Home Depot

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Norfolk General Hospital President and CEO Bill Lewis says the \$15 million addition to the hospital is nearing completion. It is expected to open in January.

# Finishing touches put on hospital expansion

Daniel Pearce  
SIMCOE REFORMER

The metal pillars shoot high in the air in front of the new entrance to Norfolk General Hospital. They support a suspended flat roof that pushes beyond the walls of the 35,000-sq-ft expansion. A clear, concave giant awning comes sweeping down to protect people coming in and out the door below.

With its mix of brick, stone, and metals and plenty of curves, this post-modernistic facade to NGH is almost ready for visitors.

In another four to six

weeks, people coming to visit the sick or to have blood work done or X-rays taken will walk through this door — which faces onto what used to be the Robinson Street parking lot — rather than the West Street entrance.

Construction on the \$15-million addition is basically done, say hospital officials. Landscapers are planting bushes in a circled boulevard in front of the facade. Cabinets and nurses stations have to be installed. New equipment, such as heart monitoring devices, must be brought in, tested, certified, and staff trained on how to use them.

On West Street, a lane for ambulances needs to be finished before a new entrance for the emergency department, which will push out into the second storey of the addition and triple in size, can be opened.

An elevator that will take the sick and injured from the emergency department to the operating room, intensive care unit, or obstetrics is part of the addition. It, too, will have to be certified.

"There's a lot of paperwork to go through in the last month," says J.J. Knott, NGH's project manager for the expansion.

And this is only the end of chapter two.

The revamping and upgrading of NGH also involves an expanded area for diagnostics. Once the new emergency room is running, the old one will be gutted and turned into a series of rooms for X-rays, ultrasound equipment, and a CAT scan machine.

The final phase is expected to be finished around the end of June or beginning of July, says NGH president and CEO Bill Lewis.

"It will be confusing for a while," says Lewis.

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Registered nurses Shirley Kovacs, left, of Vanessa, and Katy Mayos, of Delhi, are thrilled with the new and improved emergency ward at Norfolk General Hospital. The \$16.5 million expansion, which has been several years in the making, opened for business yesterday.

## New era dawns at NGH

New ER open and dealing with patients

Monte Sonnenberg

Times-Reformer

Norfolk General Hospital took a giant step into the 21st century yesterday with the opening of its new emergency ward.

Contractors are still on site adding final touches. But the old emergency room on West Street was abandoned yesterday in favour of the expanded facility facing onto Robinson Street.

The new emergency ward is three times the size of the facility it re-

places. It also features a host of new amenities. Yesterday, a doctor at NGH said the 6,500-square-foot addition is as modern as one will find anywhere.

Jerry Lawlor, NGH's director of development, said the hospital cut no corners on the \$16.5 million project.

"We tried to put in as much as possible to last as long as possible," he said. "We're not going to get to do something like this again for another 25 years."

The wing was designed to enhance patient privacy and improve patient flow. The waiting area is much larger than before and there

are private lounges where families can consult with staff.

Administrative functions related to each other have been consolidated in one area. Patients receiving treatment will be seeing a lot less of the general public. Patients admitted to NGH through emergency will be taken to a bed by way of an elevator designed specifically for this purpose.

The ward also has an expansive trauma-resuscitation room stocked with state-of-the-art equipment. Nurses have a private lounge for their breaks. Staff have dubbed it "The Zone."

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## The Emergency Department Renovation Project as a Model



- Capital management project structure
- Communications
- Timeline– July 2003– August 2005 Deadline and Budget achieved
- Cost controls
- Accountability– Prompt reporting to the board and public on a monthly basis
- The beautification of the project has attracted several interest groups throughout the province who have requested tours of Norfolk General Hospital
- The materials used– Chosen for life cycle costing benefits.

### 'A fabulous facility'

Norfolk General Hospital unveils its new ER to rave reviews

By Cheryl Ruslanait  
EXPOSITOR STAFF / SIMCOE

Supporters of Norfolk General Hospital got their first look at the new, state-of-the-art emergency department Thursday night—and gave it rave reviews.

"I can't wait to get sick," quipped Norfolk Coun. Peter Black. "This is a fabulous facility."

The emergency wing, which opens to patients Monday morning, is part of a \$16.8-million addition that includes an expanded diagnostic imaging department and a new main floor entrance.

About 200 NGH boosters, including staff, volunteers, members of the board, donors, and representatives from local service organizations, toured the new emergency as part of a gala evening celebrating the end of a project that has taken close to five years to complete.

"We made it," said a gleeful John Race, honorary chairman of the community fundraising campaigns that raised \$8.6 million for the expansion. "This is an exciting night."

The province put up \$8.2 million for the expansion, which was first envisioned back in 1992. The project was finally approved in 1999 and construction got underway in July 2003.

The two-storey addition features 35,000 square feet of new space and 14,000 square feet of renovated space.

On the main floor, there's a new front entrance, directly off the parking lot, featuring two curved glass canopies. Inside, the light-filled foyer includes an information desk, gift shop and coffee kiosk, which has direct access to a courtyard that can be used by residents of the adjoining nursing home. There's also a new, larger cafeteria.

On the first floor, the 20-year-old emergency department has tripled in size, to 10,000 square feet. There are 23 rooms, including a triage room, where patients are assessed as soon as they arrive, and a "fast-track" area where patients needing care for minor injuries or infections are treated.

An enclosed ambulance bay is attached to the new department, so that patients go directly into the hospital. And there is also a separate patient elevator that transports patients directly from emergency to the operating room, intensive care or the labour and delivery suite.

Bob Jackson, chairman of the NGH board, said the new emergency area provides better patient flow and privacy, as well as state-of-the-art equipment and bright, comfortable surroundings.



Guests at the opening of Norfolk General Hospital's new emergency ward tour the facility on Thursday night. Christopher Smith, Expositor Staff



John Race of Simcoe, honorary chairman of Norfolk General Hospital's Family Fund, passes the hat during yesterday's fundraising for the \$16.8 million expansion of the hospital's emergency ward. Digging deep to help meet the county's \$6.3 million funding commitment were, from left, Ontario Health Minister Tony Clement, local MP Toby Barrett, Cecil Railway of Waterford, Race and Tom Miller of Turkey Point.

### Health minister turns sod on NGH expansion

CLEMENT SAYS PROJECT WILL HELP ATTRACT DOCTORS, NURSES

Monte Somerton  
SPECIAL TO OPINION

Ontario's Minister of Health says Norfolk's reputation for first-rate health care is secure now that a \$16.8 million expansion has begun at Norfolk General Hospital.

Tom Clement and dozens of local dignitaries were at NGH yesterday to mark the beginning of the project.

When finished, the hospital on West Street in Simcoe will have a new emergency ward and state-of-the-art diagnostic equipment. The latter includes the county's first CT scanner, improved mammography, ultrasound and fluoroscopy services.

But, most importantly, Clement said the project will help attract and retain local doctors and nursing staff.

"I know when local medical professionals see this project actually happening, they're going to help with morale," the minister said. "I believe you are on the cusp of something important for Norfolk and all of the county. Bricks and mortar are im-

portant. But I want you to know that bricks and mortar are only a place for our already wonderful doctors and nurses to work."

Major construction has begun and is expected to be complete in November 2004. This will be followed by six months of interior renovations.

When finished, NGH's emergency ward will be double its present size. There will be a more "user-friendly" entrance and greater emphasis on patient privacy. As it stands, there are 20,000 visits to NGH's emergency ward annually.

The timetable for construction shifted into high

gear last month when the Ministry of Health agreed to cover half the cost of the project. Initial estimates pegged the cost of construction at nearly \$11 million. However, modifications to the design increased the final cost significantly.

When word of this emerged earlier this year, the province reviewed its commitment to the project. Several months passed before the ministry agreed to provide additional funds. Doreen Kott of Waterford, chair of the NGH board of directors, said the wait was stressful.

The timetable for construction shifted into high



## **CHES AWARD OF EXCELLENCE**

### **Conclusion**

A rural hospital has many roles to play. It must be a strong community leader and good corporate citizen. It influences corporate decisions about locating to, remaining in or expanding within an area. It must attract top health-care professionals. These are key factors that make a hospital an important contributor to a region's economic development.

By focusing on leadership, accountability, and teamwork in energy management, environmental consciousness, and community spirit, we have created a healthier workplace, a better managed health care facility, and a top-quality model for others to follow. And that's just good business.

We at Norfolk General Hospital believe that our recently completed Emergency Room Redevelopment project meets all the criteria as set forth by the Canadian healthcare Engineering Society, for the Award of Excellence in Healthcare Facilities Management.

We thank you for consideration of this award submission.

