



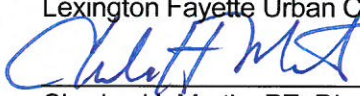
Lexington-Fayette Urban County Government
DEPARTMENT OF ENVIRONMENTAL QUALITY AND PUBLIC WORKS

Jim Gray
Mayor

David L. Holmes
Commissioner

Memorandum

To: Mayor Jim Gray
Lexington Fayette Urban County Council

From: 
Charles H. Martin, PE, Director
Division of Water Quality

Date: August 3, 2015

Subject: Change Order No. 1
Wolf Run Wet Weather Storage
Resolution No. 170-2015

This memorandum requests authorization and acceptance of Change Order No. 1 with Judy Construction Company, contractor for the Wolf Run Wet Weather Storage project, Resolution No. 170-2015 dated April 16, 2015. The requested change is for removal of unstable subgrade material and replacement with an engineered, structural fill on which the wet weather storage tank will be founded. The costs are not to exceed \$664,596. Funds are budgeted in 4003-303408-3466-92811, Project: WREQUALTNK_2013, and Activity CONSENT_ DE.

Questions should be directed to Vernon Azevedo, PE, Remedial Measures Program Manager.

C: David Holmes, Commissioner, Department of Environmental Quality
Todd Slatin, Director, Central Purchasing
Vernon Azevedo, PE, Remedial measures Program Manager
Mark Fischer, PE, Project Manager



TETRA TECH

August 3, 2015

Vernon Azevedo, PE
Division of Water Quality
125 Lisle Industrial Avenue, Suite 180
Lexington, Kentucky 40511

*Re: Wolf Run Wet Weather Storage Facility
Lexington-Fayette Urban County Government*

Dear Mr. Azevedo:

Tetra Tech has reviewed the attached change order proposed by Judy Construction Company (Judy) and recommends that it be approved for the following reasons:

Rock Removal

Judy is proposing additional rock removal due to encountering non competent rock and voids in the rock on-site. Rock removal was defined as auger refusal in the contract documents. During construction, Judy was required to remove additional rock due to the presence of non-competent rock and voids found in the rock. Judy is requesting payment for this additional mass rock excavation based on a unit price of \$25.75 a cubic yard. It is the belief of Tetra Tech that this unit price is justified based on unit prices provided by Judy in the bid form. Judy has provided an estimated volume of rock removal for the change order cost estimation purposes. The actual volume of rock removal will be determined using a survey, and will be verified by Tetra Tech. Tetra Tech recommends this be approved due to the fact that competent rock is required to support the prestressed concrete tank.

Structural Concrete

Judy has proposed using structural concrete backfill in lieu of DGA due to the significant amount of groundwater entering the tank excavation. When submerged, DGA cannot maintain the compaction as required by the specifications. Tetra Tech has retained the design geotechnical engineer, Consulting Services Incorporated (CSI), to evaluate Judy's proposal. CSI concluded that DGA is not a viable option for backfill due to the changed conditions. CSI also recommended lean concrete, with a minimum compression strength of 2,000 psi be used as backfill. American Concrete Institute (ACI) requires a minimum of 2,500 psi concrete for structural concrete. Based on this it has been required that Judy provide a minimum 2,500 psi concrete for the backfill. Due to this recommendation, Tetra Tech recommends that LFUCG approve Judy's proposed change order to use concrete as a backfill material. Judy has provided a unit cost for concrete placed by a bucket and concrete placed by a pump. The quantities used to estimate the cost of the change order are estimates only, and will be verified during construction by survey and delivery tickets. For estimating purposes, the unit price for concrete placed by a pump was used.

Credit for DGA Backfill

Judy has provided a credit of \$72,542.00 to LFUCG for the DGA backfill that will no longer be used. The credit is the cost for DGA estimated by Judy for bidding purposes, and included in their lump sum cost for the project. Based on Tetra Tech's estimated quantities this equates to approximately \$30.40 per ton. Tetra Tech recommends LFUCG approve this portion of the change order, as DGA will no longer be used as a backfill under the prestressed concrete tank.

Tetra Tech, Inc.

424 Lewis Hargett Circle, Suite 110 Lexington, KY 40503
Tel: 859.223.8000 Fax: 859.224.1025 www.tetra-tech.com



TETRA TECH

Schedule

Judy has requested the right to apply for additional time to be added to the contract once the full effect of the added work is seen on schedule. Tetra Tech recommends the change order be accepted in a timely manner to minimize the impact on the project schedule. The construction of the prestressed concrete tank is the critical path for the construction of the Wolf Run Wet Weather Storage Facility. Any delay on the acceptance of the change order will cause a delay to the overall project.

The total estimated cost of the change order is \$664,596.00. Please see the attached Change Order No. 1 provided for a unit price and quantity breakdown.

Please call myself, or Laura LeMaster, at 859-223-8000 if you have any questions or need additional information.

Sincerely,

Herbert R. Lemaster, P.E.

Herb.lemaster@tetrattech.com

cc: Laura LeMaster, Tt

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CHANGE ORDER

No. 1

DATE OF ISSUANCE August 3, 2015 EFFECTIVE DATE August 3, 2015

OWNER Lexington-Fayette Urban County Government

CONTRACTOR Judy Construction Company

Contract: Wolf Run Wet Weather Storage Facility

Project: Wolf Run Wet Weather Storage Facility

OWNER'S Contract No. WR-8; Bid No. 21-2015 ENGINEER'S Contract No. 200-11681-14002

ENGINEER Tetra Tech, Inc.

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

Description: See Attached Part 1

Reason for Change Order: Change requested by Contractor due to changed site conditions.

Attachments: (List documents supporting change) Part 1 – Contract Amount Changes; Part 2 – Time Extensions; change order proposal letters from Judy Construction Company

CHANGE IN CONTRACT PRICE:
Original Contract Price: \$ <u>4,740,000</u>
Net Increase (Decrease) from Previous Change Orders No. <u> </u> to <u> </u> : \$ <u>0</u>
Contract Price Prior to this Change Order: \$ <u>4,740,000</u>
Net Increase (Decrease) of this Change Order: \$ <u>664,596.00</u>
Contract Price with all Approved Change Orders: \$ <u>5,404,596.00</u>

CHANGE IN CONTRACT TIMES:
Original Contract Times: <u>365 Days – April 20, 2016</u> (days or dates)
Net Change from Previous Change Orders No. <u> </u> to No. <u> </u> : <u>0 days</u> (days)
Contract Times Prior to this Change Order: <u>365 Days – April 20, 2016</u> (days or dates)
Net Increase (Decrease) this Change Order: <u>0 days</u> (days)
Contract Times with all Approved Change Orders: <u>365 days – April 20, 2016</u> (days or dates)

RECOMMENDED:
By: [Signature]
ENGINEER (Authorized Signature)

APPROVED:
By: [Signature]
OWNER (Authorized Signature)

APPROVED:
By: [Signature]
CONTRACTOR (Authorized Signature)

DATE: 8/3/15

DATE: 8-4-15

DATE: 8/3/15

Change Order No. 1
Lexington-Fayette Urban County Government
Wolf Run Wet Weather Storage Facility

August 3, 2015

Part 1 – Contract Amount Changes

Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
1-1	Credit for DGA Fill	LS	1.0	(\$72,542.00)	(\$72,542.00)
1-2	Structural Concrete Fill Placed with Bucket	CY	0	\$189.00	\$0.00
1-3	Structural Concrete Fill Placed with Pump	CY	3500	\$197.00	\$689,500.00
1-4	Mass Rock Excavation	CY	1850	\$25.75	\$47,638.00
TOTAL					\$664,596.00

NOTES:

Item 1-1 The original contract listed DGA as backfill from competent rock to the tank foundation slab. Due to groundwater conditions, concrete will be used as the backfill material. Item 1-1 lists the credit amount of the labor, materials, and incidentals included in placing the DGA to specifications.

Item 1-2

- A. Measurement shall be on the basis of cubic yards of concrete placed with bucket.
- B. This item includes all materials, equipment, labor, hauling, testing, and incidentals required for the Contractor to place the concrete by the use of the buckets. The concrete used must be a minimum of 2,500 psi concrete. The unit price also includes surface preparation. Surface preparation includes the following:

- Remove rock fragments larger than six (6) inches.
- Dewater pit as much as practically possible. Water pools will be pumped down to the maximum extent possible with sump pumps.
- Remove mud or debris to best reasonable extent possible. Large areas of standing pump are not acceptable.
- Maintain a dewatering sump area outside of the pour area for water to be routed towards and removed from.

Concrete shall be placed in a manner to push any remaining excess water towards the sump area. Concrete shall be placed in lifts no greater than three (3) feet. Concrete shall be vibrated completely to remove all voids.

- C. The total volume of concrete placed shall be determined by the Contractor by performing a topographic survey of the competent rock surface, and a topographic survey of the final concrete placed. The Contractor shall provide the survey data and calculations prior to

request for payment. The volume of concrete placed by bucket shall be determined by delivery tickets and notes by the Resident Project Representative and the Project Superintendent. The volume for concrete placed by bucket and pump must be equivalent to the volume determined from the topographic survey.

Item 1-3

- A. Measurement shall be on the basis of cubic yards of concrete placed by pump.
- B. This item includes all materials, equipment, labor, hauling, testing, and incidentals required for the Contractor to place the concrete by the method of pumping. The concrete used must be a minimum of 2,500 psi concrete. The unit price also includes surface preparation. Surface preparation includes the following:
 - Remove rock fragments larger than six (6) inches.
 - Dewater pit as much as practically possible. Water pools will be pumped down to the maximum extent possible with sump pumps.
 - Remove mud or debris to best reasonable extent possible. Large areas of standing water are not acceptable.
 - Maintain a dewatering sump area outside of the pour area for water to be routed towards and removed from.

Concrete shall be placed in a manner to push any remaining excess water towards the sump area. Concrete shall be placed in lifts no greater than three (3) feet. Concrete shall be vibrated completely to remove all voids.

- C. The total volume of concrete placed shall be determined by the Contractor by performing a topographic survey of the competent rock surface, and a topographic survey of the final concrete placed. The Contractor shall provide the survey data and calculations prior to request for payment. The volume of concrete placed by pump shall be determined by delivery tickets and notes by the Resident Project Representative and the Project Superintendent. The volume for concrete placed by bucket and pump must be equivalent to the volume determined from the topographic survey.

Item 1-4

- A. Measurement shall be based on cubic yards of rock removed.
- B. This item includes all materials, equipment, labor, hauling, testing, and incidentals required for the Contractor to complete mass rock excavation as a result of probe holes, poor bearing, or voids in rock.
- C. The volume of mass rock excavation shall be determined based on a surface created from auger refusal to the topographic survey of the competent rock surface. The volume resulting between the two surfaces will be the quantity paid for mass rock excavation. The Contractor shall provide the surface profile, survey data, and calculations prior to request for payment.

**Change Order No. 1
Lexington – Fayette Urban County Government**

August 3, 2015

Part 2 – Time Extensions

There are no time extensions requested with the items associated with this change order request at this time. Judy has requested the right to apply for additional time to be added to the contract once the full effect of the added work is seen on the schedule.

JUDY

Construction Co.
GENERAL CONTRACTORS

P.O. BOX 457 CYNTHIANA, KENTUCKY 41031
Telephone (859) 234-6900 Fax (859) 234-3480
www.judyconstructionco.com

July 27, 2015

Tetra Tech
424 Lewis Hargett Circle, Suite 110
Lexington, KY 40503
Attn: Herb Lemaster

Ref: Wolf Run Wet Weather Storage Facility
Credit for DGA Fill
COP # 2

Dear Mr. Lemaster,

We have prepared the following proposal to provide a credit for the DGA fill under the storage basin that was included in the original contract.

Credit for DGA Fill	\$72,542.00
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If this proposal is acceptable, please incorporate it into your next change order. If you have any questions, feel free to call me.

Sincerely,



Paul Lawrence

cc: Ben Williams
Darryl Wells
COP File

PL/lj



Celebrating 40 Years of Business



JUDY Construction Co.

GENERAL CONTRACTORS

P.O. BOX 457 CYNTHIANA KENTUCKY 41031
Telephone (859) 234-6900 Fax (859) 234-3480
www.judyconstructionco.com

July 29, 2015

Tetra Tech
424 Lewis Hargett Circle, Suite 110
Lexington, KY 40503
Attn: Herb Lemaster

Ref: Wolf Run Wet Weather Storage Facility
Structural Concrete Fill
COP # 3

Dear Mr. Lemaster,

We have prepared the following unit price proposal to provide structural concrete fill under the storage basin. This proposal includes surface preparation and placing of the fill per your 7/24/15 email. We have prepared one price for placing the fill from a bucket and one price to use a concrete pump to place the fill.

Structural Concrete Fill Placed with Bucket	3500CY @ \$189.00/cy = \$661,500.00
Structural Concrete Fill Placed with Pump	3500CY @ \$197.00/cy = \$689,500.00

We would like to reserve the right to request additional time be added to the contract once the full effect of this added work is seen on the schedule.

If this proposal is acceptable, please incorporate it into your next change order. If you have any questions, feel free to call me.

Sincerely,



Paul Lawrence

cc: Ben Williams
Darryl Wells
COP File



RL/lj

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July 29, 2015

Tetra Tech
424 Lewis Hargett Circle, Suite 110
Lexington, KY 40503
Attn: Herb Lemaster

Ref: Wolf Run Wet Weather Storage Facility
Mass Rock Excavation
COP # 4

Dear Mr. Lemaster,

We have prepared the following unit price proposal to provide mass rock excavation below the elevation of auger refusal as shown in the geotechnical investigation report provided in the contract documents.

Mass Rock Excavation Unit Price 1850CY @ \$25.75/cy = \$47,638.00

This price includes disposing of the material offsite.

We would like to reserve the right to request additional time be added to the contract once the full effect of this added work is seen on the schedule.

If this proposal is acceptable, please incorporate it into your next change order. If you have any questions, feel free to call me.

Sincerely,



Paul Lawrence

cc: Ben Williams
Darryl Wells
COP File

PL/lj



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