



District Three Design Newsletter

(Internet Address - <http://www.dot.state.fl.us/rddesign/D-3/files/d3.htm>)

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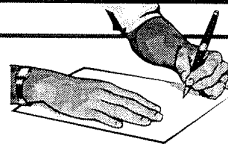
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DISTRICT THREE DESIGN FLORIDA DEPARTMENT OF TRANSPORTATION

If you have any questions or problems regarding obtaining a copy of this newsletter from the web page, contact Eddie Register in the District Utilities Office. (850) 638-0250 ext.—392 or fax (850) 638-6148

District III Quarterly Design Newsletter

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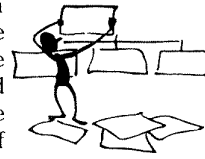
From the Editors Desk

Larry Kelley, District Design Engineer

Time marches on. The District Design Conference has come and gone. Attendance at the conference was great and provided valuable information as well as an opportunity for networking. The Design Conference Planning Committee always does a great job putting this conference on. They are already planning for next year. I look for it to become an even more valuable event in the future as we highlight the most important issues of the year.

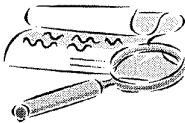
I attended the FICE Conference in Orlando in May. I came away with a better understanding of the concerns of the consultant industry. As we go forward, I hope we can address and settle many of those concerns.

Have you noticed how nothing stays the same forever? District Three Design has made some organizational changes. Conditions have changed, and we are adjusting. Hal Gore, Scott Golden and Jason Peters are assuming a greater role in the Design Department. The details of these adjustments are shared in this edition of the newsletter. Primary reasons for the adjustments are the issues of "succession training" and "increased privatization". The first wave of the DROP employees leave the Department in June, 2003. We must initiate a transfer of knowledge in key areas.



Also, as the Department increases its privatization levels, we must develop new ways of doing many functions. Very soon, we will select a few resurface projects and experiment with less Department involvement. These projects will require that the consultant perform all pavement design, utility coordination, specifications and permits. In this scenario, the Department will do very little plans review. The consultant's Quality Control plans will take on new importance.

As we experiment with this method, we will stress greater open communication up front and throughout the design of the project. I see this method developing a stronger partnership than ever before as the consultant must communicate directly with many DOT sections rather than wait for review comments to respond to. We also see this creating a smoother, steadier work effort for the consultant as we remove many of the gaps for DOT involvement.



Of course, this may never reach a routine level for all type projects, but if successful, it is a first step toward "full service contracts". I ask the Department work force and our consultant partners to view these changes as a necessary and positive response to changing conditions.

I look forward to working with the entire (DOT and private) Design Team in delivering a complete, accurate and on-time product. As I travel, I see the progress being made in improving the transportation system; a direct result of the Team's hard work and attention to details.

"You think you understand the situation, but what you don't understand is that the situation just changed!"
-Putnam Investments advertisement

Design Department Organizational Changes

Larry Kelley, District Design Engineer

Please note the following changes in the District Three Design Section. All Design functions are now aligned under the following managers as indicated.

Hal Gore, Jr., P.E. -In-House Roadway Design
 -Traffic Plans
 -Utilities
 -Bidability
 -Plans Review
 -Quality Assurance

Scott Golden, P.E. -Structures
 -Drainage

Jason Peters, P.E. -Project Management
 -Estimates



The six steps to becoming a better listener form a LADDER.

L: Look at the person speaking.

A: Ask questions.

D: Don't interrupt.

D: Don't change the subject.

E: Empathize

R: Respond verbally and nonverbally



Specification Package Preparation Training

Duane Brautigam, State Specifications Engineer

Speaking on behalf of Specifications Office staff from District Offices and the State Specifications Office, I would like to encourage

consultant firms to register for training in Specification Package Preparation.

As some are aware, we are completing the pilot phase of **OUR PLAN TO HAVE SPECIFICATION PACKAGES PREPARED BY THE CONSULTANT ENGINEER OF RECORD, WITH FULL IMPLEMENTATION PLANNED BY THE JULY 2003 CONSTRUCTION LETTING.** District Three has already started to include language on Specification Package preparation in the Scope of Services in order to meet the 2003 full implementation date. That means there are contracts out there (or coming on line) with consultants who have not yet been trained. The July 2003 deadline is really not that far away in relation to production cycles.

We have had very positive feedback about the training from consultants and FDOT people, and we have now

scheduled several training sessions at centralized locations, as we expand the training effort to make this training available to the hundreds of firms that will need it.

We have established a web page for on line registration by consultant firms. Details of who should attend, what they should bring, and what to expect are provided, as well as a pull down menu that lists the dates and sites of each scheduled training session. We have already scheduled training sessions throughout the remainder of the calendar year, with most of them in Tallahassee, but with some mid-state (Bartow for now, with possibilities of DeLand and/or Tampa). The web site is:

<http://www.dot.state.fl.us/specificationsoffice/Training/registration.htm>

We have also provided a link to this site from the Roadway Design Training web page. We will be adding sessions in response to demand, combined with availability of training staff and facilities.

Again we want to encourage consulting firms to register and attend training in Specification Package Preparation. Should you have any questions or need any additional information, please contact me or Dianne Perkins, who is handling the registration database, at (850) 414-4110.

Utility Survey Responsibilities and Relocation Requirements

Charles Andrews, PBS&J
 FDOT Area Utility Manager

With buried utilities lining the right of ways of Florida's Highways, and new facilities being installed on a daily basis, utility coordination is more complicated than ever. One recent issue that has proven to be one of the industry's biggest problems is the misconceptions regarding the responsibility of locating these facilities during FDOT construction projects. Sunshine State One Call of Florida, Inc., governed by Florida Statute Chapter 556, currently

(Continued from page 2)

has an "Excavation Guide" which addresses the excavator's responsibilities and states that once notice has been given to the member operators they have 48 hours to either "inform you that no conflict exists with that member operator's facilities; physically locate and mark the horizontal route of the excavation site [vertical is not provided]; or contact you to schedule a new due date for the locate." The guide also states that in practicing safe digging, the "excavators should maintain a minimum clearance of two feet between the cutting edge or point of any power-operated excavating or earth moving equipment and a marked, unexposed underground facility."



The Utility Accommodation Manual (UAM), Chapter 11 - Utility Survey, not only requires the utility owners to provide certain levels of locate information, but gives the Design Engineer in consultation with the District Utility Engineer and appropriate construction personnel the authority to require the utility company to relocate any facilities within three (3) feet of any construction. Due to recent misconceptions of the intent of the Sunshine State One Call Excavation Guide, many of the long line companies installing facilities on Florida's right of ways are reluctant to vertically locate their underground facilities for the FDOT contractors.

These types of issues can only be resolved when both parties work together to ensure the utility facilities are protected during FDOT road construction. In light of the issues the District is experiencing with the long distance companies, it is in everyone's best interest that all FDOT utility representatives follow the UAM and require the long line facilities be installed or relocated at least three (3) feet below any and all construction. FDOT Highway Contractor's cannot be expected to manually excavate (hand dig) around these facilities, nor take on the responsibility of vertically locating them. This process will only delay the road project and possibly damage very expensive and important underground cable.

Change in the Use of Metric Measurements

Vincent Schimmoller, Deputy Executive Director, FHWA

This is to let you know about changes in our policy on the use of metric measurements in documents prepared by the State Departments of Transportation for Federal-aid highway projects.

In the future, the use of metric measurements in documents prepared by the State DOT's will be optional. I am, therefore, rescinding the following prior guidance memoranda on this issue:

"Metric Conversion in Environmental Documents", (December 13, 1993).

"Metric Use Requirements", (May 6, 1999).

We are not, however, changing our policy on the use of metric measurements in documents prepared by the FHWA. In accordance with the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100-418), we will continue to use metric measurements in our daily business activities. As in the past, documents intended for a broader audience, such as the general public, may use dual units with the metric value first followed by the inch-pound value in parenthesis.

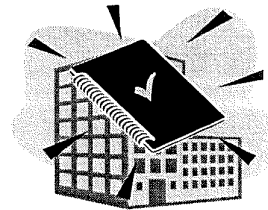
The change in guidance resulted from inquiries by several State DOT's. Following a recent inquiry from the Washington State Department of Transportation regarding environmental documents, I asked the Office of Chief Counsel to review our policy requiring the use of dual measurements. Chief Counsel based its review on Section 205(c)(2) of the National Highway System Designation Act of 1995, which prohibits us from requiring any State to use the metric system "... with respect to designing or advertising, or preparing plans, specifications, estimates, or other documents, for a Federal-aid highway project ..." before September 30,

2000 (emphasis added). Section 1211(d) of the Transportation Equity Act for the 21st Century deleted the date of September 30,

2000, making the exception permanent.

Although there is some value in the use of dual measurements, we have concluded that Section 205(c)(2), as amended, gives us sufficient flexibility to let State transportation officials decide whether to prepare documents using the inch-pound system, metric measurements, or dual measurements. The reference to "other documents" covers not only environmental documents but all reports and documents prepared by the States for the FHWA. These documents include planning and research funded grants and forms such as FHWA-45 (Bid Price Statistics) and FHWA-47 (Record of Materials, Supplies, and Labor).

This change also clarifies a portion of our letter dated October 22, 1998, to the chief executive officer of each State transportation department concerning the impact of TEA-21 on metric conversion. If you have any questions on this matter, please contact Ms. Carol Jacoby at 202-366-1561 or Mr. Edwin Okonkwo at 202-366-1558, both of the Office of Program Administration.



Hard work spotlights the character of people: some turn up their sleeves, some turn up their noses, and some don't turn up at all."

-Sam Ewig

Supplemental Agreement Report-March

Larry Kelley, District Design Engineer

This is the Supplemental Agreement Report for the month of March 2001. The three (3) categories of supplemental agreements that are included in this monthly report are codes 113, 119 and 128. This report is also included in the Quarterly Design Newsletter as a tool to inform designers of errors and omissions that can lead to Supplemental Agreements and unnecessary costs to the public.

Below is a description of those areas and our responses:

Description Code 113: Modification to pavement design required.

S.P. No. 55320-3449, FPID No. 222596-1-52-01 (Leon County)

Reason: Improvements under this contract included milling and resurfacing the existing roadways and paved shoulders along SR 8 (I-10) in Leon County. The typical section provided for milling the driving lanes 120 mm and 50 mm on the inside and outside paved shoulders. Also, a plans milling note specified that the milling would not intrude into the existing crack relief layer.

During the second phase of stage milling, the Contractor encountered the existing crack relief layer at varying depths, which required an adjustment to the average milling depth. This milling adjustment resulted in a non-typical cross slope of the roadway. Therefore, it was determined by the Department that additional asphalt would be required in order to maintain the required resurfacing thickness and achieve the required cross slope criteria.

Subsequent to the cross slope correction required during resurfacing of existing roadways, it became apparent that the existing grassed shoulders adjacent to the roadways were substandard and borrow material would be required to eliminate a drop-off condition. A review of the plans revealed that the Designer did not include provisions for borrow material on the project.

As a result of the review, it was determined that a pay item for borrow by truck measure would be established to correct the low shoulders. The placement of borrow material and increased shoulder work necessitated an increase in the sod and grassing items.

Increase = \$400,843.15

Response: This was not a design error. The Designer did not have any control over the actual depth of the existing crack relief layer and the exact same amount of resurfacing was being replaced as was milled from the existing paved shoulders. Therefore, based upon Index 105 of the Roadway and Traffic Design Standards it would appear that not anything would need to be done to the existing grassed shoulders and front slopes.

However, it should be pointed out to Designers that just matching the existing pavement design does not necessarily mean that shoulder work is not required. The Designer should evaluate the condition of the existing grassed shoulders to determine if the existing shoulders are low or high, eroded, sloped within the allowable range and condition of the existing turf. Reviewing the cross sections and also a good field review should help make this determination, however either one alone may not.

Description Code 119: Revisions required related to major structural component changes.

S.P. No. 61010-3529, FPID: 220784-2-52-01 (Washington County)

Reason: This project consisted of the removal and replacement of the Choctawhatchee River Bridge on SR 10 (US 90) in Washington County.

The Contractor submitted a claim requesting compensation for cost incurred that is attributed to delay of the delivery of bridge beams due to design deficiencies. The Contractor further requested compensation for performance of load test and modifications made to type 6 pre-stressed beams. The Department reviewed the Contractor's claim and recognized the Contractor incurred additional cost that was attributed to the pre-stressed concrete beams produced for this project.

Increase = \$128,586.85

Response: The CEI or Construction personnel did not attribute this Supplemental Agreement to a designer error. A further investigation into the matter with the former District Structure's Engineer revealed that much of the problem was in the casting of the beams and concrete below the required strength that led to corrective measures and load test being performed on the beams.

Description Code 128: Inaccurate or inadequate survey information used in plans preparation.

S.P. No. 48040-3570, FPID: 218624-1-52-01 (Escambia County)

Reason: This project consisted of milling and

(Continued from page 4)

resurfacing and paved shoulder construction along SR 95 (US 29) from I-10 to Cantonment. There were numerous locations along the project where construction of the paved shoulders on the standard 0.06 cross slope went through existing asphalt driveways. The construction of the paved shoulder resulted in the outside edge of the new paved shoulder being lower than the same point on the existing asphalt driveways. This resulted in the existing driveways being excavated and graded to match the new grade established by the paved shoulder.

Increase = \$5,555.97

Response: The CEI or Construction personnel did not attribute this Supplemental Agreement to a designer error. Problems arose with the original surveyor on this project and another surveyor had to finish surveying the project. Therefore, it was decided that the survey was incomplete.

This supplemental agreement probably does not include all the cost that is involved with the driveway reconstruction. The asphalt was probably overrun in regular items to repave the driveways or will appear in subsequent supplemental agreements.

This supplemental agreement is being included in this report because this is a re-occurring error on 3-R projects and is normally attributed to a design error. It should be pointed out to designers that paved shoulder construction normally is carried through existing paved (asphalt and concrete) driveways on the standard 0.06 cross slope. This may result in the edge of the new paved shoulder being higher or lower than the same point on the existing driveway. Normally, only at existing paved side roads is the paved shoulder terminated and warped to tie to the existing returns.

The designer should request (if not provided in survey) that the surveyor provide a half cross section at each driveway to help establish this requirement as well as the existing driveway material type (asphalt or concrete). Sometimes this can be determined by a visual inspection (field review) but it will not provide sufficient information about the necessary reconstruction distance to provide a smooth connection or one that meets Roadway and Traffic Design Standards, Index 515 slope requirements.

The Turnout Construction pay item should be included for reconstruction of asphalt driveways and 6" Concrete Sidewalk pay item for reconstruction of concrete driveways, as they are to be replaced in-kind.

Supplemental Agreement Report—April

Larry Kelley, District Design Engineer

This is the Supplemental Agreement Report for the month of April 2001. The two (2) categories of supplemental agreements that are included in this monthly report are codes 009 and 503. This report is also included in the Quarterly Design Newsletter as a tool to inform designers of errors and omissions that can lead to Supplemental Agreements and unnecessary costs to the public.

Below is a description of those areas and our responses:

Description Code 009: Permit related issues.

S.P. No. 58050-3519, FPID No. 220405-1-52-01 (Santa Rosa County)

Reason: Improvements under this contract consists of multilane reconstruction along SR 87 in Santa Rosa County.

Subsequent to commencement of construction, a review of existing site conditions revealed areas of the project were exposed and subject to potential erosion during the clearing and grubbing operation. Due to the environmental sensitivity of this project and its location, the Florida Department of Environmental Protection requested that hydro seeding be used as an erosion control method to temporarily stabilize the exposed surface conditions.

Since the project has been under scrutiny by the FDEP, the Department agreed to use hydro seeding and hydro mulching in lieu of regular seeding and mulching to expedite stabilization of exposed areas. Hydro seeding can be placed safely on steep slopes and does not require final dressing of the areas prior to application.

Increase = \$47,740.00

Response: This was not a design error.

Description Code 503: Change resulting from engineering decision.

S.P. No. 57040-3578, FPID: 220177-1-52-01 (Okaloosa County)

Reason: Improvements under this contract consist of new multilane roadway construction and construction of a low level bridge over Rocky Bayou on SR 20.

Subsequent to commencement of construction, in an effort to expedite the completion of the project, the

(Continued from page 5)

Department proposed allowing the existing roadway pavement in phase II construction to remain in place. The existing pavement in certain areas would be overlaid with ABC-III where a minimum application of three (3") of ABC-III, the structural asphalt and surface course thickness as called for in the plans would result in achieving the proposed profile grade for the roadway. This change involved overlaying the existing mainline pavement from station 59+51 to station 569+00 of phase II construction and included areas of base widening and new side street connections.

Increase = \$254,770.04

Response: This was not a design error.

Supplemental Agreement Report—May

Larry Kelley, District Design Engineer

This is the Supplemental Agreement Report for the month of May 2001. The two (2) categories of supplemental agreements that are included in this monthly report are codes 101 and 107. This report is also included in the Quarterly Design Newsletter as a tool to inform designers of errors and omissions that can lead to Supplemental Agreements and unnecessary costs to the public.

Below is a description of those areas and our responses:

Description Code 101: Necessary pay item(s) not included.

S.P. No. 48020-3564, FPID No. 218608-1-52-01 (Escambia County)

Reason: Improvements under this contract consist of removal and construction of a new Bayou Texar Bridge on Cervantes Street (SR 10A) and milling and resurfacing the approaches to the new bridge.

After the project had been let to contract, it was discovered that Redirective Attenuators would be required in order to meet the minimum design standards, in accordance with the FDOT Roadway and Traffic Design Standards Booklet, dated January 1998. The Designer of Record had not included pay item number 2102-89-4, Vehicular Impact attenuator (Temp.) in the contract plans.

Increase = \$33,340.02

Response: This appears to be a design error. The premium cost incurred will be pursued, if after a further review by the Designer, FDOT Project Management

Engineer, Project Manager, Consultant CEI and Construction personnel that the error was indeed an avoidable design error.

Description Code 107: Modification of approved MOT plan to accommodate various modes of transportation (i. e. pedestrians, boats, cars, bikes, etc.).

S.P. No. 55003-3501, FPID: 219866-1-52-01 (Leon County)

Reason: Work under this contract consisted of milling, resurfacing, drainage improvements, signing and pavement markings on SR 261 (Capital Circle). Subsequent to the project being let, the Department conducted a traffic count survey and determined that due to the high volume of traffic utilizing this roadway, the need existed for restricting the Contractor's lane closures during peak hours. Lane closure restrictions were implemented to enhance safety and alleviate traffic congestion and inconveniences to the traveling public while these improvements were being performed.

The Contractor was advised prior to construction beginning that based on the recent traffic count survey initiated by the Project Engineer, lane closure restrictions would be required during peak hours from 7:30 AM to 9:00 AM and from 4:30 PM to 6:30 PM.

The MOT plan in the contract plans did not reflect any lane closure restrictions during peak hours. Based on this the Contractor requested additional monetary compensation for the idle equipment on the project during the restricted work hours.

Increase = \$6,421.38

Response: This was not a design error. The scope for the design services on the project did not call for performing a lane closure analysis and did not list the peak hours when lane closures for the project would be prohibited. The scope of services on most projects, now require that a lane closure analysis be performed and the times when lane closures are restricted be shown in the plans.

"Let every nation know whether it wishes us well or ill, that we shall pay any price, bear any burden, meet any hardship, support any friend, oppose any foe to assure the survival and the success of liberty.

—John F. Kennedy