

SURVEYORS OF THE PAST



CHARLES ALBERT BIGGER

O.L.S., D.L.S., 1853-1923

A SURVEYOR FOR ALL SEASONS

By Charles Fairhall

In his excellent treatise on the history of surveying in Canada, 'Men & Meridians', Vol. 2, Chapter 12, author Don W. Thomson pays tribute to Assistant Superintendent of the Geodetic Survey of Canada, Charles A. Bigger, for his contribution to the development of that organization.

This highly competent Dominion and Ontario Land Surveyor is also renowned among the survey profession in the Ottawa area for his contributions to the legal survey sector as well.

While in private practice during the last two decades of the nineteenth century, Mr. Bigger displayed a standard of accuracy in his work that distinguished him from his contemporaries in the surveying profession. A summary of plans of subdivision registered in the City of Ottawa Registry Office for that period discloses that Mr. Bigger prepared some twenty-nine plans during those early years of civic growth. While this output was not great compared to other surveyors of that time, the quality of his work is remarkable.

During the course of a recent survey of the Rideau Canal Reserve Lands within the City limits, some interesting comparisons were made vis-a-vis measurements between stone monuments planted on the exterior boundaries of abutting registered plans by Mr. Bigger. Agreement of astronomic bearings in the order of 30 seconds or less were commonplace and most of the distances checked

within the 1/5,000-1/10,000 order of accuracy. His field notes, neatly written in ink and supported by sketches, indicate that in an age when many surveyors were still using link chains, Mr. Bigger was refining his measurements taken with steel tapes by applying temperature corrections.

Mr Bigger was born near Paris, Ontario on October 15, 1853. He obtained his primary education at the public school in his native town and secondary education in Toronto. He also attended military school in Kingston, from which he graduated in 1874. On January 6, 1882, he qualified as a Provincial Land Surveyor after serving under articles with Robert Sparks of Ottawa. During those years, his work seems to have been concentrated chiefly in the counties of Prescott and Russell. In 1882, Mr. Bigger also qualified as a Dominion Land Surveyor and was employed that year on Dominion land surveys in northern Saskatchewan. In 1883, he was appointed Inspector of Surveys in the North-West, covering the district between the Fourth Meridian and the Rocky Mountains, and between the International Boundary and the Red Deer River. For the Department of the Interior, Ottawa, Mr. Bigger made surveys as follows:

- 1882 - Outlines in vicinity of Saskatoon.
- 1883 - Inspection of surveys, Southern Saskatchewan.
- 1884 - Subdivision Townships in Alberta between Fourth and Fifth Meridians.
- 1886 - Subdivision Townships in Alberta west of Fifth Meridian and trails from Red Deer to Calgary and Macleod.
- 1887 - Subdivision Townships in Southern Alberta west of Fifth Meridian.
- 1888 - Subdivision Townships in Southern Alberta west of Fourth Meridian.

He continued in the employ of the Dominion Government until 1888 when he took up private practice in the Ottawa Valley, making his home at Plantagenet where he resided six years. He then moved to Ottawa where he continued in private practice.

One of Mr. Bigger's more enduring works was a municipal survey of the road allowance forming the boundary line between the townships of Gloucester and Osgoode in 1900. Albeit this survey was never confirmed, some of the stone monuments planted by Mr. Bigger are extant, offering a mute testimony to his high standard of workmanship.

In 1901, Mr. Bigger re-entered Government service as the Canadian Surveyor on the re-survey of the Quebec-New York boundary line. He was responsible for all the astronomic observations for latitude and longitude. One of his assistants states that "Mr. Bigger had the delicate touch of the skilled observer and his handling of the instruments, and ceaseless care to secure the most reliable results, made him a master in field astronomy". In 1904-05, Mr. Bigger was employed on boundary survey work in Alaska.

In 1905, in co-operation with Dr. Wm. F. King, the Geodetic Survey of Canada was inaugurated, Dr. King being Superintendent and Mr. Bigger, Assistant Superintendent. Mr. Bigger personally supervised the early work in Ontario, Quebec and British Columbia and his direction of field parties was outstanding.

The equipment of the Standards Building, Ottawa, was gathered together by Mr. Bigger and the building was designed and constructed under his direct supervision. He was a recognized authority on scientific instrument construction and was sent to Europe twice to supervise the construction of special apparatus for the Geodetic Survey.

In Ottawa he held a high place in the esteem of his associates and of the general public. Mr. Bigger was a past President of the Ottawa Branch of the Royal Astronomical Society of Canada. He was an Associate Member of the Engineering Institute of Canada.

Mr. Bigger passed away on the afternoon of Friday November 9, 1923 in his office at the Geodetic Survey Building at Ottawa.

ANSWER TO WINTER ISSUE

C	O	M	P	A	S	S	G	R	A	D	E
U	E	T	T	W	O	N	N				
R	E	T	R	A	C	E	R	A	T	E	D
V	E	N	R	J	E	I	O				
E	A	R	T	H	E	S	O	L	A	R	
D	R	A	O	L	O	S					
M	O	V	I	N	G	A	P	O	G	E	E
I	E	O	N	T	I	S					
S	T	R	I	P	U	P	L	O	T	S	
T	N	O	H	M	O	W	I				
A	X	I	A	L	B	A	L	A	N	C	E
K	E	A	L	E	R	E	V				
E	R	R	O	R	R	E	S	E	R	V	E