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THE LAND SURVEYORS LAW

(1996 Revision)

THE LAND SURVEY REGULATIONS

(1996 Revision)

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LAND SURVEY REGULATIONS

(1996 Revision)

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LAND SURVEY REGULATIONS

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PART I-Preliminary

1. These Regulations may be cited as the Land Survey Regulations (1996 Revision). Citation
2. In these Regulations- Definitions
“approximate”, in relation to any boundary, has the meaning ascribed to it in section 17 of the Registered Land Law (1995 Revision); 1995 Revision
“fixed” in relation to any boundary has the meaning ascribed to it in section 18 of the Registered Land Law (1995 Revision);
“registration section” has the meaning ascribed to it in section 2 of the Registered Land Law (1995 Revision); and
“Registry Map” has the meaning ascribed to it in section 2 of the Registered Land Law (1995 Revision).

PART II-Surveys made under section 14

3. If a dispute arises between a licensed surveyor and the Chief Surveyor over the application of the regulations, either party may refer the matter to the Board. The Board shall hear and determine such dispute, and its decision shall be final. Disputes
4. (1) All distances shown on plans shall be in feet and decimals of a foot. Units of measurement
(2) All angular measurements shall be in degrees, minutes and seconds of arc.
(3) For purpose of conversion from international metres to feet, the relationship to be used shall be one international metre = 3.280840 feet, or one foot = 0.3048 international metres.
5. (1) The figure of the earth and the projection to be used in the computation of the co-ordinates of any survey shall be the Universal Transverse Mercator Projection zone 17 using the Clarke 1866 figure having elements; semi-major axis 6378206 international metres flattening 1/295.0. Systems of co-ordinates and projections

(2) Where Universal Transverse Mercator co-ordinates are given in metres they shall be converted to feet using the relationship in regulation 4(3).

Maintenance of measuring instruments

6. (1) Every licensed surveyor shall maintain his theodolite, measuring band and all other equipment in good order, and the Chief Surveyor may refuse to authenticate any survey which has been made with defective equipment.

(2) Every measuring band, tape, thermometer and spring balance shall be submitted to the Chief Surveyor before use and thereafter not less than once in every twelve months for comparison with the official standard in the custody of the Chief Surveyor.

(3) The Chief Surveyor may, at any time, require any licensed surveyor to submit any measuring equipment for his inspection.

Presentation of surveys

7. (1) Every licensed surveyor shall be personally responsible for the accuracy, fidelity and completeness of every survey presented by him for the approval of the Chief Surveyor.

(2) It shall be the duty of every surveyor making any survey under these Regulations to record all the relevant information that may aid in securing the accuracy and completeness of every such survey.

(3) Every surveyor shall perform sufficient work to enable him to apply a thorough check to every part of his survey.

(4) Every surveyor shall present his plan, computations and connected documents of every survey in such a manner as the Chief Surveyor may require, and if any surveyor forwards to the Chief Surveyor any plan, computation or connected document which does not conform substantially with the appropriate requirements, the Chief Surveyor may, at his discretion, return the plan, computation and connected documents to the surveyor and may refuse to authenticate such plan, computation or connected document until it has been made to conform with the appropriate requirements.

(5) All surveys returned to a surveyor shall be resubmitted to the Chief Surveyor without undue delay.

Permissible errors of measurement

8. All measurements must be made in accordance with regulations 34, 35 and 38 and the Chief Surveyor may refuse to authenticate any survey which contains errors in excess of those that can be expected from measurements properly carried out in the manner specified.

9. The Chief Surveyor may, at any time, depute any surveyor to check in the field any survey made under the Law by any other surveyor, and such check may include the verification of any information recorded in connection with such survey mark established under the Law or any regulations made thereunder. Checking of surveys
10. (1) Before carrying out any survey, every licensed surveyor shall be provided, or shall provide himself with all available information in respect of any previous survey of the parcel of land to be surveyed and of any adjoining parcel. Information prior to survey
- (2) Applications to the Chief Surveyor for this information shall be in writing and shall, whenever applicable, make reference to the approval for subdivision, or other transaction.
- (3) The Chief Surveyor shall make available, to any licensed surveyor, all technical information in his possession. Where the licensed surveyor extracts the information himself by personal search no fee will be payable, but where the information is extracted on his behalf by the Chief Surveyor, the fee prescribed in the Fourth Schedule shall be paid.
11. Before submitting any survey to the Chief Surveyor, a licensed surveyor shall ensure that approval has been obtained for a subdivision or other transaction of any parcel of land in any case where such approval is required by any law and that the survey submitted conforms with such approval. Prior approval of statutory authorities
12. (1) In pursuance of sections 16 and 18 the Chief Surveyor shall furnish to every surveyor an official letter of authority in Form A in the First Schedule. Authority for entry upon land
- (2) Every surveyor shall present his letter of authority to any owner or occupier of land who demands proof that such surveyor is duly authorised to enter upon his land.
13. (1) No licensed surveyor shall employ a survey technician without the written approval of the Board: Employment of survey technicians
- Provided that the Chief Surveyor may give provisional approval pending decision by the Board.
- (2) When such approval is given it shall be for a period of not more than two years in the first instance and may thereafter be renewed for further periods at the discretion of the Board.
- (3) The work done by any such survey technician shall be under the direction and personal control of the licensed surveyor, who shall himself carry

out a sufficient check to ensure that the work done by such survey technician is correct. The licensed surveyor shall accept full personal responsibility for all work performed by his survey technician.

(4) The licensed surveyor shall supply a certificate which shall be drawn up in Form B in the First Schedule.

(5) If the Chief Surveyor finds that a survey technician has performed any work which has not been supervised and checked by the licensed surveyor he may suspend approval for the employment of the survey technician, and the case shall be referred to the Board whose decision on the matter shall be final.

Fees chargeable by
Chief Surveyor

14. (1) The Chief Surveyor shall charge fees for all surveys carried out by the Survey Department in accordance with the charges prescribed in the Second Schedule.

(2) The Chief Surveyor shall charge fees in accordance with the charges prescribed in the Third Schedule for the authentication under section 25 of a plan submitted by a licensed surveyor.

(3) The Chief Surveyor shall charge fees in respect of all documents issued or services rendered by the Survey Department in accordance with the charges prescribed in the Fourth Schedule.

Fees chargeable by
licensed surveyors

15. The fees prescribed in the Fifth Schedule shall, unless there is a written agreement contracting out of the same, be charged by a licensed surveyor in respect of work done by him.

PART III-Survey marks, boundary beacons and boundaries

Design and specification
of survey marks

16. (1) The design of survey marks shall be as specified by the Chief Surveyor, except in special circumstances which must be set out in the report on the survey.

(2) Every new triangulation or trilateration station other than a purely auxiliary station shall be permanently marked.

(3) In third order traverses as defined in regulation 38 all traverse stations shall whenever possible be permanent points.

Placement of survey
marks
1995 Revision

17. (1) Where the boundaries of a parcel are required to be fixed in accordance with section 18 of the Registered Land Law (1995 Revision), any

beacons required to be placed to define accurately the boundaries of the parcel shall be of such type as the Chief Surveyor may require and shall normally be surmounted by a cairn of stones or a mound of earth.

(2) Where a boundary is inadequately defined and it is necessary to place a beacon to define the approximate position of the boundary such beacons shall conform to the requirements of subregulation (1).

(3) With a view to facilitating the location of isolated boundary beacons, such beacons shall be referenced to any nearby telephone pole, suitable tree or other prominent physical feature.

18. (1) (a) Where a rectilinear boundary intersects a curvilinear boundary and a beacon, required by regulation 17 cannot be placed at the intersection, a beacon shall be placed on the rectilinear boundary as near as possible to the intersection. Such beacon shall be known as a line beacon.
- (b) Where the rectilinear boundary continues on both sides of the curvilinear boundary line beacons shall be placed on both sections of the rectilinear boundary.
- (c) Where the curvilinear boundary falls within a river or swamp the line beacon shall be placed above flood level and shall be known as a river beacon.

Line beacons and river beacons

(2) When a line or river beacon has been placed in accordance with regulation 17 (1) the distance from the line or river beacon to the actual boundary shall be measured to the precision required by regulation 67 (2).

(3) All subdivisions of a parcel, the boundaries of which have been fixed, which is situated across a road reserve shall be fully beacons as self contained units.

(4) Where a curvilinear feature is adopted as a subdivisional boundary of a parcel, the boundaries of which have been fixed, the several subdivisions and any remainder shall be fully beacons as self contained units.

19. Where a beacon is placed on a boundary line that has been fixed, it shall be proved to be on line by establishing either directly or indirectly its relationship with the terminal beacons of the line.

Placing beacon on boundary line

20. Where a beacon is placed from computed data, its position shall be proved by an independent field check and calculation.

Beacons placed from computed data

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| When beacons cannot be placed | 21. When the corner of a parcel, the boundaries of which are required to be fixed, falls within inaccessible ground where a beacon cannot be placed, the position of such corner shall be permanently referenced by at least one indicatory beacon placed on a boundary line as near as possible to the corner. The details of the situation shall be indicated on the plan. |
| Damaged beacons to be repaired | 22. Where an old beacon of the parcel under survey is found to be damaged, the surveyor shall repair or renew the beacon and shall make a record of the repairs in his field notes. |
| Trigonometrical stations to be repaired | 23. (1) Every surveyor engaged on a public survey who discovers any trigonometrical or traverse station to be damaged and in need of repair shall carry out such repair as may be necessary.

(2) A licensed surveyor not engaged on a public survey is not required to repair any damaged trigonometrical or traverse station, but he shall report in writing to the Chief Surveyor the name, number and position of any such station and the nature of the damage he has observed. |
| Missing beacons | 24. Missing beacons shall be noted in the surveyor's report (regulation 64 refers) and in order to demonstrate that he has searched in the right place the surveyor shall furnish such measurements and observations as may be necessary. |
| Re-establishment of missing beacons | 25. If a surveyor is required to re-establish a missing beacon, he shall submit his field notes, computations and report to the Chief Surveyor. |
| Redundant beacons | 26. Where the existence of a visible redundant beacon is likely to lead to confusion, it shall be removed and replaced by an underground witness mark. |
| Surveys and re-establishment of boundaries | 27. (1) In every survey of land where the position of a feature or beacon defining the boundary of a parcel is found to differ materially from that indicated by the relevant previous survey, the surveyor shall exercise the greatest care-
<ul style="list-style-type: none">(a) in establishing that the discrepancy actually does exist; and(b) in collecting all evidence which may have a bearing on the eventual action to be taken.
(2) A careful search shall be made in the positions indicated by the previous survey to ascertain whether or not any evidence of the old boundary feature or beacon still exists and the position of any building or other development in the immediate vicinity of the boundary shall be recorded.

(3) The surveyor, before taking further action, shall provide the Chief Surveyor with a full report and shall request instructions. |

28. (1) Where any parcel is bounded by the sea, its seaward boundary shall be the high water mark as defined in subregulation (2). High water mark

(2) Subject to subregulation (3), the high water mark means the line of the median high tide between the ordinary spring and neap tides.

(3) If, at the time a survey is carried out, any part of the shoreline of a parcel is comprised of mangrove trees standing in the water or at the water's edge, the high water mark shall be the edge of the mangrove vegetation.

PART IV-Surveys performed by triangulation, trilateration, traverse and air surveys

29. All licensed surveyors shall assist, as far as is consonant with efficient and economical survey, in the establishment and increase of permanent control marks of all types throughout the Islands. Guiding principle

Triangulation and Trilateration

30. All geodetic and secondary triangulation and trilateration shall be carried out under the control of the Chief Surveyor, and shall normally be performed by Government Surveyors. Geodetic and secondary triangulation

31. (1) All new triangulation, trilateration and traverses made under regulation 38 which are of a lower general order than geodetic or secondary required to provide general control for cadastral surveys shall be brought into harmony with existing control by methods conforming with current survey practice. Lower order triangulation

(2) When issuing survey data for such work to a licensed surveyor, the Chief Surveyor may recommend either a particular sequence in the layout or computation of new work or any special computations which the circumstances may require, and it shall be the duty of a licensed surveyor so informed not to depart from the Chief Surveyor's recommendation without reasonable cause.

32. For the purpose of regulations 33 and 34, tertiary triangulation or trilateration means triangulation or trilateration established to an accuracy which makes it suitable for use as a basis of further triangulation or trilateration; minor triangulation or trilateration means triangulation or trilateration established to a lower accuracy and suitable only as a basis for fixing local traverses and beacons. Tertiary and minor triangulation

33. (1) A micrometer theodolite of an approved pattern reading directly to one second of arc, or better, shall be used for tertiary triangulation. Instruments use for triangulation and trilateration

(2) A micrometer theodolite of an approved pattern reading directly to twenty seconds of arc, or better, shall be used for minor triangulation.

(3) Electronic distance measuring equipment of an approved pattern shall be used for trilateration distance measurement.

Method of taking
triangulation
observations

34. (1) The minimum requirement for tertiary and minor triangulation shall be two arcs observed on different zeros:

Provided that two rounds observed on different faces and different zeros may be sufficient for observations to points situated less than 6,000 feet distant.

(2) An arc of angular observations for triangulation shall consist of two rounds observed in opposite directions on the same zero, one round being on face left and the other on face right.

(3) For each arc a suitable reference station shall be selected and both rounds of the arc shall be closed on to it, and the misclosure of each round shall be appropriate to the class of theodolite used.

(4) The difference between measurements of any angle on different arcs shall be appropriate to the class of theodolite used.

(5) Where electronic distance measuring equipment is used sufficient observations shall be taken to eliminate any ambiguities and achieve the accuracy required by regulation 8.

Fixing of beacons

35. (1) Triangulation, trilateration, or a combination of these techniques for determining the position of beacons shall be carried out in accordance with the procedure laid down in regulations 31 to 34 and the method of computation shall conform with current survey practice.

(2) Beacons may also be fixed by-

- (a) intersection, provided at least three suitable rays are observed on to the point to be fixed;
- (b) resection, provided at least four points in favourable positions for such fixing are observed; or
- (c) any other method which is capable of fixing a point with no less accuracy than that of the methods of intersection and resection:

Provided that no point fixed by any of the methods specified in paragraphs (a), (b) and (c) shall be used to form the basis of further triangulation or trilateration.

36. In areas where no triangulation exists a licensed surveyor shall request instructions from Chief Surveyor as to the datum and method of survey to be used. Isolated surveys

Traverse Surveys

37. All geodetic and secondary traverses shall be carried out under the control of the Chief Surveyor and shall normally be performed by Government Surveyors. Geodetic and secondary traverses

38. (1) (a) All main control traverses shall be observed to third order standard. Lower order traverses
- (b) Where such lines are measured by means of a measuring band all such lines shall be doubled-chained.
- (c) Where such lines are measured by means of electronic distance measuring equipment sufficient observations shall be taken to eliminate any ambiguities.
- (d) All such field operations shall be appropriate to a standard of accuracy of not less than 1:20,000.
- (2) (a) All other control traverses for the survey of rectilinear boundaries shall be observed to fourth order standard.
- (b) Field operations for such surveys shall be appropriate to a standard of accuracy of 1:10,000, but computational misclosures shall be allowed to the same degree of accuracy as the datum supplied by the Chief Surveyor.
- (c) A surveyor shall not use a loop traverse closing on his starting point if it is practicable to traverse between two previously fixed stations.
- (d) When a surveyor is unable to close his work within the limits prescribed by the Chief Surveyor, the Chief Surveyor may, at his discretion, authorise or instruct the surveyor to accept a lower order of misclosure, otherwise the surveyor shall close his new work by a loop traverse, orientation being confirmed in a satisfactory manner.
- (3) (a) The survey of curvilinear boundaries such as roads, rivers, high water marks, etc., shall be made by subsidiary traverse or by air survey methods:
Provided that this provision shall not preclude any more accurate method.
- (b) Such surveys of curvilinear boundaries shall be carried out to a standard of accuracy appropriate to the plotting scale of the plan of the survey.
- (4) Where traverses are very short, a reasonable misclosure shall be allowed irrespective of the minimum requirements under these regulations.

- Angular measurement traverses
39. (1) A theodolite permitted by regulation 33 (1) shall be used for all third order traverses where the distances are measured with electronic distance measuring equipment, or double-chained.
- (2) A theodolite permitted by regulation 33 (2) shall be used for fourth order traverses.
- (3) At every traverse station of third and fourth order traverses, not less than two rounds of angular measurements on different faces and different zeros shall be observed.
- (4) (a) Angular measurements for subsidiary traverses may be made either with a theodolite or a compass of approved pattern, subject to the necessity to achieve the standard of accuracy required by regulation 38.
- (b) If a compass is used, both forward and back observations must be observed at each station.
- (5) For all angular measurements the first round at each station shall be set, when possible, to the general orientation which is to be used throughout the survey.
- (6) It is not necessary to close rounds of traverse observations on to a reference station.
- Linear measurement of traverses
40. (1) (a) All linear measurements of third and fourth order traverses shall be measured using equipment and methods appropriate to the standards of accuracy specified in regulation 38 (1) and (2).
- (b) Slopes shall be determined by a theodolite, with a degree of precision appropriate to the standards specified in regulation 38 (1) and (2), and where the slope is in excess of 10 degrees the theodolite shall be read on both faces.
- (c) All measurements shall be reduced to the horizontal at mean sea level. In addition, measurements made with a measuring band shall be corrected for temperature and, where appropriate, sag.
- (2) (a) All linear measurements of subsidiary traverses shall be measured using equipment and methods appropriate to the standards of accuracy specified in regulation 38 (3).
- (b) Slopes shall be determined by a theodolite or Abney level with a degree of precision appropriate to the standards specified in regulation 38(3).
- (c) All measurements shall be reduced to the horizontal.

41. (1) In a survey of curvilinear boundaries by tacheometric method, distances determined by staff readings shall not normally exceed 500 feet and all three stadia readings on the staff shall be read. Surveys of curvilinear boundaries
- (2) Offsets to curvilinear boundaries from a traverse line which substantially exceed 150 feet shall be set out instrumentally or geometrically and the method shall be recorded in the field notes.
42. Swinging or hanging traverses unsupported by independent checks shall not be used. Swinging or hanging traverses
43. Where the means exist, every point of departure of a new traverse and every terminating point shall be verified by observations and measurements, which shall be recorded in the field notes. Verification of terminals of traverse
44. Where a previously co-ordinated traverse station is converted for use as a boundary beacon or where such traverse station is used to place or fix a boundary beacon, the surveyor shall verify the station by observations and measurements which shall be recorded in the field notes. Verification of datum

Air survey

45. Air survey methods may be employed in special cases with prior written approval of the Chief Surveyor. Air survey

PART V-Field notes

46. (1) Field notes shall be made on such forms or books as the Chief Surveyor may require. Field notes to be on special forms
- (2) Licensed surveyors shall pay to the Chief Surveyor the cost price of any blank forms or books supplied to them by the Chief Surveyor.
47. (1) At each triangulation and trilateration station every surveyor shall, when taking observations, record in his field notes the date, time, weather conditions and degree of visibility. Recording of triangulation observations
- (2) When it is necessary, for any reason, for a surveyor to divide his observations at any station into two sets, the second set shall incorporate at least two stations which have been observed in the first set.
48. All traverse observations and measurements shall be recorded in the field notes in the sequence in which they are observed or measured. Recording of traverse observations

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- Description of beacons 49. A full description of every beacon and other mark used in the course of the survey, whether placed, found and used or adopted shall be recorded in the field notes.
- Method of entering field notes 50. (1) All observations and measurements made in the field shall be recorded clearly and legibly in hard pencil, and shall be in such manner as the Chief Surveyor may require.
- (2) All entries in field notes which are not made in the field shall be written in blue or black ink.
- (3) All entries in field notes shall be indexed and referenced in such a way that any competent person may be able to prepare a true plan therefrom and the entries shall be in such form that they have only one reasonable and correct interpretation.
- Erasures and corrections 51. (1) In no circumstances shall any erasure be made in field notes.
- (2) Corrections shall be made by drawing a thin line through the erroneous entry so as to leave the original entry legible; the correct entry shall be written outside the erroneous entry and not across it.
- (3) Corrections to field notes shall be made in the field and shall be a true record of actual measurements or re-observation and shall be initialled by the surveyor.
- Nomenclature 52. (1) The letters, names or numerals by which any beacon or survey mark is described in field notes shall be written in roman script.
- (2) In choosing suitable descriptions, surveyors shall take care to avoid nomenclature which is likely to lead to confusion and the letters I, O, S and Z shall not be used except in pronounceable words.
- Cover page and index 53. (1) The cover page of field notes forms or the cover of field notes books shall contain such information as the Chief Surveyor may require.
- (2) This information shall include the standard temperature and tension for the measuring band used in the survey and where measurements have been made in catenary the weight per 100 ft. of the measuring band.
- (3) The pages of field notes shall be numbered and an index in alphabetical and numerical order of all observations and measurements in the field notes shall be given on the reverse of the cover page.

54. When any surveyor is compelled to use unorthodox methods of survey owing to obstructions or difficulties in the field, he shall give explanatory notes and, where necessary, diagrams in the field notes to explain clearly the method he has used and recorded.

Unorthodox methods

55. (1) Sketched topographical features in the vicinity of a beacon shall be recorded, where possible, to facilitate its location.

Topographical features

(2) All developments on any plot such as buildings, wells or boreholes shall be surveyed. Any other development such as pipelines, which in the surveyor's opinion may involve a question of easement, right of way or any prescriptive rights shall also be surveyed.

PART VI-Computations

56. (1) Computations shall be made on such forms as the Chief Surveyor may require.

Computations to be on special forms

(2) Licensed surveyors shall pay to the Chief Surveyor the cost price of any blank forms supplied to them by the Chief Surveyor.

57. Computations shall be clearly and legibly set out in ink, and the entry of numbers or words to indicate checks on the computations shall be made in pencil or a different coloured ink:

Methods of entering computations

Provided that red ink shall be reserved for the use of the Chief Surveyor.

58. Surveys carried out by triangulation or trilateration shall normally be set out and computed by the direction method, or in conformity with any other current standard survey method.

Triangulation and trilateration

59. (1) In surveys carried out by traverse methods, each separate traverse shall normally be set out in suitable form so as to demonstrate the initial datum bearing or bearings, the bearing misclosure and the consequent adjustment of bearings.

Traverses

(2) The positional misclosure, its distribution through the traverse, and finally adjusted values of all traverse points shall be demonstrated in conformity with current standard survey practice.

60. Before any surveyor forwards any computations to the Chief Surveyor for authentication he shall make an independent and complete check of all his calculations, and such checks shall accompany the computations and be clearly demonstrated.

Independent checks to be made

Method of computing areas 61. (1) The rectilinear areas of parcels, the boundaries of which have been fixed, shall be computed mathematically.

(2) When a portion of the boundary of a parcel, the boundaries of which have been fixed, is a curvilinear boundary, the area of the parcel shall be determined partly by computing from co-ordinates and partly by planimeter determination from a drawing of the curvilinear boundary which has been drawn in conformity with regulation 66.

(3) If necessary, the co-ordinates of accurately scaled points on the drawing of the curvilinear boundary shall be used in the computation, in order to reduce to a minimum the area to be determined by the planimeter.

Method of measuring areas 62. The areas of parcels, the boundaries of which are approximate only, shall be determined by planimeter measurement.

Degree of accuracy of calculating areas 63. Areas shall normally be calculated to the degree of accuracy specified in the following table-

	Decimal places of an Acre	
	Fixed boundaries	Approximate boundaries
Parcels not more than 1 acre	4	2
Over 1 acre and not more than 5	3	2
Over 5 acres and not more than 25	2	1
Over 25 acres and not more than 100	1	Nearest acre
Over 100 acres	Nearest acre	Nearest acre

Presentation of computation 64. The computations of every survey submitted for authentication shall be preceded by -

- (a) a report;
- (b) a general index to the computations; and
- (c) a complete list of final co-ordinates of every point adopted or calculated in the survey; this list shall be arranged in groups comprising datum points, new triangulation, trilateration and traverse stations, old or re established boundary beacons and new boundary beacons, arranged in alphabetical and numerical order; and on this co-ordinate list a description of every point shall be

given, and reference shall be made to the source of co-ordinates including datum plans or pages of computations.

PART VII-Plans

65. (1) All plans shall be drawn in waterproof inks on such plan forms as the Chief Surveyor may require. Plans to be drawn on special forms

(2) Licensed surveyors shall pay to the Chief Surveyor the cost price of any plan forms supplied to them by the Chief Surveyor.

66. Plans shall be plotted at the same scale as the Registry Map of the registration section in which the parcel is situated: Scales to be used

Provided that in special circumstances plans shall be plotted at such scale as the Chief Surveyor may require.

67. (1) Where the consent of the Chief Surveyor has been obtained for the adoption of an existing survey of a curvilinear boundary, the surveyor shall- Plotting of curvilinear boundaries

- (a) make an accurate reduction of the larger scale plan for use at a smaller scale;
- (b) make an accurate transfer for use at the same scale; or
- (c) replot from the original field notes and computations for use at a larger scale.

(2) Where a rectilinear boundary intersects a curvilinear boundary and regulation 18(1) is applicable, the distance from each line or river beacon to the intersection shall be shown to the nearest foot, but the distances between successive beacons along the rectilinear boundary shall be shown to the degree of precision required by regulation 71(3).

(3) Where a curvilinear boundary of a parcel has been fixed, such curvilinear boundary shall be distinctively described.

68. (1) All plans shall be plotted by rectangular co-ordinates. Plotting by co-ordinates

(2) A plotting grid of squares covering the surveyed area shall be drawn in blue such that grid line values shall be at intervals of 500 feet or even multiples of 500 feet.

(3) Every plan shall contain at least one complete grid square and no square shall have sides exceeding 8 inches in length.

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- General rules 69. (1) All detail shown on the plan shall be distinct and the cramping of figures shall be avoided.
- (2) The north point on every plan shall be upwards and parallel to the sides of the plan form.
- Abutting boundaries 70. (1) All boundaries abutting on any parcel which has been surveyed shall be shown on the plan.
- (2) Where the parcel or parcels adjoin a surveyed road, and where the scale of plotting permits, the boundaries abutting on the other side of the road shall be shown.
- Co-ordinates and numerical data 71. (1) In every survey the co-ordinates of permanent control stations shall be tabulated on the plan.
- (2) Where boundaries of parcels have been fixed, the following additional information shall be given on the plan-
- (a) the co-ordinates of block corners of regular shaped figures and of all beacons of irregular shaped parcels shall be tabulated; and
 - (b) the length and bearing of every boundary shall, when possible, be inscribed along the line to which they refer and such lengths and bearings shall be deduced from the final co-ordinates tabulated on the plan.
- (3) Co-ordinates and lengths, when required by subregulation (2), shall be shown to one decimal place of a foot.
- (4) (a) The area of every parcel shall be inscribed, where possible, within the figure to which it refers to the degree of accuracy prescribed by regulation 63.
- (b) Sufficient space shall be left for the parcel number to be inserted by the Chief Surveyor.
- (c) No parcel number shall be inserted by any surveyor.
- (5) All other data which may serve to clarify or complete any survey plan shall be shown on the plan.
- Triangulation charts 72. When surveys have been made by triangulation or trilateration or a combination of these techniques, a chart drawn on a separate plan form shall be made showing all rays observed or measured or both. Such charts shall show a tabulated list of final co-ordinates of all permanent control points:

Provided that it shall not be necessary to draw a separate plan where the control points have been surveyed by methods permitted in regulation 35(2).

73. Every survey plan shall be drawn in accordance with the requirements of the Chief Surveyor, in respect of colour, style of printing and other details. Colour and style of printing

74. (1) All topographical features that have been accurately fixed by survey or have been sketched with reasonable precision, in accordance with regulation 55(1), shall be shown in their correct plotted positions on the plan. Topographical features

(2) When form lines add nothing of significant value to the plan, they shall not be shown.

(3) Topographical information may be taken from any official map published by the Chief Surveyor or any authority approved by the Chief Surveyor with due caution in regard to the limitations enjoined by the scale of the map.

(4) Where topographical information is taken from aerial photographs, the source shall be shown on the plan.

75. (1) No erasures shall be made after a plan has been drawn in ink. Erasures or corrections

(2) Necessary corrections shall be made by scoring through the incorrect word, letter or numeral in ink and writing the correct word, letter or numeral outside the incorrect word, letter or numeral. Every such correction shall be initialled by the surveyor.

76. Every plan shall have on it a certificate in such form as the Chief Surveyor may require and the certificate shall be signed and dated by the surveyor who made the survey. Certificate

77. The Chief Surveyor may refuse to authenticate any plan submitted by a licensed surveyor which, in his opinion, has been drawn carelessly and untidily or is received by him in a dilapidated or damaged condition. Authentication by Chief Surveyor

PART VIII-Miscellaneous

78. (1) Any person shall have access, free of charge, to every published map and plan in the possession of the Chief Surveyor: Public access to maps and plans

Provided that the Chief Secretary or his representative may refuse access as he may deem necessary in the public interest.

(2) A search fee of one dollar per plan shall be paid in advance by any person who is not a licensed surveyor or not on Government duty, for access to any unpublished plan. The search fee may be credited against the price of any print of the plan purchased at the time of the search.

FIRST SCHEDULE

(Regulations 12 & 13)

Prescribed Forms

Letter of Authority

FORM A

(Regulation 12)

In exercise of the powers conferred upon him by regulation 12 of the Land Survey Regulations (1996 Revision) the Chief Surveyor hereby authorises -----

(name and designation of person authorised) to enter upon any land to perform any duty which he is required to perform under the Land Surveyors Law (1996 Revision).

Date----- 19-----.

(Chief Surveyor)

Note the relevant sections 16, 18 and 20 of the Land Surveyors Law (1996 Revision) are printed, for general information, on the back of this Letter of Authority.

Certificate for Survey Technicians

FORM B

(Regulation 13)

I certify that all the work performed in the field and in the office by my survey technician -----, has been carried out under my personal direction, and I take full responsibility for all work so performed.

Date----- 19-----.

(Licensed Surveyor)

SECOND SCHEDULE

Fees for Surveys by Survey Department

(Regulation 14(1))

1. For surveys for alienation and first registration of any Crown land, the fee shall be assessed in accordance with the following formula-

for each parcel of land \$500A
(where "A" is the square root of the area in acres of the parcel),
together with any expenses incurred:

Provided that the fee shall be computed to the nearest ten dollars and the minimum fee shall be one hundred dollars.

2. For surveys for the fixing of boundaries under section 18 of the Registered Land Law (1995 Revision) and for all other surveys carried out under the Land Surveyors Law (1996 Revision) the fee shall be assessed in accordance with the Fifth Schedule.

3. In any other case, the fee shall be assessed by the Chief Surveyor.

4. The Chief Surveyor may, at his discretion, remit all or part of any fee.

THIRD SCHEDULE

Fees for the Authentication of Plans

(Regulation 14(2))

1. For each parcel shown on the plan \$5A
(where "A" is the square root of the area in acres of the parcel):

Provided that-

- (a) the fee shall be calculated to the nearest one dollar with a minimum of ten dollars per parcel;
- (b) the fee for an easement shall be five dollars;
- (c) one-half of the above fee shall be charged for authenticating compiled plans;
- (d) fees for checking any survey made for the re-establishment of beacons shall be on a time basis in accordance with paragraph 6(3) and (4) of the Fifth Schedule:

- (e) fees for checking surveys in accordance with regulation 9 shall be assessed in accordance with the Fifth Schedule;
- (f) the Chief Surveyor may, at his discretion, remit all or part of any fee; and
- (g) no fee shall be charged for authenticating any triangulation chart or traverse chart.

2. Any charges levied by Government under this Schedule shall be added to the total of other charges payable under these Regulations.

FOURTH SCHEDULE

Fees for Documents and Services

(Regulation 14(3))

1. Prints of survey plans on dyeline paper
50 cents per square foot:
Provided that a licensed surveyor may be granted a discount of forty per cent.
2. Photocopying of computation sheets, field notes and the like, per foolscap sheet \$.75.
3. Provision of survey data, per approved scheme: \$25.00.
Provided that prints of plans up to a maximum of three per scheme shall be included in the fee. Any additional prints in excess of this number shall be charged as in paragraph 1.
4. Amendments made in the registry map, per parcel \$4.00.
5. Preparation of special plans, map or issue of any special documents not listed in this Schedule shall be assessed by the Chief Surveyor.

FIFTH SCHEDULE

Fees of Licensed Surveyors

(Regulation 15(1))

Definitions	<p>1. In this Schedule-</p> <p>“basic charge” means a charge designed to cover the cost of investigation of survey records, the collection of survey data and the clarification of the position in regard to the title and survey; and</p> <p>“hilly”, in relation to land, means that the average slope exceeds five degrees.</p>
Method of payment	<p>2. (1) The charges prescribed in this Schedule shall be payable as to seventy-five per cent of the cost on completion of the survey and the plan being deposited with the Chief Surveyor, and the remaining twenty-five per cent when the survey has been approved by the Chief Surveyor:</p> <p>Provided that, when accepting a survey commission, a surveyor may require the payment of a deposit against the eventual charges to be raised in connection with the survey. In cases where no plan is necessary, the full charge shall be payable on completion of the field survey.</p> <p>(2) In large surveys, the surveyor shall be entitled to progress payments at monthly intervals throughout the period of the survey, and such payments shall be at the rate of seventy-five per cent of the value of the work done, and shall be computed in accordance with the appropriate scale prescribed in this Schedule.</p> <p>(3) When a surveyor is unable, owing to his client’s instructions, to complete either the survey or the plan, he shall be entitled to payment of the full value of the work completed.</p>
Inclusive charges	<p>3. Except where otherwise stated, the charges prescribed in this Schedule include the plan of the survey, together with the field notes, computation and other information required by these Regulations.</p>
Charges for copies and plans	<p>4. Photostat copies, transparencies or prints of tracings from plans prepared for statutory requirements, these Regulations, Court requirements or order, or at the request of the client, shall be charged as follows-</p>

Dyeline prints	24"x36"	\$3.00
	18"x24"	\$1.50
	12"x18"	\$1.00
Transparent drafting film	24"x36"	\$5.00
	18"x24"	\$3.00
	12"x18"	\$2.00
Photostat copies	per page	\$.20

5. (1) The surveyor shall be entitled to recover transport and travelling charges at a rate per mile equal to the Government mileage allowance for necessary journeys incurred in the survey when travelling in his own transport, plus a time rate in accordance with paragraph 6(3) and (4).

Travelling and subsistence allowances

(2) When a journey is made by other means, the transport and travelling charge shall be the cost of fares, plus a time basis.

(3) The surveyor shall be entitled to reasonable subsistence allowance and hotel, camp or other accommodation expenses.

6. (1) Charges on a time basis shall be made only when the conditions are such that the other rates are not appropriate:

Charges on time basis

Provided that in any case charges shall be on a time basis in respect of the following-

- (a) the basic charge;
- (b) the preparation of plans from existing records where no field work is required;
- (c) interviews with Government officials;
- (d) work involved when the client changes his scheme or layout after the survey has commenced;
- (e) the location and verification of control points and beacons and surveys to re-establish beacons;
- (f) triangulation or trilateration; and
- (g) work required and not otherwise covered in the scale.

(2) Where fees are on a time basis the arrangement should be confirmed beforehand between the surveyor and the client.

(3) On a time basis the rate for a licensed surveyor shall be a maximum of eighty dollars per hour dependant on his skill and experience. The hourly rate may be increased where he is required to advise on matters of exceptional

importance or where the work calls for a special degree of skill or responsibility or where he employs special equipment.

(4) On a time basis the rates for a survey technician shall be an hourly rate in the range of two and a half times his annual emoluments based on a working year of one thousand five hundred and forty hours dependant on the skill and experience of the technician. The rate may be increased for work calling for a special degree of skill or responsibility, but shall not exceed the rate in subparagraph (3).

Labour and materials

7. To the aforementioned charges shall be added the cost of labour (not exceeding fifty dollars per 1/2 day per man) and materials, together with any other out-of-pocket expenses.

Additional charges

8. To the aforementioned charges the following charges, as appropriate, shall be added-

(a) for all traverse lines required in terms of these Regulations, including, necessary connections to control, and other survey marks, including such traverses as are required to establish new internal boundaries-

- | | |
|---|----------|
| (i) third order traverse, for every one hundred feet surveyed | \$10.00 |
| (ii) fourth order traverse, for every one hundred feet surveyed | \$ 5.00 |
| (iii) compass traverse, for every one hundred feet surveyed | \$ 2.00 |
| (iv) where tacheometric connections, or offsets to a curvilinear boundary or topographical feature are required, per connection or offset | \$ 3.00: |

Provided that where the area is-

- (A) predominately of swamp, cliff-rock or is hilly, these charges may be increased by ten per cent;
- (B) inaccessible, the charges may be increased by twenty-five per cent.

(b) Parcel charges-	General boundary survey	Fixed or precise survey
(i) not exceeding one-quarter acre- up to ten parcels, per parcel	\$30.00	\$50.00
for each parcel after the first ten	\$26.00	\$42.00
(ii) exceeding one quarter acre and up to one acre- up to ten parcels, per parcel	\$40.00	\$60.00
for each parcel after the first ten	\$34.00	\$50.00
(iii) exceeding one acre and up to five acres- up to ten parcels, per parcel	\$50.00	\$70.00
for each parcel after the first ten	\$42.00	\$58.00
(iv) exceeding five acres and up to twenty-five acres- up to ten parcels, per parcel	\$60.00	\$80.00
over ten parcels, per parcel	\$50.00	\$66.00
(v) exceeding twenty acres- per parcel	\$70.00	\$90.00:

Provided that where the area is-

- (A) predominantly of swamp, cliff-rock or is hilly, then charges may be increased by ten per cent;
- (B) inaccessible, the charges may be increased by twenty-five per cent.

- (c) Charges of cutting and clearing shall be based on the time basis in paragraph 6.
- (d) For each old beacon fixed on the survey, and new beacons placed in predetermined positions \$7.00.
- (e) Beacons charge, in addition to the fees set out in this paragraph, payable for every iron pin set in concrete \$7.50:

Provided that where excavation of coral or other rock is made for the proper erection of any survey beacon, an additional charge of two dollars per beacon may be made.

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- (f) (i) For each boundary line used in the mathematical computation of the area of each lot, the area of which is to be shown on the plan \$.50.
- (ii) In the case of figures of uniform width bounded by parallel sides, per parcel \$ 5.00.
- (iii) Determination of any area by planimeter or for each area to be added to a mathematically computed area, an addition of \$20.00.

Special charges

9. Notwithstanding the provisions of this Schedule, a licensed surveyor may, with the prior written approval of the Chief Surveyor, depart from the prescribed charges in cases where the Chief Surveyor is satisfied that the peculiar or special circumstances appear to justify the same.

Publication in consolidated and revised form authorised by the Governor in Council this 6th day of February, 1996.

Mona N. Banks-Jackson
Clerk of Executive Council