

DISTRICT THREE DESIGN NEWSLETTER



Inside this issue:

A Different Perspective	1
Supplemental Agreement Report	2
Design Spotlight D.J. Barber	3
Top Ten Quality Control Comments	4
Bid Set Revision (s)/Addenda(s) - April 2015	5
Bid Set Revision (s)/Addenda(s) - May 2015	6
CADD Tricks, Tips and Updates	7

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From the Editor's Desk - A Different Perspective...

Jared Perdue, P.E., District Design Engineer



We are generally accustomed to a very specific vision of how the world works and it is often a challenge to see it through a different lens. As engineers, we see the world through the prism of data, numbers, science, logic, and reason. After all, that is the most logical way to view the world, and it always leads us down the straight and narrow path..... right? Perhaps not. In this rapidly changing society, we are being challenged more and more to view things from a different perspective. The long-trusted decision matrix that is composed of logic and reason is no longer the tried and true companion that it once was for engineers. We are now being confronted with having to consider user experience, behavior, and other foreign concepts in the world of logic, which leads to the purpose and intent of this article, **MAINTENANCE OF TRAFFIC (MOT)**. There was once a time when using a data driven process to determine when and where lane closures are appropriate would never lead you astray. Now it is only a tool in the tool box. While the data gives us very solid, scientific reasons for making the decisions that we make, it most certainly does not consider the user experience or customer expectations.

Customer expectations and user experience have become a major focus of the Department. We invest numerous resources in moving people and goods both efficiently and safely. That is why, as designers, you are being asked to view the world of **MOT** through a different lens. Put yourself in the driver seat. How will the design decisions that you are making impact the expectations of motorists driving through your project? Considering all of the major construction projects that are underway in District 3, it is imperative that we focus our efforts on providing safe and efficient travel through construction work zones. In addition to all of the other important factors that require your attention when designing an FDOT transportation project, please help us by viewing **MOT** through the eyes of the user and embrace a different perspective to make wise decisions.

At the District Office, we have embraced a few new processes in an effort to better serve our customers. One process is the use of **MOT** workshops for major projects. These workshops serve as an opportunity for traffic control plans and construction phasing to be placed under a microscope for review, and they bring the design team and FDOT staff together in a setting that encourages brainstorming to find the right solution. Also, we have begun performing a special **MOT** review on all projects that do not qualify for a workshop. This special review focuses on the big picture and customer expectations as opposed to the more traditional and granular plans review.

MOT is important, so challenge yourself and others to view engineering decisions from a different perspective. Consider the impacts of your approach to daily travel and driver expectations as well as construction operation and personnel. By taking these steps toward a more rounded and comprehensive design, our transportation projects are sure to be a success.



*District 3 Quarterly
Design Newsletter*

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Supplemental Agreement Report – June, July, August 2015

Carol Kreis - QA/QC Plans Reviewer

Description Code: 503: Engineering Decision.

Reason: During the review of the contract plans for bidding, the Contractor's position is that there were no directives from the Engineer of Record noted in the plans that would exclude the bidding of optional pipe material; specifically the use of materials other than RCP. The Contractor therefore bid the contract to utilize optional materials other than RCP. Subsequently, prior to commencement of work, the Department clarified the plan intent which limits all side drain installation to RCP only. The Contractor submitted a notice of intent to claim for increased cost of labor, equipment and materials associated with this directive. Through this Supplemental Agreement, the Department and Contractor have agreed to a full and final negotiated settlement of this issue.

Granted Time: 0 Days

Increase: \$404,306.22

Response: Unavoidable: No action recommended.

***Summary:** The PPM no longer indicates to include Notes on the Optional Pipe Material Sheet(s) in the Plans. Unless Project Specific Notes are necessary, these Notes should not be on the Optional Material Sheet(s).

Description Code: 101: Necessary Pay Item(s) not included in contract.

Reason: Provide for the installation of Type K Barrier Wall with items and quantities necessary for project construction in accordance with Index 415.

Granted Time: 0 Days

Increase: \$7,745.00

Response: Avoidable: No action recommended.

Description Code: 107: MOT: Modification of Maintenance of Traffic for pedestrians, boats, cars, bikes, etc.

Reason: During construction it was determined that the Type K Barrier Wall called out in the original plan set created a sight distance issue for the traveling public. The solution for the sight distance issue was determined to be the replacement of the Type K Barrier Wall with Low Profile Barrier Wall.

Granted Time: 3 Days

Increase: \$55,790.60

Response: Unavoidable: No action recommended.

Description Code: 101: Necessary Pay Item(s) not in contract.

Reason: The Department has determined that the plan method of conduit installation by open trench as shown by the Engineer of Record would result in saw cutting areas of concrete sidewalk and driveways, creating unnecessary disruptions to businesses and residents along this intersection improvement. Therefore, direction bore installation was used for these locations.

Granted Time: 0 Days

Increase: \$9,900.00

Response: Avoidable: Action recommended.

(Continued on page 3)

Supplemental Agreement Report – June, July, August 2015

Carol Kreis - QA/QC Plans Reviewer

(Continued from page 2)

Description Code: 115: Required drainage modifications.

Reason: Provide compensation for revisions to adjust earthwork and sod quantities and pipe profiles and structure invert elevations related to the Pre-Cast Sound/Noise Barrier Wall footer and, also, adjust drainage pipe offsets between structures and adds a structure.

Granted Time: 0 Days

Increase: \$13,048.50

Response: Avoidable: No action recommended.

Description Code: 112: Phasing or plan components not constructible as shown in plans.

Reason: Provides compensation for all work associated with replacing of a non-functional Cross Drain Pipe to include necessary traffic diversions, engineering and installation of critical temporary sheet piling, dewatering and removal of unsuitable material which were not included in the plans; and delays due to demobilizing all equipment and materials from the site until all permits and approvals were granted such that the drainage structure work could be done.

Granted Time: 119 Days

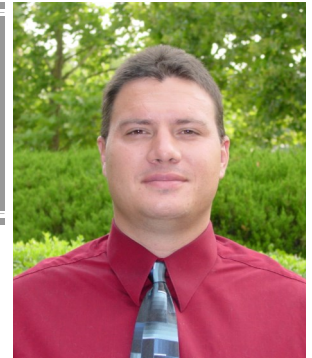
Increase: \$1,063,577.22

Response: Avoidable: Action recommended.

Design Spotlight

D.J. Barber P.E.

Project Manager



I have been employed with the Department since 2006. I graduated from Cottondale High School in 2001, attended Chipola College and Florida State University, where I earned a Bachelor of Science Degree in Civil Engineering. I was hired into the PE Trainee Program, worked in the Drainage and Structures Departments, and was recently hired as a Project Manager.

My wife (Amanda) and I have one son (Trenton). I enjoy spending time with my family.

"Motivation is the art of getting people to do what you want them to do because they want to do it.." ~ Dwight D. Eisenhower

Top Ten Quality Control Comments July - September, 2015

Lester Forrest - QA/QC Plans Reviewer

1. Projects with a January 2016 letting date, should not include pay item 706-3. The RPMs are included in the cost of the Painted Pavement Markings (Final Surface) pay item 710-90. Refer to Specification 710-4.1.1 and 710-11-2.
2. General notes should be removed from the Optional Materials Tabulation Sheet in the plans. Refer to 2015. P.P.M Vol II, Chapter 8 exhibits SDS-2A & 3-A.
3. Do not show warning lights or flags in the plans. Remove all warning lights tabulated quantities from the Summary of Temporary Traffic Control Devices. Effective for January 2016 Lettings. Refer to Roadway Design Bulletin 15-10, P.P.M, Vol.I, Ch. 10 and Specification 102-9.
4. When existing pavement cross slopes are within the allowable range and the intent is to mill for depth, the typical should call for the contractor to match existing. Refer to P.P.M Vol. I, Ch. 25; Table 25.4.6.
5. For pay item 0102-74-1, the quantity should include channelizing devices necessary for delineating the portable changeable message signs and/ or trailer mounted devices. Refer to Specification 102-11.8 and 2016 Design Standard 600 sheet 2 of 12.
6. Six inch sidewalk concrete thickness is required at driveway locations. Refer to Design Standard, Index 515.
7. Phase IV Plans should have the Right of Way finalized and should be not be labeled "proposed" ROW. Refer to P.P.M, Vol. I, Chapter 12.
8. Ponds should not have fence around them unless approval is received from the State Roadway Design Engineer. Refer to Drainage Manual, Section 5.4.4.2, note 4.
9. Temporary Traffic Control notes should not state that there are no lane closures restrictions, as these always exist in the Standard Specifications. The note should state that there are no peak hour restrictions if none exist.
10. When Clearing and Grubbing includes existing pavement please include a saw cut point for the contractor's knowledge.

Bid Set Revision(s)/Addenda(s): - April 2015

William Evans, District Specifications Coordinator

Multilane 4 L project: Add Lanes and Reconstruct
Federal Funds \$19,720,239.00

Correction Needed:

Sheets 3 & 4 (Summary of Pay Items) revise transport...see table below.

Sheet SQ-2 (Summary of Quantities) (Summary of Erosion and Sediment Control Devices box) added sediment barrier for Eglin FBO area, added to pay items...see table below.

Sheet SQ-17 (Summary of Quantities) (Summary of Performance Turf box) added sod and prepared soil layer for Eglin FBO area, added to pay item...see table below.

Sheet SQ-19 (Summary of Quantities) (Summary of Performance Turf box) added sod and prepared soil layer for Eglin FBO area, added to pay item...see table below.

Sheet SQ-21 (Summary of Quantities) (Summary of Performance Turf box) added sod and prepared soil layer for Eglin FBO area, added to pay item...see table below.

Sheet SQ-15 (Summary of Quantities) (Summary of Fencing box) remove pay item...see table below.

Sheet SQ-16 (Summary of Quantities) (Summary of Fencing box) add pay item...see table below.

Added Sheet 86A Special Details, wildlife fence notes and drawing details associated to pay item 550-10-959.

Estimate Effect: Cost Savings (-106,842.33) \$; No Change to Contract Time.

Pay Item	Sheet No.	Add. / Del. / Rev.	Old Quantity	New Quantity
104-10-3	3, SQ-2	Revised	14,530 LF	15,980 LF
162-1-1	3, SQ-17, SQ-19	Revised	542,580 SY	548,747 SY
570-1-1	4, SQ-17, SQ-21	Revised	430,655 SY	436,822 SY
550-10-959	3, SQ-15, SQ-16	Add	0 LF	63,612 LF
550-10-150	3, SQ-15, SQ-16	Delete	63,612 LF	0 LF

Discovery of errors:

Clearing and grubbing for the FBO Area was increased into part of segment 7 to facilitate all the fiber optics being installed; therefore, the first three pay items above were affected.

Bid Question 9829: Can you provide a design standard for item 550 10 150 FENCING, TYPE A? The standard designs in the design book only covers 47" field fence.

Answer: A revision with is forthcoming.

Bid Question 9918: In the recent fence revision, the drawing was changed substantially from other recent department projects. Is it the intention to eliminate metal t-post and metal terminals as options? Wood posts are hard to source and will greatly increase the fence costs. Is it correct that the maximum single fence unit is now 660' instead of 1320'? This will add approximately a third to the costs of the terminals.

Answer: (1) Yes, the Department eliminated metal t-posts as an option. The only Status material option for fence posts are treated wood/timber.

(2) We do not know if 8' wildlife fence can be purchased in 660' or 1320' rolls. We do know that it can be purchased in 330' rolls, which is the length between pulls.

Bid Set Revision(s)/Addenda(s): - May 2015

William Evans, District Specifications Coordinator

Mill and resurface plus sidewalk ADA improvements
Federal Funds \$736,742.00

Correction Needed:

(Lump Sum Summary of Pay Items) revise transport...see table below.

Sheet SQ-1 (Summary of Quantities) (Summary of Traffic Control Plan Items box) 90 days added to pay items...see table below.

Sheet SQ-2 (Summary of Quantities) (Summary of Litter Removal and Mowing box) 90 days added to pay items...see table below.

Sheet S-2 (Tabulation of Quantities) remove blue thermo message and replace with white thermo message... see table below.

Estimate Effect: additional cost for MOT (+) \$2,831.75; **25 days added to Contract Time.**

Pay Item	Sheet No.	Add. / Del. / Rev.	Old Quantity	New Quantity
102-60	SQ-1	Revised	5720 ED	7920 ED
102-74-1	SQ-1	Revised	16250 ED	22500 ED
102-77	SQ-1	Revised	2665 ED	3690 ED
102-99	SQ-1	Revised	130 ED	180 ED
107-1	SQ-2	Revise Duration	100 Days	90 Days
107-2	SQ-2	Revise Duration	100 Days	90 Days
711-11-460	S-2	Delete	2 EA	0 EA
711-11-160	S-2	Revise	27 EA	29 EA

Discovery of errors:

D3 Construction revisited the original contract time of 65 days to see if it would be constructible. However, upon the revisit, constructing the sidewalk, which was originally figured to be constructed concurrent with the milling and resurfacing in downtown Apalachicola, would prove to be impossible, because the existing right of way does not have enough open area to accommodate both operations at the same time; therefore 25 days had to be added to the contract bringing the total to 90 contract days. Also revised two thermo message items to remove the Blue and replace with White.

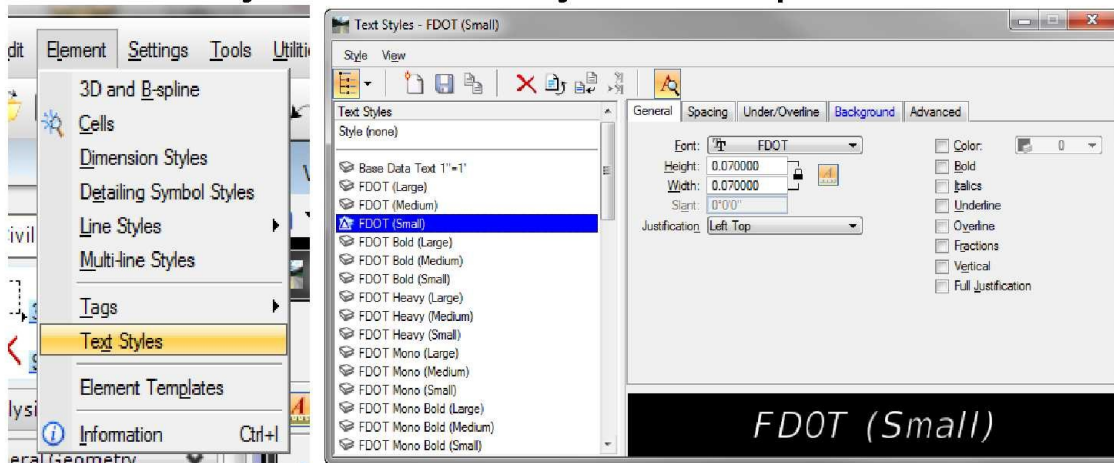
CADD TRICKS, TIPS, UPDATES - FDOT Linked Data Manager

Howard Helms, CADD Manager

TEXT STYLES

Everyone has probably seen the text style options when placing text, but everyone probably does not know where they are stored or how to manipulate them. Text Styles can be a powerful tool to use.

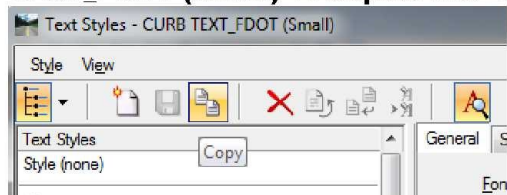
Where can you see all the Text Styles that ECSO provides?



ECSO has set these text styles up to work with the Drawing Scale. From the text styles dialog box you can edit, copy/edit the styles, create new ones, delete the ones you don't want and save them. When they are saved, it embeds them in the .dgn that you are in.

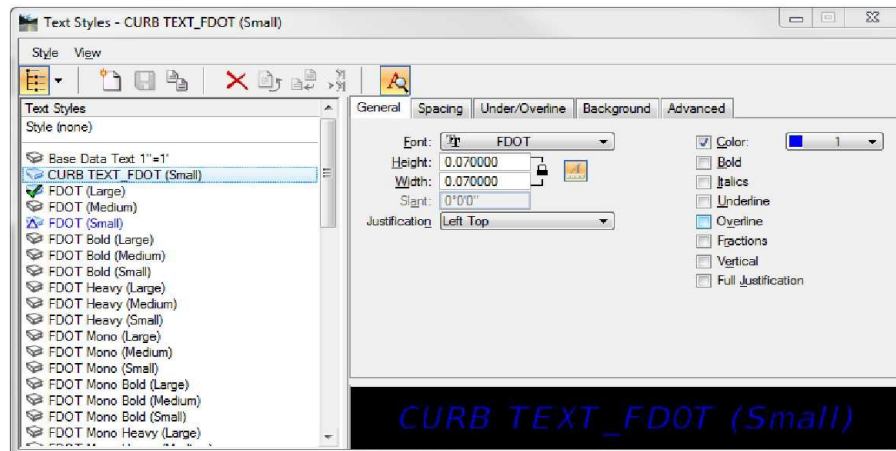
Creating a new style:

I prefer to copy an existing style and name it something I know what it is "CURB TEXT_FDOT (Small)". I copied the "FDOT (Small) and renamed it.

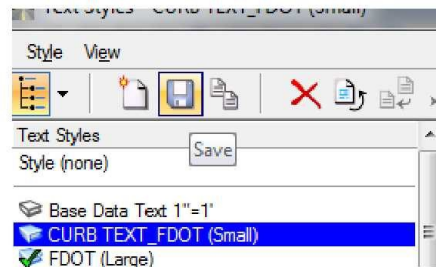


CADD TRICKS, TIPS, UPDATES - FDOT Linked Data Manager

Howard Helms, CADD Manager

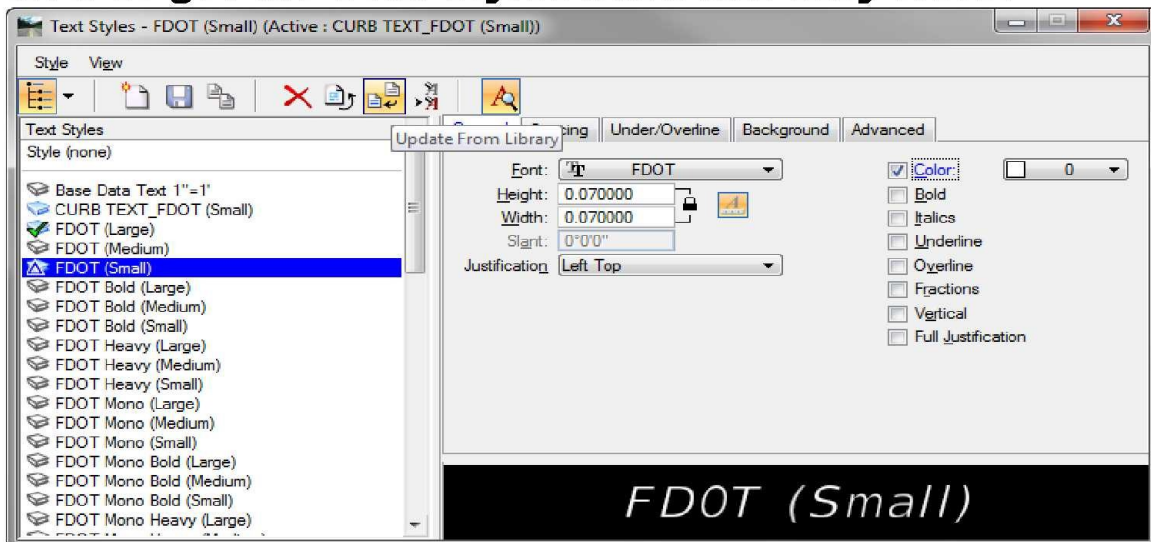


All I changed was the color on this example, but you could change it to how you want and click the save icon



After you use the text style, let's say you want to change the color or anything about the style. Make the changes then press the save icon and everything you placed on that style will change in the .dgn.

How to get the Text Styles back like they were:

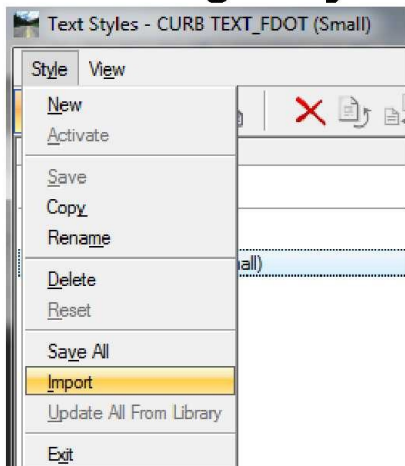


CADD TRICKS, TIPS, UPDATES - FDOT Linked Data Manager

Howard Helms, CADD Manager

If you accidentally changed one of the existing styles, you can press the Update From Library to get the original settings back. This will not do anything to the new ones you have created. Just remember if you make any changes to a style after you have used it in the .dgn placing text, it will update that text in your .dgn.

How do I get my new styles into another .dgn:



Go to Style/Import, find the .dgn you created the new styles in and click open. There are other ways to get this but you may have to have admin. privileges and that will be for another time.

This is a down and dirty look at the Text Styles. Like I said earlier this can be a powerful tool. Get in it, play with it and have fun with it.