



Florida Department of Transportation

**District 4 Design
Newsletter**

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From the Editor's Desk

Howard Webb, P.E., District Design Engineer

We have completed our first quarter of the fiscal and have a lot to be proud of. We have developed and posted a comprehensive business plan for Design (available on the Transportation Development website), have improved on making our Production dates and have made great strides in timely responses to public issues.

The first quarter results of Design's business plan has shown that we have done significantly better in making our Production dates, when compared to last fiscal year. We met 60% of our Production Dates (based on a rolling 12 month window), as compared to 35% for the first quarter of last fiscal year and 50% for all of 2003/2004.

The results of the business plan also showed that, in spite of the large volume of log-letters, permit reviews, public records requests, etc. we exceeded our targets of 90% on time.

However, there are also areas that we need to improve. During the last quarter, we did not meet our Letting target, and our performance in this area was worse than previous years. Some of this was attributed to the hurricanes but some were not and we need to work on correcting this.

Timely submittal of cost estimates is another area in which we need to improve. During the last Work Program Development Cycle, a significant amount of our estimates were not submitted on time. This affected the efforts to develop the new work program and we need to make a concerted effort to improve on this.

The improvements that we have shown are attributable to the entire design staff, our support offices and also our consultant partners. I am positive that with all your continued assistance and support, we will continue to improve.

Have a happy holiday.

Guideline for Local Government Coordination during the Design & Construction Process

Morteza Alian P.E. District Consultant Project Management Engineer

Local Government Coordination has been part of D4 routine practice for many years. Designers have been diligent in addressing local concerns in all types of projects regardless of complexity level. However, an external customer survey showed that the local government agencies are not satisfied with this level of communication and certain awareness level about project related issues is still insufficient. Issues related to Local Governments have been identified as major contributors to schedule delays during Design, and overruns in Time and Money during Construction. As a result, this guideline is developed to help our designers and construction personnel (in-house and consultants) when discussing project scope with the local government agencies

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District 4 Quarterly Design Newsletter

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Guideline for Local Government Coordination during the Design & Construction Process

Morteza Alian P.E. District Consultant Project Management Engineer

during design and construction periods. It is noteworthy to indicate that Homeowners Associations (HOAs) and Chamber of Commerce are also included in this process as organizations to be contacted, the same as local government agencies.

The process is comprised of 3 phases. Those phases are Pre Design, Design and Post Design. In Pre Design phase, the project is assigned to a project manager right after it is funded. Soon after, the scope of the project is determined with input from an internal multi-disciplinary team. Thereafter, the project manager will send an Initial Contact Letter to the city and/or county engineer with a copy to the city and/or county manager, mayor, local HOA, Chamber of Commerce, and District Design Engineer informing them of project intent, scope, budget and schedule. This happens prior to project advertisement for consultant projects and soon after Phase 31 is opened for in-house projects.

During Design phase, an Invitation Letter is sent to the local agencies describing the project intent and request for a meeting to discuss their input and requests plus project schedule, budget, local agencies contributions and responsibilities, and Design Features Deadline dates. The Design Features are those items such as decorative lighting, enhanced landscaping, and utilities work that the locals are typically requesting and require funding by the local agency and/or a signed agreement between FDOT and the local agency. This meeting must happen prior to beginning design. A similar letter is also sent to the HOA and Chamber of Commerce informing them of project intent. The HOA and Chamber of Commerce must present their special requests to the local government if an agreement is required. This is because of FDOT's inability to directly enter into agreement with entities other than governmental agencies. ***It is imperative to have all commitments approved by all parties prior to Initial Engineering phase.***

Each Phase Review is sent to the city and/or county engineer with a copy to city and/or county manager and mayor. A letter is also sent with updated information on scheduled activities and critical deadlines including the Design Feature Deadline dates. The intent is to remind the local government of the scheduled activities and the consequences of any delay. Should the local agency fail to meet their commitments by the scheduled dates, a Design Feature Deadline Notification Letter must be sent to the city and/or county engineer stating the affected Design Feature(s) will be eliminated from the project. This letter is sent after concurrence from the District Design Engineer. A copy of this letter will also be sent to the city manager, the mayor and Director of Transportation Development. Otherwise, the project manager will provide updated project information with respect to schedule and budget to the local agencies until the project is let to contract. In order for this process to work, the project manager needs to establish a monthly dialogue, e-mail or meeting, with the local agencies so that the agreements are signed and approved per project schedule to avoid the need for writing this deadline letter.

During Post Design phase (at Hand-off meeting), the design project manager will provide the list of local officials contacted during design phase with documents, as well as the list of HOA, Chamber of Commerce, and the public meeting attendance list. The construction project manager will meet with local agencies to discuss the timetable of construction activities and impacts to the community. The design project manager must be invited to this meeting. After this initial meeting, the construction project manager will provide periodic updates to the local agencies with a copy to design project manager until completed.

Designers could locate the complete process along with sample letters at District 4 Website under Transportation Development Knowledge Base (D4KB).

Migration to V8

Kuntharet Hing, District CADD Manager

Our District 4 Technical Advisory Committee (TAC) and the Engineering CADD System Office (ECSO) are working together to test the project migration to V8 with the new FDOT standard and software. The workshop was held in October 2004. ECSO had separate workshop for Consultants later this year. We have heard some of the results of this work at the winter FLUG in Tampa in November 2004.

These classes are an indication that FDOT is preparing actively for the big migration in the near future. What is this migration exactly? It's a combination of two important events. First, all MicroStation design files will be converted to the MicroStation V8 format. This is done automatically when a design file is opened in MicroStation V8. Second, FDOT will provide a conversion tool that translates all element symbology from the current standard to the new FDOT standard that takes full capabilities of MicroStation V8. For example, we will no longer use the level 0 to 63, but the level will be identified with a meaningful name that is easier to work with. The conversion tool will operate in a batch mode so that all projects can be migrated without user's presence.

In order for the migration to be successful, all need to make sure that the project complies with the current FDOT standard. It's very important that all files get a very high degree of compliancy (95% or more) when checked by the QC program. This is because the conversion will function according to the GIGO rule: garbage in, garbage out. The program will not know what to do with an element whose symbology doesn't match with the standard.

Another very important step is to make sure that all design files are corruption free. It is strongly recommended to use a tool such as Axiom File Fixer to get rid of all internal corruptions before beginning the conversion. Bentley guarantees that a MicroStation V8 file doesn't get corrupted as long as it's not already corrupted in V7. An internal corruption is not necessarily visible; the best way to insure that all files are clean is to run them through File Fixer in a batch mode.

When is the big migration planned for District 4? To minimize impacts to the production and letting plan for fiscal year 05/06, our District is planning the migration to V8 in March/April 2005. With help from ECSO, all in-house projects will be converted to V8, and then continued in V8 with the new FDOT standard. For Consultant projects, we ask that Consultants as well as their sub-consultants migrate District 4 projects at that time. It is important that all parties involved move together as projects can not be a mix of V7 and V8.

We'll do our best to organize training for in-house designers on Geopak V8 and the new FDOT V8 software as close as possible to the March/April timeframe, and before the switch. In-house designers are strongly encouraged to take the on-line MicroStation V8 training available from the ECSO intranet site immediately. If you have any questions, please contact your CADD Manager.

Consultants should organize their own training from private training providers. FDOT recommends ModernTech and ImagineIT. Both have curriculum certified by FDOT and are familiar with FDOT standard.

This is a major upgrade of the MicroStation work platform and will require teamwork, patience and cooperation from all of us to make this happen. District 4 and the Tallahassee Engineering CADD Services Office will work diligently to make this a successful migration.

Utility Certification

Rocco DePrimo, District Utility Administrator

The utility certification of an FDOT design project represents the Engineer of Record has reviewed the utility adjustment plans and utility work schedules and they are compatible with the project construction. The EOR must meet with District Construction for concurrence. The acceptable utility certification language as it applies to a specific project is as follow:

All utility negotiations (full execution of each agreement, approved Utility Work Schedules, technical special provisions

written, etc.) have been completed with arrangements made for utility work to be undertaken and completed as required for proper coordination with the physical construction schedule; OR, an on-site inspection was made and no utility work will be involved; OR, plans were sent to the Utility Companies/Agencies and no utility work is required.

This past February, the Department completed the Utility User's Guide. It can be found on the FDOT website under the Utility Office. Should you have questions concerning the utility certification or the utility coordination process, please contact district utility staff at (954) 777-4126.

Designers' Corner



Leslie Wetherel, P.E.- Section 4

Leslie has been with the Design Department for five and half years. She started as a designer immediately after graduating from the University of Florida. Yes, another Gator. Leslie has been working in in-house Roadway Section 3 on numerous projects and she will now help the Consultant Section on a temporary basis until Betsy Jeffers is back from maternity leave. Please welcome Leslie to Consultant Section .



Rosny Dorcelly - Section 3

Rosny comes to our Section from Haiti having received his Bachelors in Civil Engineering from the University of Florida in December 2003. He is a dedicated sports enthusiast, enjoying general all sports (especially football, Go Gators!). He says he has felt so welcome in Design, in the short time he has been here, since he has been given no less than six nicknames by his fellow team members.

So please welcome Rosny to the Design family when you get a chance.

Supplemental Agreement Report – 2003/2004

Morteza Alian, P.E., DCPME

Description Code 105: Conflicts resulting from discrepancies, inconsistencies, etc, between plan notes, details, pay items, standard indexes or specifications

Reason: This project consists of widening, reconstruction, drainage improvements, lighting and signal upgrading.

A work order was issued to compensate the contractor for costs incurred as a result of inaccurate information in plans. The plans showed numerous conflicts with existing AT&T utilities (ductile iron fiber optic sleeve, duct bank, and concrete encased cable) shown incorrectly in the plans. The contractor had to cut and modify numerous drainage structures to meet new flow line elevations. This change resulted into additional cost of \$11,552.28. This cost is coded as avoidable premium design error and the premium is recoverable.

Response: The designer utilized utility information provided by soft dig. The soft digs were not done at the proposed structure. This did not accurately reflect the location of the utilities at the proposed structure. This is being investigated fully to determine the extent of recovery.

Description Code 105: Conflicts resulting from discrepancies, inconsistencies, etc, between plan notes, details, pay items, standard indexes or specifications

Reason: This project consists of widening, reconstruction, drainage improvements, lighting and signal upgrading.

The project engineer directed the contractor to install temporary drainage structures at an intersection due to considerable flooding during heavy rainfall events. This was warranted to minimize impact to adjacent businesses. The plans did call for temporary drainage at this location utilizing the existing system and adding pipe and inlets for temporary condition during the specific construction phase. However, the existing system collapsed during installation. The contractor has incurred additional cost of \$5,703.19 and this is considered recoverable premium cost.

Response: The designer had an excellent plan to provide temporary drainage system due to considerable elevation difference between existing and proposed profile however, the condition of existing drainage system should have been checked prior to temporary drainage system design.

Description Code 105: Conflicts resulting from discrepancies, inconsistencies, etc, between plan notes, details, pay items, standard indexes or specifications

Reason: This project consists of widening, reconstruction, drainage improvements, lighting and signal upgrading.

During installation of the proposed storm drainage structure, the contractor encountered the existing main line to the outfall to be 0.381 meter higher than shown in the plans. As a result, the contractor had to modify the top, the right, and the bottom of structure to match higher elevation. This was coded as design error with recoverable premium cost of \$2,192.68.

Response: This is as a result of inaccurate survey information in plans preparation. This structure could have been left as originally designed. The CEI should have directed the contractor to place the proposed structure with slight modification to the opening for existing outfall pipe. This would have been a lot less than the incurred cost. The designer could have checked the surveying information more closely and performed a quality control with the survey sub. The extent of designer's error is being investigated.