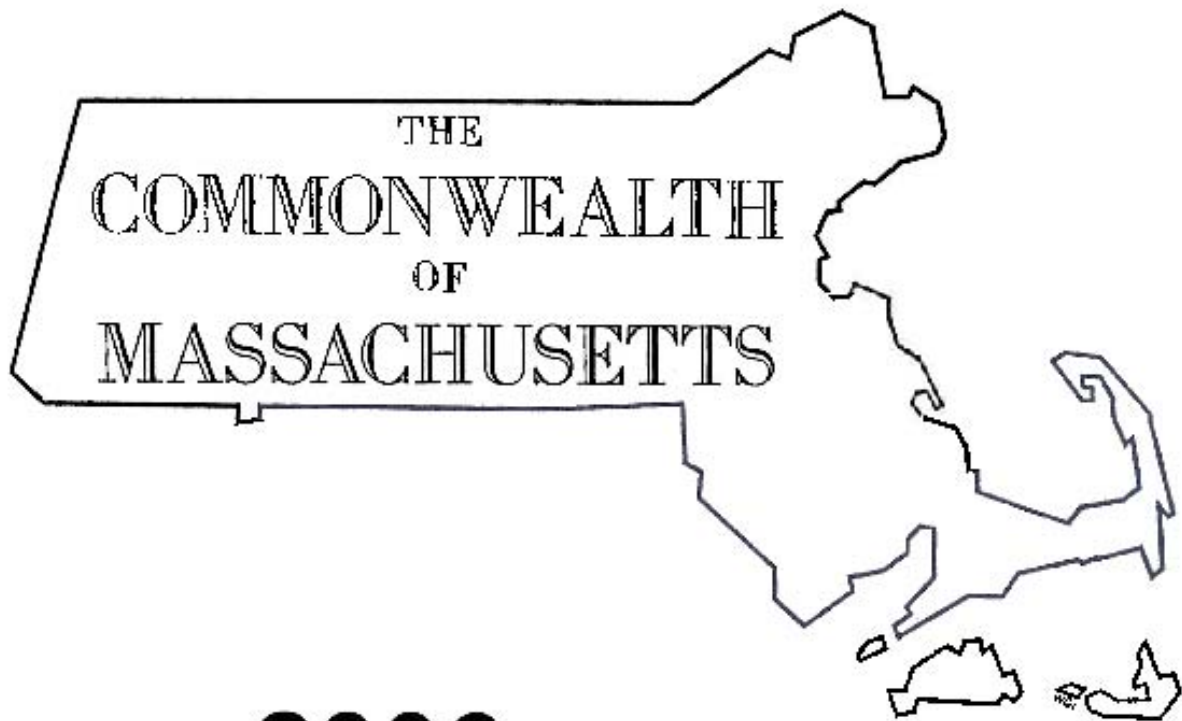


LAND COURT



2006 **MANUAL OF** **INSTRUCTIONS**



SURVEY DIVISION

FOR THE SURVEY OF LANDS AND PREPARATION OF PLANS

MANUAL OF INSTRUCTIONS
for the
SURVEY OF LANDS AND PREPARATION OF PLANS
to be filed in the
LAND COURT

This manual is issued for the information and guidance of land surveyors preparing surveys and plans to be filed in the Land Court. It is intended as a guide to the minimum requirements for what is commonly referred to in this commonwealth as a "Land Court Survey". It is not intended as a text for surveyors nor as a standard for all property line surveys.

Compliance with these instructions is mandatory, and no survey or plan will be accepted for filing unless these requirements have been fulfilled to the satisfaction of the Land Court's Survey Division. The surveyor should consider his or her work as being performed for the Court, and these instructions are paramount to any given by a client or client's attorney.

This manual will be known as the "Instructions of 2006" and will be effective as of January 2, 2006. The Instructions of 2006 supersede all previous instructions and may be amended from time to time by the Court.

The Instructions of 2006 were developed through the hard work of a dedicated committee led by co-chairs Associate Justice Leon J. Lombardi and Antonio D. Cavaco, PLS. During its existence, the other members of the committee included: Carlton A. Brown, PLS; Mary Ann T. Corcoran, PLS; Michael P. Healy, Esq., David W. Humphrey, PLS; Diane C. Tillotson, Esq.; and, as representatives of the Court, George T. Capelianis, Chief Engineer; Thomas C. Pontbriand, Acting Deputy Engineer; and Charles B. Forbush, formerly Surveying Engineer. The Court is grateful to Judge Lombardi, Mr. Cavaco, and to the private lawyers and surveyors as well as the Land Court employees whose diligent work and enormous commitment of time and effort led to the adoption of these updated instructions.

Adopted by the Court: September 23, 2005

Karyn F. Scheier, Chief Justice

Deborah J. Patterson, Recorder

George T. Capelianis, Chief Engineer

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1. INTRODUCTION

- 1.1. **Registration and Confirmation** The jurisdiction of the Massachusetts Land Court is found in the multiple subsections of Section 1 of Chapter 185 of the Massachusetts General Laws. (References to the Massachusetts General Laws will hereafter appear as “G.L. c. ____, §__.”) Subsection 1 (a) confers exclusive jurisdiction on the Court to try complaints for the confirmation and registration of title to land and complaints for confirmation without registration. G. L. c. 185, §§ 26-31 sets forth the requirements for a complaint for registration, and §§ 26A and 56A pertain to confirmations. Pursuant to G. L. c. 185, § 33, the plaintiff is required to file a plan of land with the complaint. Because the plan is a result of a survey, both will be considered together throughout this Manual. Therefore, instructions as to either a plan or a survey must be interpreted as possibly applying to both. Section 33 also provides that the Court may “require a further survey be made for the purpose of determining boundaries and may order durable monuments to be set, and referred to in the complaint, by amendments.” The Land Court follows Massachusetts statutes, common law, and established rules of construction regarding the interpretation of deeds and other instruments affecting real property interests.
- 1.2. **Duty of the Land Surveyor** This manual sets forth the requirements of the Land Court, as administered through its Survey Division (formerly known as the Engineering Department), for the preparation of plans accompanying complaints for the original registration and confirmation of title to land as well as plans for subsequent division of those lands, and, finally, plans to be registered with condominium documents where a condominium is created on registered land. Although paid by a private client, usually the plaintiff, the surveyor who undertakes the preparation of a plan for the Land Court owes his¹ primary obligation to the Court; his certification is made to the Court and it is the Court’s instruction that must be followed. While the lines of ownership are matters to be determined by the Court after consideration of the record title, plans, and other evidence that may be introduced, the surveyor is required to study the instruments of record affecting the land, and to indicate upon his plan the existing lines of ownership to the best of his knowledge. In addition, and upon specific instruction from the client, the surveyor may add to the plan those lines that represent a client’s claims of title. The surveyor should label these additional lines as “Lines Claimed by Plaintiff.” The surveyor also has a duty to disclose conflicting information, inconsistencies and discrepancies encountered in researching and preparing a Land Court plan. Conflicts between existing record data and information discovered in the field, as well as discrepancies and conflicts in abutting owner deed descriptions, plans of record, and data from other sources, such as assessor’s records, must be disclosed in writing to the Survey Division.
- 1.3. **Use of Plans** All plans on file with the Land Court are public records. Each time a surveyor files a plan in accordance with this Manual, the surveyor (a) consents to the Court’s use of such plan for all purposes, including its permitting any member of the public to copy plans for a nominal fee and (b) releases the Land Court and its employees from liability for any unauthorized use of a plan filed with the Court.

¹ The words “his” or “her” shall be construed to include both genders.

- 1.4. **The Surveyor and the Plaintiff's Attorney** Communication between the plaintiff's attorney and the surveyor is critical to an effective and accurate presentation of a case for registration or confirmation. The plaintiff's attorney needs information that the surveyor has in order to complete the complaint for registration, e.g., a description of the land, whether it bounds on a public or private way, whether easements or other appurtenant rights are claimed and other similar matters. The work of the surveyor, on the other hand, will be aided by the title information in the file of plaintiff's attorney. Although the Land Court examiner is not appointed until after the complaint and plan have been filed pursuant to G.L. c. 185, §37, the attorney for the plaintiff will most likely have a fairly complete title examination within her file.
- 1.5. **Overview of Procedure** Both registration and confirmation are proceedings that seek the Court's adjudication of the plaintiff's title and of the location of boundaries of the registered or confirmed parcel of land. Once the plaintiff files a complaint, a plan ("the Filed Plan"), and other required documentation, together with the statutory filing fee, an approved Land Court examiner performs a title examination. Following the submission of the examiner's report, the Court issues a citation for publication, posting and mailing to all interested parties. If any answers or objections to the complaint are filed by the return day, the issues raised by those contesting parties must be addressed and resolved. If the parties are unable to settle their differences, contested issues will be ultimately decided by the Court after trial. If the plaintiff ultimately prevails, the case will be treated as uncontested. All uncontested cases are referred to a judge and staff title examiner for review. Upon satisfactory review and compliance with any additional requirements, the Court issues an order for judgment. The case is then sent to Survey Division to have a plan drawn in accordance with the order for judgment ("the Judgment Plan"). The Land Court Plan number, made up of the case number plus a letter indicating the particular plan, appears in the upper right hand corner of all approved plans of registered land. The Judgment Plan is given the letter "A." Each Division Plan thereafter follows sequence "B", "C", etc. Once the Judgment Plan is completed, the Court issues a judgment. Following final accounting, the Court transmits a copy of the judgment and Judgment Plan, together with other relevant documents, to the appropriate Registry of Deeds for filing. In a registration case, the local Registry assigns a certificate number and, in due course, issues the certificate of title. The registered owners of the land described on the certificate hold title to the registered parcel of land free from all encumbrances except those: (1) appearing on the face of the certificate, (2) noted on the page of the certificate labeled Memorandum of Encumbrances, and (3) enumerated in G. L. c. 185, § 46. The boundaries of the registered parcel of land are definitively located on the ground as shown on the Judgment Plan. All subsequently filed instruments affecting the registered land are noted by the assistant recorder on the Memorandum of Encumbrances. Upon the filing of a deed conveying the registered parcel of land, the assistant recorder cancels the outstanding certificate and issues a new certificate in the name of the grantee or grantees appearing in the deed.

In a confirmation case, the Court issues a judgment and Judgment Plan that guarantees title and boundary location of the confirmed parcel of land as of the date of the order for judgment. No certificate is issued in a confirmation case; accordingly, title to the property remains on the unregistered or recorded side of the Registry of Deeds.

2. REQUIREMENTS FOR LAND COURT PLANS

2.1. Requirements For All Surveys

2.1.1. STANDARD All surveys shall be performed by or under the direct supervision of a Professional Land Surveyor in accordance with the Rules and Regulations of the Massachusetts Board of Registration of Professional Engineers and Land Surveyors set forth at part 250 of the Code of Massachusetts Regulations (hereafter “250 CMR”).

2.1.2. RESEARCH

2.1.2.1. Property Research. The surveyor must search the public records and the record title of the property in question to obtain information concerning property descriptions and boundaries. At a minimum, the surveyor should examine records in the assessor’s office and the Registry of Deeds back to a point where the description is consistent with that presented for registration. Deed descriptions of all abutting properties shall also be examined to determine whether the descriptions are consistent with that of locus. The surveyor must also review the plan index at the Registry of Deeds and examine plans of locus and abutting properties. If a full title search is not available, the surveyor must run the title forward to identify and locate easements, restrictions, agreements and other encumbrances that burden locus. Appurtenant rights and instruments creating a benefit or a conditional benefit, such as a G.L. c. 91 (Chapter 91) license, must also be examined. (For research related to division plans see § 2.3.1)

2.1.2.2. Streets and Ways Research. Before commencing any survey in the field, the data for the lines of streets and ways, whether public or private, must be ascertained and the initial points obtained must be made a part of the field survey and must also be shown on the Filed Plan. In addition to the Registry of Deeds, the data fixing the lines of such ways may be found in the offices of the planning boards, boards of survey, boards of public works, highway commissioners, county commissioners, park commissioners, city or town clerks, state, county, city and town engineers, the Massachusetts Highway Department and the Metropolitan District Commission.

2.1.2.3. Municipal Boundary Research. The city and town boundary atlases, published by the Commissioners on the Topographical Survey in 1888 and subsequent years, contain a compilation of all acts incorporating cities and towns, the definition of the city and town lines and data for the preservation of all city and town corners as of those dates. (Note: The geodetic coordinates of the city and town corners and triangulation points in these atlases are not based on the Massachusetts Coordinate System).

2.1.2.4. Adjoining or Nearby Registered Land

2.1.2.4.1. Other Registered Land. The surveyor must ascertain in advance of the survey whether any adjoining property, or any property in the immediate vicinity has been registered. If so, the Judgment Plans of those registered lands, and, in the case of an abutting parcel, the outstanding certificate of title, must be examined. The boundary lines of such adjoining parcels, having been previously determined by the Court, must be recognized. For this reason, all monuments of the earlier abutting registration on the common boundary line must be included in the field survey of the new plan. The relative location of other nearby cases, within 500 feet of locus, must be determined.

2.1.2.4.2. Discrepancies Reported and Reconciled. All irregularities or discrepancies in the earlier data that are disclosed by the new survey must be reported to the Survey Division and reconciled with new survey prior to plan preparation. (See § 3.2 Inconsistent Surveys).

2.1.2.4.3. Registered Land Indices at Court. To the extent possible, the locations of titles previously before the Court are indicated upon the atlases in the office of the Survey Division by an outline in color and by a case number lettered thereon. These atlases are accessible to the public. In addition, a card file "locality" index, arranged by City or Town, Street Name, and Case Number, and a "plaintiffs" card file index are available.

2.1.2.4.4. 'Parcel' Taking Plans. Most plans filed at the Court showing takings for highway systems prepared by the Massachusetts Department of Public Works (now MassHighway) are compiled plans. These plans show eminent domain takings of areas labeled "parcels." The information contained therein should be considered approximate only. For assistance, consult with the Survey Division (See § 2.1.4.3.9.).

2.1.3. FIELD SURVEYS

2.1.3.1. Required Fieldwork

2.1.3.1.1. Purpose of Survey. The purpose of the survey is to show the premises and create a record such that the boundaries, easements, and associated rights as later determined by the Court, can be retraced on the ground from the data shown on the plan or filed therewith. The fieldwork shall be performed so as to obtain complete information for computing and plotting the survey with appropriate checks on each part of the work.

2.1.3.1.2. On-The-Ground Survey. All plans must be the result of an actual survey performed on the ground. The survey and plan must be made by, or under the direct supervision of, the surveyor whose signature, certification, and seal appear on the face of the plan. In all cases, the plan must show the actual facts existing on the ground, in full detail, on the date of the survey. The surveyor serves as the eyes of the Court for all registered land. The survey must have been performed, or updated, within six months of the date the Land Court accepts the Filed Plan.

2.1.3.1.3. Closed Field Traverse. The survey must be predicated upon a closed field traverse of appropriate precision running around the property, either upon the boundary lines, or upon traverse lines from which the boundary lines are located, or upon a combination of both. All traverse lines shall be run within a reasonable distance of the property lines being located.

2.1.3.1.4. Field Location. All observable features that may have a bearing on the determination of property boundary lines or title lines shall be directly located from the closed field traverse. Such features to be located may include boundary monuments, walls, fences, buildings, water bodies, limits of occupation, roads, cart paths, encroachments, and easements.

2.1.3.1.5. Evidence Within 10 Feet. All evidence of occupation and possession within 10 feet of the property boundary lines and easements shall be located. This includes all buildings, fences, and monumentation.

2.1.3.1.6. Buildings. When a building or structure to which the property lines or traverse lines are referenced is located, a precise description of the particular point located must be made. "Corner board up 0.7 feet," "10th brick up," and "top of foundation" are suitable descriptions and should be noted in the field notes and on the plan. When actual ties are measured from buildings to traverse points or monuments, similar notations should be made.

2.1.3.2. Water Boundaries.

2.1.3.2.1. Water Boundary Locations. For surveys of properties bordering on tide waters, lakes, ponds, rivers, streams, or brooks, that portion of the water lines used for determining boundary or easement lines shall be located from traverse lines that form a part of the closed field traverse. The water lines shall be shown on the plan as correctly as the scale permits. Where watercourses pass through the property, the survey shall include the location and direction of flow of the stream at all places within the property lines.

2.1.3.2.2. Limits of Water Bodies. The mean high water mark of all tidal waters and the low water mark of any lake, pond, or river and the middle line and side lines of any stream or brook are the only water lines ordinarily required. Where title instruments indicate other water lines are determinative or where a contest with respect to the location of any water line is anticipated, additional data concerning the water levels or courses may be required. Examples include contour lines near old dams, the top or bottom of a riverbank, the middle of the channel of a river or tidal stream, the thread of a brook, or the edge of a marsh or upland. The location of the low water mark or 100-rod line is necessary when lines over flats or foreshore are to be determined.

2.1.3.2.3. Contour Lines. Where contour lines are used, they must be related to a fixed datum and be referenced to a permanent benchmark(s) shown on the plan.

2.1.3.2.4. Flats and Foreshore. When determination of flats and foreshore is important, all physical record features that limit and lie within or adjacent to the flats (including, but not limited to, licenses, harbor lines, bulkhead lines, pier lines, filled areas, beaches, rambles, marsh, bogs, mean high water mark, mean low water mark, extreme low water mark, 100-rod line, channels that contain fresh flowing water at low tide, all structures within the flats, jetties, seawalls and groins) shall be located. The surveyor should contact the Land Court Surveyor prior to the completion of surveys for the determination of boundaries of flats or lines over the foreshore.

2.1.3.3. Survey Instruments

2.1.3.3.1. Instrumentation. All surveys shall be performed with survey grade instruments (i.e. surveyor's transits, theodolites, total stations, surveyor's levels, steel tapes, electronic distance measuring instruments (EDMs), etc.) suitable for property line surveys and shall be maintained in good working condition and periodically calibrated.

2.1.3.3.2. Maintenance All equipment used to conduct the surveys described herein, including all field equipment and computer hardware and software, shall be maintained in good working order. Maintenance shall include periodic cleaning, adjustment, calibration and testing to verify the accuracy and reliability of measurements.

2.1.3.3.3. Calibration. All linear measurements shall be taken with a properly calibrated measuring device. A record of the calibration results shall be maintained for future reference. (See 250 CMR). The Survey Division may request a review or a copy of said record. (See § 2.1.3.4.7.)

2.1.3.3.4. Alternative Survey Instruments. The Land Court acknowledges that new surveying and positioning instruments are constantly being invented and perfected, global positioning satellite systems (GPS) being one example. In general, these innovative instruments can be used for Land Court surveys when they have been proven sufficiently accurate and reliable to be accepted into the land surveying community at large. Their results should yield positional accuracy results equivalent to, or better than, the methods specified above. Redundant measurements shall be made to confirm the location of all points used for determining boundary lines. The surveyor shall consult with the Surveyor of the Court before using any new techniques or instrumentation for a Land Court survey.

2.1.3.4. Measurements

2.1.3.4.1. Angle Precision. The least count of the vernier or other dividing device of the survey instrument shall be 30 seconds or less. Survey angles shall be measured, by repetition if necessary, to the nearest 10 seconds or less.

2.1.3.4.2. Angle Accuracy. All angles should be measured by repetition or otherwise to obtain the survey precision desired. Short sights should be avoided by setting supplemental backsights and/or foresights at appropriate distances from the instrument.

2.1.3.4.3. Angular Error of Closure. The angular error of closure disclosed by the summation of the unadjusted field angles, when expressed in seconds, should not exceed 18 times the square root of the number of angles.

2.1.3.4.4. Angle Adjustments. As the angular "error of closure" of a survey is dependent in part upon the field conditions affecting the measured angles, the surveyor, with his knowledge of the probable accuracy obtained, should exercise his judgment as to whether any angular error should be distributed proportionately or applied to the angles between short lines, or put in those angles where the readings were made under difficult circumstances.

2.1.3.4.5. Distance Measurements. All linear measurements must be made with a steel tape with minimum graduations of feet, tenths, and hundredths of a foot, or with electronic distance measuring instruments (EDMs) displaying, at a minimum, in feet, tenths and hundredths of a foot with a specified precision of (+/- 5 mm + 5 ppm) or better. All distances that are a part of or used in any way to determine the property lines must be measured to the nearest 1/100 of a foot, or better.

2.1.3.4.6. Taped Distances and Corrections. When a tape is used under conditions that are not standard for that tape or when the tape itself is somewhat in error, appropriate corrections must be applied. A spring balance or a tension handle shall be used for consistent measuring. A tape thermometer shall be used to apply the proper temperature correction. In measuring over uneven ground, the measurement of a slope distance with the corresponding vertical angle or the use of a hand level or tape level is recommended.

2.1.3.4.7. Electronic Measurements. When using EDM instruments, suitable checks include the use of calibrated NGS certified baselines or comparison to a standardized, calibrated steel tape. When calibrated baselines are used, copies of the calibration records for the instrument or instruments used, preceding and subsequent to the survey, signed and sealed by the responsible surveyor, must be submitted with the Filed Plan. For comparison to a standardized steel tape, one traverse line over 450 feet must be measured with both EDM and standardized steel tape. This 450-foot line should be a part of the closed field traverse or an extension of one of the traverse lines and notation must be made on the plan to indicate the results of both measurements. When it is not practical to measure a 450-foot line in the closed field traverse, a temporary comparison baseline over 450 feet long can be established using the same equipment and certified by the surveyor.

2.1.3.4.8. Checking Location Measurements. Some method of checking the measurements from the traverse lines to the property corners, street line monuments or other such critical points should be used. For instance, if an angle and distance is used to locate a point, then a station and offset to the traverse line, or a second angle and distance from another traverse line point, should be taken. The secondary measurements will make possible the verification of the primary measurements through computation.

2.1.3.4.9. Leveling. Where leveling is required, a standard surveyor's leveling rod, graduated in feet, tenths, and hundredths of a foot may be used. Trigonometric leveling techniques may be used when deemed appropriate and suitably accurate by the surveyor. In either case, leveling shall be conducted with suitable redundancy for checking purposes and preferably with closed loops.

2.1.3.5. Monumentation

2.1.3.5.1. Monuments. Monuments may be either natural or artificial. A natural monument includes features such as trees, lakes, boulders, ledges, or the like. An artificial monument (or bound) is a man-made feature meant to perpetuate the location of a point, line or boundary, such as fences, stone walls, posts, stakes, stone monuments, or other physical objects placed in the ground intended to be boundary marks. Generally, natural monuments take precedence over those that are artificial.

2.1.3.5.2. Permanent Monument. A permanent monument is a monument that can reasonably be expected to remain stable for at least 20 years. It shall be made of durable material and of such nature so as to resist displacement or erosion. Stone or concrete monuments may be considered permanent monuments when they are at least 5 inches square on top and at least 3 feet long if set flush with the surface of the ground, otherwise longer. The bottom of the bound should always reach below the frost line. Drill holes, lead plugs, and disks set in ledge or large, stable rocks are usually permanent monuments. Iron pipes over 3 feet long may be considered permanent monuments when

- a. a 3" diameter or larger pipe has a flange on the bottom and has been filled with concrete; or
- b. when a pipe is set solidly in concrete.

Generally, monuments marking or referencing property lines and property corners, unless otherwise permitted herein, shall be permanent monuments.

2.1.3.5.3. Semi-Permanent Monument. Semi-permanent monuments are durable monuments that remain stable for several years. Although many iron pipes remain undisturbed for years, most are easily dislodged or removed. For this reason the Court views almost all iron pipes as semi-permanent. Semi-permanent monuments include metal rods and pipes at least 3 feet long and spikes or large nails driven into solid pavement.

2.1.3.5.4. Particular Point on Monument. If the monument is stone or concrete, a drill hole or a cross cut should be placed in its top indicating the particular point of location. If it is not possible to make a definite point, the dimensional relation of the survey point or the property corner to some face and corner of the bound should be given.

2.1.3.5.5. Physical Identification of Monuments Property line points falling upon boulders or ledges should be monumented using a drill hole, a bolt of enduring metal, or a disk engraved with the name and/or registration number of the surveyor.

2.1.3.5.6. Description of Monuments. The physical size and condition of each monument shown on the plan must be noted. An official "Land Court Monument" should be noted as being an "L.C.B." when the letters "LCB" or "Land Court" have been cast in the top.

2.1.3.5.7. Status of Monuments. The status of monuments must be noted on the plan. Full written descriptions of monuments are encouraged.

2.1.3.5.7.1. When abbreviations are used one of the following notations shall be used:

- a. A "found" monument ("FD") is a monument that was found and accurately located.
- b. A "set" monument ("S") is a monument that was set by the surveyor as part of the current project.
- c. A "disturbed" monument ("D") is a monument that was found and located by the surveyor but does not appear to be in its original location. A stone monument leaning or laying on the ground next to a hole are examples of "disturbed" monuments. The locations of these monuments should be considered suspect (if not erroneous) unless proven otherwise.
- d. A "found-not-located" monument ("FNL") is a monument that was observed in the field but not accurately located.
- e. A "not found" monument ("NF") is a monument that was known to exist in the past but could not be recovered after a physical search of its purported location.
- f. A "record" monument ("R") is a physical monument that is referenced in instruments of record such as deeds and plans. A physical monument that was known to exist in the past based on recorded information but whose existence was not confirmed in the field is called a record monument. The term can also be applied to a non-physical monument such as abutter's property, street layout, contour or coordinate.

2.1.3.5.7.2. The date that the surveyor determined the status of a monument must be noted on the plan. (For instance, Stone Monument: (S) 05/04/1990; (FD) 07/15/1995; (FD) 02/12/1997; (D) 06/12/1999; (NF) 09/10/2002.)

2.1.3.5.8. Traverse Points. Traverse points (or stations) should be permanent or semi-permanent points. Durable stakes with tacks or nails can be used for traverse points. Sufficient ties or other identification should fix such points so that they can be recovered to check any portion of the work before the survey is finished or to simplify the setting of such monuments as the Court may request.

- 2.1.3.5.9. Stone Walls. Because stone walls often mark property lines or evidence of property lines, they are important monuments to be located. The surveyor should take care to locate enough of the actual wall so that any lot calculations will be sufficiently accurate. Measurement intervals shall be controlled by the extent to which the wall deviates from a straight line. The locations of very crooked walls, or sections thereof, shall therefore require a greater number of locations than would relatively straight walls. In general, enough angle points should be located along the stone wall such that straight lines between adjacent points do not fall outside the width of the stone wall. In cases where the wall face, not the wall centerline, controls the location of a boundary, locations shall be made to the wall face. Drill holes, or permanent monuments shall be set along the length of the wall at intervals not exceeding 350 feet. (See also § 3.2.4. Stone Walls).
- 2.1.3.5.10. Lot Corners. Wherever physically possible, at least one corner on all lots shall be monumented with a permanent monument. The Survey Division may require more than one corner to be monumented. The surveyor should consult with the Survey Division to determine which corners are to be monumented or to request a waiver of this requirement.
- 2.1.3.5.11. Monuments Every 350 Feet. Wherever physically possible, permanent or semi-permanent monuments shall be located no more than 350 feet apart along the perimeter of the property lines. Three ties to each monument should be measured and shown on the plan or on an accompanying print or sketch.
- 2.1.3.5.12. Monuments at Water Boundaries. Where lines fixing the limit of registration run to a water boundary of any kind, permanent or semi-permanent monuments must be found or set at some point on those lines near the water boundary.
- 2.1.3.5.13. Monuments on Original Complaint Registrations. Monuments required on Original Registration Plans must be set in accordance with the order for judgment before the Judgment Plan is prepared.
- 2.1.3.5.14. Monuments on Subsequent Divisions. Monuments required on Subsequent Division Plans must be set before the Survey Division approves the Plan and it is filed with the Court.
- 2.1.3.5.15. Monumenting Definitive Subdivisions. For Definitive Subdivisions, the number, type and location of monuments required for filing shall be determined at the pre-filing review.
- 2.1.3.5.16. Subsequent Notification of Monuments Set. After Judgment or after a Division Plan has been filed or sent to the Registry of Deeds and after

streets and lots have been monumented, notification shall be sent to the Survey Division, along with a plan showing the type and location of monuments set, so that they may be made a part of the record. The surveyor shall also include a statement certifying that the monuments have been set.-

2.1.3.5.17. Elevation Monuments. Monuments with elevations (benchmarks) are required in those cases where the property lines are fixed as following a contour or tied to an elevation. The elevations shall, if reasonably practicable, be related to some established base such as NGVD29 or NAVD88. The elevations of a sufficient number of monuments shall be determined so that in the event some are destroyed others nearby may be utilized.

2.1.3.6. Municipal Boundaries. Municipal boundaries (including town, city, county, Registry of Deeds district and state lines) that cross or form a part of locus, or are referenced in a deed description must be shown with complete dimensions. The monuments fixing these boundaries must be located as part of the Land Court survey. Generally, municipal boundaries run straight from angle point to angle point.

2.1.3.6.1. Road Stones. Although G.L. c. 42, §4 requires the erection of road stones where highways intersect town and city boundaries, these road stones should not be considered as being correctly placed on the municipal boundary unless found to be so by survey. Road stones on or near locus shall be located as part of the survey.

2.1.4. SURVEY ANALYSIS AND COMPUTATION

2.1.4.1. Computations

2.1.4.1.1. Rectangular Coordinates Mandatory. Rectangular coordinates shall be used in all cases. For new registrations where the area of the parcel to be surveyed is 100 acres or more, the rectangular coordinate system shall be based on the Massachusetts Coordinate System using survey techniques that will result in a degree of precision consistent with this manual. A copy of the field notes documenting such methods shall be submitted with the plan.

2.1.4.1.2. Property Line Directions. Property line directions shall be specified by the use of either bearings or azimuths. -

1. If the area of the parcel to be surveyed is 100 acres or more:
 - a. For new registrations, the property line directions shall be based on the Massachusetts Coordinate System (see § 2.1.4.1.1).
 - b. For existing registrations, the property line directions shall be those already established. However, the survey shall also be tied into the Massachusetts Coordinate System as specified in

§2.1.4.1.1. The difference in the directions between the two systems shall be noted on the plan.

2. If the area of the parcel to be surveyed is less than 100 acres:
 - a. For new registrations in which:
 - i. a common boundary line is shared with an existing registered parcel, the property line directions of the existing registered parcel shall be used.
 - ii. only one existing judgment plan is located within 500 feet of locus, the property line directions of the said existing judgment plan shall be used.
 - iii. more than one existing judgment plan is located within 500 feet of locus, the property line directions of one of the existing judgment plans shall be used. The difference between the property line directions of the other judgment plans shall be noted on the locus plan.
 - iv. none of the above apply, then the property line directions shall be either true North, grid North or magnetic North.
 - b. For existing registrations, the property line directions shall be those already established.
 - c. It is suggested in all cases that the survey be tied into the Massachusetts Coordinate System as specified in § 2.1.4.1.1 and the difference between the Massachusetts Coordinate System and the locus system be noted on the plan.

2.1.4.1.3. Closed Field Traverse Analysis. Before the angles have been adjusted, all closed field traverses shall yield a minimum precision of 1 part in 15,000. Closed field traverses shall be adjusted by an appropriate method, e.g. compass rule or least squares.

2.1.4.1.4. Review of Closed Field Traverse Measurements. If the precision ratio is not within the prescribed limits, a review of the fieldwork should be made and questionable angles and/or distances remeasured.

2.1.4.1.5. Adjustment of Closed Field Traverse. Land surveyors shall exercise their professional judgment as to whether an error should be distributed proportionately or applied to some particular part of the closed field traverse.

2.1.4.1.6. Supplementary Calculations. The locations of the property corners, the application of any record deed dimensions and the computation of any new lot lines shall be mathematically tied to a closed field traverse.

2.1.4.1.7. Form of Traverse Tables. Traverse tables showing unadjusted and adjusted data may be printed on separate sheets 8 ½ inches by 11 inches in size, or may be drafted on the plan itself. The tables shall identify the person performing the computations, the plaintiff and the case/plan number, the date of the computation, bearings, distances and coordinates and area in square feet and acres, all signed and sealed by the responsible surveyor.

2.1.4.1.8. Supplemental Supporting Data. Computation tables showing property line closures shall be filed with every plan. Where irregular lines, such as water lines, make this impossible, a combination of property lines and tie lines shall be filed. Where a development of streets and lots is involved, closure tables for the perimeter of locus, each block of lots, each lot and the streets must also be filed. Such closure calculations shall be generated by using the bearings and distances of tangent lines, bearings of radial lines and/or chords of non-tangent curves that are actually drafted on the plan and not by simply inverting by coordinates. Computation tables must also show a check of curve data (delta angle, radius and arc length). A coordinate list of all property corners, monuments found and closed field traverse corners with a legible copy of the worksheet showing the location of each coordinate shall be submitted. All such data shall be signed and sealed by the responsible surveyor.

2.1.4.2. Boundary Determination. Generally accepted rules of construction for the interpretation of deeds and other instruments conveying title should be followed when determining property lines for registered land.

2.1.4.2.1. Order of Importance. In general, descriptive elements referenced in deeds (“calls”) when confirmed by an on the ground survey, are given weight in the order set forth below:

- a. Senior rights (a superior right or claim such as a prior conveyance)
- b. Natural monuments (streams, boulders, etc.)
- c. Artificial monuments (stone monuments, drill holes, pipes, buildings, etc.)
- d. Record monuments (non-physical monuments), including abutter’s boundaries and layouts of streets and ways
- e. Bearings (courses)
- f. Distances
- g. Massachusetts Coordinate System coordinates (G.L. c. 97, § 17)
- h. Area

- 2.1.4.2.2. General Rules of Construction. The order of importance listed above must be applied consistent with the basic principles for interpreting deeds and determining property lines. The following is a partial list of these principles.
- a. The intent of the grantor, as expressed in the deed, must be ascertained, whenever possible.
 - b. The deed should be construed as a whole instrument, with meaning given to each part.
 - c. Reference to another instrument or plan incorporates that document into the description in its entirety.
 - d. Obvious errors in the description are to be ignored.
 - e. A specific description controls over a general description.
 - f. The words “more or less” diminish the value of a call.

2.1.4.3. Streets and Ways

- 2.1.4.3.1. Definition of Way. The word “way” as used herein includes all highways, boulevards, avenues, roads, streets, paper streets, traveled ways, cart paths, etc., whether public or private, constructed or not, in use or not, existing physically on the ground or legally of record.
- 2.1.4.3.2. Bounded on a Way. At common law the word “by” has been interpreted as including the fee in the way abutting a parcel, and the words “by the line of” and other similar phrases have been interpreted as excluding the fee in a way abutting a parcel. The common law principle was codified by G. L. c. 183, § 58 (the so-called Derelict Fee Statute), which creates a rebuttable presumption as to the fee in a way, water course or monument abutting a parcel. The statute applies to all instruments executed on or after January 1, 1972 and to instruments executed prior to that date on the recorded land side. The statute does not apply to registered land instruments executed prior to January 1, 1972 where the land has been registered or confirmed before that date.
- 2.1.4.3.3. Status and Width. The legal status (public or private) and the width (fixed or variable) of all ways must be determined.
- 2.1.4.3.4. Public Street Line Law. When the lines of the ways in cities and towns are not well defined on the ground, recourse may be had to the provisions of G.L. c. 86, § 2.
- 2.1.4.3.5. Public and Private Portions of Way. When a way is partially public and partially private, the line separating the public portion and the private portion of the way must be located and tied to locus.

- 2.1.4.3.6. Ways Dividing Land Into Lots. Where any public way or any well constructed and defined private way runs through locus, the land on either side thereof shall be considered separate lots when required by the local planning board as a condition of approval or endorsement. When not so required by the planning board, a plan may be filed showing a single lot crossed by a way depicted by dashed lines where the landowner holds title to the fee of the way as well as the land on each side of that way.
- 2.1.4.3.7. Denying Legality of Ways. If the legal existence of a way upon or crossing locus and rights of any party thereto are being denied in the complaint filed with the Court, then said way may be labeled "approximate location" and its location plotted upon the plan from the best information available. The exact location will be required if the Court determines that locus is subject to the existence of the way.
- 2.1.4.3.8. Way to be Bounded. In the absence of satisfactory existing monuments to fix ways upon the ground, the surveyor must place enough permanent monuments to hold the lines connecting private and public ways. When locus bounds on a private way, and that private way originates in a public way that has been monumented, the survey shall be extended to include public way monuments within 500 feet of locus.
- 2.1.4.3.9. Post-Judgment Plan Street Line Alterations. When a street line affecting registered land being subdivided has been altered by an eminent domain taking or otherwise since the issuance of the last Judgment Plan, the new street line will lie either within or beyond the registered locus. (See § 2.1.2.4.4)
- a. When the new street line lies within locus, the new street shall be located as monumented and the lot dimensioned to the sideline of the new street. The old street line should either be shown with dashed lines and the mathematical relationship between the old and new street lines given, or the mathematical relationship between the old and new street lines must be provided on a worksheet or on the Filed Plan itself.
 - b. When the new street line lies outside of locus, within or beyond the old street, and the registered lot owner does not own any of the former street, the old street line shall be used for dimensioning.
 - c. When the new street line lies outside of locus, within or beyond the old street, and ownership permits,
 1. the lot may be dimensioned to the sideline of the new street and an S-Petition filed to eliminate the old street; or
 2. the old street may be used for dimensioning.
 - d. The old and new streets should be labeled in a way that differentiates them. (For example, the new street could be called "Center Street" and the old street called "Old Center Street").

2.1.4.3.10. Determination of Lines of Private Way. Upon request of the plaintiff, the exact location of the whole of a private way, or a part thereof, may be determined by the Court, as with a claim of appurtenant rights over the private way from locus to the public way. All of the lines to be so determined must be fixed by survey and mathematics in the same manner as the property lines of locus.

2.1.4.3.11. Legal Determination of Approximate Location of Private Way. Upon request of the plaintiff, the Court may determine the approximate location of a private way extending from locus to a public way. If so, then all lines thereof must be approximately located and the location plotted to scale on the plan filed with the Court. In some instances, maps, atlases or other surveys of public record may show such approximate locations. If so, said data may be adopted provided the source of the information is indicated on the plan.

2.1.4.4. Railroads

2.1.4.4.1. Location of Railroad. When locus bounds on or is intersected by a railroad, the sidelines of the railroad shall be accurately determined.

2.1.4.4.2. Data Controlling Railroad Lines. The data for railroad lines may be obtained from the engineering departments of the respective railroad corporations or the Massachusetts Bay Transportation Authority. The plan being prepared should be submitted to the engineering department having jurisdiction for its review before being filed with the Court.

2.1.4.4.3. Location of Monuments. The monuments establishing the baseline or sideline of a railroad shall be located from the closed field traverse lines.

2.1.4.4.4. Fixing the Side Line. The sideline location of the railroad may be fixed from the base line thus surveyed by using the base line stations and offsets as shown on the railroad location plans or valuation plans.

2.1.4.5. Abutting or Nearby Registered Land

2.1.4.5.1. Plan to Identify Prior Registrations. Where registered land abuts locus, the number of the Land Court Case, the name of the present owner of such abutting registered land, and the number of the outstanding Certificate of Title shall be placed on the plan.

2.1.4.5.2. Plan to Identify Prior Confirmations. Where confirmed land abuts locus, the number of the Land Court Case, the name of the present owner of such abutting confirmed land, and the original book and page reference of the recorded judgment of confirmation shall be placed on the plan. Instructions from the Survey Division should be sought whenever a survey seeks to alter the boundaries of a prior confirmation plan.

2.1.4.6.Water Boundaries

2.1.4.6.1. Great or Private Ponds. All ponds and lakes shall be determined to be either "Great Ponds" or private ponds. The limit of private ownership of land abutting Great Ponds extends to the low water mark in its natural state.

2.1.4.6.2. Determination of Boundaries of Flats. For surveys performed in conjunction with complaints filed under G.L. c. 240, §§ 19 through 26 for the settlement of boundaries and determination of the lines and boundaries within or over the flats or foreshore, supplemental data may be necessary. A conference with the Survey Division should be arranged prior to the preparation of any plan for the determination of boundaries of flats or lines over the foreshore.

2.1.4.7.Town, County, State and Registry of Deeds District Lines

2.1.4.7.1. Changes. Since the publication of the city and town boundary atlases in the early twentieth century, many changes in city and town lines have been made by acts of the Legislature, which should be consulted where applicable.

2.1.4.7.2. County and Registry of Deeds District Lines. Selected city and town boundaries and associated data also define county, state and Registry of Deeds district lines. When they are also Registry of Deeds district lines, city or town lines shall be precisely located and dimensioned as property lines. If locus lies on both sides thereof, said line shall be made the division line between separately dimensioned parcels on each side of it. In such situations a Land Court Plan of each parcel is filed in the Registry of Deeds district in which that parcel is situated.

2.1.5. DRAFTING REQUIREMENTS FOR ALL PLANS

- 2.1.5.1.Media. Every plan presented pursuant to these instructions shall be on non-erasable media of durable material (anticipated life span exceeding 100 years under normal storage conditions) that readily accepts permanent black ink and upon which alterations of the plan are readily discernable. Such media must be widely available in roll stock and 24 inch by 36 inch sheet formats. In addition, if a DXF file, DWG drawing, PDF file or some other computer digital format approved by the Chief Surveyor is available, it should accompany the plan for filing. The Survey Division should be consulted relative to choice of media.
- 2.1.5.2.Plan Sheet Size. Plan sheet sizes shall be 18 inches by 24 inches or 24 inches by 36 inches.
- 2.1.5.3.Parcel Highlight. The inside of the perimeter of each parcel or group of contiguous parcels or lots shall be highlighted with green tint.
- 2.1.5.4.Plan Title. The plan title must state the name of the city or town in which the land is located, the street address, the name and full business address of the surveying firm, corporation or partnership that prepared the plan including zip code, telephone number with area code, the name of the responsible surveyor, and if not an employee of the surveying firm, corporation, or partnership, then the full business address, including zip code and telephone number with area code, of the responsible surveyor, and the date of the plan.
- 2.1.5.5.Border. There shall be a border on each plan sheet located at least 3/4 inches from each edge of the plan, and no numbers or letters shall be placed in the border.
- 2.1.5.6.Plan Sheet Orientation. The property shall be oriented upon the plan so that the north point heads in a general way toward the top of the sheet. It is preferable that it head directly up the sheet or up and to the left somewhat.
- 2.1.5.7.Lettering. All plans should be lettered so that they may be read from the bottom and right side only. The lettering of the property line dimensions, the abutting owners, and the street should be large enough to be appropriately prominent.
- 2.1.5.8.Scales. The plan scale, in feet to an inch, must be such as to clearly show all necessary data. Scales of 5, 10, 20, 30, 40, 50, 60, 80, 100, 120, 150, 160 and 200 are suggested. A bar scale must also be shown.
- 2.1.5.9.North Point. The north point must be consistent with the bearing or azimuth system used.

- 2.1.5.10. Key Sheet. A Key Sheet is required if there is more than one sheet to a plan. The size and plan date for each sheet, including the Key Sheet, must be the same. The Key Sheet must show, at a minimum, the perimeter of the lot(s), lot numbers, street names, abutters, adjoining registered land, easements, north point and sheet reference for lot detail data.
- 2.1.5.11. Multiple Sheets. All sheets except the Key Sheet shall be drafted at the same scale and contain identical information in the title block.
- 2.1.5.12. Locus Map. A locus map shall be shown on the plan (if more than one sheet, it shall be shown on the Key Sheet).
- 2.1.5.13. Legend. All plans must have a legend. Plan symbols, line types and abbreviations shall be defined in the legend. Typical abbreviations such as "c.b.": corner board, "br": brick, "st. fdn.": stone foundation, "d.h.": drillhole, "spk. in bulkhead," "I.P.": iron pipe, "I.R.": iron rod, etc. can be defined here.
- 2.1.5.14. Use of Monuments Marking Ways - Monument Identification. All monuments defining ways must be identified in the legend by the type of monument and the type of survey point located on it. (See § 2.1.3.5.7.)
- 2.1.5.15. Monuments Noted on Plan. The status of monuments as described in § 2.1.3.5.7 and those monuments that are "held" shall be so labeled on the Plan.
- 2.1.5.16. Site Location with Respect to Public Streets. The plan should show the nearest intersecting streets between which locus lies, and/or give the approximate distances from locus to those streets.
- 2.1.5.17. Lot Dimensions. Complete dimensions (directions, distances and areas) must be shown for each lot. If a boundary line is an irregular line, the area may be scaled. Tie courses shall be used to complete mathematical lot closures. There may be any number of lots to a sheet, but each lot must be completely shown to scale and fully dimensioned on a single sheet. A lot that cannot be fully shown on one sheet must be shown on the Key Sheet with the overall perimeter distances. The detailed dimensions of such a lot can be shown on the individual sheets.
- 2.1.5.18. Foreshortening and Distortion Prohibited. The perimeter of each lot must be plotted to scale. It must not be foreshortened or distorted. Although there may be more than one sheet to a plan, and any convenient number of lots to a sheet, the complete perimeter of each lot shall be on one sheet. Complicated details may be plotted at a larger scale on a detail sketch that is either put on the plan sheet with the locus perimeter or upon another plan sheet.
- 2.1.5.19. Lot Numbering. Lots created on Land Court Plans are numbered consecutively. On subsequent plans the surveyor may either continue the Land Court numbering or designate the lots differently (letters, assessor parcels, etc.).

The Survey Division, when necessary, will change the surveyor's lot designation and assign the consecutive lot numbers when the Division Plan is filed. If the owner intends to separately convey the fee in the way (e.g. to a homeowner's association or municipality), the way must be fully dimensioned and shown as a separate lot. Where the plan filed with an original complaint covers more than one lot, each lot shall be given consecutive Arabic numerals, beginning with the number 1. Any Division Plans in the same case shall extend this numbering system. Call the Survey Division if there is any doubt as to which number to begin with on any particular Division Plan. The Survey Division will assign Lot numbers when the Division Plan is filed.

- 2.1.5.20. Ways to be Shown. Any way abutting locus that exists either in the record title or upon the ground must be shown on the plan. The latest street lines established by any public authority must be shown.
- 2.1.5.21. Public or Private Ways. The status of a way and its name must be shown on the plan as: "Morse (Public) Street" or "Morse (Private) Street." The plan must indicate which governmental agency created the public way, for example, "Town Highway," "City Highway" or "State Highway" or "Metropolitan District Commission."
- 2.1.5.22. Street Widths. Street widths and the initial points controlling street lines, as well as sufficient monuments for the purpose of fixing locus therefrom must be shown. If the width is indefinite and varied, the surveyor must show the width as "variable" and utilize her best judgment to locate approximately the sideline of the way opposite locus, based on the physical facts on the ground such as walls, fences, etc., or some record information.
- 2.1.5.23. Street Dimensions. The complete dimensions of all ways, including all curve functions (delta angle, radius, and arc length) and sufficient data to tie together opposite corner curves and street angles, especially at intersections, shall be shown. Non-tangent curves shall be labeled as such with both radial bearings shown.
- 2.1.5.24. Limit of Public Way. If relevant, the line separating the public and private portion of the way must be shown.
- 2.1.5.25. Claimed Appurtenant Rights. All claimed appurtenant rights must be shown with no foreshortening permitted. All claimed appurtenant rights shall be adequately dimensioned to allow its location to be reproduced on the ground.
- 2.1.5.26. Line and Point Descriptions. Every plan must plainly indicate the manner in which the corner, property line or reference point is marked upon the ground. Certain lines must be described by a notation as well as indicated by drafting techniques. Expressions like "line through middle of (thickness of wall) brick

wall," "line between walls of brick buildings" and "face of brick wall on line" are typical of such notations.

- 2.1.5.27. Physical Evidence of Title. All fences, walls, ridges, monuments, etc., whether permanent or semi-permanent, natural or man-made, that may be considered by the Court as evidence of the boundary line must be shown. Monuments held shall be labeled as such on the plan.
- 2.1.5.28. Record Easements. All record easements located on locus, including "paper" easements where there is no physical evidence of construction or use, must be shown and identified by appropriate recording information (book and page, document number, etc.)
- 2.1.5.29. Proposed Easements. The surveyor may show the layout of proposed easements, such as proposed drainage and utility easements, by using the word "proposed" or the symbol "Ⓟ" immediately following the name of the easement and providing the following notation on the plan: "Ⓟ denotes easement not created by grant or reservation as of the date of this plan". (Examples: "Drainage Easement Ⓟ" or "Utility Easement #10 Ⓟ").
- 2.1.5.30. Precision, Linear Error of Closure, Directional Error of Closure and Accuracy. Each plan must clearly note the precision, linear error of closure, directional error of closure of the unadjusted field survey traverse, and accuracy of the EDM.
- 2.1.5.31. Measurement Identification. On all lines measured with EDM, the distances on the plan shall be noted (EDM). On all lines measured with standardized tape, the distances on the plan shall be noted (T).
- 2.1.5.32. Label Topography. When difficult terrain conditions are encountered, notations on the plan such as "heavily wooded," "swamps," "underwater," "precipice", etc., are helpful to the Court.
- 2.1.5.33. Buildings. All buildings within 10 feet of locus or within 10 feet of interior easement lines, and all buildings useful to establish property lines or interior easement lines must be shown. Where available, street address numbers shall be shown for such buildings. See § 2.1.3.1.6.
- 2.1.5.34. Water Courses and Water Lines. All record and existing watercourses and water lines useful in establishing boundary and easement lines must be shown. Other data to be included are the name of the water course, if available, the direction of flow, date of field location, or if a record location, a plan reference and plan date or date of survey, if known. All tidal waters shall be designated as "tidal" and direction of ebb and flow (flood) shall be shown.

2.1.5.35. Established Control. When the survey ties into existing control data (i.e. Mass. State Plane Coordinates, NAVD, or World Datum) the plan must contain a description of the control points used and the value of the Combined Scale Factor.

2.1.6. CERTIFICATIONS

2.1.6.1.Seal of Land Surveyor. Each plan must be stamped with the seal of the surveyor who certifies that the plan was made in accordance with these Land Court Instructions. The surveyor's registration number must clearly be shown on the seal or must be clearly shown on the plan near the seal. The seal is required under G.L. c. 112 §§ 81D-81T.

2.1.6.2.Out of State Land Surveyor. When the responsible surveyor is not registered in the Commonwealth of Massachusetts, but is registered in another state, submitted plans may be accepted provided a proper temporary permit allowing the surveyor to practice surveying within the Commonwealth of Massachusetts is obtained from the Board of Registration of Professional Engineers and Land Surveyors and a copy is submitted with the plan.

2.1.6.3. Monuments on Prior Plans/Subsequent Plans Certification. Monuments used to control prior plans and monuments set for subsequent plans must be certified as to their existence and condition as of the date of the survey. The person certifying must be the surveyor whose name appears in the title, or the surveyor in charge of, and professionally responsible for, the survey if the plan is made by a firm, corporation, partnership or association. The form of the certificate for all plans is:

I certify that as of the date of this survey, the monuments controlling prior plans are in the ground as shown and described hereon. I further certify that any additional monuments shown hereon have been set in accordance with the Land Court Instructions of 2006 as of the date of this survey.

2.1.6.4.Certification of Compliance. Each plan must be certified as having been made in accordance with these Instructions. The person certifying must be the surveyor whose name appears in the title, or the surveyor in charge of, and professionally responsible for, the survey, if the plan is made by a firm, corporation, partnership or association. The form of the certificate for all plans is:

I certify that this plan was drawn from an actual survey made on the ground in accordance with the Land Court Instructions of 2006 on or between
____ [date] ____ and ____ [date] ____ [Signature of Professional Land Surveyor and
date of signature]

2.1.6.5.Up-Date Certification. Each plan must be dated within six months of the date of filing or contain the following certificate which must be dated within six months of filing:

I certify that the conditions on the ground are the same now as at the time of the original survey ____ [date] ____ with the exception of _____.
[Signature of Professional Land Surveyor and date of signature]

2.1.6.6.Regulation Of New Subdivision Certification. Plans showing a redivision of lots fronting on streets or ways previously created by a division plan approved under the Subdivision Control Law as described in G.L. c. 41, § 81O must have the following certification:

I hereby certify that the lots shown on this plan have frontage on a public way (or ways) that was (were) shown on a previous plan <insert description> approved in accordance with the Subdivision Control Law, of at least such distance, if any, as is then required by ordinance or by-law of said city or town for erection of a building on such lot, and if no distance is so required, has such frontage of at least twenty feet.

2.1.6.7.No New Lines Certification. For land located in cities and towns that have accepted the subdivision control law, the certification allowed by G.L. c. 41, § 81X (commonly known as “No New Lines” or “81X”) may be placed on the plan in the following form:

I hereby certify that the property lines shown on this plan are the lines dividing existing ownerships, and the lines of the streets and ways shown are those of public or private streets or ways already established, and that no new lines for division of existing ownership or for new ways are shown.
[Signature of Professional Land Surveyor and date of signature]

2.1.6.7.1.On Original Filed Plan. A plan bearing an § 81X certification will be accepted without Planning Board endorsement for original registration or confirmation provided that the plan shows only one parcel and that the plaintiff is not an abutter. In cases where a plaintiff is an abutter to the parcel shown on the plan, additional evidence will be required to determine whether there has been compliance with the subdivision control law.

2.1.6.7.2.Subsequent Submissions. A plan bearing an 81X certification will be accepted as a subsequent submission for registered land provided the plan shows one lot created from the merger of 2 or more registered lots or shows the land remaining not previously shown as a separate lot.

2.2. **Special Requirements for Original Registrations and Confirmations** In addition to the matters described above in § 2.1, all Filed Plans must show:

2.2.1. **PHYSICAL EVIDENCE.** In the case of a plan that accompanies an original complaint, lines shall be marked with physical objects enabling abutting owners and other interested parties to ascertain the locations of the lines of ownership claimed by the plaintiff. The surveyor must mark every line upon the ground with natural or man-made objects located sufficiently close to enable interested parties to identify the claimed property lines without having to employ another surveyor.

2.2.2. **PHYSICAL EVIDENCE OF USE.** Evidence of use that exists on locus such as dirt or gravel roads, paths, utility lines, cultivated areas, wells, or other similar features must be shown regardless of whether the record title provides a basis for such use.

2.2.3. **ABUTTING OWNERS.** All abutters, as ascertained from the latest city or town assessor's records, and the property lines between them as compiled, must be shown, including those on the opposite side of a private road at locus. Abutters on both sides along the full length of any way over which claimed appurtenant rights are claimed must be shown.

2.2.4. **ALL WAYS TO BE SHOWN.** In addition to those ways which must be shown pursuant to § 2.1.5.20. , any way *over* locus that exists either in the record title or upon the ground must be shown on the Filed Plan.

2.3. **Special Requirements For Subsequent Divisions of Registered Land** In addition to the requirements outlined in § 2.1, all Division Plans must comply with the requirements of this section. If in the course of preparing a Division Plan inconsistencies are found with existing judgment plans, an S-Petition may be required. (See § 3.1.)

2.3.1. **SUBSEQUENT SURVEYS RESEARCH.** The surveyor shall research and obtain copies of the following documents when preparing subsequent Division Plans:

- a. The current Certificate of Title for the property being surveyed including the encumbrance pages. An attested copy of the Certificate of Title must be delivered to the Survey Division when submitting the new survey plan.
- b. The approved Judgment Plans and any Division Plans as filed at the Registries of Deeds.
- c. Filed Plans from which the approved Judgment Plans were prepared. Data on the Filed Plans that supports the data on the Judgment Plan may be used for establishing a satisfactory connection to prior data.

The surveyor should research and obtain copies of the following items:

- d. When necessary, the surveyor may need to research and obtain copies of the correspondence files on record at the Survey Division.
- e. When necessary, the surveyor may need to research and obtain copies of data outside the Land Court files. This should be relied upon only after the above

sources have been exhausted. Such data might consist of unregistered surveys, field notes of both private and public surveys, public street line data, evidence of occupation, and the opinions of landowners.

- 2.3.2. PRIOR DECREED MONUMENTS. The surveyor must search for and locate all fences, walls, monuments, offsets to structures and other monuments recognized by the Court on prior plans as determining boundary line locations.
- 2.3.3. RECORD EASEMENTS. Easements recognized on prior locus Land Court Plans and easements subsequently granted or imposed as disclosed by the outstanding certificate of title and title rundown must be shown. (For instruction on proposed easements, see § 2.1.5.29, Proposed Easements.)
- 2.3.4. CART PATHS AND OTHER PHYSICAL EVIDENCE OF USE. Unless shown on an existing locus Land Court Plan, the outstanding certificate of title or the memorandum of encumbrances as updated by a title rundown, cart paths and other physical evidence of use such as overhead wires or alteration of the natural topography shall not be shown or noted on Division Plans.
- 2.3.5. CERTIFICATE LINES. When the plan shows new lots created from land comprised of more than one certificate of title, dashed lines indicating the ownership from each certificate must be shown where the certificate lines run through lots. These lines must be labeled with their corresponding certificate numbers.
- 2.3.6. ABUTTING LAND. Abutting land that was shown on a prior Land Court division plan must reference the Land Court Plan Number and the lot number shown on said plan. Abutting land that is remaining undivided land of the registered owner shall be labeled as such with the owner's name and Certificate Number.
- 2.3.7. REMAINING LAND. The Survey Division should be consulted for the court's policy regarding the transfer or registration or instruments pertaining to remaining land.
- 2.3.8. LATEST STREET LINES. The surveyor shall show the latest street lines established by any public authority as disclosed by an examination of the certificate of title, together with the initial points determining the location thereof and sufficient other monuments on said lines to enable the new lots and any new streets to be fixed therefrom upon the ground at any time in the reasonably foreseeable future.
- 2.3.9. ASSIGNED LOT NUMBERS TO WAYS. If the plaintiff or owner wishes to convey or retain the fee under a way, or any portion thereof, or if the municipality requires a certificate of title for the way, then it must be assigned a lot number and be completely dimensioned as a lot. All the data necessary for identifying and describing the way shall be included.

2.3.10. INCONSISTENT SURVEY. When discrepancies between field measurements and record data are found, see § 3.2 Inconsistent Surveys, before preparing final plan.

2.3.11. SUB-TITLE. In addition to the usual title box information, it is required that a subtitle in the following form be lettered on the plan:

- a. Being A Division of Lot(s) _____
- b. Shown on Land Court Plan(s) _____
- c. Creating (number) Lots

2.3.12. RELOCATION OF EASEMENTS, ETC. BY S-PETITION. All watercourses, ways and other easements shown on Land Court Plans must be shown on subsequent plans unless relocation or elimination thereof has been approved by an Order of Court after an S-Petition. Any new facts supporting such petition, such as the piping or relocation of watercourses, ways, or easements, must be shown as they exist on the ground on the date of the survey.

2.3.13. MUNICIPAL ENDORSEMENTS AND CERTIFICATIONS. See § 4.6 for forms of certifications referenced in this section.

2.3.13.1. Planning Board Endorsement. Except as provided in § 2.1.6.7, every plan of land in a municipality that has adopted the Subdivision Control Law must bear the endorsement of the Planning Board. This endorsement may be either that the plan does not require Planning Board approval or that the definitive subdivision plan has been approved. A Planning Board may approve a definitive plan with conditions. Plans endorsed or approved in conjunction with a comprehensive permit issued pursuant to G.L. c. 40B, §§ 21-23, may be acted upon by the Board of Appeals established under G.L. c. 40A, § 12. For a listing of the cities and towns that have not adopted the Subdivision Control Law, see § 4.5.

2.3.13.2. City or Town Clerk's Certification. All approved definitive subdivision plans must also bear the endorsement of the town or city clerk that there has been no appeal taken within the 20 days after receipt and recording of notice of approval of the plan from the planning board. See suggested form in these Instructions. For statutory authority, see G.L. c. 41, § 81V.

2.3.13.3. Approval Not Required - Unconditional. Note that there is no provision in the law for the imposition of a condition where the endorsement is "approval under the subdivision control law not required."

2.3.13.4. Planning Board Conditions. If a definitive subdivision plan is approved upon any conditions, those conditions must be set forth on letter or legal size paper, also referring specifically to the plan upon which the conditions were endorsed. See suggested form in § 4.6. If this is done before the case has gone to judgment, it is recommended that the statement of planning board conditions be recorded along with a copy of the plan so that the record thereof may be made a part of the report of the Land Court Title Examiner. If the plan is a Division Plan

of registered land, then the original conditions of Planning Board approval must be submitted to the Survey Division with the plan. The Survey Division will cause the conditions to be noted on the outstanding certificates of title that are affected. Note: If approved upon conditions, the endorsement on plan must state "approved subject to conditions.

2.3.13.5. Authority to Sign for Planning Board. If one or more individuals endorses the plan for the majority of the planning board under the authority of G. L. c. 41, § 81P, the authority to do so must be in writing signed by a majority of the planning board and on file at the Land Court in Boston.

2.3.13.6. City of Boston. All plans consisting of land in whole or in part within the City of Boston submitted for filing in the Land Court must bear the endorsement of the collector-treasurer of the City of Boston, that in accordance with Chapter 190 of the Acts of 1982, the imposed excise has been paid or is not due.

2.3.13.7. Municipal Lien Certificates. All plans submitted for filing that are approved under the Subdivision Control Law must be accompanied by a current Municipal Lien Certificate (MLC) indicating that all taxes, assessments and charges have been paid in full. A method of identifying the parcel must be provided if the MLC does not refer to the Land Court case number and lot. When lots are designated by assessor's parcel, a copy of the assessor's map will usually suffice. Reference on the MLC to the owner's name is not adequate to identify the parcel. See G. L. c. 60, § 23.

2.4. Special Regulations for Condominiums

2.4.1. PROCEDURE In general, condominiums in Massachusetts are governed by the provisions of G.L. c.183A. The Land Court examines and approves all documents and plans for condominiums on registered land. The site plan, together with the floor plans and condominium documents, are reviewed by the Land Court Legal Division. After the condominium has been allowed by a Judge of the Court (evidenced by the judge's signature on the face page of the Master Deed), the condominium and plans may be filed at the proper registry. Except for modifications to Class I Condominiums, described below, the Survey Division no longer prepares condominium plans for filing at the local registry.

2.4.2. CLASSES OF CONDOMINIUMS The Land Court divides condominiums into two classes depending on whether the Master Deed was approved before or after September 15, 1986. Class I condominiums are those condominiums where the Master Deed was reviewed, approved and "allowed for filing" prior to September 15, 1986. The Survey Division will continue to prepare modification plans for filing at the local Registry of Deeds for changes to Class I plans. Class II condominiums are those condominiums where the Master Deed was reviewed, approved and "allowed for filing" on or after September 15, 1986. The Survey Division will not prepare modification plans for changes to Class II plans.

- 2.4.3. MASTER DEED LAND DESCRIPTION All condominiums (Class I or Class II) must consist of land that can be identified in the Master Deed by reference to existing lot(s) on a plan(s) filed with the Court.
- 2.4.4. VARIATIONS IN DESCRIPTIONS A condominium is established on an existing lot; the lot dimensions should accordingly be precisely as shown on the plan that authorizes a certificate to issue for that lot. If the measured dimensions do not agree with the record dimensions but are within the allowable error of closure consistent with §2.1.4.1.3, the plan should show both dimensions, labeling record dimensions “(R)” and measured dimensions “(M).” Descriptions should use record dimensions and not new measured dimensions.
- 2.4.5. SITE PLANS A site plan showing lot lines and buildings as described in this section is required for all condominiums created on registered land.
- 2.4.5.1. Title Block. The title block must contain the condominium name, phase designation, location, land court plan number, date and the surveyor’s name, full address and telephone number.
- 2.4.5.2. Buildings. All buildings, dimensioned on the exterior to the nearest 0.1 foot, and building material, unit designations and number of stories shall be shown. The distance between a building and the lot or phase lines shall be shown to the nearest 0.1 foot.
- 2.4.5.3. Easements and Common Area. The site plan shall show all record easements and shall show Common Area, Limited Common Area and Exclusive Use Easements created by the Master Deed or amendment to the Master Deed that relate to the land (rather than the building) dimensioned to the nearest .1 foot.
- 2.4.5.4. North Arrow and Scale. The site plan shall contain a north arrow and scale.
- 2.4.5.5. As-Built Certification. The site plan must be signed, sealed and dated by the professional land surveyor who prepared the plan and must contain a certification that the plan fully and accurately depicts the location and dimensions of the buildings, as built, and fully lists the units contained therein.
- 2.4.5.6. Plan Material. Class I Site Plans must be prepared on a material consistent with these Instructions. Class II Site Plans shall be prepared on a material and in such form as will be acceptable for filing, with the Master Deed or subsequent amendments, in the Registered Land Section of the local Registry of Deeds.
- 2.4.6. FLOOR PLANS As required by G.L. 183A, §8(f), a set of floor plans must be filed with the condominium documents. Each sheet of the floor plans must be dated, signed and sealed by the engineer, architect or surveyor who prepared the plans and contain the certification that the plans fully and accurately depict the layout, location, unit number and dimensions of the units as built.

3. SELECTED ISSUES

3.1. **S-Petitions** In cases where an existing registration plan or certificate must be altered to reflect inconsistencies between monuments and dimensions of record, accretions, erosions, eminent domain takings, or elimination of easements or ways or where an insufficient number of undisturbed record monuments causes doubt concerning the proper location of the boundaries of an existing registered parcel, a so-called “S-Petition” should be filed with the Land Court pursuant to G.L. c. 185, §115. The surveyor should work with the attorney for the certificate holder to provide the information the attorney will need in order to file the petition. The petition should be filed with a Division Plan showing the corrected data or eliminating the way or easement and should name all parties having an interest. The Court will require a title examination to confirm the identity of interested parties. The Court will consider the S-Petition, and, if allowed, enter an order approving the new plan and amending the certificate, if necessary. The Order is filed with the Division Plan at the appropriate registry district.

3.2. **Inconsistent Surveys** If a new survey has a boundary line which is common to a prior registration, and some discrepancy between the new field work and the old registration plan data or an insufficient number of undisturbed record monuments causes doubt concerning the proper location of the common line, the matter should be referred to the Survey Division for instructions.

3.2.1. **BOUNDARY LINES MUST BE MAINTAINED** Boundary lines determined by the Court and fixed on the ground in relation to verified monumentation of record, existing or retraceable, must be maintained.

3.2.1.1. **Slight Variations**. Record dimensions shall be used when the new measurements between undisturbed monuments previously recognized on Land Court Plans agree within the allowable errors applicable in prior surveys.

3.2.1.2. **Some Errors**. Subject to review by the Court, changes may be made when the new measurements explain an already recognized or obvious error in the old work.

3.2.2. **FIELD SURVEY TO RECOGNIZE PREVIOUSLY OR ADJOINING REGISTERED LAND** Whenever locus abuts land previously registered or is a division of land previously registered, it is imperative that monuments on the earlier Land Court Plan be located and verified by the new survey. The lines determined by the earlier case must be maintained. Because the physical monuments shown on the prior plans are presumed to mark the property lines, it is necessary to look for and tie into all monuments of record affecting locus.

- 3.2.3. FILED PLANS All plans made by the Court and sent to the various registries are based on a plan filed in the Court. These Filed Plans should be consulted in most cases when dealing with registered land. Some of the earlier plans prepared by the Court were prepared for the sole purpose of issuing certificates of title. These plans do not show the actual property lines but only show the total distances needed to prepare a bounding description. Many times walls, monuments, ditches, pipes, and other physical monuments are shown but not dimensioned. Invariably, the Filed Plan will have the property lines and monuments dimensioned so they can be reproduced.
- 3.2.4. STONE WALLS The Court recognizes that many stone walls shown on Judgment Plans are intended to mark the property lines unless clearly shown otherwise. This is true whether the plan merely depicts the stone wall as on earlier plans or identifies the wall with bearings and distances, drill holes, etc. In general, when surveying land bounded by a wall, the surveyor must hold the wall. If the record math does not fit the wall, undisturbed record monuments such as the wall itself or drill holes previously set in the wall cannot simply be offset. The surveyor should avail himself of all information available in the Survey Division regarding the location of the wall. Specifically, the Filed Plan and correspondence file should be reviewed. Sometimes all available information is used to recreate the old wall as part of the review process. The surveyor should not hesitate to request a meeting with the Legal and Survey Divisions of the Land Court. (See also § 2.1.3.5.9 Stone Walls).
- 3.2.5. MONUMENTS DO NOT FIT RECORD MATH When a discrepancy exists between the record math and record monuments, a worksheet should be prepared showing the relationship of the monuments to the record location (Usually the monuments are shown offset perpendicularly from the property lines.). In determining whether to hold record monuments, the Court needs to review all pertinent data and its effect on abutting land. After consultation with the Survey and Legal Divisions, a judge decides what additional steps, if any, must be taken prior to the preparation of the final plan.
- 3.2.6. INSUFFICIENT NUMBER OF UNDISTURBED RECORD MONUMENTS For existing registered land, if it is determined that enough record monuments have been disturbed or destroyed to cause doubt concerning the proper location of the boundaries of the parcels, an S-Petition (§ 3.1) may be required. In such cases a meeting with the Survey Division must be scheduled.
- 3.2.7. PLAN APPROVAL REQUEST TO JUDGE FOR REVIEW When a plan is prepared that differs from record (holds monuments and changes dimensions or holds dimensions and references monuments), the plan is presented to a judge for review. The judge reviews the plan and determines whether the change requires an S-Petition. If an S-Petition is not required, the judge initials the plan approval request that has been signed by the owner or the owner's attorney allowing the plan to be filed and used without filing a petition.

3.3. Eminent Domain Takings

3.3.1. **REGISTRATION OF TAKING** When registered land is taken under G. L. c. 79, § 4, the authority purporting to exercise its right of eminent domain is entitled to have the instrument showing the exercise of such right accepted for filing and noted on the owner's original certificate of title. A new certificate of title will not issue to the authority however, until the steps hereafter set forth are taken.

3.3.2. **PROCURING CERTIFICATE BY S-PETITION** The authority making the taking shall present an S-Petition to the Chief Title Examiner requesting that one or more certificates of title be issued.

- a. **Entire Lot Taken.** If the entirety of a registered lot of land has been taken, an S-Petition shall be filed requesting the issuance of a new certificate of title in the name of the taking authority. No plan is required in this instance.
- b. **Portion of Lot Taken.** If only a portion of a registered lot of land has been taken, then a Division Plan must be filed together with an S-Petition requesting approval of the plan and issuance of new certificates of title. Any such Division Plan shall show as a separate lot the land remaining in the registered owner after the taking.

3.3.3. **PARCEL NUMBERING** On plans showing fee takings by eminent domain, parcels shall be designated by their taking parcel number as shown on the taking documents and shall be prefaced with the word “parcel”. This numbering system differs from the conventional Land Court lot numbering sequence.

3.4. **Withdrawal From Registration** Following judgment and the issuance of a certificate of title, land remains registered in perpetuity unless withdrawn from the Land Registration system as provided by either G. L. c. 185, § 52, or G.L. c. 183A, § 16. One basis for withdrawal under G. L. c. 185, § 52 is the acquisition of an entire parcel of registered land by the commonwealth, a political subdivision, or a public authority. The other four grounds for withdrawal set forth in § 52 are: (a) that the registered land constitutes less than 50 per cent of the total area of a single parcel or of 2 or more contiguous parcels in common ownership; (b) that the registered land consists of less than 10 per cent of the portion of the land area to which an original certificate of title pertains, the rest of the land area to which such certificate pertains having been conveyed since the original registration; (c) that the owners of the registered land have submitted the land to the provisions of the condominium statute (G. L. c. 183A) or the Real Estate Time-Share Act (G. L. c. 183B); or (d) that the Court finds other good cause for withdrawal. Where land being submitted to the condominium statute consists of both registered and recorded land, the registered land may be withdrawn pursuant to G.L. c. 183A, § 16.

4. APPENDICES

4.1. **Checklist for Original Registration** Before an Original Complaint may be filed with the Recorder, the plan that accompanies it must be endorsed by the Survey Division with the notation "May Be Filed". Such an endorsement will be refused unless the plan:

- a. Is on media as specified in § 2.1.5.1. upon which is affixed original signatures.
- b. Is stamped with the seal of the surveyor who certifies the plan.
- c. Is dated within 6 months of filing or has "up date" certificate on it.
- d. Is endorsed with the proper Planning Board Endorsement (Note that if "Approved", then the Town Clerk's Certificate is also necessary on the plan) or has surveyors Certificate in accordance with G.L. c. 41, § 81X
- e. Shows North Point heading up the sheet.
- f. Is tinted green around the inside of the property lines claimed.
- g. Shows directions and distances for all lines.
- h. Shows the area of locus.
- i. Shows the widths of all streets.
- j. Shows all streets as being either "public" or "private".
- k. Shows the monuments controlling street lines, railroad lines and the property lines claimed.
- l. Shows the full names of all abutting owners, including those on the opposite sides of any private streets at locus.
- m. Is endorsed with or accompanied by appropriate traverse tables on transit lines and appropriate traverse tables on property lines.
- n. Is endorsed with the precision, the linear error of closure, and the directional error of closure.
- o. Shows all physical and record features affecting locus.

4.2. **Checklist for Division Plans** The Survey Division will refuse to accept a proposed Division Plan for filing unless there is presented:

- a. An attested Registry of Deeds copy of outstanding Certificate of Title;
- b. The Statutory filing fee
- c. A plan which shows all items in § 4.1 and in particular or in addition thereto:
 1. Is endorsed with the proper Planning Board Endorsement (Note that if "Approved", then the Town Clerk's Certificate is also necessary and if "Approved Upon Condition", then it must be accompanied by the Statement setting forth the Planning Board Conditions).
 2. Shows complete dimensions for every lot.
 3. Shows the new lots tied into at least three monuments that were recognized on prior Land Court Plans.
 4. Shows sufficient perimeter monuments and backbone monuments to control new lines.
 5. Is endorsed with or accompanied by appropriate traverse tables around blocks of lots, individual lots, interior streets or ways and exterior perimeter.
 6. Is accompanied by an explanation of variations from the record data and of any corrective steps applied.
- d. Municipal Lien Certificate

- 4.3. **Checklist for Condominium Plans** The Land Court will refuse to approve a set of condominium documents unless there is presented:
- a. Site Plan. The site plan should contain and show the following:
 1. Plan Title
 - i. Condominium name
 - ii. Phase designation
 - iii. Locality
 - iv. Surveyor's name, full business address, and telephone number
 - v. Date
 - vi. Land Court Plan Number
 2. Buildings
 - i. Completely dimensioned on exterior to the nearest 0.1 feet.
 - ii. Connected to lot or phase lines to the nearest 0.1 feet.
 - iii. All units designated
 - iv. Number of stories designated
 3. Exclusive Use Easements. Fully dimensioned to the nearest 0.1 feet.
 4. Utility Easements
 5. Limited Common Areas
 6. Common Areas
 7. North Arrow
 8. Scale
 9. "As-Built" Certification. The As-Built Certification must be signed, sealed and dated by the professional land surveyor who prepared the site plan. (See § 2.4.5.5.)
 - b. Floor Plans. A set of floor plans must be filed with the condominium documents. Each sheet of the floor plans must be dated, signed and sealed by the engineer, architect, or surveyor who prepared those plans and must contain an "As Built" Certification.
- 4.4. **Other Relevant Surveying Standards** For surveying techniques and other survey standards, the surveyor should consult the Board of Registration of Professional Engineers and Land Surveyors, Procedural and Technical Standards for the Practice of Land Surveying - 250 CMR Cadastral, Original and Retracement Surveys and Supplemental Standards, and any of the latest current college texts on surveying, or any of the pamphlets by such professional organizations as the American Congress on Surveying and Mapping, the American Society of Civil Engineers or the Massachusetts Association of Land Surveyors and Civil Engineers.

4.5. Municipalities That Have Not Adopted the Subdivision Control Law as of April 2005

<u>Municipality</u>	<u>Registry District</u>
Arlington	Middlesex South
Belmont	Middlesex South
Boston	Suffolk
Cambridge	Middlesex South
Cheshire	Berkshire North
Clarksburg	Berkshire North
Conway	Franklin
Gosnold	Dukes
Holland	Hampden
Royalston	Worcester
Somerville	Middlesex South
Tolland	Hampden
Washington	Berkshire Middle
Watertown	Middlesex South
Wendell	Franklin

4.6. Practice Concerning Planning Board Endorsements

1. The endorsement “Approval under the Subdivision Control Law Not Required” should be unqualified. The law provides that the reason for such an endorsement may be stated. Such a reason may start with the word “Since” or the word “Because” or some similar expression but should never be preceded by a word such as “If”, “But”, or “Provided”. The latter three words imply a condition or qualification which is not authorized under law. Furthermore, a notation pointing out that the lots do not conform to zoning requirements must be worded so that it is definite that they do not qualify the endorsement to the effect that Planning Board Approval is Not Required. It would be better to omit altogether such zoning notes.
2. The endorsement “Approved under the Subdivision Control Law” even though unqualified, must be dated so that it can be readily determined that the six months period during which the endorsement may be accepted has not been exceeded.
3. The endorsement “Approved under the Subdivision Control Law” must be accompanied by another endorsement upon the plan by the Town Clerk in the form shown as Form I.

4. The endorsement “Approved under the Subdivision Control Law Upon Conditions Stated” upon a plan of land that has already been registered must be accompanied by a statement of the Planning Board Conditions in the form shown as Form II. The certificate of the Town Clerk must also be endorsed on the plan in the form shown as Form I. Whenever a plan of registered land is subject to a condition or covenant, said condition or covenant must be in a separate document which is referred to on the plan. Such a document would ordinarily be attached to a “Statement of Planning Board Conditions” (FORM II), the form of which is set forth below.
5. The endorsement “Approved under the Subdivision Control Law Upon Conditions Stated” upon a plan of land to be registered may be accompanied by a statement of Planning Board Conditions in the form shown as Form II, or, if the conditions have already been recorded, a notation of the book and page of such recording should be referred to in the endorsement upon the plan. The certificate of the Town Clerk must also be endorsed on the plan in the form shown as Form I.
6. If the Planning Board endorsement is dated more than six months prior to the presentation of the plan for filing, then an additional endorsement by either the Planning Board or the Town Clerk stating that the approval has not been modified, amended or rescinded nor the plan changed must also be upon the plan in the form shown on Form III. Note that this should not be worded that the Approval is re-affirmed or that the plan is re-approved.
7. Where the Planning Board fails to act upon a plan within the time limit prescribed by the law the certificate which shall be issued by the Town Clerk should be in the form shown as Form IV. This certificate may be endorsed upon the plan or set forth on a separate sheet which is to be placed on record with the plan.
8. The Recorder of the Land Court, whose office is in Boston, must be notified of any delegation of authority to sign plans or other certificates. This notification must be over the signatures of a majority of the Board.

FORM I

(a) Clerk's Certification on an approved plan:

Date: _____

I, _____, Clerk of the City or Town of _____, hereby certify that the notice of approval of this plan by the Planning Board has been received and recorded at this office and no notice of appeal was received during the twenty days next after such receipt and recording of said notice.

City or Town Clerk

(b) Clerk's Certification on a plan referring to a Recorded Certificate:

Date: _____

I, _____, Clerk of the City or Town of _____ hereby certify that the certificate required under G.L. c. 41, § 81X is recorded in the _____ Registry of Deeds in Book ____, Page ____.

City or Town Clerk

(c) Clerk's Certification on a plan referring to a Registered Certificate:

Date: _____

I, _____, Clerk of the City or Town of _____ hereby certify that the certificate required under G.L. c. 41, § 81X is recorded in the _____ Registry District of _____ County as Document No. _____ (or in Book ____, Page ____).

City or Town Clerk

FORM II

STATEMENT OF CONDITIONS OF PLANNING BOARD APPROVAL

City/Town Planning Board

The undersigned, being (an authorized agent of or a majority of the) Planning Board of the above named city/town, hereby certify that the conditions set forth below were imposed at the time of its approval of a subdivision plan entitled _____ drawn by _____, Surveyor, dated _____, 20__.

CONDITIONS: (Set forth the conditions imposed or refer to an attachment sheet as showing them)

Authorized Agent or Majority

FORM III

CERTIFICATE OF NO CHANGE

City/Town of _____

Date: _____

The undersigned, being the Clerk of the above-mentioned City/Town, being the majority of, authorized agent of, the Planning Board of the above-mentioned City/Town, hereby certify that the approval of this plan has not been modified, amended or rescinded, nor the plan changed.

(City or Town Clerk)
(Majority) or
(Authorized Agent)

FORM IV

“FAILURE TO ACT” Certificate re: Planning Board Endorsement

a. For plans submitted pursuant to G.L. c. 41, § 81P:

Date: _____

I, _____, Clerk of the City or Town of _____ hereby certify that the plan of land on name of street, drawn by _____, Surveyor, and dated _____, 20__, was submitted to the Planning Board on date, 20__, and the Board has failed to act upon the said plan within the twenty-one days thereafter and, therefore, the plan is deemed not to require approval under the Subdivision Control Law.

City or Town Clerk

b. Plans submitted for Approval:

Date: _____

I, _____, Clerk of the City or Town of _____ hereby certify that the subdivision plan of land on name of street, drawn by _____, Surveyor, and dated _____, was submitted to the Planning Board for Approval on date, 20__, and that the Board has failed to take final action thereon within the “Time Prescribed” days thereafter, and that no appeal has been taken during the next succeeding twenty days, and, therefore, the plan is deemed to be Approved.

City or Town Clerk

* “Time Prescribed” is either “ninety” (90) days or “one hundred thirty-five” (135) days after submission of the definitive plan. The statutory “Time Prescribed” period can be extended by agreement between the applicant and the Planning Board. Notice of such extension should be filed by the Planning Board with the City or Town Clerk. If the statutory period is thus extended the Clerk’s Certificate should include the statement that the time was so extended by a notice filed with the Clerk by the Planning Board and should definitely state that the Planning Board failed to act within the extended period. (See G.L. c. 41, §§ 81U, 81V)

FORM V

STATEMENT OF CONDITIONS OF ZONING BOARD OF APPEALS APPROVAL

City / Town Zoning Board of Appeals

The undersigned, being the required number of affirmative votes of the Zoning Board of Appeals of the above named city / town, hereby certify that the conditions set forth below were imposed at the time of its approval under the authority of G.L. c. 40B of a subdivision plan entitled _____ drawn by _____, Surveyor, dated _____, 20__.

CONDITIONS: (Set forth the conditions imposed or refer to an attachment sheet as showing them)

Zoning Board of Appeals

4.7. Glossary

1. 100-rod Line. The maximum seaward extent of a riparian owner's rights in tidal flats as decreed by the Colonial Ordinances 1641-1647 being the lesser of low water or 100 rods (100 rods = 1,650 feet). (See § 2.1.3.2.4.).
2. Approval Not Required Plan. A plan, also known as a Form A plan, depicting the division of a tract of land into two or more lots which does not meet the definition of subdivision in G. L. c. 41, § 81L, and which is presented to a planning board for its endorsement under G. L. c. 41, § 81P, that approval under the subdivision control law is not required. (See § 2.1.6.6.).
3. Assistant Recorders. The registers of deeds for their respective counties or registry districts, in the performance of their duties pertaining to registered land pursuant to G. L. c. 185, § 10.
4. Certificate Lines. The common boundary line between abutting parcels of land described in two outstanding Certificates of Title. (See § 2.3.5.).
5. Certificate of Title. The document issued by the assistant recorder of the Land Court that describes a parcel of land, confirms the ownership thereof, and lists the encumbrances thereof. A certificate of title is conclusive as to one's estate in registered land. (See § 1.4.).
6. Closed Field Traverse. A series of survey field measurements forming a complete loop, beginning and ending on the same point. This method allows for a degree of error detection when analyzing the survey results. (See § 2.1.3.1.3. and § 2.1.4.1.3.).
7. Compass Rule. The correction to be applied to a given latitude (departure) for any side is to the whole error in latitudes (departures) as the length of that side is to the perimeter of the traverse, the correction being applied so as to reduce the whole error to zero. The compass rule is used when it is assumed that the closing errors are as much due to errors in observed angles as to errors in measured distances. (See § 2.1.4.1.3.).
8. Complaint. The pleading filed at the Land Court commencing an action and seeking a specific form of relief. In the context of the registered land, a complaint either seeks to register and confirm title to a parcel of land or seeks confirmation without registration. (See § 1.1.).
9. Confirmation. The legal proceeding whereby the Land Court adjudicates the ownership and location of land as of a certain time and date. (See § 1.1.).
10. Confirmation Plan. The plan issued by the Court at the time a judgment issues in a confirmation case and is recorded on the unregistered side at the Registry of Deeds.
11. Complaint Plan. See Filed Plan.
12. Decree Plan. See Judgment Plan.
13. Definitive Subdivision. A division of land requiring approval under the provisions of G. L. c. 41, §§ 81K to 81GG (See § 2.1.3.5.15.).
14. Delta Angle. The central angle subtended by a circular curve.
15. Directional Error of Closure. The calculated direction of the unadjusted linear error of closure from the ending position to the beginning position of the unadjusted closed field traverse. (See § 2.1.5.30.).

16. Division Plan. A plan showing either the division of a lot of registered land into two or more parcels, irrespective of whether the plan requires planning board approval or endorsement or a revision to the perimeter of a registered parcel. (See § 1.4.).
17. Filed Plan. The plan, prepared by a Surveyor, submitted at the time a complaint or request for a division approval is filed in the Land Court. Also called surveyor's plan, linen plan, petitioners plan or complaint plan. (See § 1.5, and § 3.2.3.).
18. Flats. A level area alternately covered and left bare by tidal waters. (See § 2.1.3.2.4)
19. Form A Plan. See Approval Not Required Plan.
20. Foreshore. The sloping portion of a beach lying between the tidal high water and low water marks. (See § 2.1.3.2.4.).
21. G.L. References to chapters (c.) and sections (§) of the Massachusetts General Laws appearing as "G.L. c. ____, § ____".
22. Great Pond. A pond containing more than 10 acres of area in its natural state that was not conveyed to a private citizen prior to 1647 as established by the Colonial Ordinances 1641-1647. (See § 2.1.4.6.1.).
23. Judgment Plan. The plan issued by the Court at the time a judgment issues in a registration case and is recorded in the Land Court section at the Registry of Deeds. This plan is also known as the "A" plan or a Decree Plan. (See § 1.4.).
24. Least Squares Adjustment. A statistically rigorous method of adjusting observations the end result of which minimizes the sum of the squares of the individual observation's corrections (residuals). (See § 2.1.4.1.3.).
25. Linear Error of Closure. The square root of the sum of the squares of the error in latitude (or "cosines") and the error in departures (or "sines"). (See § 2.1.5.30.).
26. Linen. The cloth medium formerly used exclusively on which plans were prepared for submission to the Land Court.
27. Linen Plan. See Filed Plan.
28. Locus. The parcel or lot of land that is at issue in a particular case. (See § 2.1.2.1.).
29. Massachusetts Coordinate System. Coordinates based on the Massachusetts State Plane Coordinate System as defined in G.L. c. 97, §§ 8 to 13. (See § 2.1.4.1.1.).
30. Monument. A physical object or intangible entity marking or defining a property line or corner. (See § 2.1.3.5.1.).
31. Monument, Artificial. A physical object that has been placed to mark a boundary line or corner. Examples of artificial monuments include stakes, pipes, stone markers, fences, and buildings. (See § 2.1.3.5.1.).
32. Monuments, Natural. Naturally occurring objects, such as streams, trees, rock outcrops, and hills, that mark boundary lines or corners. (See § 2.1.3.5.1.).
33. NAVD88. The North American Vertical Datum of 1988. NAVD88 is the vertical control datum established in 1991 by the minimum-constraint adjustment of the Canadian-Mexican-U.S. leveling observations. It held fixed the height of the primary tidal benchmark, referenced to the new International Great Lakes Datum of 1985 local mean sea level height value, at Father Point/Rimouski, Quebec, Canada. Additional tidal benchmark elevations were not used due to the demonstrated variations in sea surface topography; i.e., the fact that mean sea level is not the same equipotential surface at all tidal benchmarks. (See § 2.1.3.5.17.).

34. NGS. The National Geodetic Survey division of National Oceanographic and Atmospheric Administration under the United States Department of Commerce. (See § 2.1.3.4.7.).
35. NGVD29. The National Geodetic Vertical Datum of 1929 (before May 10, 1973 called the “Sea Level Datum of 1929”). A vertical control datum established for vertical control in the United States by the general adjustment of 1929. Mean sea level was held fixed at the sites of 26 tide gauges, 21 in the United States and 5 in Canada. The datum was defined by the observed heights of mean sea level at the 26 tide gauges and by the set of elevations of all benchmarks resulting from the adjustment. A total of 106,724 km of leveling was involved, constituting 246 closed circuits and 25 circuits at sea level. (The datum was not mean sea level, the geoid, or any other equipotential surface. Therefore it was renamed, in 1973, the National Geodetic Vertical Datum of 1929.) (See § 2.1.3.5.17.).
36. Order for Judgment. An order issued by a Land Court judge directing a judgment to issue in a registration or confirmation case and specifying such matters, if any, to be included concerning the title of the property being registered or confirmed.
37. Petitioner. The term formerly used for the party who filed a petition in the Land Court. See Plaintiff.
38. Petitioner's Plan. See Filed Plan.
39. Plaintiff. The party who commences an action by filing a complaint. (See § 1.1.).
40. Plan. There are four basic types of plans used in the context of the Land Court. They include the Filed Plan, the Judgment Plan, the Division Plan, and the Confirmation Plan.
41. Precision Ratio. The ratio indicating the precision of the closed field traverse calculated in the form of a representative fraction with the figure “1” as the numerator. (See § 2.1.4.1.3.).
42. Recorder. The person who has the responsibility for the internal administration of the Land Court and exercises the same powers as a clerk-magistrate in the Superior Court. (See § 4.1.).
43. Remaining Land. Land remaining after a parcel has been partially divided by lots, takings, or otherwise.
44. Registered Land. Land whose title has been registered under G.L. c. 185. Land that has been issued a Land Court judgment adjudicating the ownership and location thereof.
45. Registry of Deeds. One of the 23 Registries of Deeds located in the 14 counties of Massachusetts. For those counties with more than one Registry of Deeds, see G.L. c. 36, § 1, listing the cities and towns covered by each district office. In the context of registered land, the local Registry District of the Land Court in which the land lies and where plans, deeds, and other instruments must be filed pertaining to such land. See G.L. c. 36, § 12.
46. Senior Rights. A right predicated upon a prior conveyance of a parcel of land. (See § 2.1.4.2.1.a.).
47. S-Petition. A subsequent petition (actually a subsequent complaint) made to the Land Court to resolve, change, or modify some aspect of the original judgment. S-petitions can be made for survey or title matters. (See § 3.1 Subdivision. See Definitive Subdivision. (See § 2.1.4.3.9.).

48. Subsequent Division. All divisions of registered land following the issuance of the original judgment (decree). (See § 1.2 and § 2.3.).
49. Surveyor. A Professional Land Surveyor as defined in G.L. c. 112, § 81D. (See § 2.1.1.).
50. Surveyor's Plan. See Filed Plan.
51. Unadjusted. The mathematical condition of a closed traverse before the angles have been balanced and before any other adjustment has been made. (See § 2.1.3.4.3.).
52. Way. A highway, boulevard, avenue, road, street, paper street, traveled way, cart path etc., whether public or private, constructed or not, in use or not, existing physically on the ground or predicated upon a recorded instrument. (See § 2.1.2.2. and § 2.1.4.3.).

4.8 Standard Abbreviations

CMR	Code of Massachusetts Regulations
G. L.	Massachusetts General Laws
GPS	Global positioning satellites
EDM	Electronic distance measuring instruments
MLC	Municipal Lien Certificate
mm	millimeter
ppm	parts per million
c.	chapter
NGS	The National Geodetic Survey division of National Oceanographic and Atmospheric Administration under the United States Department of Commerce.