



Construction Newsletter

Tennessee Department of Transportation
Headquarters Construction Division

From the Director

By Lori Lange, P.E.

What does working together actually mean? I'm sure many of you have run into coworkers in the evenings, whether it be while grocery shopping or during an evening out at the movies. If your encounters are anything like mine your children usually ask "Who was that?" and my typical response is "Oh, we work together." Is that really all there is to it though? Whether it is the person you stand behind in line at the water fountain, those who share the elevator with you in the mornings, the contractor/subcontractor/inspector/etc. working on your job in the field, the flaggers on a job site, or the individual who's desk happens to be right next to yours – in what ways do we actually work together? Currently, Webster defines a coworker as "one who works with another". This is not the definition we should aim for at TDOT. Instead, **we should be striving for a coordinated effort to accomplish any and every goal with your peer's well-being as a priority.** Three questions can come out of our new definition:

1. What goal are we trying to accomplish? To be the best department of transportation in the nation.
2. Who are our peers? Every single person we encounter or effect by our work. This includes the entire staff at TDOT, the workers on every job site, and every single person that uses some form of transportation in the state of Tennessee.
3. Why are our peers a main priority? We are one family – we want everyone to make it home at night and back the next day.

All of this is said because we are always trying to improve upon ourselves. In the coming months there will be new programs/applications/methods we will be implementing to help us work together more efficiently and effectively (like PlanGrid mentioned on Page 3!). My challenge for you is to help us with these initiatives, give us feedback on what you like/do not like/think would be useful, and help us make TDOT a place where our employees like to work together.



Inside This Issue

- From the Director | 1
- Alternative Delivery Showcase - Interstate 440 | 2
- PlanGrid | 3
- Letting the Numbers | 3
- Staff Additions | 4
- Contact Us | 4

Upcoming Lettings

- October 5, 2018
- November 2, 2018 (Mowing & Litter)
- December 7, 2018

Alternative Delivery Showcase

Interstate 440

By Lia Obaid, P.E.

Originally designed as a limited access facility, Interstate 440 (originally dubbed Four-Forty Parkway) has become one of the most famous roads in Middle Tennessee and not for desirable reasons. When initially completed, I-440 was expected to carry an AADT of 64,000 vehicles per day. Now carrying over 150% of the expected volume, a renovation is much needed.

To expedite the reconstruction of the 7.6-mile corridor, an alternative contracting style is being utilized: design-build. The use of design-build bidding often decreases the time required to complete a project, improves safety conditions, and reduces overall costs. Time and cost savings are accomplished by allowing some portions of the design and construction phases to overlap. Using a specific set of standards and specifications established by TDOT, the contractor is allowed to begin construction in some areas, while completing the final design in others. As part of the design-build process, contractors were instructed to bid in adjusted low bid (A+B): “A” being the cost to construct the project and “B” being the time required to complete the project.

TDOT is calling for the proposed designs to replace the current concrete surface with asphalt. The grass median will also be removed to increase safety and accommodate additional travel lanes, increasing the facility from four lanes to six lanes (three in each direction for the full length of the corridor). Under traditional bidding and construction methods this project is estimated to take up to three years just to construct.



Image is from Tennessee Image Viewer

“Light construction preparation is anticipated to begin later this year, with heavy construction expected to start in the Spring of 2019.”

The bid opening for Interstate 440 was on Friday, July 27th. Kiewit Infrastructure South Co. was awarded the contract at \$152,959,352.00, and a total time of 708 calendar days (just under 2 years to design and construct). I-440 is now the highest cost project let in Tennessee history. Light construction preparation is anticipated to begin later this year, with heavy construction expected to start in the Spring of 2019.



PlanGrid **By Clayton Markham**

TDOT is transitioning into a more technology-driven department through various eConstruction initiatives. One recent addition, that is soon to be introduced, is PlanGrid. With the implementation of this software, field staff will no longer have to haul around large and difficult to manage sets of paper plans. PlanGrid is designed to make these plan sets easily readable on your tablet or phone. Being designed specifically for the construction industry, PlanGrid addresses many of the issues the industry faces. Where revisions were sometimes troublesome for field staff, PlanGrid allows users to instantly sync updates across an entire team and at any location with a data connection. Where issues were at times difficult to convey and track, PlanGrid streamlines information sharing by allowing users to make markups directly on a set of plans and instantly notifying other team members. PlanGrid comes with a host of other great features including; geo-located pictures, sheet compare options, RFI (Requests for Information) tracking, punch lists development and others. This easy to use software even houses other project documents, such as contracts and permit information, making them easily accessible when needed in the field. Early training and demonstrations were conducted by PlanGrid in July, with multiple pilot projects across the state beginning shortly after. Look for further implementation of PlanGrid and other eConstruction initiatives in the near future.



Image is from the PlanGrid training demo on TN-99 in Murfreesboro, TN

Letting the Numbers

2018 Letting Contract Totals:

- In the February Letting, 80 contracts were awarded for \$100,339,141.11
- In the March Letting, 56 contracts were awarded for \$106,370,239.02
- In the May Letting, 77 contracts were awarded for \$108,730,336.63
- In the June Letting, 27 contracts were awarded for \$27,387,162.61
- I-440 was let in July, and was awarded for \$152,959,352.00



Comparing the Numbers...

After the June letting in 2017, a total of 229 contracts have been awarded summing to \$379,795,372.24.

In comparison, this year we have awarded 241 contracts for a total of \$495,786,231.37.

Staff Additions

Clayton Markham, P.E. earned a Bachelor of Science degree in Civil Engineering from Tennessee Tech in 2008, his Master's degree in Civil Engineering from UT in 2012, and is currently pursuing a Master's in Business Administration from



Tennessee Tech. Since joining the Department in 2008, Clayton has served as a Roadway Specialist in the Design Division and Operations District Supervisor in the Columbia Construction Office. Since October of 2017, Clayton has been serving the HQ Construction Division as a CE Manager 1, where he assists with: Alternative Delivery contracts in Region 3, contract quantity imports for bidding purposes, contractor prequalification, development of E-Plans processes and procedures, and the procurement of the future plans collaboration tool, PlanGrid. In addition to his 10 year TDOT career, and most importantly, Clayton is a husband and father to 5 children.

Nitaya Chayangkura, P.E. is a graduate of Vanderbilt University with a Bachelor of Science degree in Civil Engineering structures. Nitaya began serving as a Civil Engineering Manager I in February 2018, assisting with Alternative Delivery projects for the Construction Division. Nitaya's previous work experience includes; structural design of bridges, bridge repair, as well as hydraulic design and analysis of bridge structures. She has been involved in several local engineering organizations, having served as Secretary of the Nashville Chapter of ASCE and currently serving as the MATHCOUNTS Nashville Chapter Coordinator for TSPE.



Blake Fulton, E.I. is a recent graduate of Tennessee Technological University with a Bachelor of Science in Civil Engineering and minor in Mathematics. Through the summer of 2017, he served as an intern in the headquarters construction division. In May 2018 Blake returned to the construction division full time to serve as a Graduate Transportation Associate (GTA), assisting with the Construction Management System, Expedite, Bid Express, and the construction website. Blake spends his free time hiking, woodworking, and watching hockey.

Ryan Sweeney, P.E. graduated Tennessee Technological University with a B.S. Civil and Environmental Engineering in 2003. Ryan currently serves as a Civil Engineering Manager I in the HQ Construction Division. Ryan started his career at TDOT in January of 2004 working in the Region 3 survey office supervising field crews and processing survey data for Region 3 Design. In 2005, Ryan took an opportunity to work for Gresham, Smith and Partners in Nashville, TN. At GS&P, he performed site and transportation design work serving as project engineer and engineer of record on projects such as the redevelopment of 100 Oaks Mall (Nashville, TN), St. Bernard Parrish Hospital (New Orleans, LA) rebuild, the widening and interchange redesign of I-40 from SR-186 to SR-45 (Jackson, TN), and the bridge replacement project Fast Fix 8 (Nashville, TN). Ryan returned to TDOT in 2015 as a Civil Engineering Manager I in Region 3 Project Development where he worked with roadway design staff on various projects before moving to HQ Construction in May of this year. Ryan currently serves as the President of the Tennessee Society of Professional Engineers (TSPE) where he has previously held the positions of Treasurer, Secretary, Vice President, and President elect. He is married to Michelle, and has two boys Braden (10) and Blake (7).



Have Comment or Questions? Contact Us!

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