

05-10-193

RECEIVED  
CONTRACT MANAGEMENT

2011 APR 19 AM 10:05  
**CHANGE ORDER APPROVAL FORM**

11 APR -11 PM 3:11  
COUNTY CLERK'S  
OFFICE

PROJECT: Citrona Drive @ Sadler Road  
Intersection Improvements Project

CHANGE ORDER NUMBER: 02  
DATE: 02/01/11

CONTRACT NUMBER: CM1604

TO CONTRACTOR: United Brothers Development Corporation

Reason for Change Order: Add 10 LF staked silt fence for erosion control; Delete 152.04 TN Super Pave Asphalt Concrete (SP 9.5) Traffic Level B due to plan quantity error; Delete 1,810 SY Asphalt Rubber Membrane Layer due to existing asphalt depth (encountered limerock during milling operations); Add 1 AS Single Post Sign Re-Locate due to an additional existing sign not shown on plans and clear zone requirements.

Original Contract Sum.....	\$	<u>177,820.90</u>
Net Change by Previous Change Order/Supplemental Agreement.	\$	<u>6,558.17</u>
Contract Sum Prior to This Change Order.....	\$	<u>184,379.07</u>
Amount of This Change Order (Add/Deduct).....	\$	<u>(39,234.80)</u>
New Contract Sum Including this Change Order.....	\$	<u>145,144.27</u>

2011 MAR 31 PM 2:56  
RECEIVED  
CONTRACT MANAGEMENT

APPROVED BY: [Signature]  
Project Manager (Department Head)

DATE: 3/28/11

APPROVED BY: [Signature]  
Contract Manager

DATE: 4/4/11

APPROVED BY: [Signature]  
Director of Office of Management & Budget

DATE: 4-12-11

APPROVED BY: [Signature]  
County Manager

DATE: 4/13/11

41151541-563100 SRCDS

**CHANGE ORDER REQUEST FORM**

Citrona Dr. @ Sadler Rd.

No. 2

**RECEIVED  
CONTRACT MANAGEMENT**

<b>PROJECT</b>	
<b>DATE OF ISSUANCE</b>	<b>EFFECTIVE DATE</b> <u>2011 FEB -3 AM 11:21</u>
<b>NASSAU COUNTY BOARD OF COUNTY COMMISSIONERS</b>	
COUNTY Contract / Purchase Order No.: Bid No. NC 10-014/P.O. No. 10000597-00	
<b>CONTRACTOR</b> <u>United Brothers Development Corporation</u>	<b>ENGINEER / ARCHITECT:</b> <u>PBS&amp;J</u>

You are directed to make the following changes in the Contract Documents.

Description: Add 10 LF Staked Silt Fence for erosion control, Delete 152.04 TN Super Pave Asphalt Conc. (SP 9.5) Traffic Level B due to plan quantity error, Delete 1,810 SY Asphalt Rubber Membrane Layer due to existing asphalt depth (encountered limerock during milling operations), Add 1 AS Single Post Sign Re-Locate due to an additional existing sign not shown on plans and clear zone requirements.

Reason for Change Order: See above Descriptions

Attachments: (List documents supporting change) Contract Bid Tab, E-mail correspondence, Photos, CO #2 Engineer's Cost Breakdown

<p><b>CHANGE IN CONTRACT PRICE:</b></p> <p>Original Contract Price</p> <p><u>\$ 177,820.90</u></p>	<p><b>CHANGE IN CONTRACT TIMES:</b></p> <p>Original Contract Times</p> <p>Substantial Completion: <u>124</u></p> <p>Ready for Final Payment: <u>169</u> (days or dates)</p>
<p>Net change from previous Change Orders No. <u>1</u> to No. <u>1</u></p> <p><u>\$ 6,558.17</u></p>	<p>Net change from previous Change Orders No. <u>n/a</u> to No. <u>n/a</u></p> <p><u>N/A</u> (days)</p>
<p>Contract Price prior to this Change Order</p> <p><u>\$ 184,379.07</u></p>	<p>Contract Times Prior to this Change Order</p> <p>Substantial Completion: <u>124</u></p> <p>Ready for Final Payment: <u>169</u> (days or dates)</p>
<p>Net Increase (decrease) of this Change Order</p> <p><u>\$ (39,234.80)</u></p>	<p>Net Increase (decrease) of this Change Order</p> <p><u>0</u> (days)</p>
<p>Contract Price with all approved Change Orders</p> <p><u>\$ 145,144.27</u></p>	<p>Contract Times with all approved Change Orders</p> <p>Substantial Completion: <u>124</u></p> <p>Ready for Final Payment: <u>169</u> (days or dates)</p>

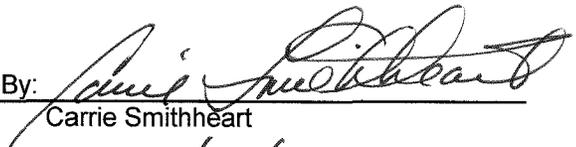
**RECOMMENDED:**  
 \* By: [Signature]  
 Engineer/Architect (Authorized Signature)  
 Date: 1/24/2011

**APPROVED:**  
 By: [Signature]  
 COUNTY (Authorized Signature)  
 Date: 2/1/11

**ACCEPTED:**  
 By: [Signature]  
 Contractor (Authorized Signature)  
 Date: 1/19/2011

**Change Order No. 2 Cost Breakdown (ETM)**

<b>Description</b>	<b>O/R - U/R Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Total Price</b>
Staked Silt Fence	10	LF	\$ 1.24	\$ 12.40
SP Asphalt Conc. (SP 9.5) TL-B	(152.04)	TN	\$ 130.49	\$ (19,839.70)
Asphalt Rubber Membrane Layer	(1,810)	SY	\$ 10.75	\$ (19,457.50)
Single Post Sign (Relocate)	1	AS	\$ 50.00	\$ 50.00
			Total =	\$ (39,234.80)

By:   
Carrie Smithheart

Date: 1/18/11

# Citrona Drive at Sadler Road Intersection Improvement Project

				United Brothers Estimate	
Pay Item	Pay Item Description	Units	Quantity	Cost Per Unit	Total Cost
101-1	MOBILIZATION	LS	1.00	\$12,200.00	\$12,200.00
102-1	MAINTENANCE OF TRAFFIC	LS	1.00	\$5,637.63	\$5,637.63
104-10-2	HAY BALES	EA	9.00	\$60.51	\$544.59
104-13-1	STAKED SILT FENCE, TYPE III	LF	1,192.00	\$1.24	\$1,478.08
110-1-1	CLEARING & GRUBBING	LS	1.00	\$1,580.42	\$1,580.42
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	CY	75.00	\$8.33	\$624.75
120-71	REGULAR EXCAVATION (3R PROJECTS ONLY)	CY	8.00	\$22.57	\$180.56
160-4	12" TYPE B STABILIZATION	SY	1,356.00	\$4.32	\$5,857.92
285-704	OPTIONAL BASE (BASE GROUP)(6" LIMEROCK)(LBR 100)	SY	848.00	\$12.00	\$10,176.00
327-70-1	MILLING EST. ASPH. PAVT. (1" AVG DEPTH)	SY	136.00	\$2.56	\$348.16
327-70-11	MILLING EST. ASPH. PAVT. (2 1/4" AVG DEPTH)	SY	2,045.00	\$3.32	\$6,789.40
334-1-12	SUPERPAVE ASPH. CONC. (SP9.5)(TRAFFIC B)	TN	444.20	\$130.49	\$57,963.66
337-7-30	ASPH. CONC. FRICTION COURSE, TRAFFIC B, FC-9.5 (RUBBER)	TN	143.10	\$180.94	\$25,892.51
341-70	ASPHALT RUBBER MEMBRANE INTERLAYER	SY	1,810.00	\$10.75	\$19,457.50
430-174-201	PIPE CULV, OPT MATL, OTHER-ELLIP/ARCH, 0-24" SD	LF	137.00	\$49.74	\$6,814.38
430-982-625	MES, OPTIONAL ROUND, 12"X18"CD	EA	2.00	\$1,296.55	\$2,593.10
520-1-8	CONCRETE CURB & GUTTER, SPECIAL (18" MIAMI TYPE)	LF	284.00	\$9.10	\$2,584.40
520-1-10	CONCRETE CURB & GUTTER, TYPE F	LF	39.00	\$9.09	\$354.51
520-1-11	CONCRETE CURB & GUTTER, TYPE RIBBON	LF	64.00	\$10.09	\$645.76
520-3	CONCRETE VALLEY GUTTER	LF	66.00	\$14.27	\$941.82
522-1	CONCRETE SIDEWALK, 4" THICK	SY	77.00	\$34.47	\$2,654.19
570-1-1	PERFORMANCE TURF	SY	410.00	\$0.34	\$139.40
570-1-2	PERFROMANCE TURF, SOD	SY	466.00	\$2.31	\$1,076.46
630-1-12	CONDUIT - SIGNALS, F&I, UNDERGROUND	LF	11.00	\$8.00	\$88.00
660-2-106	LOOP ASSEMBLY, F&I TYPE F	AS	2.00	\$450.00	\$900.00
700-20-40	SINGLE POST SIGN (RELOCATE)	AS	1.00	\$50.00	\$50.00
706-3	RETRO-REFLECTIVE PAVEMENT MARKER (WHITE/RED)	EA	18.00	\$5.00	\$90.00
706-3	RETRO-REFLECTIVE PAVEMENT MARKER (YELLOW/YELLOW)	EA	83.00	\$5.00	\$415.00
710-11-111	PAINTED PAVEMENT MARKINGS, STD, WHITE, SOLID (6")	NM	0.90	\$1,320.00	\$1,188.00
710-11-123	PAINTED PAVEMENT MARKINGS, STD, WHITE, SOLID (12")	LF	615.00	\$2.00	\$1,230.00
710-11-125	PAINTED PAVEMENT MARKINGS, STD, WHITE, SOLID (24")	LF	120.00	\$3.00	\$360.00
710-11-170	PAINTED PAVEMETN MARKINGS, STD, WHITE ARROW	EA	12.00	\$40.00	\$480.00
710-11-211	PAINTED PAVEMENT MARKINGS, STD, YELLOW, SOLID (18")	NM	0.96	\$1,320.00	\$1,267.20
710-11-224	PAINTED PAVEMENT MARKINGS, STD, YELLOW, SOLID (6")	LF	375.00	\$2.50	\$937.50
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID (6")	NM	0.30	\$4,500.00	\$1,350.00
711-11-123	THERMOPLASTIC, STD, WHITE, SOLID (12")	LF	205.00	\$3.00	\$615.00
711-11-125	THERMOPLASTIC, STD, WHITE, SOLID (24")	LF	40.00	\$5.00	\$200.00
711-11-170	THERMOPLASTIC, STD, WHITE ARROW	EA	4.00	\$75.00	\$300.00
711-11-211	THERMOPLASTIC, STD, YELLOW, SLOLID (6")	NM	0.32	\$4,500.00	\$1,440.00
711-11-224	THERMOPLASTIC, STD, YELLOW, SLOLID (18")	LF	125.00	\$3.00	\$375.00
				<b>\$177,820.90</b>	

CO #2

**Carrie Smithheart**

*DELETE ARMI LAYER*

**From:** Jonathan Page [jpage@nassaucountyfl.com]  
**Sent:** Monday, November 15, 2010 12:14 PM  
**To:** Carrie Smithheart  
**Cc:** Kent Ponder  
**Subject:** RE: Citrona Drive @ Sadler Road - Milling Depth/ARMI Layer

If the EOR agrees that it is not necessary the County takes no exception.

Jonathan

**Jonathan Page, P.E.**  
**Engineer III**  
**Engineering Services Dept.**  
**96161 Nassau Place**  
**Yulee, FL 32097**  
**(904) 491-7330**  
 jpage@nassaucountyfl.com

**From:** Carrie Smithheart [mailto:SmithheartC@etminc.com]  
**Sent:** Monday, November 15, 2010 12:06 PM  
**To:** Jonathan Page  
**Cc:** Kent Ponder  
**Subject:** FW: Citrona Drive @ Sadler Road - Milling Depth/ARMI Layer  
**Importance:** High

Jonathan,

Does the County take any exception to eliminating the ARMI Layer as recommended by PBS&J?

Thanks,

**Carrie Smithheart**  
 CEI/ Project Administrator



Direct: 904-642-8990 Fax: 904-642-4165  
 Cell: 904-509-9007 Email: SmithheartC@etminc.com

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**From:** Kadi, Sam E [mailto:SEKadi@pbsj.com]  
**Sent:** Monday, November 15, 2010 12:00 PM  
**To:** Carrie Smithheart; Holcomb, Michael E  
**Cc:** Jonathan Page; Kent Ponder; Jeremy Cronk

1/18/2011

**Subject:** RE: Citrona Drive @ Sadler Road - Milling Depth/ARMI Layer

The intent of the ARMI layer was to relieve any underlying pavement cracking outside the full depth pavement repair section that has been completed.

During design, coordination with County personnel regarding existing pavement cracking resulted in adding ARMI to the proposed pavement.

The intent was to mill 2 ¼" of the existing 3" of asphalt according to the attached pavement core information, then place ARMI on top of remaining asphalt...

Since we are getting into existing base, we recommend eliminating the ARMI layer.

If no evidence of cracking in the existing base based on field observations and photos to come, and since the milling depth was adjusted upward ½", we recommend putting down the structural course and friction course per plans.

*Thanks,*

Sam Kadi, P.E.  
Senior Project Manager

**PBS&J**  
an Atkins company

7406 fullerton St., Suite 350  
Jacksonville, FL 32256  
Direct: 904.363.8471  
Cell: 904.923.0621

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**From:** Carrie Smithheart [mailto:SmithheartC@etminc.com]  
**Sent:** Monday, November 15, 2010 11:10 AM  
**To:** Holcomb, Michael E; Kadi, Sam E  
**Cc:** Jonathan Page; Kent Ponder; Jeremy Cronk  
**Subject:** RE: Citrona Drive @ Sadler Road - Milling Depth/ARMI Layer

P.S. --> The field personnel indicated that they did not see any cracking within the limerock base.

Carrie

---

**From:** Carrie Smithheart  
**Sent:** Monday, November 15, 2010 11:09 AM  
**To:** Holcomb, Michael E; 'Kadi, Sam E'  
**Cc:** 'Jonathan Page'; Kent Ponder; Jeremy Cronk  
**Subject:** Citrona Drive @ Sadler Road - Milling Depth/ARMI Layer

1/18/2011

**Importance: High**

The milling operation on Citrona is getting into the existing base rock. We have raised the depth to 1-3/4" to try and avoid this, but we are still encountering the existing base rock. The ARMI Layer cannot be placed on limerock as it will be pulled up and ravel under the trucks & paver during paving operations.

Photos of existing base to follow.

Questions:

1. What was the intent of the ARMI Layer?
2. Since we are getting into existing base, can the ARMI Layer be eliminated?

Thanks,

**Carrie Smithheart**

CEI/ Project Administrator



Direct: 904-642-8990 Fax: 904-642-4165  
Cell: 904-509-9007 Email: SmithheartC@etminc.com

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### 3.2 SURFACE CONDITIONS

At the time of our visit, the sites were developed as two or four lane flexible pavement roadways. The shoulders were grass covered or exposed surficial soils. The topography was relatively level. Surface water was not observed at the time of our exploration.

### 3.3 PAVEMENT SECTION THICKNESSES

Table 2: Pavement Section Thickness Summary, below, summarizes the pavement and base material thicknesses encountered.

TABLE 2 Pavement Section Thickness Summary		
Pavement Core Location	Asphalt Thickness	Base Thickness & Material
Ratliff P-1	8.5 inches	None
US1 P-2	5.5 inches	8" – Limerock
VS301 at P-3 Sandy	5-inches	8" – Limerock
Ford P-4	7.75-inches	3" – Limerock
VS 301 at P-5 Ford	5-inches	8.25" – Limerock
lem P-6	4.125-inches	5.5" – Limerock
Simons P-7	2.125-inches	4" – Limerock
14th P-8	4.375-inches	4" – Limerock
Citrona P-9	3-inches	5.5" – Limerock

### 3.4 ASPHALT COMPONENT THICKNESSES

Table 3: Asphalt Component Thickness Summary, below, summarizes the different mix types evident in the asphalt cores obtained. The mixes were determined utilizing visual observations only, and are accurate to the degree the method implies. No laboratory tests were performed on the cores to determine the actual gradation of the components of the asphalt cores. If requested, we can perform extraction gradation tests on the cores to verify the asphalt types.



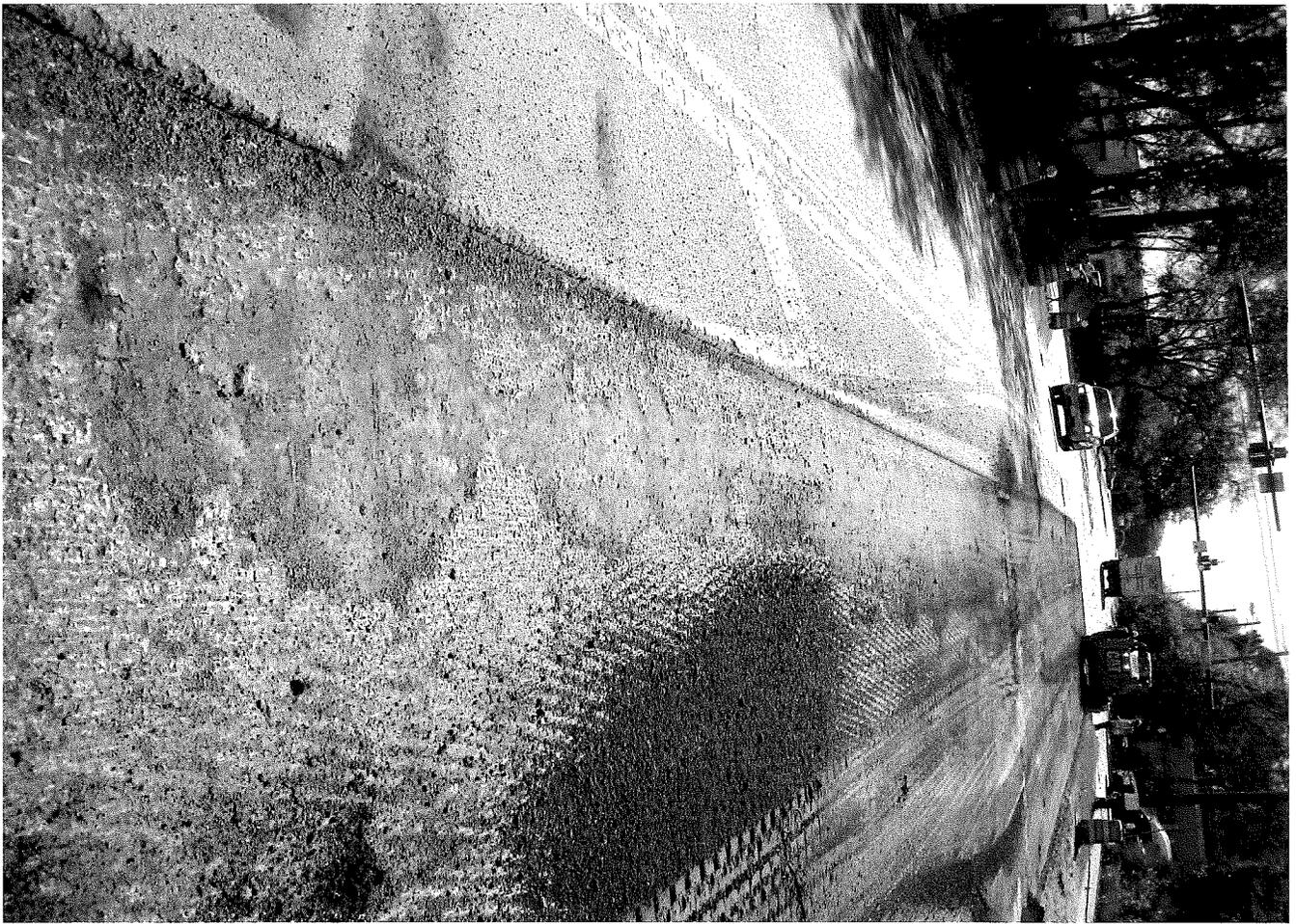
**Table 3  
 Asphalt Component Thickness Summary**

Location	Top Layer (thickness (in))	Next Layer (thickness (in))			
<i>Road 180</i> P-1	S-3 (1")	S-1 (2")	ABC Base (5.5")		
<i>US1</i> P-2	FC-5 (1")	S-1 (1.5")	S-1 (1.5")	ARMI (0.5")	ABC-3 with Coquina Shell (1")
<i>US 301 @ Sandy</i> P-3	Type 3 (0.75")	Coquina Mix (2")	Type 1 (2.25")		
<i>Ford</i> P-4	S-3 (1")	Type 1 (1")	ABC-3 (3.5")	Sand-Asphalt (2.25")	
<i>US 301 @ Ford</i> P-5	Type 3 (0.5")	Coquina Mix (2")	Type 1 (1.5")	ABC-3 Base (1")	
<i>Lem</i> P-6	S-1 (1.75")	S-1 (0.5")	Type 1 (1")	ABC-3 Base (0.875")	
<i>St. Marys</i> P-7	Type 1 (1.5")	ABC-3 Base (0.625")			
<i>14th</i> P-8	Type 3 (1")	Type 1 (1.5")	Type 1 (1.125")	ABC-3 Base (0.75")	
<i>Citronel</i> P-9	Type 3 (1")	S-1 (1.25")	ABC-3 Base (0.75")		

**3.5 LBR TEST RESULTS**

We collected nine (9) bulk samples of the near surface soils for limerock bearing ratio (LBR) testing. The LBR tests were performed in accordance with FDOT FM5-515 test method. The LBR test results are presented in the Table 4: Summary of LBR Tests.





Co #2

*SIGN RELOCATION***Carrie Smithheart**

**From:** Kadi, Sam E [SEKadi@pbsj.com]  
**Sent:** Friday, December 24, 2010 11:42 AM  
**To:** Carrie Smithheart; Holcomb, Michael E  
**Cc:** Jonathan Page; 'Dow Peters'; 'Russell Yaffee'; Doherty, Paul D  
**Subject:** RE: Citrona Dr. @ Sadler Rd. - Existing Speed Limit Sign Relocation  
**Importance:** High  
**Attachments:** Existing Sign Sta.jpg

Carrie,

Both google maps 2009 and the survey information show the existing speed limit sign at station 24+10 as shown in the plans.

Apparently, the speed limit sign was relocated and the bicycle sign erected in its place as your attached picture shows after both survey and sign inventory were conducted.

(I was not able to attach a google map photo from home, but it can be easily checked on google map)...

However, I agree with your assessment to relocate both signs away from the new EOP, at their current station locations.

Please direct the contractor to make sure the view of the relocated bicycle sign is not blocked by the stop sign at the driveway.

What is the message on the bicycle sign read?

Happy Holidays to everyone!

*Thanks,*

**Sam Kadi, P.E.**  
**Senior Project Manager**

**PBS&J**  
**an Atkins company**

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**From:** Carrie Smithheart [mailto:SmithheartC@etminc.com]  
**Sent:** Thursday, December 23, 2010 8:39 AM

1/18/2011

**To:** Holcomb, Michael E; Kadi, Sam E  
**Cc:** Jonathan Page  
**Subject:** Citrona Dr. @ Sadler Rd. - Existing Speed Limit Sign Relocation

Michael/Sam,

The existing speed limit sign is not located at Sta. 24+10 as depicted in the plans, but in stead is at Sta. 23+40. I addition there is a Bicycle sign that is actually at Sta. 24+10 (See attached photo). My assumption would be that we were to relocate the speed limit sign to the ROW to get it outside of the clear zone. With that said, do we want to leave the existing signs at their existing Sta.'s and just offset them and do we now need to relocate both? This will have us overrun the relocation item by 1 AS = \$50.00.

I just want to make sure that where they are at Sta. wise is okay. If not let me know where they need to go.

Thanks,

**Carrie Smithheart**  
CEI/ Project Administrator



Direct: 904-642-8990 Fax: 904-642-4165  
Cell: 904-509-9007 Email: SmithheartC@etminc.com

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1/18/2011



Co # 2

ASPHALT QNTY'S

**Carrie Smithheart**

**From:** Holcomb, Michael E [MEHolcomb@pbsj.com]  
**Sent:** Tuesday, January 11, 2011 3:38 PM  
**To:** Carrie Smithheart  
**Cc:** Kadi, Sam E  
**Subject:** RE: Citrona Dr. @ Sadler Road - Asphalt Quantity Issue  
**Attachments:** Pavement Quantity Evaluations.xlsx

Sorry for taking so long but I had few other fires to put out...

Bottom line is that our calculations closely match yours and thus you are correct that there was a quantity overestimation in the plans for asphalt:

	Plan	PBSJ	ETM	Actual
SP –	444.2	304.37	314.93	249.30
FC –	<u>143.1</u>	<u>139.81</u>	<u>139.1</u>	<u>185.96</u>
Total	587.30	444.18	454.03	435.26

It appears based strictly on actual quantities that the contractor placed 2.5" of SP and 2" of FC instead of the 3.5" of SP and 1" of FC as called for in the plans. From the EOR perspective I have no issues with that because the pavement structural number is basically the same either way.

Since the unit cost for FC is \$50.45 more than for SP, I would recommend paying him plan quantity only for FC, and pay for the FC overrun at the lower SP unit cost:

1" of FC(143.1 tons @ plan quantity) @ \$180.94/tn	= \$25,892.51
3.5" of SP (292.16 tons) @ \$130.49/tn	= \$38,123.96
	\$64,016.47

Based on my calculations, the County should be due a credit for asphalt totaling **\$19,839.70**

Call me when you get a moment to discuss Ratliff.

Thanks,

*Mike*

**Michael E. Holcomb, P.E.**

Associate Vice President

**PBS&J**

an Atkins company

7406 Fullerton St. Suite 350, Jacksonville Fl. 32256 | Tel: (904) 363-8460 | Fax: (904) 363-8811 | Cell: (904) 891-0360 |  
 Email: meholcomb@pbsj.com | Web: www.pbsj.com www.atkinsglobal.com

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Consider the environment. Please don't print this email unless you really need to.

1/11/2011

**From:** Carrie Smithheart [mailto:SmithheartC@etminc.com]  
**Sent:** Tuesday, January 11, 2011 2:36 PM  
**To:** Holcomb, Michael E  
**Subject:** FW: Citrona Dr. @ Sadler Road - Asphalt Quantity Issue

Michael,

Any word on this yet? I had someone else in our office do a take off and they were very close to my numbers. The Substantial Completion date is this Friday and I need to know if this issue will hold that process up.

Thanks,

**Carrie Smithheart**  
CEI/ Project Administrator



Direct: 904-642-8990 Fax: 904-642-4165  
Cell: 904-509-9007 Email: SmithheartC@etminc.com

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**From:** Carrie Smithheart  
**Sent:** Friday, January 07, 2011 4:32 PM  
**To:** 'Holcomb, Michael E'  
**Cc:** Kent Ponder  
**Subject:** Citrona Dr. @ Sadler Road - Asphalt Quantity Issue

Michael,

Per our discussion, please see the attached. I used 108lbs / SY / inch for my tonnage calculations.

Please review as soon as possible as we are showing a deficit of asphalt placed compared to the contract planned quantities.

Thanks,

**Carrie Smithheart**  
CEI/ Project Administrator



Direct: 904-642-8990 Fax: 904-642-4165  
Cell: 904-509-9007 Email: SmithheartC@etminc.com

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1/11/2011



# ETM Asphalt Analysis

Milling Calculated

$$20+40 \text{ TO } 21+40 = \frac{(37,16 + 35,58)}{2} (100) \div 9 = 404,11 \text{ sq}$$

$$21+40 \text{ TO } 21+65,38 = 35,16 (25,38) \div 9 = 99,15 \text{ sq}$$

$$21+65,38 \text{ TO } 23+30 = \frac{25,38 + 16}{2} (164,62) \div 9 = 378,44 \text{ sq} \Rightarrow (16' \text{ wide @ } 23+50 \text{ Due to Rebuild Section (Full Depth Asphalt)})$$

$$23+30 \text{ TO } 26+38,5 = \frac{25,38 + 24}{2} (308,5) \div 9 = 846,32 \text{ sq}$$

$$\frac{1728,02 \text{ sq}}{546,29 \text{ sq}} = 118,173 \text{ sq}$$

1" milling - Full Depth Calculated

Milling Plans Full Depth = 2045.54 @ 3.5" = 386.57 TN Structural

Plan Widening & Turnouts = 848 @ 2" = 91 TN Structural

TOTAL = 477,51 TN Based on 108<sup>#</sup>/54/1" of Asphalt

Friction Plan Area of 3029.54 @ 1" = 163.57 TN Based on 108<sup>#</sup>/54/1" of Asphalt

Existing Calculated

$$1728,02 \text{ Milling} = 93,31 \text{ TN}$$

$$848,00 \text{ Widening} = 45,79 \text{ TN}$$

$$139,10 \text{ TN}$$

143,1 = Plans Only Fraction ✓

Structural Calculated

3 1/2" @ 2 1/4" Milling	= 378 <sup>#</sup> /54	= 223,35 TN
Widening 2" @ 848 sq	= 216 <sup>#</sup> /54	= 91,58 TN
		<u>314,93 TN</u>

444,2 = Plans Only

TOTAL Asphalt

Calculated

454,03

Used Fraction 185,96

Used Structural 183,50

TOTAL Asphalt Used = 435,26 TN

Actual Spread Rates Based  
on Asphalt Reports

20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740
20738	21715	SPD 185.96	SPD 183.5	SPD 50.6	SPD 89.8	L-1 SPD 117.16	22740	23740	24740	25740	26740

- ① 20738 TO 20752 = 185.96
- ② 20752 TO 21715 = 236.56
- ③ 21715 TO 22740 = 420.06
- ④ 22740 TO 25745 = 396.46
- ⑤ 25745 TO 26740 = 185.96

R-1 Spd,  
 20744 TO 21715 = 275.76  
 21715 TO 25744 = 459.26  
 25744 TO 25745 = 369.46  
 25745 TO 26738 = 185.96

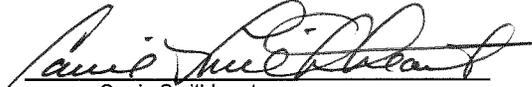
L-1 Spd  
 21715 TO 25745 = 486.16  
 25745 TO 26740 = 303.12

R-1 Spd,  
 20744 TO 21715 = 275.76  
 21715 TO 25744 = 459.26  
 25744 TO 25745 = 369.46  
 25745 TO 26738 = 185.96

L-1 Spd  
 21715 TO 25745 = 486.16  
 25745 TO 26740 = 303.12

**Citrona Drive at Sadler Pavement Quantity Analysis**

			Plan Quantities			EOR Re-Calculated Quantities			Actual Quantities			Proposed "Revised" Quantities		
Pay Item	Pay Item Description	Units	Qty	Cost Per Unit	Total Cost	Qty	Cost Per Unit	Total Cost	Qty	Cost Per Unit	Total Cost	Qty	Cost Per Unit	Total Cost
334-1-12	SUPERPAVE ASPH. CONC. (SP9.5)(TRAFFIC B)	TN	444.20	\$130.49	\$57,963.66	304.37	\$130.49	\$39,717.24	249.30	\$130.49	\$32,531.16	292.16	\$130.49	\$38,123.96
337-7-30	ASPH. CONC. FRICTION COURSE, TRAFFIC B, FC-9.5 (RUBBER)	TN	143.10	\$180.94	\$25,892.51	139.81	\$180.94	\$25,297.22	185.96	\$180.94	\$33,647.60	143.10	\$180.94	\$25,892.51
<b>Totals</b>			<b>587.30</b>		<b>\$83,856.17</b>	<b>444.18</b>		<b>\$65,014.46</b>	<b>435.26</b>		<b>\$66,178.76</b>	<b>435.26</b>		<b>\$64,016.47</b>

By:   
 Carrie Smithheart

Date: 1/11/11