

**ASSOCIATION OF CANADA LANDS SURVEYORS - BOARD OF EXAMINERS  
WESTERN CANADIAN BOARD OF EXAMINERS FOR LAND SURVEYORS  
ATLANTIC PROVINCES BOARD OF EXAMINERS FOR LAND SURVEYORS**

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**SCHEDULE I / ITEM 7  
CADASTRAL STUDIES**

**March 2004**

**Note: This examination consists of 16 questions on 2 pages plus 3 pages of Scenarios**

**Marks**

**Q. No**

**Time: 3 hours**

**Value   Earned**

<b>Questions 1 – 5 refer to Scenario A:</b>			
1	Discuss your liability for the consequences of the re-design and the foregone sales, with reference to the required standard of care.	6	
2	Distinguish between your liability in contract and your liability in negligence.	6	
3	Distinguish between the requirements for a finding of incompetence or professional misconduct, as may be determined by your Surveyors' Association, and the requirements for a finding of negligence as determined by a court of law.	6	
4	In re-establishing the road allowance, your survey crew failed to fill in a hole created in using one of the iron bars placed by the previous surveyors. A passer-by slipped into the hole, gravely injured herself, and has brought suit against MGC for negligence. Discuss your company's position in this regard.	6	
5	Describe how your Surveyors Association will try to protect the public in the face of what appears to be an error by you - a commissioned land surveyor.	6	
<b>Question 6 – 10 refer to Scenario B:</b>			
6	How might the hierarchy of boundary evidence be used to resolve the dispute?	6	
7	Discuss the legal principles by which this sort of jurisdictional boundary uncertainty should be resolved.	6	
8	Speculate on what might have transpired had the respective provincial legislatures not approved the two surveys.	6	
9	To what extent does the principle from <b>either</b> <i>Bell v. Howard</i> (1857), 6 U.C.C.P. 292 (C.A.) <b>or</b> <i>Palmer v. Thornbeck</i> (1877), 27 U.C.C.P. 291 (C.A.) apply?.	6	
10	Assuming that the doctrine of adverse possession is alive and well in both provinces, how might it apply?	6	

<b>Questions 11 – 15 refer to Scenario C:</b>			
11	Describe the fundamental characteristics of a Torrens-type system of land registration.	6	
12	Define the concept of indefeasibility of title and note any situations where it may not apply.	6	
13	What role would your system play in regard to the legal status of the survey markers (pin, bars, or stakes) that are placed in the ground during a residential subdivision survey?	6	
14	How will your system deal with overriding interests in land? Give five examples.	6	
15	Should your system incorporate an exception to the general principle (that a certificate of title is proof of title to the land described), so as to exclude any portion of land included in the certificate by wrong description of boundaries or parcels?	6	

**The following question is not related to the above scenarios**

16	“The role of the professional land surveyor, in cooperation with allied professionals, may be seen as providing the physical, social and institutional information necessary for the allocation, development and conservation of man’s land resources.” Discuss.	10	
	<b>TOTAL MARKS:</b>	<b>100</b>	

## Case Study A

You are the Municipal & Legal Survey Manager for the Monumental Geomatics Corporation (MGC), a company of about 70 employees operating in the province of Ontario. Your client is Develop Inc., a publicly traded land development company that owns a 250 Hectare parcel in the urban fringe of Crescent Town, a picturesque, industrial boomtown. The site is uneven, rocky, and covered with dense brush and numerous obstructions. Develop Inc. is on the verge of bankruptcy and their business strategists conclude that, on the basis of market rents and regional sales trends, legal subdivision of the 250 Hectare “Happy Acres” site and sale of six hundred lots should be their highest priority.

MGC is retained to survey the site and you are charged with direction of the legal survey. Sadly, MGC’s arctic operations continue to occupy your most experienced and best-trained staff. Luckily, you are able to advertise quickly and widely, and you engage a crew of 13 rather ill-trained field staff. Compounding difficulties, the desire to retain natural vegetation to maintain the unique vistas increased the difficulty of survey operations. Despite these circumstances – staffing and vegetation - the legal survey proceeds and you commence laying out the six hundred lots, surprisingly on time and close to budget. The company’s Board of Directors is impressed and you appear to be in line for appointment as a Partner.

However, all is not well at MGC. It appears that, in the frenzied pace of surveying, you have erroneously accepted as accurate a row of iron bars planted by another surveyor in staking out an adjoining parcel. In so doing you have incorrectly located the road allowance running along the east side of the property.

In the complex chain of interactions between surveyor, engineers, architect and developer, critical information was mishandled: digital files containing your computed coordinates for the road allowance were uploaded and incorporated into the architect’s computer system, just one week into the project. The mistake was not discovered until 28 weeks into the project. Now, 41 weeks into the project, 80% of the lots have been laid out; the piped infrastructure has been designed, ordered, and 40% has been installed; some \$3.1 Million has been expended in design and construction fees, and the required corrections to the scheme. Develop Inc. has had to return numerous deposits to purchasers of the new lots and MGC faces a serious threat to their credibility.

As a commissioned Land Surveyor and the Project Manager, you are coming to grips with the fact that you are **responsible for a serious mistake**, and both your company and your personal reputation stand to suffer immensely. You face an allegation of incompetence and must face the Discipline Committee of the Surveyors’ Association on that matter. Develop Inc. has brought suit against you for alleged negligence and incompetence and seeks damages for the costs of:

- (i) the required re-design, and
- (ii) the foregone sales of Happy Acres lots.

However, there is a strong suggestion from project correspondence that Develop Inc. was aware of the error in the survey at an early stage, yet they continued to sell subdivision lots. Further, despite this knowledge at an early stage in the project, Develop Inc. continued to sell lots owing to the urgency of their financial situation.

## Case Study B

The contribution of the physical cadastre to securing rights in land rests on the actual placing of monuments, as part of administering a **survey system**. You are the Land Surveyor in charge of field operations for a company that has been contracted to survey the jurisdictional boundary between two provinces in the young nation of Kanaadah. The year is 1905 and you are to survey the boundary between the provinces of Tahoma and Trebeuchet, which boundary runs along the 55<sup>th</sup> parallel of north latitude. The southern boundary of Tahoma had been created by statute on November 1, 1900, followed in April of 1902 by the corresponding adoption of the 55<sup>th</sup> parallel as Trebeuchet's northern limit. Difficulties in prosecuting cattle rustlers and the discovery of valuable vegetable-based plastics demanded that the boundary be demarcated on the ground.

Your crew proceeds westward, marking the line with iron posts and marble obelisks at intervals of 1500 feet. Progress is slow, owing to the need to cross numerous swamps and to cut through dense forest. Nevertheless, some 87 miles of boundary are marked by the end of the first field season. This first leg of the boundary is officially proclaimed by both provinces.

Sadly, upon your return to the field, you suffer setbacks due to weather, the predations of the vermin of western Kanaadah, and the desertion of men unaccustomed to carrying large marble obelisks. You make frequent checks on your equipment, including a Gunter's chain and a precise Belgian-made transit, and the appropriate corrections to your course. In September of 1906, you complete the final leg of the survey (a distance of 56 miles). A hero's welcome awaits you. Both provincial legislatures officially proclaim the full monumented boundary of 143 miles as the inter-provincial boundary.

The celebration is short-lived, however. Returning to the field in 1907 to conduct a final astronomical observation, to your horror you discover that an error has been made at some point. Further calculations reveal that the entire boundary has been monumented two miles & three chains too far north. You surmise that mal-adjustment of the theodolite and incorrect distance measuring techniques have conspired to create the error.

Within two weeks, Tahaman mineral interests' concern over the soundness of their Mineral Claims causes investors in the vegetable-based plastics to withdraw their funding. Cattle rustlers continue their unwholesome activities, while the Tahaman legislature calls for a proper survey and re-monumentation of the line in the correct position. Trebeuchetians, by comparison, assert that the limit should be respected as marked. They point out that the boundary has been drawn on official maps prepared by both provinces. You are tasked with resolving the issue.

## Case Study C

You are the Director of International Operations of Courier Geomatics, a mid-sized land survey company that is involved in bidding on positioning and legal survey services for a proposed pipeline traversing the Northwest Territories of Helvetica, a former Soviet republic. Development of the project has been problematic due to several factors, including an unstable economic climate and uncertainty regarding the land rights of the semi-nomadic Haettenschweiler indigenous peoples, especially in the oil-rich Arial Sea region.

Over the twenty months that it takes to prepare your company's proposal you develop an excellent relationship with the Haettenschweilers. To improve institutional capacity in advance of the survey, you propose the development of a **land registration system** to secure the interests of both the indigenous peoples and the national oil company. You propose that they adopt a system similar to the Torrens-type systems found in the Canadian provinces.