

MSU Document Submittal Standards

ELECTRONIC FILES:

PDF

- Any PDF submitted as a required project deliverable shall not be password protected.
- Any document submitted as a required project deliverable should be in PDF format unless its purpose is to be edited.

AutoCAD

Standard Requirements:

1. A set of drawings for all applicable disciplines shall be submitted in appropriate AutoCAD compatible format as listed below:
 - a. Minimum of 2015 - 2019 Autodesk products (Note: MSU is currently using Autodesk 2018 products)
 - b. Civil/Site drawings: AutoCAD Civil 3D
 - c. Architectural drawings: Revit or AutoCAD Architecture
2. If converting from a format other than DWG, ensure all graphic elements are preserved.
3. External references should not be bound.
4. PDF files may accompany the deliverable, but may not be submitted in lieu of DWGs.
5. The layer state used to print the hardcopies shall be saved in the drawing with name "MSU Print".
6. Drafting Guidelines
 - a. All lines must be snapped and or closed.
 - b. Drawings shall not contain multiple overlaid lines or lines with multiple segments unless overlaid lines or adjacent line segments are assigned to different layers.
 - c. Drawings shall be purged of empty, unused, or non-essential drawing data.
 - d. PLINES should be used where appropriate instead of LINES.
 - e. All drawings will be developed in full scale format (one foot = one foot) and will be maintained as an integrated whole with individual drawings plotted using paper space.
 - f. Entity colors shall be defined "by layer."
 - g. Blocks shall be created on layer 0. Use 1:1 scale to create blocks and insert at the appropriate scale.
 - h. Attributes shall be defined on layer 0 (zero).
 - i. AIA/NCS layering standards are recommended but not required.
 - j. Only native AutoCAD fonts, line types, and hatch pattern shall be used.

Discipline Specific Requirements:

Civil/Site Components to be included:

1. Points and Point Groups.
2. A single, full developed TIN surface model, including features used to define surface.
 - a. Break lines, spot elevations, etc.
3. Alignments
4. Pipe networks

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The deliverable package shall comply with the following requirements:

1. Drawings should exactly match hard copy documents. The engineer's stamp may be omitted.
2. Submitted on CD, DVD, flash drive or FTP site and labeled with project name, project number, drawings included, date, company name, contact information and telephone number.
3. Drawing names should be identical to hard copy drawings, (i.e. A-1.DWG, E-1.DWG). Special characters should be limited to dashes or underscores.
4. Zipped files should be named "Project name.exe" and not MSU.exe. Only self-extracting archives should be used. Directions must be included with the transmittal and electronically in the root directory of the electronic media in *.txt format.
5. All XREFs shall be included in the submittal package. XREFs shall be inserted on a collection of XREF designated layers and should be included in the same directory as the referencing file or if file folders are used, they shall be constructed with relative paths (i.e. \XREFname) in lieu of hardcoded letter drives and paths. (Do not use C:\myXREFs\XREFname). Do not bind or insert XREFS into drawings.
6. All font files and line types shall be included in the submittal package. The consultant is responsible for transfer of license for any purchased line types or fonts.
7. All color table books (.ctb files) used for plotting colors and line weights shall be included in the submittal package.
8. Metadata shall be provided for all submitted files including:
File name (ME45689.dwg)
 - a. Corresponding hard copy drawing name.
 - b. Description (Mechanical Piping Drawing)
 - c. All Layer names and descriptions.
 - d. XREF file names and descriptions.
 - e. Project description information, dates and contact information.

HARD COPY

Record Drawings

- AE will receive marked-up contractor as-built drawing set(s) from the Owner (FIS team).
- AE will prepare a complete set of record drawings using marked-up set. Marked-up set can be recycled and does not need to be returned to Owner.
 - In the revisions portion of the title block, please label all drawings "RECORD" and include the date.
- AE to forward to the Owner one complete set on VELLUM (along with one complete set of AutoCAD files).

If you have questions about electronic or hard copy submittals, please contact the Infrastructure Planning and Facilities, Facilities Information Services hotline at 517-353-3434 or send an e-mail to fisrequests@ipf.msu.edu.