

District Three Design Newsletter

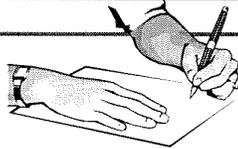
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From the Editors Desk

Larry Kelley, District Design Engineer

Congratulations to Brian Blanchard on his promotion to State Roadway Design Engineer. We wish him success in this new endeavor. Although we show Brian's new title on several articles in this newsletter edition, they were authored by Brian for District 3 prior to his leaving for Tallahassee.

The article entitled "A Dozen Points on Environmental Issues" is authored by Gene Martin with input from the District Secretary, other Directors, Brian Blanchard and Department Heads. A team has been meeting weekly to establish measures that adequately identify and protect wetland areas, and prevent problems during construction. These measures should also expedite the permitting process. Environmental awareness is a very serious matter and erosion control and wetland protection is not "business as usual".

I look forward to serving the Department as District 3 Design Engineer. There are many challenges ahead for all of us. Together, as a team, we can meet these challenges and continue the production success that District 3 enjoys.

I know many of you on the Design team from my past years in production prior to 1994. For those new to the team since then, I hope to meet you at the upcoming District 3 Design Conference on April 26 & 27 at the Panama City Bay Point Marriott.



HAVE YOU REGISTERED???

District III Design Conference

April 26 & 27, 2001

Bay Point Marriott

Panama City, FL

CALL JUDY COOK

850-638-0250 EXT. 422

Bay Point Room Reservations:

1-800-874-7105

Setting Right of Way on Urban and Rural Projects (District 3)

Brian Blanchard, State Roadway Design Engineer



A multi-disciplined team met February 21st to establish guidelines for setting right-of-way. Two objectives were defined:

1. Choose a preferred method (option 1 or 2) for setting right-of-way on an urban roadway
2. How to establish the right-of-way lines on urban vs. rural projects

There are two methods for setting right-of-way on urban projects.

Option 1 is to set the right-of-way 2 feet behind the sidewalk with the front slope being part of a temporary easement. The disadvantages to this option are that easements will increase the work effort required by the right-of-way mapping office, easements will have a 5 year expiration and if the roadway is widened in the future, the easement (now expired) will have to be re-acquired as a fee simple. We realize there may be specific situations where an easement could be a cost-effective solution. There are also situations where an easement in lieu of right-of-way allows the property owner to meet

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District III Quarterly Design Newsletter

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set-back requirements. These locations should be identified as early as possible by the engineer-of-record, land planner and appraiser.

Option 2 is to set the right-of-way based on the construction limits of a 1:2 front slope plus an additional 3 feet (desirable), 2 feet minimum to the right-of-way line. This allows space for erosion control and construction equipment. This method allows extra space for locating utilities and helps meet ADA requirements for sidewalks at driveways. **The team agreed that this is the preferred method for setting right-of-way.**

Rural vs. Urban - Designers should set their right-of-way lines differently depending on whether the project is rural vs. urban. Generally, urban projects involve high-impact commercial properties and the requirements should be set using multiple P.I.'s to

minimize the impacts. Rural projects usually involve non-commercial properties and the right-of-way can be set based on a uniform width. Minimizing the requirements is still important. In all cases, the impact on the adjacent property is the determining factor in which method to use.

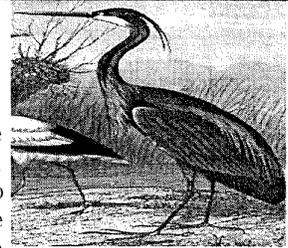
The requirements for border width in the PPM (12 feet from the travel lane to the right-of-way line on urban projects with a bike lane) should be used when setting right-of-way. This requirement can exceed the normal limits of construction. It will provide right-of-way for site distances, utilities, sidewalks with ADA provisions, traffic control devices, storm drain features and bus and transit features. A variance is required if this minimum width cannot be provided.

The team agreed that John Duncan would present these guidelines at the District Design Conference on April 26 and 27, 2001.

A Dozen Points on Environmental Issues

Gene Martin, Director of Production

1. MECHANICAL clearing and grubbing or VEHICULAR intrusion in jurisdictional wetlands require permits from Florida Department of Environmental Protection (FDEP) and United States Corp of Engineers (USCOE). If you have Clearing and Grubbing or excavation on a Department of Transportation (FDOT) project you probably need a FDEP and possibly a USCOE permit prior to advertising the projects for bids.
2. For multi-lane projects, projects on new alignment, bridge replacements and any other projects specified by FDOT, a formal jurisdictional determination from FDEP and a binding jurisdictional determination from USCOE will be required with the Phase I (30%) submittal. It is FDOT's intent to mitigate for impacts within the Limits of Construction (LOC) PLUS a "buffer zone" of 5 feet outside each LOC line. If the right of way line is within 5 feet of the LOC, we will stop mitigation at the right of way line. The jurisdictional lines for FDEP and USCOE will be staked and surveyed by a registered surveyor.
3. The consultant will stake or flag both the FDEP and USCOE jurisdictional lines before Phase I submittal. Prior to submitting the FDEP and USCOE permit application the consultant will reflag or restake both FDEP and USCOE jurisdictional lines. The consultant will remove all stakes or flags after approval of the environmental permits. The



contractor will be provided, in the plans, survey points to delineate or flag the wetlands that are

NOT TO BE IMPACTED. It will be the contractor's responsibility to flag or stake these areas prior to construction beginning and maintain them throughout construction.

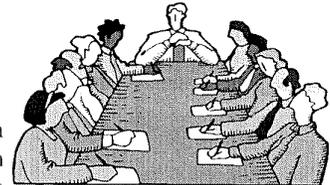
4. On all projects, the plans will clearly show the FDEP and USCOE jurisdictional line. The FDEP and USCOE jurisdictional areas that are impacted and mitigated for shall be clearly designated and noted "Construction activities allowed." Jurisdictional areas that are not impacted and are to **remain undisturbed** throughout construction shall be clearly designated and noted "Construction activities not allowed". On future projects, we will add a new section in the plans, similar to maintenance of traffic plans, to reflect the items above. This section shall also include a Tabulation Sheet or Block defining the undisturbed wetlands by x, y coordinates or station and offsets. The disturbed wetlands shall also be tabulated indicating the area impacted or mitigated in Square Feet or Acres. This section shall include any general or project specific environmental notes.
5. The Engineer of Record (EOR) will prepare a narrative, in layman terms, for inclusion in the permit application package. It shall include work being performed in this project, impacts to the environment and methods of construction specifically related to the

- environmental sensitive areas. This brief description will aid the regulatory agency reviewer in understanding the scope of the project.
6. A pre-Application Meeting should be held on major projects between the FDOT Project Manager, Environmental Management Office, EOR and all agencies issuing permits on the project no later than 60% plan development. This meeting should discuss estimated mitigation acreage, mitigation inventory acreage, proposed pond sites, jurisdictional delineations, special erosion requirements, additional sensitive sites and Northwest Florida Water Management District (NFWFMD) mitigation plan. This meeting should streamline the permitting by early involvement with agencies.
 7. The EOR shall prepare an Erosion Control Plan that will prevent or minimize environmental impacts. Areas especially prone to erosion, such as high fill areas or long steep ditches must be given special attention, i.e. sod, temporary matting, slope drains, inline holding or sediment pools, etc., to reduce environmental impacts.
 8. At the Pre-Construction Conference, the EOR must be prepared to discuss the Erosion Control Plan, including environmental sensitive areas, any known risk and the special requirements listed in the permit for this project.
 9. All environmental permits will be forwarded to the EOR as early as possible. It will be the EOR's responsibility to compare the plans with the environmental permits for conflicts and/or discrepancies. The EOR must submit in writing to the Project Manager this review has occurred and the plans comply with the permit. Also, with this letter, he will verify the flags and/or other wetland delineation markings related to this project have been removed.
 10. On projects with utility relocation, the wetland delineation lines and wetland areas (disturbed and undisturbed) must be shown in the plans at the time of the utility pre-design meeting (Phase II Plans).
 11. For utility constructions projects not associated with a FDOT project the Utility Owner or his representative will be required to present a FDEP and USCOE permit if required or a letter from the regulatory agencies stating a permit will not be required.
 12. For utility construction projects required by a FDOT construction project, prior to intruding a wetland, the Utility owner or his representative - 1.) may be allowed to move the utility under FDOT's footprint working under FDOT's permit, 2.) bore and jack under the wetland or, 3.) secure his own permit.

Right of Way Coordination (District 3)

Brian Blanchard, State Roadway Design Engineer

As a result of a design/right-of-way meeting on January 23rd, we have established a schedule of required coordination meetings. These meetings must be implemented on active projects unless the project is beyond the right-of-way mapping stage. The objective of these meetings is to allow for minor adjustments in the alignment, to require Project Manager/Engineer of Record (EOR) joint review of right-of-way requirements, and to eliminate unnecessary parcels by assessing property lines/right-of-way needs.



The following shall occur:

1. A field review at Phase I or sooner to evaluate the need for minor adjustments to the roadway alignment and the identification of houses, businesses or other right-of-way parcels requiring special considerations (i.e. access, circulation, parking, deliveries, drainage, etc.). This meeting shall occur on multi-lane projects only. The participants shall include the EOR, Project Manager, one right-of-way mapping representative and one right-of-way administration representative.
2. A roundtable review meeting involving the above participants (and Audrey Pitts) should be conducted after the initial right-of-way requirements have been set and reviewed by the EOR and Project Manager (after Phase II). This meeting will evaluate the EOR's right-of-way requirements for discrepancies and can include a land planner (if available). This is a mandatory activity for all projects involving right-of-way acquisition. All right-of-way issues/discrepancies identified during the meeting shall be resolved prior to final right-of-way submittal and acceptance by right-of-way mapping. Project Managers with limited experience should request

assistance from other Project Managers to ensure that the requirements are minimized.

3. A field review involving the Project Manager, EOR, right-of-way mapping representative, and right-of-way administrative representative will occur on multi-lane projects after right-of-way requirements and property lines are established (60%-90% right-of-way maps). This is the last opportunity to eliminate unnecessary parcels.

Supplemental Agreement Report-December

Larry Kelley, District Design Engineer

This is the Supplemental Agreement Report for the month of December 2000. The two (2) categories of supplemental agreements that are included in this monthly report are codes 009 and 105. 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 009: Permit related issues.

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

Reason: Project plans provides for multilane reconstruction of SR 61 (Thomasville hwy.) from Mt. Zion Church to the Florida/Georgia State line with storm water management facilities being provided to treat runoff. Under this contract, these facilities must meet environmental permit requirements.

Following construction of the storm water management facilities, it became evident the storage basins did not adequately percolate during the required recovery time as specified in the contract permits. Due to the environmental sensitivity of the project, the Department determined that corrective measures would be necessary to comply with the permit.

Subsequent to an on site review by the Department and Designer, these facilities were redesigned to include the installation of an underdrain system. In addition, it was determined by the Department the facilities would receive an alum treatment, be pumped, sedimentation removed from the basins and the facilities redressed as necessary.

Increase = \$354,994.30

Response: The CEI and Construction personnel did not attribute this supplemental agreement to a design error.

However, this supplemental agreement is being included as a part of this report for the purpose of bringing attention to future design projects that require the storm water management facilities to percolate within a prescribed time limit by the permits. The Designer must consider the type of soils involved and should get input from the District Drainage Engineer and the District Soils and Foundations Engineer as necessary to provide a system that will work.

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

FPID: 220784-2-52-01 (Holmes & Washington Counties)

Reason: Improvements under this contract consists of construction of a low level bridge over the Choctawhatchee River on SR 10 (US 90).

Subsequent to commencement of construction, the Contractor notified the Department that the contract bid price for pipe piling items did not include the cost of concrete and reinforcing steel. A review of the contract plans performed by the Engineer revealed that the piling installation under this contract was designed with reinforced concrete and would function as cast-in-place reinforced pile columns. It was also determined during this evaluation that the plans failed to contain language that included the components of concrete and steel within the pipe piling unit cost. The Engineer performed a comparison of unit cost of pipe piling for this contract to other projects of similar nature and found that an adjustment was justifiable.

Increase = \$59,828.64

Response: This supplemental agreement is the result of a design error. However, there was no premium cost incurred per the CEI and Construction personnel.

Middle Age

"Middle age is when everything starts to click.....your elbows, knees and neck."

Robert Orban

"You've reached middle age when people start to recognize you from the rear too."

Unknown

"The really frightening thing about middle age is the knowledge that you'll grow out of it!"

Doris Day

Supplemental Agreement Report—January

Larry Kelley, District Design Engineer

This is the Supplemental Agreement Report for the month of January 2001. The two (2) categories of supplemental agreements that are included in this monthly report are codes 105 and 117. This report is 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 105: Conflicts resulting from discrepancies, inconsistencies, etc. between plans notes, details, pay items, standard indexes or specifications.

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

Reason: The project consists of the reconstruction and 4-laning of SR 20 from Rocky Bayou to SR 293 (White Point Rd.).

The plans provided for signalized intersection improvements utilizing Actuated Solid State Controller Assemblies in three locations on the project. Subsequent, to commencement of construction a review of the project documents was performed by the Department. This review revealed discrepancies between the plans requirements and the established contract bid item for the controller assemblies. Upon further investigation it was determined that the correct item was shown in the Summary of Quantities in the Signalization Plans, but the wrong pay item was included in the Summary of Pay Items.

Increase = \$5,706.00

Response: This was a design error. The Designer failed to make sure that the correct pay item was included in the Summary Of Pay Items for the work that was actually intended. However, the CEI and Construction did not assess any premium cost for the difference between the two different controller assemblies.

The Department would like to emphasize to Designers that the review of the Summary of Pay Items against the actual work requirements should be one of the last checks made on a set of plans prior to submitting them as final plans.

FPID Nos. 220784-1-52-01 & 220784-2-52-01 (Holmes & Washington Counties)

Reason: This project consisted of the removal and replacement of the Choctawhatchee River Bridge on SR 10 (US 90) in Holmes and Washington counties. The new bridge alignment was offset and the length of the new bridge was greater than the existing bridge, thus requiring removal of the existing embankment at the abandoned approaches in order to provide a channel width equal to the new bridge span. The project cross sections did not address removal of the embankment on the west approach from the beginning of the new bridge (station 118+25 to the end of existing bridge (station 119+25) and on the east approach from the end of the existing bridge (station 126+75) to end of new bridge (station 127+75). Whereas the DEP permit indicated the existing fill at the west approach would be removed. The Department then made a decision to remove the existing embankment at the east approach in order to provide a channel width equal to the new bridge span. A review of the contract revealed that compensation for this removal was not provided for in the plans.

Increase = \$40,280.37

Response: This was a design error. No premium cost was incurred for this additional work per the CEI and Construction personnel.

Again, the Department would like to emphasize to Designers the importance of reviewing the environmental permits for a project when received and making sure that all the conditions specified by the permits are being provided for in the plans.

Description Code 117: Access management issues.

FPID: 219360-1-52-01 (Jackson County)

Reason: Improvements under this contract consisted of resurfacing, paved shoulder construction, turnout modifications and guardrail improvements along SR 273 (Campbellton Hwy.) from Washington County line to US 231.

The contractor had installed all the side drain pipe and mitered end sections according to the plans. The plans also called for the removal of twenty (20) driveway pipes and grading to provide positive drainage. Subsequently, four of the property owners demanded that their driveways be put back. However, by this time the contractor had demobilized all the crews and equipment for pipe construction.

Increase = \$7,700.00

Response: This supplemental agreement is the result of a design error. All the cost incurred per the CEI and Construction personnel was premium cost.

This project was designed by an in-house designer

therefore pursuit of the premium cost does not apply.

Just because a driveway does not appear to be used does not give the Department the right to remove it without giving the property owner a chance to exercise his rights as provided by Florida Statutes dealing with access rights and permits. However, this does not mean that the Designer should not try to remove or close unused or inaccessible driveways.

The following article was included in the April-June 2000 Design Newsletter by Brian Blanchard and should be adhered too by Designers:

"Designers must notify property owners prior to altering or removing driveways. On projects without a right-of-way phase, this means sending a notification letter to the owner. On projects with a right-of-way phase, the documentation can be by written notification or through a final judgment. As I stated in the April-June 1997 newsletter, we should show all driveways on multilane projects and any urban curb and gutter projects."

Altering a driveway could consist of relocating the driveway or narrowing an existing driveway from maybe 60' down to the current maximum width of 36', etc. The addition of pipe and mitered end sections or replacement of deteriorated pipe on a rural type project or the reconstruction of an urban driveway back the same width to correct the slope or flares would not be considered as altering.

Supplemental Agreement Report—February

Larry Kelley, District Design Engineer

This is the Supplemental Agreement Report for the month of February 2001. The two (2) categories of supplemental agreements that are included in this monthly report are codes 001 and 101. This report is 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 001: Subsurface material or feature encountered not shown in plans - assuming reasonable engineering judgment/ processes used in plans preparation (i.e. muck, old piling, boulders, artesian springs, abandoned utility lines, etc.).

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

Reason: The project consisted of removing the old Bayou Texar Bridge and construction of a new bridge on the existing alignment.

The Contractor was required to remove an additional 434.83 meters of existing piling as part of the lump sum removal of the existing Bayou Texar Bridge structure. The additional length of pile removed was based on the actual recorded meters of existing piling removed and the estimated meters of piling indicated in the project plans.

Increase = \$38,347.66

Response: This was not a design error. The quantity given was only an estimate and it would not be feasible for the designer to know exactly the length of the existing piling to be removed.

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

FPID: 219874-1-52-01 (Leon County)

Reason: Improvements under this contract consisted of resurfacing, paved shoulder construction and guardrail improvements along SR 373 (Orange Ave.) from SR 371 to SR 363 (S. Adams St.).

The Designer failed to include a pay item for special guardrail post that were necessary to construct new guardrail across the existing concrete box culvert on the left from station 7+70 to station 7+92.5.

Increase = \$1,428.00

Response: This supplemental agreement is the result of a design error. However, there was no premium cost incurred per the CEI and Construction personnel.

Designers should be aware that when placing or replacing guardrail across existing concrete box culverts that special guardrail post will be required if the top of concrete box impedes the normal depth of placing standard guardrail posts.

