



Department of PUBLIC WORKS

2232 E. Washington Street, East Peoria, IL 61611

Telephone: (309) 698-4715

Fax: (309) 698-4730

Commissioners
Dan Decker Mike Sutherland

TO: The Honorable Mayor and the City Council

THRU: Michael Sutherland, Commissioner of Public Property

FROM: Cord Crisler, Water and Wastewater Superintendent

DATE: July 15, 2020

SUBJECT: Change Order # 5 Wastewater Treatment Improvements Phase A, B, and C

DISCUSSION:

This change order pertains to RFP #012R1, RFP #013 and RFP #014

RFP #012R1 covers the additional cost of pipe lining material. Records indicated the original pipe size as 18" but was determined to be 21".

RFP #013 covers spoil removal from the job site. The spoils removed were of poor quality and not suitable for backfill of pipe trenches or structures.

RFP #014 pertains to 4 separate items.

- 1) Replacement of a HVAC damper at Rte. 8 pump station that was deteriorated and unserviceable.
- 2) Provision of electrical and control wire to flow meters and manholes at plant 3. This was missing on the original bid and needed for proper plant operation.
- 3) Pertains to an addition of a pressure reducing valve (PRV) on the existing refurbished 20 MGD vertical turbine storm pump at the plant 1 headworks. This PRV will aid flushing of the pump seal and prevent erosion of the packing due to excessive flow rates and pressure from intermittent use during storm events. This manufacture recommendation will reduce long term maintenance cost to the city.
- 4) Improvements to the existing suction intake wet well at Rte. 8 pump station. These improvements include the installation of suction vanes to improve inlet vortexing and damage causing cavitation that could affect pump life.

RECOMMENDATION:

Approve change order #5 for \$57,857.00

"EAST PEORIA - - HOME OF THE FESTIVAL OF LIGHTS"

RESOLUTION NO. 2021-030

East Peoria, Illinois

_____ , 2020

RESOLUTION BY COMMISSIONER _____

**RESOLUTION ACCEPTING FIFTH CHANGE ORDER
FOR CITY'S SANITARY SEWER SYSTEM UPGRADE PROJECT
(PHASES A – C CONSTRUCTION PROJECT)**

WHEREAS, the City of East Peoria currently operates a combined waterworks and sewerage system, which includes a sanitary sewer system, in accordance with the provisions of Division 139 of Article 11 of the Illinois Municipal Code (65 ILCS 5/11-139-1 *et seq.*); and

WHEREAS, the City has previously awarded a contract to Williams Brothers Construction Inc. (the "Contractor") for the construction of Phases A – C of the Sanitary Sewer System Upgrade Project; and

WHEREAS, a third change order has been requested for the Project regarding numerous revisions to and for the Project (the "Change Order") in the amount of \$57,857.00, as described in "Exhibit A", attached hereto and incorporated herein by reference; and

WHEREAS, the Change Order has been reviewed and approved by the City's Project Engineer (Farnsworth), the City's Project consultant, and City Officials as being necessary improvements for the Project; and

WHEREAS, it is in the City's best interests to approve the Change Order for the betterment of the Sanitary Sewer System Upgrade Project;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF EAST PEORIA, TAZEWELL COUNTY, ILLINOIS, THAT:

Section 1. The above recitations are found to be true and correct and are incorporated herein.

Section 2. The Change Order for the Sanitary Sewer System Upgrade Project as set forth in Exhibit A in the amount of \$57,857.00 is hereby approved.

Section 3. The Mayor, or his designee, is hereby authorized to submit the proposed Change Order to the IEPA for approval and to execute any documentation necessary for the IEPA submission and review process.

Section 4. After receiving IEPA approval for the Change Order, the Mayor or his designee is authorized to execute any additional documentation required for effectuating the Change Order; provided, however, that the City shall have no obligation to the Contractor under this Resolution until such time as an executed Change Order has been delivered to the Contractor and IEPA approval has been obtained.

APPROVED:

Mayor

ATTEST:

City Clerk

Date: 7-21-2020

Owner: City of East Peoria
Contractor: Williams Brothers Construction, Inc.
Engineer: Farnsworth Group, Inc.
Project: City of East Peoria, Wastewater Treatment Improvements Phase A, B and C

The Contract is modified as follows upon execution of this Change Order:

Description: See Attachment #1 – List of Change Order Items and Justifications

Attachments: See Attached RFP #012R; 013; 014; 015

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ 36,580,000.00	Original Contract Times: Calendar Days Substantial Completion: <u>540</u> Ready for Final Payment: <u>660</u> days or dates
[Increase] [Decrease] from previously approved Change Orders No. <u>1</u> to No. <u>4</u> : \$ 427,567.14	[Increase] [Decrease] from previously approved Change Orders No. <u>1</u> to No. <u>4</u> : Substantial Completion: <u>N/A</u> Ready for Final Payment: _____ 80 days
Contract Price prior to this Change Order: \$ 37,007,567.14	Contract Times prior to this Change Order: Substantial Completion: <u>620 4/05/2021</u> Ready for Final Payment: <u>740 8/03/2021</u> days
[Increase] [Decrease] of this Change Order: \$ 57,857.00	[Increase] [Decrease] of this Change Order: Substantial Completion: <u>N/A</u> Ready for Final Payment: _____ 0 days
Contract Price incorporating this Change Order: \$ 37,065,424.14	Contract Times with all approved Change Orders: Substantial Completion: <u>620 4/05/2021</u> Ready for Final Payment: <u>740 8/03/2021</u> days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer	By: _____ Owner (Authorized)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: <u>PROJECT MANAGER</u>
Date: _____	Date: _____	Date: <u>07.08.20</u>

Digitally signed by Patrik Sheridan, P.E.
DN: C=US,
E=psheridan@f-w.com,
OU="Farnsworth Group, Inc.",
CN="Patrik Sheridan, P.E."
Date: 2020.07.06
10:17:46-05'00'

ATTACHMENT #1

Change Order Items and Justification

RFP #012R1

1. The existing SA sewer crossing below Rte. 8 was determined to be a 21 in. diameter pipe and the existing pipe routing across Rt. 8 differs in alignment from plan. Existing owner record drawings indicated an 18 in. pipe and different alignment across Rte. 8 from field conditions encountered. Additional lining material is required to accommodate the larger actual pipe internal diameter and the field alignment length.

RFP #013

1. Removal of excess spoils from piping excavation from the Plant #1 site. Existing soils removed are of a very poor quality and not suitable for backfill of pipe trenches and below future pavements or adjoining other structures. Existing space for soil suitable deposition on the site has been fully exhausted. Soils are truck hauled and removed from the plant site.

RFP #014

1. Replacement of the HVAC existing roof mounted gravity exhaust damper at the Rte. 8 Pump Station. It was intended to reuse the existing damper; however, it was found to be deteriorated and unserviceable when new ductwork HVAC installation proceeded on site.
2. Provision of Electrical and Control Conduit and Wire to 3 ea. remote Flow meters/manholes at Plant #3. The wire between the nearest building structure and the remote manhole sensors was not included on the contract drawings. All control, sensor, panel, and other features at each manhole are indicated and in the base bid contract. This RFP item addresses the missing necessary conduit and wire between the two structures.
3. Addition of a pressure reducing valve on the existing refurbished 20 MGD vertical Turbine Storm pump at the Plant #1 headworks. The PRV is intended to aid Non-Potable water flushing of the pump seal packing to prevent erosion of the packing over time due to excessive flow rates and pressure for the intermittently used storm event pump, as recommended by the manufacturer's representative during startup testing of the re-built and re-commissioned unit.
4. After installation of the pumps into the Dry pit and associated suction piping and base fillet in the narrow and small suction intake wet well, it was decided to as best possible, prior to startup and operation to mitigate/improve the pump suction intake conditions in the retrofitted location. In consultation with the manufacturer, floor mounted stainless-steel intake suction vanes will be custom configured below each intake bell to reduce potential inlet vortexing and cavitation that could affect pump operation over time.



**WILLIAMS
BROTHERS**
CONSTRUCTION, INC

April 2, 2020

Pat Sheridan
Farnsworth Group
2709 McGraw Drive
Bloomington, IL 61704

RE: RFP – Lining Costs – **RFP: 12R**
East Peoria – Phase B
WBCI Job No. 518

Via email: psheridan@F-W.com

Dear Mr. Sheridan,

Attached is one copy of the Proposal Breakdown Summary dated April 2, 2020 for an add in the amount of \$14,67900. The attached costs are associated with the pipe lining revisions. Also attached are the quotations and breakdowns associated with this work.

Contact us with any questions or comments.

Sincerely,
WILLIAMS BROTHERS CONSTRUCTION INC.

By _____
Nick Verardo

Attachments

cc: File
Job



**WILLIAMS
BROTHERS**
CONSTRUCTION, INC

Engineer's
Format

Contractor's / Subcontractor's Proposal Breakdown Summary

Date: 04/02/20

RFP No. 000

GENERAL CONTRACTOR P.O. Box 1366 / Peoria, IL 61654 / Phone (309) 688-0416 / Fax (309) 688-0891

Engineer
Farnsworth Group
2709 McGraw Drive
Bloomington, IL 61704

OWNER: City of East Peoria

PROJECT: Phase A, B, C
East Peoria, IL

WBCI Project # 518

I DESCRIPTION OF CHANGE:
Extra Costs in Lining a 21" Line in Lieu of an 18" Line

II SUMMARY OF DETAILED BREAKDOWN

	Additions	Deletions	Net Total
A. Material/Equipment	\$0.00	\$0.00	\$0.00
B. LABOR	\$0.00	\$0.00	\$0.00
C.	\$0.00	\$0.00	\$0.00
D. NET TOTAL		(A+B+C)	\$0.00
E. OVERHEAD AND PROFIT		(Line D x 15%)	\$0.00
F. TOTAL WORK PERFORMED BY CONTRACTOR		(Lines D + E)	\$0.00

III CONTRACTOR'S MARK-UP ON WORK OF SUBCONTRACTORS

Detailed Breakdowns and summaries from each contractor must be attached.

SUBCONTRACTOR: Firm Name	CONTRACT WORK: Description	PROPOSAL
1. JC Dillon	Pipe Lining Extra	\$13,876.00
2.		\$0.00
3.		\$0.00
4.		\$0.00
5.		\$0.00
6.		\$0.00
G. SUBTOTAL of all work performed by contractor's subcontractors		\$13,876.00
H. CONTRACTOR'S MARK-UP on work of subcontractors	(Line G x 5%)	\$693.80
I. TOTAL WORK PERFORMED BY SUBCONTRACTOR	(Lines G + H)	\$14,569.80

J. PROPOSAL	(Lines F+I)	\$14,569.80
K. SUPPLEMENTAL COSTS		
1. SAFETY	(1% of LABOR)	\$0.00
2. EXPENDABLE TOOLS	(2.5% of LABOR)	\$0.00
L. BONDS	(0.5% of PROPOSAL)	\$72.85
M. OTHER REQUIRED INSURANCE	(0.25% of PROPOSAL)	\$36.42

IV TOTAL PROPOSAL

N. TOTAL PROPOSAL for subject RFP increase (decrease) in contract amount	\$14,679
O. The work for this RFP will require an extension of time of <u>0</u> Calendar Days.	
P. All costs are valid for 30 days.	

CONTRACTOR

(SIGNATURE).....

Nick Verardo

Title: Project Manager

Date: 04/02/20



Plumbing . Heating . Utilities . Trenchless Technologies . Hydro-excavation

PO Box 3590
Peoria, IL 61612
309.689.1596

Estimate. No. 03146-20

04/01/2020

Williams Brothers Construction Inc.
PO Box 1366
Peoria, IL. 61654

Attention: Nick Varardo
E-mail: nick@wbci.us

**RE: WWTP Imp, Phase B, Rte. 8 Pump Station & Force Main
Change Order 01 Request**

We are pleased to submit our estimate for the following items listed below,

Client #	Description	Quan	Unit	Unit Price	Ext Price
1	UV GRP, 18"	-218.000	LF	\$ 313.00	(\$68,234.00)
05	UV GRP, 21"	238.000	LF	\$ 345.00	\$82,110.00
Grand Total:					\$13,876.00

J.C. Dillon, Inc. will include the following:

- Labor, Equipment, and Materials
- Per Pre-Rehab Cleaning and CCTV Inspection dated 3/17/20

We exclude the following:

- Permits or Permit Fees
- Sales Tax
- By-Pass Pumping
- Permits or Permit Fees
- Inspection, and Engineering
- Materials Testing

Notes:

Peoria | Chicago | Davenport

www.jedilloninc.com

Terms and Conditions:

- J.C. Dillon, Inc. ("JCD") standard Pay Terms are (30) thirty days, unless agreed upon in writing prior to the start of the project
- All past due accounts will be charged a rate of 2% per month
- Reasonable attorney fees for unpaid accounts will be the responsibility of the Owner.
- Permit, Connection, or any other fees are not included, unless they are listed above
- Inspection and Materials Testing Fees are the responsibility of the Owner
- Local & State Sales Tax is the responsibility of the Owner unless stated above
- Performance and Payment Bond Fees are not included
- J.C. Dillon, Inc. will not be held responsible for private utilities un-marked prior to the start of the project. All repair to those utilities will be at the Owner responsibility.
- J.C. Dillon, Inc. guarantees its work, subject to the exception stated or implied herein, for a period of (1) one year from the completion of the work. The owner will allow access to J.C. Dillon, Inc. to make the necessary repairs.
- J.C. Dillon, Inc. will not accept any back-charges from the Owner, unless J.C. Dillon, Inc. has been given proper written notice of the Owner intent to back-charge, and J.C. Dillon, Inc. is given (72) seventy-two hours to accept responsibility for the cause of the notice and commence corrective action to remedy same.
- J.C. Dillon, Inc. does not assume any liability for or indemnify the Owner or Owner Representative from damages, losses, personal injuries or death attributed to their passive, active or partial negligence.
- J.C. Dillon, Inc. normal working hours are 7:00 am thru 3:30 pm Monday thru Friday, except Holidays

This estimate is based upon acceptance within (45) forty-five days of the date of same. The estimate is an offer to enter into an agreement for the work described hereinbefore, and is deemed an enforceable contract upon acceptance. The Owner accepts this estimate either by signature, oral assent, scheduling or commencing the work described in this estimate. Any of these modes of acceptance shall be deemed to incorporate all of the terms of this estimate into the contract between the Owner and J.C. Dillon, Inc.

If you have any questions, feel free to contact us @ 309-689-1596, and thank you for the opportunity to submit an estimate on your project.

Owner:

_____, 2020

Print

Signature

Date

J.C. Dillon, Inc.

_____, 2020

Print

Signature

Date



**WILLIAMS
BROTHERS**
CONSTRUCTION, INC

April 2, 2020

Pat Sheridan
Farnsworth Group
2709 McGraw Drive
Bloomington, IL 61704

RE: Dirt Haul Off - **RFP: 013**
East Peoria - Phase A
WBCI Job No. 518

Via email: psheridan@F-W.com

Dear Mr. Sheridan,

Attached is one copy of the Proposal Breakdown Summary dated April 2, 2020 for an add in the amount of \$9,000.00. The attached costs are associated with the Dirt Haul off for a not to Exceed Price of \$9,000.00. Also attached are the quotations and breakdowns associated with this work.

Contact us with any questions or comments.

Sincerely,
WILLIAMS BROTHERS CONSTRUCTION INC.

By _____
Nick Verardo

Attachments

cc: File
Job



WILLIAMS BROTHERS
CONSTRUCTION, INC

Engineer's
Format

Contractor's / Subcontractor's Proposal Breakdown Summary

Date: 04/02/20

RFP No. 000

GENERAL CONTRACTOR P.O. Box 1366 / Peoria, IL 61654 / Phone (309) 688-0416 / Fax (309) 688-0891

Engineer
Farnsworth Group
2709 McGraw Drive
Bloomington, IL 61704

OWNER: City of East Peoria

PROJECT: Phase A, B, C
East Peoria, IL

WBCI Project # 518

I DESCRIPTION OF CHANGE:

Dirt Haul Off

II SUMMARY OF DETAILED BREAKDOWN

	Additions	Deletions	Net Total
A. Material/Equipment	\$9,137.50	\$0.00	\$9,137.50
B. LABOR	\$811.52	\$0.00	\$811.52
C.	\$0.00	\$0.00	\$0.00
D. NET TOTAL		(A+B+C)	\$9,949.02
E. OVERHEAD AND PROFIT		(Line D x 15%)	\$1,492.35
F. TOTAL WORK PERFORMED BY CONTRACTOR		(Lines D + E)	\$11,441.37

III CONTRACTOR'S MARK-UP ON WORK OF SUBCONTRACTORS

Detailed Breakdowns and summaries from each contractor must be attached.

SUBCONTRACTOR: Firm Name	CONTRACT WORK: Description	PROPOSAL
1. _____	_____	\$0.00
2. _____	_____	\$0.00
3. _____	_____	\$0.00
4. _____	_____	\$0.00
5. _____	_____	\$0.00
6. _____	_____	\$0.00
G. SUBTOTAL of all work performed by contractor's subcontractors		\$0.00
H. CONTRACTOR'S MARK-UP on work of subcontractors	(Line G x 5%)	\$0.00
I. TOTAL WORK PERFORMED BY SUBCONTRACTOR	(Lines G + H)	\$0.00

J. PROPOSAL	(Lines F+I)	\$11,441.37
K. SUPPLEMENTAL COSTS		
1. SAFETY	(1% of LABOR)	\$8.12
2. EXPENDABLE TOOLS	(2.5% of LABOR)	\$20.29
L. BONDS	(0.5% of PROPOSAL)	\$57.21
M. OTHER REQUIRED INSURANCE	(0.25% of PROPOSAL)	\$28.60

IV TOTAL PROPOSAL

- N. TOTAL PROPOSAL for subject RFP increase (decrease) in contract amount
- O. The work for this RFP will require an extension of time of 0 Calendar Days.
- P. All costs are valid for 30 days.

~~\$11,556~~

\$9,000.00

CONTRACTOR

(SIGNATURE).....

Nick Verardo

Title: Project Manager

Date: 04/02/20



**WILLIAMS
BROTHERS**
CONSTRUCTION, INC

June 8, 2020

Pat Sheridan
Farnsworth Group
2709 McGraw Drive
Bloomington, IL 61704

RE: RFP 014 - Proposal
East Peoria – Phase A,B & C
WBCI Job No. 518

Via email: psheridan@F-W.com

Dear Mr. Sheridan,

Attached is one copy of the Proposal Breakdown Summary dated June 8, 2020 for an add in the amount of \$34,178.00. The attached costs are associated with the Miscellaneous Revisions requested by East Peoria including ESI 051 Revisions, New Damper at Route 8, PRV at Pump 5 and Vanes at Route 8. Also attached are the quotations and breakdowns associated with this work.

Contact us with any questions or comments.

Sincerely,
WILLIAMS BROTHERS CONSTRUCTION INC.

By _____
Nick Verardo

Attachments

cc: File
Job



WILLIAMS BROTHERS
CONSTRUCTION, INC

Engineer's
Format

Contractor's / Subcontractor's Proposal Breakdown Summary

Date: 06/08/20

RFP No. **014**

GENERAL CONTRACTOR P.O. Box 1366 / Peoria, IL 61654 / Phone (309) 688-0416 / Fax (309) 688-0891

Engineer
Farnsworth Group
2709 McGraw Drive
Bloomington, IL 61704

OWNER: City of East Peoria

PROJECT: Phase A, B, C
East Peoria, IL

WBCI Project # 518

I DESCRIPTION OF CHANGE:

MISC Work Requested by Farnsworth and East Peoria: ESI 051 Revisions, New Gravity Damper, PRV & Vanes

II SUMMARY OF DETAILED BREAKDOWN

	Additions	Deletions	Net Total
A. Material/Equipment	\$4,240.00	\$0.00	\$4,240.00
B. LABOR	\$751.52	\$0.00	\$751.52
C.	\$0.00	\$0.00	\$0.00
D. NET TOTAL		(A+B+C)	\$4,991.52
E. OVERHEAD AND PROFIT		(Line D x 15%)	\$748.73
F. TOTAL WORK PERFORMED BY CONTRACTOR		(Lines D + E)	\$5,740.25

III CONTRACTOR'S MARK-UP ON WORK OF SUBCONTRACTORS

Detailed Breakdowns and summaries from each contractor must be attached.

SUBCONTRACTOR: Firm Name	CONTRACT WORK: Description	PROPOSAL
1. A&R Mechanical Services	New Damper	\$3,065.00
2. Oberlander Electric	Electrical Revisions	\$23,332.00
3. GA Rich	Mechanical Revisions	\$419.86
4.		\$0.00
5.		\$0.00
6.		\$0.00
G. SUBTOTAL of all work performed by contractor's subcontractors		\$26,816.86
H. CONTRACTOR'S MARK-UP on work of subcontractors	(Line G x 5%)	\$1,340.84
I. TOTAL WORK PERFORMED BY SUBCONTRACTOR	(Lines G + H)	\$28,157.70
J. PROPOSAL	(Lines F+I)	\$33,897.95
K. SUPPLEMENTAL COSTS		
1. SAFETY	(1% of LABOR)	\$7.52
2. EXPENDABLE TOOLS	(2.5% of LABOR)	\$18.79
L. BONDS	(0.5% of PROPOSAL)	\$169.49
M. OTHER REQUIRED INSURANCE	(0.25% of PROPOSAL)	\$84.74

IV TOTAL PROPOSAL

N. TOTAL PROPOSAL for subject RFP increase (~~decrease~~) in contract amount **\$34,178**

O. The work for this RFP will require an extension of time of 0 Calendar Days.

P. All costs are valid for 30 days.

CONTRACTOR

(SIGNATURE).....

Nick Verardo

Title: Project Manager

Date: 06/08/20

A & R Mechanical Contractors, Inc.
 711 Kettering Park Dr.
 Urbana, IL 61801
 217-367-4227

City of East Peoria, Illinois
 Wastewater Treatment Plant Improvements

A&R# 10109

May 1, 2020

Description: Remove and Replace Gravity Damper at Rt. 8 Pump Station

Description	Size	Quant.	Unit Price	Total	Labor Units	Labor in Hours
Sheet Metal Worker		16 hrs	@ 88.29			
					Hours	18
Materials & Equipment					x Rate	\$ 88.29
						\$ 1,413
				Subtotal Materials Add	\$	1,200
				Subtotal Labor Add	\$	1,413
						2,613
				Overhead & Profit @15% (5% if credit)	\$	392
					\$	3,005
				<u>SUBCONTRACTOR:</u>		
				\$		-
				\$		-
				\$		-
				\$		-
Contractor's Markup (5%)				\$		-
				SUBCONTRACTOR	\$	-
					\$	3,005
				Other	\$	60
				Insurance @ 2%	\$	60
				Bond @ 1%	\$	3,065
					\$	3,065
				TOTAL PROPOSAL	\$	3,065



Langendorf Supply is proud to announce that we are the
Representatives for Fraser-Johnston commercial roof top units!!!

QUOTATION

LANGENDORF SUPPLY CO., INC.

Quote prepared by: Mike Lalumandier
Phone (309) 693-0731 Fax (309) 693-0767 E-Mail mlalumandier@lsc-inc.com

DATE: 4/8/20

To: A&R Mechancial

JOB NAME: EP WTP

Attn: Doug

Quote: 23231-19

	DESCRIPTION OF MATERIAL	PRICE
1	Ruskin model BD6 gravity damper (air up) with epoxy coating 52x52	
	Total Price	\$1,100.00

Below applies to the Quote above:

Prices quoted are for acceptance within 60 days from the date of this quote by the issuance of a purchase order, after which they will be subject to change at our discretion. Prices quoted above cover only the quantities and exact material specifically detailed in this quote above. All prices quoted include freight costs. All prices quoted are for factory's current standard ship schedules, express ship schedules may be available for additional charges based on product type and factory programs. No product will be released without approved submittals from the design engineer. No bid on starters, controls, or TStats for equipment unless specifically stated and listed.

Submittal



Date/Time: 04/08/2020 10:22:24
Created By: mlalumandier@lsc-inc.com
Current Version: 2014.0.472
Project Name:
Job Name: Ep gravity damper

Commercial

Model: BD6

SIZE: Duct 1/4
AIR FLOW: UP
FINISH COLOR: MACHINERY GR
(81)
DRAWING
REVISION:

CONSTRUCTION: ALUMINUM
FINISH TYPE: AIRDRY EPX(C4)
DRAWING
NUMBER:
DRAWING
DETAIL:

FRAME: CHANNEL
SCREEN1: NONE
SCREEN1 MTG: N/A

Qty	WIDTH	HEIGHT	Act Qty
1	52	52	0



3900 Dr. Greaves Rd.

Kansas City, MO 64030

(816) 761-7476

FAX (816) 765-8955

BD6 BACKDRAFT DAMPER

Extruded Aluminum

APPLICATION

The BD6 backdraft damper is designed for medium to heavy duty commercial HVAC applications. Vertical mount allows horizontal airflow relief in one direction, but prevents reverse airflow in opposite direction. Air pressure differential opens damper, while gravity closes it. The BD6 conforms with the International Energy Conservation Code (IECC), and ASHRAE 90.1 leakage requirements for non-motorized dampers.

Feature	Standard Construction
Frame	6063T6 extruded aluminum, .125" (3.2) THK, mitered corners
Blades	6063T6 extruded aluminum, .070" (1.8) THK
Blade seals	Ruskiprene™
Bearings	Synthetic (Nylon)
Linkage	1/2" (13) x 1/8" (3) THK, aluminum (exposed)
Finish	Mill

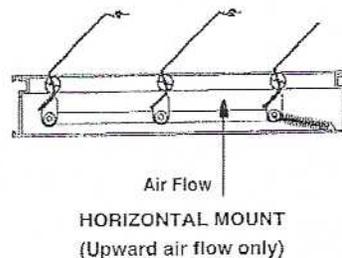
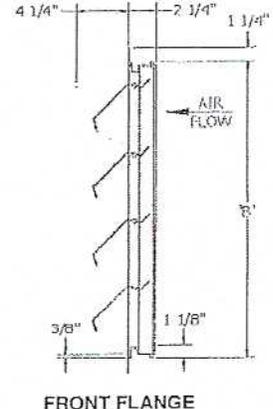
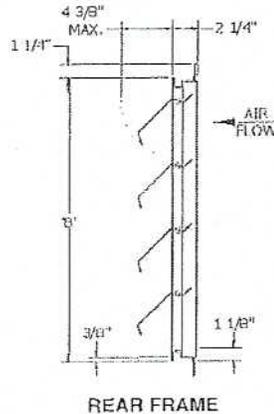
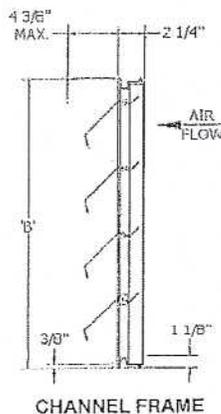
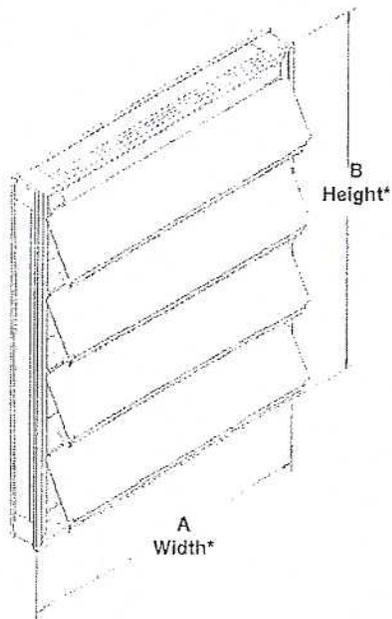
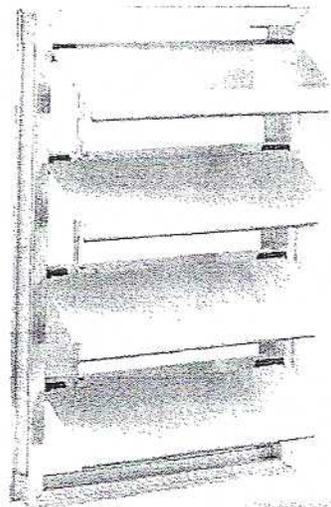
Sizing	Dimensions (W x H)*
Min. size**	12"x 8" (305 x 203)
Max. single section	48"x 52" (1219 x 1321)
Max. assembly	Unlimited

Performance/ Weight	
Max. Velocity	2500 fpm (12.7 m/s)
Temperature limits	-40°F to +200°F (-40°C to 93°C)
Weight	4 lbs. (1.8kg) per ft ²

Options/ Accessories
Front or Rear Flange
Insect or Birdscreen
Epoxy, Enamel finish
Anodized Finish
Electric Actuator
SPC (Static pressure controller) see page 3

*Dimensions in parentheses () indicate millimeters.

** Sizes below minimum to 6" X 6" (152 X152) not included in AMCA rating.



*W & H dimensions are supplied with 1/4" (6) deduct standard
A = width B = height

PERFORMANCE DATA



Ruskin Company certifies model BD6 is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program (CRP). The AMCA CRP Seal applies to Air Leakage and Air Performance Ratings.

Test Information

- Air Leakage is based on operation between 32°F and 120°F (0°C and 48°C)
- Tests for air leakage were conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.5, in the intake direction
- Air performance testing conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.5

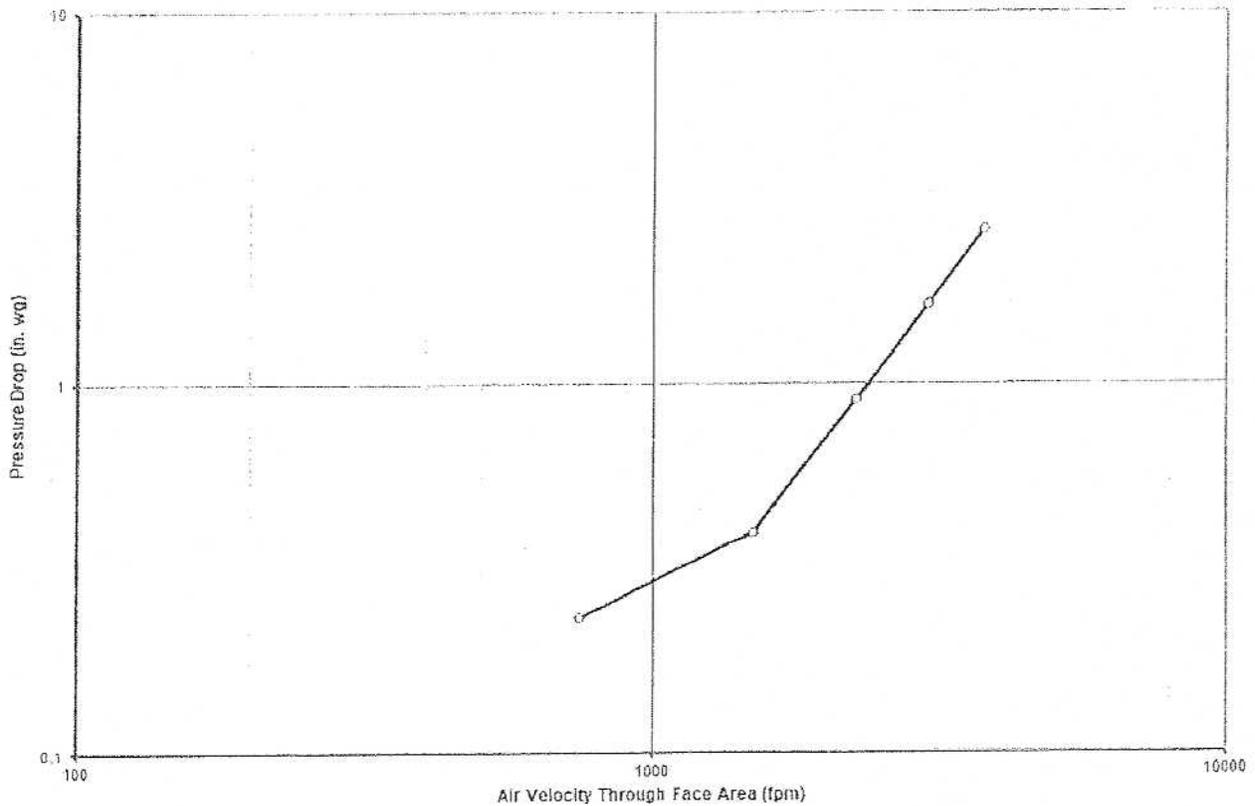
Air Leakage

- Model BD6 with a width and height 24" (610) or greater leak a maximum of: - 9.8 cfm/ft² or less at 1" w.g.
- Model BD6 with a width or height less than 24" (610) leak a maximum of: - 23 cfm/ft² or less at 1" w.g.

Air Performance

Performance data results from testing a 24" x 24" damper in accordance with AMCA Standard 500-D using Figure 5.5. All data has been corrected to represent standard air at 0.075 lb/ft³ (1.201 kg/m³).

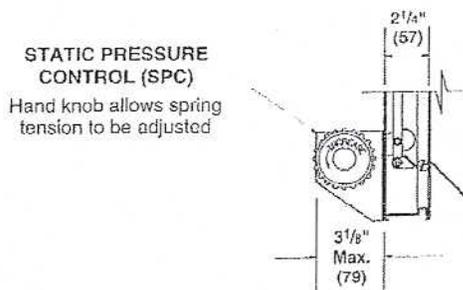
Pressure Drop
24" x 24" (610 x 610) Damper
Velocity vs Pressure Drop



PERFORMANCE DATA

Damper width	Max. Back Pressure In. wg / (kPa)
48" (1219)	4" w.g. (1.0)
36" (914)	8" w.g. (2.0)
24" (610)	12" w.g. (3.0)
12" (305)	16" w.g. (4.0)

Optional SPC (static pressure controller) is designed to maintain static pressures in ranges up to .25" w.g. for dampers up to 17.3 sq. ft. and up to .75" w.g. for dampers up to 6 sq. ft. The SPC is field adjustable. Minimum damper size for SPC option is 12"x12"



Note: One SPC per damper section

SUGGESTED SPECIFICATION

Furnish and install at locations on plans or in accordance with schedules heavy duty backdraft dampers that meet the following minimum construction standards. Frame shall be .125" (3.2) wall thickness 6063T6 extruded aluminum. Frame shall have galvanized steel braces at all corners.

Blades shall be .070" (1.8) wall thickness 6063T6 extruded aluminum. Blade edge seals shall be extruded vinyl mechanically locked into blade edge. Adhesive type seals are unacceptable.

Bearings shall be corrosion resistant long life synthetic for quiet operation. Linkage shall be 1/2" (13) tie bar with stainless steel pivot pins. Damper shall be in all respects equivalent to Ruskin BD6.

Specifier select damper shall have SPC field-adjustable static-pressure control to maintain pressures in ranges from .25" w.g. to .75" w.g. Minimum damper size for BD6 with SPC is 12" x 12" (305 x 305).

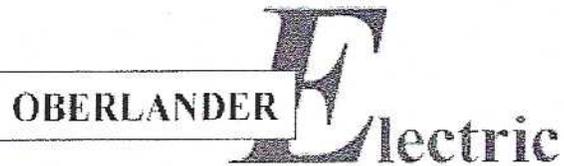
INSTALLATION GUIDELINES

- When used in fan discharge applications, damper should be located at least one-half the fan diameter away from the fan.
- For proper operation, damper must be installed square and free from racking.
- Bracing of multiple section assemblies; The BD6 is intended to be self supporting only in the largest single section size.

Multiple section damper assemblies may require bracing to support the weight of the assembly and to hold against system pressure. Ruskin recommends appropriate bracing to support the weight of the assembly and to hold against system pressure. Ruskin recommends appropriate bracing to support the damper horizontally at least once for every 8 feet of damper width. Vertical assemblies and higher system pressures may require more bracing.



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2101 N. Main Street
East Peoria, IL 61611

SCOPE:

Phone :(309) 694-1468
Fax: :(309) 699-9108

June 1, 2020

To: Williams Brothers Construction

JOB: East Peoria WWTP Improvements

RE: ESI Number 051 REVISED

ALL HOURS ON STRAIGHT TIME ONLY (TAX EXCLUDED)

Included:

- Per ESI Number 051 dated March 16, 2020.

TOTAL ADD: \$23,332.00

Please call if you have any questions.
JOE ANTONIO (jantonio@oberlanderelectric.com)

EP WWTP Improvements : ESI 051 REVISED
 Totals (Summary) - Bid Summary: Default

Material	
Non-Quoted	\$3,914.13
Quotes	0.00
Sales Tax (0.00%)	0.00
Total Material	\$3,914.13
Labor	
Direct (207.16 hours @ \$78.62)	\$16,286.92
Project Management	0.00
Total Labor (207.16 hours)	\$16,286.92
Direct Job Expenses	\$0.00
Tools and Miscellaneous Materials	0.00
Subcontracts	0.00
Job Subtotal (Prime Cost)	\$20,201.05
Overhead (10.00%)	2,020.11
Profit (5.00%)	1,111.06
Job Total	\$23,332.22
Actual Bid Price	\$23,332.22
Material to Direct Labor ratio: 0.19	
Prime Cost per square foot	\$0.00
Job Total per square foot	\$0.00
Actual Bid Price per square ft	\$0.00
Labor cost per square foot	\$0.00
Labor hours per square foot	0.00
Gross Profit %	13.42
Gross Profit \$	\$3,131.17
Net Profit %	4.76

EP WWTP Improvements : ESI 051 REVISED

Job Number: CO1396-6

Bid Summary: Default

Extension By Phase

Item #	Description	Quantity	Price U	Ext Price	Labor Hr U	Ext Lab Hr
--- 01 Raceway, Fittings & Boxes ---						
1002	1" EMT	60	117.69 C	70.61	5.50 C	3.30
1052	1" GRC	30	289.59 C	86.88	7.00 C	2.10
1345	1" GRC Elbow	19	1,467.09 C	278.75	0.50 E	9.50
1348	2" GRC Elbow	8	2,855.91 C	228.47	1.00 E	8.00
1486	1" Compression Steel Connector	2	165.43 C	3.31	0.35 E	0.70
1546	1" Compression Steel Coupling	6	170.45 C	10.23	0.16 E	0.96
1566	1" Locknut	34	68.01 C	23.12	0.13 E	4.42
1569	2" Locknut	16	107.49 C	17.20	0.27 E	4.32
1578	1" Plastic Bushing	2	16.61 C	0.33	0.13 E	0.26
1612	1" LB Condulet w/Cover & Gasket	1	56.39 E	56.39	0.80 E	0.80
1779	1" Cut & Thread	4	0.00 E	0.00	0.32 E	1.28
1802	1" GRC Coupling	3	326.35 C	9.79	0.20 E	0.60
2331	1" Conduit Hanger w/Bolt	108	106.30 C	114.27	12.50 C	13.44
2334	2" Conduit Hanger w/Bolt	55	200.29 C	110.16	13.75 C	7.56
--- 01 Raceway, Fittings & Boxes Total ---				1,009.51		57.24
--- 02 Wire & Cable ---						
2628	#14 THHN CU Stranded Wire	4,609	80.11 M	369.23	5.00 M	23.05
2629	#12 THHN CU Stranded Wire	232	125.00 M	28.94	6.00 M	1.39
2631	#8 THHN CU Stranded Wire	2,000	286.71 M	573.42	9.00 M	18.00
2632	#6 THHN CU Stranded Wire	570	441.10 M	251.43	11.00 M	6.27
--- 02 Wire & Cable Total ---				1,223.02		48.71
--- 06 Underground/Site ---						
1183	1" PVC Conduit	770	37.74 C	290.60	3.75 C	28.88
1186	2" PVC Conduit	440	74.79 C	329.08	4.50 C	19.80
2046	1" PVC Male Adaptor	30	50.00 C	15.00	18.00 C	5.40
2049	2" PVC Male Adaptor	16	66.00 C	10.56	0.30 E	4.80
2100	1" PVC Coupling	93	40.00 C	37.20	0.18 E	16.74
2103	2" PVC Coupling	52	43.00 C	22.36	0.30 E	15.60
--- 06 Underground/Site Total ---				704.80		91.22
--- 07 Misc ---						
T0008	Belden 1048A	740	1.32 E	976.80	13.50 M	9.99
--- 07 Misc Total ---				976.80		9.99
Job Total				3,914.13		207.16

* Trade Price, Labor column 3

CONTRACTOR'S PROPOSAL

FROM: G A Rich & Sons, Inc. P O Box 50 Deer Creek, IL 61733	PROJECT: East Peoria JOB NUMBER: 19509 RFP#: CONTRACT WORK: Plumbing
---	---

I DESCRIPTION OF CHANGE:
 Supply and instal prv on pump #5

II SUMMARY OF DETAILED BREAKDOWN:

	Additions	Deletions	Net Total
A. MATERIAL	\$76.17	\$0.00	\$76.17
B. LABOR	\$216.84	\$0.00	\$216.84
C. EQUIPMENT	\$64.50	\$0.00	\$64.50
D. OTHER COSTS			
1 SAFETY	(1% of LABOR) - Deletion -0-		\$2.17
2 EXPENDABLE TOOLS	(2.5% of LABOR) - Deletion -0-		\$5.42
E. SUB TOTAL		(A+B+C+D1+D2)	\$365.10
F. OVERHEAD AND PROFIT		(E x 15%) - Deletion -0-	\$54.76
G. TOTAL		(E + F)	\$419.86

III CONTRACTOR'S MARK-UP ON WORK OF SUBCONTRACTORS
 Detailed Breakdowns and Summaries from each Sub-Contractor must be attached.

SUBCONTRACTOR: Firm Name	CONTRACT WORK: Description	PROPOSAL
1 _____	_____	_____
2 _____	_____	_____
3 _____	_____	_____
4 _____	_____	_____

H SUBTOTAL of all work performed by contractor's subcontractors _____
 I CONTRACTOR'S MARK-UP on work of subcontractors (H x 6%) - Deletion -0- _____

IV FINAL SUMMARY

J PROPOSAL	(G+H+I)	\$419.86
K BONDS	(2.5% of PROPOSAL) - Deletion -0-	\$0.00
L BUILDER'S RISK INSURANCE (if applicable)	(0.3% of PROPOSAL) - Deletion -0-	_____
M TOTAL PROPOSAL for subject RFP increase (decrease) in contract amount		\$419.86
N Time added to contract _____	0 Calendar Days	

CONTRACTOR SIGNATURE _____

TITLE Project Manager DATE 05/27/20

