

**The School Board of Broward County, Florida  
Facilities and Construction Management**

**EXHIBIT 3**

**SUMMARY OF CHANGE ORDERS**

Meeting Date: 3/20/2012

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**1. Discovery Elementary**

**TOTAL: \$23,742**

New Prototype Elementary School fka Elementary A

CHANGE ORDER NO:006

PROJECT NO: P.001005 (f.k.a. 3962-25-05)

Contractor: Balfour Beatty Construction, LLC

CONTRACT DATE: 08/04/2009

Consultant: Song & Associates, Inc.

#Days

**Consultant Omission:**

**\$23,742**

Item No. - 085 Contractor provided labor materials and equipment to install a new fence around dry retention areas.

0

\$23,742

Code requires retention areas more than one-foot deep to be protected.



The School Board of Broward County, Florida  
Facilities and Construction Management Division  
1700 SW 14th Court  
Fort Lauderdale, FL 33312

(754) 321-1500

**Document 01250g (00 63 63)-Construction Change Order-85**

Facility Name: Discovery Elementary Date: 10/28/2011  
Project Name: Fire Protection and ADA Restrooms Project # P0001005 3962-25-05  
Project Description: New Elementary School 'A'  
Contractor: Balfor Beatty Reference Letter  
Dated: \_\_\_\_\_

Description of Change:  
Contractor provided labor materials and equipment to install a new fence around dry retention areas  
attachments: \_\_\_\_\_

Reason For Change:  
Code requires retentions areas more than one foot deep to be protected.

Summary:

Total of Credits and/or Added Costs: Add: \$23,742  
Deduct: \$0  
The Contract Time will be (increased) (decreased) by: 0 Days

**THIS CHANGE ORDER ITEM IS INCLUSIVE OF ALL COSTS ASSOCIATED WITH THIS WORK. NO ADDITIONAL COMPENSATION FOR EXTENDED TIME SHALL BE DUE AS A RESULT OF THIS CHANGE IN THE SCOPE OF WORK.**

*AE Refused to sign*  
Recommended  
*See Attached letter*  
\_\_\_\_\_  
Project Consultant's Signature Date

Accepted  
*[Signature]* *1/24/12*  
\_\_\_\_\_  
Contractor's Signature Date

Reviewed and Concurred  
*[Signature]*  
\_\_\_\_\_  
Facilities Project Manager's Signature Date

Gregory Faucher  
Project Consultant's Typed Name  
Song and Associates  
Project Consultant's Firm Name

Clinton C. Glass  
Contractor's Typed Name  
Balfor Beatty  
Contractor's Firm Name

Gregory T. Boardman  
Facilities Project Manager's Typed Name  
The School Board of Broward County, FL

**This Information to be completed by School Board of Broward County Staff**

Change Order Categories			Sub Categories	
<input type="checkbox"/> Owner's Request	<input type="checkbox"/> Unforeseen	<input type="checkbox"/> Consultant Error	<input checked="" type="checkbox"/> Consultant Omission	<input type="checkbox"/> Regulatory Compliance <input type="checkbox"/> Safety/Emergency

November 4, 2011

Mr. Greg Faucher, Construction Administrator  
Song & Associates, Inc.  
400 S. Australian Avenue, 6th Floor  
West Palm Beach, FL 33401

RE: Discovery Elementary (formerly Elementary School 'A'), City of Sunrise  
Keith & Associates, Inc. Project No. 07132.00

**Subject: K&A Response to CUD#23 - Fencing of Two Additional Detention Areas**

Dear Mr. Faucher:

Thank you for forwarding us a copy of the original Contingency Use Directive (CUD) #23 and all other related documents.

As discussed during our meeting with Mr. Greg Boardman (SBBC - Project Manager), Mr. William Cottle (Balfour Beatty Construction), Mrs. Dodie Keith-Lazowick (K&A), you and I last Friday (10/28/11) the following is provided with respect to the on-site stormwater drainage system design as it relates to the fencing around the two additional depressed/detention areas located at the southeast and northeast corners of the school site. Refer to attached Paving/Grading and Drainage As-builts (dated 12/31/09). First K&A attempted to contact Mr. Darelle Phillips (DOE) to clarify whether the State Requirements for Educational Facilities (SREF) criteria supersedes that of the Florida Building Code (for New Educational Facilities).

**Difference between SREF and FBC Criteria:**

*SREF Reads - (SREF 5(2)(d)(4): Special hazards (e.g., on-site sewage disposal plants; above-ground LP gas and fuel oil tanks; for Kindergarten through Grade 5, retention ponds with depths exceeding one (1) foot; deep drainage ditches; canals; highways; play fields adjacent to roadways; etc.) are locked and secured to prevent unauthorized access, but access is allowed for maintenance and repair.)*

*while the FBC Reads - (FBC 2004, 423.10.1.1.2: Special hazards as identified by the authority having jurisdiction including retention ponds whose permanent water depth or whose water depth over a 24-hour period exceeds 1 foot, deep drainage ditches, canals, highways, play fields adjacent to roadways shall be fenced).*

The main difference between the two criteria is associated with the additional language included in the FBC of "...over a 24-hour period exceeds 1 foot...". Unfortunately, K&A has not been successful in contacting Mr. Phillips. K&A will continue with our attempts.

As a second option, as discussed during the meeting, K&A collected miscellaneous information to explain the facts that may have led to the previous SBBC Project Manager's decision to direct the contractor (Balfour Beatty) to extend the fences around these two depressed/detention areas.

Initially, during the Building Department Plan Review process (in particular reviews for Phase III-50% CDs (issued 1/23/2008) and Phase III-100% CDs (issued 3/26/2008) (see attached) the only reference made to the fencing of "retention" areas was associated to the *FBC 2004, 423.10.1.1.2* to ensure their water depth over a 24-hour period would not exceed 1 foot. K&A developed the attached Bleed Down calculations demonstrating that for the 10 year-1 day storm event both of these depressed/detention areas would not hold more than one (1) foot of water after 24 hours.

**Difference between "Retention" and "Detention" Areas:**

In addition, both the SREF and FBC criteria referenced above describe the areas holding water as retention ponds. In accordance with the SFWMD Basis of Review, the two depressed areas in question are not "retention" areas but rather "detention" areas.

"Retention" areas rely solely on soil permeability and/or evapotranspiration to absorb or diminish stored stormwater runoff. As is the case with the subject "detention" areas, the stored stormwater runoff is diminished by a connection to an off-site receiving drainage system as well as soil permeability and evapotranspiration.

**Background of Encountered Issues with Higher than Expected Water Table Elevations during Construction:**

Refer to the attached K&A letter dated April 2, 2010 identifying the encountered higher than expected water table elevations (between 6 to 12 inches) during the completion of the school.

Furthermore as indicated in the original Contingency Use Directive (CUD) #23: "Although the subject retention (detention) areas were designed to be Dry Retention (Detention), there was a possibility that these areas would hold water longer than twenty-four hours due to factors outside of the Architects, Owners, or Construction Managers control. Therefore for the safety of the Children, fences were added as a layer of protection from the possibility that these areas would contain water during school hours."

**Confirmation of Two Detention Areas Not Holding More than one (1) foot of Water after 24 hours:**

During recent heavy rain events between 10/29/11 and 11/1/11, K&A monitored the recovery of these two detention areas by performing several site visits and survey measurements of the water levels. The water levels within both detention areas dissipated down to less than 2 inches on the southeast detention area (bottom elevation of 8.00 NGVD) and to completely dry on the northeast detention area (bottom elevation 8.50 NGVD) within 24 hours after the end of the rain event.

As previously indicated, K&A developed the attached Bleed Down calculations demonstrating that for the 10 year-1 day storm event both of these depressed/detention areas would not hold more than one (1) foot of water after 24 hours. Any storm event greater than a 10 year storm event would preclude outdoor student access to grass areas even if schools remain open in the region.

It is K&A's position that the subject detention areas were designed to meet the fence criteria in accordance with *FBC 2004, 423.10.1.1.2* which was established and reiterated during the design and review of the project. The other two drainage areas were designed as deeper detention areas with more storage depth and therefore their perimeter was specified to be fenced. Our recent site visits and survey measurements of the recovery of the two subject detention areas, following a recent heavy storm event

(10/29/11 through 11/1/11), supports our conclusion that the design governing criteria has been achieved.

Additionally; due to the unforeseen high water table condition encountered while completing construction of the school, associated concerns that these two detention areas may hold water at that particular time and the critical timeframe to open the school for the 2009 school year; the SBBC's Project Manager directed the contractor (Balfour Beatty) to extend the fencing around these two detention areas as an immediate preventive measure. However, this decision was made without allowing the heavy rain at the time and high water table condition to diminish, as well as the completion and certification of the overall site drainage system to operate as designed.

Thank you for your consideration of our response to this situation. Should you have any questions or require any clarification, please do not hesitate in contacting us.

Sincerely,

KEITH & ASSOCIATES, INC.  
Consulting Engineers



Mark Castano  
Project Engineer

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**KEITH**  
ASSOCIATES, INC.  
consulting engineers

**The School Board of Broward County**  
**Division of Facilities and Construction Management**

**Change Order Summary**

**Facility Name:** Discovery Elementary **Date:** 02/13/12

**Project Title:** TPM 16 Classroom Addition **Project #:** P.0001005

**Contractor:** Balfour Beatty **F.K.A./P#** 3962-25-05  
**Consultant:** Song and Associates

**Original Contract** \$24,412,449

**Change Order Allowance (from PFA)** \$100,000

<b>Change Order Items</b>		
Consultant Error:	\$120,018	0.49% of original contract amount
Consultant Omission:	\$55,843	0.23% of original contract amount
Owner Request:	\$64,972	0.27% of original contract amount
Unforeseen:	\$0	0.00% of original contract amount
<b>Subtotal:</b>	<u>\$240,833</u>	<b>0.99%</b> of original contract amount
<b>Construction Change Directives</b>		
Consultant Error:		0.00% of original contract amount
Consultant Omission:		0.00% of original contract amount
Owner Request:		0.00% of original contract amount
Unforeseen:		0.00% of original contract amount
<b>Subtotal:</b>	<u>\$0</u>	<b>0.00%</b> of original contract amount
<b>Total:</b>	<u>\$240,833</u>	<b>0.99%</b> of original contract amount

**Change Order:** A written order to the contractor signed by the Superintendent and approved by the School Board and the architect, issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time as originally defined by the contract documents.

**Construction Change Directive:** A written order to the contractor signed by the Superintendent and the architect, issued after the execution of the contract, authorizing a change in the work or an adjustment of the contract sum or the contract time as defined by the contract documents. This directive is utilized when the parties cannot mutually agree upon the change. After execution of the work or an agreement between the parties, the change directive is brought back to the School Board for their approval at the next available meeting.