ITEM #3Z
BOMA
05/22/2012

CHANGE ORDER

No. 2

DATE OF ISSUANCE: April 2012 EFFECTIVE DATE: _____

OWNER: City of Franklin
CONTRACTOR: Century Construction Co.
Contract: General Construction
Project: Jackson Lake Dredging Improvements Project
OWNER's Contract No. 2010-0175
ENGINEER: City of Franklin - Engineering

You are directed to make the following changes in the Contract Documents:

Description:

Line Item 3: Monetary increase of $10,001.73 in the cost associated with design and construction of the box culvert crossing Dry Branch on Christ United Methodist Church (CUMC) property.

Structural design = $1,000.00
Additional requirements of box culvert = $2,539.64
Wing walls = $6,462.09
($1,000.00 + $2,539.64 + $6,462.09 = $10,001.73 Total)

Line Item 3: Contract time increase of 21 days for activities related to the box culvert design and construction.

Reason for Change Order:

Additional design and construction of box culvert, including wing walls to increase structural strength and durability. This Change Order addresses all additional cost and additional time associated with the design and construction of box culvert.

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price $1,467,785.00	Original Contract Times: Substantial Completion: December 28, 2011 Ready for final payment: December 28, 2011 (dates)
Net Increase (~~Decrease~~) from previous Change Orders No. 0 to 1: $186,145.00	Net change from previous Change Orders No. 0 to 1 to: Substantial Completion: 82 Ready for final payment: 82 (days
Contract Price prior to this Change Order: $1,653,930.00	Contract Times prior to this Change Order: Substantial Completion: March 19, 2012 Ready for final payment: March 19, 2012 (dates)
Net increase (~~decrease~~) of this Change Order: $10,001.73	Net increase (~~decrease~~) this Change Order: Substantial Completion: 21 Ready for final payment: 21 (days)
Contract Price with all approved Change Orders: $1,663,931.73	Contract Times with all approved Change Orders: Substantial Completion: April 9, 2012 Ready for final payment: April 9, 2012 (dates)

RECOMMENDED: APPROVED: ACCEPTED:

By: _____ By: _____ By: _____
Project Manager (Authorized Signature) OWNER (Authorized Signature) CONTRACTOR (Authorized Signature)

Date: 4-24-12 Date: _____ Date: 4.20.12

JACKSON LAKE DREDGING PROJECT REVIEW

SUMMARY OF FINDINGS

Prepared for

City of Franklin, Tennessee

Prepared by

Michael L. Duke

April 2012

JACKSON LAKE DREDGING PROJECT REVIEW

SUMMARY OF FINDINGS

INTRODUCTION

The City of Franklin retained a contractor to dredge, dewater and dispose of dredge material from Jackson Lake. The residential lake functions as a part of the city's stormwater management system. The project was initially scheduled for completion in November of 2011.

The project has not been completed as of April 2012 due to issues related to a delayed start and dredging productivity. Mike Duke, an individual experienced in dredging was retained by the City to review the dredging project. Specific tasks to be performed by Duke were:

- Review Project Documents
- Present Summary of Findings
- Observe Dredging Operation
- Review Operations Logs
- Assess Site Conditions
- Provide Report on Findings and Recommendations

Results of this review are provided in the following sections.

REVIEW PROJECT DOCUMENTS

The documentation reviewed included the following

- Bidding Requirements and Conditions
- Contractor Bid Package
- Specifications and Addendums
- Design Plans
- Contractor Submittals
- Change Order Requests
- Field Inspection Reports

Summaries of the each document review are provided below.

Bidding Requirements, Conditions, and Bid Form Review

A summary of the review of Bidding Requirements, Conditions, and Bid Form is provided in Table 1. Key findings in the review of these sections are:

1. The project is defined as the dredging and disposal of "removed materials"
2. The Bidder must familiarize himself with the local conditions and will make additional surveys and investigations as necessary to determine pricing.
3. The submission of Bid Constitutes an incontrovertible representation by the Bidder that he has completed this requirement
4. This representation is repeated in the Bid Form

Table 1

Bidding Requirements, Conditions, and Contractor Bid Package Bid Instruction and Bid Form Review

Section	*Page*	*Reference*	*Comment*
00020	00020-1	"The Project generally consists of the furnishing and installation of all materials, equipment, and labor for the **dredging and disposal of removed materials** from Jackson Lake."	Project requires removal of "materials"
00100	00100-1	Article 3 states: "Before submitting his Bid, each Bidder must ....(b) familiarize himself with local conditions that may in any manner affect performance of the work....) "Before submitting his bid, each Bidder will, at his own expense, make such additional survey and investigations as he may deem necessary to determine his Bid price for performance of the Work within the terms of the Contract Documents" "The submission of Bid Constitute an incontrovertible representation by the Bidder that he has completed with every requirement of this Article 3."	The contractor has represented to the owner that the contractor is familiar with the local conditions, has reviewed available information on the project, has identified additional survey or investigation work necessary to characterize the work, has performed that survey or investigation work
00100	00100-3	"The Bidder is specifically advised that any person, firm , or other party to whom is proposed to award a Subcontract under the Agreement must be acceptable to the Owner. No part of the Agreement may be subcontracted without the prior written approval of the owner" "If the Supplementary Conditions require the identity of certain Subcontractors and other persons and organizations to be submitted	Supplementary Conditions did not require the identification of subcontractors.

		to Owner in advance of the Notice of Award.....Such list shall be accompanied by an experience statement with pertinent information as to similar projects and other evidence of qualification for each Subcontractor, person, or organization if requested by owner."	
00300	00300-1	"The Bidder, in compliance with your invitation to Bid for the construction of: Jackson Lake Dredging Improvements and having examined the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, equipment and supplied and to construct the Project in accordance with the Contract Documents, within the limits established therein, and at the prices stated below."	The Bidder states they have examined the site and are familiar with all conditions surrounding the construction.
00500	00500-1	"The Work, as described in Section 01010, generally consists of the furnishing and installation of all materials, equipment, and labor for the dredging and disposal of **removed materials** from Jackson Lake."	The agreement restates the project is the dredging and disposal of removed materials from Jackson Lake.
00505	00505-1	"The project generally consists of the furnishing and installation of all materials, equipment, and labor for the dredging and disposal of **removed materials** from Jackson Lake."	The "Notice of Award" restates the project is the dredging and disposal of removed materials from Jackson Lake.

Specifications Review

The review of the Specifications Review is provided below in Table 2. The dredge material is described as "sediment and sludge" and "silt and mud" and "dredged material" in the specifications.

Table 2

Specifications Review

Section	*Page*	*Reference*	*Comment*
01010	01010-1	1.02 B. "The Project generally consists of the furnishing of all materials, equipment, and labor for the dredging and proper sediment disposal of the **removed sediment and sludge** from Jackson Lake"	Section 01010 states the project is the dredging and proper sediment disposal of the removed sediment and sludge from Jackson Lake.
01005	01005-1	1.01 A. "The summary of work is presented in Section 01010."	Section 01010 states the project is the dredging and proper sediment disposal of the removed sediment and sludge from Jackson Lake.
01005	01005-2	1.02 D. "Contractor shall verify all dimensions, quantities and details shown on the Plans, Supplementary Drawings, Schedules, Specifications or other data received from the Engineer, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction or improper operation resulting there from nor from rectifying such conditions at his own expense."	
02482	02482-1	1.01 A. "The Contractor shall furnish all labor, materials, equipment and incidentals necessary and perform all dredging of Jackson Lake and dewatering and drying of dredged material as shown on the Drawings and as specified herein."	The "Dredging and Dewatering of Dredged Material" states the project is dredging, dewatering and drying of dredged material…"
	02482-1	1.01 C "Dredging shall consist of the removal of sediment (silt and mud) from the Jackson Lake……"	Dredge material is described as "sediment (silt and mud)

Bid Addendum Review

The review of Bid Addendums is provided below in Table 3. There are two questions in the Addendums which are relevant to this review.

1. What is to be done with trash found from dredging activities? Answer: Contractor will be responsible for the proper disposal of all trash found during lake dredging activities.
2. Do you have any pretested coagulants and flocculants that are effective in settling out the sediment into the dewatering bags? Answer: No. The Contractor shall be responsible for determining if coagulants and/or flocculants are needed for dewatering.

The question related to trash is significant. Trash was recognized by a bidder and an item to be considered in his bid preparation. The question related to coagulants and flocculants is similar. A bidder recognized the potential need for chemical conditioning.

At this time, the dewatering and dewaterability of the dredged material may not require chemical conditioning. The dredging of the smaller grain size material combined with potentially higher dredging rates may require future conditioning to prevent blinding of the geotextile fabric and reduction of dewatering rates.

Table 3

Bid Addendum Review

No.	*Question or Statement*	*Response and Comment*
1	8. Do you have any pretested coagulants and flocculants that are effective in settling out the sediment into the dewatering bags?	No. The Contractor shall be responsible for determining if coagulants and/or flocculants are needed for dewatering.
	9. In the ARAP Permit document application, Section 12.3.3 Technical Information, states that the material will dewater in the dewatering bags in 2-3 days, who and how was this time period determined?	This was an estimation provided by TDEC as part of the discussion pertaining to overall regulatory compliance. The bench-scale test and actual work shall dictate length of dewatering time needed to adequately treat material.
2	Item 3 – Plan Holders List	Prime Contractor is not shown as a Plan Holder. Subcontractor is shown as Planholder
	Item 4 – Pre-Bid Sign In Sheet	Neither Prime or Subcontractor signed in at Pre-Bid Meeting
	16. What is to be done with trash found from dredging activities?	Contractor will be responsible for the proper disposal of all trash found during lake dredging activities.
3	No findings or comments related to Addendum No. 3	

Specifications Appendices Review

The appendices included sample results for 6 samples collected in different areas of the Lake. In general, the samples indicate a mostly fine grained material, less than 200 mesh. This characteristic implies the potential need for chemical conditioning to reduce the potential for fabric blinding, improve dewaterability, and improve filtrate quality.

Table 4

Specifications Appendices Review

No.	*Description*	*Comment*
A.	Sample Results: Solid and Water Content	Sample results indicate a Total Dry Weight Solids ranging from 39.6% to 67.6% and averaging 50.7% DWS. Water content is .493/.507, 97.2%.
	Sample Results: Grain Size Distribution	Sediment Grain Size Distribution indicates a primarily silt and clay material. These less than 200 mesh material particle sizes range from 40-80% the material mass with an average mass of 70%. The combination of water content and particle size would imply a material slow to gravity drain (dewater). In addition, fines tend to blind geotextile fabrics slowing further the rate of draining. These characteristics would indicate the need to evaluate material conditioning using polyelectrolytes to speed dewatering and reducing the potential for fabric blinding.
B.,C,D,E		No Comments at this time

Design Plans

There are two observations related to the Design Plan Review. The plans indicate a work area on the East Bank of the Lake. The routing of the piping is shown in the drainage easement. Currently, the dredging operation work area is on the West Bank. As dredging progresses, the reduction of pumping distance with an East Route may improve production.

Contractor Submittals

The review of Contractor Submittals is provided in Table 5. In general, the submittals did not provide sufficient information to assess the adequacy or workability of the plans.

Table 5

Contractor Submittal Review

		SUBMITTAL REVIEW	
Section	***Page***	***Description***	***Comment***
02482	02482-1	1. Dredging Work Plan: "The work plan shall include descriptions of all methods, materials, equipment and incidentals being proposed to perform the dredging work as shown on the Drawings and as specified herein."	No description of the dredge, booster pump, or pipelines from the dredge provided in the "Dredge Plan" Submittal. A general narrative description of the geotextile container laydown area, routing of decant water and turbidity curtains was provided.
		2. Sediment Control Plan: Refer to Specs	The "Sediment Control Plan reworded the same information provided in the "Dredge Plan" submittal. Specific details as required by the specification were not provided.
		3. Dewatering Work Plan: "The plan shall include, but not be limited to, site plan, dewatering/drying containment cell and overall dewatering facility layout, geotextile container layout, pumping methods, polymer type and polymer injection system/location, ..."	A "plan" layout of the geotextile container area with booster pump location provided. Note: The depicted plan layout is not being applied in the field. The specification implied the use of polymer.
		4. Bench Scale dewatering demonstration test or hanging bag test report.	There are a number of bench scale and hanging bag test methods currently in use. There are many benefits to performing these tests to the contractor including: predicting dewatered material solid concentration over time, filtrate quality, volume

		reduction over time, determining conditioning additive impact on rate of dewatering and filtrate quality, and volume reduction. The "Hanging Bag Test" performed and information collected allowed only the determination of material volume reduction at the end of two (2) days. Engineer requested a copy of the "sieve analysis" of the tested material sample. This analysis not provided.
	5. Technical product literature for all products to be used in the work, including Manufacturer's Certification for dredging, sediment control, and dewatering productions shall be provided to the engineer as part of shop drawing review.	A cut sheet for the geotextile container fabric was provided.
	6. Drawings showing the proposed sediment control, dewatering/drying containment areas, identifying all site access points, and all proposed equipment and piping to be used in completion of the project shall be submitted to the engineer during the shop drawing review.	See Submittal No. 3

Change Order Request Review

A summary of the Change Orders and their review is provided in Table 6. In general, there are requests for increasing the project time for inclement weather, debris, increased "drying time", and an increase in surveyed volume of dredge material. The City allowed an increase in project time of 90 days for a 16,000 cu yd increase in material. Based on the quantity increase of 43%, a 26 day increase in time would be appropriate. The increase of 90 days is a 150% increase in allowable time for the 43% increase in volume.

The increase in "drying time" has been addressed by elimination of the 20% moisture content requirement and allowing the transport and disposal of the material upon passing the paint filter test.

The downtime attributed to unanticipated debris quantity by the contractor and inclement weather has not been resolved. The initial bid contemplated dredging portions of the project to occur in summer months. Delays related bridge construction pushed the dredging portions of the project into the fall-winter season.

The combination of claimed downtime for inclement weather and debris for the period of December-January was in excess of the available time.

Table 6

Change Order Requests

No.	*Description*	*Comment*
1	Bridge	Not dredge related
2	Bridge	Not dredge related
3	Bridge	Not dredge related
4	Surveyed volume increase	Increase in volume was 16,000 cu yds
5	Volume Increase Time extension of 90 days	The contractor requested Increase in time, (90 days), is 150% the time the contactor originally scheduled (60 days) for the original volume of 37,000 cu yds for 43% volume increase, 16,000 cu yds. This is inconsistent with the contractor's original bid schedule.
6	19 day extension for inclement weather and 40 day extension for dry time.	The change order request 19 days for inclement weather. The change order also mentions downtime for debris but does not request an allowance. Inclement weather downtime is usually considered in the contractor project design and cost estimate. The question is: How many days did the contractor allow for weather in his estimate? The presence, qualification and some quantification of debris should be defined by the contractor during the period available for contractor design and cost estimating in the preparation of the bid. Dewatering in the geotextile container occurs through gravity draining of pore water, not evaporation ("drying"). This season's freezing days would not allow freezing of the tube surface (blinding), or in any season affect the gravity draining rate. Gravity draining rate inside the tube is not affected by rain on the tube.
7	15 day extension for inclement weather and 38.5 days for trash and debris	See Change Order 6 Comments.
8	Option for debris and trash removal for an additional charge of $3.90	Specifications and response to questions are clear; the contractor is responsible for disposal of dredge material and trash.
9	Request for additional time to dry dredge material to bid specified 20% moisture content	Owner has provided direction to contractor allowing the transportation and disposal of material after material passes the Paint Filter Test, a substantial increase in material moisture content and achievable through gravity dewatering.

SITE CONDITIONS ASSESSMENT

There are two issues raised by the contractor related to site conditions:

1. Dredge Cable bank anchoring has pulled loose during wet conditions
2. More debris than anticipated has interfered with dredge operations

The anchoring issues have been resolved by the dredge operating staff by counter staking the anchoring plates.

Debris issues were identified during the bid preparation period. A walk down of the Lake feed stream indicates a wide variety of adjacent land uses including location of a major highway conduit between Nashville and Franklin, livestock operations, commercial and residential. The stream bed is largely rock shaded by woods and overhanging vegetation. Storm drains along the stream routing have allowed trash, building materials, and natural vegetation to enter the stream and accumulate in the Lake. A contractor walk down of the feed stream should trigger the need to survey the dredge material and incorporate a cost allowance in the bid price for management of debris and estimated downtime related to debris handling.

Large rock has been encountered by the dredge indicating cutting into the natural bottom of the Lake.

DREDGE OPERATIONS ASSESSMENT

Dredge Capabilities Assessment

The Dredge Specifications from the manufacturer's web site is presented in Table 7. In general, the dredge is capable of pumping water up to 1,100 ft at 50 ft TDH. This pumping rate was used to assess the current set up although total head loss is greater than 50 ft TDH.

The original bid required the following performance:

- Project Duration 60 days
- Work Days 5 days/week
- Dredging Days 43 days
- Dredge Quantity 37,000 cu yds
- Dredge Rate 863 cu yd/day

Table 8 summarizes the operating requirements necessary to meet the proposed dredge rate using the manufacturer's pump rate for water at 50 ft TDH. The shaded areas of the table depict the conditions necessary to meet the proposed dredging rate. In general, the dredge must move dredge material at high solids slurry concentrations at high levels of On-Stream time.

TABLE 7

DREDGE SPECIFICATIONS

GEOFORM INTERNATIONAL, INC.	**DINO SIX**
Dimensions Length 18 ft. Width 71 in. Height 64 in. Weight (less fuel) 3,240 lbs.	**Slurry Pump** Manufacturer Geoform International, Inc. Discharge Diameter 6 in. Performance 1,600 GPM Max 1,100 GPM @ 50 ft. TDH Supplied with open faced trash impeller and enclosed impeller
Working Capacity Working Depth 10 ft. Cut Width 66 in.	**Travel System** Double pulley hydraulic windlass with 2 hydraulic motors
Floatation 2 (two) pontoons 26 in. X 22 in. X 168 in. Construction Stainless Steel 16 gauge, 3 separate compartments each float (6 compartments total) Internal stiffeners on all sides	**Cutterhead** Width 66 in. Diameter 14 in. Drive Variable speed duel hydraulic motor Direct Drive Replaceable, hardened steel trencher teeth and mixing paddles
Engine Type Cummins 4 cylinder turbo-charged diesel Horsepower 60 hp @ 2800 rpm Fuel capacity 20 gallons	**Hydraulic System** Pump Tandem gear 2.60in³/rev. and .91in³/rev. Filtration 10 micron Reservoir 20 gallons Oil cooler thermostatically controlled Stainless steel tubing on boom Impeller high-low speed selector valve
Instrumentation Tachometer/hour meter Slurry pump hydraulic pressure gauge Cutterhead hydraulic pressure gauge Discharge pressure gauge	**Safety Engine Shut-Down** High engine coolant temperature Low engine oil pressure High hydraulic oil temperature Low hydraulic oil level

Dealer Representative and Commercial Sales:

David Wentland, P.E.
Docks & Marinas, Inc.
1304 Raebrooke Lane
De Pere, WI 54115-8028
p. 920-621-3464 f. 866-710-0893
davewentland@gmail.com
www.docks-marinas.com

TABLE 8

DREDGE PRODUCTION REQUIREMENTS TO MEET PROPOSED RATES

Hrs OST	%Slurry %OST	5%	10%	15%	20%	25%	30%	40%	50%
2.7	30%	44	88	132	176	221	265	353	441
3.6	40%	59	118	176	235	294	353	471	588
4.5	50%	74	147	221	294	368	441	588	735
5.4	60%	88	176	265	353	441	529	706	882
6.3	70%	103	206	309	412	515	618	824	1029
7.2	80%	118	235	353	471	588	706	941	1176
8.1	90%	132	265	397	529	662	794	1059	1324
9.0	100%	147	294	441	588	735	882	1176	1471

Assumptions: Nine Hour Operating Day
Pumping Rate, 1100 gpm @ 50 ft TDH
Pumping Water

Note: 1. % Slurry is based on volume of insitu dredge material density in attendant water
2. OST: On-Stream Time – Time dredging (cutting and pumping)

ASSESS DREDGING OPERATIONS

Dredging Operating Log

The dredge operating log was evaluated for the period November 7, 2011- February 29, 2012. The summary of dredge operating data is provided in Table 9. In general the dredging operation has been unable to approach proposed dredge rates when physically dredging. This analysis is based on the best estimate for volume of material dredged, used as the basis for payment.

The operating data indicated approximately 50% on-stream time. The slurry concentration required to meet the proposed production rate is 30%. The estimated quantity of material removed indicates an actual slurry concentration of approximately 10%.

TABLE 9

OPERATING LOG SUMMARY

Production Summary	
Available Hrs	1494
Pumping Hrs	783
Calculated Down Time	**711**
Trash Plugging	510
Weather	220
Logged Down Time	**729**
Estimated Volume, cu yds	**16422**
Pumping Hrs	**783**
Pumping Days	**98**
Dredging Rate, cy/day	**168**
Proposed Rate, cy/day	**863**

Operations

Dredge and Booster Pump operations appear to be reliant on observation and feel. Equipment observations are communicated via radio between the operators. Dredge operations are monitored and control by physically sounding resistance around the dredge and movement of the "boat" to determine head location within the dredge material column. Loss in feed to the geotextile containers is visually monitored by observing lay-flat hose changes in circumference. Loss of feed pressure is communicated from the container observer to the dredge and booster pump operator. Other sections of lay-flat are observed to determine pumping status and/or possible locations of pipeline plugging.

The control of the dredge cutter depth by feeling resistance and the observed accumulation of large rocks or concrete blocks indicate dredging at the bottom of the lake.

SUMMARY

Major findings of this project assessment are as follows:

1. Management of trash was identified as part of the project scope.
2. The contractor apparently did not survey the Lake source, characterize the dredge material, estimate debris quantity, and incorporate debris related costs in the bid price.
3. There was adequate time to survey the Lake source and characterize the dredge material in advance of preparing a bid.
4. The contractor represented in submission of the bid to the city that the bidder was familiar with the local conditions, had reviewed available information on the project, had identified additional survey or investigation work necessary to characterize the work, and had performed that survey or investigation work.
5. The contractor estimated and submitted a dredge period of 60 calendar days in the bid.
6. The Contractor Plans submittal was unclear as to how the Contractor intended on performing the project including provisions to manage trash.
7. Production rates are significantly less than proposed when in production.
8. Machine capacity to meet the contractor proposed production rates is questionable.
9. Modification of equipment to reduce debris plugging and improve production rates has not been considered.
10. It is unclear how operators find and dredge bottom but in appears the unit(s) are picking up material off the natural bottom.
11. There does not appear to be a plan, or activity to produce a plan, to improve performance.
12. The City has modified dewatering requirements allowing a substantial reduction in dewatering time requirements necessary for final transportation and disposal.

RECOMMENDATIONS

Recommendations to the City of Franklin are as follows:

1. Determine current project status
    a. Perform Lake Survey
    b. Survey GeoTextile Container Volume and calculate original in-situ dredge material volume.
    c. Reevaluate production rates.
2. Require the Contractor to provide a Plan and Milestone Schedule to improve production, reduce project duration and manage debris. Possibilities for the contractor to consider are:
    a. Modify machine to reject debris
    b. Acquire additional equipment
    c. Modify machine operation to stay off bottom
3. Provide onsite inspector.
4. Require contractor to provide production status vs Plan and Milestone Schedule on a weekly basis.

HISTORIC
FRANKLIN
TENNESSEE

ITEM #5
CIC
05-10-12

MEMORANDUM

May 10, 2012

TO: Board of Mayor and Aldermen

FROM: Eric Stuckey, City Administrator
David Parker, City Engineer/CIP Executive
Paul Holzen, Interim Director of Engineering
Micky Dobson, Staff Engineer

SUBJECT: Consideration of Change Order No 2 to the Jackson Lake Dredging Improvements Project (COF Contract No. 2011-0003) for an Increase in the Contract Amount of $10,001.73 and an additional 21 days.

Purpose

The purpose of this memo is to provide information to the Board of Mayor and Aldermen (BOMA) with information to consider approval of Change Order No. 2 for the Jackson Lake Dredging Improvements project.

Background

The BOMA approved the construction contract for the above referenced project with Century Construction Company, Inc. on March 22, 2011 in the amount of $1,467,785.00. The Notice to Proceed was issued May 2, 2011 with a contract completion date of December 28, 2011. On January 24, 2012, Change Order No. 1was approved by the BOMA including an increase of $186,145.00 to the contract amount (new contract amount of $1,653,930.00) and a time extension of 82 days to the contract (new contract completion date of March 19, 2012).

Change Order No. 2 includes a monetary increase of $10,001.73 in the cost associated with design and construction of the box culvert crossing Dry Branch located on Christ United Methodist Church (CUMC) property. A breakdown of the requirements of the box culvert includes an increase of $1,000.00 towards structural design, an increase of $2,539.64 towards additional material requirements of box culvert, and an increase of $6,462.09 to construct bridge wing walls ($1,000.00 + $2,539.64 + $6,462.09 = $10,001.73).

Change Order No. 2 also includes a time increase of 21 days to the contract for activities related to the box culvert design and construction. If Change Order No. 2 is approved, the new construction completion date would become April 9, 2012. Please note that the contractor is currently working outside of contract time and this status will not change with the approval of Change Order No. 2.

Financial Impact

If approved, an increase of $10,001.73 will be added to the construction contract with Century Construction Company, Inc. The total construction contract amount will be $1,663,931.73.

Recommendation

Staff recommends approval of the Change Order No. 2 with Century Construction Company, Inc. for an increase in the Contract Amount of $10,001.73 and an additional 21 days.