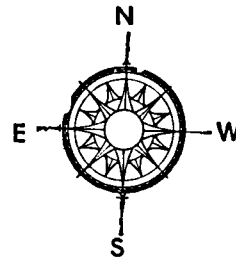


The Nova Scotian Surveyor

Published Quarterly under the Auspices of

The Association of Provincial Land Surveyors
of Nova Scotia Incorporated



Founded 1951

R. E. Millard, P. L. S., Managing Editor

Incorporated 1955

VOLUME 3

DECEMBER, 1956

NUMBER 9

Minutes Of The Sixth Annual Meeting

OF THE ASSOCIATION OF PROVINCIAL LAND SURVEYORS OF NOVA SCOTIA

November 27th and 25th, 1956

The meeting was opened at 10.30 a. m., Tuesday, November 27th at the Nova Scotia Technical College, Halifax, Nova Scotia, by Vice-President, Freeman Tupper in the absence of the President, Mr. R. E. Millard, due to illness.

Members present were the following:— Hoyes A. Cameron, George W. Swansburg, N. R. Harrington, James A. H. Church, H. B. Robertson, J. L. Ryan, Spencer Ball, Errol B. Hebb, C. C. Lemmon, C. H. Robart, Gordon A. Nicholson, J. E. R. March, V. W. E. Johnson, C. Irwin Cameron, E. O. Temple Piers, Eldon Adams, Sterling G. Snow, Gerald D. Hughes, John S. Pope, Frank D. Yates, E. A. Crawley, Robert Hunt, Freeman Tupper, D. E. Wagstaff, R. E. Dickie, R. F. Melanson, C. S. Creighton, D. L. Crooker, George T. Bates, Lyndon Gray, Joseph F. Archibald, D. L. Eldridge, H. K. Wedlock, Gerald F. MacDougall, Wallace Betts, A. F. Chisholm, Ian MacInnis, O. H. Manuel, A. H. Murray, G. W. I. Creighton, W. E. Servant, A. E. Amirault, Chester A. Keen, Herbert Martell, James F. Kelly, A. B. Rutledge, R. M. Schofield.

Besides the members there were present the following:—E. K. Ford, Vocational Education Division, Halifax; Dr. G. G. Mayerhof, Nova Scotia Technical College, Halifax, Phillip J. Smith, National Harbours Board, Halifax.

Visiting delegates from the New Brunswick Land Surveyors Association were delayed due to poor flying conditions and did not attend Tuesdays session but were in attendance for the meeting on Wednesday morning, November 28th; W. L. Roberts, Fredericton, New Brunswick; H. P. Lingley, Saint John, New Brunswick.

Also present as exhibitors were:—Mr. Hattie of Eastward Industries Limited; Mr. Pelletier of Keuffel and Essor Co. of Canada, Montreal; Mr.

Carver of Hughes-Owens Company Limited; Mr. Garnett and Mr. Stewart of Garnett Optical Company Limited, and Mr. Peden of Wild of Canada, Limited, all of whom put on a very attractive display of Surveying and Drafting Instruments and Equipment, which was of great interest to the members and guests.

The minutes of the last annual General meeting was read by the secretary. Moved by Mr. J. A. H. Church that the minutes as read be adopted.

Mr. Tupper read a telegram from Mr. Roberts and Mr. Lingley of the Association of New Brunswick Land Surveyors stating that all flights from St. John were cancelled and they would arrive at 5.30 p. m.

He also read a telegram from the Association of Newfoundland Land Surveyors regretting that they were unable to attend our meeting.

He then read a letter from Mrs. A. M. James expressing appreciation of the flowers sent in memory of her departed husband.

He read a letter from Major General E. C. Plow regretting that he would be unable to attend the meeting.

Mr. L. E. Peverill spoke on the Registration of Plans in the Registry Offices.

Mr. J. R. March led the discussion on Mr. Peverill's talk. He asked Mr. Peverill about the size of plans registered at the Registry Offices.

Mr. Peverill explained the size of plans and said that the maximum size was 28" x 38". Mr. Peverill said that it was difficult to have a uniform size when plans of all sizes were coming into the Registry Offices for registration.

Mr. Adams, Mr. March and others took part in the interesting discussion on the Registration of Plans.

Mr. Adams said he thought that a surveyor should be employed in Registry Offices to check deeds as regards the descriptions contained before they were copied.

Mr. Peverill agreed that a surveyor could serve a good purpose there but said that some of the small Registry Offices could not afford a permanent surveyor, but perhaps a travelling surveyor might suffice. Mr. March said that if Mr. Peverill were willing he would suggest that a committee be appointed by the Association to study the Registry Act.

Mr. Peverill said he was willing to sit in on a committee to study the Act.

Mr. March moved that the Association appoint a committee of three to study the Registry Act and report their findings to the Association.

Seconded by Mr. Geo. T. Bates

Motion carried.

Mr. Dickie moved a vote of thanks to Mr. Peverill for his interesting talk.

Seconded by Mr. March.

Motion carried.

A vote of thanks was extended to Mr. Peverill.

Mr. R. E. Dickie gave an interesting talk entitled "Title Searches by Land Surveyors".

Mr. Bates asked the purpose of making a search.

Mr. Dickie explained that a search is necessary in order to be sure of the validity of the title.

Mr. Bates said that he thought a Land Surveyor and a lawyer could work to very good advantage to straightening out a title.

Mr. Dickie said that a Land Surveyor could not give a "Certificate of Title," which has to be done by a lawyer.

An interesting discussion on title searches by Land Surveyors followed. Mr. Geo. Bates moved a vote of thanks to Mr. Dickie for his interesting talk.

A vote of thanks was extended to Mr. Dickie.

Mr. Tupper brought up the subject of the proposed committee to study reciprocity with New Brunswick.

Mr. Ball explained that reciprocity was mentioned in the proposed revision of the Act and would be taken up in the afternoon session of the meeting.

Mr. Crawley mentioned the proposed committee to study the Registration Act. Mr. Adams moved that a committee comprised of J. R. March, Spencer Ball and J. A. H. Church be appointed to study the Registration Act and report to the Association.

Seconded by R. E. Dickie.

Motion carried.

Mr. Adams moved that the meeting adjourn for lunch.

Seconded by H. B. Robertson.

Motion carried and the meeting adjourned at 12:45 p. m.

AFTERNOON SESSION

Tuesday, November 27th, 1956

The meeting was opened by the Vice-President, Freeman Tupper at 2:45 p. m.

Mr. J. A. H. Church gave an interesting paper entitled "History of the Nova Scotia Land Survey School, and Hopes for the future."

It was moved and seconded that Mr. Eldon Adams and Mr. Stirling Snow be appointed scrutineers to count the Ballots.

Mr. Adams and Mr. Snow retired to another room to count the Ballots. During their absence a short recess was called.

Mr. Tupper received the results of the Balloting.

Following is a list of Officers elected for the 1957 season.

President: Freeman Tupper

Vice-President: J. A. H. Church

Secretary-Treasurer: H. B. Robertson

Halifax City Area: Spencer Ball, Walter Servant

Halifax County Area: Layton Reid, William Crooker

Western Part of Province: R. E. Dickie, Errol Hebb

Eastern Part of Province: Ronald Chisholm, Donald Eldridge

Cape Breton: Herbert Martell, Eldon Adams.

Mr. Ball led the discussion on the proposed revision of the Nova Scotia Land Surveyor's Act.

Mr. Ball told the members of the demand for higher standards in the surveying profession and in the training of future surveyors.

Mr. Ball apologized to the members for not being able to provide copies of the proposed Act.

Mr. Ball then gave a clause by clause description of the proposed Act.

Mr. Tupper stated that from previous discussions with New Brunswick that he thought reciprocity can be arranged when the Nova Scotia standards are raised to the same level as those now in existence in New Brunswick.

Mr. Ball stated that this was being done.

Mr. Ball then read a letter from a Mr. Como of Sydney requesting a certificate to practice as a Land Surveyor. Mr. Como has been working at survey work for a number of years with his father who is a registered Land Surveyor with a practice in Sydney. The elder Mr. Como is now 80 years of age and cannot be on the job in the field and since his son is not a registered Land Surveyor they are in danger of losing their surveying business. The younger Mr. Como is now 62 years old and feels that it would be too much for him to sit the examinations.

Mr. Ball stated that he feels some consideration should be given to men such as Mr. Como.

Mr. Adams stated that men such as Mr. Como should not be barred from surveying.

Mr. Ball suggested a clause in the act to include men such as Mr. Como and others who are at present waiting for the fulfillment of requirements for qualification as Land Surveyors.

Mr. Bates made the motion that the case of Mr. Como and others of like instances be left to the committee to study each case on its own merits. This to be included as a clause in the act.

Seconded by Mr. Adams.

Motion carried.

Major Church suggested that the 1957 class at the survey school be included in the motion by Mr. Bates.

President Tupper requested that each member be forwarded a copy of the revised Act after it has been approved by the legal authorities and before it is presented to the legislature.

Mr. Church stated that he agreed with Mr. Tupper's request, and Mr. Ball stated that it is the only safe way.

Mr. Ball made the motion that as soon as the proposed Act has been approved by the legal authorities, a copy be sent to each member.

Seconded by Walter Servant

Motion carried.

Due to the lateness of the hour President Tupper asked that his talk on Highway Surveying Problems be carried over until Wednesday morning, and could fill in the time previously meant for Mr. Kendall's talk, Mr. Kendall being ill is unable to present his paper.

President Tupper thanked all those presenting papers and called for a motion of adjournment until Wednesday A. M.

Motion of adjournment by Mr. Bates.

Seconded by Donald Eldridge.

Motion carried and the meeting adjourned until Wednesday morning.

Wednesday Morning, November 28th, 1956

The meeting was opened at 9.30 a. m. by President Freeman Tupper.

President Tupper asked the members if there was any special business.

Mr. Adams suggested that retiring presidents serve a five year term as supervisors to the executive committee so that their valuable experience should not be lost to the Association.

Mr. Adams asked for views of the other members on this subject.

Mr. Ball said he thought Mr. Adams suggestion was an excellent idea and that there is no substitute for experience.

Mr. Adams then made the motion that past presidents continue for six years after retiring as

president as advisor to the executive committee with the right to sit in on the executive meetings.

Seconded by Mr. Nicholson.

Motion carried.

Mr. Adams served notice of motion that at the next annual meeting he intends to make the motion that the fees be doubled to \$6.00 per year and that initiation fees be doubled to \$10.00 per year.

Mr. R. E. Dickie asked that a time limit be set for those members who are backward in paying their dues.

Mr. Crooker asked if this would not be taken care of after the new act is incorporated.

Mr. Dickie reminded Mr. Crooker that it may be several years before the new act is incorporated.

Mr. Adams suggested that the secretary write each member reminding them that they are behind in their dues.

Mr. R. M. Schofield the retiring secretary said that bills had been sent out in February, 1956, and that there are still about thirty members not paid for 1956.

Mr. Bates moved that members in arrears for one year be suspended and that they be reinstated on payment of those dues. This to be amended in the by-laws at the proper time.

Seconded by Mr. Adams.

Motion carried.

Mr. Lemmon asked that if a surveyor who is making an expropriation for the government which could be classed as sub-dividing land is required to make application to the planning board.

Mr. March stated that this is being looked into.

Mr. Adams made the motion that the Association should go on record as protesting the Halifax County Planning Board's action for barring the press from their meetings.

Mr. Bates said that he agreed with Mr. Adams but felt that the Association should not interfere.

President Tupper said that he agreed with Mr. Bates.

Mr. March said that he was in sympathy with the press but also agreed with Mr. Bates.

Mr. Adams said that he feels that public rights are being interfered with and that the press should be able to get first hand information and not "tailor made" reports from the County Planning Board.

Mr. Bates stated that he believes most of the members feel the same as Mr. Adams but doubts the wisdom of Mr. Adams's motion.

Layton Reid seconded the Motion.

in favor 11

against 12.

Motion defeated by one vote.

President Tupper introduced the visitors and welcomed them to the meeting.

Mr. Harold Lingley, St. John, N. B.
President N. B. Land Surveyors Association
Mr. Willis Roberts, Fredericton, N. B.
Past-President N. B. Land Surveyors Association
Mr. Gerald D. Hughes
Vice-President N. B. Land Surveyors Association

President Tupper then asked Mr. Lingley to say a few words.

Mr. Lingley expressed the thanks of the New Brunswick Land Surveyors Association and said that he looks forward each year to the exchange of friendship between the surveyors of the two Provinces and hopes that the visits between them will be carried on for many years.

President Tupper then asked Mr. Roberts to say a few words.

Mr. Roberts said that he regrets that the weather delayed their arrival but that he hoped to meet as many old friends as possible in time that is left.

President Tupper then called on Mr. Hughes who is also a member of the Nova Scotia Provincial Land Surveyors Association to say a few words.

Mr. Hughes said that he was very glad to be present at the meeting.

Mr. Donald Eldridge suggested that the Nova Scotia and New Brunswick Associations hold their annual meetings together at some central point such as Amherst or Moncton and asked for the opinion of the members.

Mr. March stated that he feels it is a wonderful idea and thinks that it could be worked out.

Mr. Ball stated that a joint meeting would be a marvelous idea and that the annual meeting of each association be held on different days with a joint meeting for both.

Mr. Roberts of the N. B. Land Surveyors Association stated that he agrees with the idea, but due to the by-laws of their association the meeting is required to be held in January, but that the meeting could be held at any place such as Moncton or Amherst.

Mr. March said that he saw no reason why the Halifax members could not go to some other place just as those living outside now come to Halifax.

President Tupper suggested that the joint meeting of the two Associations could be held as a special mid-summer meeting and that each Association could remain to hold their annual meetings in November and January as at present.

Mr. Bates made the motion that the executive of the Nova Scotia Land Surveyors Association be a committee to work with the New Brunswick Association towards the holding of a joint meeting of the two Associations.

Seconded by Mr. Piers.
Motion carried.

President Tupper then called on Mr. Ronald Chisholm to give an explanation to the members, of the next item on the program entitled "Paper on Surveying Experiences" by a Veteran Surveyor.

Mr. Chisholm then explained to the members that this paper was to have been prepared by Dr. Hugh McPherson of Antigonish, but due to ill health the paper could not be prepared in time for the meeting.

President Tupper explained to the members that due to ill health Mr. Ralph Kendall could not be present to present his paper entitled "Surface and Subterranean Surveys".

President Tupper gave a talk on Highway Survey Problems which was followed by an interesting discussion.

President Tupper told the members that they now have permission to monument one section of highway this year and hoped that in future all new highways will be monumented. He said that it would not be practical for the old highways to be monumented as this would be very expensive.

President Tupper stated that title to old abandoned sections of highways could not be obtained by possession.

Mr. Piers said that when the Department of Highways changes the position of a highway that the former position should be marked, especially when the old highways are also property boundaries.

Mr. Tupper said that the old highways are often deeded to the adjacent land owners in the course of settlement.

Mr. Murray also stated that he would like to see the old highways monumented when changes have been made.

Mr. March said that in the Survey of Crown Lands they are often compelled to monument the highways. This is done by measuring off half the width of the highway by measuring from the center of the travelled way.

Mr. Bates said that the width of highways should be standardized and that the Association should consider making a request to the Department of Highways. He said that highways could be standardized according to type and the use of the roads. Such as

Trunk Roads
Secondary Roads
Service Roads

The latter could be applied to certain roads in sub-divisions, as it is often a hardship to the sub-divider if all roads are required to be laid out as 66 feet wide.

Mr. Piers stated that he was in agreement with Mr. Bates.

Mr. Crawley then quoted the highway Act in regards to the width of roads. He said it is easier to make 66 feet in the standard width otherwise everyone would have a reason for making his road less than 66 feet.

Mr. Piers mentioned that there is often complaints in connection with private roads.

Mr. Bates said there are some cases where it is possible to get the planning board to agree to a 40 foot road if the buildings are built far enough back so that in future the road may be widened to 66 feet if required.

Mr. Piers said that has been done but that lately they have been applying more pressure against doing this.

Mr. Crooker said that he felt this to be a matter for the planning board rather than for the Land Surveyors.

Mr. Crawley asked if the New Brunswick delegates could tell us what is being done in New Brunswick. He also reminded the members that the white line is not always the center of the pavement and that the center of the pavement is not always the center of the highway.

Mr. Roberts spoke on the problem of monumenting highways in New Brunswick. He said conditions were about the same as in Nova Scotia, but Nova Scotia is ahead of them since they have already started to monument one section of new highway this year. He mentioned the shortage of Land Surveyors in Highway work. He said that their roads are of varying width with all new roads being 66 feet wide.

President Tupper next called on Mr. Eldon Adams to present a paper entitled "The Surveyor and the Public".

Mr. Adams presented a very interesting paper and reminded surveyors that they must always give the public a fair deal.

President Tupper thanked Mr. Adams for his interesting paper.

Mr. A. F. Chishom of Dalhousie University asked that those surveyors using college student or seasonal employment would submit comments on the work done by those students, either through the Association or directly to the officials of the colleges of the students involved.

Mr. March moved a resolution of thanks to the press for their co-operation and extend a welcome to future meetings.

Seconded by Walter Servant.
Motion carried.

Mr. Adams made a motion that the members extend a vote of confidence to the out-going executive.

Seconded by Mr. Crawley.
Motion carried.

Mr. R. E. Dickie moved that the president be sent to the Association to the annual meeting of New Brunswick Land Surveyors Association to be held in Fredericton in January and also to the annual meeting of the Canadian Institute of Surveying and Photogrammetry to be held in Ottawa in

February. The association paying the costs.

Seconded by Mr. Adams.
Motion carried.

Mr. Bates moved the amendment to Mr. Dickie's motion that if the President is unable to attend either or both of those meetings the Vice-President is to attend.

Seconded by Mr. Adams.
Motion carried.

Mr. Harold Lingley, President of the New Brunswick Land Surveyors Association extended an invitation to the President to attend the Annual Meeting of the New Brunswick Association in January and also extended the invitation to any other member who wishes to attend.

Mr. C. S. Creighton made a motion that the Association show its appreciation for the use of the room.

Seconded by Mr. Dickie.
Motion carried.

Moved by Mr. Chisholm that the Association show its appreciation to the exhibitors whose presence helped to make the meeting a success.

Seconded by Major Church.
Motion carried.

President Tupper spoke of the death of Mr. Ralph Hendry who was a member of the Association and those present were asked to stand and bow their heads in silent memory of the late member.

Mr. Dickie made a motion that the secretary write a letter of sympathy to Mrs. Hendry.

Seconded by Mr. C. S. Creighton.
Motion carried.

Mr. Nicholson then told the members of the recent death of Mr. James Morrison, P.L.S.

President Tupper asked the members present to rise in tribute to Mr. Morrison.

President Tupper asked if there was any other business to be brought up, if not a motion of adjournment was in order.

Mr. Murray moved that the meeting adjourn.

Seconded by Layton Reid.
Meeting adjourned at 11:45 a. m.

James Layton Reid

We regret to record as we go to press the tragic death of a member of our association, James Leyton Reid, of Dartmouth, who was instantly killed in a car accident on Monday, December 17th. He is survived by his wife and two sons, to whom we extend our sympathy.

Nova Scotia Land Survey School

HISTORY AND FUTURE DEVELOPMENT

By J. A. H. Church, P.L.S. Nova Scotia, Chief Instructor

This school, the only one of its kind in Canada, was opened in No. 6 (Army) Vocational Training School on the grounds of the Nova Scotia Technical College, Halifax, on November 1945. The purpose was to train Veterans of the Second War to become qualified Provincial Land Surveyors in any of the three Maritime Provinces under the auspices of the Department of Veterans Affairs. A syllabus of training was submitted for approval to Dr. F. H. Sexton, director of Technical Training, and subsequently to each of the three Maritime Provincial Governments, and to the Department of Veterans Affairs. The course was designed for 12 months duration under a certified Provincial Land Surveyor, the basis being 50 percent of that period to be allotted to theory, and 50 percent to actual field work, the passing out test being the statutory examination of any of the provinces concerned. All Maritime Provinces and the D.V.A. agreed to the scheme, which was put into operation.

Aims of Training

Requirements of the Syllabus:

1. The development of surveyors well grounded in the basic requirements of his profession so that in the course of time he might develop that faculty for critical analysis so essential to sound practice in his profession, and which is based upon a knowledge of fundamentals.
2. There was no expectation that graduates would be expert surveyors after 12 months training, but it was hoped that, with the theoretical and field training given, the more alert would learn, from his individual experience the limits of accuracy possible with the instruments furnished by the school, and also the standards of accuracy requisite on any particular type of work.
3. It was expected that the more alert graduate so grounded would improve his technique, judgement, and dependability proportionately to the class of company in which fortune might place him. After 12 years of experience it has been gratifying to see how high a percentage of graduates have done just that.

Scope and Method of Training

In Nova Scotia there exists no general framework of survey, so it may be classified as unsurveyed territory in which the Geodetic Survey has established survey monuments of a very high order, and the Topographic Survey Permanent Marks established by traverse from the Geodetic Survey Monuments. Full particulars of these Permanent

Marks and Geodetic Triangulation Stations are now obtainable from the Department of Mines, Halifax.

Such being the case any surveyor should be capable of picking up a monument transforming the listed Co-ordinates, whether Geographical or Rectangular, on the Conical Orthomorphic, Universal Transverse Mercator, or Plane Rectangular. A study of the Mines Act, Nova Scotia, will show what is entailed in respect to a modern system for staking and recording mining claims, both in theoretical and practical survey methods, and in certain circumstances the astronomic Azimuth must be obtained by observation.

Recognition was given to these considerations at the inception of the school, the Mines Act of Nova Scotia has confirmed our recognition of the prime necessity for instruction in all Topographical methods of survey on the elementary level such as can be attained with the engineers transit reading to 01 minutes, and that in a twelve months course.

Particular emphasis has been laid on solar and stellar observations for Azimuth and time; determination of Latitude seems to be somewhat doubtful using the engineers transit, anyway we don't have much success with it. Star identification is taught by the monthly issue of a star chart showing those listed in the American Nautical Almanac on a grid indicating the lines of Azimuth and Altitude at 21 hours A.S.T., on the 15th of each month, for the Latitude and Longitude of the school. Three Azimuth Determination Stations have been set up close to the school, the direction of the R. O. being determined by the mean, about 1000 observations to a toleration of plus or minus 3" in Azimuth and 05 seconds of time.

Training in Professional Practice

This phase of the training aims at realism and is based, in order of importance, on the general considerations:

1. Ethics. Development of professional consciousness, the sole source of Professional status, and the only method whereby the surveying profession can be of service to the general public, the association of Provincial Land Surveyors of their Province, and ultimately to themselves. If any surveyor imagine he can ignore ethical considerations in favour of his immediate financial gain he is very surely "barking up the wrong tree", such a one will never advance beyond the technician status — his epitaph might well be that in the "Ode to a Suicide" by Robert Burns.

2. The function of a surveyor is not a judicial one, but merely that of a collector and compiler of evidence found in the field.

Field Work

Field work may be considered under two main categories:

1. Retracing old boundaries, run originally by Magnetic Compass. Under this heading it is a pleasure to give recognition to the invaluable aid given the school by the excellent training in Forestry which graduates of the Maritime Forest Rangers School of Moncton, N. B., have made available while attending this school, to Mr. J. E. R. March of the Department of Lands and Forests, and to Mr. R. E. Dickie of the Mersey Paper Company, both of whom train students in forest survey every year.

2. **General P.L.S. Practice:**

The only avenue by which a student may acquire experience is that of a member of the survey party working with, or under the personal supervision of, the Chief Instructor, who holds a certificate. The procedure followed is:

- (a) Thorough briefing of the party.
- (b) Search of Title at the Registry of Deeds Office.
- (c) Field work, including tie in to some adjacent topographical feature, referencing of all boundary posts, closed traverse being obligatory, and an astronomic observation, if possible.
- (d) Office work, computation, balance of the traverse lines, and where necessary of boundaries, closure required better than 1 in 3,000 and O1V number of set ups of the instrument plotting by co-ordinates, computation of area with plane-meter check.
- (e) Preparation of plan in accordance with the rules of the Registrar of Deeds.
- (f) Preparation of Legal Description by metes and bounds.

Any deficiency at each stage entails that the originator of the blunder goes out to rectify same. Our motto is: "That is your every own mess, go out and clean it up."

The procedure is somewhat time consuming, but it does tend towards improvement in technique. On a survey the students are slow, exceedingly slow, but we like to think thorough.

Change in Management

The school was started under the scheme for Rehabilitation Training for Veterans sponsored by the Department of Veterans Affairs, which started in November 1945 and terminated in December 1948. Conditions were not conducive to training students in Land Survey and with the consent of Dr. F. H. Sexton, and the D.V.A. the locale was changed to Lawrencetown, and later to Middleton

in the Annapolis Valley. This phase came to an end in December 1948.

On the advice of Dr. Sexton the Vocational Education Division of the Department of Education was consulted and on September 1st, 1949 the school opened under the direction of Mr. E. K. Ford, at Lawrencetown, Annapolis County in the class room specially prepared for the purpose by the Lawrencetown Branch No. 112, Canadian Legion B.E.S.L. The class room has accommodation for 15 students.

Breakdown of 10 Years Operation

Completed Course	115	
Sat Examination	115	100%
Certificates Obtained	112	97%
Failed	3	3%

6 students have been required to sit supplementaries, varying from 2 papers to the entire examination — all were successful.

Employment of Graduates

The following is somewhat conjectural, being to some extent hearsay.

Employment

Federal Government	33%
Provincial Government	20%
Other Survey	43%
Caribbean Surveys	4%
	<hr/>
	100%

Student Origin

Nova Scotia	67	76%	Saskatchewan	1
New Brunswick	15	13%	Alberta	1
Newfoundland	1		B.W.I.	1
Ontario	3		U.K.	1

TOTAL 115

Future Development

The keynote to this aspect is without any doubt to be found on page 137 of the July 1956 issue of The Canadian Surveyor, part of the "Brief to be presented to the New Brunswick Development Commission "by the Association of New Brunswick Land Surveyors, and I quote "We strongly recommend that the two Provinces (New Brunswick and Nova Scotia), on a departmental, Provincial Land Surveyor's Association, or higher level, meet together with the object of having one Land Surveying School for both Provinces. The objective of this school being to (1) train provincial land surveyors, (2) train cartographers, (3) build up a surveyors' hand book, (4) disseminate technical advances," end of quote.

In the summary of Recommendations on page 136 of the same publication will be found, and I quote "We recommend the participation of New Brunswick in the operation of the Nova Scotia Land Surveyors School as presently operated by

the Province of Nova Scotia. This recommendation is made in the hope that land surveyors might procure adequate basic training, and the standards of land surveying might be improved." end of quote.

Members are aware that our Association hopes to present, and have approved, a bill of incorporation of the Association of Nova Scotia Land Surveyors at the forthcoming session of the Provincial House of Assembly. In that bill is incorporated the syllabus of training and examination so ably drawn up by Mr. J. H. Holloway, D.L.S., A.L.S., of Edmonton, Alberta for the Committee of Survey Officers under the chairmanship of Mr. R. Thistlethwaite, Surveyor General of Canada. The most important clauses therein are (1) a three year apprenticeship, and (2) an Intermediate Examination in Theory on the standard of 1st Year University in Mathematics, Physics, and the English Language.

Probably most of us will agree that the young aspirant surveyor of the Maritimes would have a tough assignment under the new set up of the Intermediate Examination, to say nothing of a "souped up" final which will be required to bring Nova Scotia into line with Canadian practice. Our Province has recognized the necessity of a school under presently existing conditions — one may claim that the School, as it is today, has been adequate but, most emphatically, it will not do in the future.

After discussion with many interested members, some of them graduates of the School working in Nova Scotia and elsewhere in Canada, it would appear that a solution should be sought along the lines:—

1. The entrance requirements for acceptance at the School to be completion of 1 years apprenticeship under a Nova Scotia or New Brunswick land surveyor.
2. For students from outside the Maritimes, one years experience (6 months in the field) or apprenticeship under a provincial land surveyor, subject to an entrance examination envisaged in the Act of Incorporation at the discretion of the Association.
3. Duration of the Course 2 years, during which time students should, with the co-operation of the Departments of Provincial Governments and Forestry Companies, have practical experience in the field for at least three months continuously each year. It is submitted that no school can give such practical experience over such a period.
4. Purpose of the Course, preparation for (1) Intermediate Examination 1st. Year and (2) Final Examination 2nd. Year.
5. Para (4) entails (1) drafting, (2) Photogrammetry, (3) English, i.e. preparations of reports etc., (4) Elements of geology, botany etc., (5) Mathematics, and (6) Physics.

Organization

At present our accommodation is limited by floor space to 15 students. This year we have had to turn away 10 qualified for entrance. The staff consists of 1 Chief Instructor, the holder of a Nova Scotia Certificate, and 1 Aide selected from among the students each year. It will be evident that either a vast change will be necessary, or the school will fade out of the picture.

In addition to the School of Land Surveying, and indeed complimentary thereto, a School of Cartography is a crying need. Such School would be open to students of both sexes, and would give instruction in (1) English language, (2) Mathematics, (3) Physics, (4) Drafting — cartography standards, (5) Map projections etc., (6) Photogrammetry, (7) Map production from the earliest stage to the final printed sheet. The graduate of such a School would find ready employment at a respectable remuneration. It may be claimed that the set up outlined would constitute a balanced program in the survey field the like of which does not exist yet anywhere in Canada.

Feasibility

The Lawrencetown Branch No. 112 Canadian Legion has, by unanimous resolution offered to the Department of Education, as a gift free of encumbrance, the plot of land where the school is now located in exchange for their use of an assembly room to accommodate some 25 Legionaires for so long as that Branch operates under a Charter from the Dominion Command of the Canadian Legion. Short of a 3rd World War such period cannot be of any lengthy duration. The plot of land fronts on Provincial Highway No. 1, and comprises 1 acre of land suitable for building, located 200 yards from the Post Office; the southern boundary is the right bank of the Annapolis River.

Financial Consideration

For the past three years we have been investigating the possibility of obtaining a sum of money, amounting in all to about \$100,000., in bequests from the late Dr. Hall and his widow for the building, equipment, and maintenance of a Vocational School in the County of Annapolis. It is understood that the various Provincial Government Departments concerned in such a project have come to general agreement with the Trust Company administering the estate. It would ill become the writer to predict the outcome of the negotiations now in progress as the settlement is solely in competence of the Government. While the sum involved is not sufficient for the whole scheme envisaged, it is quite a start.

Conclusion

This plea for an enlarged school adequate to meet the requirements necessitated by recent tech-

necological advances, chiefly inflying and aerial photography, is not in any way influenced by a desire to enhance the size and importance of the school and/or the staff. It is simply recognition of the fact that all institutions are faced with the alternative of either growing with the needs of the social environment, or stagnating.

The Associations of Land Surveyors in the Maritimes have shown their desire for growth to the standards of their sister organization in Canada; their goal being standardization of training and examination throughout the country. The crux of the situation is whether or not we implement our wishes by adequate training. It is not claimed that the School is anywhere near the ideal: it is only too evident that there is room for improvement. But we do claim to have turned out a number of useful men alert enough to make use of the

grounding in basic principles received in school. Our graduates may be found practising as certified Land Surveyors in every province of Canada, except Quebec and Newfoundland.

A letter dated November 1st has been received from Mr. W. R. Roberts, of the Department of Lands and Mines, New Brunswick, stating that the Minister of that Department has given his approval to a scheme for sending two apprentice surveyors to this School each year. While attending the School each apprentice will receive 75% of his pay. Mr. W. F. Roberts asks that two vacancies be kept each year for two New Brunswickers. This action is proof positive that our sister province approves of our efforts, and is willing to co-operate in the setting up of a Maritime School.

James A. H. Church
November 16th, 1956

Minutes Of Meeting Of The New Executive

Held at the Nova Scotia Technical College, Halifax, N. S., Wednesday, November 28th, 1956

Those present were: — Freeman Tupper, President; James A. H. Church, Vice-President; Epenecer Ball, Walter Servant, R. E. Dickie, Layton Reid, William Crooker, Donald Eldridge, Ronald Chisholm, Elden Adams, H. B. Robertson, Secretary.

The meeting was opened by President Tupper at 12:15 p. m.

The subject of the revision of the Provincial Land Surveyors Act was brought up for discussion.

Mr. Adams asked if the revised "Act" will be ready for presentation at the next session of the Legislature.

Mr. Ball said that he thought it could be done. He said that when the Act has been prepared for presentation a special General meeting will have to be called.

Mr. Reid asked who will be engaged to present the new Act to the Legislature.

Mr. Adams suggested that the Hon. Clifford Levy, Minister of Lands and Forests and Municipal Affairs be asked to present the new Act to the Legislature.

Mr. Ball agreed that it sounded like a good suggestion.

Mr. Dickie asked if this will be done in Government measure.

Mr. Ball said that it will require legal information.

Mr. Eldridge asked if a by-law is necessary in order to send flowers at the death of any member.

Major Church said that a by-law is not necessary as it is one of the duties of the secretary.

Mr. Eldridge requested that the secretary forward an application form to Mr. John Donaldson, P.L.S., of Sheet Harbour who is interested in becoming a member of the Association.

Mr. Servant suggested the possibility of forming a Maritime Regional Branch of the Canadian Institute of Surveying and Photogrammetry.

Mr. Eldridge suggested that this could be brought up if the joint meeting of the New Brunswick and Nova Scotia Association Meetings are held.

President Tupper asked for any further business, if not the meeting adjourn. The next meeting to be at the notification of the Secretary.

Motion to adjourn by Mr. Dickie.

Seconded by Walter Servant.

Meeting adjourned at 1:00 p. m.

Annual Banquet

The annual banquet was held at the Lord Nelson Hotel, on November 27th, with fifty-six members and guests present.

Those seated at the head table included: President Freeman Tupper; Harold Lingley, President of the N. B. Association; Willis Roberts, Past President of the N. B. Association; G. W. I. Creighton, Deputy Minister, Dept. of Lands and Forests; J. P. Messervey, Deputy Minister, Dept. of Mines; Col. Slater, Command Engineer, Eastern Army Com-

mand; E. K. Ford, Director of Vocational Education, Dept. of Education; Ed. Palletier, of Keuffel and Ersor of Canada Limited, Montreal.

Lieut. Col. Slater took the place of Col. Smith, who could not attend due to poor flying conditions.

A very enjoyable and educational film, "Maps For The Army", was shown. This film was introduced by Col. Slater.

List Of Officers

	1954	1955	1956	1957
President	R. E. Dickie	J. R. March	R. E. Millard	Freeman Tupper
Vice-President	J. R. March	R. E. Millard	Freeman Tupper	J. A. H. Church
Sect'y-Treas.	W. A. G. Snook	R. M. Schofield	R. M. Schofield	H. B. Robertson
Council				
Halifax Area	F. Tupper E. Robertson	F. Tupper J. L. Reid	Spencer Ball Layton Reid	Spencer Ball Walter Servant
Provincial Area	R. E. Millard J. A. H. Church	D. L. Eldridge J. A. H. Church Roy Amero Ronald Chisholm	R. E. Dickie J. A. H. Church Ronald Chisholm Don Eldridge	Leyton Reid William Crooker R. E. Dickie Errol B. Hebb Ronald Chisholm Donald Eldridge
Cape Breton Area	A. H. Martell	A. H. Martell	A. H. Martell John S. Pope	A. H. Martell Eldon Adams

LIST OF NEW MEMBERS

since May issue of the Nova Scotian Surveyor

- | | | | |
|-----|--|-----|---|
| 205 | A. Blake Rutledge, 11 Cleveland Crescent, Dartmouth, N. S. | 213 | David L. Crooker, South Brookfield, Queens County. |
| 206 | Francis Noel, 53 Pearl St., Brantford, Ontario | 214 | Bruce Havill, 237 Hollis Street, Halifax, N. S. |
| 207 | Ralph Hale, P. O. Box 90, Sherbrooke, N. S. | 22 | Dr. Hugh MacPherson, St. Francis Xavier University, Antigonish, N. S.
(Dr. MacPherson was appointed Honorary Member at the October Meeting of the Executive.) |
| 208 | John A. McElmon, 11 Rogers Drive, Halifax, Nova Scotia. | 145 | Gordon Nicholson, 105 Alexander Street, New Glasgow, N. S.
(Mr. Nicholson is a former member whose name had been accidentally omitted from the list of members.) |
| 209 | William O'Sullivan Jr., 189 Portland St., Dartmouth, N. S. | | |
| 210 | Daniel R. Gopaul, P. O. Box 592 Nassau, Bahamas, B. W. I. | | |
| 211 | Ivan P. MacDonald, 105 George St., Ottawa. | | |
| 212 | Murdock A. Ferguson, St. Peters, Richmond County, N. S. | | |

Ever In A Spot Like This?

"Point your transits toward Montreal and get there, double fast!"—those were orders," recalls Gordon E. Ainsworth, Whately, Mass., surveyor on the original Portland-Montreal oil pipeline, completed in record time back in 1941. "We worked in the field 12 to 14 hours, 7 days a week—through unmapped swamps, mountains, and virgin wilderness of northern New Hampshire and Vermont.

"One miserably hot day we hit 'blowdown' in the most impenetrable country I've seen in 21 years of surveying. Levels showed our original line, following a winding mountain road, was 130 feet above the hydraulic gradient established by Humble engineers. Relocating we faced a deep, wide ravine. Pipe stringers were hot on our heels—there was no time for cutting lines.

"We decided on an approximate check, by stadia, of the elevation on the far side. No rod was

available, but hurried reconnaissance turned up a tall beech on the opposite ridge. Exposing the entire length of trunk, we placed red flagging at its base, and aimed the lower cross-hair of our Gurley 'light-mountain transit' at the top of the band. Three of the boys climbed the tree, and, at signals from my revolver, moved a second band, which I caught with the upper cross-hair. We got our reading (approx. 40') by taping the vertical distance along the trunk; found the ravine to be about 4000' across. After we carefully read the vertical angle and computed the difference in elevation between H.I. and base of tree, direct leveling gave us our proper location in relation to hydraulic gradient.

"We finished the survey for our 83-mile spread in 10 weeks. Oil was flowing the 236 miles into Montreal only 21 weeks after the first stake was driven in Portland!"

Niagara's Mysteries Solved

The first accurate survey of the Niagara River bed, from its source at Lake Erie to a point below Niagara Falls, has been completed by the Buffalo District, U. S. Army Corps of Engineers. Basis for a scale model (1:360) of the Falls and River, built at Vicksburg, Miss., for study of remedial work on the Falls, the profile employed almost every known sounding method—and several brand-new ones.

Surveying the Upper Rapids above the crest of the Falls where current runs 15 to 20 mph, was the major hazard. Earlier efforts to chart these waters proved inaccurate; and many suggestions were discarded before the Engineers thought of using a "flying platform."

Flying over the spot to be sounded, a Bell helicopter reeled out 1500 to 2000 feet of steel wire line through pulleys. An orange pennant, attached 30 feet above a saucer-shaped lead weight, was the target. The helicopter dropped straight down until the weight hit the bottom of the

river. Line slackened, and then was pulled taut by a light counterweight. The pilot radioed, "Target!", to four ground watching parties, who shot the pennant on their transits; obtained information for computing elevations. As many as 77 readings were made in one day, with the helicopter flying back and forth in paths 300 feet apart.

Kytoons (helium-filled balloons) were also used where the channel was narrow or high trees lined the shore; and for finding elevation from the crest of the Falls to the waters below. Two kytoons, 8 feet long, 4 feet wide, were lashed together, with a third riding above the center. This gave enough lift to support a weighted sounding line, threaded through a pulley on the underside of the kytoon. One man maneuvered the captive kytoons; another manipulated the sounding line. Transmitters, signaled by walkie-talkie, placed the weight at the exact spot on the river bottom.

**NOTICE: to all members of the Association
DUES FOR 1957 ARE NOW DUE**

**SEND MONEY ORDER, addressed to Secretary-Treasurer, The Association of Provincial
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