

March 11, 2015

Submitted via e-mail

Tom Green, PE
Beach CRA Design Manager, Public Works Department
City of Fort Lauderdale
100 N Andrews Ave
Fort Lauderdale, FL 33301

Subject: Task 1: RDC Cost Analysis Submittal – Assessment for Cost Escalation

Dear Tom,

Atkins has completed the assessment for cost escalation of the Recreational Design and Construction Inc. (RDC) Cost Analysis Submittal. Below is a summary of our findings.

Review Methodology:

- Atkins has reviewed RDC's Cost Analysis Submittal provided by the City of Ft. Lauderdale. Raw costs and sums were reviewed for accuracy. RDC's Original Budget dated 09/18/12 was adjusted for cost escalation based on the construction industry accepted RSMMeans Current Cost Index when compared between July 2012 and January 2015. This assessment provides a generalization of escalation costs based on RSMMeans Current Cost Index and local market conditions may differ based on actual market price fluctuations for all trades.

Conclusions:

- As a result of our review, Atkins has provided attached an independent assessment of the cost escalation. Below are qualifications and a summary comparison between RDC and ATKINS of the total construction cost adjusted for escalation.
 1. Escalation based on the construction industry accepted RSMMeans Current Cost Index for comparison in escalation between July 2012 and January 2015.
 2. For RSMMeans Current Cost Index Factor (July 2012 to Jan. 2015) column, 5.9% is calculated as follows: $100 (\text{Jan. 2015 Index}) - 94.1 (\text{July 2012 Index}) / 100$
 3. Construction Mid-point of 1st Quarter 2016, is based on a 5 month design completion schedule plus 30 days of permitting and a construction schedule of 331 business days from April 2015 NTP.
 4. Excludes any analysis/review outside of the Escalation Assessment. (e.g. delay costs)

Summary

RDC's Request
ATKINS Assessment

Cost

\$36,031,550
\$34,595,141

Sincerely,



Adrian Viera,
Project Controls Manager

Cc: Atkins Team File

**CITY OF FT. LAUDERDALE
REDEVELOPMENT OF THE AQUATIC CENTER**



Task 1: Assessment for Cost Escalation

March 11, 2015

Cost Description	Recreational Design and Construction Inc. (RDC)				ATKINS				Comments
	RDC - Original Budget (09/18/12)	RDC - Delay & Escalation Cost (02/25/15)	RDC - Escalation as a % of the Original Budget	RDC - Adjusted Budget (02/25/15)	RSMeans Current Cost Index Factor (July 2012 to Jan. 2015)	ATKINS Included Escalation to 1st Quarter of 2016 (Const. Mid-Pt)	Adjusted Escalation Cost as based on RDC Orig. Budget	Adjusted Budget as per RSMeans Current Cost Index	
Division 1: Contractor General Conditions	\$5,124,695	\$201,705	3.94%	\$5,326,400	N/A	N/A	N/A	\$5,124,695	Cost increases associated to Div. 1 have been defined by RDC as delay related and therefore are not part of the ATKINS assessment.
Division 2: Sitework & Demolition, Special Foundations & Sitework Improvements	\$2,104,977	\$1,008,340	47.90%	\$3,113,317	5.90%	2.00%	\$166,293	\$2,271,270	
Division 3: Concrete	\$5,311,784	\$2,394,966	45.09%	\$7,706,750	5.90%	2.00%	\$419,631	\$5,731,415	
Division 4: Masonry	\$565,477	\$59,523	10.53%	\$625,000	5.90%	2.00%	\$44,673	\$610,150	
Division 5: Metals	\$367,900	\$552,100	150.07%	\$920,000	5.90%	2.00%	\$29,064	\$396,964	
Division 6: Wood, Plastics & Composites	\$0	\$36,110	N/A	\$36,110	5.90%	2.00%	\$0	\$0	
Division 7: Thermal & Moisture Protection	\$265,769	\$228,231	85.88%	\$494,000	5.90%	2.00%	\$20,996	\$286,765	
Division 8: Openings	\$345,300	\$292,200	84.62%	\$637,500	5.90%	2.00%	\$27,279	\$372,579	
Division 9: Finishes	\$1,064,836	\$0	0.00%	\$1,064,836	5.90%	2.00%	\$84,122	\$1,148,958	
Division 10: Specialties	\$1,006,699	(\$336,000)	-33.38%	\$670,699	5.90%	2.00%	\$79,529	\$1,086,228	
Division 11: Equipment	\$1,626,873	(\$228,750)	-14.06%	\$1,398,123	5.90%	2.00%	\$128,523	\$1,755,396	
Division 12: Furnishings	\$940,840	(\$158,340)	-16.83%	\$782,500	5.90%	2.00%	\$74,326	\$1,015,166	
Division 13: Special Construction	\$3,716,580	(\$418,357)	-11.26%	\$3,298,223	5.90%	2.00%	\$293,610	\$4,010,190	
Division 14: Conveying Systems	\$544,700	(\$164,500)	-30.20%	\$380,200	5.90%	2.00%	\$43,031	\$587,731	
Division 15: Mechanical	\$974,676	\$652,774	66.97%	\$1,627,450	5.90%	2.00%	\$76,999	\$1,051,675	
Division 16: Electrical	\$2,397,887	(\$525,887)	-21.93%	\$1,872,000	5.90%	2.00%	\$189,433	\$2,587,320	
Subtotal	\$26,358,993	\$3,594,115	13.64%	\$29,953,108	6.36%		\$1,677,510	\$28,036,503	
Permits (Allowance)	\$142,545	\$0	0.00%	\$142,545	5.90%	2.00%	\$11,261	\$153,806	
Bonds & Insurance)	\$519,550	\$0	0.00%	\$519,550	5.90%	2.00%	\$41,044	\$560,594	
Developers Contingency	\$455,769	\$0	0.00%	\$455,769	5.90%	2.00%	\$36,006	\$491,775	
Project Contingency	\$250,000	\$0	0.00%	\$250,000	5.90%	2.00%	\$19,750	\$269,750	
Developer's Fee	\$4,710,578	\$0	0.00%	\$4,710,578	5.90%	2.00%	\$372,136	\$5,082,714	
Subtotal	\$6,078,442	\$0	0.00%	\$6,078,442	7.90%		\$480,197	\$6,558,639	
Total Costs	\$32,437,435	\$3,594,115	11.08%	\$36,031,550	6.65%		\$2,157,706	\$34,595,141	RDC Original Budget direct costs subtotal appears to have a rounding error of \$1.00 when compared to the sum of the actual raw costs.

- Qualifications:**
1. Escalation based on the construction industry accepted RSMeans Current Cost Index for comparison in escalation between July 2012 and January 2015.
 2. For RSMeans Current Cost Index Factor (July 2012 to Jan. 2015) column, 5.9% is calculated as follows: $100 \text{ (Jan. 2015 Index)} - 94.1 \text{ (July 2012 Index)} / 100$
 3. Construction Mid-point of 1st Quarter 2016, is based on a 5 month design completion schedule plus 30 days of permitting and a construction schedule of 331 business days from April 2015 NTP.
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Historical Cost Indexes

The table below lists both the RSMeans® historical cost index based on Jan. 1, 1993 = 100 as well as the computed value of an index based on Jan. 1, 2015 costs. Since the Jan. 1, 2015 figure is estimated, space is left to write in the actual index figures as they become available through either the quarterly *RSMeans Construction Cost Indexes* or as printed in

the *Engineering News-Record*. To compute the actual index based on Jan. 1, 2015 = 100, divide the historical cost index for a particular year by the actual Jan. 1, 2015 construction cost index. Space has been left to advance the index figures as the year progresses.

Year	Historical Cost Index Jan. 1, 1993 = 100		Current Index Based on Jan. 1, 2015 = 100		Year	Historical Cost Index Jan. 1, 1993 = 100		Year	Historical Cost Index Jan. 1, 1993 = 100		Current Index Based on Jan. 1, 2015 = 100	
	Est.	Actual	Est.	Actual		Actual	Est.		Actual	Actual	Est.	Actual
Oct 2015*					July 2000	120.9	58.5		July 1982	76.1	36.8	
July 2015*					1999	117.6	56.9		1981	70.0	33.9	
April 2015*					1998	115.1	55.7		1980	62.9	30.4	
Jan 2015*	206.7		100.0	100.0	1997	112.8	54.6		1979	57.8	28.0	
July 2014		204.9	99.1		1996	110.2	53.3		1978	53.5	25.9	
2013		201.2	97.3		1995	107.6	52.1		1977	49.5	23.9	
2012		194.6	94.1		1994	104.4	50.5		1976	46.9	22.7	
2011		191.2	92.5		1993	101.7	49.2		1975	44.8	21.7	
2010		183.5	88.8		1992	99.4	48.1		1974	41.4	20.0	
2009		180.1	87.1		1991	96.8	46.8		1973	37.7	18.2	
2008		180.4	87.3		1990	94.3	45.6		1972	34.8	16.8	
2007		169.4	82.0		1989	92.1	44.6		1971	32.1	15.5	
2006		162.0	78.4		1988	89.9	43.5		1970	28.7	13.9	
2005		151.6	73.3		1987	87.7	42.4		1969	26.9	13.0	
2004		143.7	69.5		1986	84.2	40.7		1968	24.9	12.0	
2003		132.0	63.9		1985	82.6	40.0		1967	23.5	11.4	
2002		128.7	62.3		1984	82.0	39.7		1966	22.7	11.0	
2001		125.1	60.5		1983	80.2	38.8		1965	21.7	10.5	

Adjustments to Costs

The "Historical Cost Index" can be used to convert national average building costs at a particular time to the approximate building costs for some other time.

Example:

Estimate and compare construction costs for different years in the same city.

To estimate the national average construction cost of a building in 1970, knowing that it cost \$900,000 in 2015:

INDEX in 1970 = 28.7

INDEX in 2015 = 206.7

Time Adjustment Using the Historical Cost Indexes:

$$\frac{\text{Index for Year A}}{\text{Index for Year B}} \times \text{Cost in Year B} = \text{Cost in Year A}$$

$$\frac{\text{INDEX 1970}}{\text{INDEX 2015}} \times \text{Cost 2015} = \text{Cost 1970}$$

$$\frac{28.7}{206.7} \times \$900,000 = .139 \times \$900,000 = \$125,100$$

The construction cost of the building in 1970 is \$125,100.

Note: The city cost indexes for Canada can be used to convert U.S. national averages to local costs in Canadian dollars.

Example:

To estimate and compare the cost of a building in Toronto, ON in 2015 with the known cost of \$600,000 (US\$) in New York, NY in 2015:

INDEX Toronto = 110.9

INDEX New York = 131.8

$$\frac{\text{INDEX Toronto}}{\text{INDEX New York}} \times \text{Cost New York} = \text{Cost Toronto}$$

$$\frac{110.9}{131.8} \times \$600,000 = .841 \times \$600,000 = \$504,600$$

The construction cost of the building in Toronto is \$504,600 (CN\$).

*Historical Cost Index updates and other resources are provided on the following website.
<http://info.thegordiangroup.com/RSMMeans.html>