

FLORIDA DEPARTMENT OF TRANSPORTATION

# District Three Design Newsletter

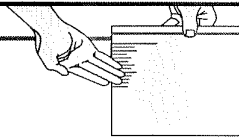
(Internet Address - <http://www.dot.state.fl.us/rddesign/D-3/files/d-3.htm>)

Volume 5, Issue 3

JULY—SEPTEMBER 2000

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## Newsletter On-line Index

**Eddie Register, District III Design Newsletter**

In June of this year, a feedback survey was sent to transportation engineering consultants that are currently, or have in the recent past, conducted business with FDOT District Three in the design of transportation projects. The purpose of the survey was to obtain feedback from consultant partners as to how well our processes, policies, and procedures are functioning.

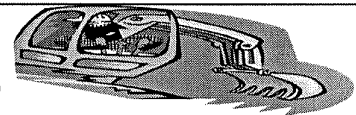
One participant suggested the creation of an on-line index system for design issues discussed in the Quarterly Design Newsletter. After review, it was concurred that such an index would prove beneficial in aiding our consultant partners to locate and request copies of specific design issues previously published in the Newsletter. We are pleased to announce that this new index is currently on-line and may be accessed at :

<http://www.dot.state.fl.us/rddesign/D-3/files/d-3.htm>

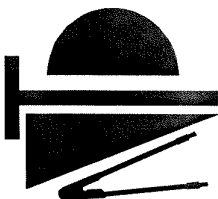
Please note that updates will be added quarterly to the Index beginning with the October/December quarter. Should you have any questions or comments regarding our web page, please feel free to contact the District Design Engineer, Brian Blanchard, or myself at the e-mail address links provided on the District Three Design homepage.

## Excavation of Structures

**Brian Blanchard, District Design Engineer**



Designers are not to specify excavation depths, etc. that disagree with Section 125 of the Standard Specifications, without first discussing the issue with the District Geotechnical Engineer. Section 125 requires all excavation in stream beds to a depth of at least 4 feet below the permanent bed of the stream. In no case should requirements be used that are below those given in Section 125. The designer must also consider the excavation requirements given in Section 125 for structures in stream beds when designing Traffic Control Plans. The designer must coordinate the excavation requirements with the DEMO office when preparing the permit application.

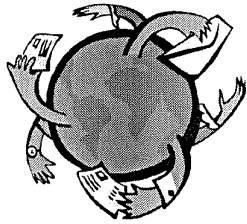


## Right Turn Lanes

**Brian Blanchard, District Design Engineer**

This article is to clarify our policy concerning turn lanes on permit applications and F.D.O.T. design projects. Our current policy on right turn lanes is to provide a 5 foot undesignated lane to the left of the right turn lane for bicyclists. If the 5 feet cannot be provided due to right of way restrictions, a minimum of 4 feet is acceptable.

The existing 5 foot paved shoulder should be removed to provide a full depth pavement design for the right turn lane. A new 5 foot paved shoulder on the outside of the right turn lane is not necessary if the additional pavement is provided to the left of the right turn lane.



## **Consultant Project Web Sites**

### **Project Web Page Task Team**

The Public Information Officer, and the Project Manager will decide if a project Web site will be created. The District Public Information Director and the respective Project Manager will claim equal ownership of the Web Site and be responsible for making sure that the project Web site is updated and maintained during its various phases. The District Secretary and the District Directors of Transportation Development, Transportation Operations and Transportation Support and the Central Public Information Office will be notified by e-mail by the District Public Information Director when a new project Web site is created.

In most cases, project Web sites will only be approved for major, high profile jobs that merit a CAP Level 3 or 4. However, the District Public Information Director and the Project Manager may include other projects when deemed appropriate. When the scope of services is written on a new job, a hit counter will be placed on the new Web site to get a handle on the traffic it generates. This information will help in the planning of future sites.

A project will keep the same Internet address from concept to completion. If a project has moved to construction, for example, preceding material will be archived from other phases so interested parties can still look it up on the project Web site. As a project

passes from one phase to another, it will be left up with the proper disclaimer or notification. A timeline will be created to show where the project has been, where it is now, and where it is going. In order to give people a basic understanding of DOT's Work Program, every project Web site will be linked to the department's Work Program information at

<http://www.dot.state.fl.us/programdevelopmentoffice/wp.htm>.

When people leave the DOT site to visit a consultant project Web site, a separate page will pop up with the following message: "You are now leaving the Florida Department of Transportation Web site. Your are about to access [www.yourprojectWebsite](#). Thank you for visiting." Every consultant project Web site will be linked back to the DOT home page.



A new link will be added to the drop down menu on DOT's home page called "Major Project Web Sites." This will take people to a Web page that lists the links to all major project Web sites. Consultants are permitted to place their business logo on the project Web site. This logo may link to the consultant's home page. The District Public Information Director must approve the placement and size of the logo.

## **Evacuation Routes**

**Brian Blanchard, District Design Engineer**

During our Operations/Production meeting, I shared verbally my design notes which apply to evacuation routes. Below is the written version of the notes to be included in the plans and usage notes intended for the newsletter.

### **Existing 4 Lane Highways**

**Usage Note for the Designer:** The designer shall provide a Traffic Control Plan that provides 2 lanes of traffic in both directions at all times, or can be restored to 2 lanes in both directions within 24 hour notice of an emergency.

*Example:* No providing of one lane in each direction, on a divided roadway, to replace a 2 lane bridge in one direction to keep from providing a temporary detour bridge. As an exception to this requirement, in an urban area, one lane might be provided if there is a short alternate route that can be provided as a detour upon notice of an emergency (only where lane closure analysis would allow one lane for extended period).

### **Plans Note: All Existing 4 Lane Highways**

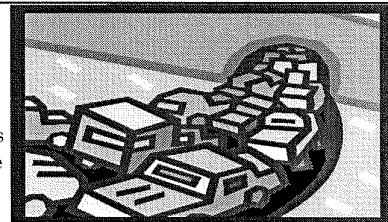
All lanes must be open for traffic during an evacuation notice of a hurricane or other catastrophic event and shall remain open for the duration of the evacuation or event as directed by the Project Engineer.

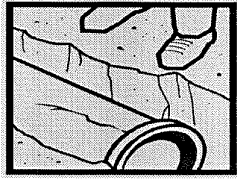
### **Existing 2 Lane Highways**

**Usage Note for the Designer:** The designer shall provide a Traffic Control Plan that provides for one lane of traffic in both directions at all times, or can be restored to normal traffic conditions within 24 hour notice of an emergency.

### **Plans Note: All 2 lane Highways**

The contractor shall schedule work operations so that both lanes could be opened to traffic within a period of 24 hours in case of an emergency.





## Side Drains

**Brian Blanchard, District Design Engineer**

We have had several projects where side drains are being replaced without enough pipe to meet our minimum design standards. These are usually field entrances in rural areas. Sub-standard driveways are not suitable for farm equipment and many are eventually used as residential driveways.

We require that all driveways/turnouts be installed to the minimum standards when side drains are extended, replaced or mitered ends constructed on existing pipes

*"The factory of the future will have only 2 employees, a man and a dog. The man will be there to feed the dog. The dog will be there to keep the man from touching the equipment."*

Warren Bennis

## Right of Way: Center line of Survey

**Ira Carter, District Location Surveyor**



Right-of-Way requirements in relation to centerline of construction, has become a hot topic in District Three. Through the years we have battled with right-of-way requirements being based off of the centerline of construction vs. the centerline of survey. In some cases, the requirements should be based off the centerline of construction (i.e., a new alignment that leaves the existing roadway). Unfortunately, there are several negative factors that come into play when using the centerline of construction especially when it would be just as easy to project the proposed right-of-way on to the survey line. Three readily apparent negative factors are: (1) it creates clutter to an already congested right-of-way map, and (2) the existing right-of-way is already based off the centerline of survey in most cases, and (3) in the future it will cause problems in determining where the right of way actually is.

We are finding more and more centerline of constructions that may run adjacent to the centerline of survey and have a one or two second difference in the bearing. This is not acceptable when this line is used for the acquisition of right-of-way. Every line established that has right-of-way acquired off of it, whether it is a centerline of construction or centerline of survey, has to be reestablished in order to determine the location of the existing right-of-way.

Also, we have received construction plans that do not show the existing right-of-way in the areas where new right-of-way is being acquired. All the right-of-way on these plans are shown as "right-of-way". This makes it extremely difficult in a review to ensure that we either (1) have the right-of-way shown, or (2) need to acquire additional right-of-way. We are also seeing required right-of-way not being parallel, concentric or perpendicular (when there is a jog in the right of way) to the centerline of survey. When creating a centerline of construction, if it is absolutely necessary to base your proposed right-of-way off it, realize that

the proposed right-of-way directly affects Right-of-Way Surveying and Mapping employees and the property owner as well.

**Based on these types of problems, we would like for all right of way to be based off the centerline of survey. If it is absolutely necessary to base the right-of-way off the centerline of construction we would like to see a little more thought put into the establishment of a centerline of construction. We would also like to see existing right-of-way shown along with the proposed right-of-way on the construction plans. As a solution, we feel that more collaboration between the Designer and the Right of Way Surveying and Mapping employees, on a regular and consistent basis during the planning period, will ensure that the right-of-way maps produced will be more accurate, that production deadlines are attained and replication of work is kept to a minimum.**



### COMMUNICATION

A 3 1/2 year old son was eating an apple in the back seat of the car, when he asked, "Daddy, why is my apple turning brown?"

"Because," his dad explained, "after you ate the skin off, the meat of the apple came into contact with the air, which caused it to oxidize, thus changing its molecular structure and turning it into a different color."

There was a long silence. Then the son asked softly, "Daddy, are you talking to me?"

*The Executive Speechwriter Newsletter*

## Supplemental Agreement Report-June

**Brian Blanchard, District Design Engineer**

This is the Supplemental Agreement Report for the month of June 2000. The four (4) categories of supplemental agreements that are included in this monthly report are codes 005, 105, 106 and 700. This report is included in the Quarterly Design Newsletter as a tool to inform designers (anyone that receives it) 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 005: Utility adjustments delaying contract work schedules caused by Utility Companies with no JPA involved (should be all premium and 3<sup>rd</sup> party charged).**

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

**Reason:** Improvements under this contract included the 4-laning of SR 20 from west of Rocky Bayou to CR 294 (White Point Road) and the construction of an additional bridge across Rocky Bayou.

The Contractor submitted claims to recover time and cost attributed to utility delays after the 60 day period expired and no settlement was reached between the Utility Companies and the Contractor.

**Increase = \$185,843.00**

**Response:** This was not a design error. The delays were attributed to the Utility Companies by the CEI (Metric Engineering, Inc.).

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

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

**Reason:** Improvements under this contract included the 4-laning of SR 20 from west of Rocky Bayou to CR 294 (White Point Road) and the construction of an additional bridge across Rocky Bayou.

The Contractor submitted a claim for removing

topsoil stockpiled on property shown on the project plans to be FDOT right of way, but was found to be private property.

**Increase = \$14,784.00**

**Response:** The CEI attributed this supplemental agreement to a design error and the entire amount is premium cost. The Department will pursue recovery if after further evaluation by the Project Manager, Designer, CEI and the R/W Department that the error was the Designer's and not incorrect information provided by the Department.

**Description Code 106: Inaccurate location, size, identification, conflict resolution, etc. of an existing or proposed utility (no JPA involved).**

**S.P. No. 55010-3527, FPID: 219811-1-52-01 (Leon County)**

**Reason:** Improvements under this contract included milling and resurfacing of SR 63 (US 27). During the milling operation the Contractor encountered structures not shown in the plans within the existing asphalt pavement, which resulted in damage to the milling machine. Subsequently, the Contractor submitted a claim requesting compensation for the equipment repairs and down time cost.

The Department reviewed the Contractor's claim and determined that the Contractor would recover the cost associated with repairing the damaged milling machine and down time.

**Increase = \$6,102.09**

**Response:** The In-house CEI/District Construction Office did not attribute the claim to a design error. The structures were not visible and were not picked up by the survey therefore the Designer was unaware of their presence.

**Description Code 700: Overrun of existing pay items when original contract amount is exceeded by over 5%.**

**S.P. No. 48050-3500, FPID: 218690-1-52-01 (Escambia County)**

**Reason:** Improvements under this contract included milling and resurfacing of SR 292 (Gulf Beach Hwy). Overruns to certain pay items resulted in the Contractor's work effort exceeding the original contract amount by more than 5%. Off Duty Law Enforcement Officer: Utilization of this item was

*(Continued from page 4)*

necessary to ensure safety of motorist and Contractor's work force during periods of lane closures.

Pavement. Removal of Existing Concrete: During paved shoulder construction, additional areas of existing concrete pavement were encountered which required removal.

Superpave Asphaltic Concrete (Traffic Level 3) & Asphaltic Concrete Friction Course: Subsequent to the design phase, additional acceleration/deceleration and median turn lanes were constructed along this project under FDOT issued permits. Surfacing of these areas in addition to the correction of pavement cross slopes and the construction of connections to existing side roads and driveways resulted in the increased utilization of these items.

**Increase = \$110,921.96**

**Response:** This supplemental agreement was not the result of a design error. The increased use of the Law Enforcement Officer was above the normal required conditions for their use as given in the Plan Preparation Manual.

## Supplemental Agreement Report—July

**Brian Blanchard, District Design Engineer**

This is the Supplemental Agreement Report for the month of July 2000. The three (3) categories of supplemental agreements that are included in this monthly report are codes 019, 107 and 700. This report is included in the Quarterly Design Newsletter as a tool to inform designers (anyone that receives it) 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 019: Conflicts between contractors resulting from overlapping projects, work limits, pay items, standard indexes or specifications.**

**S.P. No. 99990-3964, FPID: 220874-1-52-01 (Districtwide)**

**Reason:** This was a Districtwide guardrail replacement contract for Bay, Escambia, Gadsden, Jackson, Jefferson, Leon, Okaloosa and Walton counties. Proposed improvements included the

installation of vehicular impact attenuators at locations as identified in the contract plans. Subsequent to this contract being let, a bridge replacement contract was let that encompassed sites 11, 12, and 18 contained in the guardrail replacement contract. The Department recognized the proposed Quadguard Impact Attenuators to be installed at these locations under this contract would conflict with the ongoing work under the bridge replacement contract.

The Department made a decision to eliminate installation of the Quadguard Attenuators at the aforementioned sites and to reimburse the contractor for attenuator components. The surplus components were salvaged into the Departments Maintenance inventory.

**Decrease = \$36,881.28**

**Response:** Because of the multiple counties and roads involved this error is not being attributed to a design error. However, the Designer and Project Manager should check when starting a project to determine if there are or will be other projects within or adjoining their project that should be considered and would affect the design or project limits.

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

**S.P. No. 53002-3432, FPID: 222622-1-52-01 (Jackson County)**

**Reason:** Improvements under this contract includes the new construction of the Sneads Weigh Station for east and west traffic in Jackson County. Subsequent to commencement of construction, the Engineer performed a review of the maintenance of traffic as shown in the plans for phase I construction. The Traffic Control Plans provided for a traffic shift of 1.2 meters by utilizing concrete barrier wall during the proposed pavement construction adjacent to the existing roadways, whereby narrowing the pavement driving surface for motorist using the inside lane and creating a potential hazardous condition should a

*REPORTS INDICATE THAT 1.5 MILLION WEB PAGES ARE ADDED TO THE INTERNET EACH DAY, AND THAT THE NUMBER OF WEBSITES IS DOUBLING EVERY 8 MONTHS.*

(Continued from page 5)

vehicle temporarily veer from the driving lane.

The Department evaluated this condition and determined that in order to ensure safety of the traveling public, temporary pavement widening and shoulder treatment was required on the inside shoulder for both the east and westbound roadways.

This entailed the widening of the roadway by one (1) meter to include the following:

1. The installation of roadway base, 50 mm thick structural asphalt for the entire inside length of the project.
2. Borrow and regular excavation as required to achieve a normal shoulder width.
3. Final dressing, sod strip adjacent to widening and seeding and mulching of remaining area.
4. Removal of all temporary pavement, sodding and seeding and mulching upon completion of the phase I construction.

**Increase = \$129,500.00**

**Response:** This supplemental agreement is not being attributed to a design error. The revised plan is definitely safer for the traveling public, however the original MOT plan as provided met all the requirements as given in the 1998 Standards, Index no. 600. It allowed the barrier wall to be placed at the edge of the existing roadway without being offset the 0.6 meter (2') requirement as given in the 2000 and 2001 Standards. It has been recommended as the minimum offset, but was not a requirement by the index. The use of 11' wide inside lane is permissible as long as the outside lane is 12' wide. The use of the inside and outside shoulders as part of the driving surface for a lane diversion/detour has been standard practice on all the I-10 rehabilitation and resurfacing projects.

**Description Code 700: Overrun of existing pay items when original contract amount is exceeded by over 5%.**

S.P. No. 55060-3502, FPID: 219857-1-52-01 (Leon County)

**Reason:** Improvements under this contract included milling and resurfacing of SR 10 (Tennessee St.), mast arm signal installation at several intersections and minor ADA and sidewalk improvements along the project.

Extensive utilization of silt fence for erosion control,

protection of adjacent property and control of sediment intrusion into the storm sewer system during construction operations resulted in a substantial overrun to the silt fence pay item.

**Increase = \$122,401.80**

**Response:** This supplemental agreement was not the result of a design error. Under normal circumstances the designer would not anticipate or estimate the amount of silt fence used for this type project.

## Supplemental Agreement Report—August

**Brian Blanchard, District Design Engineer**

This is the Supplemental Agreement Report for the month of August 2000. The three (3) categories of supplemental agreements that are included in this monthly report are codes 010, 117 and 700. This report is included in the Quarterly Design Newsletter as a tool to inform designers (anyone that receives it) 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 010: Additional items, overruns or plans modifications due to weather causes (ex. repair of damage caused by hurricane such as excessive erosion or wind damage).**

**S.P. No. 55050-3542, FPID: 219776-1-52-01 (Leon County)**

**Reason:** Project plans provides for multilane reconstruction of SR 61 (US 319) from Mt. Zion Church to the Florida/Georgia State line.

During construction the project experienced heavy rains resulting in high levels of slope erosion in various locations throughout the project limits. A review of the site conditions revealed steep grade differentials previously sodded failed to stabilize the slopes. Due to the environmental sensitivity of the project location, the Department determined remedial action was necessary to restore and repair the slopes by redressing the damaged areas. The remedial work consisted of grading and dressing of eroded slopes, the installation of additional riprap ditch lining and the utilization of pegged and lapped sod in order to

*(Continued from page 6)*

control and prevent slope and ditch erosion.

**Increase = \$218,530.00**

**Response:** This was not a design error.

**Description Code 117: Access management issues.**

**S.P. No. 55050-3542, FPID: 219776-1-52-01 (Leon County)**

**Reason:** Project plans provides for multilane reconstruction of SR 61 (US 319) from Mt. Zion Church to the Florida/Georgia State line.

There were nine driveways along the project that was not shown on the original construction plans. This work order provided for mobilization/demobilization, regular excavation and embankment to reconstruct the driveways from the roadway to the right of way line in accordance with the Right of Way Agreements negotiated on the project between the Department and the property owners. The locations for the driveways are northbound: 358+50, 366+50, 372+96, 389+30 and southbound 258+65, 266+90, 276+15, 279+00 and 287+75.

**Increase = \$16,101.15**

**Response:** This supplemental agreement is being attributed to a design error. All driveways that are affected by construction should be shown on the plan sheets or in a summary of turnouts when plan sheets are not provided. Stipulated final judgments should be reviewed and driveways provided accordingly when they disagree with normal driveway configurations and requirements as given by Standard Index no. 515.

The requirement for showing all driveways affected by construction on the plan sheets for multi-lane projects and urban curb and gutter projects or in table format for resurfacing projects without plan sheets was in the April-June, 1997 District Three Design Newsletter and again in the April-June, 2000 Newsletter.

**Description Code 700: Overrun of existing pay items when original contract amount is exceeded by over 5%.**

**S.P. No. 55050-3544, FPID: 219773-1-52-01 (Leon County)**

**Reason:** Improvements under this contract included multilane reconstruction of a section of SR 61 (US 319). Project plans provided for removal of existing unsuitable material at various locations throughout the project limits. A review of the actual site conditions revealed certain areas of unsuitable material required extra depth removal. It was determined by the Department that the additional removal was essential to ensure the integrity of the roadway pavement. Subsequently, the overrun to the subsoil quantities directly relates to the overrun in embankment quantities.

**Increase = \$459,341.85**

**Response:** This supplemental agreement was not the result of a design error, but unforeseeable conditions.

**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.  
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Quarterly Design  
Newsletter***

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