

# EEA LAND ACQUISITION POLICY -- SURVEYS

**January 6, 2015**

Pursuant to the provisions of 301 CMR 51.05 (4), the following shall be the policy of the Secretary of the Executive Office of Energy and Environmental Affairs (EEA) with respect to surveys of land or interests in land to be acquired for Article 97 purposes. This policy supersedes all previous EEA land acquisition policies on surveys.

Under the provisions of 301 CMR 51.05 (4), EEA agency heads may waive the requirements of this policy, if not otherwise required by law, upon written justification therefor placed in the permanent project acquisition file maintained by said EEA agency.

A plan of land in a form suitable for recording, together with a metes and bounds legal description, shall be prepared if any of the following circumstances apply:

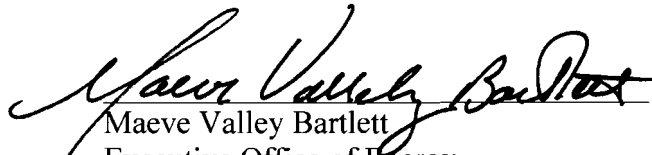
- 1) the land to be acquired, in fee or subject to a restriction pursuant to the provisions of Sections 31 and 32 of Chapter 184 of the General Laws, is not shown on a recorded survey plan; the deed description cannot be adequately confirmed on the ground, and there is no extrinsic evidence (*e.g.*, survey plans and/or deed descriptions of abutting parcels, rivers, or roads) that defines the boundaries of the land to be acquired or restricted;
- 2) the acquisition will result in creation of a new property line;
- 3) lesser interests in land are to be acquired and the land affected by the easement, restriction or other less than fee interest to be acquired by the EEA agency is not shown on a recorded plan of land, the deed description cannot be adequately confirmed on the ground, and there is no extrinsic evidence (*e.g.*, survey plans and/or deed descriptions of abutting parcels, rivers, or roads) that defines the boundaries of the land to be affected;
- 4) for land where an "envelope" is created around a dwelling or other portion of land to indicate its exclusion from a restriction created pursuant to Section 31 and 32 of Chapter 184 of the General Laws, and a description of the envelope cannot be adequately confirmed on the ground; or
- 5) to achieve EEA or EEA Agency land program criteria or requirements.

Surveys for acquisition of Article 97 lands or interests therein shall conform to the most recent version of the EEA Specifications for Surveys.

All contracts for surveys shall include standard conditions pertaining to:

- a) liquidated damages for surveys delivered after the contracted delivery date;
- b) acceptance and authorization for payment of the survey material upon determination by the EEA agency that the terms of the survey contract have been met; and
- c) rejection and return of the survey material without payment to the surveyor if the EEA Agency determines that the terms of the survey contract have not been met.

By signing the "EEA Agency Article 97 Land Acquisition Transmittal Form," an EEA agency head certifies compliance with the above policy.

  
Maeve Valley Bartlett  
Executive Office of Energy  
and Environmental Affairs

# **EEA LAND ACQUISITION POLICY – SPECIFICATIONS FOR SURVEYS**

**January 6, 2015**

The following specifications apply to surveys of land or interests in land to be acquired for Article 97 purposes pursuant to the policy of the Secretary of the Executive Office of Energy and Environmental Affairs (EEA) established under 301 CMR 51.05 (4).

1. All property survey plans shall be prepared for the EEA Agency by a registered, professional land surveyor performing in compliance with 250 CMR 5.00 (Professional Practice).
2. The Contractor shall perform services in accordance with the procedural and technical standards for the practice of land surveying, 250 CMR 6.00 (Land Surveying Procedures and Standards).
3. The Contractor shall notify the EEA Agency's agent prior to the commencement of field data collection or as required by the Project-Specific Scope of Work.
4. The Contractor shall provide as a separate item the cost of a survey in which the coordinates and meridian are based on the Massachusetts State Plane Coordinate System, NAD 1983. (Methods shall be used to achieve at least Third Order Class One accuracy as currently defined by the Federal Geodetic Control Committee. At least two points shall have their coordinates labeled on the plan or as required by the Project-Specific Scope of Work.)
5. If the EEA Agency does not specify that the Massachusetts State Plane Coordinate System is to be used, the meridian of the survey will be based on True North accurate to +/- 10 arc seconds.
6. The Contractor shall furnish the EEA Agency with all plan data electronically on the media described in the most current version of the EEA Digital Submissions Guide.
7. Unless specifically waived in the Project-Specific Scope of Work, the survey plan shall show the following:
  - a) lines of current ownership, including names of all abutters together with book and page references to the deeds of such abutters;
  - b) physical evidence of boundary lines on all sides of the premises;
  - c) rights of way and easements of record, including ways on the ground and all utility lines and easements;
  - d) appurtenant easements;
  - e) book and page references for all recorded easements;
  - f) old highways, abandoned roads, and other ways, including ways on the ground;
  - g) buildings and other significant structures;
  - h) all springs, streams, rivers, ponds or lakes;
  - i) cemeteries or family burying grounds;
  - j) stone walls adjoining or crossing any parcel boundary;
  - k) disputed boundaries or encroachments;

- l) each lot of the subject property shall be uniquely labeled, and if more than one plan is prepared for the same owner, the text in each title block must be unique;
  - m) all non-tangent curves shall be labeled on the plan with the curve length, curve radius, chord bearing, and chord length;
  - n) for curvilinear features, tie lines shall be shown on the plan;
  - o) when parcels are separated by a road or other narrow feature, a tie line between them shall be included;
  - p) standard map elements, including but not limited to north arrow, scale, and plan legend; and
  - q) other requirements as defined in the Project-Specific Scope of Work.
8. The Contractor shall submit a preliminary plan of the property surveyed in such format as required in the Project-Specific Scope of Work. All drafts and final plans shall have the date of the most recent change. Drafts shall be dated and be labeled as a draft. Upon EEA Agency review and approval, Contractor shall submit two final recordable Mylar plans, which shall comply with current Rules and Regulations of the Registers of Deeds, and six paper copies of the stamped original, or as required in the Project-Specific Scope of Work.
9. Unless otherwise instructed in the Project Specific Scope of Work, the Contractor shall be responsible for submitting the plan to the local planning board for required endorsements. This responsibility includes preparing applications, paying associated fees, and attendance at the meeting to explain and support the requested endorsements.
10. The Contractor shall furnish the EEA Agency, in writing and electronically, a narrative description of the land in a metes and bounds format, based on the plan and making reference to the plan in the description. In addition to the written description, the Contractor shall furnish the Department with a digital version on the media described in the most current version of the EEA Digital Submissions Guide.
11. The Contractor shall prepare and sign a Report of Survey ("Report"). The Report shall include a narrative discussing how the boundaries shown on the plan were derived; any uncertain, disputed, or problematic boundaries along with suggested remedies; visible encroachments or other indications of adverse use; and a copy of all pertinent field notes.
12. At least two parcel corners or angle points shall be monumented. All other parcel corners and angle points shall be marked in the field, or marked or monumented as specified in the Project-Specific Scope of Work.
13. Boundary markers may be set at regular intervals on long lines as indicated in the Project Specific Scope of Work.
14. If, during the course of his or her work, the Contractor discovers significant discrepancies between acreage, monumentation, or courses called out in the deeds to the subject property and what exists on the ground or discovers any disputed boundaries or encroachments, the Contractor shall notify the EEA Agency consistent with the requirements of 250 CMR 4.00 (Professional Practice) and 250 CMR 6.00 (Land Surveying Procedures and Standards).

# EEA LAND ACQUISITION POLICY – SURVEY SPECIFICATIONS – DIGITAL SUBMISSIONS

January 6, 2015

## Introduction

The Executive Office of Energy and Environmental Affairs (EEA) has established *Specifications for Surveys* that provide details for how land surveys are to be prepared for the EEA and its agencies. This Digital Submissions Guide is referenced in the *Specifications for Surveys* and describes the EEA digital submission requirements for land surveys. Due to the pace of development in digital technology, this Digital Submissions Guide is maintained separately from the *Specifications for Surveys* to avoid the need for frequent revision of the core EEA survey requirements.

## Digital Products

The following digital products shall be included with the finished survey:

- 1.) CADD File – The CADD file shall be registered to global coordinates so the entire file can be viewed within a Geographic Information System. The preferred coordinate system is Massachusetts State Plane NAD83 (Meters or Feet). Unless otherwise indicated in the project specific scope of work, information in the CADD file that is part of the property boundary should be isolated in a separate layer or layers. The boundary lines and any tie lines should be in one layer with no additional data. Boundary monuments should be placed in a separate layer with no additional data. Course description annotation (metes and bounds) should also be put in a separate layer.
- 2.) List of Courses – All courses need to be included in either a Microsoft Excel spreadsheet, text file, or Microsoft Word document.
  - a.) If using Microsoft Excel, the information shall be formatted as follows: Column A - either a code of DD for straight courses or NC for curves; Column B - bearing stored in the format of "S08-32-21E" for straight courses or the letter "C" for curves; Column C - the length of the line segment in feet for straight courses or the length of the chord in feet for curves; Column D - blank for straight courses or the letter "R" for curves; Column E - blank for straight courses or the length of the radius in feet for curves; Column F - blank for straight courses or the letter "C" for curves; Column G - blank for straight courses or the chord bearing stored in the format of "S08-32-21E" for curves; Column H - blank for straight courses or curve direction stored as either "L" for left or "R" for right. (*Example attached.*)

- b.) If using Microsoft Word or a text file, the information to be provided is the same as described above for Microsoft Excel. Each course shall be listed on a separate line and, instead of columns, the individual data pieces are to be separated by a space, e.g., *S08-32-21E 356.10* for a straight course, or *NC C 397.28 R 1935.10 C N19-53-40E R* for a curve. (*Examples attached.*)
- 3.) Boundary Description – A narrative description of the boundary shall be included as a text file or Word document that can be used as a recordable boundary line description. The description shall be a full, narrative metes and bounds description with courses and distances based on the survey plan unless a different bounding description is called for in the project specific scope of work.
- 4.) Adobe Reader file – A PDF file of the plan shall be included, with a minimum resolution of 300 dpi.
- 5.) Tagged Image File – An uncompressed TIF file of the plan shall be included, with a minimum resolution of 600 dpi.
- 6.) Metadata – A metadata description of the digital submissions file shall be included as a TXT file. This metadata file must include:
  - a.) the information on the type of coordinate system to which the CADD data were registered and the specifics about which layers contain the boundary data.
  - b.) any other information about the CADD file that will improve the EEA Agency's understanding of the file and how the data were created, including the type and version of the software used;
  - c.) the format and software version (if applicable) selected for the list of courses;
  - d.) the format and software version (if applicable) selected for boundary description;
  - e.) the resolution and dimensions of the PDF file; and
  - f.) the resolution and dimensions of the TIF file.

Other digital products may also be required for some projects, but those products will be described in the project specific scope of work.

### **Delivery of Digital Products**

All final digital products shall be delivered on a Compact Disk (CD) or Digital Video Disk (DVD) unless otherwise specified by the project specific scope of work. Draft products can be delivered by any means that is mutually agreeable to both the EEA Agency and the surveyor.

# EXAMPLES

## *EXCEL*

DD	N81-58-05E	565.02					
NC	C	430.16	R	350	C	N44-03-06E	L
DD	N06-08-07E	337.2					
NC	C	385.49	R	625	C	N24-05-50E	R
DD	N42-03-35E	48.02					
NC	C	375.91	R	775	C	N28-01-26E	L
DD	N14-00-10E	349.88					
NC	C	397.28	R	1935.1	C	N19-53-40E	R
DD	N25-47-11E	628.36					
DD	N27-56-02E	613.83					
DD	N30-57-02E	596.55					
DD	N24-29-01E	628.57					
NC	C	509.95	R	897.11	C	N07-58-23E	L
DD	N08-32-21W	172.36					
DD	N05-08-58E	105.54					
DD	N08-32-21W	356.1					
DD	N08-32-21W	18.04					
DD	N29-51-34E	26.48					
DD	N62-29-53E	35.47					
DD	S08-32-21E	406.42					
DD	S21-46-16E	87.27					
DD	S27-55-38E	15.05					
DD	S08-32-21E	175.76					
NC	C	556.36	R	758.98	C	S12-57-42W	R
DD	S24-29-01W	629.64					
DD	S30-57-02W	598.05					
DD	S27-56-02W	611.57					
DD	S25-47-11W	559.71					
DD	S25-47-11W	67.72					
NC	C	387.01	R	1885.1	C	S19-53-40W	L
DD	S14-00-10W	349.86					
NC	C	400.17	R	825	C	S28-01-26W	R
DD	S42-03-35W	48.02					
NC	C	354.65	R	575	C	S24-05-50W	L
DD	S06-08-07W	337.2					
NC	C	491.61	R	400	C	S44-03-06W	R
DD	S81-58-05W	1049.13					
DD	N01-32-26E	50.71					
DD	N81-58-05E	43.36					
DD	N81-58-05E	132.32					
DD	N81-58-05E	100					

DD	N81-58-05E	100
DD	N81-58-05E	100

*WORD*

DD N81-58-05E 565.02  
NC C 430.16 R 350.00 C N44-03-06E L  
DD N06-08-07E 337.20  
NC C 385.49 R 625.00 C N24-05-50E R  
DD N42-03-35E 48.02  
NC C 375.91 R 775.00 C N28-01-26E L  
DD N14-00-10E 349.88  
NC C 397.28 R 1935.10 C N19-53-40E R  
DD N25-47-11E 628.36  
DD N27-56-02E 613.83  
DD N30-57-02E 596.55  
DD N24-29-01E 628.57  
NC C 509.95 R 897.11 C N07-58-23E L  
DD N08-32-21W 172.36  
DD N05-08-58E 105.54  
DD N08-32-21W 356.10  
DD N08-32-21W 18.04  
DD N29-51-34E 26.48  
DD N62-29-53E 35.47  
DD S08-32-21E 406.42  
DD S21-46-16E 87.27  
DD S27-55-38E 15.05  
DD S08-32-21E 175.76  
NC C 556.36 R 758.98 C S12-57-42W R  
DD S24-29-01W 629.64  
DD S30-57-02W 598.05  
DD S27-56-02W 611.57  
DD S25-47-11W 559.71  
DD S25-47-11W 67.72  
NC C 387.01 R 1885.10 C S19-53-40W L  
DD S14-00-10W 349.86  
NC C 400.17 R 825.00 C S28-01-26W R  
DD S42-03-35W 48.02  
NC C 354.65 R 575.00 C S24-05-50W L  
DD S06-08-07W 337.20  
NC C 491.61 R 400.00 C S44-03-06W R  
DD S81-58-05W 1049.13  
DD N01-32-26E 50.71  
DD N81-58-05E 43.36  
DD N81-58-05E 132.32



DD N81-58-05E 100.00  
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