

From: ronpower@nalcorenergy.com
To: rkaushik@nalcorenergy.com
Cc: robertbesaw@nalcorenergy.com
Subject: Fw: Local Hiring Concerns
Date: Friday, August 5, 2011 10:19:13 AM
Attachments: [_png](#)
[L010-S011-200-170331-00090 - Local Hiring Concerns.pdf](#)

Raj - fyi - as discussed earlier today, I am pushing for local hiring.

Raj / Bob - Please think about candidates



Ron Power, P. Eng.
**Project Manager - Generation
& Island Link (Consultant)**
**Nalcor Energy - Lower
Churchill Project**
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----- Forwarded by Ron Power/NLHydro on 08/05/2011 10:17 AM -----

From: Ron Power/NLHydro
To: Normand.Bechard@snclavalin.com
Cc: Francois.Couturier@snclavalin.com, Afzal.Hussain@snclavalin.com, Luc.Chausse@snclavalin.com,
LowerChurchill@snclavalin.com, LCP - SNC, Jose.Gillis@snclavalin.com
Date: 07/31/2011 04:47 PM
Subject: Local Hiring Concerns

Local Hiring Concerns

Rec. No. L010-S011-200-170331-00090

Normand,

Please refer to attached letter regarding our concerns with local hiring.

Regards

Ron



L010-S011-200-170331-00090 - Local Hiring Concerns.pdf



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Rec. No.: L010-S011-200-170331-00090

July 31, 2011

SNC-Lavalin Inc.
272 Torbay Road
St. John's, NL A1A 4E1

Attention: Mr. Normand Bechard

**Subject: Lower Churchill Phase 1 Development
Agreement LC-G-002
Engineering, Procurement and Construction Management (EPCM) Services
Local Hiring Concerns**

Dear Normand:

SLI's "Proposal for EPCM Services for the Lower Churchill Project" clearly and extensively expressed the intent to employ local resources as a priority source of staff for the project. Several pages from the technical section of the noted proposal, wherein this intent is documented, are included in Attachment 1 of this letter. Also, a table from the commercial section of the noted proposal (refer to Attachment 2) amply demonstrates the intent that local hiring be the primary SLI staffing source for the project. We were pleased to see these specifics in the Proposal and felt that such a policy would go a long way towards meeting the requirements of the project's Benefits Strategy.

Recently Approved PAA's for Out-of-Province Personnel

In early July several PAA's were approved for out-of-province individuals to work on the project until 15 December 2011 (see table below). It had originally been requested that the noted individuals be approved until mid-2013. The 15 December 2011 timeline was mutually agreed with the understanding that local resources would be hired that would work alongside the noted individuals so that, post-December 2011, the local resources would be suitably trained in the relevant software etc... and would then work on the project for the longer term. The agreement to hire the noted individuals was made in the spirit of cooperation / accommodation so that SLI's and the project's immediate needs would be met while, at the same time, the local hiring aspects would be put in place for the longer term. To date no local hires have been recruited.

Out-of-Province Personnel	Local Hire
4013 – Civil Support Technician – Claude Laurier	To be advised
4014 – Civil Technican 3D Model – Carlos Prado	To be advised
4015 – Civil Technician 3D Model – Juan Zuluaga	To be advised
4111 – Int. Civil Eng. – Dominic Theriault	To be advised



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PAA's for Campsite Utilities

We recently agreed with the SLI initiative that engineering work for the Accommodations Complex utilities be carried out in SLI's Topsail Road office. This activity will occur from August to October 2011. In the process of reviewing and approving the PAA's for the individuals on the team that will work on the noted scope, it became very obvious that the local SNC Lavalin office has significant capability applicable to the project's needs.

The table below provides a brief snapshot of the capability of some of the key team members. Individual resumes for the listed personnel are included in Attachment 3 herein. The listing is not inclusive of the entire utilities team, but is provided for capability illustration purposes only.

Team Member	Qualifications / Comments
Ken Jewer	Very senior mechanical engineer – appears to be amply qualified for the Sr. Auxiliaries role that SLI have been unable to fill up to now. ~ 25 yrs exp.
Scott Penney	Very experienced mechanical engineer including utilities, etc.. Project experience. - ~ 10 yrs exp.
Ray Bailey	Senior structural engineer / heavy civil / project experience / ~ 25 yrs exp.
Elaine McArthur	Experience civil engineer – project experience – 16 yrs exp.
Ray Osmond	Sr. Mechanical Technologist – 40 yrs. experience
Curtis Beazley	Sr. Mechanical Designer – 10 yrs. experience
Davis Hull	Sr. Electrical Technician – 38 yrs. experience
Catherine Miller	Sr. CAD Operator – 20 yrs. experience
Eugene Laing	Sr. Civil Technologist – 40 yrs experience
Paul White	Civil Technician – 10 yrs. experience
Martin Ellis	Sr. Technician – 35 yrs. experience
Terry Sooley	Sr. Technician – 21 yrs. experience

In accordance with SLI's "Proposal for EPCM Services for the Lower Churchill Project", we would have expected to have seen such individuals being proposed for the longer term positions. This is still our expectation.

PAA's Currently "On Hold"

The following PAA's are currently on hold. We expect that these positions can be recruited from the local SLI office / locally.



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Out-of-Province Personnel	Proposed Local Hire
4520 – Mechanical Eng. Auxillaries – Sina Mesghali	To be advised
4523 – Mechanical Tech. HVAC – Carol Dallaire	To be advised

On a final note, while it is expected that the necessary “high-level” technical and other expertise would potentially need to be recruited out-of-province, the expectation remains that robust recruitment would come from the local SLI office, from other NL engineering companies and from other local recruitment efforts. We look forward to receiving your plan to address the noted concerns.

Sincerely,

Ron Power
 Project Manager – Generation / Island Link
 RP/rp

cc: Paul Harrington



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ATTACHMENT 1



EXECUTIVE SUMMARY



Aboriginal / Native Groups

SNC-Lavalin has an excellent relationship with the Innu Nation and makes every effort to provide training and opportunity to Innu people and companies, and particularly supports the Innu Healing Foundation for example. As well, SNC-Lavalin supports the broad aboriginal and native community development and many sports and volunteer organizations.

Project Office

SNC-Lavalin's Project Office will be located in St. John's. Engineering, Procurement and Construction groups will be located in St. John's. Specialist engineering will be undertaken in other SNC-Lavalin centers as required. A project support office will also be opened in Happy Valley-Goose Bay.

SNC-Lavalin will also engage the services of other local engineering, design and services firms to support the overall EPCM Mandate.

Execution Strategy and Approach

The cornerstones of SNC-Lavalin's execution plan are:

- Project readiness and immediate mobilization;
- Commitment to high standards of health and safety through the implementation of comprehensive training and implementation programs;
- A strong and dedicated team. The proposed services will be performed by an experienced team that have worked together on many successful projects;
- Commitment to sustainable development and environmental protection in compliance with ISO standards, SNC-Lavalin's corporate policy and standards, Nalcor's policy, standards, regulations and guidelines;
- Maximization of local content in procurement and construction;
- Strong project management and efficient and well organized interdiscipline coordination between offices following our proven Area Management Philosophy;
- Effective Project Controls using integrated comprehensive software applications such as **PM+**, **PDM**, and Primavera.
- Cost effective and high quality procurement from best value cost centers supported by our global procurement team and integrated **GPS** software;
- Best in class design software.

Project Team

SNC-Lavalin's nominated team is an experienced team of professionals drawn largely from our offices in St. John's and other Canadian centres with specialist support from high caliber personnel from our Montreal, Calgary and Toronto offices.



**SNC • LAVALIN**Component 1 – Muskrat Falls Hydroelectric Development
PART C – Technical Proposal Questionnaire**1.3.8 Flexibility and Innovation**

Although we are a large company, we are extremely flexible in our approach to projects. SNC-Lavalin has completed projects of a similar scale to the Lower Churchill Project using EPCM, EPC, Integrated Owner/EPCM and Cost Reimbursible/EPC/Direct Hire approaches. We have participated in previous projects, such as this one, which have a community and labour relations objective to utilize as many local contractors as possible. We believe this is a good approach for this project; however, we are open to discuss other arrangements and have the experience to modify our approach to suit. In the past, we have used innovative approaches like a “Road Show” to promote the project and enlist qualified vendors and a “Procurement Committee” made up of key decision makers to facilitate the award of packages in the most efficient and timely manner.

1.3.9 Local Newfoundland Knowledge and Expertise

SNC-Lavalin, through our BAE-Newplan office in St. John’s, has the local expertise, knowledge and contacts to ensure we implement the project in accordance with local requirements. This office has been part of the SNC-Lavalin family for over 15 years and has carried out the civil and infrastructure work for many projects in Newfoundland and Labrador. It is not a joint venture or subcontract arrangement, but a wholly-owned subsidiary with its home office located in close proximity to Nalcor’s head office.



BAE-Newplan can provide a full range of architectural, engineering and project management consulting services as required in support of the detailed design and project management for the Lower Churchill Project.

1.3.10 Project Readiness

SNC-Lavalin has been following the development of this project from the beginning. We have closely monitored the timing of the progression through the preliminary stages (Gateway Phases 1 and 2) and have positioned our resources to be ready for this project. The timing is perfect. We are ramping down projects, and this provides us with the people and facilities in Canada to easily transition into the engineering effort for the Lower Churchill Project. In St. John’s, we have the facilities and people in position to deliver support as required. For engineering resources, the timing is an excellent fit with the completion of the Shipshaw and Eastman 1A projects in Quebec. Engineering resources from these teams will be available to transition to the Lower Churchill Project as those projects wind down. These personnel are familiar with hydro projects in northern Canada.



4.1.2 Quality Resources

SNC-Lavalin will staff this Project with key personnel who have worked on previous relevant hydroelectric projects. The engineering staff will originate mostly from the Canadian offices of SNC-Lavalin. Personnel will be transferred from other hydro projects that are nearing completion to the Lower Churchill Project. A number of the candidates nominated for Project Management, Engineering and Construction Management positions have worked on the Gull Island and Muskrat Falls Feasibility and Pre-FEED Studies. SNC-Lavalin will, throughout the project, actively source personnel in Newfoundland and Labrador to fill the various positions in the St. John's project office and at site. Section 6 provides a listing of the proposed key personnel. Their resumes are contained in Volume 2 – Resumes and Descriptions of Roles and Responsibilities.



4.1.3 Team Readiness

SNC-Lavalin's resources will be available as soon as the EPCM services contract is awarded. A select number of resources required at the start of services could be made available before the starting date, if necessary. There will **NOT be any delay** in the mobilization of our personnel assuming the award date is not later than the end of November 2010.

In addition, our current engineering offices in St. John's and elsewhere will be ready and available for our project staff and will continue to be until the proposed project office is operational.

SNC-Lavalin will use its best effort to ensure an immediate mobilization of its personnel as soon as the contract is awarded.

4.1.4 Motivated Resources

SNC-Lavalin is promoting a productivity enhancement program. Such a program will encourage project **personnel to set higher standards** throughout the project.

SNC-Lavalin intends to put in place a communications program designed to keep all project personnel continuously informed of project status, achievements and events. We have instituted this in the form of a comprehensive, well designed monthly newsletter, as well as a dedicated website, on other projects where it has been very well received.

These programs will create a better working atmosphere which is key to increasing the motivation of employees at work.



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Component 1 – Muskrat Falls Hydroelectric Development
PART C – Technical Proposal Questionnaire

The SNC-Lavalin organization will have extensive knowledge of large hydro projects, and members of the various functional groups will have had prior experience in working together on such projects. Advice will be exchanged freely between the team members to the benefit of the project execution.

Selected members of the Engineering, Procurement and Project Controls groups will be available throughout the construction phase to support and participate in site activities such as Construction Management and Commissioning, as required. The work during all phases of the project will be supported by our world class HSE, Quality and Information Management systems.

4.3.3.6 Health, Safety & Environment

The preparation of design and specifications will take into consideration all relevant international standards, as well as Canadian and Newfoundland and Labrador regulations for safety, health and the environment. Requirements for conditions of safety of construction, operation and maintenance personnel will also be incorporated into all contract documents.

4.3.4 d) Proponent's Organization

d) Proponent's organization; (further detail regarding organization and Key Personnel shall be provided in response to question 6.0 herein);

SNC-Lavalin will draw the resources and expertise for the Lower Churchill Project from three of its business units, namely;

- The Hydro and Power Systems Division;
- The Transmission and Distribution Division; and
- BAE-Newplan Group Limited.

The high level technical expertise for the execution of the work will come from the divisions, whereas local resources and personnel would be drawn from our Newfoundland based subsidiary, BAE-Newplan Group Limited.

SNC-Lavalin will be the contracting entity for the project and will provide all of the services for the project from its own in-house resources, supported as required by a number of designated engineering subcontractors. The subcontractors will participate on a "loan of personnel" basis whereby they would second resources directly to the project team.

The general organization proposed for the project is shown in Figure 6.1 in Attachment 6.2-1. In developing this organization we have made a number of assumptions:



developed for the project which will include flow charts depicting the decision making process to be used.

In addition to the procedures which define the processes to be followed, all major works are subject to a system of approvals. In the case of engineering, for example, all designs must be checked by someone other than the initial designer and approved by someone at a higher level of authority.

An authorization matrix will be developed for the project identifying the authority levels with the organization.

One of the key tools in the decision making process is the development and use of a risk register. SNC-Lavalin's risk management process was discussed in Section 4.3.2. In the early stages of the work, the project would be risk assessed to determine the major technical, financial, organizational, and other risks associated with the project. The risks would be assigned a priority ranking, and mitigation measures would be developed for each. Decisions on critical activities would take into account all associated risks. The risk register would be reviewed on a regular basis (monthly as a minimum) and risks that have been dealt with would be dropped from the list. New risks would be added as they arise.

Flow charts illustrating the decision making processes within engineering and procurement will be developed to support the overall risk programs.

4.3.7 g) Mobilization and Staffing Plan

g) Mobilization and staffing plan for all Project phases clearly identifying how personnel will be assigned to the various locations;

- Personnel will be identified according to the approved project organization charts.
- Personnel will be sourced from within SNC-Lavalin NL, other SNC-Lavalin offices and various NL Engineering companies throughout the Province.
- A 'Personnel Assignment Authorization Form' (PAA) will be prepared for each person and approved according to the project approval authority guide, including Nalcor.
- Assignment letter and conditions (pre-agreed with Nalcor) will be agreed with each employee prior to mobilization to the project.
- Staff from out of province will be assigned as follows:
 - Long term assignment (>6 months)
 - Short term assignment (< 6 months)
 - Business trip (specialist engineer, support team member)
- Personnel from within SNC-Lavalin (short and/or long term appointments) will be formally assigned to the Project by means of an approved PAA and will work out of the St. John's project office.



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ATTACHMENT 2

SNC-LAVALIN INC.
Section B6

ATTACHMENT 1

Part 1
Section 0.4

Proponents Name: SNC-Lavalin Inc.

TABLES BELOW ARE BASED UPON MUSKRAT FALLS DEVELOPMENT – SCENARIO A, COMPONENTS 1 + 3+ 4a +4b + 4c

Attachment A - Employment Table (Person Hours and Number of Persons)										
Residency										
Employment Category	Labrador		Newfoundland		Other Canada		Foreign		Total	
	# of Persons	# of Person Hours	# of Persons	# of Person Hours	# of Persons	# of Person Hours	# of Persons	# of Person Hours	# of Persons	# of Person Hours
Project Management	2	14,560	48	792,896	25	189,280			75	996,736
Engineering Management			19	189,696	6	87,552			25	277,248
Procurement and Contract Management	31	297,916	61	586,220	23	221,034			115	1,105,170
Construction Management			42	618,960	18	87,360			60	706,320
Other			11	8,400	4	6,240			15	14,640

TOTALS 33 181 76 290

Attachment A - Employment Table (Person Hours and Number of Persons)										
Work Location										
Employment Category	Labrador		Newfoundland		Other Canada		Foreign		Total	
	# of Persons	# of Person Hours	# of Persons	# of Person Hours	# of Persons	# of Person Hours	# of Persons	# of Person Hours	# of Persons	# of Person Hours
Project Management	2	14,560	73	982,176					75	996,736
Engineering Management			25	277,248					25	277,248
Procurement and Contract Management	80	941,250	35	163,920					115	1,105,170
Construction Management	10	150,120	49	543,015	1	13,185			60	706,320
Other	10	13,680	.5	960					15	14,640

Note: If the occupation categories are not appropriate, Proponent may add categories accordingly.



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ATTACHMENT 3

Kenneth Jewer

Mr. Jewer is a Mechanical Engineer with twenty-three (23) years experience in design and construction management. Mr. Jewer is currently Manager of the Mechanical and Electrical Divisions of BAE-Newplan Group Limited.

EDUCATION

1987 Bachelor of Engineering (Mechanical), Memorial University of Newfoundland

EXPERIENCE

**Since 2008 SNC-LAVALIN INC. – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL
Manager, Mechanical & Electrical Divisions (Since 2008)**

- ◆ Pearlgate Recreation Complex, Mount Pearl, NL – Responsible for the design of Mechanical and Electrical systems associated with a new \$45 million recreation multiplex. Work highlights included design of the following systems:
 - Ammonia refrigeration system for two ice pads with full heat recovery.
 - Ice flood demineralization water treatment system.
 - Rainwater recovery, storage and filtration systems.
 - Ventilation, heating, cooling and dehumidification systems for two arenas.
 - Commercial kitchen ventilation systems with ultra-violet grease removal and heat recovery.
 - In-floor and in-bleacher heating systems.
 - Thermal storage chilled glycol system.
 - Ventilation and dehumidification system for swimming pool with heat recovery for pool water reheat.
 - Geothermal heat pump system for multiplex heating/cooling.
- ◆ City Hall, Corner Brook, NL - Responsible for the design of mechanical and electrical systems associated with a new \$20 million office complex. Work highlights included the following systems:



Kenneth Jewer 2.

- Geothermal heat pump system for building heating/cooling.
- Rainwater recovery and storage system for building irrigation systems.
- Green roof.
- In-floor radiant heating system.
- Low temperature hydronic heating system.
- Low water consumption plumbing features including waterless urinals.
- Windows on the World (WOS) internet based public awareness and education system pertaining to building environmental conservation initiatives.

1999-2008**SNC-LAVALIN INC. – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL****Manager, Mechanical Division**

- ◆ St. John's International Airport – Responsible for design of mechanical systems associated with new \$52 million, 120,000 sq. ft. Air Terminal Building. Work included design of the following systems:
 - Primary/secondary/tertiary pumping systems.
 - Variable speed pumping systems.
 - 5100 KW boiler plant consisting of four (4) heating boilers, one (1) low pressure steam boiler, and two (2) 180 TR chillers.
 - Underground bulk fuel storage and secondary contained piping distribution systems, including system integrity monitoring.
 - Steam to steam humidification systems.
 - Fire protection system consisting of Class 2 and Class 3 standpipe; three (3) wet alarm valve sprinkler systems; and two (2) pre-action sprinkler systems for the baggage handling areas.
 - Ventilation and air conditioning systems consisting of nine (9) indoor air handling units of both the constant volume and variable air volume type.
 - Smoke purge exhaust ventilation systems.
 - Vibration and noise control systems for rotating equipment.
 - Chilled glycol, heating glycol, hot water and low pressure steam piping distribution systems, including associated equipment such as pumps, air separators, valves, etc.
 - BacNet Building Automation System, which included internet-based interface capability.
 - Approximately 100,000 sq. ft. of underfloor hydronic heating.

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Kenneth Jewer 3.

- Oil-fired above-ground radiant heating systems for the baggage handling areas.
- Hazardous gas detection systems, including two-speed exhaust ventilation.
- ◆ Field House, Memorial University of Newfoundland – Responsible for design of mechanical systems for \$12 million, 120,000 sq. ft. track and field/basketball/ volleyball sports facility on the MUN campus. Work included design of the following systems:
 - Primary/secondary hydronic heating system.
 - Heating/ventilation/de-stratification systems for mail bowl.
 - Integration into the campus district heating system.
 - Conversion of Aquarena from electric heating of pool water and ventilation air to hydronic heating utilizing plate and frame technology.
 - Building Automation System including integration into the campus-wide Honeywell Excel 500 Control and Monitoring System.
- ◆ Other projects include:
 - Combined Services Building, St. John's, International Airport, St. John's, NL
 - Mobile Central High School, Mobile, NL
 - Herdman Collegiate, Corner Brook, NL
 - Building 223, Pleasantville – Chilled Water Plant Upgrade, St. John's, NL
 - 550 TR Chiller Water Plant, St. Clare's Mercy Hospital, St. John's, NL
 - Central Waste Management, Norris Arm, NL
 - City Hall, Corner Brook, NL
 - Hodder Memorial Stadium, Deer Lake, NL
 - Natuashish Housing Development, Labrador, NL
 - New Boiler Plant, College of the North Atlantic, Clarenville, NL
 - Town of Port au Choix Water Supply, NL
 - Canadian Liquid Air Building, St. John's, NL
 - Fuel Oil Storage Tank Farm, Natuashish, Labrador, NL
 - New World Island All-Grade School
 - Lawn All-Grade School
 - Upgrade of numerous schools under the jurisdiction of the Avalon East School Board



Kenneth Jewer 4.

- Clarenville Dialysis Clinic
- Waterford Hospital Dialysis Clinic (largest in Eastern Canada)
- St. Clare's Mercy Hospital, Medical Air, Vacuum, Nitrogen and Nitrous Oxide Source Replacements and Distribution System Modifications
- Waterford Hospital Short Term Stay Clinic
- Stephenville "Dome" Arena
- Town of Grand Bank Water Treatment System
- Pitcher's Pond Golf Course Irrigation System

1996-1999 SNC-LAVALIN INC. – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL
Senior Mechanical Design Engineer/Project Manager

- ◆ HIWS (Schlumberger) Offshore Service Facility, St. John's, NL
 - Responsible for design of mechanical systems in 45,000 sq. ft. facility to service Hibernia offshore platform drilling equipment. Work included design of following systems:
 - Secondary contained waste water piping systems.
 - Compressed air plant and piping.
 - Oil-fired radiant heating system.
 - Bulk fuel storage and distribution piping system.
 - Computer room inert gas fire suppression system.
 - Office air conditioning systems.
- ◆ HIWS (Schlumberger) Bulk Plant, St. John's, NL
 - Responsible for design of plant to store, mix and pneumatically convey barite, bentonite, cement, and mineral oil to produce drilling mud for the Hibernia offshore oil production platform.
- ◆ MPRS Mushrooms, Argentia, NL
 - Responsible for design of process steam plant and piping distribution system to service a commercial food production facility.
- ◆ St. Clare's Mercy Hospital, St. John's, NL
 - Responsible for design of bulk fuel storage system to service hospital. This work included removal of bulk underground fuel storage tanks and replacement with new above-ground storage vessels. Work also included remediation of contaminated soils and liaison with Provincial Government Environmental Agencies.



Kenneth Jewer 5.

- Responsible for design of mechanical systems and plumbing, hydronic heating, medical gas, ventilation, air conditioning, direct digital controls and pneumatic controls for numerous construction packages carried out under a \$15 million renovation for the hospital. This work included a total renovation to the hospital operating suite.
- ◆ Steam Distribution, 5-Wing Goose Bay, Labrador
 - Responsible for a complete design review of Phase II of the Base steam distribution piping system replacement program and liaison with Provincial Government Agencies to ensure compliance with provincial authorities.

1995**SNC-LAVALIN INC. - COWAN****Mechanical Design Engineer**

- ◆ Responsible for co-development of computer program to calculate pipe friction and determine pumping head in systems utilizing TMP and BCTMP pulp stock.

1987 - 1995**THE BAE GROUP LIMITED, St. John's, NL****Mechanical Design Engineer / Project Manager**

- ◆ Responsible for co-ordination, design and supervision of mechanical projects undertaken by The BAE Group Limited and, more recently, BAE-Newplan Group Limited.
- ◆ Major projects include:
 - Cow Head Offshore Fabrication Facility, Marystown, NL: Responsibilities included design and construction management of:
 - Bulk oxygen storage and piping distribution system.
 - Cutting and shielding gas storage and piping distribution system.
 - Compressed air plant and piping distribution system.
 - Breathable air plant and piping distribution system.
 - Bulk fuel storage and piping distribution system.
 - Industrial ventilation systems for pipe shops.
 - Work also included concept development of mechanical heating, ventilation, dust collecting, and fire protection systems for the first large industrial paint and shot blast facility in the province.
- ◆ Numerous other projects include:
 - St. Clare's Hospital, Air Conditioning Upgrade, St. John's, NL
 - Robinson Blackmore Printing Plant, St. John's, NL



Kenneth Jewer 6.

- Cold Ocean Research Storage Facility. St. John's, NL
- Canadian Coast Guard Helicopter Hangar, Stephenville, NL
- Marble Mountain Ski Resort, Corner Brook, NL
- Goulds High School, St. John's, NL
- St. Phillips Elementary School, St. Phillips, NL
- Medical Gas Upgrading, Grenfell Regional Health Services, St. Anthony
- Hibernia Management & Development Corporation Office Building/
Warehouse, St. John's, NL

COMMITTEES

Member of Joint Board of Practice, Professional Engineers & Geoscientists of
Newfoundland & Labrador and Newfoundland Association of Architects

Member of Public Safety Appeals Board

OTHER ASSOCIATIONS

American Society of Heating, Refrigerating and Air Conditioning Engineers

National Fire Protection Association

Canadian Green Building Council, Atlantic Chapter

PROFESSIONAL ASSOCIATIONS

Professional Engineers and Geoscientists of Newfoundland & Labrador

LANGUAGES

English

Scott M. Penney

Scott Penney is a Mechanical Engineer with eight (8) years experience in consulting engineering. Past experience includes institutional, educational, health care, commercial, retail, municipal, as well as residential projects.

EDUCATION

2000 Bachelor of Engineering (Co-Op), Memorial University of Newfoundland, Faculty of Engineering & Applied Science, Dean's List – 1998 to 2000

EXPERIENCE

Since 2002 **SNC-LAVALIN INC. – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL, Canada**

Mechanical Engineer

- ◆ Duties include concept development, detailed design calculations, equipment selection, code review, drawing development, specification preparation, site inspections and contract administration.
- ◆ Recent projects include:
 - City Hall, Corner Brook, NL – Design of mechanical systems including geothermal heating/cooling system, rainwater harvesting system, HVAC and plumbing.
 - Combined Services Building, St. John's International Airport, St. John's, NL – Design of industrial ventilation systems, firehall and industrial compressed air systems.
 - Mobile Central High School, Mobile, NL – Design/Build Contract for 250-student high school, including HVAC, plumbing and fire protection.
 - Herdman Collegiate, Corner Brook, NL - A 100,000 sq.ft. high school renovation. Responsibilities included plumbing, fire protection and HVAC design.
 - Mushuau Housing Development, Natuashish, NL - Design of mechanical systems and duplex housing units for the Community of Natuashish, Labrador.



Scott M. Penney 2.

- Hodder Memorial Stadium, Deer Lake, NL - Design of the main heating, cooling and dehumidification air handling unit that serves the spectator area, and design of the new arena refrigeration plant.
- Neddie's Harbour Inn, NL - Design of mechanical systems to serve the new 16 unit hotel, including commercial laundry, restaurant and commercial kitchen.
- College of the North Atlantic, Boiler Plant Replacement - Design of hot water boiler plant to replace existing aging facility.
- Waterford Hospital, Short-Term Stay, St. John's, NL - Design of mechanical systems for renovated wing of existing hospital. Project included specialization plumbing, heating and HVAC equipment.
- Voisey's Bay Mine/Mill Complex, Voisey's Bay, NL - Design of mechanical systems for multi-use complex that will house site offices, warehouse, laboratories, and service garage.
- Town of Port au Choix Water Supply - Design of town water supply system that included surface supply, storage tank, deep wells and chlorination system.
- ◆ Mechanical design support for school design for Lawn All-Grade School, New World Island School, Goulds Elementary, St. Kevin's Junior High and Holy Trinity High School, including:
 - HVAC design: static pressure calculations, unit selection, cooling load calculations, coil and humidifier selections.
 - Piping design: lining sizing, pump selections and hot water tank sizing, hydronic equipment selections.
 - Acoustic analysis of duct borne and breakout sound levels from ductwork.
 - Contract administration including review of commissioning documentation, shop drawings and Operation & Maintenance Manuals.
- ◆ Prepared a study of the chilled water system for St. Clare's Hospital that reported the existing condition of the system and provided recommendations and options for future replacement.
- ◆ Completed design for a hydronic sidewalk snow-melting system.
- ◆ Design for HVAC renovations and original systems for various retail and office areas, including Newfoundland Liquor Corporation offices and retail outlets, Canadian Coast Guard offices, Steers Insurance offices, Atlantic Lotto Corporation office and warehouse, Fortune Head Interpretation Centre, etc.
- ◆ Irrigation system pumphouse for the Town of Whiteway, Pitcher's Pond Golf Course.



Scott M. Penney 3.

- ◆ Commissioning exercise for the balance of plant equipment for Granite Canal Hydroelectric Power Development.

2001-2002 NEWFOUNDLAND & LABRADOR HYDRO, St. John's, NL, Canada
Mechanical Engineer – Generation Engineering Support

- ◆ Duties included:
 - Commissioning of fire suppression systems for remote communication sites.
 - Study of fouling/corrosion problems for Bay D'Espoir service water system.
 - Noise frequency analysis of the Hardwoods Gas Turbine.
 - Design of modifications to the Holyrood clear water drainage system.
 - Preparation of construction contract for the modification to a wet sprinkler system.

2001 NEWFOUNDLAND & LABRADOR HYDRO, Holyrood, NL, Canada
Mechanical Engineer – Thermal Generating Plant

- ◆ Duties included:
 - Preparation of reports of the overhaul of three oil-fired boilers. Reports included welding procedures, design modifications and code verification.
 - Troubleshooting fan vibration problem; impeller replacement, shaft alignment, static and dynamic balancing and vibration analysis.
 - Reporting for annual outages of three steam turbines. Experience with turbine clearance, alignment, lubrication, cooling and shaft seal systems.

2000-2001 CHURCHILL FALLS (LABRADOR) CORP., Churchill Falls, NL, Canada
Mechanical Engineer – Hydroelectric Generation

- ◆ Duties included:
 - Mechanical engineering support during a 10 week unscheduled outage of 500MW generator, involved repair of rotor, bearings and brake system.
 - Modifications to high-pressure compressed air system; material selection, design sketches, government permit, inspection and testing.
 - Designed fuel line piping for a remote diesel backup generator.
 - Environmental report to reduce the possibility of powerhouse oil release.



Scott M. Penney 4.

- Design vehicle exhaust system for heavy equipment garage.

Mechanical Engineer – Town Services

♦ Duties included:

- Evaluation of the town water treatment system, including inspection of filtration tanks and testing of chlorination injection system.
- Prepared PM procedures for town refrigeration and HVAC equipment.
- Designed water sterilization system for airport water supply.

PROFESSIONAL ASSOCIATIONS

Association of Professional Engineers & Geoscientists of Newfoundland,
Professional Engineer, September 2004

LANGUAGES

English

Ray Bailey

Ray Bailey is a Structural Engineer with twenty-one (21) years experience in the design of marine and civil works projects. Mr. Bailey has served as lead engineer and engineering manager on numerous projects within the company. This involvement has been from initial proposal through to final design and construction.

Internationally Mr. Bailey has been involved in several feasibility studies in countries including Abu Dhabi, Chile, Trinidad, Saudi Arabia, and Vietnam. These studies focused on port development including site selection, berth layout, planning and engineering. His ports and marine experience covers marine terminals for Oil and Gas, Mining, Aluminum Smelters and other industrial projects.

EDUCATION

1987 Bachelor of Engineering (Civil), Memorial University of Newfoundland, Canada

EXPERIENCE

Since 1995 **SNC-LAVALIN INC. – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL**
Senior Structural Engineer/ Project Manager

- ◆ Dry Dock Gate Study, Bull Arm Site Corporation - Lead Design Engineer for the study of the reinstatement of the Bull Arm Dry Dock Facility. The study examined the various practical ways of reinstating the dry dock, including temporary berms and permanent gate structures. Various berm and gate concepts were reviewed and a preliminary design was completed for a floating concrete gate complete with sill and abutments.
- ◆ Burin Minerals Feasibility Study - Project Manager/Lead Engineer responsible for the infrastructure component of the Feasibility Study associated with the reactivation of the St. Lawrence Fluorspar Mine. The project includes all on-site infrastructure including site works, buildings, access roads, water, power supply and tailings dam. The main component of the new infrastructure is the marine terminal. This port facility is designed to handle a range of vessels up to 65,000 DWT including all associated material handling equipment.



SNC • LAVALIN

Ray Bailey 2.

- ◆ Area Manager/Lead Engineer for the marine works associated with Alcoa's Greenland Smelter Project. This project involved the site selection review and the development of the port facilities associated with the smelter construction and operations. Subsequent to this study, a field program was initiated to carry out bathymetry, side scan sonar and mapping of the sea bed in the project area.
- ◆ Design Engineer responsible for the concept development and costing for the marine facilities and infrastructure associated with the development of the Rio Tinto Simandou Project in Guinea. This project involved preparing preliminary designs for various production and load-out scenarios associated with the iron ore development. Ship sizes ranged from 60,000 DWT to 250,000 DWT. The concept involved various structural configurations, including causeways, trestles, jetty and dredging.
- ◆ Project Manager/Lead Engineer responsible for the preliminary design associated with the development of an LNG Transshipment and Storage Facility in Newfoundland. The responsibilities associated with this project included developing a marine solution that would meet the clients short term and long term project objectives. The facilities were designed to handle 250,000 m3 LNG tankers. Project management duties were also required to coordinate construction and permitting issues with local regulatory authorities.
- ◆ Area Manager/Lead Engineer responsible for the "FEED" of the marine facilities component of the Vankor Oilfield Development. This portion of the project involved the preliminary design and evaluation of the port infrastructure required for the transshipment facility. Due to its location in Northern Russia, special consideration had to be given to climatic extreme such as ice forces. Vessel sizes ranged from 15,000 to 150,000 DWT.
- ◆ Area Manager/Lead Engineer for the Advance Engineering associated with the Port Facilities for the Al Jalamid Phosphate Project, Kingdom of Saudi Arabia. The port facilities were designed for the export of 3 mtpa of DAP and other associated materials. Water depth restrictions required the combined use of a dredged channel and causeway access. Tasks associated with this project included development and evaluation of various port concepts and the preparation of design build contracts for the client.
- ◆ Design Engineer for the Bassac River Improvement Project in the Mekong Delta of Vietnam. This project involved developing an engineering solution to alleviate continuous navigation restrictions at the Bassac River estuary and the preparation of a pre-feasibility study for the project.
- ◆ Responsible for the design review of the Tanker Loading Terminal Jetty, Punta Europa, Bioko Island, Equatorial Guinea. This project involved reviewing the design concepts and evaluating alternate design and construction techniques as part of an overall design/build project. Design concepts were reviewed with respect to scheduling, constructability and cost to provide the client with an economical marine solution for the tanker facility.

Ray Bailey 3.

- ◆ Lead Structural Designer for the Cronin's Head Sewage Treatment Facility. Tasks associated with this project included structural design, preparation of project specification and inspection services during construction.
- ◆ Structural Design Engineer for the Avalon East School Restructuring Program. This project included renovations to 15 schools, as well as design and construction of two (2) new schools.
- ◆ Structural Design Engineer for Lawn All-Grade School, and New World Island School. Responsibilities included structural design, preparation of specifications and project management of the civil and structural phases of contract.
- ◆ Structural Design Engineer / Project Manager for Berths 15 and 16, Harvey's Offshore Supply Base, St. John's Harbour. This project involved the demolition of the existing timber pile wharf structure and the design of new berthing facilities and upland areas to services supply vessels and bulk carriers. Construction sequencing of the facilities were required to allow uninterrupted use of the existing facilities by the owner.
- ◆ Design Engineer / Project Manager for the upgrading of the Small Boat Basin at Twillingate, NL. The scope of work included a 64 m extension to the breakwater, the widening and lengthening of the timber crib/pile wharf structure and widening of the wharf approaches.
- ◆ Design Engineer for the new \$52 million St. John's International Airport Rehabilitation and Expansion. To reduce costs and incorporate a construction phasing plan that allows uninterrupted building use, components of the existing structure had to be incorporated into the new structure. This task was further complicated as the existing building was built in nine separate phases from 1956 to 1987. The project involved expanding the First Floor space and adding two additional stories to the existing building to increase the total usable space from 5,800 to 14,000 m².
- ◆ Design Engineer for the second 150,000 DWT tanker berth at the Whiffen Head Transshipment Terminal in Newfoundland, Canada. This berth is constructed of prefabricated tubular steel jackets fixed to the bottom by piles driven through the jacket legs. The work was part of a design/build contract and involved working with the marine contractor to development of the jacket concept and then performing detailed design. Services were also provided during the construction phase to address engineering issues.
- ◆ Structural Engineer responsible for the design of the 9,700 m² Melville Health Centre. Duties included the design of foundations and structural steel, drawing co-ordination and review and preparation of project specifications. Other duties included the development of a geotechnical program in consultation with geotechnical specialists to qualify foundation design parameters due to the unique characteristics of the underlying bearing strata. Project management duties were also performed for the civil and structural components of the work.



Ray Bailey 4.

- ◆ Design Engineer for the initial permanent dock facilities for the Voisey's Bay Mine/Mill Site. The dock consists of a 144 m long wharf facility comprised of a series of 24.2 m diameter cellular sheet pile cells. Other responsibilities included the design of the elevated utilidor links between the various site buildings and the design of the 6,000 m² Services Complex Building. This is an industrial building located at the mine/mill site and houses both office and heavy equipment repair facilities.
- ◆ Design Engineer responsible for the preliminary design layouts and costing of the marine components associated with the Abu Dhabi Aluminum Smelter Tecno-Economic Feasibility Study - Site Selection Study and Port Preliminary Design Component.
- ◆ Design Engineer / Project Manager responsible for the detailed design and construction coordination with the owner of a steel sheet pile bulkhead wharf facility for the Bay Bulls Offshore Supply Base.
- ◆ Design engineer involved in the layout, preliminary design and costing for the marine components of the Trinidad Aluminum Smelter (Trinalum) Bankable Feasibility Study. This project involved developing a port for vessels up to 35,000 DWT and required the preliminary design of a dredged navigation channel, access trestle and loading platform.
- ◆ Design engineer involved in the layout and design of the temporary wharf facilities for the Goro Nickel Project located in Port Prony, New Caledonia.
- ◆ Performed preliminary engineering design and final design checks for the upgrading of the Harvey's Berth 14 wharf property for a new offshore supply base. The upgrading consisted of demolishing the existing timber deck and pile structure and replacing it with a concrete deck and steel sheet pile and pipe pile structure. The structure is located in approximately 10 m of water. The foundation design for this structure required special attention due to the inconsistencies in the underlying bearing material.
- ◆ Responsible for the design of the two-storey extension to Mount Pearl City Hall. The structure consists of a steel frame building encompassing approximately 1500 m².

1993-1996

THE BAE GROUP LIMITED, St. John's, NL**Structural Engineer - Seconded to DORIS Development Canada**

- ◆ Provided engineering services in the design of the Hibernia Gravity Base Structure (GBS), a 102 m wide x 111 m high offshore structure used for the drilling and storage of oil. The structure is made up of approximately 450,000 tonnes of reinforced post-tensioned concrete. The structure was designed for a variety of loads, including wave, iceberg and earthquake. Responsibilities include the review and development of calculation notes, drawing review and co-



Ray Bailey 5.

ordination, verification of finite element analysis results, development of design methodology for special design problems, pre-stressing loss calculations and construction technical assistance.

1988-1993 THE BAE GROUP LIMITED, St. John's, NL**Structural Engineer**

- ◆ Conducted safety inspections for Newfoundland Power developments at Pierres Brook, Lockston, Port Union and Heart's Content. Inspections and reporting encompassed visual assessment of structural soundness of dams, spillways, penstocks, and surge tanks. Dam classifications were conducted for hazard potential according to the Institute for Civil Engineers Guidelines.
- ◆ Responsible for the design of the 2,000 m² extension to the Northwest Atlantic Fisheries Centre, St. John's, NL. Additional responsibilities included construction supervision, design co-ordination and cost control.
- ◆ Responsible for the design and co-ordination of the Structural design team in the design of the new RCMP "B" Division Headquarters, St. John's. Other duties included the establishment of specifications, construction supervision and on-site co-ordination.
- ◆ Responsible for the design of light towers, helicopter landing pads and site buildings as part of the Canadian Coast Guard Lighthouse Standardization Project at various remote sites across Newfoundland.
- ◆ Responsible for the design and inspection of both a single storey and two-storey building for the Royal Bank of Canada in Goose Bay and St. John's.
- ◆ Responsible for the design review of the wharf extension at Trepassey, NL and the survey and design of the wharf upgrading and extension at St. Mary's, NL.
- ◆ Responsible for both the design and construction co-ordination of the new fish plant at Makkovik, Labrador.
- ◆ Involved in the design, specifications, design co-ordination and design review with senior engineers on various projects, including:
 - Cow Head Offshore Fabrication Facility, Marystown, NL
 - House of Assembly, Confederation Building, St. John's
 - Budget Rent-a-Car's new offices, St. John's
 - St. Christopher's Resort, Port Blandford, NL
 - ACAN Window Plant, Paradise, NL
 - Mount Pearl Arena, Mount Pearl, NL
 - Air Terminal Building, Deer Lake, NL

Ray Bailey 6.

- Hickman Saturn Dealership Extension, St. John's, NL
- Conception Bay South Water Transmission Line - Pedestrian/Waterline Bridge

1987 - 1988 GOVERNMENT OF NEWFOUNDLAND AND LABRADOR**Department of Works, Services and Transportation
Projects Manager**

Responsibilities included the preparation of tender documents, tender review, project co-ordination, inspection and contract administration of various maintenance and capital projects carried out by the Department.

COMMITTEES

PEG-NL Structural Engineering Committee, Association of Professional Engineering and Geoscientists of Newfoundland

PROFESSIONAL DEVELOPMENT

- | | |
|------|--|
| 1998 | Wharf Rehabilitation Workshop |
| 1996 | Canadian Masonry Research Institute, Engineered Masonry Design Seminar |
| 1995 | Canadian Portland Cement Association, Concrete Design Seminar |

COMPUTER APPLICATIONS

Excel
STAAD/PRO, S-Frame
ADOSS, SODA
Variety of spreadsheet programs

PROFESSIONAL ASSOCIATIONS

Professional Engineers and Geoscientists of Newfoundland & Labrador (PEG-NL)
Canadian Society of Civil Engineers

LANGUAGES

English



Elaine McArthur

Elaine McArthur is a Civil Engineer with 16 years experience in the design of civil and environmental projects, specification writing, cost estimating, contract administration and project management.

EDUCATION

1993 Bachelor of Engineering, Civil – Memorial University of Newfoundland

EXPERIENCE

Since 2002 **SNC-LAVALIN – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL**
Project Manager

- ◆ Responsible for:
 - Pre-Design and conceptual arrangement of OSBL facilities for the proposed refinery at Southern Head, NL. This includes the arrangement of tank farm structures and impounding, layout of stormwater and wastewater collection and treatment systems, pre-design of marine intake and wastewater discharge pipelines. Specific emphasis was placed upon issues relating to construction at an undeveloped site that has no infrastructure typically found to support the development, or any existing access for which materials or equipment can be delivered to site.
 - Civil engineering support for the EIS for the proposed refinery at Southern Head, NL. This included the development of project details to identify potential environmental impacts anticipated from construction procedures, operations and decommissioning. Mitigative measures to reduce the impact of the project were identified to comply with provincial and federal requirements.
 - Preparation of preliminary cost estimates for the civil works on the proposed Southern Head refinery project. These estimates included siteworks for the movement of over twelve million cubic meters of earth and rock, water supply and distribution, stormwater management facilities, wastewater collection and treatment, and transportation corridors both onsite for OSBL facilities as well as offsite to connect to the provincial transportation corridors.



Elaine McArthur 2.

- Civil engineering support for the Comprehensive Study for the liquefied natural gas (LNG) facility proposed for Grassy Point, NL. This included the development of project details to identify the potential environmental impacts that could result from civil construction procedures, operations and decommissioning. Mitigative measures to reduce the impact of the project were identified to comply with provincial and federal requirements.
- Design and project management of municipal and civil infrastructure, including water and sewer systems, site works, water disinfection systems, water supply development, and road works.
- Concept design of the municipal wastewater treatment and lagoon system for the Town of Happy Valley-Goose Bay, Labrador.
- Design and project management of water transmission main for Town of Holyrood, NL.
- Design of site parking, laydown and building services for renovations to the Service Depot for the City of Mount Pearl, NL.
- Design of access road and services for penstock replacement for Deer Lake Power, Deer Lake, NL.
- Design of chlorination system upgrading for Heart's Content, NL.
- Design of water supply improvements for the Town of Bay Roberts, NL.
- Design of site and services for new Air Liquide Customer Service Centre in Donovan's, Mount Pearl, NL
- Study of the Water Supply and Distribution System for Holyrood, NL.
- Design of site services for several schools, including: Goulds Elementary (Goulds, NL), St. Kevin's Junior High (Goulds, NL), and Holy Trinity High School (Torbay, NL).

1994-2002 DAVIS ENGINEERING & ASSOCIATES LTD., Clarenville, NL**Project Engineer**

- ♦ Project management/contract administration of various construction projects at Natuashish, Labrador, including the facultative wastewater treatment lagoon and the slow sand filtration water treatment plant. Work at Natuashish also included:
 - Managing environmental compliance and monitoring issues associated with the Mushuau Innu Relocation Project.
 - Involvement with the design team for municipal services for Natuashish, Labrador. This site was a greenfield site for which there was neither existing access nor infrastructure available to support the project



Elaine McArthur 3.

development.

- Life cycle cost analysis of infrastructure elements for Natuashish, Labrador.
 - Design of sewerage collection and disposal system for the construction camp at Natuashish.
 - Project scheduling and cost administration for engineering and construction activities for the relocation of Davis Inlet to Natuashish.
 - Landfill design for the new Innu community in Sango Bay (Natuashish), Labrador. Emphasis was placed on the investigation of environmental issues with cultural concerns in selection of the landfill site.
 - Remote coordination of field investigations at Natuashish, Labrador for the relocation of the community of Davis Inlet.
- ◆ Design of marine infrastructure for small craft facilities.
 - ◆ Study of water quality for municipal clients, including THM formation potential and investigation, and design of treatment options for parameters of concern.
 - ◆ Study of the suitability of the domestic water treatment facilities being utilized at Newfoundland and Labrador Hydro's remote power generation sites. This study included a review of water quality characteristics and existing treatment systems, as well as recommendations to upgrade the systems where necessary to comply with the Canadian Drinking Water Quality Guidelines.
 - ◆ Computerized hydraulic analysis of water distribution system for the Town of Stephenville using digital pressure pipe modelling. As part of a larger study into the water supply for Stephenville, a series of source/connection scenarios were investigated using this model to optimise the Town's supply and distribution pressure net.
 - ◆ Analyses of existing and proposed water distribution systems for the Town of Port Blandford. Various options/configurations were evaluated based on the simulated flow patterns determined by the pressure pipe model, Cybernet.
 - ◆ Assessment and valuation of existing marine infrastructure.
 - ◆ Generation and maintenance of construction schedules incorporating details from several project managers of various construction phases.
 - ◆ Investigation of innovative wastewater treatment systems in conjunction with the Wastewater Technology Centre of Burlington, Ontario. An evaluation of the performance capabilities of emerging new technologies for Newfoundland communities was a major component of this project.
 - ◆ Execution of the regional solid waste management study for the Town of Lewisporte and surrounding communities to investigate centralized landfill



Elaine McArthur 4.

and incineration options.

- ◆ Investigation of sewage treatment and disposal options for solid waste management studies carried out for the Eastport peninsula and Port Blandford – Winterbrook area communities. Pre-design of facultative lagoon and drainage bed facilities were completed from anticipated local demand, and appropriate locations were determined from geotechnical investigations at proposed landfill locations.
- ◆ Completion of a study into the impacts of upgrading the TCH at Whitbourne to RAD100 standards in conjunction with McCormick Rankin Associates. Alternative geometric configurations to accommodate access to Route 100 and Routes 80/81 were evaluated for anticipated traffic performance and potential business impacts. Responsible for community information sessions.
- ◆ Development and implementation of computerized diesel plant model for evaluation of lifecycle fuel usage costs.
- ◆ Responsible for phased environmental site assessments.
- ◆ Design of on-site subsurface wastewater treatment and disposal systems, and other municipal works.

1992

DEPARTMENT OF WORKS, SERVICES & TRANSPORTATION

Student Engineer

- ◆ Responsibilities included the detailed examination of the structure of the Highway Transportation Management System, which is an information management program used by the Department for the analysis of highway elements. Recommendations were made regarding the development of a prioritisation scheme for the Highway Transportation Management System.

1992

NEWPLAN CONSULTANTS LIMITED, Mount Pearl, NL

Student Engineer

- ◆ Responsible for the application of a computer model to simulate sanitary sewer flow patterns for the Smallwood Drive area in Mount Pearl. This computer model was developed to determine modifications required to the system to accommodate new residential and commercial developments.
- ◆ Prepared detailed cost estimates of municipal roadways in the Town of Conception Bay South to identify the funding requirements to upgrade the town's roads and develop a priority list for future road upgrading.

1990, 1991

CANADIAN COAST GUARD

Student Engineer



Elaine McArthur 5.

- ◆ Duties for this work period included detailed specification preparation, site inspections and project supervision. The term project was to formulate the preliminary design details for a single span, concrete girder-deck bridge for the Cape Race access road. Other projects included the supervision of road restoration in Cape St. Francis, building renovations at the VTS Centre in Argentia and inspection of the construction of the operations building for a new Loran 'C' station in Portugal Cove South.

1989, 1990 NATIONAL RESEARCH COUNCIL (Newfoundland & Labrador Development Corporation)

Student Engineer

- ◆ The work period was devoted to investigating advanced industrial materials for application in Newfoundland's marine environment. Site visits were made to several research facilities, including the Industrial Materials Research Institute in Boucherville, Quebec, the Institute for Research in Construction in Ottawa, Ontario, and the Institute for Materials Research in Hamilton, Ontario.

PROFESSIONAL DEVELOPMENT

2004	Project Planning and Management for Engineers, Memorial University of Newfoundland
2001	Water Quality Issues and Treatment Options, Daltech University
1998	Management of Environmental Site Assessments Phases I-IV, Daltech University
1998	Communal Wastewater Systems, EPIC Educational Program
1998	Engineered Wetlands Technical Seminar, Canadian Society for Civil Engineering

COMPUTER APPLICATIONS

Microsoft Office, MSPProject, AutoCAD, SANSYS, WATSYS, CYBERNET

PROFESSIONAL ASSOCIATIONS

Association of Professional Engineers & Geoscientists of Newfoundland and Labrador

LANGUAGES

English



Ray OSMOND

Ray Osmond is a Senior Mechanical Technologist with almost 40 years experience.

EDUCATION

1971 Mechanical Engineering Technology, Community College

EXPERIENCE

Since 2010 **SNC-LAVALIN INC., Mount Pearl, NL Canada**
Senior Mechanical Technologist

2002-2010 **AMEC AMERICAS LIMITED, St. John's, NL**
Senior Mechanical Technologist

1981-1998 **BFL CONSULTANTS LIMITED, St. John's, NL Canada**
Mechanical Technologist

1980-1981 **NEWFOUNDLAND TELEPHONE COMPANY, St. John's, NL Canada**
Level 1 Management Position

1971-1980 **BISHOP & FORBES LIMITED, St. John's, NL Canada**
Mechanical Technologist

Details by project:

- ◆ Hotels, Motels & Residential
 - Hotel Newfoundland (Sheraton)
 - Hotel / Convention Centre, Delta Hotel
 - MUN Student Apartments
 - Journey's End Motel – St. John's
- ◆ Health Care
 - Janeway Children's Hospital

Ray OSMOND 2.

- Health Science Complex – Dialysis Unit Modifications
- Health Science Complex – Centre for Remote Telemedicine
- Carbonear Hospital
- Western Memorial Regional Hospital – Major Renovations
- Dr. H. Bliss Murphy Cance Clinic, St. John's, NL
- Health Sciences Complex – MRI Extension
- Stephenville Hospital
- Trenton, Ontario's Medical Clinic
- ◆ Assembly Buildings
 - Lance Aux Meadows Interpretation Centre
 - Port Aux Basques Arena, Sports Complex
- ◆ Office Buildings
 - Scotia Centre, St. John's
 - ICON Building, St. John's
 - Confederation Complex Extension, St. John's, NL
 - Fort Williams Building, Newfoundland Telephone Company
 - Atlantic Place, St. John's
 - Administration Building, Hibernia Site, Bull Arm, NL
- ◆ Industrial and Special Purpose
 - Safety Offshore Fire Fighting Research Training Centre, Foxtrap, NL
 - Northwest Atlantic Fisheries Centre, St. John's, NL
 - H.M. Penitentiary, Extensions and Renovations, St. John's, NL
 - Power Plant 900 Block, Pleasantville, St. John's, NL
 - MUN Annex Boiler Plant
 - Department of National Defence, Long Range Radar Sites for Brevoort, Saglek and Cartwright
 - Marystown Shipyard Extension
 - Fire Station, Gander, NL



Ray OSMOND 3.

- Foam Fire Protection System Aircraft Hangers, Building 258 and 260, Goose Bay
- Argentia Ferry Terminal
- Paint / Blast Shop, Hibernia Site, Bull Arm, NL
- Marine Atlantic Maintenance Facilities
- Harbour Breton Area, NL
- Laundry Facilities, General Hospital, St. John's, NL
- RCMP Complex, Goose Bay, NL
- College of the North Atlantic – Seal Cove Boiler Replacement
- DND Petawawa Vehicle Maintenance Facility
- St. John's Port Authority Office Building
- DND North Warning Systems
- Canadian Tire Service Stations

ADDITIONAL TRAINING

CADD (Computer Aided Drafting Design)
"Carrier" Air Conditioning Technical Development Program
HVAC Controls – Marine Institute, NL
Site Safety Training Course
Fall Protection
Confined Space
First Aid

LANGUAGES

English

Curtis Beazley

Curtis Beazley is a Mechanical Designer, with over 10 years experience in the design and layout of mechanical systems and equipment for industrial, commercial and building applications utilizing computer-aided drafting technology such as AutoCAD and MicroStation using the Heat Carrier Hourly Analysis Program for determining heating and cooling loads for a building. Experience with mechanical systems includes plumbing and drainage, fire protection, sprinklers, hot water heating, steam heating, ventilation and air conditioning/chilled water systems, and fuel pipe lines. Curtis has also has been involved in the design and development of LEED certified buildings.

EDUCATION

- 1999 Bachelor of Technology, Memorial University of Newfoundland, St. John's, NL
1998 Mechanical Engineering Technology, The College of the North Atlantic, St. John's, NL

EXPERIENCE

**Since 1999 SNC-LAVALIN INC. – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL
Mechanical Designer / Engineering Technologist / CAD Operator**

- ◆ Voisey's Bay Mine/Mill Project, Voisey's Bay, Labrador
 - Assisted with, prepared and developed Mechanical Room layout sections for the Services Complex at Voisey's Bay. Developed HVAC layouts for the Services Complex.
 - Coordinated mechanical interference checks with other disciplines and acted as the CAD Coordinator for the Mechanical Department.
 - Provided Document Control for the mechanical discipline by filing check prints and any reviewed documents.
 - Assisted and prepared drawings for critical mechanical fuel tank farms and fuel lines for the port and mill site at Voisey's Bay.
 - Prepared drawings for fuel, portable water and fire protection pumphouses for Voisey's Bay.



Curtis Beazley 2.

- ◆ Complete HVAC design layouts and coordination of mechanical systems for Corner Brook City Hall, Mount Pearl Glacier and the Central Waste Management project. Attended design and coordination meeting to discuss interference issues.
- ◆ Mechanical piping and HVAC drafting on the following projects:
 - Combined Services Building, St. John's International Airport, St. John's, NL
 - Corner Brook City Hall, Corner Brook, NL
 - Mount Pearl Glacier, Mount Pearl, NL
 - Central Waste Management, Central Newfoundland.
 - Humber Valley Resort, Corner Brook, NL
 - The Narrows Condominiums, St. John's, NL
 - Neddie's Harbour Inn, NL
 - Herdman Collegiate, Corner Brook, NL
 - St. John's International Airport, Renovations & Rehabilitation
 - Field House for Memorial University of Newfoundland, St. John's
 - Newfoundland Liquor Corporation Outlets, Various Locations
 - New Health Care Centre, Fogo Island, NL
 - St. Clare's Mercy Hospital, St. John's, Renovations
 - Conception Bay South Treatment Plant
 - Mount Pearl City Depot
 - Melville Hospital, Goose Bay, Labrador
 - New World Island School, NL
 - Pitcher's Pond Golf Course
 - Natuashish Housing Project, Labrador
 - Humber Valley Resort, Corner Brook, NL
 - Deer Lake Arena, Deer Lake, NL
 - Air Liquide Canada Inc., New Customer Centre, Mount Pearl, NL
- ◆ Assisted and prepared critical mechanical systems layouts, including drainage, dewatering and fire protection systems for Granite Lake Hydro-Electric Development Project (Spent Sept 2000 – Jan 2001 at AGRA/BAE-Newplan JV office)



Curtis Beazley 3.

- ◆ Created detailed sections and equipment layouts for the following projects:
 - Corner Brook City Hall, Corner Brook, NL
 - Mount Pearl Glacier, Mount Pearl, NL
 - Central Waste Management, Central Newfoundland
 - Building 223, Pleasantville, St. John's, NL
 - Herdman Collegiate, Corner Brook, NL
 - St. Clare's Hospital Chilled Water Upgrade, St. John's, NL
 - Mobile School, Mobile, NL
- ◆ Completed the Hourly Analysis Program on the following projects to determine heating and cooling loads and exhaust rates so that air handling units, air conditioning units and fans could be selected:
 - Nain Administration Building, Nain, Labrador, NL
 - Herdman Collegiate, Corner Brook, NL
 - Leary's Brook School, St. John's, NL
 - Building 223, Pleasantville, St. John 's, NL
 - Mobile School, Mobile, NL

LANGUAGES

English

Davis J. Hull

Davis Hull is a Senior Engineering Technician with BAE-Newplan Group Limited, with thirty-eight (38) years design experience.

EDUCATION

1971 Engineering Drafting - District Vocational School, Conception Bay South, NL
1970 Basic Drafting - District Vocational School, Gander,

EXPERIENCE

Since 1995 SNC-LAVALIN – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL

Senior Electrical Technician

Major projects include:

- ◆ Mobile Central High School, Mobile, NL
- ◆ St. John's International Airport – Combined Services Building – Extension & Renovations
- ◆ City of Mount Pearl, Extension and Renovations to Municipal Service Depot
- ◆ Herdman Collegiate, Western School District – Renovations and Fit-Up, Corner Brook, NL
- ◆ Fogo Island Health Centre – Fogo, NL
- ◆ St. John's International Airport – Air Terminal Building Rehabilitation and Expansion, St. John's, NL
- ◆ Melville Hospital - Goose Bay, NL
- ◆ Memorial University of Newfoundland Field House, St. John's, NL
- ◆ St. Clare's Mercy Hospital renovations, St. John's, NL
- ◆ HMDC/HIWS Offshore Facilities, Mount Pearl, NL
- ◆ MPRS Mushroom Plant, Argentinia, NL
- ◆ Grand Falls Sewage Treatment Plant, Grand Falls, NL

Davis J. Hull 2.

- ◆ A. Harvey & Co. Ltd. - Hibernia Shore Base

Since 1981 THE BAE GROUP LIMITED, St. John's, NL

Senior Electrical Technician

Major projects include:

- ◆ Mount Pearl Arena, Mount Pearl, NL
- ◆ Cow Head Offshore Fabrication Facility, Marystown, NL
- ◆ Waterford Hospital renovations, St. John's, NL
- ◆ RCMP "B" Division Headquarters, St. John's, NL
- ◆ Renovation Work for Supreme Court and Court of Appeal, St. John's, NL
- ◆ Baine Johnston Centre, St. John's, NL
- ◆ New Headquarters for Newfoundland and Labrador Hydro, St. John's, NL
- ◆ New House of Assembly, Confederation Building, St. John's, NL
- ◆ Newfoundland and Labrador Housing Corporation Building, St. John's, NL
- ◆ Electrical Upgrading for Natural History Building and Newfoundland Museum
- ◆ Bonavista Hospital, Bonavista, NL
- ◆ Arctic Vessel and Marine Research Institute, St. John's, NL
- ◆ Field Electrical Centre, Deer Lake Airport, Deer Lake, NL
- ◆ Maintenance Garage, Gander International Airport, Gander, NL
- ◆ Cape Breton Post, Cape Breton, NS

1979 - 1981 PROJECT MANAGEMENT & DESIGN (1974) LTD.

Senior Electrical Design Draftsman

Major projects include:

- ◆ Pasadena Integrated School, NL
- ◆ Fogo Island Fish Plant, NL

Davis J. Hull 3.

1972 - 1979 BISHOP & FORBES LIMITED

Electrical Design Draftsman

Major projects include:

- ◆ Carbonear Regional Hospital, Carbonear, NL
- ◆ Environment Centre, White Hills, St. John's, NL
- ◆ Postal Station, Kenmount Road, St. John's, NL
- ◆ Taxation Data Centre, Freshwater Road, St. John's, NL
- ◆ Atlantic Place Shopping Centre, St. John's, NL

PROFESSIONAL ASSOCIATIONS

Registered Member, Association of Engineering Technicians & Technologists
of Newfoundland

LANGUAGES

English

Catherine Miller

Ms. Miller is a Civil/Electrical/Mechanical Technician with over twenty years experience in her field.

EDUCATION

1980 Basic Drafting (DVS Carbonear)

EXPERIENCE

Since 1997 BAE-NEWPLAN GROUP LIMITED – SNC-LAVALIN INC., Mount Pearl, NL
CAD Operator – Mechanical, Electrical and Civil

- ◆ St. John's International Airport
 - Rehabilitation & Renovations
 - Combined Services Building
 - Parking System
 - Field Electrical Centre
 - Gate 5
- ◆ Various schools, including:
 - Mobile Central High School, Mobile, NL
 - Herdman Collegiate, Corner Brook, NL
 - Leary's Brook School – Extension, NL
 - Holy Cross School – Electrical Assessment, Holyrood, NL
- ◆ Voisey's Bay Mine/Mill Site Development & Infrastructure, Labrador, NL
- ◆ Various hospitals, including:
 - St. Clare's Hospital, Special Care Unit, 6th Floor
 - St. Clare's Hospital, Chilled Water System
 - Waterford Hospital, Fire Alarm System Upgrade
- ◆ Mount Pearl City Depot and RNC Detachment, Mount Pearl, NL



Catherine Miller 2.

- ◆ Salvation Army Church, Stephenville, NL
- ◆ Nain Administration Building, Nain, Labrador, NL
- ◆ Residential Design, including:
 - McKee's Grove Condominiums
 - The Narrows Condominiums
 - Kelly's Brook Apartments
- ◆ Registry of Deeds, Office Space, St. John's, NL
- ◆ ScotiaBank, Paradise, NL
- ◆ Fire Hall Ventilation, Town of Stephenville
- ◆ College of the North Atlantic, Boiler Plant Replacement
- ◆ Hawke's Bay Watermain Replacement, NL
- ◆ Local Waste Management Facilities, Central NL
- ◆ Corner Brook Sewage Lift Station

1995-1996 J. P. Kenny and Partners PLC**CAD Operator**

- ◆ Hibernia Subsea Offshore Loading System and Pipeline Contract

1989-1994 The BAE Group Limited**Manual and Computerized Draftsperson****ADDITIONAL TRAINING**

1998	Auto CAD R-14 (In-house training)
1997	Microstation SE (In-house training)
1997	Windows 95/NT Overview
1994	Auto CAD 12-12 for Windows Update (Micro Teck)
1994	Microsoft Windows 3.1 (Micro Teck)
1991	Basic Electrical Course (Cabot College)
1990	Levels 1 and 2 CAD (SEA Systems)
1986	Construction Estimating (Cabot College)

Catherine Miller 3.

LANGUAGES

English

Eugene Laing

Eugene Laing is a Senior Civil Technologist with over forty(40) years experience in the consulting industry. He has in-depth design and CAD experience for numerous municipal, mechanical, marine and civil engineering projects throughout Newfoundland and Labrador.

EDUCATION

1965 District Vocational School, Carbonear, NL

EXPERIENCE

Since 1995 SNC-LAVALIN – BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL
Senior Civil Technologist

- ◆ Design and co-ordination of the following major projects:
 - Lower Churchill Hydro Study, NL
 - Island Pond/Portland Creek Hydro Study, NL
 - GUI – Simandou – Iron Ore Handling Facilities, Guinea
 - Husky Energy, White Rose Topsides Concept Study design and bid submission
 - Husky Energy, White Rose, Subsea Concept development and design
 - St. John's International Airport, Torbay, NL
 - Voisey's Bay Mine/Mill Project site development and services
 - Hibernia Shore Base – A. Harvey & Co. Ltd.
 - Sewage Treatment Facilities – Towns of Conception Bay South, Grand Falls and Happy Valley-Goose Bay, NL
 - Water Supply System – Town of Stephenville

1981-1995 THE BAE GROUP LIMITED, St. John's, NL
Senior Civil Technician

Eugene Laing 2.

- ◆ Design and co-ordination of municipal and civil projects throughout Newfoundland and Labrador.
- ◆ Design and co-ordination of the following major projects:
 - Cow Head Offshore Fabrication Facility, Marystown, NL
 - Port of St. John's, Main Terminal Upgrading
 - Short Range Radar Facilities, Department of National Defence
 - Wharf Construction at various sites along Labrador coast
 - Water and sewer systems at Nain, Cartwright, Rigolet, Trepassey and Bay de Verde
 - Restoration and clean up of former Dew Line Sites
 - Codroy Breakwater Reconstruction
 - RCMP "B" Division Headquarters
 - St. John's Port Corporation - Fender repairs at Main Terminal
 - St. John's Port Corporation - Water Main Replacement

1979-1981 PROJECT MANAGEMENT & DESIGN (1974) LIMITED, St. John's, NL**Senior Mechanical Technician**

- ◆ Design and co-ordination of mechanical systems in commercial and residential buildings
- ◆ Design and co-ordination on the following projects:
 - Arctic Vessel Marine Research Institute
 - Pasadena Elementary School
 - Trepassey Water Supply Chlorination System
 - Cartwright Water Supply Chlorination System

1965-1979 BISHOP & FORBES LIMITED, St. John's, NL**Mechanical Technician**

- ◆ Design and drafting of mechanical systems under the supervision of Project Engineer.
- ◆ Design and drafting on the following projects:
 - Northwest Atlantic Fisheries Centre



Eugene Laing 3.

- Engineering & Applied Sciences Building, MUN
- South Campus Boiler House, MUN Campus
- Health Sciences Complex, St. John's
- Hospitals at Carbonear, Twillingate and Grand Falls

ADDITIONAL TRAINING

1997-1999 AutoCAD, Release 2004
 MicroStation Release J

COMPUTER APPLICATIONS

WATSYS, Version 5.0, Water Analysis Systems
Inroads - Survey Version 7.0
AutoCAD, Release 2007
MicroStation – V8 (Intergraph)

PROFESSIONAL ASSOCIATIONS

Association of Engineering Technicians, Technologists of Newfoundland

LANGUAGES

English

**JOB DESCRIPTION**

DOCUMENT NUMBER

JD-LCP-4178**SNC • LAVALIN**

PAGE 1 of 1

CIVIL STRUCTURAL TECHNICIAN CAMPSITE UTILITIES

REVISION 00 ISSUE DATE 2011-07-15

Incumbent Name: Paul White**1.0 PURPOSE**

To oversee and execute drafting and technical work as directed by the Senior Civil/Structural Technician, in accordance with the project requirements for quality.

2.0 SCOPE

Drafting and technical support for the engineering related to the design of campsite utilities

3.0 SPECIFIC RESPONSIBILITIES AND AUTHORITY**3.1 Engineering Operations**

3.1.1 Prepare drawings, data sheets and material lists in accordance with the proper quality standards, the project procedures and facility and discipline design criteria.

3.2 Quality Assurance

3.2.1 Ensure that drawing quality is in accordance with corporate and project requirements.

4.0 WORKING RELATIONSHIPS

4.1 Reports to the Senior Civil/Structural Technician

4.2 Maintains working relationships with Discipline Engineers as required in the design of the facilities.

4.3 Maintains functional relationships with Discipline Engineers, Technicians and Draftspersons

5.0 METHOD OF REPORTING

Reports weekly to the Senior Civil/Structural Technician on the progress of technical work

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Paul WHITE

Paul White is a CAD Technician with 10 years experience. Paul has obtained experience in the civil, structural, architectural, and landscape architectural disciplines.

EDUCATION

- 2005** Diploma in Information and Communications Technology (D.ICT), Memorial University of Newfoundland (Division of Lifelong Learning), St. John's, NL
- 1998** Certificate in Computer Aided Drafting (CAD), College of the North Atlantic, St. John's, NL

EXPERIENCE

Since 2007 **SNC-LAVALIN INC. - BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL**
CAD Technician – Civil

- ◆ CAD drawing & graphic illustration production on civil, heavy civil, planning & feasibility study, property development and building construction projects.
- ◆ Projects included:
 - Lower Churchill Project - Preliminary Site & Facilities Planning, Geotechnical Program, EIS & Technical Report illustration *for Nalcor Energy*
 - Michelin Development Project – Uranium Mine Feasibility Study *for Aurora Energy Resources Inc.*
 - Port and Facilities Planning & Site Selection Study (Africa) *for Rio Tinto Iron Ore Atlantic Limited*
 - Herdman Collegiate Parking Lot Redevelopment *for Dept. of Education*
 - Corner Brook City Hall (Site Development) *for City of Corner Brook*
 - Liquefied Natural Gas (LNG) Transshipment Site Selection Study *for North Atlantic Pipeline Partners*
 - Alcoa Greenland Site Selection Investigation *for Alcoa Inc.*
 - Flourspar Mine Bankable Feasibility Study *for Burin Minerals Limited*



Paul WHITE 2.

2002-2006 VARIOUS PRIVATE CONSULTANTS / PROPERTY OWNERS & DEVELOPERS, St. John's, NL

CAD Technician – Architectural & Landscape Architectural

- ◆ Project-based contractual drawing production on variety of planning, property development and building construction projects.
- ◆ Projects included:
 - Burnt Cape Ecological Reserve, for LandTech (& Collette Nap Architect)
 - PWGSC-CRA Tax Centre Site Landscape Rehabilitation, for Richard Seypka & Associates
 - St. John's (Agricultural) Research Centre Fall Restraint System, for Roman Halitzki Architecture & Design
 - Head Offices Renovation, Northern Property REIT
 - Manna Bakery, Proposed Retail Store Deli & Commercial Kitchen
 - Bella Vista Limited, As-Built Drawings for Commercial Building, Freshwater Road
 - Dental Practice Offices, Dr. Larry Bussey

2001-2002 KAVANAGH & ASSOCIATES LTD., St. John's, NL

CAD Technician - Civil

- ◆ Responsibilities included property development and municipal infrastructure civil works & facilities projects.
- ◆ Projects included:
 - Municipal Water and Sewer Infrastructure, Parking Lot Design, and Surface Water Drainage, FirstPro Retail Shopping Centre
 - Municipal Infrastructure, Water/Sewer Systems, Road Design and Construction for Various Residential Developments
 - Long-Term Water Supply Infrastructure Planning, St. John's Municipal Water Supply.



Paul WHITE 3.

2000-2001 SHEPPARD CASE ARCHITECTS LTD., St. John's, NL

CAD Technician - Architectural

- ◆ Responsibilities included high profile commercial extension/renovation and luxury condominium projects.
- ◆ Projects included:
 - Sobey's Supermarkets, Extensive Renovations, Long Pond, Manuels; and Newtown Road, St. John's
 - Multi-Storey Luxury Condominium Development, Kenny's Pond Condominium Development

1999-2000 NEVLAB ENGINEERING LTD., South River, NL

CAD Technician - Civil & Structural

- ◆ Responsibilities included institutional, commercial, structural, property development and municipal infrastructure civil works and facilities projects.
- ◆ Projects included:
 - Baccalieu Collegiate, Old Perlican, NL
 - Powell's Supermarkets, Bay Roberts and Harbour Grace, NL
 - Municipal Water Supply & Sewer System Infrastructure, C.B.S., NL

1998 FACILITIES DESIGN GROUP LTD., St. John's, NL

CAD Technician - Architectural

- ◆ Responsibilities included institutional (school and hospital) and commercial (shopping mall) projects.
- ◆ Projects included:
 - Placentia (Shopping) Mall, Placentia, NL
 - Dr. A. A. Wilkinson Memorial Health Centre, Old Perlican, NL
 - Roof Replacement & Repairs for A. P. Low Primary School, J. R. Smallwood Middle School, Labrador City Collegiate

ADDITIONAL TRAINING

1996 Entrepreneurship Training Program, Memorial University of Newfoundland (School of Business), St. John's, NL



SNC • LAVALIN

Paul WHITE 4.

1995 Computer Graphic Arts Program, College of the North Atlantic (Division of Continuing Education), St. John's, NL

COMPUTER APPLICATIONS

AutoCAD

AutoCAD Civil 3D

LANGUAGES

English

Martin Ellis

Mr. Ellis is a Senior Architectural Technician with 35 years experience.

EDUCATION

1975 Diploma in Architectural Drafting, College of Trades & Technology, St. John's, NL
1974 Diploma in Basic Drafting, Carbonear District Vocational School

EXPERIENCE

Since 1995 SNC-LAVALIN INC. - BAE-NEWPLAN GROUP LIMITED, Mount Pearl, NL
Senior Architectural Designer

- ◆ Responsible for preparation of architectural drawings, co-ordination of architectural design team and integration of Mechanical, Electrical and Structural disciplines. Major projects have included:
 - Pearlgate Recreational Complex, Mount Pearl, NL
 - McKee's Grove and The Narrows Condominium Projects, St. John's.
 - Mobile Central High School, Mobile, NL
 - Central Newfoundland Waste Handling Project, NL
 - Combined Services Building, St. John's International Airport, NL
 - Voisey's Bay Nickel Mine/Mill Project, Voisey's Bay, Labrador, including Service Complex, Accommodations Complex, and general architectural for the Mill & Port Site.
 - Expansion & Rehabilitation to St. John's International Airport
 - Avalon East School Board – School Restructuring Program
 - Extension and Renovations to Mount Pearl City Hall
 - Fogo Island Health Centre
- ◆ Also involved in project management and administration, and concept design for numerous smaller projects for clients such as the Newfoundland Liquor Corporation, Health Care Corporation of St. John's, Royal Bank of Canada, and other private clients.

Martin Ellis 2.**1981-1995 THE BAE GROUP LIMITED, St. John's, NL****Architectural Designer**

- ◆ Responsible for preparation of architectural drawings, co-ordination of architectural design team and integration of Mechanical, Electrical and Structural disciplines. Also involved in project management and administration, and concept design for numerous projects. Major projects have included:
 - New stadium, Gander, NL
 - New stadium, Stephenville, NL
 - New stadium, St. Barbe
 - Nephrology Outpatients Centre, St. John's
 - RCMP "B" Division Headquarters, St. John's
 - Northwest Atlantic Fisheries Centre, St. John's
 - Provincial House of Assembly, St. John's
 - School of Fine Arts, Corner Brook
 - Waterford Hospital Renovations, St. John's
 - Glenwood School, Glenwood, NL
 - Cape Breton Post Building, Sydney, NS
 - St. John's Metrobus Centre, St. John's
 - Grenfell Regional Health Services, St. Anthony
 - Baine Johnston Centre, St. John's
 - Primary/Elementary School, Fogo Island
 - Air Terminal Building, Deer Lake
 - Institute of Fisheries and Marine Technology, St. John's

1979-1981 BARLOW & ASSOCIATES**Architectural Draftsman**

Responsible for architectural drafting and co-ordination on various small to medium sized projects.

1978-1979 NEIL CHAPLIN LIMITED**Architectural/Electrical Draftsman**

Responsible for Electrical drafting for various design/build electrical projects.

Martin Ellis 3.

Also design and project management for two architectural projects.

1975-1978 NEW LAB PRE-ENGINEERED STRUCTURES LTD.

Draftsman

Responsible for concept design and construction documentation for many small design/build projects.

1975 FEDERAL MINISTRY OF TRANSPORT

Draftsman

Miscellaneous drafting and design for St. John's Air Terminal Building and Operations Centre.

COMPUTER APPLICATIONS

AutoCAD

LANGUAGES

English

CURRICULUM VITAE**TERRY H. SOOLEY**

Mr. Sooley is a Senior Drafting Technician with twenty one (21) years experience in drafting and design.

EDUCATION

- | | |
|------|---|
| 1989 | Avalon Community College, Carbonear, Newfoundland
Constructional Drafting |
| 1993 | Marine Institute, St. John's, NF
AutoCAD Levels I and II (Release 12 for Windows) |
| 1995 | Newfoundland Occupational Safety Consultants, Inc., St. John's, NF
Confined Space Entry
The Core Training Program for W.H.M.I.S.
Powerline Hazards Safety Training Program
Transportation of Dangerous Goods Regulations (Road) |
| 1997 | BAE-Newplan (In-house)
MicroStation SE |
| 1998 | Microtek, St. John's
AutoCAD Upgrade (Release 14) |
| 2007 | Academy Canada, St. John's
AutoCAD Civil 3D 2007 |
| 2007 | GTC Safety Training & Consultants Services, Gould's, NL,
Confined Space Entry
Powerline Hazard, W.H.M.I.S. , T.O.D. |
| 2009 | Microtek, St. John's
AutoCAD Upgrade Civil 3D 2009 |

EXPERIENCE

Mar. 2011-
Present

BAE _ NEWPLAN GROUP LIMITED
Senior Civil Engineering Technician

- ◆ Responsible for design and drafting of municipal and civil projects.

Feb. 1999- NEWFOUNDLAND AND LABRADOR CONSULTING ENGINEERS LTD.
Mar. 2011 Senior CADD Technician

- ◆ Responsible for design and drafting of Municipal Infrastructure, Buildings and Marine projects.

Nov. 1998- CITY OF ST. JOHN'S - Engineering Department
Feb. 1999 Draftsperson II

Responsible for design and drafting of traffic intersections, road realignment, property reports around the City and parking and truck turning for the CIVIC Centre. Using the program Auto Turn.

1995-1998 BAE _ NEWPLAN GROUP LIMITED
Drafting Technician

- ◆ Responsible for design and drafting of municipal and civil projects including the mine/mill infrastructure for the Voisey's Bay project. Aided in the detailing of the Shipping Dock and Road Construction.

1990-1995 NEWPLAN
CONSULTANTS
Drafting Technician

- ◆ Responsible for the production of drawings, drawing control, archiving and backup of CADD drawing files of municipal and civil projects.

1989-1990 NEWPLAN CONSULTANTS
Drafting Technician - On the Job Training

MAJOR PROJECTS INCLUDE:

- ◆ Using **AutoCAD**, projects include:

-Town of Nain, Water and Sewer System

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- Town of Makkovik, Water and Sewer System
- Town of Portugal Cove - St. Philip's, Water and Sewer System
- Town of Heart's Delight, Water Treatment Plant
- Town of Portugal Cove - St. Philip's, Waste Water Treatment Plant
- Town of Fogo, Water and Sewer System
 - St. John's Port Corporation, Structural Repairs Berths 19,20, &

- Town of St. Anthony, Harbour Development
- Town of Bay de Verde, Harbour Development Study
- Town of Grand Bank, Water and Sewer System
- Town of Fortune, Water and Sewer System
- Town of Conception Bay South, Water and Sewer System

◆ Using **Microstation SE**, projects include:

- Voisey's Bay Project

◆ Using **AutoCAD**, projects include:

- Town of Conception Bay South, Water and Sewer System
- City of Mount Pearl, Street Upgrading and Paving
- Town of Marystown, Street Upgrading and Paving
- Town of Marystown, Water and Sewer System
- A. Harvey & Company, Shore Base, St. John's Waterfront
- A. Harvey & Company, H.M.D.C. Building
- A. Harvey & Company, H.I.W.S. Building
- Town of Grand Bank, Water and Sewer System
- Also extensive use with down loading information from Topcon Data Collection

Other projects include:

Id supervision and quality/quantity control on the following construction projects:

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- City of Mount Pearl, Trunk Sewer
- Town of Conception Bay South, Water and Sewer System Ph.

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- Town of Conception Bay South, Water and Sewer System Ph.
- North West Atlantic Fisheries Center, Sewer Main Testing
- Spaniard's Bay Water & Sanitary Sewer
- Trepassey Seawall Repair

Terry Sooley

- Karwood Estates, Paradise, Kenmount Road Extension
- Town of Spaniard's Bay, Water and Sewer System 2000
- Smith Stockley, St. Johns, Parking lot Paving

LANGUAGES

English

July, 2011