



Florida Department of Transportation

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GOVERNOR

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Jose Abreau
Secretary

This Memo Has Expired

MEMORANDUM 11-03

DATE: March 12, 2003

TO: District Production Directors, District Design Engineers, District Consultant Project Management Engineers, District Operations Directors, District Construction Engineers

FROM: Brian Blanchard, State Roadway Design Engineer
Ananth Prasad, State Construction Engineer
William Nickas, State Structures Design Engineer
Sharon Holmes, State Maintenance Engineer

SUBJECT: As-Built Plans

The purpose of this memorandum is to define the requirements for an acceptable set of as-built plans. An As-Built Plans task team was established on December 18, 2001, to define these requirements. The specific goals of the task team were to analyze the problems with the current process and to make long-term recommendations. Another reason for the task team was to address issues being discussed through the development of the Electronic Document Management System (EDMS) for the Office of Design. There are design related documents that the Design and Maintenance personnel have identified which are generated after completion of the design phase. The preparation and preservation of these documents have historically been inconsistent. This leads to incomplete documentation and/or additional work for the downstream users, i.e., District Maintenance Offices, Design Offices, etc. The Maintenance Structures and Facilities Engineers were expressing concerns that they were not getting the as-built plans after the construction phase. The Structures and Facilities Engineers need to have accurate bridge records available for inspection, maintenance, rehabilitation, and emergency repair operations. Some of the as-builts were not legible after they were sent to the Department of State (DOS) to be microfilmed. Since the life of a bridge structure is 75 years, it is crucial that the proper information be stored.

The current procedure, as outlined in "Chapter 4 of the Preparation and Documentation Manual (P&DM) (Topic 700-050-010)," requires that a completed signed and sealed set of final plans be sent to the DOS to be microfilmed. The DOS sends a microfilm copy back to the district and keeps the "silver" copy to be archived. The DOS sends a "record of disposition" form to Document Control in the Central Office.

The task team is recommending a three-phase process:

As-Built Plans

Phase One: This phase continues the current process we have today, as outlined in Chapter 4 of the P&DM, and will remain until the next phase is implemented. The Department will send our proposed guidelines to the DOS outlining our procedure for archiving and maintaining the records for the required retention period. The Department will take responsibility for archiving our records.

Phase Two: The Department can advance to this phase of scanning all plans and not having to send the final as-built plans to be microfilmed by the DOS, as soon as an acceptable procedure is in place. It includes scanning all components of the final as-built plans into the Construction Document Management System (CDMS) under the current Document Groups and Types.

The implementation date for Phase Two becomes effective on construction projects completed after December 2003. This will allow sufficient time for the Construction Offices to migrate to the new enterprise EDMS by Hummingbird DM (which replaces Arcis) and to obtain the necessary resources.

Phase Three: Chapter Four of the P&DM will be modified to reflect the following recommendations of the task team. The as-builts for roadway and bridge plans will be marked-up by the Construction Engineering Inspector (CEI) consultant (or Resident Engineer for in-house projects), signed, sealed, dated, and scanned into the CDMS. A note under the seal will reflect responsibility for only the changes. Sheets without changes will be signed, dated, and a stamp applied indicating the signature reflects that the plans are as-built conditions built in substantial compliance with the engineer's plans.

The CEI consultant will sign, seal, and date sheets requiring minor as-built changes as noted above. A minor change is defined as a change not requiring an engineering analysis to be performed by the Engineer of Record (EOR) or not requiring revised calculations from the EOR. Unless the Resident Engineer becomes familiar with the design concepts of the project, the determination for the need for revised calculations and/or engineering analysis would lie with the EOR. For major changes, we will use the revision process in the CPAM as is the process today. The official record set will reflect all the changes and be scanned into CDMS.

The electronic design files for the bridge plans (category II) will be updated from the record set to reflect as-built conditions in the native DGN format. The recommendation is to have the EOR or the CEI consultant perform this CADD service. The consultant contracts would be expanded to require as-built bridge plans (category II) be prepared electronically (CADD) during the construction process. The districts will have the option to have the EOR or the CEI consultant perform this CADD service. The districts will be accountable for ensuring that electronic as-built plans for bridges (category II) are provided. The EOR's Post Design services of consultant contracts will be expanded to require all bridge load ratings be updated before the end of construction utilizing the as-built bridge plans.

The electronic design files for the as-built bridge plans will be stored on-line by the State Structures Office in the native DGN format. If these files are taken off-line in the future, a copy of the CD will be stored in the State Structures Office and in the district.

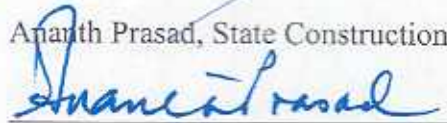
The target date for implementation of Phase Three is January 2004 for CEI consultant contracts executed on or after this date. If the Engineer of Record performs this service, this date applies to post design services executed on or after this date. An earlier implementation date is recommended for those contracts that can be modified without negatively affecting the work program.

BB/kn


Brian Blanchard, State Roadway Design Engineer


Date 3-11-03

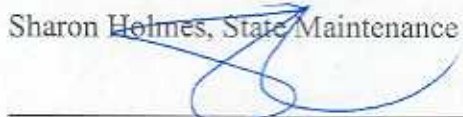
Ananth Prasad, State Construction Engineer


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William Nickas, State Structures Design Engineer


Date 3-12-03

Sharon Holmes, State Maintenance Engineer


Date 3.12.03