



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

BDE PROCEDURE MEMORANDUM

NUMBER: 17-10

SUBJECT: BDE Manual Revision – Chapters 4, 6, 11, 15, 35, 41, 60, and 63.

DATE: May 5, 2017

Chapters 4, 6, 11, 15, 35, 41, 60, and 63 of the *BDE Manual* have been revised as a result of the newly created *IDOT Computer Aided Design, Drafting, Modeling and Deliverables Manual*. Please see the *BDE Manual* on-line to view the revisions.

Background

The *IDOT Computer Aided Design, Drafting, Modeling and Deliverables Manual* (hereafter referred to as the “*CADD Manual*”) has been adopted by the Department via Departmental Policy D&E-29 dated April 27, 2017. The *CADD Manual* provides guidance for Computer Aided Design and Drafting that shall be used for:

- The preparation of roadway plans for the Illinois Department of Transportation,
- The preparation of structure plans for the Illinois Department of Transportation,
- The preparation of three-dimensional (3D) models used for measurements and Automated Machine Guidance (AMG) in construction projects of the Illinois Department of Transportation, and
- The preparation of deliverable files to various units within the Department at various stages in the project lifecycle.

The *CADD Manual* represents a significant update to IDOT’s *CADD* policy and standards. It incorporates updated information based on advances in technology and it addresses many changes in the way modern roadway and bridge projects are being designed and constructed. Additionally, the manual merges into one manual what was previously three different policy documents covering roadway requirements, structure requirements, and deliverables requirements.

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The *Computer Aided Design, Drafting, Modeling and Deliverables Manual* consolidates and supersedes all previous versions of the:

- *IDOT CADD Roadway and Structures Deliverables Policy*,
- *IDOT CADD Roadway Drafting Reference Guide*, and
- *IDOT CADD Structures Drafting Reference Guide*.

Specifically, the requirements of the new *CADD Manual* are intended to address the current ongoing shift from printed design documents towards growing demand for three dimensional (3D) models and the Department's transition to a workflow where 3D models are an integral component during every stage of the project's life cycle, including tasks from survey, planning, design, geotechnical investigation, utility coordination, land acquisition activities, conflict mitigation and AMG during construction, as-built plan retention, field operations, and asset management.

The *CADD Manual* has been established to promote the development of highway improvement projects in a consistent and efficient manner.

As a result of the adoption of the *Computer Aided Design, Drafting, Modeling and Deliverables Manual*, Chapters 4, 6, 11, 15, 35, 41, 60, and 63 of the *BDE Manual* have been revised to delete references to the former CADD policy documents and reference the new manual where appropriate.

Besides basic references to the new *CADD Manual*, Section 11-8 of the *BDE Manual* was updated regarding roadway and structures software available for use on Department projects, the use of 3D models, and the availability of CADD support personnel during project development.

Sections 60-2 and 60-3 have been renumbered and revised to delete references to the former CADD policy documents and to add reference and subsequent discussion concerning the new *CADD Manual*.

The CADD file management, plotting and drafting guidelines previously found in Chapter 63 were appropriately moved to the new *CADD Manual*, which necessitated a complete renumbering and revision of Sections 63-1.03(a), 63-2, and 63-3 of the *BDE Manual*.

Other minor revisions included in this Procedural Memorandum not associated with the adoption of the *CADD Manual* include:

- The note of Figure 11-7.A was updated to reference current Bureau of Safety Programs and Engineering documents entitled, *Systemic Safety Improvements: Analysis, Guidelines and Procedures*, and *Users Manual Benefit-Cost Tool*, which are utilized in the completion of

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benefit to cost analysis procedures and the determination of service lives on Highway Safety Improvement Program (HSIP) projects.

- Section 60-6 was updated to include a brief description of an additional central Bureau of Local Roads and Streets policy document.
- Section 60-7 was updated to include brief descriptions of several additional central Bureau of Operations' manuals or documents.
- Section 60-8 was updated to reflect the revised bureau names resulting from the 2016 IDOT reorganization.
- Section 60-9 was added to include pertinent manuals and documents from the Bureau of Safety Programs and Engineering that may be used for reference during the project development process.

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