

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING THE APPROVAL OF CHANGE ORDER NO. 2 FOR HDR ENGINEERING, INC. RELATIVE TO CONTRACT NO. E-10-012-101, ROSS'S LANDING PARK IMPROVEMENTS AND REPAIRS, PHASE 3 (BID/AWARD, CONSTRUCTION ADMINISTRATION AND RESIDENT PROJECT REPRESENTATION), FOR AN INCREASED AMOUNT OF FOUR HUNDRED FORTY-TWO THOUSAND FOUR HUNDRED EIGHTY-FIVE DOLLARS (\$442,485.00), FOR A REVISED CONTRACT AMOUNT NOT TO EXCEED EIGHT HUNDRED FORTY-FIVE THOUSAND FOUR HUNDRED FIFTEEN AND 12/100 DOLLARS (\$845,415.12).

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, it is hereby authorizing the approval of Change Order No. 2 for HDR Engineering, Inc. relative to Contract No. E-10-012-101, Ross's Landing Park Improvements and Repairs, Phase 3 (Bid/Award, Construction Administration and Resident Project Representation), for an increased amount of \$442,485.00, for a revised contract amount not to exceed \$845,415.12.

ADOPTED: _____, 2014

/mem

City of Chattanooga



Resolution/Ordinance Request Form

Date Prepared: May 8, 2014

Preparer: Dennis Malone *[Signature]*

Department: Public Works

Brief Description of Purpose for Resolution/Ordinance:

Res./Ord. # _____

Council District # _____

7

A City Council resolution is requested to approve the Change Order No. 2, for HDR Engineering, Inc., relative to Contract No. E-10-012-101, Ross's Landing Park Improvements and Repairs, Phase 3 (Bid/Award, Construction Administration and Resident Project Representation), for a increased amount of \$442,485.00, for a revised contract amount not to exceed \$845,415.12.

Name of Vendor/Contractor/Grant, etc. HDR Engineering, Inc.

New Contract/Project? (Yes or No) No

Total project cost \$ 845,415.12

Funds Budgeted? (YES or NO) Yes

Total City of Chattanooga Portion \$ 845,415.12

Provide Fund 4021

City Amount Funded \$ 845,415.12

Provide Cost Center A60416

New City Funding Required \$ _____

Proposed Funding Source if not budgeted _____

City's Match Percentage % _____

Grant Period (if applicable) _____

List all other funding sources and amount for each contributor.

Amount(s)

Grantor(s)

Agency Grant Number _____

CFDA Number if known _____

Other comments: (Include contingency amount, contractor, and other information useful in preparing resolution)

FY13 General Fund Capital Budget (Parks)

Approved by: *[Signature]*

DESIGNATED OFFICIAL/ADMINISTRATOR

Reviewed by: FINANCE OFFICE

Please submit completed form to @budget, City Attorney and City Finance Officer

Revised: 1/26/09



CITY OF CHATTANOOGA
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

Development Resource Center
1250 Market Street, Suite 2100
Chattanooga, TN 37402
Phone: (423) 643-6000
Fax: (423) 643-6008

CHANGE ORDER

Contract No.: E-10-012-101
Contractor: HDR Engineering
Project Name: Ross's Landing Park Improvements and Repairs
Implementation - Phase 3

Change Order No.: 2
Date: 4/28/2014
Council Res. #'s:
(Attach Copies) 27450
27566

Check Reason for Change Order

- Error/Omission
- Field Condition
- Field Dispute Settlement
- Owner Request
- Value Engineering

Contract Days Changed: _____

Revised Completion Date: June 30, 2015

Original Contract Amount \$ 828,854.00
Net Change by Previous C.O.s \$ (425,923.88)
Contract Amount Prior to this C.O. \$ 402,930.12
Total Amount of this C.O. \$ 442,485.00
NEW CONTRACT AMOUNT \$ 845,415.12

Other: For Bid / Award Services, Project Management and Controls, Construction Administrative Services and Construction Resident Project Representative Services.

Description / Justification (Add more pages if necessary)
See attached information.

The terms and conditions of this Change Order, including the cost and time contained herein, constitute a full accord and complete satisfaction for all costs and time of performance related to the work described or referenced herein, including but not limited to, all delay and impact costs for the entire Project resulting from this Change Order. Except as amended herein, all provisions of the Contract remain in full force and effect.

APPROVALS

CONTRACTOR		ENGINEER / ARCHITECT	
Signature	Date	Signature	Date
<i>[Signature]</i>	<u>5/19/14</u>	<i>Arthur B. Colwell</i>	<u>5.2.14</u>
CITY PROJECT MANAGER		CITY ENGINEER	
Signature	Date	Signature	Date
<i>[Signature]</i>	<u>5/19/14</u>		
ADMINISTRATOR OF PUBLIC WORKS		CITY FINANCE OFFICER	
Signature	Date	Signature	Date

April 28, 2014

P94050

Mr. Dennis Malone, PE
Assistant City Engineer
City of Chattanooga
Development Resource Center
1250 Market Street, Suite 2100
Chattanooga, TN 37402

RE: PROPOSAL FOR ROSS'S LANDING PARK IMPROVEMENTS AND REPAIRS IMPLEMENTATION – PHASE III (SERVICES FOR BID PHASE & CONSTRUCTION ADMINISTRATION/OBSERVATION PHASE)

Dear Dennis:

Thank you for asking us to submit a proposal for the *Improvements and Repairs Implementation – Phase III* at Ross's Landing Park in Chattanooga, TN.

The City of Chattanooga would like to complete efforts in improving the Ross's Landing Park. The goal is to execute the essential repairs to the Hard Edge based on the recommendations HDR provided during the original investigation phase.

Our team has completed the final design of the repairs. Based on our involvement during the original investigation phase and having prepared the final design documents for Ross's Landing Park, we understand the challenges that may be involved during construction. We feel well-qualified to assist the City through the bidding and construction phases.

HDR intends to sub-contract with Bath Engineering, our team member who performed the electrical and mechanical design, to assist in the bidding and construction phases. Bath will participate in the pre-bid meeting, make one site visit during the construction, make one site visit during the final walkthrough, and assist in preparing electrical and mechanical RFIs, shop drawings, and submittals. Refer to Attachment C for their man-hour estimate.

In order to provide the services requested, we propose to perform the scope of work as generally listed below and outlined in more detail in Attachment A:

- ***Project Management and Controls (Task 1).*** Project management and controls will be used to schedule the work, assign staff, and communicate the status of the project to the City of Chattanooga.
- ***Bid Phase Services (Task 2).*** Our team will assist the City in obtaining bids for the construction contract, including participation in a pre-bid meeting, providing addendum assistance as required, participation in the bid opening, preparing the bid tabulation,

evaluating the bids (including an interview of the apparent lowest bidder), preparing a letter of recommendation for the selection of a contractor, and preparing an Issued-For-Construction set.

- **Construction Administration/Observation Services (Task 3).** Our team will assist the City in the initial meetings with the contractor, including the Pre-construction meeting and the Progress Meeting. We will provide a full-time (45 hours/week) onsite Resident Project Representative (RPR) for the duration of the construction period, expected to be 26 weeks.

The RPR, with assistance from the design team, will review the work for general conformance to the contract documents, provide interpretations and clarifications of the contract documents, prepare work change directives and change orders as authorized by the City, review and evaluate field and laboratory tests, serve as a liaison between the City and the Contractor, and review and respond to the Contractor's shop drawings and other submittals.

The RPR will also maintain orderly files of meetings notes, correspondence, and other documents involved in the construction process, prepare necessary reports, lead construction related conferences and meetings, and review pay applications submitted by the contractor based on construction progress.

The Engineer of Record (EOR) will also make monthly site visits (expected to be a total of six) at significant milestones throughout the duration of the construction period. The EOR will also participate in the final inspection and issue a Certificate of Completion to the City for the project.

The RPR will review "red-line" drawings, and based on those, we will prepare a set of record drawings for delivery to the City.

PROPOSAL CLARIFICATIONS

This proposal has been prepared based on the schedule provided by you in an email on March 26, 2014 outlining a timeline for this project. The timeline identifies the expected project completion on May 1, 2015. If the construction duration extends beyond that date, please note we will be requesting additional funding to cover our construction observation and administration services for the remainder of the construction project on a Time and Materials basis. The fees will be based on our 2015 rate schedule.

PROPOSED FEES

In order to accomplish the work generally described above and in more detail in the Scope of Work and Deliverables (Attachment A), HDR proposes to provide services on Lump Sum Fee Basis for **\$442,485**.

The basis for our estimate is provided in the Project Proposal Summary (Attachment B). We understand the terms of this project will be covered via an amendment to our existing contract No. E-10-012-101, *21st Century Waterfront Ross's Landing: Riverfront Parkway Phase 1 Evaluation - Investigation*, as approved by City Council Resolution No 26622.

AUTHORIZATION

If you concur with this proposal, please issue an amendment to the existing contract and provide a Notice-To-Proceed. Any work outside the above mentioned scope will be done, with authorization from you, via a formal Scope Change Document. This proposal is valid for 45 days from the date of this document.

Invoicing will be submitted on a monthly basis and a Monthly Status Report will be included to provide a status update regarding completed progress, as has been provided in the past two phases.

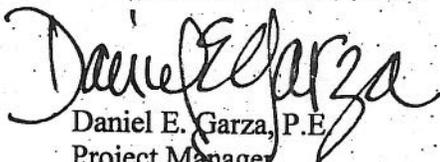
Please note HDR implements new rate schedules on or near January 1st of each year.

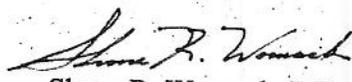
Thank you again for asking us to help. We look forward to continuing our working relationship with you and your staff in the final step of this challenging and exciting project. If you have any questions or require additional information, please do not hesitate to contact us.

Please do not hesitate to call me at 361-696-3347 if you would like to discuss this proposal further.

Sincerely,

HDR ENGINEERING, INC.


Daniel E. Garza, P.E.
Project Manager


Shane R. Womack, P.E.
Associate Vice President


Carl E. Crull, P.E.
Vice President

Enclosures

Attachment A – Scope of Work and Deliverables

Attachment B – Project Proposal Summary

Attachment C – Bath Engineering Man-hour Estimate 04/25/2014

HDR Engineering, Inc.

SCOPE OF WORK

I. Project Management and Controls (Task 1)

Services under this phase will include:

1. **Project Management / Controls.** We will provide project management for all team tasks listed below. This work will involve general project management duties such as status reporting, scheduling of manpower and project deliverables, staff assignments, internal coordination meetings and quality control based on HDR's pre-established QC program. We will also coordinate with team members to maintain the project schedule.

II. Bid Phase Services (Task 2)

Services under this phase will include:

1. **Solicitation of Potential Bidders** – We will assist City staff in identifying and soliciting potential bidders to provide an opportunity for contractors to participate in the bidding of this construction project.
2. **Pre-Bid Meeting** – We will participate in a pre-bid meeting with City staff and interested parties held at a City of Chattanooga conference room and will include a site visit. We will be available to answer questions and clarify issues that may come up based on the drawings and specifications.
3. **Addendum Assistance** – We will assist City staff in answering and preparing addendums during the bidding period.
4. **Bid Opening & Bid Tabulation** – We will attend the bid opening to assist City staff during the process of collecting bids to identify the potential low bidder. Following the bid opening, we will tabulate bids based on the bid opening information provided by City staff.
5. **Letter of Recommendation** – We will evaluate and compare bids based on City of Chattanooga selection criteria. The bids submitted by qualified contractors will be reviewed and tabulated to identify bid irregularities and to form an opinion on levels of understanding of the scope of work for the project. Included in the evaluation will be an interview with the apparent low bidder to form an opinion of their capabilities to perform the work. We will provide a letter of recommendation to the City for the selection of the Contractor based on the findings of the bid review to inform the owner of the bid evaluation and results of contractor reference checks.
6. **Preparation of an 'Issued for Construction' Set** – We will integrate any updates or addendum items into the 'Issued for Bid' documents, and prepare an 'Issued for Construction' package.

III. Construction Administration/Observation Services (Task 3)

Services under this phase will include:

1. **Construction Administration** – We will perform the following construction administration services for this project:

- i. Pre-construction Meeting: We will participate in a pre-construction meeting to provide a recommended agenda for critical construction activities and elements that will impact the project. This meeting, with the City of Chattanooga staff and the selected Contractors staff, will be used to emphasize deadlines and set expectations for the Contractor.
- ii. Resident Project Representative (RPR): We will provide a full-time (45hours/week) HDR engineer for the duration of the construction project. The RPR will handle day-to-day construction observation and owner's representative contract administration related activities at the project site, and will act as the liaison between the City and the Contractor. The RPR will not have any Contractor construction related or site safety responsibilities or duties associated with the Contractor's work flow, personnel management, means and methods or any other contractor related duties.
- iii. Construction Observation: We will perform observations of the construction to determine if the work is being performed in general compliance with the plans and specifications.
- iv. Shop Drawing & Submittal Reviews: We will review contractor-generated shop drawings and submittals for general conformance with design concept and Contract documents. It is anticipated the documents will comply with the Issued for Construction Documents generated by HDR Engineering and shall be approved and certified by the Contractor. We are not responsible for project delays due to incomplete documents submitted or if adequate time (as specified in Contract documents) is not allotted for the review. Coordination with the Contractor will occur in an attempt to maintain the project schedule. The intent of this work is to provide quality assurance on the Project and to avoid potential problems which could cause project delays or less than adequate workmanship.
- v. Interpretations & Clarifications: We will provide written clarifications and responses to the contractor's requests for information (RFIs).
- vi. Change Orders & Work Change Directives: We will review change order requests submitted by the contractor and prepare work change directives (in coordination with and authorization from City staff), to authorize changes which may affect the contractor's price and schedule, but are not contrary to the general interest of the City under the contract.
- vii. Field & Laboratory Testing: We will review field and laboratory test results required by the contract documents for general conformance with the contract documents.
- viii. Project Records: We will maintain orderly files of meeting minutes, correspondence, results of test reports, authorized project changes, progress reports, submittal results, pay applications, and other Project-related documents. These documents will be logged and maintained and copies of the reviewed documents will be sent electronically to the Contractor and the City.
- ix. Pay Applications: We will review contractor generated pay applications to determine amounts of progress payments due, based on degree of completion of

- the work, and recommend issuance of such payments by the City. We will also review the monthly Contractor pay applications and make recommendations to the City regarding the accuracy of said pay applications.
- x. Weekly Progress Meetings: We will conduct weekly progress meetings on behalf of the City at the project site to accomplish the following:
 1. Monitor the progress of the project;
 2. Issuance of instructions to the Contractor on behalf of the City;
 3. Issuance of necessary general interpretations and clarifications of Contract documents;
 4. Identifying potential issues that may hinder the progress of work;
 5. Discuss test results, as necessary, and make recommendations as to the acceptability of the work;
 - xi. Punch list Walkthrough: We will participate in a punch list walkthrough with the Contractor and City. After the meeting, we will provide a Punch List to the Contractor identifying specific items that require correction.
 - xii. Final Walkthrough & Certificate of Completion: We will participate in a Final Inspection walkthrough to confirm all punch list items have been remedied to the satisfaction of the City. At the conclusion of the walkthrough, we will provide the City with a Certificate of Completion for the Project.
 - xiii. Record Drawings: We will review the Contractor's "red-line" drawings, and based on that information, we will produce and provide a set of record drawings to the City.

IV. Deliverables

The following table summarizes the deliverables required during the course of the project.

List of Engineering Submittals	
Submittal	Remarks
Bid Phase Documents	One electronic copy (in PDF format via email) of contract addenda and/or responses to questions required during the bidding phase. One electronic copy (in PDF and XLSX format via email) of the Bid Tabulation . One electronic copy (in PDF format via email) of the Letter of Recommendation . One 22"x34" unbound set of hard copy drawings, 8½"x11" unbound set of technical specifications, bid form, and front-end contract documents of the Issued for Construction set , all suitable for reproduction.
Construction Phase Documents	One electronic copy (in PDF format via CD) of the Project Records collected during the construction project. One electronic copy (in PDF & ACAD formats via CD) and one 22"x34" bound set of hard copy drawings of the Record Drawings set .

RESOLUTION NO. 27450

A RESOLUTION AUTHORIZING THE ADMINISTRATOR OF THE DEPARTMENT OF PARKS AND RECREATION TO ENTER INTO AN AGREEMENT FOR PHASE II DETAILED DESIGN AND ENGINEERING TO INCLUDE BID SPECIFICATIONS WITH HDR ENGINEERING, INC. BY AMENDING THE PRESENT CONTRACT NO. E-10-012-101, FOR ROSS' LANDING PARK IMPROVEMENTS AND REPAIRS IMPLEMENTATION, FOR AN ADDITIONAL AMOUNT OF EIGHT HUNDRED TWENTY-EIGHT THOUSAND EIGHT HUNDRED FIFTY-FOUR DOLLARS (\$828,854.00).

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, TENNESSEE, That the Administrator of the Department of Parks and Recreation be and is hereby authorized to enter into an agreement for Phase II Detailed Design and Engineering to include bid specifications with HDR Engineering, Inc. by amending the present Contract No. E-10-012-101, for Ross' Landing Park improvements and repairs implementation, for an additional amount of \$828,854.00.

ADOPTED: April 2, 2013.

/mms

RESOLUTION NO. 27566

A RESOLUTION AUTHORIZING THE APPROVAL OF CHANGE ORDER NO. 1 FOR HDR ENGINEERING RELATIVE TO CONTRACT NO. E-10-012-101, ROSS'S LANDING PARK IMPROVEMENTS AND REPAIRS, PHASE II (DETAILED DESIGN AND ENGINEERING), FOR A DECREASED AMOUNT OF FOUR HUNDRED TWENTY-FIVE THOUSAND NINE HUNDRED TWENTY-THREE AND 88/100 DOLLARS (\$425,923.88), FOR A REVISED CONTRACT AMOUNT NOT TO EXCEED FOUR HUNDRED TWO THOUSAND NINE HUNDRED THIRTY AND 12/100 DOLLARS (\$402,930.12).

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, it is hereby authorizing the approval of Change Order No. 1 for HDR Engineering relative to Contract No. E-10-012-101, Ross's Landing Park Improvements and Repairs, Phase II (Detailed Design and Engineering), for a decreased amount of \$425,923.88, for a revised contract amount not to exceed \$402,930.12.

ADOPTED: July 16, 2013.

/mms

Bruce
JUN 28 2013
CH



**CITY OF CHATTANOOGA
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DIVISION**

Development Resource Center
 1250 Market Street, Suite 2100
 Chattanooga, TN 37402
 Phone: (423) 643-6000
 Fax: (423) 643-6008

Amendment to Agreement

Contract No.: E-10-012-101
 Engineer: HDR Engineering, Inc.
 Project Name: Ross's Landing Park Improvements and Repairs
 Phase II (Detailed Design and Engineering)

Change Order No.: 1
 Date: 6/18/2013
 Council Res. #'s: 27450
 (Attach Copies)

Check Reason for Change Order

- Error/Omission
- Field Condition
- Field Dispute Settlement
- Owner Request
- Value Engineering
- Other: Reduction of Scope

Contract Days Changed: _____
 Revised Completion Date: _____

Original Contract Amount \$ 828,854.00
 Net Change by Previous C.O.s \$ _____
 Contract Amount Prior to this C.O. \$ 828,854.00
 Total Amount of this C.O. \$ (425,923.88)
NEW CONTRACT AMOUNT \$ 402,930.12

Description / Justification (Add more pages if necessary)

* Amendment of Project Scope per attached letter dated May 29, 2013 from HDR to Lee Norris, Public Works Administrator

The terms and conditions of this Change Order, including the cost and time contained herein, constitute a full accord and complete satisfaction for all costs and time of performance related to the work described or referenced herein, including but not limited to, all delay and impact costs for the entire Project resulting from this Change Order. Except as amended herein, all provisions of the Contract remain in full force and effect.

APPROVALS

Contractor		ENGINEER / ARCHITECT	
Signature	Date	Signature	Date
<i>[Signature]</i>		<i>Stephen B. Colwell</i>	<i>6-24-13</i>
CITY PROJECT MANAGER		CITY ENGINEER	
Signature	Date	Signature	Date
<i>[Signature]</i>	<i>6/28/13</i>	<i>William Payne</i>	<i>07-01-13</i>
ADMINISTRATOR OF PUBLIC WORKS		CITY FINANCE OFFICER	
Signature	Date	Signature	Date

May 29, 2013

J209571

Mr. Lee Norris
Public Works Administrator
City of Chattanooga Public Works Department
1250 Market Street
Chattanooga, TN 37402

**RE: ROSS'S LANDING PARK REPAIRS – AMENDMENT OF SCOPE FOR
PROJECT #E-10-012-101**

Dear Lee:

This has been quite an exciting project so far! I realize we've been through some challenges in our attempts to move forward, and I'd like to thank you for your efforts in getting us to this point. Without your help, I'm not sure where our team would be in this process.

We received our original contract amendment #2, through the Parks and Recreation Department of the City of Chattanooga, on April 12, 2013. Shortly thereafter, our team was informed the Department of Engineering would take over management of the Project for the City. We had kickoff meetings onsite during the last week of April. On May 15, 2013 I spoke with you via phone and you followed up with an email requesting our team to stop work on the project. At that time, you directed me to provide a final invoice and a revised proposal for the structural improvements required along the Hard Edge at Ross's Landing Park, as well as the two small boat docks located east and west of the Chattanooga Pier.

There are two items in this package for you to review:

1. Revised proposal dated May 29, 2013, rev. 01

It includes the design and bidding efforts for the two small boat docks and the structural repairs along the hard edge. I've removed all fees and scope already performed as well as your requests for the removal of the previously scoped improvements. **The revised fee for this effort is \$267,941.00.**

2. Final invoice for the originally scoped project dated March 25, 2013

As you requested, the final invoice includes our team's efforts up to and including Friday, May 17, 2013. Included with the final invoice is a monthly report summarizing our team's efforts through May 17. **The fee for the final invoice is \$134,988.82.**

The table below provides a summary of the fees:

Team Member	Original Fee		Revised Fee
	Total	Final Invoice	
HDR	\$323,966.00	\$49,683.28	\$169,954.40
10% Sub Markup	\$45,899.00	\$7,755.05	\$8,907.90
J+J	\$251,700.00	\$44,047.50	\$0.00
BATH	\$151,380.00	\$19,028.00	\$57,070.00
Terracon	\$30,984.00	\$0.00	\$26,384.00
S&ME	\$5,625.00	\$0.00	\$5,625.00
RLS	\$19,300.00	\$14,475.00	\$0.00
Totals	\$828,854.00	\$134,988.82	\$267,941.30

The sum of the final invoice and the revised fee is \$402,930.12, which is the combined fee for the design phase and bidding phase for the Ross's Landing Park Repairs. This fee does not include any construction phase services.

Please note Terracon (geotechnical sub-consultant) and S&ME (regulatory sub-consultant) did incur costs but did not provide a final invoice. However, Terracon's scope changed very little (removal of landside borings only) and S&ME's scope did not change at all. Therefore any costs incurred will be a part of the revised scope and fees.

If you have any questions or require additional information, please do not hesitate to call me at 361-696-3347.

Sincerely,

HDR ENGINEERING, INC.



Daniel E. Garza, P.E.
Project Manager

HDR Engineering, Inc.



PROJECT PROPOSAL SUMMARY

Client Point of Contact: Mr. Dennis Malone
Client Organization: City of Chattanooga, TN
Project Name: CHATT_Bidding & CACO Services
Project Manager (HDR): DEG
Proposal Number: P94050

A. Activity / Task Description	HDR Activity Code	Labor (\$)	Expenses / Reimbursables (\$)		Phase Subtotals (\$)
			In-House	Outside with markup @ 10%	
1 Initiation / Controls	01	\$9,199	\$ -	\$ -	9,199
2 Bid Phase Services	02	\$25,982	\$ -	\$ 1,760	27,742
3 Construction Admin Services	03	\$149,029	\$ -	\$ 17,545	166,574
4 Resident Project Representative	04	\$149,409	\$ -	\$ -	149,409
5 not used	-	\$0	\$ -	\$ -	-
6 not used	-	\$0	\$ -	\$ -	-
7 not used	-	\$0	\$ -	\$ -	-
8 not used	-	\$0	\$ -	\$ -	-
Services Subtotal			----->		\$ 352,924

B. Project Contingency (10%) + Escalation (3%):

13% -----> \$ 45,880

C. Subconsultants

	Sub Fee	Management Fee 10%	Phase Subtotals
1 Bath Engineering	\$ 39,710.00	\$ 3,971.00	\$ 43,681
2 Sub Company	\$ -	\$ -	\$ -
3 Sub Company	\$ -	\$ -	\$ -
4 Sub Company	\$ -	\$ -	\$ -
5 Sub Company	\$ -	\$ -	\$ -
Subconsultants Subtotal			-----> \$ 43,681

D. GRAND TOTAL (PROJECT) (A+B+C)

\$ 442,485

MAN-HOUR ESTIMATE

Bath Engineering Corp.

Project: **Ross' Landing Chattanooga, TN**
 Client: **HDR Engineering**

Date: **4/25/2014**
 Bath Job No. **2060-05**

		Sr Engineer	Engineer	Sr Designer	Principal	Total
TOTAL ESTIMATE SUMMARY	Man-Hour Rate	\$175	\$135	\$110	\$195	
	Total Estimated Man-hours	56		28	114	198
	Estimated Man-hour Costs	\$9,800		\$3,080	\$22,230	\$35,110
	Estimated Project Expenses					\$4,600
TOTAL ENGINEERING ESTIMATE						\$39,710

Project Scope: Provide the necessary electrical & mechanical engineering construction services for the repairs, modifications and additions at the Ross Landing facility.

PROJECT PHASE SUBTOTALS		Expenses	Sr Engineer	Engineer	Sr Designer	Principal	Item Total
Construction Administration Services		\$4,600	\$9,800		\$3,080	\$22,230	\$39,710
SUBTOTALS		\$4,600	\$9,800		\$3,080	\$22,230	\$39,710
TASK DESCRIPTION		Expenses	Sr Engineer	Engineer	Sr Designer	Principal	Item Total
Construction Administration Services							
Pre-Bid Meeting 1 men 3 days		\$1,200				30	30
Meetings & Coordination w/HDR			16		16	4	36
RFI's			4			8	12
Submittals			4			8	12
Interim 2 men 3 days		\$2,000	30			30	60
Final 1 men 3 days		\$1,200				30	30
As Builts		\$200	2		12	4	18
PROJECT PHASE SUBTOTAL		\$4,600	56		28	114	198
Additional Items							
PROJECT PHASE SUBTOTAL							

OPINION OF PROBABLE CONSTRUCTION COSTS

City of Chattanooga
 Ross's Landing Riverfront
 Park Improvements



Estimated By: TAK
 Checked By: NKG
 QA/QC By: DEG
 Date: April 24, 2014

Item Description	Quantity		Unit Cost	Total Including O&P	Sub-Item Total	Extended Total
	QTY	Unit				
Marine Power Centers (2) 30A/120V	11	EA	\$800.00	\$8,800		
Ground Fault Monitor	1	EA	\$8,500.00	\$8,500		
Current Transformers -CT's	11	EA	\$400.00	\$4,400		
Panel MDP-5, 600 amp MCB shunt trip, PW4LSS, 1 phase, 3W	1	EA	\$22,000.00	\$22,000		
100A/2P Circuit Breakers with Shunt Trip	11	EA	\$1,200.00	\$13,200		
20A/1P Circuit Breakers	8	EA	\$100.00	\$800		
Transformer T-5, 167kVA 480V-120/240V, 1 phase,3W	1	EA	\$11,000.00	\$11,000		
Ground wire and ground rods	1	LS	\$6,000.00	\$6,000		
Ditch and backfill	750	LF	\$15.00	\$11,250		
Item No. 2.3- Mechanical Installation					\$87,380	
4" Sched 40 PVC water line	1,150	LF	\$40.00	\$46,000		
Valve Boxes	14	EA	\$1,200.00	\$16,800		
1" PEX water line	250	LF	\$10.00	\$2,500		
1-1/2" PVC Sleeve	250	LF	\$10.00	\$2,500		
1" Bronze Ball Valve	12	ea	\$65.00	\$780		
misc fittings	1	LS	\$5,000.00	\$5,000		
Ditch and backfill	1,150	LF	\$12.00	\$13,800		
Item No. 3 - Boat Dock						\$47,400
Item No. 3.1 - Installation of Pipe Piles					\$37,000	
18" OD Pipe Pile and Stringer installation (includes shoes)	4	EA	\$9,000	\$36,000		
18" Pile Guide	4	EA	\$200	\$800		
18" Piling Caps	4	EA	\$50	\$200		
Item No. 3.2 - Installation of Boat Dock					\$10,400	
Connect-A-Dock FS1060 and FS1030 Float Sections	1	LS	\$5,000	\$5,000		
Connect-A-Dock EF1010 Extra Flotation	54	EA	\$100	\$5,400		
Miscellaneous Items, e.g. signage, chains etc	1	LS	\$1,000	\$1,000		
SUBTOTAL (Work Items)						\$7,204,000

Project Related Costs						\$654,000
Insurance/Bonds		2%		\$144,080		
Construction Administration/ Observation	1	LS		\$365,000		
Underwater Inspection		1%		\$72,040		
Materials Testing		1%		\$72,040		
TOTAL (Work Items + Project Related Costs)						\$7,858,000

Contingency						\$1,179,000
Project Contingency		15%		\$1,178,700		
PROJECT GRAND TOTAL (Work Items + Project Related Costs + Contingency)						\$9,037,000

Notes:

- Opinion of probable project cost (OPPC) is based on HDR's understanding of current labor and material costs and reasonable estimates of construction activity duration.
- All costs are based on 2013 dollar amounts
- * Quantities and/ or unit costs provided by Bath Engineering

OPINION OF PROBABLE CONSTRUCTION COSTS

City of Chattanooga
 Ross's Landing Riverfront
 Park Improvements



Estimated By: TAK
 Checked By: NKG
 QA/QC By: DEG
 Date: April 24, 2014

Item Description	Quantity		Unit Cost	Total Including O&P	Sub-Item Total	Extended Total
	QTY	Unit				
ITEM No. 0 - Mobilization/Demobilization						\$250,000
Mobilization/Demobilization					\$250,000	
Mobilization	1	LS	\$175,000	\$175,000		
Demobilization	1	LS	\$75,000	\$75,000		
Item No. 1 - Structural Repairs at Hard Edge						\$6,357,310
Item No. 1.1 - Demolitions and Excavations					\$898,000	
Demolish existing concrete terrace beam pile cap	1	LS	\$30,000	\$30,000		
Demolish existing concrete terrace beam	1	LS	\$110,000	\$110,000		
Demolish 4" concrete terrace topping	1	LS	\$32,000	\$32,000		
Demolish 9" sidewalk slab	1	LS	\$20,000	\$20,000		
Demolish Stairs	1	LS	\$8,000	\$8,000		
Temporary Bracing with Plate and/or Soil Anchors	1	LS	\$500,000	\$500,000		
Excavation	1,650	CY	\$120	\$198,000		
Item No. 1.2 - Installation of Sheet Pile Wall					\$2,456,310	
PZC 19, Gr. 50, Sheet Piling Pairs @ 35' tall	284	PAIRS	\$5,000	\$1,420,000		
PZC 19, Gr. 50, Sheet Piling Singles @ 35' tall	31	EA	\$2,500	\$77,500		
90-degree Pile Connectors	21	EA	\$1,800	\$37,800		
45-degree Pile Connectors	4	EA	\$1,800	\$7,200		
WOM Pile Connectors	23	EA	\$1,000	\$23,000		
WOF Pile Connectors	22	EA	\$1,000	\$22,000		
Sheet Pile Wall Coating	1	LS	\$688,850	\$688,850		
H-Piles	24	EA	\$2,000	\$48,000		
Sheet Pile Shoes	599	EA	\$160	\$95,840		
H-Pile Shoes	24	EA	\$130	\$3,120		
Fill Material	825	CY	\$40	\$33,000		
Item No. 1.3 - Installation of Anchor Rods					\$1,458,000	
1 3/4" Dia Anchor, 60-ft min (Proof Tested)	75	EA	\$18,000	\$1,350,000		
1 3/4" Dia Anchor, 60-ft min (Performance Tested)	6	EA	\$18,000	\$108,000		
Item No. 1.4 - Placement of Concrete Pile Cap/ Terrace Beam					\$1,485,000	
Placement of concrete pile cap/ terrace beam	825	CY	\$1,800	\$1,485,000		
Item No. 1.5 - Underwater Repair (around Ductile Iron Pipe)					\$60,000	
60" ductile removal and sheetpile installation	1	LS	\$60,000.00	\$60,000		
Item No. 2 - Utility Improvements and Reconnections*						\$548,977
Item No. 2.1 - MEP Demolition					\$53,500	
Demo 4" water line and valve boxes	1,150	LF	\$10.00	\$11,500		
Demo work at mooring structure for water	11	EA	\$400.00	\$4,400		
Demo 6 - 2 1/2" conduit, wire, junction boxes	750	LF	\$20.00	\$15,000		
Demo work Panel MDP-5 and T-5	1	EA	\$5,000.00	\$5,000		
Demo work at mooring structure for electrical	11	EA	\$400.00	\$4,400		
Saw cut and patch flat work for mechanical	11	EA	\$600.00	\$6,600		
Saw cut and patch flat work for electrical	11	EA	\$600.00	\$6,600		
Item No. 2.2 - Electrical Installation					\$408,097	
2 1/2" Sched 40 PVC conduit	2,640	LF	\$20.00	\$52,800		
Splice boxes with tap connectors	13	EA	\$2,400.00	\$31,200		
# 1/0, cu, 600V wire	1,740	LF	\$6.30	\$10,962		
# 2/0, cu, 600V wire	2,460	LF	\$7.75	\$19,065		
# 4/0, cu, 600V wire	7,080	LF	\$11.50	\$81,420		
# 250kCM, cu, 600V wire	7,200	LF	\$12.25	\$88,200		
100W LED light fixtures	11	EA	\$2,600.00	\$28,600		
Marine Power Centers (1) 50A/240V	11	EA	\$900.00	\$9,900		



CHANGE REQUEST FORM (CRF)

City Contract No. E-10-012-101
 Project Name: Ross's landing Park Improvements and Repairs Implementation
 Engineer: HDR Engineering, Inc.
 Contractor: _____

Requested By: City of Chattanooga

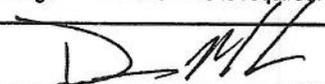
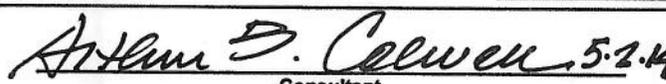
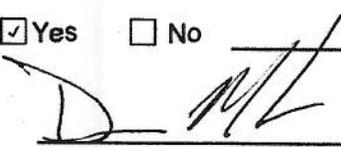
Drawing: _____

Problem Desc: By Resolution #27566, the original scope of the Design project was scaled back including the removal of the fee for Bid /Award Services. Subsequently, the original contract did not include the services of Construction Administration (CA) nor the Resident Project Representative (RPR).

Revised Scope Description/Details

By this CRF the City is authorizing HDR to proceed with the following services so that the project can continue to progress while the formal process of the Change Order is finalized to include the remaining service identified on Change Order No. 2.

1	Project Management and Controls	LS	\$	9,199.00
2	Bid/Award Services	LS	\$	27,742.00
Total				\$ 36,941.00

Contractor Acknowledgement: <input type="checkbox"/> No Change in Contract Amount is required. <input checked="" type="checkbox"/> A Change in Contract Amount is required: <u>\$36,941.00</u> <input type="checkbox"/> No Change in Contract Time is required. <input checked="" type="checkbox"/> A Change in Contract Time is required: <u>90 days</u>	
 _____ Architect / Engineer / Inspector / RPR	 _____ Consultant
Change in Contract Amount is within the Contingency Amount authorized under Resolution No. <u>27566</u> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No _____ <div style="text-align: center;">N/A</div> _____ Engineer / Architect Project Manager	<div style="text-align: center;">Proceed with Execution</div> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No _____  _____ City Project Manager

Distribution: City Engineer; Central Files