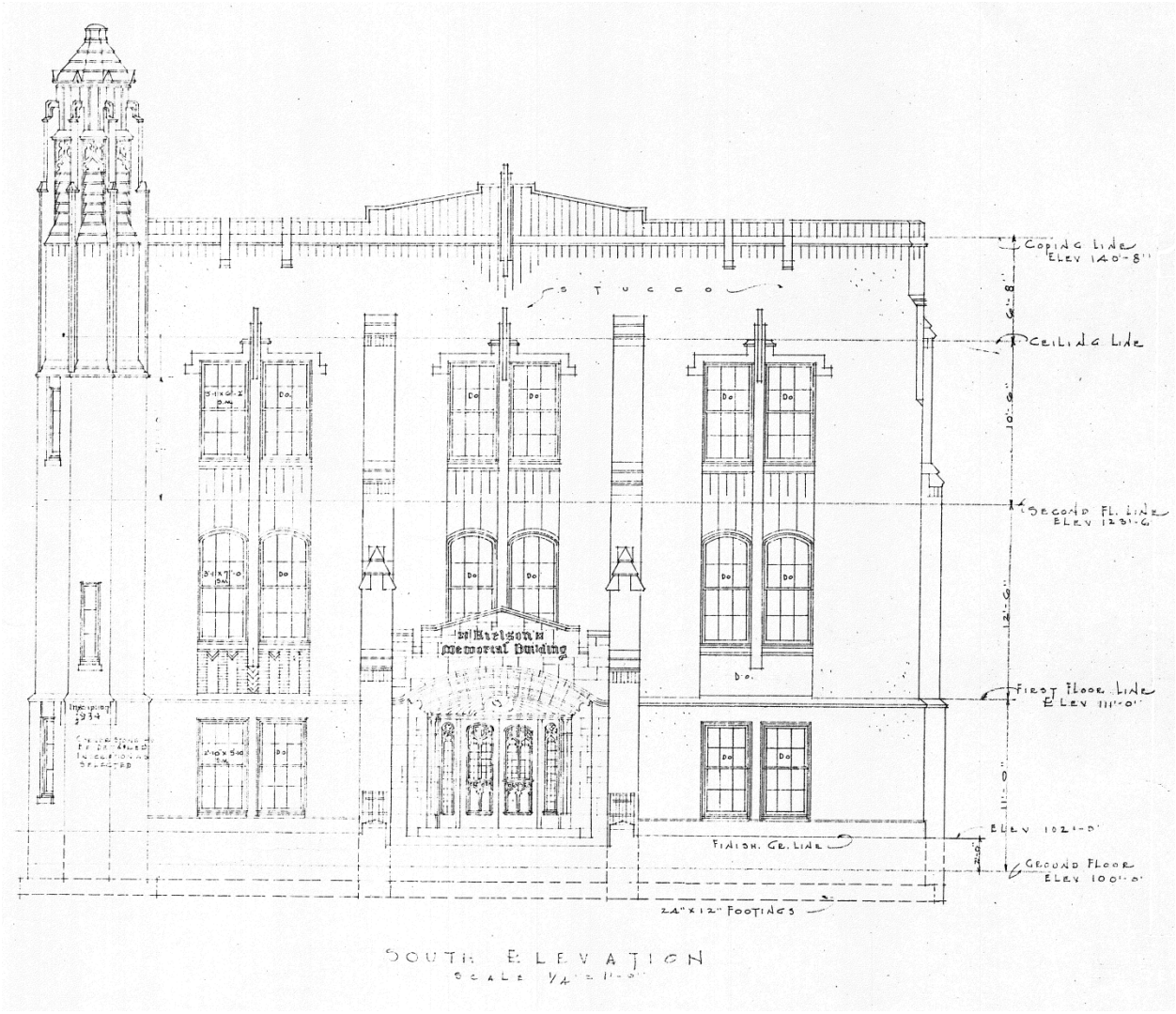
UNIVERSITY OF ALASKA FAIRBANKS

2025

Facilities Services

Division of Design and Construction

CADD Department



FACILITIES CADD STANDARD

CAD, BIM, & GIS Standards for the University of Alaska Fairbanks

The University of Alaska Fairbanks receives many different types of facilities related data files including files from Computer Aided Drafting (CAD), Building Information Modeling (BIM), and Geographic Information Systems (GIS). The complexity, quantity, and variety of these files demand that a robust management and quality control system is in place to maximize the file's longevity and value to the University. This Facilities CADD Standard is a key component of that system.

The life of a data file at UAF, a CAD drawing file for example, may be decades. We currently have CAD files in use that originated almost 30 years ago. We also have paper drawing files for buildings at UAF that date back to the 1930's and that still provide us with usable information about our facilities. With that in mind, we have an obligation and responsibility to ensure that the electronic drawing files we receive today are in a format and layout that ensures their continued usability for the foreseeable future and beyond.

This UAF CADD Standard has been developed with the following goal:

> **To establish and maintain a complete library of accurate, accessible and standardized CAD files of all UAF facilities for the benefit of and use by UAF faculty and staff including University of Alaska Fairbanks administration, facility managers, maintenance and repair staff, design and construction staff, consultants, and contractors.**

In order to achieve that goal, we have measured the standards against the following metrics:

- **Will they create consistent CAD drawings that are easy to use for reference in current and future construction and maintenance/repair projects?**
- **Will they increase in-house and consultant efficiencies to simplify and speed up drawing preparation?**

If you have any questions or comments regarding these standards, please address them to me at the Division of Design and Construction CADD Department as indicated below. We welcome feedback and will continue improving these standards for use by the University and the community of consultants and contractors we work with.

Thank you,

Michael Jones, CADD Manager
UAF Division of Design and Construction
uaf-ddc-cadd@alaska.edu
(907)-474-7186

General Requirements & Procedures

This section applies to general CADD Department procedures and to all types of facilities data files related to CAD, BIM, or GIS. Requirements for each data type are located in a section specific to that software platform.

Data Requests

- Requests should be made to the University's project manager. The project manager will review the request with the director and forward it to the CADD Department.
- If a project requires multiple requests or would benefit from direct requests to the CADD Department, coordinate the process and approval with the University's project manager prior to making any requests of the CADD Department.
- Under no conditions will information be released by the CADD Department during an ongoing Request for Proposals (RFP) or bidding process unless specifically directed by the University's contracting officer.

Scope

To collect and maintain standardized facilities data related to existing and ongoing construction and maintenance/repair projects at UAF related to the following three data types:

- CAD (Computer Aided Drafting)
  - As of 2015, the University collects and manages its inventory of buildings using AutoCAD files (dwg). Required CAD files shall comply with this standard. See Part A: CAD Standard
- BIM (Building Information Modeling)
  - Many UAF consultants are using BIM software, primarily Revit, to produce construction documents for projects. While the University is not yet using BIM internally, it is our intent to collect completed BIM model files whenever used for production of a project. The model files shall be submitted per this standard. See Part B: BIM Standard.
- GIS (Geographic Information System)
  - Any projects utilizing or generating GIS data shall submit the data to the University at the conclusion of the project. See Part C: GIS Standard.

File Organization and Transmittal to UAF

In order to keep track of materials submitted to UAF, a clear catalog of information needs to accompany the materials submitted to UAF. This includes the materials on a CD, DVD, USB thumb drive, or webshare site with files conformed to a naming convention, produced in an orderly way, and an index sheet naming each file and its description.

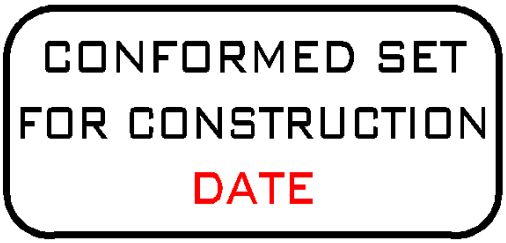
- Ensure the files adhere to the guidelines presented in this document.

- The content of electronic drawings must match the delivered original hard copy set exactly to ensure the integrity of the electronic drawing set delivered to UAF. (Professional stamps should not be included with the CAD/BIM files.)
- Include an electronic transmittal sheet with all submittals indicating the project number, project name and phase of the project.
- Include with the electronic files a text file with a complete listing of all files submitted, including filenames and a brief description of the item. This ensures the completeness of the drawing set and assists in archival procedures.
- Submit one complete full-size set of PDF's with the file name corresponding to name of the project, submittal date and phase of the project.
- Submit all digital files on CD-ROM, DVD-ROM, or thumb-drive to the UAF project manager. FTP sites or other methods of electronic transmittal are also acceptable.
- Do not submit data files or support files not used in or associated with the project.
- Zip files should be named with the Project Number, Project Description and Submittal Phase of the files included in the zip file.

Conformed, As-Built, and Record Drawings

Conformed Drawings

- Conformed Drawings include the bid drawings, updated to include all changes made by addendum during the bid process and all awarded alternates.
- Addendum drawings shall be incorporated into the drawing sheets for the set.
- Addendum drawings shall not be on separate layouts or sheets unless an entire new sheet has been issued and added to the complete set of drawings.
- No revision bubbles will appear on conformed drawings.
- Conformed drawing hard-copies and PDF files intended for use during construction shall be signed and stamped by the responsible professional.
- Electronic submittals of conformed CAD/BIM files shall not include electronic signatures or professional stamps. PDF files should have stamps for conformed drawings.
- Each sheet of conformed electronic files must contain the following block:

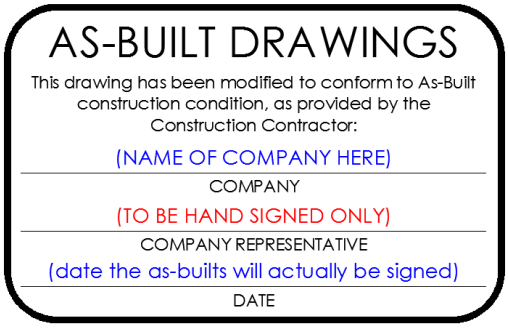


- Locate the block in the lower right corner of the drawing area to the left of the title block. If sheet contents conflict with the stamp, adjust the location of the stamp.

As-Built Drawings

- As-Built Drawings include the conformed drawings, updated to include all changes made by DCVR during the construction process and all red-line changes recorded on the contractor's working set of drawings.

- No revision bubbles will appear on As-Built drawings.
- DCVR drawings shall be incorporated into the drawing sheets for the set. Do not list the DCVR number once the change has been incorporated.
- DCVR drawings shall not be on separate layouts or sheets unless an entire new sheet has been issued and added to the complete set of drawings.
- As-built drawings shall be prepared based upon the red-line set of as-built conditions kept by the contractor during construction.
- The production and approval of the digital as-built record drawings shall be the responsibility of the contractor.
- The contractor shall document all changes to the drawings per their contract with the owner.
- Each sheet of as-built electronic files and hard-copies shall contain the following block:



- Locate the block in the lower right corner of the drawing area adjacent to the title block. If sheet contents conflict with the stamp, adjust the location of the stamp.

Projects involving Additions, Repair, and Renovation

Many projects at UAF involve rehabilitation or changes to existing space in the form of additions, renovations, or repairs.

- Consultant teams for a project shall work together to ensure that graphics used to indicate new, existing, and to be demolished work are well-coordinated within the design team and individual disciplines.
- New work shall be depicted using a continuous, bold line type and weight.
- Demolition work shall be depicted using a demo(dashed), bold line type and weight.
- Existing conditions shall be depicted using a continuous, 75% screened line type and weight.
- Individual CAD layers or Revit construction phases shall be used to distinguish the different types the work.
- Graphic conventions use to distinguish between new, existing, and to be demolished work shall be clear and distinctive.

Document Submittal Requirements & Deadlines

Submittal requirements may vary per contract requirements.

- Coordinate specific submittal with the University's project manager.

Review comments and corrections shall be addressed as follows:

- Comments on Bid Drawings shall be addressed by the consultant and corrections incorporated into the Conformed Drawings submittal.
- Comments on Conformed Drawings shall be addressed by the consultant, corrections made to the drawing files and the drawing set resubmitted.

In-House Work			
Bid Drawings Deliverables	***Resp. Party***	***Format***	***Due Date***
- Bid Drawings CAD Files	PM	.dwg	Prior to construction
- Bid Drawings PDF Files	PM	.pdf	Prior to construction
As-Built Drawings Deliverables	***Resp. Party***	***Format***	***Due Date***
- As-Built Drawings CAD Files	PM	.dwg	1 week prior to final inspection.
- As-Built Drawings PDF files	PM	.pdf	1 week prior to final inspection.

Short-form Projects (Less than $200,000)			
Bid Drawing Deliverables	***Resp. Party***	***Format***	***Due Date***
- BID Drawings CAD Files	A/E or PM	.dwg	Per contract
- BID Drawings PDF Files	A/E or PM	.pdf	Per contract
Conformed Drawings Deliverables	***Resp. Party***	***Format***	***Due Date***
- Conformed Drawings CAD *Files*	A/E or PM	.dwg	Within 10 days of bid opening.
- Conformed Drawings PDF files	A/E or PM	.pdf	Within 10 days of bid opening.
As-Built Drawings Deliverables	***Resp. Party***	***Format***	***Due Date***
- As-Built Drawings CAD Files	C or PM	.dwg	1 week prior to final pay estimate.
- As-Built Drawings PDF files	C or PM	.pdf	1 week prior to final pay estimate.

Long-form Projects (More than $200,000)			
Bid Drawings Deliverables	***Resp. Party***	***Format***	***Due Date***
- BID Drawings CAD Files	A/E	.dwg	Per contract
- BID Drawings PDF Files	A/E	.pdf	Per contract
Conformed Drawings Deliverables	***Resp. Party***	***Format***	***Due Date***
- Conformed Drawings CAD *Files*	A/E	.dwg	Within 10 days of bid opening.
- Conformed Drawings PDF files	A/E	.pdf	Within 10 days of bid opening.
As-Built Drawings Deliverables	***Resp.***	***Format***	***Due Date***

		Party		
-	As-Built Drawings CAD Files	C	.dwg	1 week prior to final pay estimate.
-	As-Built Drawings PDF files	C	.pdf	1 week prior to final pay estimate.

Key:
- A/E - Consultant
- C - Contractor
- PM - University Project Manager
- .dwg - AutoCAD Drawing Format
- .pdf - Portable Document Format

Part A: CAD Standard

General

The UAF CAD Standard is based on the National CAD Standard 6.0 (NCS) and refers to it extensively. Sections of the NCS found not applicable and/or impractical have been modified or removed. When there are voids in the NCS, earlier versions of the UAF Standards or the US Army Corps of Engineers A/E/C CAD Standard have been incorporated into this standard. This standard should feel familiar and aligned with current practices for firms working with UAF.

In lieu of conforming to the UAF CADD Standard, consultants may submit a copy of their in-house standard, including CTB files, to the DDC CADD Department for review and approval. In all cases the general quality requirements of the UAF CADD Standard remain applicable and take precedence over a consultant's in-house standards. Should a consultant use their own approved standard but their submitted CAD files fail to adhere to it, the drawing files will be returned as unacceptable.

File Format Requirements

CAD files shall be submitted as .dwg files in the AutoCAD version they were created in, though no earlier than Version 2020.

CAD File Transmittal

The CADD Department recommends using the e-transmit command within AutoCAD for all drawing transmittals. Individual drawings or multiple drawings may be zipped together with the e-transmit command. Transmittal options within the e-transmit command shall be set to "place all files in one folder" and "include fonts". X-referenced and CTB files shall be included in the e-transmit file.

Accuracy

All CAD drawings shall be drafted using precision input employing the most accurate source material available.

- For all drawing entities, zero tolerance is required.
- All lines shall meet at intersections.
- Items shall not overlap or be duplicated on top of themselves.
- Lines shall be continuous (not broken into segments) from beginning to end.

Consultants are responsible for the accuracy of all CAD drawings delivered to the University, regardless of the accuracy of CAD drawings of previous projects furnished by the University as a convenience to the consultant.

Housekeeping

Submitted CAD files shall only contain information relevant to the project. Extraneous data that either does not or no longer pertains to the project shall be deleted from the drawing files.

- For example, an architect may make several copies of a single floor plan in one drawing file to study the arrangement of offices for that floor. The unbuilt or extra plans are no longer relevant to the future maintenance and operations of the facility and should be removed from the file before submittal.
- Unused blocks, layers and line types shall be purged from the drawings.
- Unloaded external reference files or image files shall be detached from the drawing file. Don't include in the set unless used in separate files.

Coordinate Origins in CAD data files

Plan views and files shall have a common point of origin.

- The origin of CAD model files shall be at coordinates (0, 0, 0).
  - For building projects the origin point is typically at or just outside of the lower left corner of the building.
  - For non rectilinear buildings a logical origin point shall be established at the beginning of the project.
- The origin point shall remain consistent between all model files in a project. Ensure that plan views and structural grids overlay vertically when used as reference files.
- The origin of each CAD sheet file shall be at the lower left-hand corner of the sheet and set to coordinates (0, 0, 0).

Templates

Drawing templates complete with UAF layers and standards shall be used in-house and are available for use by consultants when requested.

National CAD Standard 6.0

In order to align with the broadest industry standard, UAF has adopted the National CAD Standard 6.0 (hereafter referred to as NCS).

- It is the intent of the UAF CAD Standard that the NCS is adopted with as few changes as possible to facilitate consultant's work with a broad spectrum of clients that require conformance to the NCS.
- UAF required modifications or clarifications to the NCS are detailed in the section below.
- This standard does not duplicate information found in the NCS. A copy of the NCS must be purchased to complete and comply with the UAF CAD Standard.
- A copy of the NCS 6.0 may be purchased at http://www.nationalcadstandard.org/ncs6/
- UAF FS & DDC Staff may access the NCS by contacting the DDC CADD Department for instructions.

AIA CAD Layer Guidelines

- General
  - NCS Layers should be used whenever possible.
  - Colors, line types, line weight shall be set to ByLayer. Entities shall not be assigned properties independent of their layer.

- Where an NCS Layer does not exist for a project requirement, a new one should be created using the process prescribed by NCS.
- When a new layer is created enter a description of that layer into AutoCAD in the Layer dialog box where it is associated with the layer.
- Section 1.4 Discipline Designator, Level 2, is not required in most cases. Demolition sheets should include the 'D' discipline designator. In all other instances it shall not be used unless project specific conditions require it.
- Section 6.0 Appendix C – Complying with the NCS and ISO 13567 can be struck in its entirety.

Uniform Drawing System

- Module 1 – Drawing Set Organization
  - 1.2 Set Content and Order
    - In Alaska, drawing order has traditionally not followed the NCS prescribed order. Please use the following sequence of drawings for major disciplines. Add additional disciplines as required by the complexity and needs of the project.

Drawing Order (Major Disciplines)	
Designator	**Discipline**
G	General
C	Civil
L	Landscape
A	Architectural
S	Structural
M	Mechanical
E	Electrical

    - Additional disciplines should use the designators required per the NCS.
  - 1.4 File Naming
    - Model Files
      - Objects in model files shall be drawn full size at a scale of 1:1.
      - Naming Model Files
        - Model file naming conventions vary widely from firm to firm. The model file naming conventions in the NCS are encouraged, but not required.
    - Sheet Files
      - A single sheet file (.dwg) is required for each discipline represented in the design.
        - Example: All Architectural sheets layout may be placed in a single A-series file. Alternatively, individual sheet files may be used.
      - Naming Sheet Files
        - Sheet file naming shall contain the discipline covered, and well as the sheet numbers contained therein.
- Module 2 – Sheet Organization
  - 2.2 Sheet Sizes
    - Most UAF projects will utilize the ANSI D (22x34) sheet size. This sheet size facilitates 11x17 half-size prints that are convenient and inexpensive to reproduce.

        - Other sheet sizes may be used as project needs warrant with approval of the University's project manager.

    - 2.3 Sheet Layout
        - Title Block Area
        - All projects may use primary consultant's Title Block. The UAF Title Block is available for use by consultants when requested.
        - Sheets shall include all the information required by this section.
            - Title blocks shall be the same and have a consistent appearance throughout a project despite being plotted by different consultants or sub-consultants.
            - The title block shall clearly indicate the phase of the project being submitted; from Conceptual, Schematic, Design Development…, to As-Built.
- Module 3 –Schedules
    - Consultants are encouraged to use the schedule formats provided by the NCS as a guideline.
- Module 4 – Drafting Conventions
    - 4.2 Drawing Standards
        - This section shall act as the guide for quality control, consistency and clarity of drawing presentation.
        - It is not the intent of the UAF Standard to dictate the methods of employing the drafting conventions indicated in Section 4.2 of the NCS. However, a consistent disregard for standard drafting conventions and drawing quality shall result in a rejection of the submitted drawings.
        - UAF Drafting Standard templates shall be used for in-house projects and are available for consultant use upon request.
        - Text *(The following has been adapted from the USACE A/E/C CAD Standard Release 5.0.)*
            - Text styles/fonts
                - To improve the direct translation of fonts between applications, only TrueType fonts shall be used.
                - Contrasting text styles (or fonts) are used within a drawing to delineate types of information. In most A/E/C drawings, the fonts shown in the table below should be sufficient.

Comparison of Font Types	
Font Type	**TrueType**
Monotext	Lucida Console ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
Proportional	Arial ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

Slanted	Arial (slanted by 21.8 degrees) *ABCDEFGHIJKLMNOPQRSTUVWXYZ* *abcdefghijklmnopqrstuvwxyz*
Filled	Arial Black **ABCDEFGHIJKLMNOPQRSTUVWXYZ** **abcdefghijklmnopqrstuvwxyz**
Symbology	Symbol ΑΒΧΔΕΦΓΗΙϑΚΛΜΝΟΠΘΡΣΤΥςΩΞΨΖ Αβχδεφγηιφκλμνοπθρστυϖωξψζ

  - Monotext font.
    - This font creates text characters that are evenly spaced. Monotext font should be used where text fields need to be aligned such as in schedules or, in some cases, title blocks.
  - Proportional font.
    - This font creates text where the characters are proportionally spaced. It is appropriate for general notes, labels, or title blocks.
  - Slanted font.
    - A slanted font is used where text needs to be easily distinguished from other text.
  - Filled font.
    - Filled fonts are used primarily for titles and on cover sheets.
  - Symbology font.
    - This font should be used in cases where Greek symbols are representations for technical information.
- Text height
  - The text height for plotted CAD files is 1/8” text height for dimensions, notes, callouts, table/schedule text, and general text on full size drawings. Subtitles and titles shall be plotted equivalent to 3/16” (5 mm) and 1/4” (6 mm) lettering size, respectively. The text height and text width shall be assigned equal number values. Line spacing shall be equal to one half of the text height.
- Text placement
  - Text shall never be placed over other text.
  - Text shall not be placed over lines, gridlines, hatching, or patterning. If text is placed in a hatched or patterned area, the hatching/patterning shall be clipped so the text can be clearly read.
  - Text justification depends upon the type of text being placed. For example, general numbered notes shall have upper left justification, elevation labels appearing to the left of a feature shall have bottom right justification, and elevation labels appearing to the right of a feature shall have bottom left justification.

        - Dimensions
            - All dimensions shown in the project submittals shall be fully associative.
            - Dimension definition points should be located with an appropriate Object Snap (End Point, Mid-Point, etc.) precisely on the project geometry.
            - Forced dimensions, the manual input of dimension text or otherwise over-riding the actual dimensions, are NOT acceptable and can cause drawing submittals to be rejected.
    - 4.3 Sheet Types
        - Drawing sets shall be organized as required by this section.
- Module 5 – Terms and Abbreviations
    - Drawings shall adhere to the standards for abbreviations contained in the standard.
    - Any abbreviations present on drawings should be defined on the legends and abbreviations sheet particular to that discipline in which that abbreviation can be found.
- Module 6 – Symbols
    - Drawings shall conform to the NCS Symbol Library except as noted below.
        - Customized symbols that fall in Division 1 of the NCS Symbol Library, such as a north arrow or drawing title, are acceptable provided they present the required information clearly and completely.
- Module 7 – Notations
    - Strike this section in its entirety.
        - The NCS and UDS rely heavily on the drawing viewer's access and familiarity with Master format specification numbering. At this time, it is impractical to expect the average worker in the field to refer to specifications to define the different components of a detail.
        - Traditional notation and keyed notes are acceptable provided they present the information clearly and completely.
- Module 8 – Code Conventions
    - Drawings shall conform to this section and applicable code requirements.

<u>Plotting Guidelines</u>

- Submitted drawings shall be accompanied by the consultant's current plot settings file (.ctb or .stb).

<u>Appendixes</u>

- Disregard all NCS Appendixes.

Part B: BIM Standard

General

Many projects are utilizing Building Information Modeling (BIM) for design and construction projects at UAF. BIM models shall be provided to UAF in their native format.

Use of Industry Foundation Classes (IFC)

Currently UAF is working on its internal BIM standards, but until the standard is complete the use of IFC and the creation of IFC compliant models is highly recommended. Information about IFC can be found at the BuildingSMART Alliance website at:
http://www.buildingsmartalliance.org/

Use of Revit and NavisWorks

It is recommended that models are created in the most current versions of Autodesk Revit or Autodesk NavisWorks. Modeling practices and best practices for model creation include, but are not limited to:

- Consistent file naming convention
- Models must not have linked models
- Vertical and Horizontal Coordinates must be consistent throughout the models.

Use of Other BIM products

It is understood that different disciplines require the use of different types of software. These software packages must result in the creation of proper 2D products and with models that can be used by the end user.

BIM Deliverables

BIM Models developed for a project shall be delivered at the same time and with the same methodology as the 2D CAD files. BIM Models shall be complete for each discipline. When BIM models are used, it is expected that the as-built information from construction will be incorporated into the model over the duration of construction, with 2D as-built PDF files produced from the model. The model and PDF files shall be submitted together as the final record drawing submittal.

Part C: GIS Standard

General

Projects at UAF utilize Geographic Information Systems (GIS). In order to ensure that the GIS data arrives in a usable and complete format, we are in the process of writing a GIS standard. In the meantime, requirements for GIS submittals are as follows.

GIS Deliverables

Data delivery preferred in Esri File geodatabase format. Esri Shapefile format accepted, unless database specifications require file geodatabase.

Data projected in Alaska State Plane Zone 3, NAD 83, U.S. Survey Feet.

Elevation data in NAVD88, Meters or U.S. Survey Feet.

Each layer should have unique identification numbers, and symbolized according to previously agreed upon attributes.

All attributes should be normalized as much as possible.

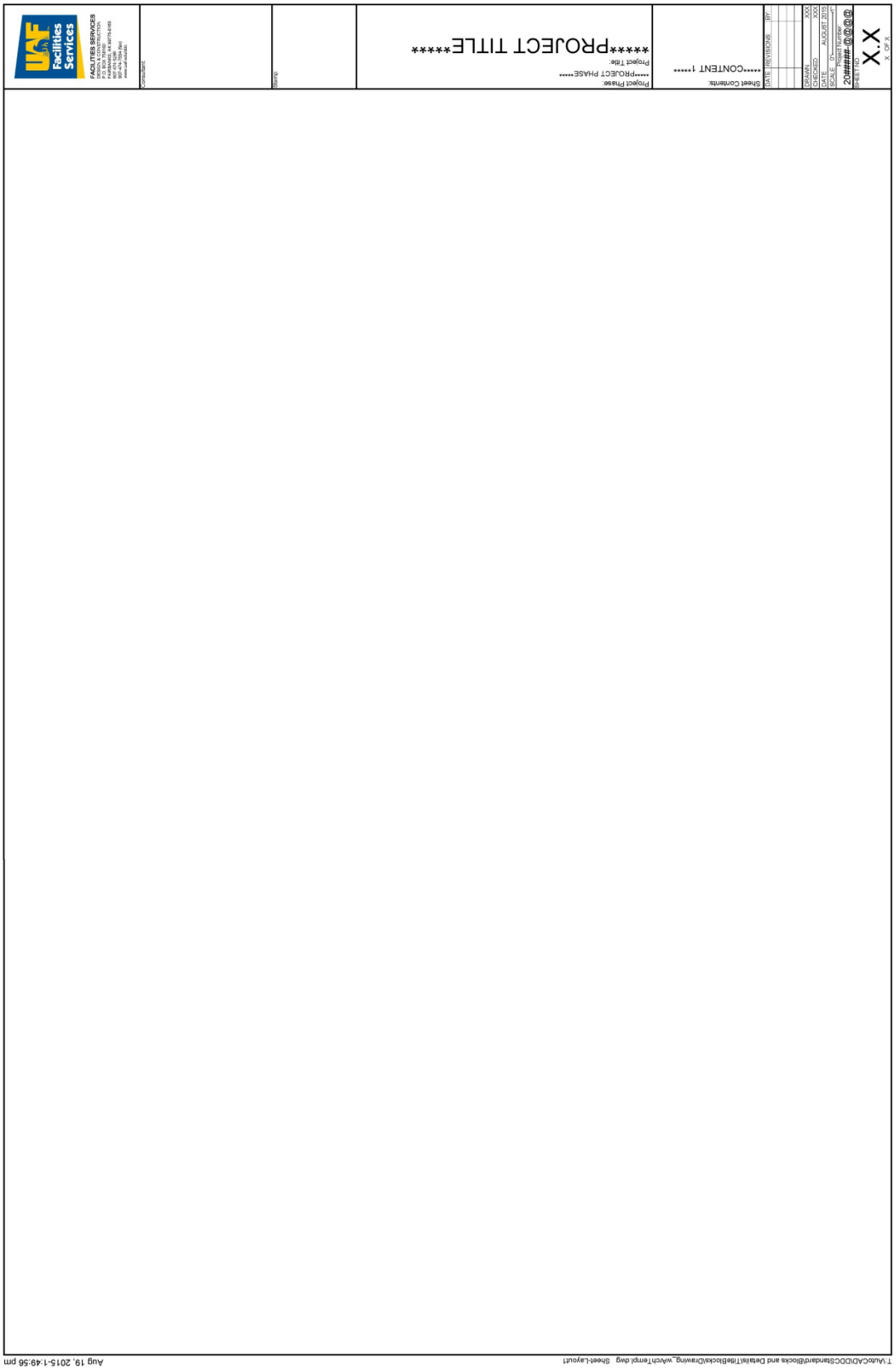
Part D: Appendices

Contents:

Appendix 1 – CAD File Checklist

- ☐ Submitted drawings include a text file with a complete listing of all materials submitted, including filenames for each item included in the submittal with a description. *(File Organization and Transmittal to UAF, Page 3)*
- ☐ Appropriate phase of project/conformed or as-built stamp is attached to each sheet or incorporated into the title block. *(File Organization and Transmittal to UAF, Page 3)*
- ☐ If the drawings files are for an Addition, Repair, or Renovation; the drafting conventions for new, existing, and to be demolished construction are consistent throughout the drawing set. *(Projects involving Additions, Repair,& Renovation; Page 4)*
- ☐ CAD files are submitted as AutoCAD dwg files. *(File Format Requirements, Page 7)*
- ☐ CAD files are submitted unbound. *(CAD File Transmittal, Page 7)*
- ☐ CAD files contain only information relevant to this project. Extra details, studies, design options have been deleted from the files. *(Housekeeping, Page 7)*
- ☐ Plan views and files have a common point of origin. *(Coordinate Origins in CAD data files, Page 8)*
- ☐ Sheet files have a common point of origin and location of the title block in the layout view. *(Coordinate Origins in CAD data files, Page 8)*
- ☐ AIA Layer formatting requirements are followed. *(AIA CAD Layer Guidelines, Page 8)*
- ☐ Colors, line types, and line weight are set to ByLayer. There may be exceptions where title block and block components require assignment of properties directly to the object, but these should be the exception. *(AIA CAD Layer Guidelines, Page 8)*
- ☐ A single sheet file is required for each discipline, containing all sheets relevant to that discipline. *(Uniform Drawing System, 1.4 File Naming, Page 9)*
- ☐ Sheet file names shall reflect the discipline, as well as the numbers of the sheets contained therein, such as A101, C105, M351, etc. *(Uniform Drawing System, 1.4 File Naming, Page 9)*
- ☐ Correct Title Block shall be used. *(Uniform Drawing System, 2.3 Sheet Layout, Page 10)*
- ☐ In general, drafting conventions are adhered to and are consistent throughout the drawing set. If poor drafting conventions exist throughout the drawing set, resulting in information that is unclear or confusing for the viewer, the drawing set may be rejected. *(Module 4 – Drafting Conventions, Page 10)*
- ☐ Text height for full size drawing shall be 1/8". *(Module 4 – Drafting Conventions, Page 10)*
- ☐ Dimensions are associative. *(Module 4 – Drafting Conventions, Page 11)*
- ☐ No forced dimensions exist in the drawing files. *(Module 4 – Drafting Conventions, Page 12)*
- ☐ Abbreviations adhere to the NCS or other published standards. If no abbreviation exists, the consultant shall establish one and clearly indicate it in their abbreviations schedule. *(Module 5 – Terms & Abbreviations, Page 12)*
- ☐ Symbols adhere to the NCS or other published standards. If no symbol exists, the consultant shall recommend one for approval by the owner. *(Module 6– Symbols, Page 12)*
- ☐ A current CTB or STB file is included with the submitted files. *(Plotting Guidelines, Page 12)*

Appendix 2 - UAF Title Block Example



Appendix 3 – UAF Plot Style (.ctb) Graphic