Florida Department of Transportation

DISTRICT THREE DESIGN NEWSLETTER



Inside this issue:

From the Editor's Desk	1
Supplemental Agreement Report -	2
March, April & May '06	
Utility Service on	3
Full Service	
Contracts	
Design Spotlight- Troy Spivey	3
Designer/Surveyor	4
Relationships	
Taking Ownership	4





District III Quarterly Design Newsletter

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From the Editor's Desk

Larry Kelley, P.E., District Design Engineer

"Quality of Design" is something I'm concerned about every single day. I am, ultimately, responsible for the quality of design in District Three. Most designs are good enough, some are excellent and some are less than desirable.



I saw part of a television program a few nights ago about creativity not being a result of intelligence alone. I didn't get to see all of the program, especially the part where they discussed brain function and parts of the brain associated with creativity.

However, I was impressed with the part of the program that discussed creativity as a culmination of all parts. The parts in this case were all the experiences and education that a person has lived plus all that is gained by day to day interaction with others.

In explaining all this the host showed a scenario where actors were placed in a stage setting but given no script. As the actors observed and fed off of each others' actions and improvised script, a decent little play emerged. His point was that creativity is not solely attributed to intelligence since one actor could not have developed a script that fast on his own.

Albert Einstein is another example. He was obviously a very intelligent person and is credited with developing the famous formula for relativity, E=mc². He did not make this discovery with intelligence alone. He studied physics for many years and closely followed up on the works of Michael Faraday and James Maxwell, both British physicists who had made discoveries in the field of electromagnetic induction. He also built his theories around early French scientists' work which involved experimentation with the relationship of mass and speed and energy.

But, even with all this background information it still took a day-to-day relationship with coworkers and his wife to develop creativity.

Einstein and his wife, also a physicist, chose a specialty of theoretical physics and decided early on to discover the secrets associated with energy, matter and light. Intelligence certainly was a factor in discovery, but creativity was the key.

These examples of course are applicable to any situation where multiple persons are working on a common project or goal. No matter how intelligent a single member of the team is, the creativity may well be dependent on the interaction of individuals. I think we often underestimate the importance of communication. Communication not only gets answers to specific questions, but allows us to observe the ideas and actions of others so our creative mind can put all the parts together.

Creativity in designs may very well be the "quality" in designs. I think we should strive to go beyond just being accurate.

"I can't understand why people are frightened of new ideas. I'm frightened of the old ones."

~ John Cage ~

Page 2 District Three Design

Supplemental Agreement Report-March, April & May '06

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the months of March, April and May 2006. The two (2) categories of supplemental agreements that are included in this report are codes 113 and 503. 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 113: Modification to pavement design required.

Reason: Improvements under this contract consist of milling, resurfacing, widening, shoulder improvements and various drainage improvements on SR 65 in Liberty County.

Subsequent to commencement of construction, the District Materials Office recommended deleting the ARMI and increasing the structural asphalt thickness on the widening from 1" of Type SP to a total of 2.5" of Type SP.

During the pre-construction meeting the Project Administrator voiced concerns about the pavement design. A new Georgia Pacific plant located within the limits of the project had recently opened and truck traffic would increase significantly. The District Materials Office was contacted and made the above recommendations to the pavement design.

Increase = \$76,096.00

Response: This supplemental agreement was not the result of a design error.

Description Code 503: Change resulting from engineering decision.

Reason: Improvements under this contract consist of milling and resurfacing, safety improvements and signing and pavement marking on SR 63 in Gadsden County.

The Department amended the contract to include a section of SR 63 from Darsey Calvary Road to the Florida/Georgia State line. This 861' section of roadway had been left out of previous resurfacing projects and was therefore in poor condition.

Increase = \$13,257.00

Response: This supplemental agreement was not the result of a design error. The Welcome to Florida Sign is across from Darsey Calvary Road and previous resurfacing projects had stopped at this location giving it the appearance of being the State Line.





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April 26—27, 2007 Sandestin, Florida

Mark your Calendars!!



Look for Conference Registration Information in the December '06 Issue of The District Three Design Newsletter!!

Page 3 District Three Design

Utility Coordination on Full Service Contracts

Scott Golden, P.E., Assistant District Design Engineer

I wanted to remind everyone to review your Utility Conflict Matrix and Utility Relocation Schedules and confirm that they agree and ensure that every potential conflict is addressed in the schedules. We should be designing around and accommodating utilities to the greatest extent practical. However, if you cannot design around a utility then you must ensure that its relocation is addressed in the utility schedules. If you and the utility company can not reach an agreement then, please notify the Department's Project Manager. Your Project Manager will coordinate the issue with the District Utility Engineer.

The greatest results in life are usually attained by simple means and the exercise of ordinary qualities. These may for the most part be summed up in these two – common sense and perseverance.

~ Owen Feltham

Design Spotlight-Troy Spivey

Larry Kelley, P.E., District Design Engineer

Troy Spivey is the spotlighted Design employee this quarter. Troy is employed in our Surveying Section as a Survey Technician where he works as part of a field crew as well as in all aspects of the survey section.

Troy is a 1989 graduate of Gulf Coast Christian Academy in Pensacola, Florida. After graduation he served our country in the United States Air Force until January of 1993. After military duty, Troy moved back to the Chipley area and worked in the medical field as a Medical/Surgery Technician. In 1994 he started his career in surveying, working in the private sector. Troy joined FDOT in February of 2000 in the District



Surveying Department. Troy is a very likeable and dedicated employee and a big asset to the Survey Section and the Department.

Troy understands how unpredictable work and life can be. Troy is a survivor. He lost his mother and brother in a an automobile accident when he was just nine years old. He was adopted by an aunt and uncle and had to relocate from his Bonifay home to a new setting in Pensacola.

Troy does not take life for granted. He now enjoys his wife Debbie and two children, Paul and Jessica. They spend time camping, and enjoying life in general, together. Troy also serves his community as a member of the Chipley Volunteer Fire Department.

Reflecting back on his life, Troy realizes how quickly life can be lost. His advice is: "Live life to the fullest, everyday, in all aspects of life."

Page 4 District Three Design

Designer/Surveyor Relationships

Danny Deal, P.S.M, District Surveyor

Over the past few months during scope conformance and other project related meetings I have observed the fact that our Consultant Designer/Surveyor team relationships are probably not as strong as they could be. We would like to see more upfront communication and coordination during the pre and post man-hour negotiation stage of the project. It's very important for the Designer and Surveyor to go over the scope and pinpoint all the known needs at that time so that the Surveyor can deliver the right product for the project.

During the Design process it's important for the Designer to communicate with the Surveyor any additional Survey data needs or maybe even data file formatting issues. With all the changes to our software it's very likely that needs have possibly changed. The Designer should not feel that the data received is a one time deal with no chances for anything different, or that he can't ask for more if the project warrants it. Normally we try to avoid supplementals, but at the same time the quality and completeness of the Design is just as crucial.

Also the Designer needs to give the Surveyor a chance to QC the plans before 60% scope conformance for Full Service Contracts. Most of the issues with alignment, reference points and benchmarks would be resolved with a quick review from the Surveyor. Let the Surveyor review and QC what he/she has contributed to the Design of the project. This is a must on Full Service Contracts.

I guarantee that your teams will get stronger, the Design process will go smoother, and quality will improve.

Quality Plans start with a quality Survey!



"The ultimate measure of a man is not where he stands in the moments of comfort and convenience, but where he stands at times of challenge and controversy."

Martin Luther King, Jr., Strength to Love, 1963

Taking Ownership

Jason Peters, P.E., Assistant District Design Engineer

Full Service is a program that was implemented in District Three approximately five years ago. Since its implementation, a question that is routinely being asked throughout the Department is, "What is Full Service?"

So what is Full Service? What does it mean? The first thought that comes to mind is simply – Taking ownership. It means entering into a partnership with the Department to do your part. It means doing what is needed in order to provide quality products, within the Department's scheduled time. It means carefully considering budget with each decision. It means taking ownership of the task as well as its challenges. It means understanding the requirements of the scope and communicating with all parties. It means making good engineering decisions as opposed to only what Department personnel recommend.

It's like building a house. A general contractor normally hires sub-contractors for various duties such as framing, roofing, plumbing, electrical, etc. So what is a sub-contractor's job? Do exactly what the contractor says and nothing else? Complete a phase and wait for the next instructions? Do exactly what the contractor says without advising of potential problems or issues that could affect budget or schedule? The obvious answer is, No! It is the sub-contractor's responsibility to assume ownership of the product or service he/she is providing. This means bringing problems and solutions of monetary value to the contractor. It means being a part of the solution. This means being the expert in that area and performing the tasks necessary to produce quality products. It means taking ownership.

These are just a couple of examples of what Full Service means. However, it's just the tip of the iceberg. Think about Full Service, and then ask yourself, "Am I taking ownership of the products and services that I am providing?".