

*Government Notice No. 119 of 2013*

## **THE CADASTRAL SURVEY ACT**

### **Regulations made by the Minister under section 21 of the Cadastral Survey Act**

#### **1. Short title**

These regulations may be cited as the Cadastral Survey (Land Surveys) Regulations 2013.

#### **2. Interpretation**

In these regulations –

“Act” means the Cadastral Survey Act;

“Cartesian Map Grid Coordinates”, referred to as the Map Grid of Mauritius 2008 (MGM2008), means Cartesian Map Grid derived from GDM2008;

“Geodetic Coordinates”, referred to as the Geocentric datum of Mauritius 2008 (GDM2008), means coordinates based on the Reference Frame and Associated Ellipsoid;

“Plane Coordinate System”, referred to as the Local Grid Mauritius 2012 (LGM 2012), means Plane Coordinate System based on the Lambert Conformal Conic Two Parallel map projection.

#### **3. Chief Surveyor to direct and standardise cadastral land survey practices**

(1) The Chief Surveyor may, pursuant to his powers under the Act, issue Guidelines, Directions and Notices to land surveyors to regulate the practice of land surveyors, and to set standards for land survey work in respect of geodetic survey control, cadastral land

surveying practices, survey accuracy, marking, plans, data and data formats, survey plan and document registration procedures, and any other matter related to surveying practices, the coordinated and the Digital Cadastral Database (DCDB).

(2) The Chief Surveyor may declare special zones where a higher level of land survey boundary establishment and measurement accuracy applies.

(3) The increased accuracy standards shall apply to all cadastral land surveys made in the declared special zone or zones and, where applicable, across the declared special zone or zones boundary.

#### **4. Survey equipment**

(1) All instruments and survey equipment shall be kept in good working order and tested frequently to ensure that they operate within –

(a) design tolerances;

(b) accuracy standards for which survey quality theodolites and total stations shall have a minimum accuracy of 10 seconds.

(2) (a) All tapes used to measure distances shall be of survey quality having a uniform cross section and being of a stable material which exhibits a linear temperature coefficient.

(b) The tapes shall be steel tapes, with nylon coated or steel band, graduated in metres and decimals of metres such that any distance can be measured to a least count of 1 millimetre.

(3) All electronic measuring equipment, including GPS equipment and calibration software, shall, before general use, be

tested over known baselines or network points as approved by the Chief Surveyor.

## **5. Accuracy**

- (1) A land surveyor shall, in carrying out a cadastral survey –
  - (a) use equipment and techniques that enables the required standard of accuracy to be met and verified; and
  - (b) carry out adequate checks of the survey to ensure that the required standard of accuracy is met.
- (2)
  - (a) Each distance and reduced level shall be expressed in metres and decimals of a metre recorded to a least count of 1 mm.
  - (b) Each bearing and angle shall be expressed in sexagesimal degrees, minutes and seconds.
  - (c) Each area shall be expressed in square metres or hectares.
  - (d) Each bearing, distance, reduced level and area shall be recorded to sufficient significant figures to reflect the specified accuracy requirements.
  - (e) For surveys connected to the MGM 2008, LGM 2012 or Rodrigues datum, the measured horizontal ground distances shall be recorded and used for purposes of boundary dimensions.
- (3) The following accuracies shall be the minimum standard –
  - (a) if the angular misclosure in any traverse exceeds  $10\sqrt{n}$  seconds (where “n” equals the number of angles measured in the traverse) and if the gross error cannot be detected and corrected by localized

remeasurement, all the angles in the traverse shall be remeasured;

- (b) two measurements of the horizontal ground distances of a boundary line shall agree to within one part in five thousand plus 5 millimetres (1:5000 plus 5 mm); [Eg:  $100 \pm 0.025\text{m}$ ,  $200 \pm 0.045\text{m}$ ];
- (c) the maximum allowable error of closure of a traverse after angular adjustment shall be one part in ten thousand (1:10000);
- (d) the minimum horizontal accuracy of surveys carried out with GPS technology shall be two parts per million plus 10 mm (2ppm plus 10mm) at 95per cent confidence level.

(4) Where an error of closure is to be distributed, the Bowditch rule or a superior adjustment shall be used.

(5) Bearings shall be derived by angular observation from 2 or more suitably spaced control points in MGM 2008 or LGM 2012 Map Grid Coordinates of Mauritius or Rodrigues datum.

(6) (a) A survey shall be referenced to the official geodetic datum by angles and distances measured to 2 or more nearby co-ordinated monuments, or by differential carrier phase GPS observation with results computed in the official geodetic datum.

(b) The coordinated monuments used for a survey shall be verified as undisturbed by measurement to the reference marks prior to being used for the purpose of the survey.

(c) The Chief Surveyor may, for the purpose of unambiguously locating and fixing the position of the survey in the DCDB, accept approximate coordinates provided for a minimum of



2 surveyed boundary corners in the situation where geodetic network marks are more than 500 metres from the land being the subject of the survey.

(d) The approximate coordinates shall be in UTM Zone 40S and be recorded to a least count of 1 metre.

(e) The datum to be used shall be GDM2008 or WGS84 datum.

(f) The datum used by a land surveyor shall be recorded and shown on all relevant survey plans.

(g) Approximate coordinates may be derived from –

(i) hand held GPS measuring unit operating in point position mode and having a digital read-out display accuracy of 1 metre;

(ii) Google Earth recorded to a digital read-out display accuracy of 1 metre;

(iii) MHL aerial photography; or

(iv) by another means acceptable to the Chief Surveyor provided the coordinates meet specifications.

(7) The land boundary survey measurements and marked survey traverses shall be carried out to full land survey accuracy, whether accurate geodetic coordinates or approximate coordinates are used for locating any land parcel in the DCDB.

(8) Linear measurements in a survey shall be expressed in metres and decimals thereof.

(9) The difference in the linear perimeter of a surveyed land parcel compared to its dimensions as per existing title deeds shall

be expressed as a “Linear Perimeter Misclosure” in metres and decimals thereof.

## **6. Survey procedure**

(1) A land surveyor shall, before carrying out a cadastral survey, refer to every available pertinent documentary evidence relating to the land being surveyed and the adjoining lands, or any such survey evidence that may affect the boundaries under survey.

(2) A land surveyor shall, in carrying out a cadastral survey –

- (a) locate all existing survey marks, boundary marks, reference marks, improvements including boundary fence or walls and natural features likely to provide evidence of the boundaries of the land; and
- (b) connect the survey to all existing surveys of land in the vicinity likely to provide evidence of the boundaries of land by –
  - (i) where there are not 2 apparently sound survey marks or reference marks to which the survey may be connected, connecting to such apparently sound survey marks as are available and to improvements in a manner that enables the existing survey to be re-established;
  - (ii) where significant differences in the data from an existing survey are revealed, carrying such further work as may be necessary to establish whether or not the difference results from an error in measurement in the existing survey, the placement or acceptance of the survey mark in the existing survey or the siting of the improvement;

- (c) in a field, search for all boundary stones and survey marks adjacent to the land parcel or parcels being surveyed.

(3) (a) Where any marks are found, they shall be recorded as “found” in the field notes.

(b) Where any marks are searched for and after a thorough search is made by a land surveyor, it is conclusive to the surveyor that the mark is gone, then the mark shall be recorded as “gone” in the field notes.

(4) (a) A land surveyor shall run a permanently marked traverse to connect all marks found and pick up all pertinent near-boundary improvements, including walls or fences.

(b) The traverse marks shall be used as the basis for positioning the corners and boundaries of the land under survey and at least 2 of those marks shall be permanent traverse marks to be placed preferably on road sides for use in future surveys within the locality.

(c) Where there is subdivision among heirs or morcellement into 10 or more lots per site, the surveyor, promoter or developer, as the case may be, shall at the end of infrastructural works where applicable, cause a permanent network of survey control marks to be placed within the site to a standard acceptable to the Chief Surveyor.

(5) (a) A land surveyor shall record all angular, distance and coordinate measurements taken and provide a description of the traverse marks.

(b) At selected corner points, reference marks shall be placed so as to enable the corner to be re-established by a land surveyor at a later date if in between time the mark is lost or destroyed.

(6) Every boundary under a survey shall be measured directly or shall be determined by closed traverse, trilateration or check measured radial observation.

(7) (a) Where the linear perimeter misclosure of an existing land parcel exceeds 1 per cent of the original linear dimensions, the land surveyor shall draw up a memorandum of survey of the land parcel.

(b) Paragraph (a) shall not apply to land parcels where at least one side is bounded by sea, rivers, lakes or any ambulatory feature.

(8) Every survey involving the following shall be coordinated in the MGM 2008, LGM 2012 or Rodrigues datum Co-ordinate Systems –

- (a) land acquisition by Government;
- (b) subdivision among heirs into 10 or more lots;
- (c) morcellement into 10 or more lots per site;
- (d) land prescription;
- (e) all State land surveys; and
- (f) any plot of land of the extent and type as may be specified in the Guidelines issued by the Chief Surveyor.

## **7. Preparation of field notes**

(1) Field notes shall contain a clear detailed account of everything found, observed and done in the field in the course of a survey, including –

- (a) a neat detailed sketch with a north arrow to indicate the orientation;
- (b) the name of the owner of the property, the client or designation of area being surveyed;
- (c) the date of the observations on each page;
- (d) the type and identification and calibration certificate of all measuring equipment used;
- (e) the type of weather conditions under which the field work was done;
- (f) the entry of all quantitative observations or measurements made; and
- (g) a complete description of every monument found, placed or restored and of every permanent structure referencing a monument and a note indicating monuments not found.

(2) Incorrect entries in field notes shall be struck out in such a way that they remain legible but are obviously discarded.

(3) Field notes are to be recorded at the time of observation and shall be of such quality to facilitate their clear reproduction by photocopy, facsimile, scanning or other digital or graphical reproduction technology.

(4) All field notes shall be preserved by the land surveyor charged with the responsibility of the survey.

(5) Every survey shall have a supporting file kept by the land surveyor or survey firm, containing –

- (a) a record of all searches made for evidence, including physical, documentary or verbal evidence, and the results of such searches;
- (b) references to photographic material, old plans, old deeds and other material used for information;
- (c) all pertinent computations; and
- (d) a copy of the description and report resulting from the survey.

(6) (a) Every original field notes, plans and supporting files shall be kept for safe keeping by the land surveyor or survey firm.

(b) These documents referred under subparagraph (a) shall be made available to the Chief Surveyor on request.

## **8. Survey control marks**

(1) A survey control mark shall be of a non-ferrous metal mark to be reasonably durable and stable for a period of at least 20 years under permitting circumstances.

(2) A survey control mark shall have an identification number (ID) obtained from the Chief Surveyor.

(3) A survey control mark shall, as far as is reasonably practicable, be located where it –

- (a) may be readily driven or set in the ground so that it is reasonably secure;
- (b) is not likely to be disturbed; and

- (c) is able to be found and used by another land surveyor at a later time in the future.

(4) A survey control mark fixed in soft ground shall be casted in concrete cement to form a block having a minimum depth of 300 mm and a square top surface having a minimum width of 200 mm, and supported by four iron bars at its base and having a non-ferrous survey marker with a centre mark fixed at the centre of its top surface.

(5) A survey control mark fixed in hard ground, whether concrete or tarmac, shall be as follows –

- (a) a hole must be drilled larger than the width of the survey marker and filled with epoxy; and
  - (b) the survey marker shall be hammered into position and allowed to dry and settle in the epoxy.
- (6) A survey marker shall have the following specifications –
- (a) be of a non-ferrous material;
  - (b) be of a bolt nut shape having a circular tip with a minimum diameter of 20 mm and minimum thickness of 5 mm;
  - (c) have a minimum length of 50 mm;
  - (d) have a minimum diameter of 10 mm; and
  - (e) have an appropriate centre mark at the top.

## 9. Traverse marks

(1) A traverse mark shall be of a ferrous or other suitable metal mark large enough to be reasonably durable and stable for a period of at least 10 years under permitting circumstances.

(2) A traverse mark shall, as far as is reasonably practicable, be located where it –

- (a) may be readily driven or set in the ground so that it is reasonably secure;
- (b) is not likely to be disturbed; and
- (c) is able to be found and used by another land surveyor at a later time in the future.

## **10. Monumentation of boundaries**

(1) Placed monuments shall be classified as follows –

- (a) “boundary peg” means a round iron or round steel post with a minimum diameter of 12 millimetres and a minimum length of 450 mm placed in the ground;
- (b) “boundary stone” –
  - (i) means a monument made of rock or concrete cement with a square flat surface having minimum dimension 100 mm x 100 mm and a maximum dimension of 200 mm x 200 mm and of a minimum length of 450 mm;
  - (ii) may be inscribed with relevant information such as the abbreviation of the boundary holder or a cut cross or an arrow;
- (c) “cut cross” means a mark in the form of a cross cut into bedrock or concrete;
- (d) “reference marks” –
  - (i) means 2 survey markers placed at a minimum distance of 1.00m from the boundary stone or corner, generally at right angles to each other and



which are not visible to the public and are in a safe location.

- (ii) shall be used by land surveyors to re-establish the referenced corner monument.

(2) When a survey is made, all angles and points of curvature of a boundary under survey, being either retraced or created, shall be defined by one of the monument classifications referred under paragraph (1).

(3) Where evidence of a boundary mark no longer exists, all available information concerning its original position shall be considered in the re-establishment thereof.

(4) Where it is not possible or not advisable to monument a true angle or point of intersection, or where it is determined that the location of a monument will place it in immediate danger of destruction, one witness monument shall be placed at a suitable point as near as practicable to its intended location and on one of the boundaries under survey.

(5) Where a boundary line terminates at a natural boundary, as in the case of lots fronting the sea, a monument shall be placed on the boundary line far enough from the natural boundary as to be reasonably safe from destruction.

(6) An accurate record shall be made of the distance along the boundary line between the natural boundary and the monument.

## **11. Contents of memorandum of survey or survey report**

- (1) Every memorandum of survey or survey report shall –
  - (a) have a preamble which shall include –
    - (i) the purpose of the survey;

- (ii) the name of the streets, town, village or district where the land parcel or unit is located;
- (iii) ownership details;
- (iv) the Parcel Identification Number (PIN) of the land parcel;
- (v) in case where more than one land parcel is being described, a table of PIN as follows –

SN	Lot No.	Extent / m <sup>2</sup>	PIN
1	1		XXXXXXXXXX
2	2		XXXXXXXXXX

- (vi) reference of the development permit, where applicable;
- (b) contain a description of each surveyed land parcel or unit which shall be clear and unambiguously worded, and shall begin at a well-marked point and follow the boundaries using directions, whether cardinal or ordinal, and distances around the land parcel or unit, back to the place of beginning;
- (c) contain a description, including width, of any physical feature found along the boundaries and indicate the side which is followed by the boundaries;
- (d) include for each boundary, the adjoining owner and its title deed, and the description of any boundary marks found or placed on either side of the boundary line or boundary intersection;
- (e) include an indication of the width, status and name of any bordering road and width of road reserves and right of way or way leaves;

- (f) include the length of each boundary line which shall be clearly stated in words and in figures to a least count of at least 10 mm;
- (g) specify the area of each the land parcel or unit being described;
- (h) where applicable, specify the parcel linear perimeter misclosure;
- (i) include the nature and description of any building on it, if any;
- (j) be supported by a survey plan drawn up according to regulation 12 and a location plan drawn up according to regulation 13;
- (k) include a survey technical report in such form as the Chief Surveyor may approve; and
- (l) be signed by the land surveyor who shall also affix his seal or stamp and the date.

(2) (a) Subject to subparagraph (b) and paragraphs (3) and (4), every memorandum of survey shall be read over by a land surveyor to the parties who are present at the survey and shall be signed by them.

(b) Where –

- (i) a party does not understand the language in which the memorandum of survey has been drawn up, the land surveyor shall explain or cause to be explained to the party the contents of the memorandum of survey in the language requested by the party;

- (ii) a party that is unable to sign in roman characters, he shall affix his thumb-print to the memorandum, and cause his names in small letters, his surname in capital letters and his National Identity Card Number to be written below the thumbprint.

(3) Where a survey is made in the presence of the owner of an adjoining property, the land surveyor shall record in the memorandum of survey –

- (a) such objections or observations relative to the survey as may have been made by the owner; or
- (b) where the owner refuses, or is unable to sign, his refusal or inability, as the case may be.

(4) Where a survey is made in the absence of the owner of an adjoining property, the land surveyor shall record such absence in the memorandum of survey and attach to the memorandum –

- (a) the written consent of the owner to the survey being made in his absence;
- (b) the original of the summons served upon the owner; or
- (c) a copy of the notice published under section 9(3) of the Act.

(5) Every memorandum of survey or survey report shall be drawn up in 1 original on white A4 size paper of not less than 90 grams of which –

- (a) the typeface shall be “ Times New Roman”, or “Cambria” in regular style and have font size of 12 point;

- (b) each page shall be consecutively numbered on the bottom right, page 1 of the total number of pages, page 2 of the total number of pages and so on and any annex thereto shall be numbered on the bottom right, page 1 of the total number of pages, page 2 of the total number of pages and so on;
- (c) any date mentioned in the memorandum of survey or survey report shall be in the format DD/MM/YYYY;
- (d) the memorandum of survey or survey report shall contain no abbreviation or interlineations, and words scratched out shall be done in such a manner that such words remain legible;
- (e) no addition to a memorandum of survey shall be recorded otherwise than at the foot of a memorandum;
- (f) shall have on the recto of every sheet a blank margin of 30 mm on the left and 10 mm on the top, right and bottom except on the first sheet the top margin shall be 100 mm;
- (g) shall have on the verso of every sheet a blank margin of 30 mm on the right and 10 mm on the top, left and bottom.

(6) No memorandum of survey or survey report shall be drawn up in cases of subdivision or morcellement, unless the necessary development permits or clearances have been obtained from the relevant authority.

(7) A memorandum of survey or survey report shall contain the description of the parcel or parcels of only one site.

## **12. Survey plan**

- (1) Every survey plan shall record –
  - (a) the accurately plotted boundaries, with the distances, angles or bearings as determined by the survey and where the boundary follows a curve, the length along it and its radius shall be shown, and in the case of a curve other than part of a circular curve, sufficient information shall be provided to be able to re-establish the curved boundary;
  - (b) width, status and name of any bordering road and width of road reserves and rights of way or wayleaves affecting the site;
  - (c) the location of all buildings lying within 3 metres of either side of any boundary dealt with and such buildings shall be shown by means of perpendicular distances from such boundary;
  - (d) the accurate location and type of all monuments found or placed;
  - (e) survey monuments including at least 2 traverse marks, shall be designated on the plan by symbols as per regulation 12(8) and such symbols shall be shown and identified by name in the legend;
  - (f) the names of the owners of the land parcels dealt with by the survey and the names of the owners and title of ownership of all adjoining properties;
  - (g) all natural boundaries which shall be plotted to an accuracy consistent with the field techniques used to define such boundaries;

- (h) the location and direction of flow of all water courses that intersect the boundaries under survey and their names if known;
- (i) all fences, walls, monuments, hedges, and other evidentiary items or physical features which were found and considered as evidence of or related to any boundaries under survey;
- (j) the width of any physical feature found along the boundaries and indicate the side which is followed by the boundaries;
- (k) encroachments, if any;
- (l) areas of land parcels or units;
- (m) angles either observed or calculated;
- (n) a tabulated list of coordinates of all boundary points in MGM 2008 or LGM 2012 or local site or Rodrigues datum Co-ordinate System in the following format, as applicable –

Datum: GDM 2008/LGM 2012/ Local Site Grid/  
Rodrigues datum

SN	Boundary Point (BP)	Easting (m)	Northing (m)	Description
1	BP 1	555555.55	775555.55	Boundary stone
2	BP 2	555566.66	775566.66	Iron Peg (12 mm Diameter) in road reserves 30 cm from road edge.

- (o) a precise location of the site at reasonable scale.

(2) Every Survey plan must have a “Survey Technical Report” in such form as the Chief Surveyor may approve.

(3) (a) A plan must be plotted to an appropriate metric representative scale that will suitably and clearly illustrate details of the survey;

(b) The plan must be drawn to a standard acceptable to the Chief Surveyor.

(c) There shall be a borderline on each plan located at least 10 millimetres from each edge of the sheet and no numbers or letters shall appear outside this borderline.

(d) Distances, angles and bearings shown on the plan are to be measured ground quantities.

(e) Any calculated distances, angles and bearings shown shall be identified as such by the word “calc.” written immediately after each calculated quantity.

(4) A plan must show a north point indicating the true or grid north for the particular official datum used by a land surveyor.









(5) A plan must be accurately plotted with the grid parallel with the side of the plan form and the north direction generally pointing upwards.

(6) In exceptional cases, where it is necessary to make the best use of the form because of the shape or layout of the survey, a plan may be plotted with a grid at an angle to the side of the form, but in that case the angle must not exceed a clockwise or anticlockwise rotation of the relevant grid north by more than 90°.

(7) Only simple leader lines with reasonable sized arrow heads should be used to indicate details in a plan.



- (8) The following symbols shall be used for survey marks –

Survey Mark	Existing	New	Plotted Dimension
Survey Control Mark			Diameter 2-3mm
Traverse Marks			Side Length 2-3mm
Boundary Stone			2mm x 2mm
Iron Peg (Boundary)			Diameter 2-3mm

- (9) The legend of the plan shall –
- have an explanation of the symbols and abbreviations used;
  - indicate whether distances, angles and bearings shown on the plan are measured or adjusted values and, if they are adjusted values, the legend shall indicate the nature of the adjustment and whether or not a scale factor has been applied to the distances;
  - show the scale factor used, if applicable; and
  - the datum used for the coordinates of the survey;
  - have a place for the land surveyors signature and seal signifying the survey has been carried out personally by the surveyor and the plan is a true record of the survey work undertaken by the surveyor;

- (10) A plan shall have a title block, which shall comprise a descriptive heading and other appropriate details concerning the survey.

### **13. Location Plan**

Every survey plan must be accompanied by a location plan drawn up at a reasonable scale which shall include –

- (a) distances from at least 2 prominent landmarks or road junctions;
- (b) a precise indication of the point of the landmarks or road junctions from which the measurements were made;
- (c) a north arrow, generally pointing upwards;
- (d) access to site from neighbouring main roads;
- (e) all access and road names where available;
- (f) simple leader lines with reasonable sized arrow heads to indicate details on plans;
- (g) approximate coordinates, in the MGM 2008 grid coordinates or in WGS 84, of any 2 corners of the site, preferably corners situated along or adjacent to the road frontage.

### **14. Establishing Survey Control Marks**

(1) Survey control marks shall be established according to specifications set out in regulation 8.

(2) Survey control marks must be fixed either by triangulation using dual frequency GPS receivers or by means of closed traverse using total station.

(3) 4 rounds of angles, face left and face right, and distances shall be recorded in suitable forms using total station.

(4) (a) Closed traverse shall be of an accuracy of 1/50,000 and shall be adjusted using Bowditch rule or any superior adjustment method.

(b) All necessary corrections like refraction, sea level correction, earth curvature shall be applied to the adjustments before final results are obtained.

(5) Independent baselines shall be observed with GPS with typical observation times of at least 30 minutes for baselines less than 10 km in static mode.

(6) Details of observation sessions which includes receiver model, height recorded at start and end of survey and other necessary details, shall be recorded in suitable forms.

(7) A free adjustment shall be carried out to ensure loop closures following which the constrained adjustment shall be carried out for final results.

(8) (a) Detailed reports shall be made about the baselines processing and the adjustments carried out.

(b) These reports shall include baselines horizontal and vertical accuracies, observation times, network adjustment reports, “a priori” and “a posteriori” variance factors and loop closure reports.

## **15. Survey technical report**

(1) A survey technical report shall be submitted for any survey carried out under the Act and under this regulation or for any land development project.

(2) The survey technical report shall include details about the land surveyor’s work, equipment used, survey control mark used,

traverse marks surveyed and established, boundary marks surveyed and established and accuracy achieved.

(3) Along with the survey technical report, descriptions of at least 2 permanent traverse marks, a sketched survey observation scheme indicating all traverse marks and boundary marks surveyed shall be produced.

(4) Traverse adjustments and GPS reports shall be submitted where applicable.

#### **16. Technical specifications of Geocentric Datum of Mauritius**

The technical specifications of the Geocentric Datum of Mauritius shall be those specifications referred to in the First Schedule.

#### **17. Technical specifications of Local Grid of Mauritius 2012**

The technical specifications of the Local Grid of Mauritius 2012 (LGM2012) shall be those specifications referred to in the Second Schedule.

#### **18. Technical specifications of Rodrigues datum**

The technical specifications of the Rodrigues Datum shall be those specifications referred to in the Third Schedule.

#### **19. Commencement**

These regulations shall come into operation on 1 July 2013.

Made by the Minister on 6 June 2013.

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**FIRST SCHEDULE**

[Regulation 16]

**TECHNICAL SPECIFICATIONS OF GEOCENTRIC  
DATUM OF MAURITIUS****1. Reference Frame**

- (a) Reference Frame: ITRF 2005 Epoch at Day 1 year 2020
- (b) Associated Ellipsoid: WGS84 Ellipsoid

**2. Associated Ellipsoid**

The 4 fundamental defining WGS84 ellipsoid parameters are –

Parameter	Notation	Value
Semi-major axis	a	6378137.0 m
Reciprocal of Flattening	1/f	298.257223563
Angular Velocity of the Earth	$\omega$	$7.2921150 \times 10^{-5} \text{ rad s}^{-1}$
Earth's Gravitational Constant (Mass of Earth's Atmosphere Included)	GM	$3.986004418 \times 10^{14} \text{ m}^3 \text{ s}^{-2}$

**3. Geodetic and Map Grid Coordinates**

- (a) Geodetic Coordinates shall be based on the Reference Frame and Associated Ellipsoid and referred to as the Geocentric Datum of Mauritius 2008 (GDM2008);
- (b) Cartesian Map Grid Coordinates shall be derived from GDM2008 and based on the Universal Transverse Mercator (UTM) Projection for Zones 40S and 41S with Central Meridians (CM) at Longitudes 57° E and 63° E respectively and referred to as the Map Grid of Mauritius 2008 (MGM2008).

**SECOND SCHEDULE**

[Regulation 17]

**LOCAL GRID MAURITIUS 2012**

The LGM 2012 shall be based on the following parameters –

- (a) Datum : GDM 2008
  - (b) Origin : Verdun PTP0391
  - (c) Projection : Lambert Conformal Conic Two Parallel
  - (d) Central latitude : 20° 16' 31.85868" S
  - (e) Central longitude : 57° 33' 52.40384" E
  - (f) False easting at Origin : 250,000.00 mE
  - (g) False northing at Origin : 350,000.00 mN
  - (h) Parallel 1 : 20° 03' 40.0" S
  - (i) Parallel 2 : 20° 26' 40.0" S
  - (j) Scale factor at parallels : 1.00000
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**THIRD SCHEDULE**

[Regulation 18]

**TECHNICAL SPECIFICATIONS OF RODRIGUES DATUM**

Grid : Rodrigues Local

Projection : Transverse Mercator (TM)

Ellipsoid : Clarke 1880

semi-major axis, a	= 6378249.145
semi-minor axis, b	= 6356514.867
flattening, 1/f	= 293.46500067780

## Projection Parameters –

longitude of origin	: 63° 23' 00.00" E
latitude of origin	: 19° 40' 28.00" S
scale factor at central meridian	: 1.000
false easting at origin	: 20000.00m
false northing at origin	: 20000.00m

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