

**TITLE III. PROPERTY/LAND USE AND DEVELOPMENT  
CHAPTER VIII. DIGITAL DATA SUBMISSION STANDARDS**

**EFFECTIVE 05/20/2016**

**SECTION 1. STANDARDS APPLICABLE**

Wherever the Muscatine County Code of Ordinances or state statute requires or allows the submission of plats, site plans or surveys in digital form, they shall be prepared and submitted in accordance with the standards established in this chapter.

**SECTION 2. COORDINATE SYSTEM**

The coordinate system used for tax parcel mapping by Muscatine County is the Iowa State Plane Coordinate System, South Zone, using the North American Datum of 1983 (NAD83), National Adjustment of 2011, with the North American Vertical Datum of 1988 (NAVD88). Map units are US Survey Feet. GPS Control Monuments used in referencing surveys must be part of Muscatine County's network of GPS survey control. Information pertaining to the Muscatine County GPS Control Monuments is maintained and available on both the Geographic Information Consortium and the Muscatine County Engineer department tab on the Muscatine County website. The Coordinate Information for each GPS Control Monument is provided in both Iowa State Plane Coordinate System, South Zone and Iowa Regional Coordinate System, Zone 14: Burlington values.

**SECTION 3. PROCEDURES FOR REFERENCING DATA TO COORDINATE SYSTEM**

- A. For conventional surveys, a survey must commence and end at two distinct GPS Control Monuments in Muscatine County's survey control network. The control monuments used for reference must be prominently noted in the digital submittal and the basis for bearing should be clearly defined.
- B. For GPS surveys, the survey base station must occupy one GPS Control Monument in Muscatine County's survey control network. At least one other distinct Muscatine County survey control network GPS monument must be occupied as a check and the basis for bearing should be clearly defined. The Muscatine County GPS Control Monuments used for reference must be prominently noted in the digital submittal, unless using one of the continuously operating base station control system available in the County, which should likewise be noted.
- C. Muscatine County recognizes that Iowa Law dictates that all final survey plats must show horizontal distances at existing ground level, whereas tax parcel mapping is projected to the Iowa State Plane Coordinate System, South Zone by County mapping staff, and is scaled to grid dimensions at approximate sea level. Because of the different elevations of the horizontal planes used, distances measured on the ground will always differ from those measured at a sea level elevation. Muscatine County staff will be responsible for scaling the digital submittals from the ground plane to the State Plane grid plane for incorporation into the County mapping system.
- D. To accommodate this scaling procedure, digital data must be submitted in real-world coordinates (i.e., at a scale of 1:1). One point on the boundary of the survey must have or be directly projectable to true State Plane coordinates using standard accepted projections. This point should be distinctly noted in the submittal and its coordinate values provided. In addition, the calculated combination factor needed to convert ground distances to State Plane grid distances in the area of the survey should be supplied with the digital submittal and distinctly noted as should be the basis for the bearing of the lines graphically represented.

#### **SECTION 4. DATA INTEGRITY REQUIREMENTS FOR FINAL PLAT AND SURVEYS**

All coincident points on the external boundary of the digital plat or survey submitted must be 'snapped' together, i.e., they must have the same coordinate values without any gaps. Internal angles in the digital extract must remain consistent with those in the original plat. Any coordinate transformations employed must be limited to only those that translate, rotate and scale the plat or survey. Differences between distances or angles measured in the digital extract submittal with corresponding values displayed as annotation shall not exceed those stipulated by Iowa Law (0.1 foot for distances, 1 minute for angles).

#### **SECTION 5. DATA LAYERING REQUIREMENTS**

Individual layers must exist for distinct group of features and their corresponding text annotation. A description of all delivered layer names should also be provided if the names are not self-explanatory. At a minimum, layers provided will consist of the following critical elements required to build tax parcels and to reference the survey to the mapping system: Lot lines; Subdivision boundary; County survey control points used as reference ties.

#### **SECTION 6. FILE FORMATS FOR DIGITAL SUBMISSIONS**

Computer-drafted graphic data shall be submitted in an AutoCAD drawing format (\*.DWG), utilizing the most current AutoCAD version available or versions no older than three prior to the most current. If AutoCAD software is not available to the submitting party, AutoCAD drawing exchange format (DXF) files of the same release shall be submitted. All drawing elements on the layers must be created in model space only.

#### **SECTION 7. MEDIA REQUIREMENTS FOR DIGITAL MAP SUBMITTALS**

Submissions will be accepted on CD-ROM or by electronic mail (E-mail). Digital drawings are to be submitted or emailed to the Auditors Office along with an accompanying hardcopy plot of the official plat.

#### **SECTION 8. CHECKING OF DIGITAL DATA**

The digital data will be checked to verify that the standards expressed herein are met. If the standards are not met, additional information may be requested or the submittal may be returned for corrections.

#### **SECTION 9. TIMING**

Unless otherwise provided by statute, the timing of digital data submissions shall be as follows:

- A. Preliminary Plats: A computer drafted digital copy of a preliminary plat shall be submitted at the time the application is made and with subsequent revisions. A final revised copy as approved by the Zoning Commission shall be submitted prior to filing for final plat approval.
- B. Final Plats: A computer drafted digital copy of the plat to be submitted prior to the release for filing of record with Muscatine County.
- C. Site plans (except for minor and moderate site plan applications): a computer-drafted digital copy of the site plan submitted for review is required at the time the application is made. After a site plan has been approved, a computer drafted digital copy of the approved final site plan showing all revisions and changes will be submitted prior to a building permit being issued.
- D. Surveys: A computer drafted digital copy of the survey shall be submitted at the time for the filing of record with Muscatine County.

**SECTION 10. SAVINGS CLAUSE.** If any section, provision or part of this ordinance, or of the Codes hereby enacted by reference, shall be adjudged invalid, illegal or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid, illegal or unconstitutional.

