

Every Day Counts - Case Study 3

Project name	Conventional Alt. CS 3 Fla.
Labor rate table	Labor 2011
Equipment rate table	Equip 2011
Notes	<ol style="list-style-type: none">1. Pricing is 2011 \$.2. Construction Schedule of 60 mos.3. Rates reflect majority of work performed evenings to minimize disruption.4. 6 Bridges.5. Labor Cost/Unit - This reflects the cost of Labor to put one unit of measure of work in place. This is comprised of a typical crew with associated productivity required to perform the activity. Labor is priced up to include base rate, fringes, taxes, insurance, etc.6. Material Cost/Unit - This cost represents the final installed cost for all the materials associated with the item of work.7. Sub Contract Cost/Unit - this represents the Sub Contract all in Cost to put one unit of work in place. This cost includes all costs necessary to reflect a total installed cost (incls. Labor, equipment and material).8. Equipment Cost/Unit - This represents the cost of Construction Equipment necessary to put one unit of work in place. This cost includes equipment ownership and maintenance and operational costs.9. Other Cost/Unit - This cost represents all other costs necessary to perform the item of work and not covered by the abovementioned costs.10. Total cost/unit - This is the summation of all unit costs to arrive at a total cost per unit to put one one item of work in place.11. Total Amount - Total cost to put the quantity of units specified in place.
Report format	Sorted by 'LOCATION/Pay Item/Group phase/Phase' 'Detail' summary Allocate addons

Cost Estimating Spreadsheet Report
Conventional Alt. CS 3

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
Additional Cost Additional Cost Detour								
* unassigned *								
<i>01-54-36.00 Equipment Mobilization</i>								
<i>01-54-36.50 Mobilization Or Demob.</i>								
Transport Bridge to Site	12.00 ea	517.79	-	-	817.10	-	1,334.89	16,019
Transport Bridge back to	12.00 ea	517.79	-	-	817.11	-	1,334.90	16,019
FDOT								
<i>Mobilization Or Demob.</i>								32,037
<i>Equipment Mobilization</i>								32,037
 <i>01-55-00.00 Vehicular Access And Parking</i>								
<i>01-55-23.50 Roads And Sidewalks</i>								
Temporary, roads	6,000.00 lf			-		1,135.98	1,135.98	6,815,898
Temporary, roads Remove	6,000.00 lf			-		155.45	155.45	932,702
<i>Roads And Sidewalks</i>								7,748,599
<i>Vehicular Access And Parking</i>								7,748,599
 <i>32-34-00.00 Fabricated Bridges</i>								
<i>32-34-10.10 Bridges, Highway</i>								
Fabricated highway bridges, Install	990.00 lf	50.64	0.00	-	13.97	-	64.61	63,965
Fabricated highway bridges, Remove	990.00 lf	50.64		-	13.97	-	64.61	63,965
Fabricated highway bridges, concrete in place, abutment	1,050.00 cy	293.61	198.50	-	19.01	-	511.12	536,674
Fabricated highway bridges, concrete in place, abutment Remove	1,050.00 cy		0.00	-		149.47	149.47	156,945
<i>Bridges, Highway Fabricated Bridges</i>								821,549
								821,549
 <i>34-71-13.00 Vehicle Barriers</i>								
<i>34-71-13.17 Security Vehicle Barriers</i>								
Maintain Detour	1,500.00 day	-	-	-	-	89.68	89.68	134,524
<i>Security Vehicle Barriers</i>								134,524
<i>Vehicle Barriers</i>								134,524
* unassigned *								8,736,711
Additional Cost								8,736,711
Additional Cost								
Detour								

Cost Estimating Spreadsheet Report
Conventional Alt. CS 3

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
General Conditions General Conditions								
* unassigned *								
<i>01-31-00.00 Project Management And Coordination</i>								
<i>01-31-13.20 Field Personnel</i>								
Field Personnel, clerk, average	125.00 week	472.96	-	-	-	-	472.96	59,120
Field engineer, average	387.00 week	1,457.74	-	-	-	-	1,457.74	564,147
Field Personnel, project manager, average	129.00 week	2,397.18	-	-	-	-	2,397.18	309,236
Field Personnel, superintendent, average	375.00 week	2,202.81	-	-	-	-	2,202.81	826,054
								<u>1,758,556</u>
<i>Field Personnel</i>								<i>1,758,556</i>
<i>Project Management And Coordination</i>								<i>1,758,556</i>
 <i>01-32-33.00 Photographic Documentation</i>								
<i>01-32-33.50 Photographs</i>								
Construction Photographs	128.00 set	-	777.25	-	-	-	777.25	99,488
								<u>99,488</u>
<i>Photographs</i>								<i>99,488</i>
<i>Photographic Documentation</i>								<i>99,488</i>
 <i>01-45-00.00 Quality Control</i>								
<i>01-45-23.50 Testing</i>								
Field Testing	6.00 prjc	-	-	-	-	35,981.96	35,981.96	215,892
								<u>215,892</u>
<i>Testing</i>								<i>215,892</i>
<i>Quality Control</i>								<i>215,892</i>
 <i>01-52-13.00 Field Offices And Sheds</i>								
<i>01-52-13.20 Office And Storage Space</i>								
Office Trailer, furnished, rent per month, 32' x 8', excl. hookups	60.00 ea	-	288.18	-	-	-	288.18	17,291
Storage Boxes, rent per month, 20' x 8'	120.00 ea	-	87.89	-	-	-	87.89	10,547
								<u>27,838</u>
<i>Office And Storage Space</i>								<i>27,838</i>
 <i>01-52-13.40 Field Office Expense</i>								
Field Office Expense, office equipment rental, average	60.00 mo	-	179.37	-	-	-	179.37	10,762
Field Office Expense, office supplies, average	60.00 mo	-	113.60	-	-	-	113.60	6,816

Cost Estimating Spreadsheet Report
Conventional Alt. CS 3

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
<i>01-52-13.40 Field Office Expense</i>								
Field Office Expense, telephone bill; avg. bill/month, incl. long dist.	60.00 mo	-	251.11	-	-	-	251.11	15,067
Field Office Expense, field office lights & HVAC	60.00 mo	-	131.54	-	-	-	131.54	7,892
								<hr/>
<i>Field Office Expense</i>								40,537
<i>Field Offices And Sheds</i>								68,374
 <i>01-56-26.00 Temporary Fencing</i>								
<i>01-56-26.50 Temporary Fencing</i>								
Temporary Fencing, chain link, 6' high, 11 ga	3,000.00 lf	3.43	8.37	-	-	-	11.80	35,411
								<hr/>
<i>Temporary Fencing</i>								35,411
<i>Temporary Fencing</i>								35,411
 <i>01-58-00.00 Project Identification</i>								
<i>01-58-13.50 Signs</i>								
Project Signs	100.00 sf	-	21.40	-	-	-	21.40	2,140
								<hr/>
<i>Signs</i>								2,140
<i>Project Identification</i>								2,140
 <i>01-71-23.00 Field Engineering</i>								
<i>01-71-23.13 Construction Layout</i>								
Survey Crew	125.00 day	2,057.23	-	-	90.63	-	2,147.86	268,482
								<hr/>
<i>Construction Layout</i>								268,482
<i>Field Engineering</i>								268,482
* unassigned *								2,448,344
General Conditions								2,448,344
General Conditions								2,448,344
 Permanent Walls Permanent Walls								
400-2-10 Concrete Class II								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Approach Slab	787.80 cy	154.57	173.39	-	20.87	-	348.83	274,805
								<hr/>
<i>Concrete In Place</i>								274,805
<i>Cast-In-Place Concrete</i>								274,805
400-2-10 Concrete Class II								274,805
 415-1-9 Reinforcing Steel								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								

Cost Estimating Spreadsheet Report
Conventional Alt. CS 3

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel Approach Slabs	161,496.00 lb	0.40	0.06	-	0.08	-	0.54	86,596
								<hr/>
<i>Reinforcing In Place</i>								86,596
<i>Reinforcing Steel</i>								86,596
<i>Accessories</i>								
415-1-9 Reinforcing Steel								86,596
521-8-1 Concrete Traffic Railing								
<i>34-71-13.00 Vehicle Barriers</i>								
<i>34-71-13.26 Vehicle Guide Rails</i>								
Concrete Traffic Railing Barrier Retaining Wall Vehicle Guide Rails Vehicle Barriers	660.00 lf	13.96	49.03	-	4.44	-	67.43	44,503
								<hr/>
<i>Vehicle Guide Rails</i>								44,503
<i>Vehicle Barriers</i>								44,503
521-8-1 Concrete Traffic Railing								44,503
548-12 Retainig Wall System								
<i>32-32-23.00 Retaining Walls</i>								
<i>32-32-23.13 Retaining Walls</i>								
Retaining Wall System	66,432.00 sf	8.28	14.05	-	4.24	-	26.58	1,765,468
								<hr/>
<i>Retaining Walls</i>								1,765,468
<i>Retaining Walls</i>								1,765,468
548-12 Retainig Wall System								1,765,468
Permanent Walls								2,171,371
Permanent Walls								
Substructure-End Substructure-End Bents								
400-4-5 Concrete Class IV (Substructure)								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Concrete Class IV	432.00 cy	309.15	197.30	-	41.73	-	548.18	236,813
								<hr/>
<i>Concrete In Place</i>								236,813
<i>Cast-In-Place Concrete</i>								236,813
400-4-5 Concrete Class IV (Substructure)								236,813
415-1-5 Reinforcing Steel Substructure								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								
<i>03-21-10.60 Reinforcing In Place</i>								

Cost Estimating Spreadsheet Report
Conventional Alt. CS 3

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel	58,320.00 lb	0.53	0.50	-	0.11	-	1.13	65,988
<i>Reinforcing In Place</i>								65,988
<i>Reinforcing Steel</i>								65,988
<i>Accessories</i>								
415-1-5 Reinforcing Steel								65,988
Substructure								
455-143-5 Test Piles								
<i>31-62-00.00 Driven Piles</i>								
<i>31-62-13.23 Prestressed Concrete Piles</i>								
Prestressed concrete piles,	1,140.00 vlf	32.18	65.77	-	18.54	-	116.48	132,789
24" square, Test Pile								
<i>Prestressed Concrete</i>								132,789
<i>Piles</i>								
<i>Driven Piles</i>								132,789
455-143-5 Test Piles								132,789
455-34-5 Concrete Piling Prestressed								
<i>31-62-00.00 Driven Piles</i>								
<i>31-62-13.23 Prestressed Concrete Piles</i>								
Prestressed concrete piles,	6,720.00 vlf	11.70	65.77	-	6.74	-	84.21	565,884
24" square,								
<i>Prestressed Concrete</i>								565,884
<i>Piles</i>								
<i>Driven Piles</i>								565,884
455-34-5 Concrete Piling								565,884
Prestressed								
Substructure-End								
Substructure-End								1,001,475
Bents								
Substructure-Piers Substructure-Piers								
400-4-5 Concrete Class IV (Substructure)								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Concrete Class IV	918.00 cy	309.15	197.30	-	41.73	-	548.18	503,228
<i>Concrete In Place</i>								503,228
<i>Cast-In-Place Concrete</i>								503,228
400-4-5 Concrete Class IV								503,228
(Substructure)								

Cost Estimating Spreadsheet Report
Conventional Alt. CS 3

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
32-34-10.10 Bridges, Highway Fabricated highway bridges, precast, prestressed concrete, I beams	12,672.00 lf	-	-	-	-	191.32	191.32	2,424,451
<i>Bridges, Highway</i>								<u>2,424,451</u>
<i>Fabricated Bridges</i>								2,424,451
450-2-54 Prestressed Beams								2,424,451
458-1-12 Bridge Deck Expansion Joint								
32-34-00.00 Fabricated Bridges 32-34-10.10 Bridges, Highway Bridge Deck Expansion Joint	822.00 lf	114.21	326.45	-	3.69	-	444.34	365,251
<i>Bridges, Highway</i>								<u>365,251</u>
<i>Fabricated Bridges</i>								365,251
458-1-12 Bridge Deck Expansion Joint								365,251
521-5-1 Concrete Traffic Railing								
34-71-13.00 Vehicle Barriers 34-71-13.26 Vehicle Guide Rails Concrete Traffic Railing Barrier Bridge	3,888.00 lf	13.96	49.03	-	4.44	-	67.43	262,161
<i>Vehicle Guide Rails</i>								<u>262,161</u>
<i>Vehicle Barriers</i>								262,161
521-5-1 Concrete Traffic Railing								262,161
Superstructure Superstructure								6,031,483

Estimate Totals

Description	Amount	Cuts/Adds	Net Amount	Totals	Hours	Rate	Cost Basis	Percent of Total	
Labor	5,709,434		5,709,434		47,823.707	ch		26.43%	
Material	3,860,801		3,860,801					17.87%	
Subcontract									
Equipment	1,352,326		1,352,326		7,058.341	ch		6.26%	
Other	10,680,411		10,680,411					49.44%	
	21,602,972			21,602,972				100.00	100.00%
Total				21,602,972					