

The Surveyor General of Canada Lands FUNCTIONS AND RESPONSIBILITIES

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The purpose of this article is to inform Ontario Land Surveyors of the current statutory and regulatory responsibilities of the office of the Surveyor General of Canada Lands. I would also like to describe for you the present contract survey program for surveys on Crown Canada Lands, which I hope those in private practice may find of some interest.

Before doing this, I think it would be appropriate to mention that 1975 marks the centennial anniversary of the Board of Examiners for Dominion Land Surveyors and also the issuing of the first commission to a Dominion Land Surveyor.

By an Order-in-Council dated March 7, 1871, Lt. Col. J. S. Dennis was made the Surveyor General of Dominion Lands. His immediate duty was to commence the survey of the vast and virgin territory of the Northwest under the newly inaugurated Dominion Lands Survey System. At that time, there were no surveyors authorized to make surveys of Dominion Lands and therefore, a number of provincially commissioned surveyors (many from Ontario) were appointed as Deputy Surveyors of Dominion Lands. In the Dominion Lands Act of 1872, provision was made for the appointment of a federal board of examiners to examine and admit applicants for commissions as Deputy Surveyors of Dominion Lands. However, the act stated that no person was entitled to be examined for a commission until he had served three successive years under articles as a pupil of a Deputy Surveyor engaged on the surveys of Dominion Lands. Therefore, no candidates were qualified to write the examination until 1875 and as a result, the board was not constituted until that year.

The Order-in-Council establishing the first Board of Examiners is dated May 7, 1875.

The Board met at Winnipeg on June 10, 1875. Seven candidates appeared with two subsequently withdrawing. Commissions were granted to five candidates — two from Ontario and three from Manitoba. William Crawford of Milverton, Ontario, was granted the first commission ever is-

sued to a Dominion Land Surveyor. It was dated June 17, 1875.

Since 1871, there have been seven Surveyors' General; the present incumbent is Mr. D. R. Slessor, B.Sc. (C.E.), O.L.S., D.L.S., P.Eng. The task of the first Surveyor General was to subdivide the western plains in a systematic fashion to provide for the orderly development and settlement of the new territory. The statutory and regulatory responsibilities of the present Surveyor General have changed and increased over the past 100 years. Today his organization forms the Legal Surveys Division of the Surveys and Mapping Branch of the Federal Department of Energy, Mines and Resources. The division provides a comprehensive surveying service to federal departments, other agencies and to Territorial governments. This service includes professional advice, the administration, monitoring and inspection of surveying contracts and the execution of surveys. With respect to field surveys under his jurisdiction, the Surveyor General establishes standards, issues instructions, examines survey returns and inspects completed field work.

The Surveyor General is involved in the surveying and maintaining of specified provincial boundaries jointly with the corresponding provincial agencies under commission of the Governor General in Council. Another part of the division's work involves the regulating of surveys of Indian Reserves, Indian Lands, National Parks, Territorial Lands, mineral claims and the subdivision of private lands in the Territories. Also, in the north and in Canada's continental shelves, the Surveyor General controls oil and gas surveys made under the Canada Oil and Gas regulations. He also maintains a program of establishing co-ordinated survey areas in selected Crown Canada Lands in the provinces and in developed and developing areas in the Territories.

Other regulatory functions of the Surveyor General includes the ratification, custody and maintenance of legal survey records, the preparation of legal descriptions of Crown Canada Lands and also ensuring the adequacy of descriptions defining the federal electoral districts.

Today, as in 1875, the Surveyor

General acts as Chairman of the Board of Examiners for Dominion Land Surveyors which has the responsibility of examining and admitting candidates as Dominion Land Surveyors and also has the responsibility for the maintenance of professional discipline.

The organizational structure of the division underwent a change in 1972 with the advent of regionalization.

This change was necessitated by the failure of our division, due to insufficient funds, to adequately meet the needs for surveying services placed upon it by other departments and agencies.

In the past few years, there has been a dramatic increase in requests for surveys resulting from development projects in the north, the establishment of new National Parks and especially in Indian Reserves as more and more Indian Bands become interested in the economic development of their reserves.

It was obvious that some major change had to be made in our method of providing surveying services to our clients. In an attempt to solve this problem, a management study was initiated and its broad recommendations were accepted. An ad hoc committee was established to implement the reorganization of the division. As a result of the study, numerous recommendations were made and many were approved. I will mention three of major importance.

The first called for the establishment of Regional Offices in seven cities across Canada to coincide with the Regional Offices of the Department of Indian Affairs and Northern Development. These offices are in Vancouver, Edmonton, Regina, Winnipeg, Toronto, Quebec City and Amherst, Nova Scotia. We also established offices in Whitehorse and Yellowknife in the Territories. Of these offices, only one existed in 1972, that being in Vancouver. It was established in 1960 to provide better service for surveys on Indian Reserves since 1,600 of Canada's 2,200 Indian Reserves are in British Columbia.

The second major recommendation accepted was the decision that departments and agencies requesting surveys would provide the funds necessary to carry out the resulting programs. The fact that Legal Surveys

Division was required to provide these funds in the past was an instrumental factor in its failure to complete all requested surveys.

The third major recommendation involved a change in emphasis regarding the role our division should play in the execution of surveys. In the past, the majority of all surveys were performed by staff surveyors. To obtain more flexibility in operations, it was agreed the majority of future surveys would be done under contract and the Surveyor General's staff would assume an administrative, advisory and regulatory role. In future years, we can expect as much as 90% of the surveys administered by the Surveyor General will be carried out under contract.

Under our present regionalized set up, the Division's surveying services capability is located in the Regional Offices while regulatory functions remain in the Ottawa headquarters. The major divisional functions remaining in Ottawa are the divisional administration, the headquarters unit of the Field Section, the Survey Instructions Section, the Plans Examination Section and the Canada Lands Surveys Records.

Perhaps now a few comparative figures will indicate the growth we have undergone in the past several years.

In 1971, total divisional strength was 77 positions. At present, the Ottawa office has this same number of positions but there are now 58 surveyors, technologists and clerks in the nine Regional Offices. In summer months, this total is increased through the use of casual employees by another 23 man-years. In the 1971-72 fiscal year, the total divisional budget was 1.5 million dollars. Of this, \$170,000 was spent on contract surveys. In the present fiscal year, the division expects to spend 3.6 million dollars on its program activities. Of this, 1.3 million dollars will be provided by our client departments for surveying services. At least 80% of this amount will be used for contract surveys.

Now a word about our contract surveys program. In early spring of each year, the Surveyor General receives an official list from the Department of Indian Affairs and Northern Development stating the surveys they wish to have completed. The list is compiled by provinces and each province is allotted a portion of the total

money available. The Regional Surveyor working in close liaison with the Regional Indian Affairs officials plays a major role in setting the requirements for the surveys and the scheduling of them. As I mentioned earlier, the great majority of these surveys are done under contract by surveyors in private practice. The majority of surveys requested in Ontario are for the Indian Affairs Program. They can be roughly divided into three categories, entitlement surveys, community affairs surveys and educational surveys. The entitlement surveys make up the bulk of contract work while the other two items are usually arranged for by the person or organization wishing to obtain rights in the land.

The requests are channeled through the Band Council and the District Supervisor to the Regional Director. If approved, the Regional Surveyor becomes involved and begins his detailed investigation which includes gathering complete documentation on the survey. This may necessitate a visit to the Indian Reserve, interviews with various officials or Band members and may even involve a field investigation.

Once his investigation is complete, the Regional Surveyor must decide whether the survey is best done by his staff surveyors or by a contractor. If it is to be a contract survey, the Regional Surveyor must nominate a surveyor and determine if he is willing and able to do the survey. The Regional Surveyor also prepares his estimate of cost for the survey.

At this point, the Regional Surveyor sends the results of all his work to the Surveyor General in Ottawa with a request that a contract be initiated for the survey.

Perhaps, at this point, I should give you an indication of how a surveyor in private practice is selected. The responsibility for recommending the surveyor lies with the Regional Surveyor. To ensure an equitable distribution of work among all competent surveyors in a province or a region of a province, the Regional Surveyor selects names from the provincial association roll of members on a rotational basis. This is the normal method of selection but at times it is necessary to deviate from it for one of more reasons. For example, the client department, agency or band council may specifically request that a particular surveyor do the survey.

In another case, the priority of a survey usually dictates the selection of a surveyor at or near the survey site. In other cases, a surveyor, because of experience or knowledge may be the best qualified person to do the survey. And finally, it may happen that a particular company may be the only one possessing the required expertise or equipment needed to do the required survey.

When a request is received in the Ottawa office to process a contract survey, it is sent to the Instructions and Support Section. This section is responsible for the overall administration of contract surveys and the issuing of all survey instructions. It also prepares legal descriptions and compiles and draughts survey plans and other documents.

The Instructions group consists of fifteen survey technologists and land surveyors. The group is divided into teams; each team specializing in a province or area of the country.

The information supplied by the Regional Surveyor is reviewed by the instructions writer and further information is added to it which is obtained from the Canada Land Surveys Records and other sources of information in Ottawa. When the proposed survey has been thoroughly researched, a letter is sent by the Regional Surveyor to the recommended surveyor requesting that he supply an estimate of cost to complete the survey. With this letter is sent all technical specifications related to the work and also administrative details in relation to accounts, deadlines, etc. I should point out that the above procedure is used on all surveys estimated to cost \$15,000 or less. In the case of surveys costing more than \$15,000, estimates are requested from three surveyors judged competent to do the work. As in the case of every rule, there are exceptions, and in some cases, even though a survey will cost more than \$15,000, only one surveyor is approached, for substantially the same reasons stated earlier for deviating from the rotational selection. The Regional Surveyor may also, at his discretion, issue instructions directly for smaller surveys estimated to cost less than \$1,000.

When the estimate of cost is received, it is analyzed by the Regional Surveyor. I should stress here that an estimate of cost is exactly that; an estimate of the cost to do the

survey. In no way is it considered a firm or fixed price. It must conform to only one criteria; it must be in accordance with the minimum tariff of fees applicable in the province. When the estimate is analyzed, a number of factors are considered. The dollar value of the estimate is a factor but not the only factor. All estimates are compared with that prepared by the Regional Surveyor and possibly with a second one prepared by the instructions writer. The purpose of this exercise is not to obtain the lowest possible figure, but to determine the validity of the total sum quoted. An estimate may be considered excessively high or low and may be rejected for either of these reasons. All other factors being equal, the lowest estimate is accepted.

The second factor considered in assessing an estimate relates to reports which may accompany the estimate. Sometimes a report will indicate the surveyor has researched or investigated the proposed survey very thoroughly. The quality of such a report may dictate which of several estimates is accepted and may override the fact the estimate is not the lowest.

A third factor used to assess an estimate is the surveyor's willingness to meet the specifications and deadlines contained in our letter requesting the estimate. At times these specifications and deadlines are critical and at other times they are negotiable. The two factors are always considered but vary in importance, depending on the survey.

The last factor considered but by no means the least important is the past performance of the surveyor, if he has completed work for us in the past. At the completion of all survey projects, an evaluation report is completed on the surveyor. It deals with such topics as estimated cost compared to final cost, conformance to instructions and deadlines, etc. Also, the Regional Surveyor has as one of his continuing duties, the monitoring of all surveys carried out in his Region. Reports of this monitoring operation are taken into account when considering a survey for future work.

Once an acceptable estimate has been obtained, a requisition is prepared for a purchase order which is in effect a professional services contract. This, together with the set of specific instructions for the survey, is sent to the surveyor with authorization to proceed with the work.

On occasion, the surveyor may have underestimated the cost of the survey or run into unexpected difficulties and as a result finds he cannot complete it within the limits of his estimate. Under the terms of the purchase order, he is not allowed to exceed the estimated cost without authorization from the Surveyor General. In this case, he must tell us the reasons for the increase in cost and obtain permission to exceed his estimate before proceeding with the survey. If this procedure is not followed, there is no guarantee that additional money can be obtained to pay for the survey.

Earlier I mentioned that one of the regulatory functions of the Surveyor General is to issue survey instructions for the survey of Crown Canada Lands. Quite often we are asked by surveyors why this is necessary. Actually, there are two main reasons. Firstly, by authority of the Canada Lands Surveys Act, the Surveyor General has the responsibility for administering these surveys. To do this properly, he must have a thorough knowledge of all survey activities on these lands. The only way he can do this is to authorize and issue instructions for all such surveys. The Canada Lands Surveys Records is the repository for all past surveys. The majority of these are also on record in the local Land Titles or Registry Office. Without requiring that all surveyors request instructions these records could not be properly maintained and in a short time could not be depended upon to tell the current state of affairs. The second reason relates to the fact that virtually all legal surveys form the basis of a land transaction. The survey instructions are intended to detail the exact legal and technical requirements, so far as is possible, to enable the survey and the transaction to be completed as quickly and as economically as possible. In addition, the Surveyor General represents one of the parties to the transaction and it is his duty to ensure that the survey does in fact reflect the intended transaction. Survey instructions are a good means of ensuring this. Actually, the surveyor gets pretty fair value for the few dollars charged for a set of survey instructions. There is a good deal of work and investigation goes into the preparation of them and although the surveyor still must ensure that nothing is overlooked or is in error, he is saved a good deal of time and work that he would otherwise have to expend.

In regard to survey instructions in Ontario, we have had problems with surveyors who accept requests for surveys from Band Councils of Indian Reserves or officials of Government Departments and consider these requests as sufficient authority to proceed with the survey. I reiterate that any survey work on Crown Canada Lands involving monumentation must have prior instructions from the Surveyor General of Canada Lands.

Another regulatory function of the Surveyor General worthy of mention is Plans Examination. The Plans Examination Section has much the same organizational structure as the Instructions Section. Of course, its main duty is to ensure that all survey returns submitted are acceptable from a survey, mathematical and legal viewpoint. Another of its duties is to determine if the survey as completed is satisfactory to the administering department. This is done by sending provisional prints to the agency involved - in the case of an Indian Reserve the prints would go to the Band Council for its approval. While this approval is being obtained the plan and field notes are examined with respect to some 80 or more items. These items relate to several major categories such as: the status of the land; evidence found and created; survey principals and procedures, mathematical data and completeness as to compliance with laws, regulations and instructions.

Once the plan has been found to be technically acceptable, it is sent to the administering department for signature by the Minister and then is confirmed by the Surveyor General and is recorded in the Canada Lands Survey Records with a copy being sent to the local Land Registry Office.

Since the Division regionalized in 1972, the volume of surveys completed has steadily increased. For example, in the fiscal year 1974-75 520 sets of instructions were issued across Canada; 208 for contract surveys; 121 for staff surveys and another 191 for indirect surveys. In the current fiscal year, contract surveys totalling almost one half million dollars will be scheduled in Ontario in addition to staff and indirect surveys.

I hope the foregoing paragraphs have conveyed some idea of the scope of the Surveyor General's functions and responsibilities across Canada and particularly in Ontario.