

CO-03-06 BACKUP



POSPIECH
— CONTRACTING —

June 9, 2016

Hancock Road Phase III A and IIIB

FDOT ADA Ramp Modifications: Due to steep profile slope of the Trail ramps had to be extended to conform to FDOT ADA construction requirements. Plans indicated ramp width from 10' to 11.5'. To match trail width ramps were constructed at typical 12' width. Required adjustments increased trail ramp 4" concrete quantity and Detectable Warning Surface (DWS) quantity. Additionally, two (2) each DWS's not shown for installation at the median safe haven by the original bid plans are included as part of this item CO-03-06.

The Contractor proposed this modification to the Work at a cost increase of \$4,913.18 and no change to Contract Duration (see attached proposal marked Exhibit 6). Pospiech Contracting, Inc. provided cost data and quantities listed his proposal.

Thank You,

Gary Bracken

Cost Breakdown:

Measured Old 50 East West Trail Curb Ramp 4" Concrete Sidewalk Quantity at 154.8 SY. Calculated Trail Curb Ramp 4" Concrete Quantity at 69.4 SY. Overrun 4" concrete quantity at 85.4 SY. Unit Cost at \$28.50/SY.

Cost Increase at \$2,433.90.

All Remaining Measured Trail Curb Ramp 4" Concrete Sidewalk at 5,198.7 SY. Calculated Trail Curb Ramp 4" Concrete Quantity at 5,052.9 SY. Increase 4" Concrete Sidewalk 145.8 SY. Unit cost for 4" sidewalk is offset by asphalt trail unit costs. $\$28.50/\text{SY} - \$19.28/\text{SY} = \$9.22/\text{SY}$.

Cost Increase at $145.8 \text{ SY} \times \$9.22/\text{SY} = \$1,344.28$.

Measured DWS at 357.4 LF. Calculated DWS at 354.6 LF. Increase at 2.8 LF or 5.6 SF. Average DWS at 21 SF. $5.6 \text{ SF} / 21 \text{ SF} = 0.27 \text{ DWS}$. Unit Cost per part A of contract at \$500.00/DWS.

Increase Cost Measured Length DWS at $0.27 \times \$500.00 = \135.00 .

Added Two (2) DWS's at School Main Pedestrian Crossing not shown for installation by the original plans. Unit cost of DWS per part A of the contract is at \$500.00/EA.

Increase work 2 DWS $\times \$500.00/\text{DWS} = \$1,000.00$.

Total ADA Ramps Modification Cost at \$4,913.18.

EXHIBIT 6 BACKUP DOCUMENT

N Hancock Rd

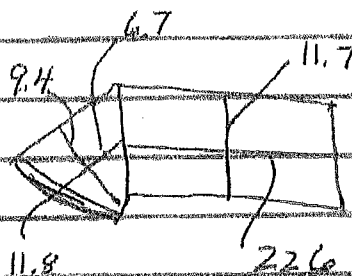
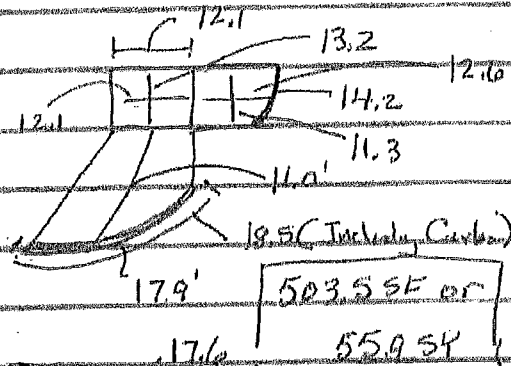
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Trail Ramp Measurements

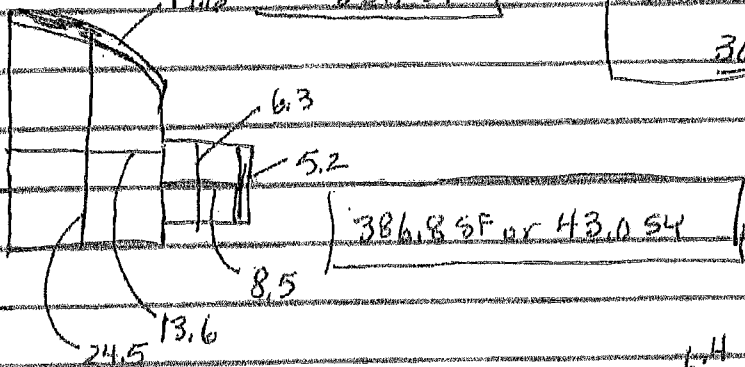
By: RPRudd, Terra, Inc

Date: 05/17/2016

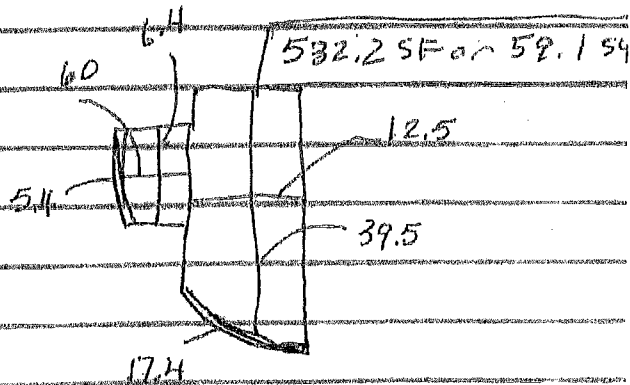
Old 50 East



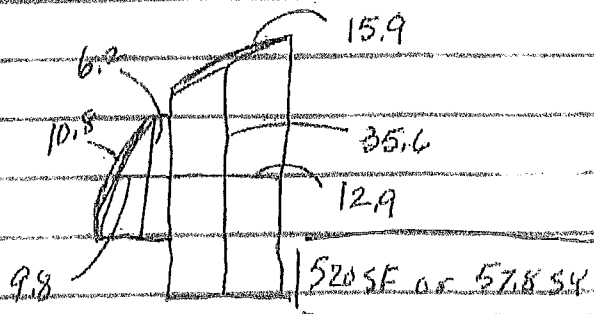
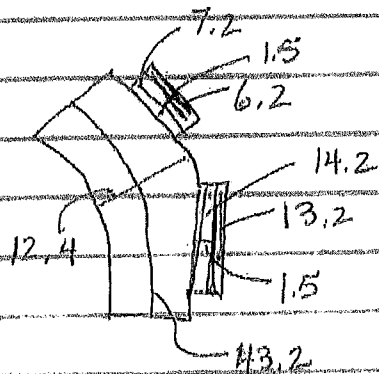
$264.4 + 63.0 = 327.4 \text{ SF}$
 36.4 SY



Old 50 West



$567.8 \text{ SF or } 63.1 \text{ SY}$



N. Hancock Rd

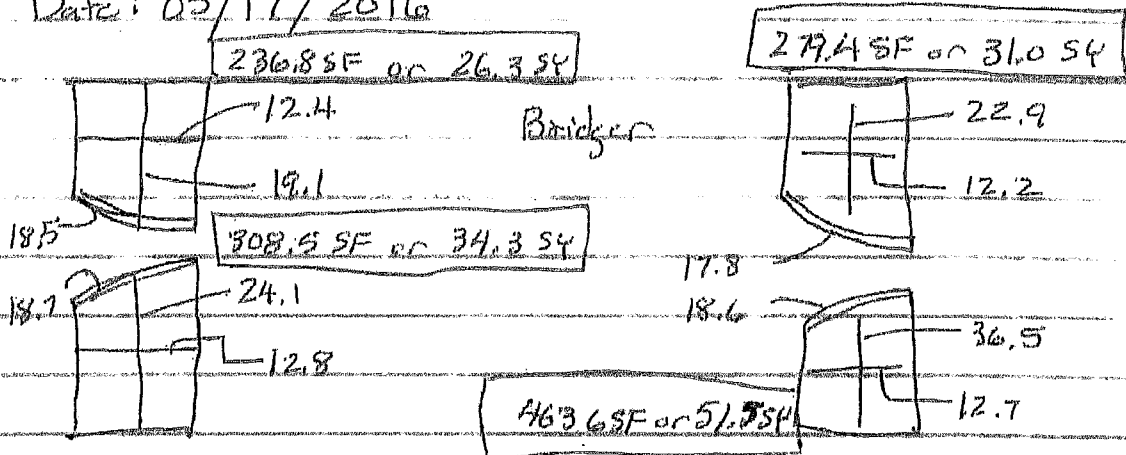
Page 2 of 2

Trail Ramp Measurements

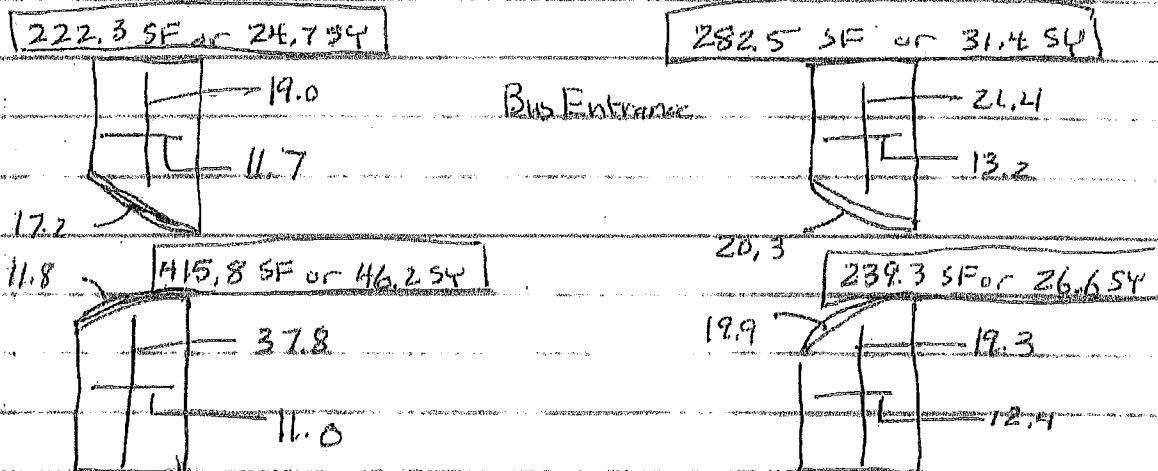
By: RPRudd; Tierra, Inc.

Date: 05/17/2016

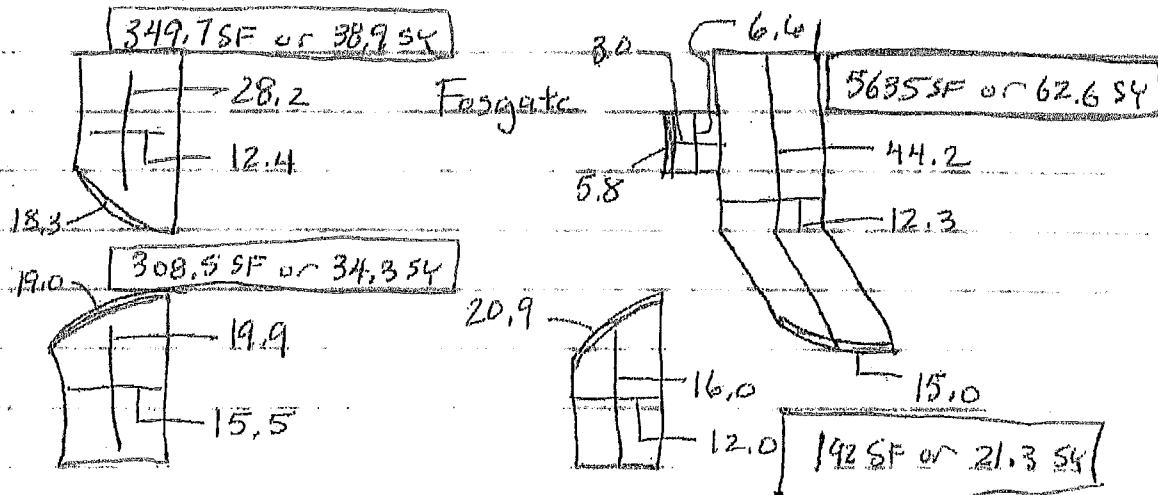
Jim Hunt



Big Sky



School Main Entrance



Trail Structure

Bid A

Bid B

12" Stab \$3.35/SY	12" Stab \$4.10/SY
6" Limerock \$9.10/SY	6" Limerock \$8.35/SY
1.5" SP 12.5 \$8.68/SY	1.5" SP 12.5 \$8.70/SY

4" Concrete Sidewalk: \$28.50/SY ————— \$29.60/SY
 DWS \$500.00/EA ————— \$425.00/EA

Plan

Placed

1/2 So East	Sidewalk Plan	DWS	Sidewalk	DWS
NE	457.6 SF	7.5 LF	327.4 SF	11.8 LF
NW	315.9 SF	23.7 LF	503.5 SF	32.1 LF
SW	309.8 SF	28.9 LF	386.8 SF	22.8 LF

1/2 So West

NE	201.1 SF	15.7 LF	532.2 SF	22.8 LF
SW SE	212.6 SF	23.8 LF	520 SF	26.7 LF
SW	1222 SF	18.1 LF	567.8 SF	19.4 LF

Jim Hunt

SE	157.8 SF	15.9 LF	236.8 SF	18.5 LF
NE	157.6 SF	16.7 LF	308.5 SF	18.7 LF

Bridges

SE	157.0 SF	16.0 LF	463.6 SF	17.8 LF
NE	157.0 SF	16.1 LF	274.4 SF	18.6 LF

TA 234, Rt

SE	181.6 SF	19.6 LF
NW	182.1 SF	19.6 LF

Not Constructed

g Totals	3712.1 SF	221.6	4,126.0 SF	209.2 LF
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	Plan	Placed	Plan	Placed
By Sign	Sidewalk	DWS Sidewalk	DWS	Sidewalk
SE	118 SF	12.8 LF	415.8 SF	11.8 LF
NE	157.6 SF	17.0 LF	222.3 SF	17.2 LF
Bin Entrance	Ø			
SE	185.4 SF	19.4 LF	239.3 SF	20.3 LF
NE	130.3 SF	14.0 LF	282.5 SF	19.9 LF
School Meeting			308.5 SF	
SE	217.7 SF	16.5 LF	349.7 SF	19.0 LF
NE	196.9 SF	16.7 LF	349.7 SF	18.3 LF
Esports				
SE	183.1 SF	19.1 LF	192 SF	20.9 LF
NE	221.3 SF	17.5 LF	563.5 SF	20.8 LF
Page Totals	1410.3 SF	133.0 LF	2,573.6 SF	148.2 LF
Page 1	3,712.1 SF	221.6 LF	4,176.0 SF	209.2 LF

Plan	Plan	Placed	Placed
5,122.4 SF	354.6 LF	6,699.6 SF	357.4 LF

Trail Sidewalk	6,699.6 - 5,122.4 = 1,577.2 @	30.8% Greater Than Planned
DWS	357.4 - 354.6 = 2.8 @	0.8% Greater Than Planned

$$1,577.2 \text{ SF} = 175.24 \text{ SY} @ \$9.22/\text{SY} = \boxed{\$1,615.71}$$

$$2.8 \text{ LF} = 5.6 \text{ SF DWS} @ \cancel{\$500} \cdot \$500/\text{EA}$$

$$\text{Average DWS @ } 20+\text{ SF Page @ } 30\% \text{ of } \$500 =$$

$$\boxed{\$1,765.72} \quad \boxed{\$150.00 \text{ ?}}$$

For Increase In 4" Sidewalk There Would
Be An Equal Decrease In Asphalt Trail Items

Taking Larger of Bid A/B for 4" Sidewalk
Unit Value @ \$29.60/SY

Taking Lower of Bid A/B for Asphalt Trail
Items Unit Value (Sum) @ \$20.38/SY

Difference Between Trail Types @

$$\$29.60 - \$20.38 = \$9.22/SY$$

Addition Concrete Trail Added @ 175.24 SY

$$175.24 SY \times \$9.22/SY = \$1,615.71$$

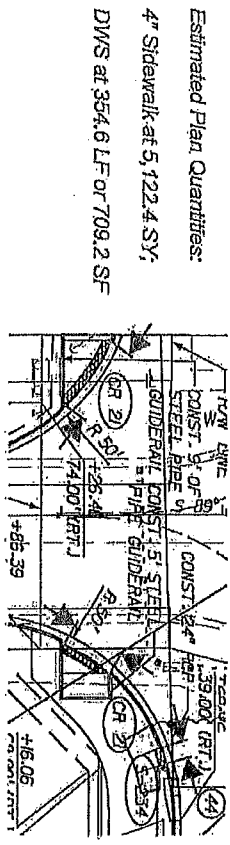
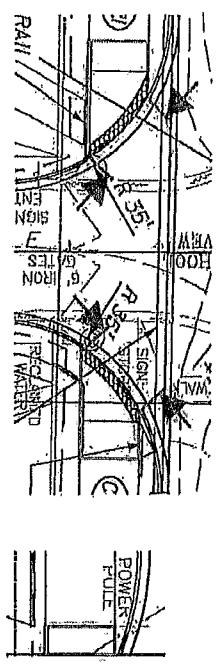
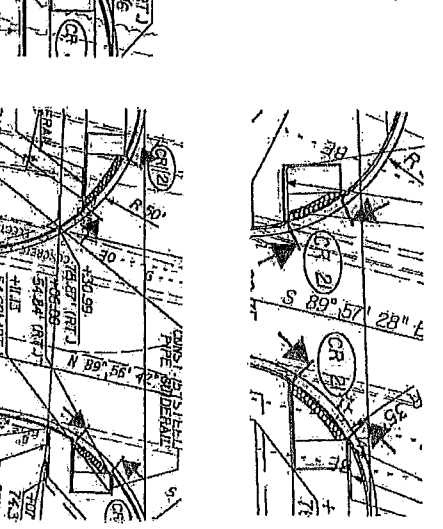
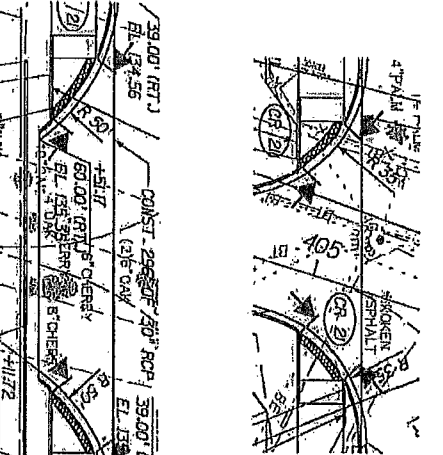
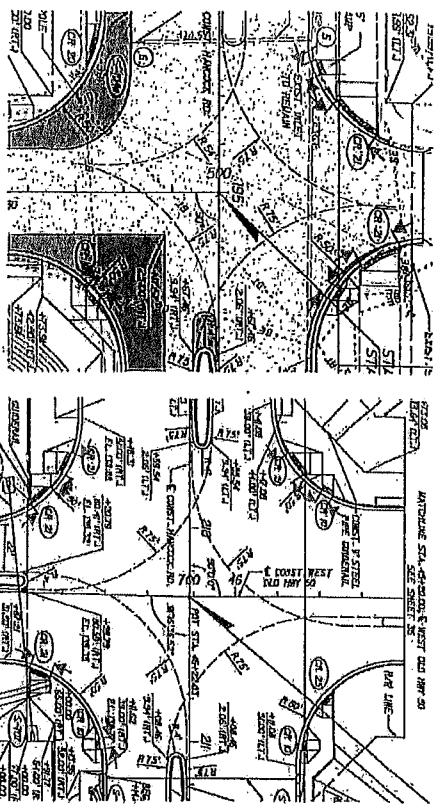
DWS Per-Each w/ Avg @ 21 SF Per Bid A

$$5.6 SF (\text{Overrun}) / 21 SF = 0.27 DWS$$

$$0.27 DWS \times \$500/EA DWS = \$135.00$$

I get total Overrun Cost for Trail
Ramp Size Increase @ \$1,750.71

$$\boxed{+ \$1,750.71}$$



Estimated Plan Quantities:
 4" Sidewalk-at 5,122.4 SY,
 DWS at 354.6 LF or 709.2 SF

Robert Rudd

From: Robert Rudd
 Sent: Thursday, May 19, 2016 4:27 PM
 To: Gbracken@poshplanning.com
 CC: rrudd@ar.com
 N Homock-04, CO-05, Trail Ramps
 Attachments: Notes.pdf; Plan_Ext_Sheet.pdf

Gary,

See attached Trail Ramps measurements and notes.

Old 50 East West Ramps are the only locations where there is no asphalt offset related to additional concrete for ramps. I get increase in concrete at these ramps at 85.4 SY. This quantity includes SW ramp construction twice. Bid A unit cost is at \$23.50/SY. Increase in cost is at \$2,453.20.

Total overrun for all other trail ramps is at 145.8 SY. At these locations when concrete increases asphalt trail decreases by the same value. 1 inch of offset concrete around \$2.22/SY (using lowest available unit costs for asphalt and highest available unit costs for concrete. Cost increase varies out to be \$1,364.22.

Detectable Warning Measurements for installed vs Plan are almost the same. I measured 357.4 LF of installed DWS at trail ramps. Plan estimated DWS at trail ramps is at 354.6 LF. Only a 2.8 LF or 5.6 SF difference. Since ramps are per grade with the average ramp at 24 SF (bid B) to 25 SF (bid A) each increase using small ramp average would be at around \$135.00.

There are three curb ramps that were shown with no DWS. All in bid A area at \$500.00/EA. There is two ramps / DWS's not installed at STA 2364+ Right. The actual plan number of DWS's in bid A was 357. Bid noted 34. Plan and bid B at 6 DWS's. Concrete was not there to measure so it adjusted itself with sum. There are 47 DWS's rather than 40. Add 2 DWS's at \$500.00/EA for a total cost of \$1,000.00.

I get total Trail Ramps Cost Change at \$9,513.15.

Take a look and let me know what you think.

Thanks,

Robert Rudd
 Terrain, Inc.