



## Florida Department of Transportation

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### ESTIMATES BULLETIN 13-09

### ROADWAY DESIGN BULLETIN 13-11

### STRUCTURES DESIGN BULLETIN 13-12

### DCE MEMORANDUM NO. 19-13

*(FHWA Approved: 7/22/2013)*

DATE: July 22, 2013

TO: District Design Engineers, District Construction Engineers, District Program  
Management Engineers/Administrators

FROM: Duane Brautigam, Director, Office of Design

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SUBJECT: Replacement of Computation Books with Plan Summary Boxes

### **BACKGROUND**

Computation Books, aka “comp books”, have been used for many years to document planned and final quantities, by location for each pay item on a project. These books are also used by construction inspectors to document quantity changes and related notes as a project progressed. Alternatively, some pay items were documented within the plans on summary tables. The summary table information varied; only selected tables detailed the quantities by location. While both methods contained similar information, computation books were not a part of the contract bid documents.

Recently, an increasing number of bidders have been requesting computation book information prior to submitting their bids. In addition, the State Construction Office has been undertaking efforts to streamline the final estimates processes. To address bidders’ needs, as well as to consolidate the quantity documentation, a team was established to address both computation books and summary boxes. The result was a recommendation to include all necessary quantity information within the plans, and to eliminate the use of a separate computation book for recording planned and final quantities.

Existing plan summary boxes have been reviewed and updated to include appropriate space for each pay item's quantity, by location. Space was also included for separate design and construction remarks. New plan summary boxes have been created, so that every pay item has a default plan summary box.

To assist designers with the preparation of the summary boxes, a new software application is available: **Linked Data Manager (LDM)** for Excel to MicroStation data transfer. This tool will include an option to automate the creation of the summary boxes from data stored in a Quantity Manager database and then linking the summary boxes to the MicroStation design file.

**Clarification: Do not mix old summary boxes with new summary boxes on the same project, as additional columns may be required.**

## IMPLEMENTATION PLAN

The implementation plan seeks to balance the bidder's need for quantity information with the designer's need to avoid duplication of work (both comp book and plan summary boxes). Fortunately, the computation books are normally prepared at the end of the design process.

**July to October 2013 lettings:** NO IMPACT- Projects scheduled for these letting dates are at 100% plans or in contracts phase. Do not make any changes to these projects. Do not attempt to duplicate information in both the comp book and plan summary boxes.

**November 2013 to June 2014 lettings:** Designer may begin the use of new plan summary boxes; comp book forms will still be acceptable for items not using the new plan summary boxes. Note: As of the issue date for this bulletin, most of the projects scheduled for these letting dates are in the 60-90% plans phase, when comp book preparation would normally begin.

**July 2014 lettings and later:** Quantity calculations for all future projects should use plan summary boxes.

**Exceptions:** New comp books shall not be started after January 1, 2014. If a comp book was started prior to January 2014, the District Design Engineer will determine on a project-by-project basis whether to allow the comp book to continue, or whether the project should be updated to include plan summary boxes; a statewide end to comp book exceptions will be determined at a later date.

**Quantity calculations:** Shapes used to determine length or area may be referenced by shape number (Area ID), and location. The Area ID should be clearly labeled in the shape file, QTDSRD##, i.e. "Area ID = 12345". DO NOT include point-by-point shape descriptions. Quantities based on estimated values may be noted in the Design Notes column, i.e. based on 110 lbs per square yard-in, based on 3 each per mile, or based on 30 signs x 40 days for phase 1. Detailed instructions for documenting quantities will be provided in the Basis of Estimates.

**Design Support Documentation:** Calculations completed in MathCad, Excel, or other format should be saved with the project support files, in either the source format or .pdf format. These files, along with the Excel files for the summary boxes, should be located in a single directory for ease of access. This directory should be named "Calculations" and be located in the project directory. DO NOT attach

the support calculations to the bid letting package. Detailed instructions for saving files will be included in the CADD Production Criteria Handbook.

**Handbooks & Manuals:** Handbooks and manuals will be updated by the responsible office. While new plan summary box instructions will need to be provided, existing comp book projects will be supported throughout the contract life. Some of the changes include:

**Plans Preparation Manual (PPM)-** Volume 1: Update comp book references throughout.

Volume 2: Update 2014 edition with new plan summary box exhibits.

Volume 2, Section 3.6 will be updated as follows:

Note changes to page numbering and location of summary sheets. See below for drainage sheets.

- The Transport Summary of Pay Items will remain after the Key Sheet (the proposal level summary)
- The Roadway Summary of Quantities will remain after the Typical Section.
- The Roadway Summary of Quantities will be numbered SQ-1, SQ-2, etc.
- A statement will be added to indicate that “Summary of Quantities Boxes should be placed in pay item order.”

Volume 1, Section 22.3 will be updated to meet Lump Sum Project instructions below.

**Basis of Estimates Manual (BOE)** - Chapter 8: add instructions for the use of the new plan summary forms. Chapters 11-20: For each pay item group, add references to new plan summary boxes. Maintain existing comp book references.

**Construction Project Administration Manual (CPAM)** - Add instructions for working with plan summary boxes. Maintain existing comp book instructions.

**CADD Production Criteria Handbook** - Update to reflect new summary box and directory naming requirements.

**Structures IDS and Cell library** - Remove “Estimated Quantity Boxes” from current cells. Update IDS to match new procedure, and include copies of the updated cells.

Structures: See details below

**Structures Manual** - Remove “Estimated Quantity Boxes” from Volume 2, Structures Detailing Manual (SDM), *Examples*. Update Volume 1 (SDG) and Volume 2 (SDM) to update directions on specific structural components and how to document the quantities.

**Other publications** - Districts are responsible for updating their own web pages, handbooks, and procedures, as necessary.

**Lump Sum Projects:** Complete the plan summary boxes, or tabulation sheet, with quantities by location for each item of work, similar to a traditional pay item project. DO NOT include the pay item number and total quantity. For example, Roadway guardrail is summarized by location from station A to B as 250’, station C to D as 300’, and station E to F as 500’; do not provide pay item number 536-1-1 or the total quantity.

**SMART Plans:** Guidelines for SMART plans are still under review. Additional information will be published as it becomes available.

Lump Sum Projects: Vol 1, Chapter 22 of the PPM will be updated to include the following note, to be placed on the Summary of Pay Items sheet: "999-2 Lump Sum Contract: All other Pay item numbers shown in the Contract Plans are provided only for the purpose of describing the work to be performed. Pay item descriptions are found in the Department's Basis of Estimates Manual."

**Scope of Services:** The Consultant Scope of Services (the contract between the Department and Consultant Designers) will be updated to remove references to the comp book preparation. In the interim, the increased work of the plan summary boxes will be offset by the reduced work of the computation book. No adjustment should be made to the designer's number of hours.

## TRAINING

Training will be completed through multiple webinars for the groups noted below:

**Designers /CADD Users-** The Engineering CADD Systems Office (ECSO) will provide webinars to demonstrate the use of the new applications for data transfer, along with the new plans summary boxes. A webinar was presented on June 19, 2013. To view the presentation, see the ECSO web page at:

<http://www.dot.state.fl.us/ecso/downloads/GoToMeetingTraining/GoToMeetingWebinars.shtm>

**Reviewers/Estimators/Project Managers-** The Specifications and Estimates Office will provide webinars to demonstrate the use of the new plans summary boxes, and to ensure the consistent documentation of quantities by location. A webinar was presented on July 10, 2013. To view the presentation, see the Office of Design's Training web page at

<http://www.dot.state.fl.us/officeofdesign/training/>

**Contractors/Construction Engineering Inspectors (CEIs)-** The Construction Office will provide webinars to demonstrate the use of the LDM application to update notes and quantities for as-built plans and final estimates. A webinar is scheduled for July 24, 2013. To register, see the Construction Office's Meetings & Events page at

<http://www.dot.state.fl.us/construction/Publications/EventsMain.shtm>

Dates and times for additional webinars will be announced through the Contact Database and posted on the internet web pages for each of the offices.

We appreciate the cooperation of all offices during the transition period. We hope that the Consistent, Predictable, Repeatable (CPR) method for quantity documentation will meet the needs of all of our customers, from design through construction.

If you have any questions, please contact the appropriate person(s) below:

CADD: Denise Broom, 850-245-1607, or Jimmie Prow, 850-245-1626

Estimates: Melissa Hollis, 850-414-4182

Roadway Design: Chester Henson, 850-414-4117

Structures Design: Cheryl Hudson, 850-414-5332

Construction: Richard Massey, 850-414-4184

Summary of Drainage Structures do not get "merged" with the other roadway summary boxes; they will remain after the SQ-sheets, numbered with the roadway sheets, as indicated in PPM Vol 2, Chapter 3.6.

Structures: New guidance is available in the detailing manual. Bridge summary sheets are numbered BQ-#, and are placed following the bridge component index/key sheet, or behind the Transport Summary of Quantities- when no roadway component exists.