

SECTION 00842

CHANGE ORDER

Change Order No. **8**

Date of Issuance: 3-28-19	Effective Date:
Owner: Topsfield Water Department	Owner's Contract No.:
Contractor: Kinsmen Corporation	Contractor's Project No.:
Engineer: Wright-Pierce	Engineer's Project No.: 13257D
Project: Topsfield Water Treatment Plant – Contract 1	Contract Name:

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

Description: Contract Extension, Generator Gas Piping, Aeration Tower Automatic Drain


Attachments: Request for Contract Extension, PCO 15 – Generator Gas Piping, PCO-22 Aeration Tower Automatic Drain

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price: \$ <u>7,246,000.00</u>	Original Contract Times: Substantial Completion: <u>1/3/19 (500 Days)</u> Ready for Final Payment: <u>2/22/19 (550 Days)</u> days or dates
Increase from previously approved Change Orders No. 1 – 4, 6 and 7: \$ <u>38,100.00</u>	[Increase] [Decrease] from previously approved Change Orders No. <u> </u> to No. <u> </u> : Substantial Completion: <u>N/A</u> Ready for Final Payment: <u>N/A</u> days
Contract Price prior to this Change Order: \$ <u>7,284,100.00</u>	Contract Times prior to this Change Order: Substantial Completion: <u>1/3/19 (500 Days)</u> Ready for Final Payment: <u>2/22/19 (550 Days)</u> days or dates
Increase of this Change Order: \$ <u>10,844.00</u>	Increase of this Change Order: Substantial Completion: <u>3/6/19</u> Ready for Final Payment: <u>6/2/19</u> days or dates
Contract Price incorporating this Change Order: \$ <u>7,294,944.00</u>	Contract Times with all approved Change Orders: Substantial Completion: <u>3/6/19 (562 Days)</u> Ready for Final Payment: <u>6/2/19 (650 Days)</u> days or dates

RECOMMENDED:

ACCEPTED:

ACCEPTED:

By: <u></u>	By: _____	By: _____
Engineer (if required)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title: <u>Project Manager</u>	Title: _____	Title: _____
Date: <u>3/28/19</u>	Date: _____	Date: _____

Town of Topsfield
Water Treatment Plant Project
Change Order #8

Board of Selectmen

Mark B. Lyons, Chairman

Lynne Bermudez, Clerk

Boyd R. Jackson, Member

John K. Spencer, Member

Dick Gandt, Member

Date:

Board of Water Commissioners

Philip Knowles, Chairman

Richard Stone, Clerk

Mark Gallagher, Member

Approved as to the Availability of Funds:

Town Accountant

Approved by Owner's Project Manager

Woodard & Curran



KINSMEN CORPORATION

TEL. 603-625-9199

CONTRACTORS • ENGINEERS

FAX 603-625-9399

December 19, 2018

Wright-Pierce
600 Federal Street, Suite 2151
Andover, MA 01810

Attn: Mr. James E. Cray, P.E.

Re: Topsfield Water Treatment Plant
Contract 1
Topsfield, MA

Gentlemen:

This letter is a formal request for a Contract Time extension to achieve Substantial and Final Completion of the Contract work as it is presently scheduled and projected. The primary contributor to the overall construction delay was Winter and its accompanying challenges to construction in cold weather. As a result of the mid-Summer bid schedule and extended award period, the work of this Contract could not begin in earnest until Fall of 2017. This assured that certain portions of the concrete work would be impacted by cold weather. It is always a gamble with concrete work in winter and last year we were not on the winning end of that uncertainty. While we have made every attempt to recover the time lost last winter during the concrete work, we have not been successful in accelerating the balance of the work enough to completely overcome that setback. You may recall that weather forced us to essentially stop the structural slab work and erect an enclosure to protect the work before continuing with the slab, curbs and other structural elements. The bearing CMU activity ultimately could not begin until early April, almost twelve weeks beyond our originally scheduled date. As was shown in our schedule updates, this delay alone pushed our anticipated Substantial Completion date from early January out to late March. We have struggled to recover that lost time but it still appears that Substantial Completion, if present schedule holds, will not be achieved until approximately mid-February. Our Start-Up Schedule anticipates an operational Plant on or about February 8, 2019.

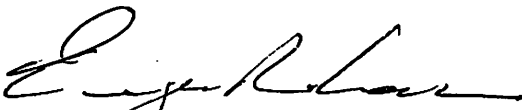
In addition to the significant loss of production to the critical concrete work last winter, there have been a number of other factors which have disrupted the orderly prosecution of the work and contributed to the overall extension of the schedule. The CMU Veneer Change Order resulted in a delay to the completion of the masonry work of almost twelve weeks, after it was originally projected to interrupt the masonry work only about four weeks. While we continued with other work where we could, this delay ultimately held up the wall panels and the installation of doors and windows and prevented us from being able to secure the building against the weather for some interior finishes and certain portions of trade work. The Change Order revising the site electrical was also a contributing source of delay, involving considerable extra coordination with the utility and extending the overall durations of activities associated with those changes. Had it not been for the successful intervention by the Town's Dave Bond, this change could have resulted in further delays. We are still awaiting the completion of

the gas service which needed to be revised as a result of the pending Change Order to add fuel piping to the standby generator. The Change Order process for the revision of the exhaust ductwork from the CHEM areas was only recently concluded so that material could not be purchased and installed. While any one of these and many other items viewed in singular is typically not enough to cause any significant delay, they do become a problem when taken in the aggregate. Just like every little thing can help, every little thing can also have an adverse impact.

It is not unusual to incorporate changes to the work during the span of a Contract like this one and we have had relatively few. It is also reasonable to request and be provided with an equitable adjustment to the Contract duration for their performance. We have not sought additional Contract Time on many of these seemingly incidental changes because we believed we could absorb their impact to the schedule and still achieve Substantial Completion within the Contract period. However, that now seems unlikely. We are, therefore, requesting a sixty (60) calendar day extension to the Contract Substantial Completion and Final Completion dates. While we will continue to aggressively pursue the completion of all Contract work and expect to be complete prior what would be an extended Substantial Completion date of March 6, 2019, we are requesting the additional time as a contingency against any item which may arise during Plant start-up and initial operation. We thank you in advance for your favorable consideration of this request.

Very truly yours,

KINSMEN CORPORATION



Eugene R. Connor, Jr., P.E.
President
ERC/kb

CC: to Greg Krom, Topsfield Water Department

KINSMEN CORPORATION

TEL. 603-625-9199

CONTRACTORS • ENGINEERS

FAX 603-625-9399

February 22, 2019

Wright-Pierce
40 Shattuck Road, Suite 305
Andover, MA 01810

Attn: Mr. James E. Cray, P.E.

Re: Topsfield Water Treatment Plant
Contract 1
Topsfield, MA

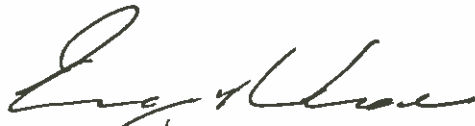
Gentlemen:

Pursuant to the provisions of Article 11 of the General Conditions (EJCDC) and as amended in Supplementary General Conditions, we are submitting, herewith, our breakdown of costs for Proposed Change Order No. 015 to Provide Fuel Piping to Generator, generally in accordance with Designer's direction by response to RFI 021 dated September 25, 2018, including W-P Sketches.

Please issue a Contract Change Order at the earliest authorizing payment for the performance of this additional work.

Very truly yours,

KINSMEN CORPORATION



Eugene R. Connor, Jr., P.E.
President
ERC/kb

TOPSFIELD WTP PCO 015

KINSMEN CORPORATION
TOPSFIELD WATER TREATMENT PLANT
TOPSFIELD, MA

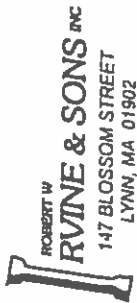
PROPOSED CHANGE ORDER NO. 015
PROVIDE GENERATOR FUEL PIPING

1.	<u>LABOR</u>	\$ 0.00
	Foreman 0 MH @ \$70.00	\$ 0.00
	Carpenter 0 MH @ \$67.68	\$ 0.00
	Laborer 0 MH @ \$55.81	\$ 0.00
2.	<u>DIRECT LABOR COST</u>	\$ 0.00
	Payroll Taxes and Insurance (2018) 62.65 % (\$ 0.00)	
3.	<u>MATERIAL AND FREIGHT</u>	\$ 0.00
	Foreman Expense 0 DYS	\$ 0.00
4.	<u>EQUIPMENT</u>	\$ 0.00
	No Additional GC Equipment Involved	\$ 0.00
5.	<u>SUBCONTRACTED WORK</u>	\$ 2,600.46
	Plumbing FSB Subcontract 1 LS	\$ 2,600.46
	Subtotal (Items 1-5)	\$ 2,600.46
	OH & P – GC Work (15%)	0.00
	OH & P – Subcont. Work (5%)	115.89
	Subtotal Amount	\$ 2,716.35
	Subcontract Bonds	0.00
	GC Bond	43.65
	TOTAL AMOUNT	\$ 2,760.00

**ADDITIONAL CONTRACT TIME REQUIRED: FOURTEEN (14) CALENDAR DAYS.
(EXCLUSIVE OF ALL OTHER PCO'S CONTRIBUTING TO CONTRACT TIME
EXTENSIONS.)**

INVOICE 25438

JOB NUMBER: 1779
 DATE OF ORDER: 1/15/18
 JOB NAME / LOCATION: TOPSFIELD WTP



ROBERT W. RIVINE & SONS INC.
 147 BLOSSOM STREET
 LYNN, MA 01902

MASTER'S REGISTRATION NUMBER 10865
 Telephone (781) 581-0464
 FAX (781) 581-2860

TO: Kinman
 Topfield WTP
 PHONE: _____
 ORDER TAKEN BY: _____

QTY.	MATERIAL	PRICE	AMOUNT
10'	2 1/2 Black steel		58.00
2	2 1/2 45° weld		42.00
1	2 1/2 90° weld		22.00
1	4x2 1/2 Flange weld		40.00
1	2" mslibu 90		6.00
2	2" mslibu 5#90		14.00
1	2" mslibu union		11.00
1	2x1 1/2 weld ellet		11.00
1	1 1/2 x 4 nipple		2.50
1	4x2 Thread Flange		10.00
1	1 1/2 x 1 mslibu 90		4.50
1	1 1/2 Gas lock		46.00
2	Stainless steel Hangers		25.00
	Length 3/8 SS Rod		26.00
	4 SS nut & wash		4.00
	1 Roll teflon tape		8.00
	1 Container Rubber Seal		15.00
8	weld Joints		76.00
2 hrs	Prep + Test + Inspection		
1	TRIP 0318-GR-100		193.00
	bars RELIABLE		1090.00

TERMS	DESCRIPTION OF WORK	AMOUNT
	weld 2" to generator + top on house side	
	tie in generator	
	PPC prep + Test + INSPECTION 4 hrs	

LABOR	HOURS	RATE	AMOUNT	TOTAL MATERIAL	TOTAL LABOR
AL	8	71.9	629.52	690.00	1196.35
Ducane	5	71.9	398.45	119	432.36
Testing/Tax	2	71.9	159.98	611-P	231.77
				Bond	50.98
				TAX	
Thank You!					2600.46
PAY THIS AMOUNT →					

WORK ORDERED BY: _____ DATE COMPLETED: _____
 SIGNATURE (if hereby acknowledging the satisfactory completion of the above described work):
 [Signature]

For Time Variations, contact your...

KINSMEN CORPORATION

TEL. 603-625-9199

CONTRACTORS • ENGINEERS

FAX 603-625-9399

February 25, 2019

Wright-Pierce
40 Shattuck Road, Suite 305
Andover, MA 01810

Attn: Mr. James E. Cray, P.E.

Re: Topsfield Water Treatment Plant
Contract 1
Topsfield, MA

Gentlemen:

Pursuant to the provisions of Article 11 of the General Conditions (EJCDC) and as amended in Supplementary General Conditions, we are submitting, herewith, our breakdown of costs for Proposed Change Order No. 022 to Provide Cold Weather Aerator Drain, generally in accordance with Designer's direction in EC-9, dated January 24, 2019 including annotated Drawings PR-4, I-4 and E-10.

Please issue a Contract Change Order at the earliest authorizing the scheduling and performance of this additional work.

Very truly yours,

KINSMEN CORPORATION



Eugene R. Connor, Jr., P.E.
President
ERC/kb

TOPSFIELD WTP PCO 022

KINSMEN CORPORATION
TOPSFIELD WATER TREATMENT PLANT
TOPSFIELD, MA

PROPOSED CHANGE ORDER NO. 022
PROVIDE COLD WEATHER AERATOR DRAIN

1.	<u>LABOR</u>		\$ 223.24
	Foreman 0 MH @ \$70.00	\$ 0.00	
	Pipefitter 0 MH @ \$77.30	\$ 0.00	
	Carpenter 0 MH @ \$69.75	\$ 0.00	
	Laborer 4 MH @ \$55.81	\$ 223.24	
2.	<u>DIRECT LABOR COST</u>		\$ 146.12
	Payroll Taxes and Insurance (2018)	62.65 % (\$ 223.24)	
3.	<u>MATERIAL AND FREIGHT</u>		\$ 2,985.24
	Tapping Saddles, Taps 1 LS	\$ 1,868.00	
	CU Pipe, Fittings, Access. 1 LS	\$ 283.05	
	Solenoid Valve - 2" 1 LS	\$ 834.19	
	Foreman Expense 0 DYS	\$ 0.00	
4.	<u>EQUIPMENT</u>		\$ 125.00
	Scaffolding Rental 1 LS	\$ 125.00	
5.	<u>SUBCONTRACTED WORK</u>		\$ 3,876.39
	Mechanical Subcontract 1 LS	\$ 1,200.00	
	Electrical FSB Subcontract 1 LS	\$ 2,676.39	
	Subtotal (Items 1-5)	\$ 7,355.99	
	OH & P – GC Work (10%)	347.96	
	OH & P – Subcont. Work (5%)	181.65	
	Subtotal Amount	\$ 7,885.60	
	Subcontract Bonds	66.91	
	GC Bond	131.49	
	TOTAL AMOUNT	\$ 8,084.00	

ADDITIONAL CONTRACT TIME REQUIRED: ADDITIONAL CONTRACT TIME NOT REQUIRED. (EXCLUSIVE OF ALL OTHER PCO'S CONTRIBUTING TO CONTRACT TIME EXTENSIONS.)

KINSMEN CORP
P O BOX 16117
ATTEN: GENE CONNOR
HOOKSETT, NH

TEAM EJP Middleton, MA
162 No. Main Street Rte 114
P.O. Box 761
Middleton, MA

03106-6117

01949

Telephone: 978-777-7738

2/25/19 Bid ID: 5391214 TOPSFIELD, MA / WTP, 2" TAPS Page 1

Quantity	Sell Per	Description	Unit Price	Extended Price
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* TOPSFIELD, MASSACHUSETTS *
* 2" TAPS AT AERATOR TOWER *
* ***** *
* ENGINEER: *** *
* BID DATE: **/**/** *

TEAM EJP DOES NOT ACCEPT
RESPONSIBILITY FOR PRODUCT
COMPLIANCE WITH THE "BUY
AMERICA" CLAUSE OF THE "AMERICAN
RECOVERY & REINVESTMENT ACT"
(ARRA STIMULUS BILL)

WE ARE PLEASED TO PRESENT THE
ENCLOSED PROPOSAL FOR THE ABOVE
REFERENCED JOB.

PRICING IS BASED ON FACTORY
DIRECT, FULL TRUCKLOAD DELIVERY
TO THE JOBSITE BY INDEPENDENT
TRUCKING FIRMS.

RECEIVING AND UNLOADING IS THE
RESPONSIBILITY OF PURCHASER.
ANY DELAY CHARGES INCURRED BY
INDEPENDENT TRUCKERS WILL BE FOR
YOUR ACCOUNT.

PRICES ARE BASED ON THE ENTIRE
LIST OF MATERIALS, ARE FIRM FOR
THIRTY DAYS FROM 2/25/19.

ALL MATERIALS QUOTED ARE SUBJECT
TO MANUFACTURER'S AVAILABILITY
AND "SHIP BY" DATES.

* NOTE: ALL PLASTIC PIPE AND *
* FITTING PRICES ARE SUBJECT *
* TO CHANGE AT TIME OF *
* SHIPMENT *

THE ENCLOSED QUOTATION IS OUR

Continued Next Page

KINSMEN CORP
P O BOX 16117
ATTEN: GENE CONNOR
HOOKSETT, NH

03106-6117

TEAM EJP Middleton, MA
162 No. Main Street Rte 114
P O Box 761
Middleton, MA

01949

Telephone: 978-777-7738

2/25/19 Bid ID: 5391214 TOPSFIELD, MA / WTP, 2" TAPS Page 2

Quantity	Sell Per	Description	Unit Price	Extended Price
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INTERPRETATION OF THE ENGINEER'S
SPECIFICATIONS AND DRAWINGS.
ALL MATERIALS, QUANTITIES, AND
SIZES ARE > **ESTIMATED** < ONLY.
FINAL PRICING WILL BE BASED ON
REVISIONS RECEIVED BY FORMAL
SUBMITTALS.

ALL CURRENT TERMS AND CONDITIONS
APPLY & ARE SUBJECT TO APPROVAL.

RESPECTFULLY SUBMITTED,
E.J. PRESCOTT, INC.

BY: KEVIN MARSTON

MARKETING REPRESENTATIVE

Continued Next Page

KINSMEN CORP
P O BOX 16117
ATTEN: GENE CONNOR
HOOKSETT, NH

03106-6117

TEAM EJP Middleton, MA
162 No. Main Street Rte 114
P O Box 761
Middleton, MA

01949

Telephone: 978-777-7738

2/25/19 Bid ID: 5391214 TOPSFIELD, MA / WTP, 2" TAPS Page 3

Quantity	Sell Per	Description	Unit Price	Extended Price
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* 2- 2" TAPS INSIDE PUMP ROOM

1	EA	12 202S SADDLE 2IP 13201438	180.00	180.00
1	EA	8 202S SADDLE 2IP 863980	128.00	128.00
2	EA	2 BALL CORP IPXFEIP LEAD FREE	305.00	610.00
2	EA	2" SERVICE TAP	475.00	950.00

* KINSMEN CORP. TO PROVIDE THE FOLLOWING, BUT NOT LIMITED TO:

PROVIDE PROPER STAGING FOR TECH. TO WORK AT A CORRECT HEIGHT TO INSTALL SADDLES, SET TAPPING MACHINE AND TAP SAME

PROVIDE 120V TO OPERATE THE POWER HEAD FOR TAPPING MACHINE

* KINSMEN TO PROVIDE A PERSON TO ASSIST IN BRINGING EQUIPMENT IN AND OUT OF BLDG.; ASSIST TECH. IN SETTING SADDLES, CORPS AND TAPPING MACHINE IN PLACE; ASSIST WITH TAPPING AND ANY OTHER ASSISTANCE REQUIRED

=====

Subtotal:	1,868.00
Tax:	.00
Bid Total:	1,868.00

F.W. Webb Company
 98 Lindbergh Avenue
 Methuen, MA 01844
 TEL# (781-325-7041)
 FAX# (781-325-7051)

Quote
 Number
 02/25/19
 62164358

To:
 KINSMEN CORP

SAME

PO BOX 16117
 HOOKSETT NH 03106-6117

PO BOX 16117
 HOOKSETT, NH 03106-6117
 GENE CONNOR

(603-625-9199) Fax# (603-625-9399)

Cust #	Customer Po#	Rel#	Writer	Date Req
127029	AERATOR TOWER		NASH	02/25/19
				PAGE 1 OF 1

Quoted By: NASH

Quantity	Description	Net Price	Exten	Ln#
10	TUBE L COP HRD 2"x10' BLU C/T2L10 (34598)	9.530	95.30	(1)
4	* ELL 90DEG 2" COP 607 COP290 (36113)	19.250	77.00	(2)
<i>4-2</i>	* ADPT 2" WROT COP M COP2CMA (35893)	21.240	42.48 <i>84.96</i>	(3)
1	* SOLDER LEAD FREE 100 S/B100 (44041)	25.790	25.79	(4)
1	* SOLND VLV BRS 2 NPT 2W NC 120AC NBR ASC8210G100 (174764) THIS PRODUCT CONTAINS LEAD	834.190	834.19	(5)
Sub Total:			1074.76	
Freight:				
Handling:			<i>1,117.24</i>	
Total:			1074.76	

*** NUMBER OF DAYS QUOTE VALID IS 15 ***
 PLEASE REFERENCE QUOTE # 62164358 FOR INQUIRIES OR ORDER OF ABOVE MATERIAL



Pilot Operated
General Service Solenoid Valves
 Brass or Stainless Steel Bodies
 3/8" to 2 1/2" NPT

2/2
SERIES
8210

2-WAY

Features

- Wide range of pressure ratings, sizes, and resilient materials provide long service life and low internal leakage
- High flow valves for liquid, corrosive, and air/inert gas service
- Lead-free versions available for Safe Drinking Water Act Compliance
- Industrial applications include:
 - Car wash
 - Laundry equipment
 - Air compressors
 - Industrial water control
 - Pumps

Construction

Valve Parts in Contact with Fluids		
Body	Brass	316 Stainless Steel*
Seals and Discs	NBR or PTFE	
Disc-Holder	PA	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver

*Catalog Numbers 8210G127, 8210G129, 8210G132, 8210G133 have 316L Stainless Steel bodies.

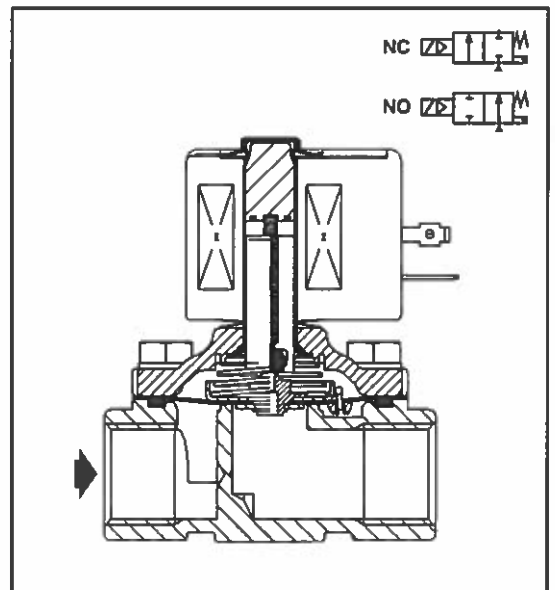
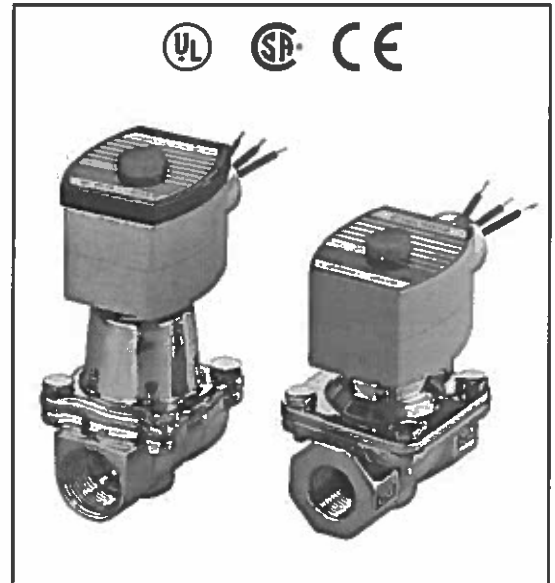
Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
	DC Watts	AC			General Purpose		Explosionproof	
		Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	-	6.1	16	40	238210	-	238214	-
F	11.6	10.1	25	70	238610	238710	238614	238714
F	15.8	-	-	-	-	501695	-	501696
F	16.8	16.1	35	180	272610	97617	272614	97617
F	-	17.1	40	93	238610	-	238614	-
F	-	20	43	240	99257	-	99257	-
F	-	20.1	48	240	272610	-	272614	-
F	30.8	-	-	-	-	501695	-	501696
H	11.6	-	-	-	-	238910	-	238914
H	40.6	-	-	-	-	238910	-	238914

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz). 6, 12, 24, 120, 240 volts DC. Must be specified when ordering.
 Other voltages available when required.

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type I.
Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; Red-Hat - Explosionproof and Watertight, Types 3, 4, 4X, 7, and 9.
 (To order, add prefix "EF" to catalog number, except Catalog Numbers 8210B057, 8210B058, and 8210B059, which are not available with Explosionproof enclosures.)
 See *Optional Features Section* for other available options.



Nominal Ambient Temp. Ranges

RedHat II/RedHat AC: 32°F to 125°F (0°C to 52°C)
 RedHat II DC: 32°F to 104°F (0°C to 40°C)
 RedHat DC: 32°F to 77°F (0°C to 25°C)
 (104°F/40°C occasionally)
 8210G227 AC: 32°F to 130°F (0°C to 54°C)
 DC: 32°F to 90°F (0°C to 32°C)

Refer to *Engineering Section* for details.

Approvals

UL listed as indicated. CSA certified.
 RedHat II meets applicable CE directives.
 Refer to *Engineering Section* for details.
 ATEX/IECEx certified with prefix "EV" as listed. Refer to *Optional Features Electrical Section* for details.

Specifications (English units)

Pipe Size (in)	Orifice Size (in)	Cv Flow Factor	Min.	Operating Pressure Differential (psi)						Max. Fluid Temp. °F		Brass Body			Stainless Steel Body			Watt Rating/Class of Coil Insulation ⑦	
				Max. AC			Max. DC			AC	DC	Catalog Number	Const. Ref. ④	UL Listing	Catalog Number	Const. Ref. ④	UL Listing	AC	DC
				Air-Inert Gas	Water	Light Oil @ 300 SSU	Air-Inert Gas	Water	Light Oil @ 300 SSU										
NORMALLY CLOSED (Closed when de-energized), NBR or PTFE ⑥ Sealing																			
3/8	3/8	1.5	①	150	125	-	40	40	-	180	150	8210G073 ②	1P	●	8210G036 ②	1P	●	6.1/F	11.6/F
3/8	5/8	3	0	150	150	-	40	40	-	180	150	8210G093	5D	○	-	-	-	10.1/F	11.6/F
3/8	5/8	3	5	200	150	135	125	100	100	180	150	8210G001 ▼	6D	○	-	-	-	6.1/F	11.6/F
3/8	5/8	3	5	300	300	300	-	-	-	175	-	8210G006 ✓	5D	○	-	-	-	17.1/F	-
1/2	7/16	2.2	①	150	125	-	40	40	-	180	150	8210G015 ②	2P	●	8210G037 ②	2P	●	6.1/F	11.6/F
1/2	5/8	4	0	150	150	-	40	40	-	180	150	8210G094 ✓/▲	5D	○	-	-	-	10.1/F	11.6/F
1/2	5/8	4	0	150	150	125	40	40	-	175	150	-	-	-	8210G087 ✓	7D	●	17.1/F	11.6/F
1/2	5/8	4	5	200	150	135	125	100	100	180	150	8210G002 ▼/▲	6D	○	-	-	-	6.1/F	11.6/F
1/2	5/8	4	5	300	300	300	-	-	-	175	-	8210G007	5D	○	-	-	-	17.1/F	-
1/2	3/4	4	5	-	300	-	-	300	-	130	90	8210G227	5D	○ †	-	-	-	17.1/F	40.5/H
3/4	5/8	4.5	0	150	150	125	40	40	-	175	150	-	-	-	8210G088 ✓	7D	●	17.1/F	11.6/F
3/4	3/4	5	5	125	125	125	100	90	75	180	150	8210G009 ▼/▲	9D	○	-	-	-	6.1/F	11.6/F
3/4	3/4	5	0	150	150	-	40	40	-	180	150	8210G095 ✓/▲	8D	○	-	-	-	10.1/F	11.6/F
3/4	3/4	6.5	5	250	150	180	125	125	125	180	150	8210G003 ▼	11D	○	-	-	-	6.1/F	11.6/F
3/4	3/4	6	0	350	300	200	200	200	200	180	180	8210G026 ② †	40P/100	●	-	-	-	16.1/F	30.8/F
1	1	13	0	150	125	125	135	120	120	180	180	8210G054 †	41D/31D	●	8210G089 †	45D/15D	●	16.1/F	30.8/F
1	1	13	5	150	150	100	125	125	125	180	150	8210G004 ▼/▲	12D	○	-	-	-	6.1/F	11.6/F
1	1	13.5	0	300	225	115	-	-	-	200	-	8210G027	42P	●	-	-	-	20.1/F	-
1	1	13.5	10	300	300	300	-	-	-	175	-	8210G078 ②	13P	-	-	-	-	17.1/F	-
1 1/4	1 1/8	15	0	150	125	125	135	120	120	180	180	8210G055 †	43D/32D	●	-	-	-	16.1/F	30.8/F
1 1/4	1 1/8	15	5	150	150	100	125	125	125	180	150	8210G008 ▼	16D	○	-	-	-	6.1/F	11.6/F
1 1/2	1 1/4	22.5	0	150	125	125	135	120	120	180	180	8210G056 †	44D/33D	●	-	-	-	16.1/F	30.8/F
1 1/2	1 1/4	22.5	5	150	150	100	125	125	125	180	150	8210G022 ▼	18D	○	8210G127	52D	●	6.1/F	11.6/H
2	1 3/4	43	5	150	125	90	50	50	50	180	150	8210G100	20P	●	8210G129	53P	●	6.1/F	11.6/H
2 1/2	1 3/4	45	5	150	125	90	50	50	50	180	150	8210G101	21P	●	-	-	-	6.1/F	11.6/F
NORMALLY OPEN (Open when de-energized), NBR Sealing (PA Disc-Rolled, except as noted)																			
3/8	5/8	3	0	150	150	125	125	125	80	180	150	8210G033	23D	●	-	-	-	10.1/F	11.6/F
3/8	5/8	3	5	250	200	200	250	200	200	180	180	8210G011 ② ③	39D	●	-	-	-	10.1/F	11.6/F
1/2	5/8	4	0	150	150	125	125	125	80	180	150	8210G034 ✓	23D	●	-	-	-	10.1/F	11.6/F
1/2	5/8	3	0	150	150	100	125	125	80	180	150	-	-	-	8210G030 ✓	37D	●	10.1/F	11.6/F
1/2	5/8	4	5	250	200	200	250	200	200	180	180	8210G012 ② ③	39D	●	-	-	-	10.1/F	11.6/F
3/4	3/4	5.5	0	150	150	125	125	125	80	180	150	8210G035 ✓	25D	●	-	-	-	10.1/F	11.6/F
3/4	5/8	3	0	150	150	100	125	125	80	180	150	-	-	-	8210G038 ✓	38D	●	10.1/F	11.6/F
3/4	3/4	6.5	5	250	200	200	250	200	200	180	180	8210G013	46D/52D	●	-	-	-	16.1/F	15.8/F
1	1	13	0	125	125	125	-	-	-	180	-	8210G057 ② ③	34D	●	-	-	-	20/F	-
1	1	13	5	150	150	125	150	150	125	180	180	8210G014	47D/53D	●	-	-	-	16.1/F	15.8/F
1 1/4	1 1/8	15	0	125	125	125	-	-	-	180	-	8210B058 ② ③	35D	●	-	-	-	20/F	-
1 1/4	1 1/8	15	5	150	150	125	150	150	125	180	-	8210G018	48D/54D	●	-	-	-	16.1/F	15.8/F
1 1/2	1 1/4	22.5	0	125	125	125	-	-	-	180	-	8210B059 ② ③	36D	●	-	-	-	20/F	-
1 1/2	1 1/4	22.5	5	150	150	125	150	150	125	180	180	8210G032	49D/55D	●	8210G132	29D	●	16.1/F	15.8/F
2	1 3/4	43	5	150	125	125	150	150	125	180	180	8210G103	50P/56P	●	8210G133	30P	●	16.1/F	15.8/F
2 1/2	1 3/4	45	5	150	125	125	150	150	125	180	180	8210G104	51P/57P	●	-	-	-	16.1/F	15.8/F

① 5 psi on Air; 1 psi on Water.
 ② Valve provided with PTFE main disc.
 ③ Valve includes Ultem (G.E. trademark) piston.
 ④ Letter "D" = diaphragm construction; "P" = piston construction.
 ⑤ () Safety Shutoff Valve; ● General Purpose Valve.
 Refer to Engineering Section (Approvals) for details.
 ⑥ Valves not available with Explosionproof enclosures.
 ⑦ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.

② AC construction also has PA seating.
 ③ No disc-holder.
 ④ Stainless steel disc-holder.
 † UL listed for fire protection systems per UL429A 120/60, 110/5024VDC, no prefix and voltage options offered.
 ‡ DC constructions must have solenoid mounted vertical and upright.
 ✓ ATEX/IECEx certified with prefix "EV".
 ▼ ATEX/IECEx certified for DC only with prefix "EV".

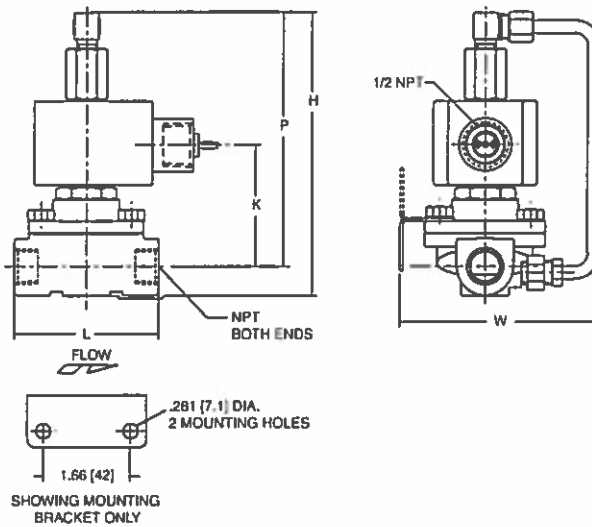
◆ Not available in 6 Volt DC. EF and HB prefix only.
 ▲ Valve available with lead-free brass body and bonnet using suffix "LF". The term "Lead-Free" for brass materials is defined by SDWA 1417 as having a maximum weighted average lead content of 0.25% on the wetted surface area.

Dimensions: inches (mm)

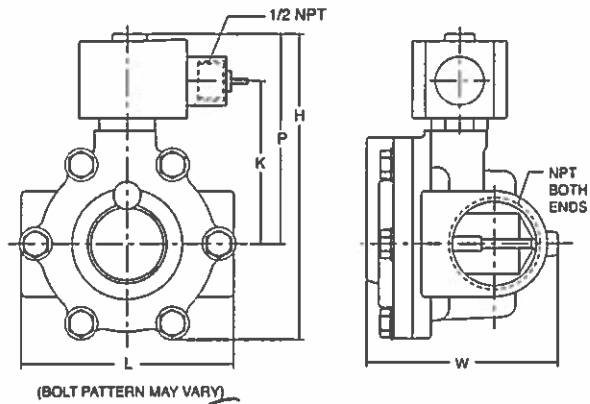
Const. Ref.		H	K	L	P	W
52	in	5.00	3.08	3.84	4.33	3.18
	mm	127	110	98	110	81
53	in	6.46	3.57	3.75	4.83	3.74
	mm	164	91	95	123	95
54	in	6.47	3.57	3.66	4.83	3.94
	mm	164	91	93	123	100
55	in	6.93	3.72	4.38	4.98	4.30
	mm	176	95	111	126	109
56	in	8.17	4.13	5.06	5.39	4.71
	mm	208	105	129	137	120
57	in	8.17	4.13	5.50	5.39	5.21
	mm	208	105	140	137	132

IMPORTANT: Valves may be mounted in any position, except as noted in specifications table.

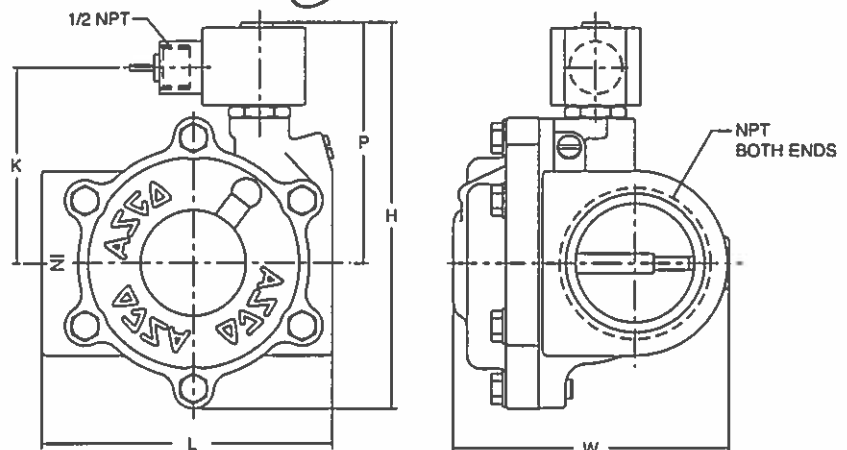
Const. Ref. 39



Const. Ref. 18, 29, 49



Const. Ref. 20, 21, 27, 30, 50, 51, 56, 57





Pilot Operated
General Service Solenoid Valves
 Brass or Stainless Steel Bodies
 3/8" to 2 1/2" NPT

2/2
SERIES
8210

2-WAY

Features

- Wide range of pressure ratings, sizes, and resilient materials provide long service life and low internal leakage
- High flow valves for liquid, corrosive, and air/inert gas service
- Lead-free versions available for Safe Drinking Water Act Compliance
- Industrial applications include:
 - Car wash
 - Laundry equipment
 - Air compressors
 - Industrial water control
 - Pumps

Construction

Valve Parts in Contact with Fluids		
Body	Brass	304 Stainless Steel*
Seals and Discs	NBR or PTFE	
Disc-Holder	PA	
Core Tube	305 Stainless Steel	
Core and Plugnut	430F Stainless Steel	
Springs	302 Stainless Steel	
Shading Coil	Copper	Silver

*Catalog Numbers 8210G127, 8210G129, 8210G132, 8210G133 have 316L Stainless Steel bodies.

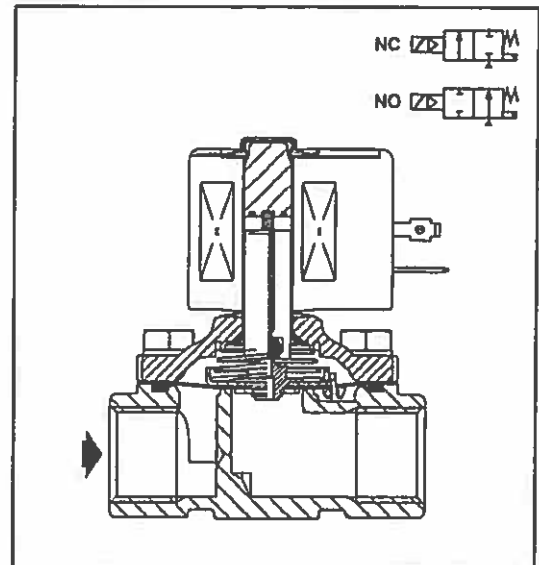
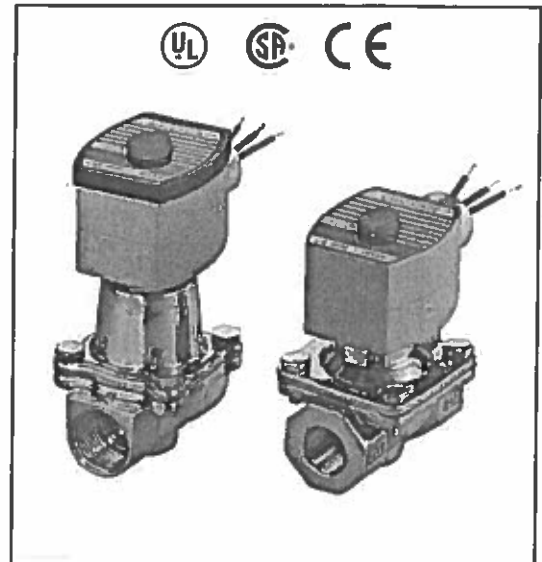
Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part Number			
	DC Watts	AC			General Purpose		Explosionproof	
		Watts	VA Holding	VA Inrush	AC	DC	AC	DC
F	-	6.1	16	40	288210	-	238214	-
F	11.6	10.1	25	70	238610	238710	238614	238714
F	16.8	16.1	35	100	272610	97617	272614	97617
F	-	17.1	40	93	238610	-	238614	-
F	-	20	43	240	99257	-	99257	-
F	-	20.1	48	240	272610	-	272614	-
F	30.8	-	-	-	-	501695	-	501698
H	11.6	-	-	-	-	238910	-	238914
H	40.8	-	-	-	-	238910	-	238914

Standard Voltages: 24, 120, 240, 480 volts AC, 60 Hz (or 110, 220 volts AC, 50 Hz), 6, 12, 24, 120, 240 volts DC. Must be specified when ordering.
 Other voltages available when required.

Solenoid Enclosures

Standard: RedHat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X; RedHat - Type I.
Optional: RedHat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; Red-Hat - Explosionproof and Watertight, Types 3, 4, 4X, 7, and 9.
 (To order, add prefix "EF" to catalog number, except Catalog Numbers 8210B057, 8210B058, and 8210B059, which are not available with Explosionproof enclosures.)
 See *Optional Features Section* for other available options.



Nominal Ambient Temp. Ranges

RedHat II/RedHat AC: 32°F to 125°F (0°C to 52°C)
 RedHat II DC: 32°F to 104°F (0°C to 40°C)
 RedHat DC: 32°F to 77°F (0°C to 25°C)
 (104°F/40°C occasionally)
 8210G227 AC: 32°F to 130°F (0°C to 54°C)
 DC: 32°F to 90°F (0°C to 32°C)

Refer to *Engineering Section* for details.

Approvals

UL listed as indicated. CSA certified.
 RedHat II meets applicable CE directives.
 Refer to *Engineering Section* for details.
 ATEX/IECEX certified with prefix "EV" as listed. Refer to *Optional Features Electrical Section* for details.

Gene Connor

From: Cassie Johnston <cassiejohnston@frea.biz>
Sent: Friday, February 22, 2019 2:57 PM
To: Gene Connor
Subject: RE: Topsfield WTP - EC9 Aeration Tower Drain
Attachments: PCO for EC#9 Aeration Blower Solenoid.pdf

Gene,

Our price for EC9 Aeration Blower Solenoid is \$2,798.04. See attached backup.

Please advise if approved and please let me know that you received this email.

Regards,

Cassie Johnston

VP/Controller
Fall River Electrical Associates Co., Inc.
74 Corneau Street
Fall River, MA 02721
P: 508-675-0523 x12
F: 508-674-2820

Begin forwarded message:

From: Gene Connor <genec@kinsmencorp.net>
Date: January 24, 2019 at 1:38:49 PM EST
To: 'Mike Pimentel' <mikepimentel@frea.biz>
Cc: 'Dana Johnston' <danaejohnston@frea.biz>
Subject: FW: Topsfield WTP - EC9 Aeration Tower Drain

Mike,

Please review attached EC-9 requesting pricing to add a solenoid valve in the Pump Room to drain Aerator.

Please provide a breakdown of costs for electrical portion of this scope. Any questions, please call.

Thank you,
Gene

Gene Connor
KINSMEN CORPORATION
T (603) 625-9199
F (603) 625-9399
C (603) 490-9953
genec@kinsmencorp.net

From: James Cray <jim.cray@wright-pierce.com>
Sent: Thursday, January 24, 2019 11:31 AM

To: Gene Connor <genec@kinsmencorp.net>

Cc: paul@harborcontrols.net; Gregory Krom - Topsfield Water Department (gkrom@topsfield-ma.gov) <gkrom@topsfield-ma.gov>; Keith Newman <eci1keith@aol.com>; Andrew McDonald <Andrew.McDonald@wright-pierce.com>; Renee Lanza <rlanza@woodardcurran.com>

Subject: Topsfield WTP - EC9 Aeration Tower Drain

Hi Gene,

Please refer to the attached EC-9 for adding an automated drain line for the aeration tower inlet piping. A copy has also been saved to the FTP.

If you have any questions, please let me know.

Thanks,

-Jim

James Cray, PE

Wright-Pierce | Project Manager

Direct 978.416.8002 | Cell 978.509.3960

JOB 2160 017021: Topsfield, MA - WTP C...
 ESTIMATE 2 017021: Aeration Blower Solenoid
 DATA SET 69 MR - Comm Indust TSC/EST/N...
 DATE 2/22/2019 1:18:08 PM

Bid: #1 - Bid Summary
 Fall River Electrical Assoc,
 74 Corneau Street
 P.O Box #1248
 Fall River, MA 02721
 (508)675-0523 / (508)674-2820
 markrezendes@frea.biz

L...	Ref O...	Description	Reference T...	Reference	Ref Amount	Operatlon	Rate	Amo
1	<input type="checkbox"/>	MATERIAL TOTAL:	Material	Total	896.01	*	1.00	896
2	<input type="checkbox"/>	SUBTOTAL						896
3	<input type="checkbox"/>	*****						0
4	<input type="checkbox"/>	*QUOTATIONS						0
5	<input type="checkbox"/>	SUBTOTAL						0
6	<input type="checkbox"/>	*****						0
7	<input type="checkbox"/>	MATERIAL SALES TAX %	Component	2	896.01	%		0
8	<input type="checkbox"/>	QUOTES SALES TAX %	Component	5	0.00	%		0
9	<input type="checkbox"/>	SUBTOTAL						0
10	<input type="checkbox"/>	*****						0
11	<input type="checkbox"/>	*LABOR:						0
12	<input checked="" type="checkbox"/>	LABOR HOURS	Labor	Total	12.92	*	1.00	12
13	<input type="checkbox"/>	- OR -						0
14	<input checked="" type="checkbox"/>	FOREMEN HRS	Component	12	12.92	%		0
15	<input checked="" type="checkbox"/>	JOURNEYMEN HRS	Component	12	12.92	%	100.00	12
16	<input type="checkbox"/>	FOREMEN RATE	Component	14	0.00	*		0
17	<input type="checkbox"/>	JOURNEYMEN RATE	Component	15	12.92	*	104.71	1,352
18	<input type="checkbox"/>	UTILITY COORDINATION						0
19	<input type="checkbox"/>	TESTING_TRAINING						0
20	<input type="checkbox"/>	SUBTOTAL						1,352
21	<input type="checkbox"/>	*****						0
22	<input type="checkbox"/>	*SUPERVISOR. LABOR:						0
23	<input checked="" type="checkbox"/>	SUPERVISOR HRS	Component	12	12.92	%	5.00	0
24	<input type="checkbox"/>	SUPERVISOR RATE	Component	23	0.65	*	135.00	87
25	<input type="checkbox"/>	SUBTOTAL						87
26	<input type="checkbox"/>	*****						0
27	<input type="checkbox"/>	*JOB EXPENSES:						0
28	<input type="checkbox"/>	TOOLS EXPENDABLE	Component	20	1,352.85	%	1.50	20
29	<input type="checkbox"/>	SUBMITTALS / OM						0
30	<input checked="" type="checkbox"/>	VEHICLE (GAS) TRIPS	Component	12	12.92	/	16.00	0
31	<input type="checkbox"/>	VEHICLE (GAS) EXPENSE	Component	30	0.81	*	95.00	76
32	<input type="checkbox"/>	CONSTRUCTION TEMP POWER						0
33	<input type="checkbox"/>	UTILITY CO. BACKCHARGES						0
34	<input type="checkbox"/>	SUBTOTAL						97
35	<input type="checkbox"/>	*****						0
36	<input type="checkbox"/>	*SUB CONTRACTS:						0
37	<input type="checkbox"/>	INDEPENDENT TESTING						0
38	<input type="checkbox"/>	SUBTOTAL						0
39	<input type="checkbox"/>	*****						0
40	<input type="checkbox"/>	JOB SUBTOTAL						2,433
41	<input type="checkbox"/>	*****						0
42	<input type="checkbox"/>	*MARKUPS/OVERHEAD:						0
43	<input type="checkbox"/>	FLAT MARKUP %	Component	40	2,433.08	%		0
44	<input type="checkbox"/>	-OR-						0
45	<input type="checkbox"/>	MATERIAL	Component	2	896.01	%		0
46	<input type="checkbox"/>	QUOTATIONS	Component	5	0.00	%		0
47	<input type="checkbox"/>	SALES TAX	Component	9	0.00	%		0
48	<input type="checkbox"/>	LABOR	Component	20	1,352.85	%		0
49	<input type="checkbox"/>	SUPERVISOR LABOR	Component	25	87.21	%		0
50	<input type="checkbox"/>	JOB EXPENSES	Component	34	97.01	%		0
51	<input type="checkbox"/>	SUBCONTRACTORS	Component	38	0.00	%		0
52	<input type="checkbox"/>	JOB TOTAL						2,433

JOB 2160 017021: Topsfield, MA - WTP C...
 ESTIMATE 2 017021: Aeration Blower Solenoid
 DATA SET 69 MR - Comm Indust TSC/EST/N...
 DATE 2/22/2019 1:18:08 PM

Bid: #1 - Bid Summary
 Fall River Electrical Assoc,
 74 Corneau Street
 P.O Box #1248
 Fall River, MA 02721
 (508)675-0523 / (508)674-2820
 markrezendes@frea.biz

I...	Ref O...	Description	Reference T...	Reference	Ref Amount	Operation	Rate	Amo
53	<input type="checkbox"/>	*****						0
54	<input checked="" type="checkbox"/>	PROFIT	Component	52	2,433.08	%	10.00 16.00	2,433.08
55	<input type="checkbox"/>	JOB TOTAL + PROFIT	Component	54	364.96	*	1.00	2,798
56	<input checked="" type="checkbox"/>	BOND						0
57	<input type="checkbox"/>	ADD BOND	Component	56	0.00	*	1.00	2,798
58	<input checked="" type="checkbox"/>	ELECTRICAL PERMIT FEE						0
59	<input type="checkbox"/>	ADD PERMIT	Component	58	0.00	*	1.00	2,798
60	<input type="checkbox"/>	*****						0
61	<input type="checkbox"/>	BID TOTAL						-2,798

2176..

JOB 2160 017021: Topsfield, MA - WTP...
 ESTIMATE 2 017021: Aeration Blower Sole...
 DATA SET 69 MR - Comm Indust TSC/EST/...

Summary
 Fall River Electrical Assoc,
 74 Corneau Street
 P.O Box #1248
 Fall River, MA 02721
 (508)675-0523 / (508)674-2820
 markrezendes@frea.biz

PRINTED 2/22/2019 1:15:16 PM
 MATERIAL Primary
 LABOR Primary

NOTES

Item				Material		Labor		
#	Item #	Size	Item Desc	Qty	Mat Unit	Mat Ext	Lbr Unit	Lbr
Section : Section 017: 17 - EQUIPMENT BRANCH								
1	2		3/4" AL C FITTING W/CVR & GASK	1	11.40	11.40	0.3500	0.35
2	3		1/2" AL C FITTING W/CVR & GASK	1	9.45	9.45	0.3000	0.30
3	4		3/4" AL 3 PIECE COUPLING	1	21.85	21.85	0.3000	0.30
4	6		STAINLESS STEEL UNISTRUT	20	10.00	200.00	0.2000	4.00
5	7		LOT OF STAINLESS STEEL HARDWARE	1	250.00	250.00	2.0000	2.00
6	3802	3/4"	ALUM CONDUIT	60	2.74	164.40	0.0370	2.22
7	4802	3/4"	ALUM 90 ELBOW	3	30.06	90.18	0.1500	0.45
8	5398	3/4"	ALUM LB W/CVR & GASK	2	14.42	28.84	0.3500	0.70
9	5802	3/4.	X 1/2 RED BUSH	1	1.51	1.51	0.0200	0.02
10	5860	3/4"	CUT/THREAD-LABOR	4	Skip	0.00	0.1800	0.72
11	5937	3/4"	ALUM COUPLING	3	10.65	31.95	Skip	0.00
12	5949	1/2"	X CLOSE NIPPLE ALUM	1	6.18	6.18	0.1000	0.10
13	5989	3/4"	ALUM MYERS HUBS	2	7.41	14.82	0.3000	0.60
14	8082	1/2"	LIQUIDTITE CONDUIT	3	2.33	6.99	0.0200	0.06
15	8122	1/2"	LIQUIDTITE STR CONN	2	5.22	10.44	0.1000	0.20
16	11126	14	THHN SOL CU	300	0.16	48.00	0.0030	0.90
Subtotals for Section : Section 017: 17 - EQUIPMENT BRANCH						896.01		12.92
Grand Totals						896.01		12.92

TOPSFIELD WTP – CONTRACT 1
TOPSFIELD WATER DEPARTMENT
13257D

DATE: 1/24/2019

EC NO.: 9

TO: Kinsmen Corporation
FROM: Wright-Pierce

REFERENCE OR AFFECTED
DESIGN DOCUMENT(S)
SPEC.
SECT.: _____

DWG.: PR4, I4, E10

OTHER: _____

SUBJECT: Aeration Tower Drain

DESCRIPTION OF CLARIFICATION:

Please provide a cost (w/ back-up) to add an automated aeration tower drain line between the 8" DI aeration inlet and the 12" DI aeration tower outlet. This will allow Topsfield to automatically drain the exposed aeration tower inlet piping back into the clearwell to prevent freezing while the plant is offline in the winter.

The proposed solenoid valve (SV-440) shall be normally closed and energized to open via SCADA with an operator adjustable time set-point to allow the piping to drain. The solenoid shall be wired to a spare DI input in the Main Control Panel PLC and shall be incorporated into the plant shut-down sequence programming.

Please refer to the attached (3) sketches for additional details.

Additional info attached? Y N

Signed: _____


James Cray

Date: 1/24/19

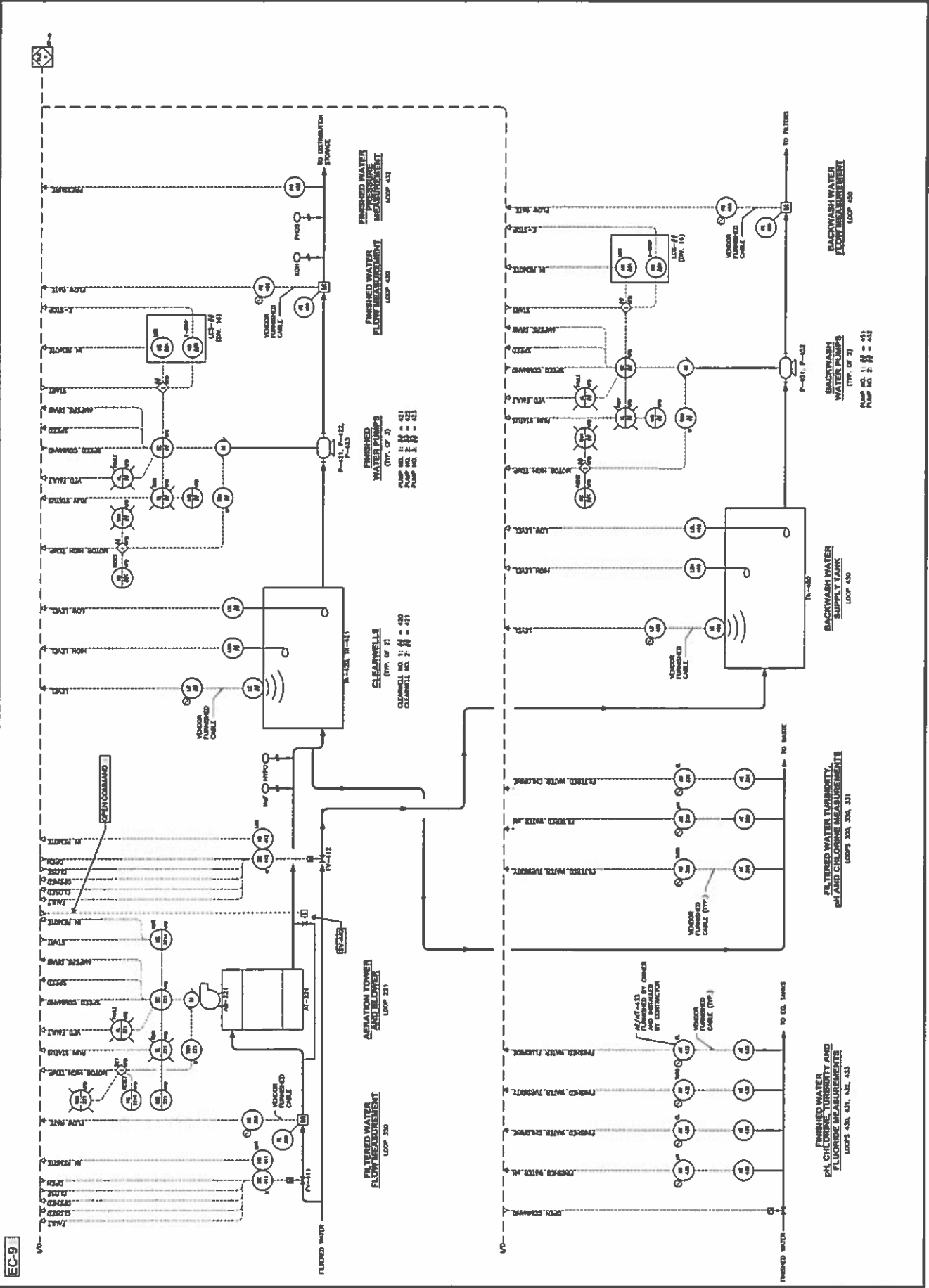
cc: TWD

TOPSFIELD WATER DEPARTMENT
 TOPSFIELD, MASSACHUSETTS
 INSTRUMENTATION LOOP DIAGRAM #1

WRIGHT-PIERCE
 Engineering a Better Environment
 Offices Throughout New England
 888.621.8156 | www.wright-pierce.com



NO.	DATE	DESCRIPTION
1	01/11/2017	ISSUED FOR CONSTRUCTION
2	01/11/2017	REVISED PER COMMENTS
3	01/11/2017	REVISED PER COMMENTS
4	01/11/2017	REVISED PER COMMENTS
5	01/11/2017	REVISED PER COMMENTS
6	01/11/2017	REVISED PER COMMENTS
7	01/11/2017	REVISED PER COMMENTS
8	01/11/2017	REVISED PER COMMENTS
9	01/11/2017	REVISED PER COMMENTS
10	01/11/2017	REVISED PER COMMENTS



EC-9

