Administrative Staff ~ Consultant Management ~ Drainage ~ Engineering Support ~ Roadway ~ Structures ~ Survey ~ Traffic Design ~ Utilities

District 4 Design Newsletter

September 2014

Are The Lights On?

By: Tim Brock, P.E., and July Randt, P.E.

Begin with the end in mind. We want a lighted roadway…right? Keep in mind we may need three agreements in place for this to work. We really do not maintain roadway lights except for our interstate corridors. So why are there so many lights on our state roads? Who maintains them? How do we pay for it? How did they get installed? All good questions and we hope to answer them in this article.

The fundamentals for lighting our roadways start with determining who will be responsible to maintain the lights once they are installed. Typically the maintaining agency will be the City or the County in the particular area of your lighting project. The agreement that is needed to be executed is called the *State highway lighting, maintenance, and compensation agreement* and of course we have a standard form for it (# 375-020-52)…we will call this agreement *number one*. Next we need to determine what we need…will there be a lighting system or just some added lights to elevate the light levels in particular locations? Roadway lighting designers will get involved at this stage to determine proper light levels are achieved. They have some rather amazing computer programs to model the various lights. Yes…you should check out some of the computer programs when you get a chance.

How do we pay for these lights? Well, there are multiple ways to cover the costs and we always need to find the most economical and efficient way that will accomplish the job; remember that all state employees are charged with keeping an eye on the tax dollars we spend. Why do I say that in this article? Well…mainly because when we determine what lights will suffice and we have determined who will maintain them…we need to ask ourselves: What is the least cost to accomplish our lighting project? Okay…this seems like a rather straight forward question, however there may be some wrinkles. Have we determined the costs for our lights? Have we looked to FPL and ask them if they can install the lights on their poles? A quick breakeven analysis can better determine the best value. If it turns out that FPL can place the required lights on their poles to accomplish our lighting goals, then I would say that would be the best way to accomplish our lighting goals; otherwise, brand new poles and a more costly lighting system will have to be installed. The second agreement will involve FPL (or the local power company) and FDOT. The utility office will work with the specific utility agency (like FPL) and the lighting designer to determine which agreement is best for the specific situation… (We will call this agreement *number two).*

Okay…almost done. The last agreement is the one entered into between the maintaining agency (i.e. City of Hollywood) and the actual folks that will maintain the lights (i.e. FPL). You may or may not need to have this one in place and it really is out of our control. If it is determined that the best lighting solution is to have FPL (or the local power company) place the lights…they will require a service agreement with the maintaining agency… (We will call this agreement number three).

Okay…so roadway lighting is now as easy as 1, 2, and 3? We trust the mystery of our roadway lighting is a bit clearer now. If you have any questions regarding the different types of agreements, the different ways to cover the lighting cost or simply want to discuss it further; please stop by our utilities office.

In this issue:

Permit Review Lessons Learned
By: Kenzot Jasmin, P.E.

As roadway designers and design project managers (PM), we all know of the importance of community awareness and stakeholder management and their impact on the major milestones of the design process. Most of us within the design department have been involved in managing the expectations of those who have interest in our design project or are affected by their deliverables or outputs. Most projects have numerous stakeholders: Local municipalities, Home Owner's Association, Counties, and Utility Agencies etc. One of the first tasks for a project manager is to identify the stakeholders and establish a rapport with them. This article will help you understand the importance of community awareness and effective communication with stakeholders as a key element for project success.

In this article, I will share with you a lesson learned on one of my recent RRR projects in Palm Beach County. During the design of the RRR project, Palm Beach County Water Utilities department had submitted an application for a new driveway connection to SR-812/Hooker Highway. The applicant had submitted a complete application with all required documentation per the Florida Administrative Code (F.A.C) Chapter 14-96. As we all know permits can initiate from many different sources, such as, Property Owners, Local Municipalities, Utility Agencies, etc. The responsibility of the designer or design PM who is assigned to review the permit package is to ensure that there are no conflicts with their project under design. We followed the permit review process and coordinated with the applicant (PBCWUD) to determine any potential impacts to the SR-812 RRR project. After a thorough review, we approved the permit based on the fact that there was no apparent conflict between the proposed driveway construction and the SR-812 RRR project.

The project was then production complete in March of 2014 and scheduled for July 11, 2014 letting. The procurement process was going smoothly until two weeks prior to the official letting date; a contractor posed the following Bid question: "Are you aware that Palm Beach County Water Utilities Department (PBCWUD) is planning on expansion of existing water plant located within the project limits. The expansion project involves the import of 200,000 CY of structural backfill and the export of 200,000 CY of non-suitable fill"

The only information associated to PBCWUD that was available to us during design was a permit application for a driveway connection. Until that time we were not aware of any County's project scheduled to be constructed in the vicinity of the SR-812 RRR project nor was the applicant required to include such information in the permit application.

In an effort to provide a response to the pending Bid question and to ensure that construction of the RRR project can be accomplished without schedule delays or conflicts, we've contacted PBCWUD to get more information in regard to their project. That's when we found out the extent of the County's project and understood the purpose of the driveway connection permit they had applied for. PBCWUD's project consists of expansion of their existing water treatment plant (the West Region Operations Center) which includes construction of a 5 MG water storage tank, two dry retention ponds, parking and proposed lake expansion, and demucking of the entire project site. The project is scheduled to be constructed within the same time as the SR-812/Hooker Highway RRR project. This would have been a very complicated scenario with two different contractors working in the same area (same physical project limits) and at the same time. We would have one contractor doing a Milling & Resurfacing (M&R) operation on SR-812 while the other is hauling 400,000 CY of fill to and off the County's project site. This situation would generate a larger daily volume of truck traffic on SR-812 causing significant distress to the new pavement. After careful consideration and extensive coordination, the department had decided to delay the SR-812 resurfacing project to prevent overlap with the construction of the County's project and the heavy truck traffic. This was the result of a lack of community awareness and effective communication with key players.

Permit Review Lessons Learned continued

Many of the problems that surface on a project are actually the results of poor communication. It is important for us to keep an open and effective line of communication with stakeholders. This article is a perfect example of how poor communication can cause a project to end unsuccessfully. When you work so hard from procurement process to production complete, it is very unfortunate to have made all this effort and still end up with an unsuccessful project. Waiting is never a good option so we need to ask questions, communicate effectively and get the key players involved early on in the process.

Lessons Learned
By: Scott Thurman, P.E.

Adding Safety Funds….
A project has been worked on by a consultant who has developed the plans through design stages up to the point of a constructability submittal. The project has safety funds added for ATMS and Intersection Safety improvements. These improvements required a schedule change (graced by the scheduling gods…) approved by management in order to include this scope of work within the project.

Three months later…. I am a new Consultant Manager taking over all responsibility and rolls as a PM. New to the funding/contract/PM process I go through the rigorous task of demanding Scope Changes and Staff Hours from our Consultant, producing an LRE with the added items to updated our construction funds to include all safety items within our project. I also review the staff hours and the included sub-consultant Scope within the Supplemental Agreement to ensure continuity from what our proposed scope is and what the sub-consultant has listed. I also reviewed our existing original contract to ensure we didn't have any overlapped scope and to see what funding is still available in optional services.

From my digging and reviewing of the original contract, I had discovered that the safety improvements were federally funded and the original contract did not allow for federal provisions within the contract. This breaks down simply to…. Safety funds cannot be added to the contract through an SA. There are only two options to add this scope to the project at this point.
Option 1: Switch all Safety Improvements to State funds and add scope through a SA.
Option 2: Add new project sequence and keep all federal funds separate through a new contract.

Moral of the story is to check the original contract before adding federal funds and make sure all new contracts have Federal Provisions to allow federal funds at any time!

New/Relocated Employee Introductions

Ramon Otero - District Structures Design Engineer

Ramon is a registered Professional Engineer and has a Bachelor of Science Degree in Civil Engineering from the University of Puerto Rico. Ramon has over nineteen years of bridge design experience. He started his career in the New England area working as a consultant for various bridge projects for the Massachusetts, New Hampshire, Vermont, and Maine DOTs. Later in his career, he moved to Florida where he continued to work as a consultant for FDOT bridge projects. Seven years ago, Ramon joined FDOT as the Assistant District Structures Design Engineer. On personal note, Ramon is happily married to his wife, Angela, and has two children, an 8 year-old boy, Justin, and a seven year-old girl, Karina. He enjoys traveling and spending time with his family. Congratulations and Good luck.

Binod Basnet - Drainage

It is a great feeling to be a part of FDOT-Drainage team. Having completed my Master's Degree in Civil Engineer from Lamar University in Texas, I worked with some private companies for a few years before joining Florida Department of Health three years ago. My interest in the field of drainage engineering inspired me to join the Drainage Team. From the first day, this team has been very welcoming and I have found it to be a great working environment. My hobbies include playing sports and traveling. I like to play team sports, such as soccer, with my family and friends as it develops team spirit, willing to help teammates to achieve the common goal, while enjoying the sports. Traveling is always fun; it helps us get a firsthand experience of what the world is like.

James Poole - District Drainage Design Engineer

James earned a Bachelor of Science in Civil Engineering Degree from the University of Florida. He began his career at FDOT District Four as a Professional Engineer Trainee. He wrapped up his Trainee Program with a six month specialization in Roadway Design. After specialization, James made his permanent home in the Drainage Office in 2005 where he earned his Professional Engineer License in 2008. Since joining the Drainage Team, James continually makes significant contributions to the success of the unit. Drawing on his strong engineering aptitude, he became a reliable resource as the resident hydraulics expert. His simplistic approach to problem solving is a cost-saving asset for the Department. James has designed the drainage systems for major roadway projects, including SR-7 widening in Broward County and acted as reviewer for I-595 and the Indian Street/Veterans Memorial Bridge. By following the example set by Francis Lewis, James has developed strong leadership skills and demonstrated the ability to lead this dynamic team. James is dedicated to providing a solid family life for his wife Joy and their daughter Julia. He is an accomplished photographer and excellent golfer.

Rita Bulsara - CM Section 4

Rita is a registered Professional Engineer and has a Bachelor of Science Degree in Civil Engineering from the University of Connecticut. Rita started her career working for a consultant as a Bridge designer. Shortly after her move to Florida, Rita started as a Professional Engineer Trainee in District Six in 2007. After her rotation through the departments, she decided to stay in Internal Design. On a personal note, Rita is happily married to her husband, Julian, and has a 1 year old daughter, Sophia. She enjoys cooking and spending time with her family.

New/Relocated Employee Introductions

Jorge Soto - Structures

Jorge is a registered Professional Engineer and has a Bachelor of Science Degree in Civil Engineering from the Florida International University. Jorge has over sixteen years of bridge and related transportation structures design experience. Prior to joining the Department, he worked as a consultant for various bridge design projects for the Florida DOT. Most recently he worked in the I-595 PPP project where he was the EOR/Project Engineer for several highway bridges. On a personal note, Jorge is happily married to his wife, Maria, and has two children, a nine year-old boy, Julian, and a thirteen year-old girl, Adriana. He enjoys traveling and playing sports with his children, especially bicycling.

Lola Benitez - CM Section 5

Lola was born and raised in San Juan, Puerto Rico. She moved to Miami to attend college at FIU where she earned her Bachelor's degree in Civil Engineering. In 2007, Lola began her career with FDOT as a Professional Engineer Trainee in District 6. After completing her rotation in the Training Program, she did her specialty in Design and then joined the Internal Design section where she has been working as a Project Engineer. Lola is a registered Professional Engineer and while working with the Department she continued her education at FIU and completed a Masters in Engineering Management. In her spare time, Lola enjoys traveling to Puerto Rico to spend time with her family and friends and also likes painting art.

Anna Plegachova - Traffic Design

Growing up in Lima-Peru was quite interesting. Since I was a little girl I remember when my step-father, who was a civil engineer, used to take me to his work and explain to me every detail about it. When I turned twelve and I had a better understanding of life, I decided to follow his steps and be part of a community that focused in creating a better place to live. When I was 16, my family brought me to the United States in search of better opportunities. Years passed by, and when I finally had the courage to follow my dreams, I pursued my Bachelor's at F.I.U. Soon after graduation in 2013, I had gained some experience assisting Project Managers in Construction and Land Development projects, which had helped me, obtain hands-on experience in this diverse discipline. My hobbies include cooking, eating and playing board games. I just would like to say that I'm very thankful and excited for this opportunity at FDOT.

Alejandro Maulini - Design Section 2

I was born and raised in Cuba. Since I was little I knew that construction and designing would be part of my future. I graduated from an School of Architecture in 2002. Soon after graduation I started to teach structural analysis classes to architects, and my interest for engineering started to grow. In 2004, I moved to United States and I started working in a water engineering company. After I acquired a deeper understanding of how engineers could influence in the society and improve people's lives, I decided to pursue my Civil Engineer degree at Florida International University instead of continuing my initial architectural path. My hobbies are playing basketball, swimming and enjoying time with my family. I am very excited for this opportunity of being part of FDOT team.

New/Relocated Employee Introductions

Eugene Khashper - Utilities

I was born in Russia where I received a Bachelor's of Science in Electrical Engineering. Prior to joining the District 4 Design team, I worked as an in-house consultant in the District 6 Construction office for 8 years, reviewing road and bridge plans, utility permits and utility work schedules with the focus on eliminating conflicts. I am married with two children. I enjoy fresh water fishing, playing tennis and basketball.

Todd Pethick - Survey and Mapping

I was born and raised in a small town in upstate New York about an hour west of Albany. I attended Hudson Valley Community College while taking the Civil Engineering program with emphasis on Surveying. I began Surveying in a small privately owned company after college and later transferred to a larger Civil Engineering company where I worked for almost 20 years. I moved to the State of Florida in the spring of 2014 and began work for a local Engineering/Surveying firm. I have (2) children living in New York and recently became married to my second wife. My interests include golf and spending time on the beach.