

Every Day Counts - Case Study 6

Project name	Prefabricated Alt. CS 6 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 30 mos.3. Rates reflect majority of work performed in restricted work area.4. Center Pier w/2 bounds of traffic.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

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
Approach Slab Approach Slab								
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	190.00 cy	188.61	178.50	-	25.84	-	392.95	74,660
Concrete In Place								74,660
Cast-In-Place Concrete								74,660
400-2-10 Concrete Class II								74,660
415-1-9 Reinforcing Steel								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel Approach Slabs	38,950.00 lb	0.48	0.52	-	0.10	-	1.10	42,839
Reinforcing In Place								42,839
Reinforcing Steel								42,839
Accessories								
415-1-9 Reinforcing Steel								42,839
Approach Slab								117,499
Approach Slab								
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	240.00 week	948.63	-	-	-	-	948.63	227,671
Field engineer	485.00 week	2,687.79	-	-	-	-	2,687.79	1,303,576
Field Personnel, general purpose laborer, average	485.00 week	1,897.26	-	-	-	-	1,897.26	920,171
Field Personnel, project manager	240.00 week	3,952.63	-	-	-	-	3,952.63	948,630
Field Personnel, superintendent	485.00 week	2,687.79	-	-	-	-	2,687.79	1,303,576
Field Personnel, timekeeper, average	130.00 week	1,588.96	-	-	-	-	1,588.96	206,564
Field Personnel								4,910,190
Project Management And Coordination								4,910,190
<i>01-32-33.00 Photographic Documentation</i>								
<i>01-32-33.50 Photographs</i>								

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>01-32-33.50 Photographs</i>								
Construction Photographs	130.00 set	-	584.75	-	-	-	584.75	76,017
Photographs								76,017
Photographic Documentation								76,017
<i>01-45-00.00 Quality Control</i>								
<i>01-45-23.50 Testing</i>								
Field Testing	1.00 prjc	-	-	-	-	370,262.66	370,262.66	370,263
Testing								370,263
Quality Control								370,263
<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	-	296.68	-	-	-	296.68	17,801
Storage Boxes, rent per month, 20' x 8'	120.00 ea	-	90.48	-	-	-	90.48	10,858
Office And Storage Space								28,659
<i>01-52-13.40 Field Office Expense</i>								
Field Office Expense, office equipment rental, average	60.00 mo	-	184.66	-	-	-	184.66	11,079
Field Office Expense, office supplies, average	60.00 mo	-	116.95	-	-	-	116.95	7,017
Field Office Expense, telephone bill; avg. bill/month, incl. long dist.	60.00 mo	-	258.52	-	-	-	258.52	15,511
Field Office Expense, field office lights & HVAC	60.00 mo	-	135.42	-	-	-	135.42	8,125
Field Office Expense								41,733
Field Offices And Sheds								70,391
<i>01-56-26.00 Temporary Fencing</i>								
<i>01-56-26.50 Temporary Fencing</i>								
Temporary Fencing, chain link, 6' high, 11 ga	1,000.00 lf	4.19	8.62	-	-	-	12.81	12,807
Temporary Fencing								12,807
Temporary Fencing								12,807
<i>01-58-00.00 Project Identification</i>								
<i>01-58-13.50 Signs</i>								

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
455-143-5 Test Piles								31,183
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, 24" square, <i>Prestressed Concrete Piles</i> <i>Driven Piles</i>	1,540.00 vlf	14.28	67.71	-	8.35	-	90.33	139,114
								<u>139,114</u>
455-34-5 Concrete Piling								139,114
Prestressed								
Substructure-End								273,685
Substructure-End								
Bents								
Substructure-Piers Substructure-Piers								
400-4-25 Concrete Class IV (Substructure)								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
CIP Footings	4,625.00 cy	215.55	184.66	-	29.53	-	429.74	1,987,549
Concrete Class IV (Substructure) CIP Column Concrete	4,110.10 cy	502.95	209.28	-	68.91	-	781.14	3,210,557
CIP Beam Pedestals <i>Concrete In Place</i> <i>Cast-In-Place Concrete</i>	50.90 cy	603.54	369.32	-	82.70	-	1,055.55	<u>53,727</u> 5,251,833 5,251,833
<i>03-41-36.00 Precast Structural Post-Tensioned Concrete</i>								
<i>03-41-36.50 Post-Tensioned Jobs</i>								
Precast Pier Cap Cantilevers <i>Post-Tensioned Jobs</i> <i>Precast Structural</i> <i>Post-Tensioned Concrete</i>	2,238.90 cy	220.02	966.38	-	76.77	-	1,263.17	<u>2,828,101</u> 2,828,101 2,828,101
400-4-25 Concrete Class								8,079,934
IV (Substructure)								
415-1-5 Reinforcing Steel Substructure								
<i>03-21-05.00 Reinforcing Steel Accessories</i>								
<i>03-21-10.60 Reinforcing In Place</i>								
Reinforcing Steel <i>Reinforcing In Place</i>	2,064,739.00 lb	0.64	0.51	-	0.13	-	1.29	<u>2,659,284</u> 2,659,284

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
455-88-5 Drilled Shafts								7,520,454
462-2-13 Post Tensioning Tendons								
<i>03-23-00.00 Stressing Tendons</i>								
<i>03-23-05.50 Prestressing Steel</i>								
Post Tensioning Tendons	173,617.00 lb	2.93	2.20	-	0.07	-	5.20	902,995
<i>Prestressing Steel</i>								902,995
<i>Stressing Tendons</i>								902,995
462-2-13 Post Tensioning Tendons								902,995
Substructure-Piers								20,288,620
Substructure-Piers								
Superstructure Superstructure								
400-147 Composite Neoprene Pads								
<i>05-05-23.00 Metal Fastenings</i>								
<i>05-05-23.80 Vibration & Bearing Pads</i>								
Bearing Pads	269.60 cf	103.78	738.63	-	-	-	842.41	227,113
<i>Vibration & Bearing Pads</i>								227,113
<i>Metal Fastenings</i>								227,113
400-147 Composite Neoprene Pads								227,113
400-4-4 Concrete Class IV (Superstructure - Deck & Dia)								
<i>03-30-00.00 Cast-In-Place Concrete</i>								
<i>03-30-53.40 Concrete In Place</i>								
Concrete Class IV	11,698.20 cy	243.36	246.21	-	33.35	-	522.92	6,117,181
Superstructure								
<i>Concrete In Place</i>								6,117,181
<i>Cast-In-Place Concrete</i>								6,117,181
400-4-4 Concrete Class IV (Superstructure - Deck & Dia)								6,117,181
400-9 Bridge Floor Grooving								
<i>32-13-13.00 Concrete Paving</i>								
<i>32-13-13.23 Concrete Paving Surface Treatment</i>								
Concrete grooving	37,264.00 sy	3.06	-	-	6.45	-	9.50	354,159
<i>Concrete Paving Surface Treatment</i>								354,159
<i>Concrete Paving</i>								354,159

Spreadsheet Level	Takeoff Quantity	Labor Cost/Unit	Material Cost/Unit	Sub Cost/Unit	Equip Cost/Unit	Other Cost/Unit	Total Cost/Unit	Total Amount
521-5-3 Concrete Traffic Railing								
<i>34-71-13.00 Vehicle Barriers</i>								
<i>34-71-13.26 Vehicle Guide Rails</i>								
Concrete Traffic Railing	4,090.00 lf	17.04	43.09	-	5.50	-	65.62	268,392
Barrier Bridge								
<i>Vehicle Guide Rails</i>								268,392
<i>Vehicle Barriers</i>								268,392
521-5-3 Concrete Traffic Railing								268,392
Superstructure								18,904,889

Estimate Totals

Description	Amount	Cuts/Addds	Net Amount	Totals	Hours	Cost Basis	Percent of Total	
Labor	21,894,695		21,894,695		100,369.223 ch		47.70%	
Material	17,998,032		17,998,032				39.21%	
Subcontract								
Equipment	5,548,252		5,548,252		17,634.710 ch		12.09%	
Other	462,828		462,828				1.01%	
	45,903,807			45,903,807			100.00	100.00%
Total				45,903,807				