Section 3

Project Development Using CADD and ProjectWise

3.1 **Project Design and Presentation Planning:**

3.1.1 *Assemble meeting* with the lead technician/CADD Coordinator and design team.

3.1.2 *Develop* the index of drawings, estimate the number of sheets, and the level of effort required.

3.1.3 *Discuss* project drawing format criteria such as scales, areas of importance, etc.

3.1.4 *Identify* Survey data considered necessary to include in project drawings.

3.2 **Project Wise (PW) Setup:**

3.2.1 *Contact* a ProjectWise Administrator to create a project folder (design project). A parent and sub-folder will be created. A "general" folder will be included within the created folder that contains the standard border, the border companion, cover, and the index dgn files. Re-name the files in the general folder using the standard naming convention.

3.2.2 *Create* the PW project subfolders based upon section, subsection with categories names from the index of drawings, and include folders for any data supporting the project. A PW administrator will set the new PW permissions for the project with input from the Project Engineer.

3.3 **Develop Design Files in Microstation**:

3.3.1 *Develop all drawings using X and Y coordinates where appropriate* for the prescribed standard model files and reference files.

3.3.2 *Develop Model files* that reflect entire features such as a channel, levee or road for the project. The models, (civil site, structural plan, etc.) will be referenced to individual sheet files and clipped in as many sheet files as necessary in order to present the entire design feature.

3.3.3 Maintain design elements real world locations when referencing model files that span large areas or features that require match lines in successive sheet files.

3.3.3.1 *Large reference models* when required to be referenced onto more than a single sheet shall be clipped and placed into successive sheet files.

3.3.3.2 *Elements or focus areas rearrangements* shall be accomplished by moving the border file.

DO NOT move design elements from their "real world locations".

3.3.4 *Maintain the north arrow on the top of border* where project layout permits. The north arrow may require north arrow placement at another location when a view is rotated to utilize more space on a sheet file on length alignments.

3.3.5 *Attach reference files to sheet files* using "coincident-world" method at a 1 to 1 scale relationship with real world coordinates.

3.3.6 *Attachment of the border or companion file* shall be made at the intended plotting scale; for example, 100:1 or 20:1.

3.3.7 *Sheet file contents* should contain as non-referenced elements text, symbols, section keys, and graphic scale, notes, etc.

3.3.8 *Place notes and dimensions on the sheet files* as much as practical, rather than in the model file. Consistency of text heights will be easier to maintain by placement of text and dimensions on the sheet file.

3.4 **Design Software and Tools and A/E/C CADD Standards Compliance:**

3.4.1 *Design work production* shall be produced in Microstation using prepared seed files containing standard model or sheet file levels.

3.4.2 *NetSpex* (software installed on all Design Branch Stations) standards management and design software shall be used to create and develop design sheet and model files.

3.4.3 *Earth modeling* such as site work, navigation, or beach nourishment will be modeled using InRoads and the A/E/C compliant standard configurations. All sheet files containing the referenced InRoads model files shall be prepared using Netspex configured design files.

3.4.4 *Noncompliant Engineering software* that prepares designs without regard for standard A/E/C CADD Standard requirements shall be edited and all design file elements should be brought into graphic compliance.

3.4.5 *Review the CADD Standards Guide* for examples of proper design.

3.5 Standard Compliance Checking and Design Reviews:

3.5.1 *At all scheduled review milestones* electronic design files and printed sheet files will be reviewed for compliance with **A/E/C CADD Standards** and **CADD Standards Guide** Jacksonville District Regulation **CESAJR-1110-4-2**.

3.5.2 *Compliance Checking* should be a continuous goal during project development so that at review intervals no errors are discovered causing undue correction of files not meeting standard requirements.

3.5.3 *Users should have an understanding of the standards* by keeping a copy of both the A/E/C CADD Standard and the Jacksonville CADD Standards Guide as a reference. Resource tools relating to the CADD Standards should also be understood by the user.