DOUGLAS COUNTY, NV
This is a no fee document
NO FEE
DC/PUBLIC WORKS

2020-956352
11/13/2020 09:46 AM
Pgs=52

Recorder's Office Cover Sheet

Recording Requested By:

00122581202009563520520525

KAREN ELLISON, RECORDER

Name: HEATHER MACDONNELL

Department: PUBLIC WORKS

Type of Document: (please select one)

- ☐ **Agreement**
- ☐ **Contract**
- ☐ **Grant**
- ☒ **Change Order**
- ☐ **Easement**
- ☐ **Other** **specify:**_____

COPY

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

Change Order No. 12

Date of Issuance:	10/30/2020	Effective Date:	10/30/2020
Owner:	Douglas County	Owner's Contract No.:	15501
Contractor:	Resource Development Company	Contractor's Project No.:	18017
Engineer:	Keller Associates	Engineer's Project No.:	216030
Project:	NVWWTP Improvements	Contract Name:	NVWWTP Improvements

The Contract is modified as follows upon execution of this Change Order. WCD #32, and WCD #33 occurred before Milestone #1, and WCD #31 and WCD #34 occurred after. The adjustment in contract times reflects this. **Description:** See page 2 of this document for further descriptions. **Attachments:** Change order descriptions, *WCD #31, WCD #32, WCD #33, WCD #34*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES *[note changes in Milestones if applicable]*
Original Contract Price: $ 9,155,284.00	Original Contract Times: NTP: June 25, 2018 Substantial Completion: 480 Days (October 18, 2019) Milestone #1: 365 Days (June 25, 2019) Ready for Final Payment: 540 days (December 17, 2019) days
[Increase] ~~[Decrease]~~ from previously approved Change Orders No. 1 to No. 11 : $ 249,891.28	[Increase] ~~[Decrease]~~ from previously approved Change Orders No. 1to No. 11 : Substantial Completion: 156 days Milestone #1: 156 days Ready for Final Payment: 156 days
Contract Price prior to this Change Order: $ 9,405,175.28	Contract Times prior to this Change Order: Substantial Completion: 636 Days (March 22,2020) Milestone #1: 521 Days (December 18, 2019) Ready for Final Payment: 696 Days (May 21, 2020)
[Increase] ~~[Decrease]~~ of this Change Order: $ 60,762.30	[Increase] ~~[Decrease]~~ of this Change Order: Substantial Completion: 15 Days Milestone #1: 14 Days Ready for Final Payment: 15 Days
Contract Price incorporating this Change Order: $ 9,465,937.58	Contract Times with all approved Change Orders: Substantial Completion: 651 Days (April 6, 2020) Milestone #1: 535 Days (January 1, 2020) Ready for Final Payment: 711 Days (June 5, 2020)

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By:	By:	By:
Engineer (if required)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title: Project Engineer	Title Director Public Works	Title
Date: 10/30/2020	Date 11-04-2020	Date 11/9/2020

Owner (Authorized Signature)
By:
Title: Douglas County Manager

FILED
NO. 2020.192
11-13-20
DATE
DOUGLAS COUNTY CLERK
MINDEN, NV
BY DEPUTY

Change Order Descriptions

1. WCD #31 (PCO #59) – Influent Structure 12-inch SI Abandonment
    a. This WCD includes the labor and materials to abandon the 12-inch SI pipe in the aerobic digester influent structure.
    b. $1,138.78
    c. 0 Contract Days

2. WCD #32 (PCO #58)
    a. This WCD accounts for an impact to the Contractor's schedule due to the COVID-19 pandemic.
    b. No change in contract cost
    c. 14 contract days

3. WCD #33 (PCO #35)
    a. This WCD includes the removal/replacement/upsizing the transformer connecting to BCP-151, installation of additional breakers, conduits, conductors, potholing, and excavation in order to provide a complete and functioning heat trace system
    b. $56,204.99
    c. 0 Contract Days

4. WCD #34 (PCO #61)
    a. The old effluent pumps have been removed from the operations building. Subsequently, the discharge piping was abandoned. However, the abandoned discharge piping connects to a live pipeline in a nearby vault. Unfortunately, water is flowing back into the abandoned pipe. To prevent this, the abandoned pipe will be cut and capped outside of the vault described above.
    b. $3,418.53
    c. 1 contract day

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KELLER ASSOCIATES

Work Change Directive

Owner:	Douglas County	**WCD No.:**	31
Project Name:	NVWWTP Improvements Project	**Project No.:**	216030
Contractor:	Resource Development Company	**Issued By:**	Jeremy Wilson
Attention:	Alex Nevarez	**Date Issued:**	09/17/2020

Reason for Change: The planned modifications to the existing biolac influent structure are shown on sheet 160-SM-2001. The existing abandoned 12-inch SI pipe shown in section A extends approximately 8-inches into the existing vault. To allow for properly abandoning this pipe, the end and associated grout will need to be removed flush with the vault.

Description of change(s): This WCD includes the labor and materials to properly abandon the 12-inch SI pipe.

Attachments: Contractor's proposed change order.

Contract Sum Adjustment: The proposed basis of adjustment to the Contract Sum or Guaranteed Maximum Price is (Place an X in the appropriate box).

- ☒ Lump Sum increase of $1,138.78
- ☐ Unit Price of
- ☐ Cost of Work not to exceed
- ☐ Contractor Submit TM Ticket

Contract Time Adjustment: An increase in contract time is not anticipated as part of this WCD.

COPY

When signed by the Owner and Engineer authorized representatives and received by the Contractor, this document becomes effective immediately as a Construction Change Directive, and the Contractor shall proceed with the change(s) described above. The Contactor's signature, signed by an authorized representative, indicates agreement with the proposed adjustments in Contract Sum and Contract Time set forth in this Construction Change Directive.

Keller Associates, Inc.

Engineer

1325 Airmotive Way Suite 380

Reno, Nevada 89502

(Address)

By (Authorized Signature)

Jeremy Wilson

(Printed Name)

09/17/2020

Date

Douglas County

Owner

1120 Airport Road, Bldg F2

Minden, Nevada 89423

(Address)

By (Authorized Signature)

Philip Ritger

(Printed Name)

09-24-2020

Date

Resource Development Company

Contractor

1050 Linda Way

Sparks, Nevada 89431

(Address)

By (Authorized Signature)

CHRISTOPHER ERB

(Printed Name)

09/25/20

Date

COPY

RESOURCE DEVELOPMENT COMPANY

PCO #59 - INFLUENT STRUCTURE 12 INCH SI ABANDONMENT

Date: AUGUST 28, 2020

Project: NVWWTP Improvements

ATTN: Jeremy Wilson, PE – Keller Associates

Mr. Wilson,

This PCO is to document the process for RDC to remove the existing 12" pipe penetration in the existing Influent Structure in preparation of abandoning the 12" pipeline per plan sheet 1160-SM-2001. This work covers evacuation of the influent water, confined space entry, grinding and cutting and removal of the pipe end and grout.

PCO Extra Work Total: **$1,138.78**

Additional Contract Days: **0 Contract Days**

Please don't hesitate to contact me if you have any questions or need any clarification.

Sincerely,

Christopher Erb

Christopher Erb

Resource Development Company

Cc: Ron Roman, PE – DCPW

Scott McCullough - DCPW

COPY

1050 Linda Way Sparks, NV 89431-5598
(775) 356-8004 / Fax (775) 356-0610
Nevada License No. 75026 / California License No. 893537

RESOURCE DEVELOPMENT COMPANY

DATE 8/28/2020

PCO #59 - INFLUENT STRUCTURE 12 INCH SI ABANDONMENT
NVWWTP - DOUGLAS COUNTY
RDC PROJECT # 18017

EQUIPMENT				
	HOURLY RATE		HOURS	SUBTOTAL
Work Truck	32.48		4.00	129.92

LABOR					
	HOURLY RATE			HOURS	SUBTOTAL
Superintendent	120.00			4.00	480.00
Project Manager	120.00			0.00	0.00
Sr. Project Engineer	120.00			0.00	0.00
Jr. Project Engineer	70.00			0.00	0.00
Operator - Roller	76.75			0.00	0.00
Operator - Loader	77.84			0.00	0.00
Operator - B/T/E	77.36			0.00	0.00
Carpenter	76.16			0.00	0.00
Laborer	47.54			8.00	380.32
Driver - Water	29.37			0.00	0.00
Driver - Dump/Transport	46.71			0.00	0.00
Shop Labor	78.00			0.00	0.00
Shop Welder	110.50			0.00	0.00
Travel				0.00	0.00
Subsistence	75.00			0.00	0.00

MATERIAL				
	MATERIAL COST	TAX		SUBTOTAL
Hardware	0.00	0.00		0.00
Material	0.00	0.00		0.00
	0.00	0.00		0.00
	0.00	0.00		0.00
	0.00	0.00		0.00
Consumables	0.00	0.00		0.00
Dump Fee	0.00	0.00		0.00
Freight	0.00	0.00		0.00

SUBCONTRACTOR			
	DIRECT COST		SUBTOTAL
	0.00		0.00
	0.00		0.00
	0.00		0.00
	0.00		0.00

TOTALS					
	SUBTOTAL	MARK-UP %	MARK-UP		TOTAL
Equipment	129.92	15%	19.49		$ 149.41
Labor	860.32	15%	129.05		$ 989.37
Material	0.00	15%	0.00		$ -
Subcontractor	0.00	5%	0.00		$ -
Bonds & Insurance (3%)	0.00	0%	0.00		$ -

INCREASE IN CONTRACT TIME	0 DAYS

JOB TOTAL	1,138.78

Submitted By: Christopher Erb

REQUEST FOR INFORMATION FORM

NORTH VALLEY WASTEWATER TREATMENT PLANT IMPROVEMENTS

RESOURCE DEVELOPMENT COMPANY

SUBMITTED TO:	JEREMY WILSON KELLER ASSOCIATES	RFI #	117
		DATE SUBMITTED:	8/17/2020
		DATE NEEDED:	8/24/2020
SUBMITED BY:	Christopher Erb RDC	RDC PROJECT #	18017

SPEC SECTION(S): 02 41 00 DEMOLITION

PLAN SHEET(S): 160-SM-2001

RFI DESCRIPTION:

On Sheet 160-SM-2001 Section A we are required to anchor bolt a plate to the vault wall to Abandoned the 12" SI pipe.

The issue is the existing pipe is not flush with the vault wall as indicated on the plans will require RDC to flush cut the pipe and grind the grout flush with the wall in order for the abandonment detail to work.

RDC views the removal of the pipe and grout as as extra work, and will provide PCO pricing once this RFI is responded to.

ATTACHMENTS: Picture of existing pipe penetration and sheet 160-SM-2001

RFI RESPONSE:

Proposed approach is acceptable.

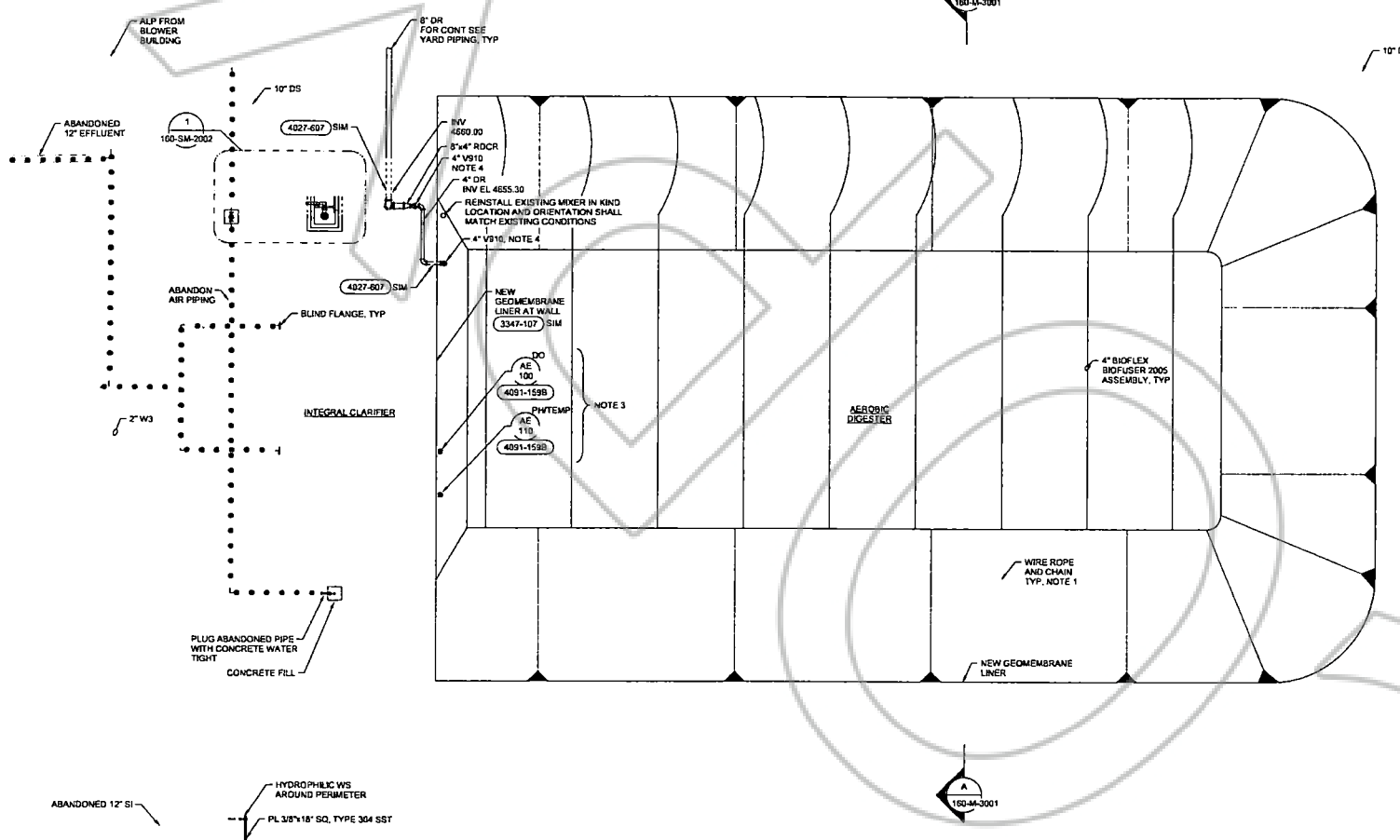
RESPONSE BY: Jeremy Wilson, PE

DATE: 08/25/2020

COPY

INFLUENT STRUCTURE EXISTING 12" SI PIPE PENETRATION

COPY



A SECTION
3/4"=1'-0"

N

PLAN
1/8"=1'-0"

NOTES:

1. REATTACH WIRE ROPE AND CHAIN TO PIPE PER MFR DIRECTIONS, TYP (2) LOCATIONS EACH BIOFLEX BIODIFFUSER 2005 ASSEMBLY.
2. INSTALL SAFETY ROPE, TYP ALL POST LOCATIONS (1-1/2" NYLON ROPE WITH SINGLE KNOTS @ 1'-0" OC, L=20').
3. INSTALL METERS AT LOCATIONS DIRECTED BY OWNER.
4. SET MAXIMUM INLET WEIR ELEVATION AT EL 4661.50'

6/25/18

MICHAEL R. RIESS EXP 12/31/2019 MECHANICAL NO. 019251

06/19/2018

NO.	DSGN	DATE	DR	REVISION	CHK	APVD	BY	APVD
	RANDALL / CORNWALL		D CAVE	T PAGE / J RIFE				J DEAN

DESIGN OFFICE
2525 AIRPARK DRIVE
REDDING, CA 96001
(530) 243-1551

NORTH VALLEY WWTP
IMPROVEMENTS PROJECT
DOUGLAS COUNTY PUBLIC WORKS (DCWP)
DOUGLAS COUNTY, NV

ch2m:

STRUCTURAL / MECHANICAL

AEROBIC DIGESTER
PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"

DATE	JUNE 2018
PROJ	675961
DWG	160-SM-2001
SHEET	81 of 111

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RULES OF OCCUPANCY

SPWURL

FILENAME: 160-SM-2001_675961.dgn

PLOT DATE: 20160617

PLOT TIME: 1:26:13 PM

KELLER ASSOCIATES

Work Change Directive

Owner:	Douglas County	**WCD No.:**	32
Project Name:	NVWWTP Improvements Project	**Project No.:**	216030
Contractor:	Resource Development Company	**Issued By:**	Jeremy Wilson
Attention:	Alex Nevarez	**Date Issued:**	09/25/2020

Reason for Change: The contractor's schedule was impacted by the COVID-19 pandemic.

Description of change(s): A member of the Contractor's staff contracted COVID-19 and was in close proximity to many members of the project team. To accommodate, the Contractor proceeded as indicated in the attached email chain. It is understood that this work change directive accounts for all COVID-19 related delays to date.

Attachments: Contractor's proposed change order.

Contract Sum Adjustment: The proposed basis of adjustment to the Contract Sum or Guaranteed Maximum Price is (Place an X in the appropriate box).

No increase in contract cost is anticipated as part of this WCD.

- ☐ Lump Sum increase of
- ☐ Unit Price of
- ☐ Cost of Work not to exceed
- ☐ Contractor Submit TM Ticket

Contract Time Adjustment: An increase of **14 contract days** is anticipated as part of this WCD.

COPY

When signed by the Owner and Engineer authorized representatives and received by the Contractor, this document becomes effective immediately as a Construction Change Directive, and the Contractor shall proceed with the change(s) described above. The Contactor's signature, signed by an authorized representative, indicates agreement with the proposed adjustments in Contract Sum and Contract Time set forth in this Construction Change Directive.

Keller Associates, Inc.

Engineer

1325 Airmotive Way Suite 380

Reno, Nevada 89502

(Address)

By (Authorized Signature)

Jeremy Wilson

(Printed Name)

09/25/2020

Date

Douglas County

Owner

1120 Airport Road, Bldg F2

Minden, Nevada 89423

(Address)

By (Authorized Signature)

Philip Ritger

(Printed Name)

10-07-2020

Date

Resource Development Company

Contractor

1050 Linda Way

Sparks, Nevada 89431

(Address)

By (Authorized Signature)

Christopher Erb

(Printed Name)

10/08/20

Date

COPY

RESOURCE DEVELOPMENT COMPANY

PCO #58 – COVID-19 DAYS

Date: August 09, 2020

Project: NVWWTP Improvements

ATTN: Jeremy Wilson, PE – Keller Associates

Mr. Wilson,

This PCO is to document the process for equitable adjustment in Contract Times and Contract Price due to number of days that COVID-19 has delayed the project. See attached email notification from Friday August 17, 2020 indicating the anticipated delay.

PCO #52 Extra Work Total: **$801.99 Waved**

Additional Contract Days: **14 Contract Days**

Please don't hesitate to contact me if you have any questions or need any clarification.

Sincerely,

Christopher Erb

Christopher Erb

Resource Development Company

Cc: Ron Roman, PE – DCPW

Scott McCullough - DCPW

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1050 Linda Way Sparks, NV 89431-5598
(775) 356-8004 / Fax (775) 356-0610
Nevada License No. 75026 / California License No. 893537

RESOURCE DEVELOPMENT COMPANY

DATE 8/31/2020

PCO #58 - COVID-19 DAYS
DOUGLAS COUNTY
RDC PROJECT # 18017

EQUIPMENT

	HOURLY RATE		HOURS	SUBTOTAL
Office Trailer	1.95		112.00	218.40
Engineer Office Trailer	1.95			0.00
Sanitary Facilities	1.25		112.00	140.00
Temp Power	1.70		112.00	190.40
Utilities	0.57		112.00	63.84
Connex	0.57		112.00	63.84

LABOR

	HOURLY RATE			HOURS	SUBTOTAL
Superintendent	120.00			0.00	0.00
Project Manager	120.00			0.00	0.00
Sr. Project Engineer	120.00			0.00	0.00
Jr. Project Engineer	70.00			0.00	0.00
Operator - Roller	76.75			0.00	0.00
Operator - Loader (Crane)	77.84			0.00	0.00
Operator - B/T/E	77.36			0.00	0.00
Carpenter	76.16			0.00	0.00
Surveyor	76.16			0.00	0.00
Laborer	47.54			0.00	0.00
Driver - Water	29.37			0.00	0.00
Driver - Dump/Transport	46.71			0.00	0.00
Shop Labor	78.00			0.00	0.00
Shop Welder	110.50			0.00	0.00
Travel				0.00	0.00
Subsistence	75.00			0.00	0.00

MATERIAL

	MATERIAL COST	TAX		SUBTOTAL
	0.00	0.00		0.00
Consumables	0.00	0.00		0.00
Dump Fee	0.00	0.00		0.00
Freight	0.00	0.00		0.00

SUBCONTRACTOR

	DIRECT COST		SUBTOTAL
	0.00		0.00
	0.00		0.00
	0.00		0.00
	0.00		0.00

TOTALS

	SUBTOTAL	MARK-UP %	MARK-UP		TOTAL
Equipment	676.48	15%	101.47	$	777.95
Labor	0.00	15%	0.00	$	-
Material	0.00	15%	0.00	$	-
Subcontractor	0.00	5%	0.00	$	-
Bonds & Insurance (3%)	23.34	0%	0.00	$	23.34

INCREASE IN CONTRACT TIME	14 DAYS

JOB TOTAL	801.29

Submitted By: Christopher Erb

From: Chris Erb
To: Roman, Ron <RRoman@douglasnv.us>
Cc: Alex Nevarez; Jeremy Wilson; Ritger, Philip <PRitger@douglasnv.us>; Jeff Farr; Preciado, Peter
Subject: RE: COVID-19 (18017 NVWWTP Douglas County)
Date: Wednesday, August 26, 2020 2:30:00 PM

Ron

Thank you and yes that is correct we will have staff onsite tomorrow.

Chris Erb
RDC
775-842-0232

From: Roman, Ron <RRoman@douglasnv.us> <RRoman@douglasnv.us>
Sent: Wednesday, August 26, 2020 2:18 PM
To: Chris Erb <cerb@resourcedevelopmentco.com>
Cc: Alex Nevarez <anevarez@resourcedevelopmentco.com>; Jeremy Wilson <jwilson@Kellerassociates.com>; Ritger, Philip <PRitger@douglasnv.us> <PRitger@douglasnv.us>; Jeff Farr <jfarr@resourcedevelopmentco.com>; Preciado, Peter <ppreciado@douglasnv.us>
Subject: RE: COVID-19 (18017 NVWWTP Douglas County)

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Chris,

The County has no concerns with RDC returning to work on August 31, 2020. I also understand that you plan to have RDC staff at the NVWWTP tomorrow to remove the effluent pumps from the operations building.

Ron Roman
Engineering Manager
Douglas County Public Works
P.O. Box 218
1120 Airport Road
Minden, NV 89423

775-782-6239
775-690-3025 (C) **I am working remotely, please call on my cell number**

From: Chris Erb [mailto:cerb@resourcedevelopmentco.com]
Sent: Wednesday, August 26, 2020 6:22 AM
To: Roman, Ron <RRoman@douglasnv.us> <RRoman@douglasnv.us>
Cc: Alex Nevarez <anevarez@resourcedevelopmentco.com>; Jeremy Wilson <jwilson@Kellerassociates.com>; Ritger, Philip <PRitger@douglasnv.us> <PRitger@douglasnv.us>;

COPY

Jeff Farr <jfarr@resourcedevelopmentco.com>; Preciado, Peter <ppreciado@douglasnv.us>
Subject: RE: COVID-19 (18017 NVWWTP Douglas County)

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Ron

RDC has completed the recommended Quarantine period and has not received any positive COVID-19 tests from its employees indicating a need to extend the Quarantine period.

RDC has asked its employees effected by the "Close Contact" incident to return to work August 31, 2020 and intends to restart work at the NVWWTP site on this date.

Does Douglas County have any concerns with RDC proceeding with the work on this date?

Please call me if you have any questions.

Thanks
Chris Erb
RDC
775-842-0232

From: Roman, Ron <RRoman@douglasnv.us> <RRoman@douglasnv.us>
Sent: Wednesday, August 19, 2020 3:15 PM
To: Chris Erb <cerb@resourcedevelopmentco.com>
Cc: Alex Nevarez <anevarez@resourcedevelopmentco.com>; Jeremy Wilson <jwilson@Kellerassociates.com>; Ritger, Philip <PRitger@douglasnv.us> <PRitger@douglasnv.us>; Jeff Farr <jfarr@resourcedevelopmentco.com>; Preciado, Peter <ppreciado@douglasnv.us>
Subject: RE: COVID-19 (18017 NVWWTP Douglas County)

Chris,

Thank you for the update on how RDC is proceeding or this issue. RDC is responsible for the safety and security of people working out at the site right now. If you have reason to believe that specific safety protocols are necessary or justified, then that is a call you will need to make. We don't currently have enough information to determine the reasonableness of your course of action. Please keep us informed as you have new information.

Ron Roman
Engineering Manager
Douglas County Public Works
P.O. Box 218
1120 Airport Road
Minden, NV 89423

COPY

775-782-6239
775-690-3025 (C) **I am working remotely, please call on my cell number**

From: Chris Erb <cerb@resourcedevelopmentco.com>
Sent: Monday, August 17, 2020 1:25 PM
To: Roman, Ron <RRoman@douglasnv.us> <RRoman@douglasnv.us>
Cc: Alex Nevarez <anevarez@resourcedevelopmentco.com>; Jeremy Wilson <jwilson@Kellerassociates.com>; Ritger, Philip <PRitger@douglasnv.us> <PRitger@douglasnv.us>; Jeff Farr <jfarr@resourcedevelopmentco.com>; Pete Preciado (ppeciado@douglasnv.us) <ppeciado@douglasnv.us>; Rippe, Steve <SRippe@douglasnv.us>; Jim Andrews <jim@creekside-electric.com>
Subject: Re: COVID-19 (18017 NVWWTP Douglas County)

CAUTION: This email is from an external source. Use caution when clicking links or opening attachments.

Date correction on line 6. Should have been August 17, 2020 not August 24,2020.

Get Outlook for iOS

From: Chris Erb
Sent: Monday, August 17, 2020 12:58:29 PM
To: Roman, Ron
Cc: Alex Nevarez ; Jeremy Wilson ; Ritger, Philip ; Jeff Farr ; Pete Preciado (ppeciado@douglasnv.us) ; Steve Rippe (SRippe@douglasnv.us) ; Jim Andrews
Subject: RE: COVID-19 (18017 NVWWTP Douglas County)
Ron
In regards to the recent employee incident with COVID-19, RDC will be following the guidelines set about in the following documents:

1. https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/quarantine.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fif-you-are-sick%2Fquarantine-isolation.html

Who needs to quarantine?

People who have been in close contact with someone who has COVID-19—excluding people who have had COVID-19 within the past 3 months.

What counts as close contact?

- You were within 6 feet of someone who has COVID-19 for a total of 15 minutes or more
- You provided care at home to someone who is sick with COVID-19
- You had direct physical contact with the person (hugged or kissed them)
- You shared eating or drinking utensils
- They sneezed, coughed, or somehow got respiratory droplets on you

Steps to take

Stay home and monitor your health

- Stay home for 14 days after your last contact with a person who has COVID-19
- Watch for fever (100.4◦F), cough, shortness of breath, or other symptoms of COVID-19
- If possible, stay away from others, especially people who are at higher risk for getting very sick from COVID-19

2. https://www.cdc.gov/coronavirus/2019-ncov/testing/diagnostic-testing.html
3. Washoe County info: https://covid19washoe.com/testing/

Bellow is a short schedule that provides dates and the approach RDC will use to minimize any potential spread of COVID-19 at the NVWWTP site.

1. August 7, 2020 last day that the incident employee was onsite at Minden.
2. August 14, 2020 RDC is informed that the employee met the definition of Close Contact for COVID-19.
3. August 14, 2020 Employee was sent for testing.
4. August 14, 2020 All RDC Employees sent home from NVWWTP job site.
5. August 17, 2020 Employee reported that test came back negative. (RDC trying to confirm via official paperwork not received yet, also test result should be considered preliminary in that the recommendations are that a 14 day wait period be followed before testing, The employee may need to be tested again)
6. August 24, 2020 RDC will be stopping all onsite work until this 14 day criteria is met.
7. August 25, 2020 RDC will be tentatively restarting onsite work pending results of Testing.

Please call me if you have any questions.

Thanks

Chris Erb
RDC
775-842-0232

From: Roman, Ron
Sent: Friday, August 14, 2020 3:28 PM
To: Chris Erb
Cc: Alex Nevarez ; Jeremy Wilson ; Ritger, Philip
Subject: RE: COVID-19 (18017 NVWWTP Douglas County)

Chris,

We've provided notice to our employees that are working on the NVWWTP project. Please let me know when you have test results and additional information.

Ron Roman
Engineering Manager
Douglas County Public Works
P.O. Box 218
1120 Airport Road
Minden, NV 89423
775-782-6239
775-690-3025 (C) **I am working remotely, please call on my cell number**

From: Chris Erb <cerb@resourcedevelopmentco.com>
Sent: Friday, August 14, 2020 12:03 PM

COPY

To: Roman, Ron <RRoman@douglasnv.us> <RRoman@douglasnv.us>
Cc: Alex Nevarez <anevarez@resourcedevelopmentco.com>; Jeremy Wilson <jwilson@Kellerassociates.com>
Subject: COVID-19 (18017 NVWWTP Douglas County)

CAUTION: This email is from an external source. Use caution when clicking links or opening attachments.

Ron

Today RDC was informed by one of our employees who was working at the NVWWTP 2 weeks ago that they have had contact with a person that tested positive for COVID-19.

As a result of this we have sent the employee for testing and are awaiting the results.

Additionally as a precaution at this time, we have sent all NVWWTP workers home for the weekend as we await the results of the testing.

We will let you know more on how we will have to address this issue once we have more information.

Thanks

Christopher Erb, P.E.

1050 Linda Way
Sparks, NV 89431
775.356.8004 (office)
775.842.0232 (cell)
cerb@resourcedevelopmentco.com

Disclaimer

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KELLER ASSOCIATES

Work Change Directive

Owner:	Douglas County	**WCD No.:**	33
Project Name:	NVWWTP Improvements Project	**Project No.:**	216030
Contractor:	Resource Development Company	**Issued By:**	Jeremy Wilson
Attention:	Alex Nevarez	**Date Issued:**	09/28/2020

Reason for Change: This WCD covers the labor, materials, equipment, and installation cost to provide a complete and functioning heat trace system for the project.

Description of change(s): This WCD includes removal/replacement/upsizing the transforming connecting BCP-151, installation of additional required breakers, conduits, conductors, potholing, and excavation in order to provide a complete and functioning heat trace system.

The parties were not able to come to a mutual agreement on a lump sum price to perform the work described in the attached PCO #35. In accordance with general conditions paragraph 11.04B, this work is to be performed on a time and materials basis. As the final cost of the work in PCO #35 is unknown at this time, the contractor is responsible for monitoring their costs and notifying the engineer prior to exceeding the authorized amount for this work.

Attachments: Contractor's proposed change order.

Contract Sum Adjustment: The proposed basis of adjustment to the Contract Sum or Guaranteed Maximum Price is (Place an X in the appropriate box).

- ☐ Lump Sum increase of
- ☐ Unit Price of
- ☒ Cost of Work not to exceed
- ☒ Contractor Submit TM Ticket $56,204.99

Contract Time Adjustment: No increase in contract time is anticipated as part of this WCD.

COPY

When signed by the Owner and Engineer authorized representatives and received by the Contractor, this document becomes effective immediately as a Construction Change Directive, and the Contractor shall proceed with the change(s) described above. The Contactor's signature, signed by an authorized representative, indicates agreement with the proposed adjustments in Contract Sum and Contract Time set forth in this Construction Change Directive.

Keller Associates, Inc.

Engineer

1325 Airmotive Way Suite 380

Reno, Nevada 89502

(Address)

By (Authorized Signature)

Jeremy Wilson

(Printed Name)

09/28/2020

Date

Douglas County

Owner

1120 Airport Road, Bldg F2

Minden, Nevada 89423

(Address)

By (Authorized Signature)

Philip Ritger

(Printed Name)

09-29-2020

Date

Resource Development Company

Contractor

1050 Linda Way

Sparks, Nevada 89431

(Address)

By (Authorized Signature)

CHRISTOPHER ERB

(Printed Name)

09/30/20

Date

RESOURCE DEVELOPMENT COMPANY

PCO #35 – Heat Trace Revisions

Date: June 24, 2020 Revised August 11, 2020

Project: NVWWTP Improvements

ATTN: Jeremy Wilson, PE – Keller Associates

Mr. Wilson,

Resource Development Company (RDC) offers the following change proposal for heat trace and insulation extra work in response to RFI #92, RFI #92-2 and RFI #92-3. Scope of work includes: PCO coordination, heat trace circuit layout, remove and replace/upsize transformer feeding panel BCP-151, install additional required circuits (breakers, conduit & conductors), potholing, excavation, backfill, finish grade & type II surfacing, heat trace controller and complete heater set at sludge dewatering pad, testing, start-up and as-builts.

PCO #35 Extra Work Total: **$68,072.99**

Additional Contract Days: **21 Calendar Days**

Clarifications

1. Conduit routing for the additional heat trace circuit at the sludge dewatering pad is assumed to be as shown on the attached schematic. Please advise if alternate conduit routing is desired.

Please don't hesitate to contact me if you have any questions.

Thank you,

Christopher Erb

Christopher Erb
Resource Development Company

Cc: Ron Roman, PE – DCPW
Scott McCullough – DCPW

Attachments: Digested Solids Conduit Routing Schematic
Reference: RFI #92-1, RFI #92-2, RFI #92-3

COPY

1050 Linda Way Sparks, NV 89431-5598
(775) 356-8004 / Fax (775) 356-0610
Nevada License No. 75026 / California License No. 893537

RESOURCE DEVELOPMENT COMPANY

DATE 8/11/2020

PCO #35- HEAT TRACE REVISIONS
NVWWTP - DOUGLAS COUNTY
RDC PROJECT # 18017

EQUIPMENT				
	HOURLY RATE	HOURS	SUBTOTAL
900 Air Compressor	72.47	0.00	0.00
375 Air Compressor	29.90	0.00	0.00
185 Air Compressor	16.81	0.00	0.00
125 KW Generator	42.43	0.00	0.00
45 KW Generator	12.04	0.00	0.00
Mini Ex John Deere 50	25.23	8.00	201.84
Hitachi 120 Excavator	55.77	0.00	0.00
Hitachi 200 Excavator	68.02	0.00	0.00
Backhoe 310 SE	39.60	0.00	0.00
Loader	74.41	0.00	0.00
Skid Steer	21.74	16.00	347.84
Sheepsfoot Roller	34.83	0.00	0.00
Smooth Drum Roller	34.83	8.00	278.64
Frostfighter Heater	30.00	0.00	0.00
Dehumidifier	37.43	0.00	0.00
Sandblasting Equipment	3.04	0.00	0.00
Rammax Compactor	17.00	8.00	136.00
Dust Collector	73.87	0.00	0.00
Boom Lift	32.40	0.00	0.00
Reach Fork 8K	37.47	0.00	0.00
Reach Fork 10K	51.29	0.00	0.00
Scissor Lift	26.58	0.00	0.00
Light Truck	24.98	0.00	0.00
Work Truck	32.48	46.00	1,494.08
Water Truck	39.96	0.00	0.00
Transport	60.45	16.00	967.20
28 Ton Crane - Grove	79.69	0.00	0.00
Office Trailer	1.95	46.00	89.70
Engineer Office Trailer	1.95	0.00	0.00
Sanitary Facilities	1.25	46.00	57.50
Temp Power	1.70	46.00	78.20
Utilities	0.57	0.00	0.00
Connex	0.57	46.00	26.22
Survey Equipment	10.00	6.00	60.00
Confined Space Equipment	5.00	0.00	0.00
Scaffold (5' section)	0.54	0.00	0.00
Whacker	8.41	0.00	0.00
Fuel Storage Tank	1.00	0.00	0.00
End Dump Trailer	6.13	4.00	24.52
Dewatering Equipment	3.00	0.00	0.00

LABOR				
	HOURLY RATE		HOURS	SUBTOTAL
Superintendent	120.00		17.00	2,040.00
Project Manager	120.00		21.50	2,580.00
Sr. Project Engineer	120.00		86.00	10,320.00
Jr. Project Engineer	70.00		0.00	0.00
Operator - Roller	76.75		0.00	0.00
Operator - Loader (Crane)	77.84		0.00	0.00
Operator - B/T/E	77.36		27.00	2,088.72
Carpenter	76.16		0.00	0.00
Surveyor	76.16		4.00	304.64
Laborer	47.54		78.00	3,708.12
Driver - Water	29.37		0.00	0.00
Driver - Dump/Transport	46.71		16.00	747.36
Shop Labor	78.00		0.00	0.00
Shop Welder	110.50		0.00	0.00
Travel			0.00	0.00
Subsistence	75.00		0.00	0.00

MATERIAL				
	MATERIAL COST	TAX		SUBTOTAL
Heater Cable	0.00	0.00		0.00
T-Stat	0.00	0.00		0.00
Termination Kit	0.00	0.00		0.00
Heat Trace Accessories	0.00	0.00		0.00
Pump Insulation Materials	575.00	43.70		618.70
Type II Base	259.26	19.70		278.96
Consumables	0.00	0.00		0.00
Dump Fee	0.00	0.00		0.00
Freight	0.00	0.00		0.00

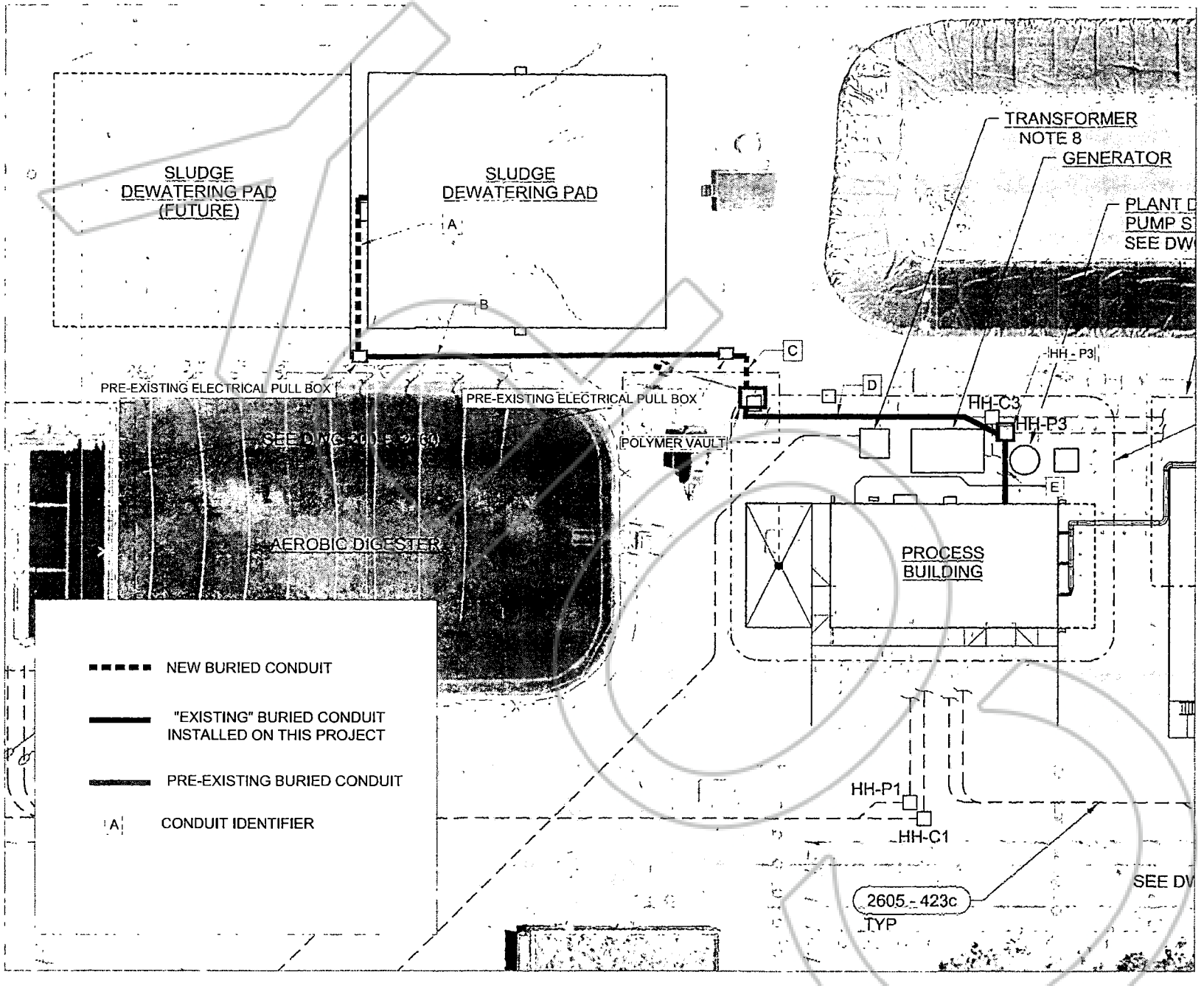
SUBCONTRACTOR			
	DIRECT COST		SUBTOTAL
Creekside Electric	33976.00		33,976.00
	0.00		0.00
	0.00		0.00
	0.00		0.00

TOTALS					
	SUBTOTAL	MARK-UP %	MARK-UP		TOTAL
Equipment	3761.74	15%	564.26		$ 4,326.00
Labor	21788.84	15%	3268.33		$ 25,057.17
Material	897.66	15%	134.65		$ 1,032.31
Subcontractor	33976.00	5%	1698.80		$ 35,674.80
Bonds & Insurance (3%)	1982.71	0%	0.00		$ 1,982.71

INCREASE IN CONTRACT TIME	21 DAYS

JOB TOTAL	68,072.99

Submitted By: Christopher Erb



DIGESTED SLUDGE HEAT TRACE POWER CONDUIT ROUTING CONCEPT

SCHEMATIC

CREEKSIDE ELECTRICAL CONTRACTORS, INC.

3059 Airport Road Carson City, NV 89706
Ph: (775) 841-5558 Fax: (775) 841-5565
NV Lic. # 50401 CA Lic. # 915754 DBE#NV01193UCPN

CHANGE ORDER REQUEST
#007

Proposal Submitted to:
Resource Development Company

JOB:
NVWWTP Treatment Plant Improvements

Work Description:
Furnish and install conduit, boxes, fittings, supports, wire, circuit breakers, transformer and terminations for plant heat trace at Headworks, SBR-1 & SBR-2, Influent Pump Station and Sludge Dewatering Pad.
Proposal based on response to RFI# 92-2 by Keller Engineering and CAD drawings provided by RDC.

THE ABOVE SUBJECT AGREEMENT IS HEREBY CHANGED AS FOLLOWS:

ITEM NO.	DESCRIPTION OF CHANGE	ADD	DEDUCT
1	See attached Material and Labor Breakdown	$33,977.00	

Contract Amount	This Change Order Add	This Change Order Deduct	Revised Contract Amount
$1,299,300.00	$33,977.00		$1,333,277.00

Except as modified by this Change Order (and previous Change Orders, if any) the subject agreement remains unchanged and continues in full force and effect.

Please sign and return the original of this Change Order.

Material & Work will not begin until an executed change order has been received by this office.

By:
Title:
Date:

By: Jim Andrews PM
Date: 3/25/2020

CREEKSIDE ELECTRICAL CONTRACTORS, INC.

3059 Airport Road
Carson City, Nevada 89706
Phone 775-841-5558 Fax 775-881-5565
NV License No. 50401 CA License No. 915754

MATERIAL AND LABOR PROPOSAL BREAKDOWN

PROPOSAL DATE: 3/25/2020 **COR#:** 7
JOB #: #12-18 **NAME:** NVWWTP Improvements
DESCRIPTION: Furnish and install conduit, wire, boxes, fittings, breakers, transformer and supports to connect site heat trace at Headworks, SBR-1 & SBR-2, Influent Pump Station and Sludge Dewatering Pad per RFI# 92-2.

A. MATERIAL & EQUIPMENT	$11,463.00	
Tax %: *7.10%*	$813.87	
M & E Subtotal		$12,276.87

B. LABOR

	RATE	MANHOURS	AMOUNT
Foreman-Electrical	$93.50	28	$2,618.00
Journeyman-Electrical	$85.00	95	$8,075.00
Apprentice-Electrical	$65.00	95	$6,175.00
Shop	$50.00		$0.00
Labor Subtotal			$16,868.00

C. FIELD RELATED COSTS

Clean Up	$	
Material Handling	$	
As Builts/Plans	$	
Permits	$	
Consumable Material	$	
Tools	$	
Truck Charges	$	400.00
Travel/Per Diem	$	
Shipping/Restock	$	
Equipment Rental	$	
Labor Subtotal		$400.00

SUBTOTAL				$29,544.87
D. SUBCONTRACT COST	%		$0.00	
E. SUBCONTACT MARK-UI	%		$0.00	
F. OFFICE OVERHEAD	%	5.00%	$1,477.24	
G. PROFIT	%	10.00%	$2,954.49	
COST & MARK-UP SUBTOTAL				$33,976.60
PROPOSAL SUBTOTAL				$33,976.60
H. BOND				$
TOTAL PROPOSAL AMOUNT				$33,976.60

REQUEST FOR INFORMATION FORM

NORTH VALLEY WASTEWATER TREATMENT PLANT IMPROVEMENTS

RESOURCE DEVELOPMENT COMPANY

SUBMITTED TO:	JEREMY WILSON KELLER ASSOCIATES
SUBMITED BY:	CHRIS ERB RDC

RFI #	**92 - 3**
DATE SUBMITTED:	3/19/2020
DATE NEEDED:	3/26/2020
RDC PROJECT #	18017

SPEC SECTION(S): 40 05 33

PLAN SHEET(S): 200-E-2110, 2120, 2121, 6001

RFI DESCRIPTION:

This is a follow-up to RFI #92-2, and is submitted in conjuction with submittal 400533-01 - Pipe Heat Tracing.

QUESTION FROM CREEKSIDE:

The engineer has upsized feeder breaker, transformer and BCP-150 main circuit breaker, but did not upsize panel BCP-151 where all the added circuits are being supplied. It is still being fed by a 60A circuit breaker from BCP-150.

Can you check on this and make sure he didn't miss upsizing this panel?

RESPONCE FROM KELLER/JACOBS:

We have confirmation from Jacobs. BCP-151 is OK as is. (EMAIL 03/10/20 ATTACHED)

As mentioned in RFI #92 and RFI #92-2, RDC views much of this as extra work, and will provide PCO pricing once the requested electrical design information is provided, and the heat trace submittal is approved.

RFI #92-2 - Heat Trace Circuits attached for reference.

Question from Creekside: Load Data, Heat Trace Layout Schematics, RFI #92, Heat Trace Layout Schematics, RFI #92-2,

RFI RESPONSE:

RESPONSE BY:

DATE:

COPY

REQUEST FOR INFORMATION FORM

NORTH VALLEY WASTEWATER TREATMENT PLANT IMPROVEMENTS

RESOURCE DEVELOPMENT COMPANY

SUBMITTED TO:	JEREMY WILSON KELLER ASSOCIATES
SUBMITED BY:	CHRIS ERB RDC

RFI #	**92 - 2**
DATE SUBMITTED:	1/27/2020
DATE NEEDED:	2/3/2020
RDC PROJECT #	18017

SPEC SECTION(S): 40 05 33

PLAN SHEET(S): 200-E-2110, 2120, 2121, 6001

RFI DESCRIPTION:

This is a follow-up to RFI #92, and is submitted in conjuction with submittal 400533-01 - Pipe Heat Tracing.

Per the approved design, provisions for heat trace only includes two (2) non-GFCI 120V 300W (VA) circuits from Panel BCP-151 (circuits 11 & 15 on plan sheet 200-E-6001). Heat trace load requirements (see attached) are sustantially higher than provisioned on the contract drawings, and may overload the panel(s), as designed. Please provide panel designation (added or upsize panel if needed), breaker configuration, and circuit numbers to accomodate the actual heat trace circuit loads. Note that one additional circuit was added at the SBR to distribute heater loading, now four (4) circuits are required at the SBR, as opposed to three (3) circuits indicated in the original RFI #92.

Based on the amount of exposed high importance process piping on the north side of the SBR, RDC recommends a conservative design.

Specifications don't call for lighted end seal terminations for exposed piping. Please advise if lighted end seals are desired for exposed piping.

As mentioned in RFI #92, RDC views much of this as extra work, and will provide PCO pricing once the requested electrical design information is provided, and the heat trace submittal is approved.

Attachments Load Data, Heat Trace Layout Schematics, RFI #92,

RFI RESPONSE:

Provide heat trace circuits from panel BCP-151. Change breakers to those as proposed. See attached recommendation for layout. Lighted end seal terminations are not required but may be an owner preference. Contractor confirm with owner if these are desired for exposed piping.
Overall heat trace design appears to be adequate. Contractor confirm spiral method of tracing is being used on larger pipe per spec. Contractor confirm small pipe (½ PVC drain pipe) will only have one strip of heat trace.
These added loads will require transformer up sizing for BCP-150. Please provide and install the following:
- Increase the 50A transformer BCP-150 feeder breaker in SWBD-150 to 70A
- Increase transformer BCP-150 from 30KVA to 45KVA
- Increase the main breaker in BCP-150 from 100A to 125A
- Increase related wiring and conduit as required.

RESPONSE BY: Adam Neiwert, P.E.
Keller Associates

DATE: 2/26/2020

ELECTRICAL PANELBOARD SCHEDULE

PANEL: PDP-150
VOLTAGE: 480V, 3PH, 3W
BUS SIZE: 225A
MAIN SIZE: MLO
INTERRUPTING RATING: 22,000AIC

LOCATION: Process Building Electrical Room
MOUNTING: SURFACE, WALL
FED FROM: Switchboard
MAIN TYPE: NONE

BREAKER CKT NO	BREAKER AMP	BREAKER POLE	LOAD VA PHASE A	LOAD VA PHASE B	LOAD VA PHASE C	LOAD VA PHASE A	LOAD VA PHASE B	LOAD VA PHASE C	BREAKER POLE	BREAKER AMP	BREAKER CKT NO	CIRCUIT TITLE
1	15	3	200			200			3	15	2	SBR 2 INFLUENT GATE
3				200			200				4	120-SG-120
5					200			200			6	
7	15	3	200			200			3	15	8	SBR 2 AIR VALVE
9				200			200				10	120-FV-302
11					200			200			12	
13	15	3	500			500			3	15	14	SBR 2 DECANTER AFD
15				500			500				16	120-AFD-310
17					500			500			18	
19	20	3	3000			200			3	15	20	GRIT FINCH VALVE
21				3000			200				22	110-FV-315
23					3000			200			24	
25	20	3	2500			2500			3	15	26	110-EUH-1
27				2500			2500				28	
29					2500			2500			30	
31	15	3	1000			2500			3	15	32	110-EUH-2
33				1000			2500				34	
35					1000			2500			36	
37	15	3				2500			3	15	38	110-EUH-3
39							2500				40	
41								2500			42	
TOTAL LOAD			7400	7400	7400	8200	8500	8500				

PHASE A LOAD (VA) = 15600
PHASE B LOAD (VA) = 15900
PHASE C LOAD (VA) = 15900
TOTAL LOAD (VA)= 47400

PDP-150 PANELBOARD SCHEDULE

ELECTRICAL PANELBOARD SCHEDULE

PANEL: BCP-180
VOLTAGE: 208Y/120V, 3PH, 4W
BUS SIZE: 125A
MAIN SIZE: 100A
INTERRUPTING RATING: 10,000AIC

LOCATION: Process Building Electrical Room
MOUNTING: SURFACE, WALL
FED FROM: CWBD 150
MAIN TYPE: Thermal Magnetic

BREAKER CKT NO	BREAKER AMP	BREAKER POLE	LOAD VA PHASE A	LOAD VA PHASE B	LOAD VA PHASE C	LOAD VA PHASE A	LOAD VA PHASE B	LOAD VA PHASE C	BREAKER POLE	BREAKER AMP	BREAKER CKT NO	CIRCUIT TITLE
180-EF-1	20	1	870			600			1	15	2	LIGHTS
180-EF-2	20	1		870			900		1	15	4	LIGHTS
180 EF-3	20	1			870			180	1	15	6	SPARE
180-EF-4	15	1	90			180			1	20	8	RECEPTACLE - OUTSIDE
180-HP-1	20	2	3000			180			1	20	10	RECEPTACLE - BATH
				3000			1000		1	20	12	RECEPTACLE - DISHWASHER
180-HP-2	20	2	1000			1440			1	20	14	RECEPTACLE - LAUNDRY
				1000			1200		1	20	16	RECEPTACLE - MICROWAVE
180-EUH-1	20	1			1000			1000	1	20	18	RECEPTACLE - DISPOSAL
180-EUH-2	20	1	1000			360			1	20	20	RECEPTACLES - COUNTER
100 SA-100, COMPOSITE SAMPLER	20	1	180			180			1	20	22	RECEPTACLE - DESK 1
REFRIGERATOR	20	1		690			180		1	20	24	RECEPTACLE - DESK 2
RECEPTACLES - LAB 1	20	1	540			180			1	15	26	RECEPTACLE - DESK 3
RECEPTACLES - LAB 2	20	1		540			180		1	15	28	RECEPTACLE - DESK 4
SPARE	20	1			540			720	1	15	30	RECEPTACLES - AREA 1
SPARE	20	1	360					1333	1	20	32	RECEPTACLES - AREA 2
SPARE	20	1		1333					3	30	34	WATER HEATER, WH-2
SPARE	20	1			1333						36	
SPARE			1333								38	
											40	SPACE
											42	SPACE
TOTAL LOAD			3280	3510	3470	4453	3375	4053				

PHASE A LOAD (VA) = 7713
PHASE B LOAD (VA) = 6853
PHASE C LOAD (VA) = 7523
TOTAL LOAD (VA)= 21819

BCP-180 PANELBOARD SCHEDULE

ELECTRICAL PANELBOARD SCHEDULE

PANEL: BCP-150
VOLTAGE: 208Y/120V, 3PH, 4W
BUS SIZE: 125A
MAIN SIZE: [redacted] 125A
INTERRUPTING RATING: 10,000A-C

LOCATION: Process Building Electrical Room
MOUNTING: SURFACE, WALL
FED FROM: Switchboard
MAIN TYPE: Thermal Magnetic

BREAKER CKT NO	BREAKER AMP	BREAKER POLE	LOAD VA PHASE A	LOAD VA PHASE B	LOAD VA PHASE C	LOAD VA PHASE A	LOAD VA PHASE B	LOAD VA PHASE C	BREAKER POLE	BREAKER AMP	BREAKER CKT NO	CIRCUIT TITLE
150-HP-1	15	2	1200			500			1	20	2	LIGHTS
				1200			500		1	20	4	LIGHTS
150-EF-1	15	1			480			900	1	20	6	LIGHTS
150-EF-2	15	1	200			540			1	20	8	RECEPTACLES - OUTDOOR S/E
150-EF-3	15	1		50			1080	720	1	20	10	RECEPTACLES - BLOWER ROOM
150-MCP-001	20	1			500				1	20	12	RECEPTACLES - ELECTRICAL RM
150-MCP-001 UPS	20	1	500			540			1	20	14	RECEPTACLES - STORAGE ROOM
EWH 1, WATER HEATER	20	3		2000			360		1	15	16	RECEPTACLE - DESK
					2000			540	1	15	18	RECEPTACLES - OFFICE
150-MCP-002 (SDR)	20	1	3000			180			1	20	20	RECEPTACLE - BATH
150-E-B1.3	15	1		500			180		1	20	22	RECEPTACLE - KITCHENETTE
			250		250			180	1	20	24	RECEPTACLE - KITCHENETTE
			250			300			1	20	26	RECEPTACLES - OUTDOOR N
RECEPTACLE, POLYMER UN1	20	1		250			1000		2	60	28	GENERATOR AUX PANEL
RECEPT. 150-LCP-110, SHC PUMP	20	1	150			150					30	
RECEPT-150-LCP 120, SHC PUMP	20	1	150					1000			32	
150-LC-130	20	1		50					1	15	33	SPARE
SPARE	20	1							1	15	34	SPARE
SPARE	20	1							1	15	35	SPARE
SPARE	30	1				1000			2	60	36	BCP-151
SPARE	30	1					1000				40	
SPARE	20	1						1000			42	
TOTAL LOAD			4300	4050	3380	3120	4120	3940				

PHASE A LOAD (VA) = 7420
PHASE B LOAD (VA) = 8170
PHASE C LOAD (VA) = 7320
TOTAL LOAD (VA)= 22910

BCP-150 PANELBOARD SCHEDULE

ELECTRICAL PANELBOARD SCHEDULE

PANEL: BCP-151
VOLTAGE: 208Y/120V, 3PH, 4W
BUS SIZE: 100A
MAIN SIZE: 60A
INTERRUPTING RATING: 10,000AIC

LOCATION: Process Building Electrical Room
MOUNTING: SURFACE, WALL
FED FROM: BCP-150
MAIN TYPE: Thermal Magnetic

	BREAKER CKT NO	BREAKER AMP	BREAKER POLE	LOAD VA PHASE A	LOAD VA PHASE B	LOAD VA PHASE C	LOAD VA PHASE A	LOAD VA PHASE B	LOAD VA PHASE C	BREAKER POLE	BREAKER AMP	BREAKER CKT NO	CIRCUIT TITLE	
110-EF-1	20	1	670						1	20	2	HEADWORKS LIGHTS	
110-ACP-330	15	1		50					1	20	4	DRIVEWAYS	
110-FIT-101	15	1			100		1455		1	20	6	[redacted] ZONE A1 HEAT TRACE	30/2
110-FIT-102	15	1	100			1450			1	20	8	[redacted]	
110-AIT-100	15	1		100			100		1	15	10	130-PIT-200	
HEADWORKS HEAT TAPE	20	1			300			100	1	20	12	130-SA-100, COMPOSITE SAMPLER	
[redacted] FINE SCREEN HEAT TAPE RC BRUSH	20	1							1	20	14	SPARE	
SDR HEAT TAPE	20	1		300		100			1	15	16	100-FIT-700	
120-AIT-400	15	1			100		1063		1	15	18	[redacted] ZONE A2 HEAT TRACE	30/2
120-FIT-700	15	1	100			1063			1	15	20	[redacted]	
120-PIT-670	15	1		100			1305		1	20	22	[redacted] ZONE B HEAT TRACE	30/2
120-LC-400	15	1			50			1305	1	20	24	[redacted]	
30/2 [redacted] ZONE D HEAT TRACE	15	1	658			1436			1	15	26	[redacted] ZONE C HEAT TRACE	30/2
	15	1		658			1436		1	15	28	[redacted]	
20/1 [redacted] ZONE E HEAT TRACE	15	1			100			100	1	15	30	[redacted] ZONE F HEAT TRACE	20/1
TOTAL LOAD			870	550	500	0	2007	100					

PHASE A LOAD (VA) = 870
PHASE B LOAD (VA) = 750
PHASE C LOAD (VA) = 600
TOTAL LOAD (VA)= 2270

BCP-151 PANELBOARD SCHEDULE

PANELBOARD SCHEDULE

NTS

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NO.	DATE	REVISION	BY	APVD
DSGN	W VOLLMERS	DR J GARIBAY	CHK M GUPTA	APVD J DEHN

6-20-2018

DESIGN OFFICE
2525 AIRPARK DRIVE
REDDING, CA 96001
(530) 243 5831

NORTH VALLEY WWTP
IMPROVEMENTS PROJECT
DOUGLAS COUNTY PUBLIC WORKS (DCWP)
DOUGLAS COUNTY, NV

ELECTRICAL

PANELBOARD SCHEDULES

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 [redacted] 1"

DATE	JUNE 2018
PROJ	675961
DWG	200-E-6001
SHEET	108 of 111

REUSE OF DOCUMENTS

SPWURL

FILENAME: 200-E-6001_675961.dgn

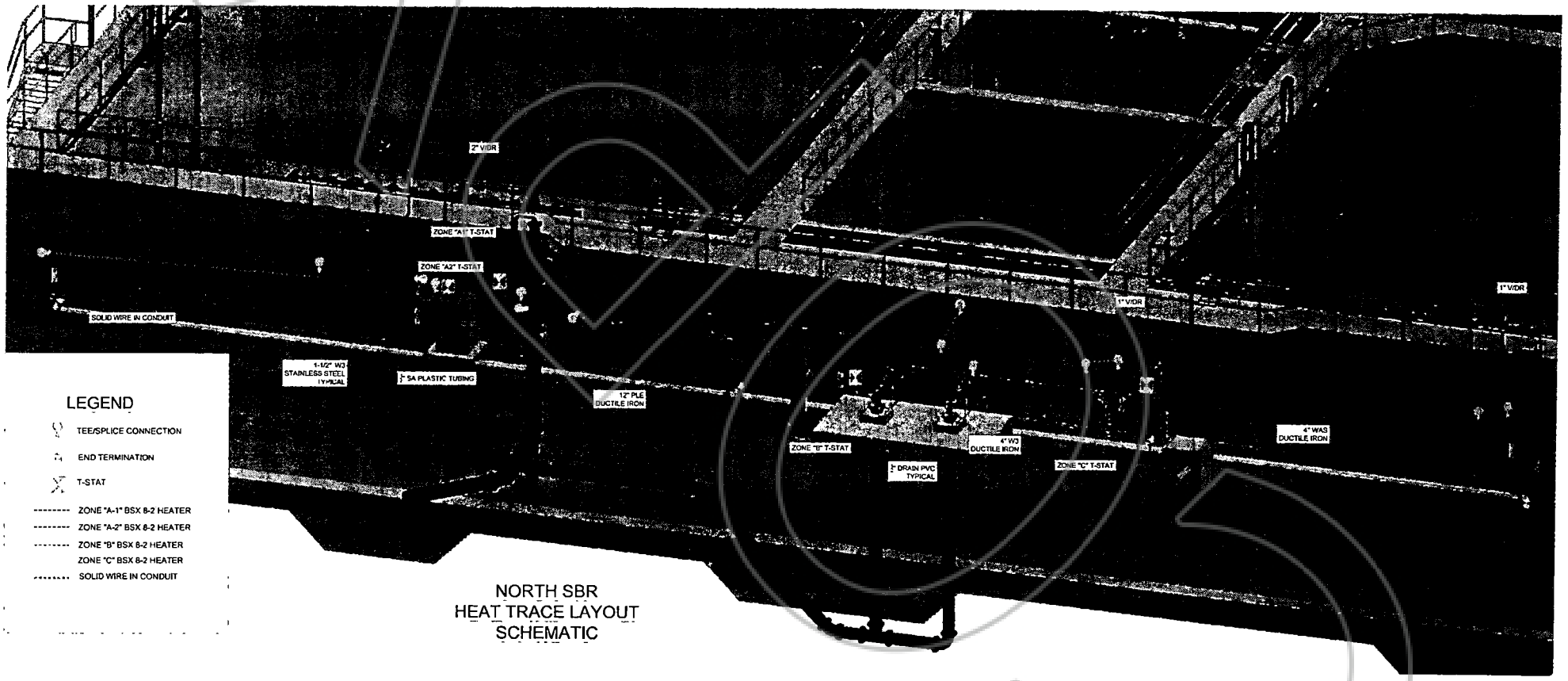
PLOT DATE: 20180617

PLOT TIME: 1:37:22 PM

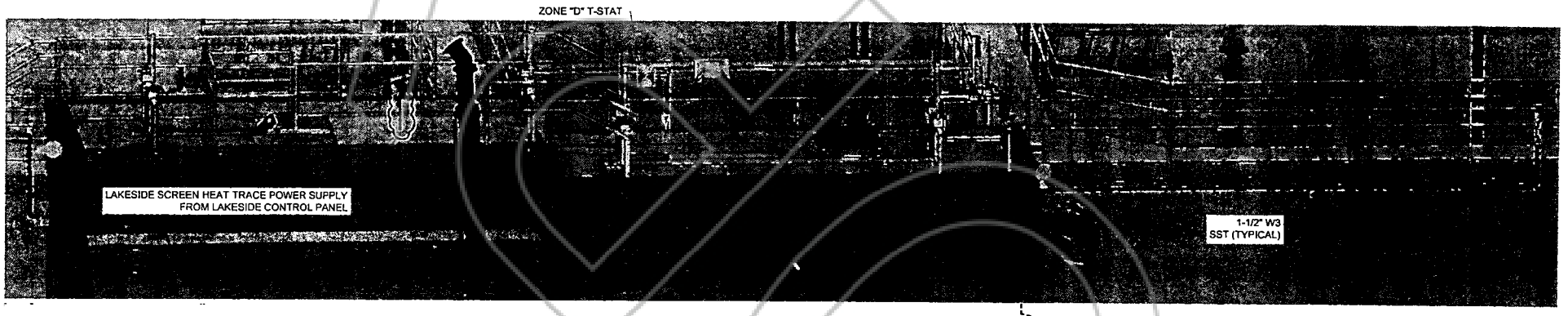
Zone/Circuit	Circuit Breaker Size (A)*	Voltage (VAC)	Heater Cable	Operating Current (A) @ 40 F Maintenance Temp	Operating Load (W) @ 40 F Maintenance Temp	Operating Current (A) @ 50 F Maintenance Temp	Operating Load (W) @ 50 F Maintenance Temp	Maximum Current (A) @ 0 F Start-up	Maximum Current (A) @ 40F Start-up	Location
ZONE A1	30	208	BSX 8-2	14 7	2911	13 5	2683	22 3	16 6	SBR
ZONE A2	30	208	BSX 8-2	10 2	2126	9 4	1951	15 4	11 5	SBR
ZONE B	30	208	BSX 8-2	12 6	2609	11 5	2393	18 9	14 1	SBR
ZONE C	30	208	BSX 8-2	14 5	2872	13 3	2647	21 9	16 3	SBR
ZONE D	20	208	BSX 8-2	6 4	1336	5 9	1225	9 7	7 2	HEADWORKS
ZONE E	20	208	BSX 8-2	2 1	427	1 9	392	3 1	2 3	SLUDGE DW PAD
ZONE F	20	120	BSX 5-1	0 8	100	0.8	91	1 4	1	INFLUENT PUMP STATION

*Recommended circuit break size. Engineer to advise if smaller breakers are desired.

VOID



NORTH SBR
HEAT TRACE LAYOUT
SCHEMATIC



LEGEND

- TEE/SPLICE CONNECTION
- END TERMINATION
- T-STAT
- ZONE "D" BSX 8-2 HEATER
- SOLID WIRE IN CONDUIT

HEADWORKS HEAT TRACE LAYOUT SCHEMATIC

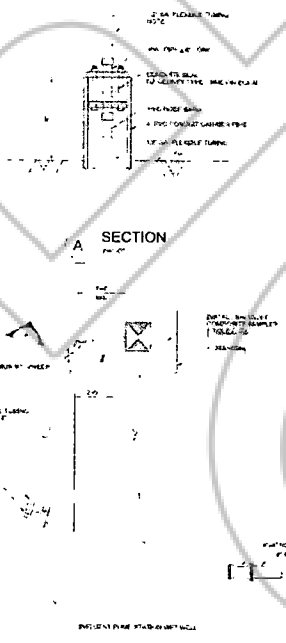
LEGEND

END TERMINATION

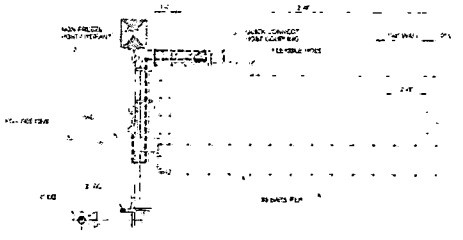
T-STAT

ZONE "E" BSX 5-1 HEATER

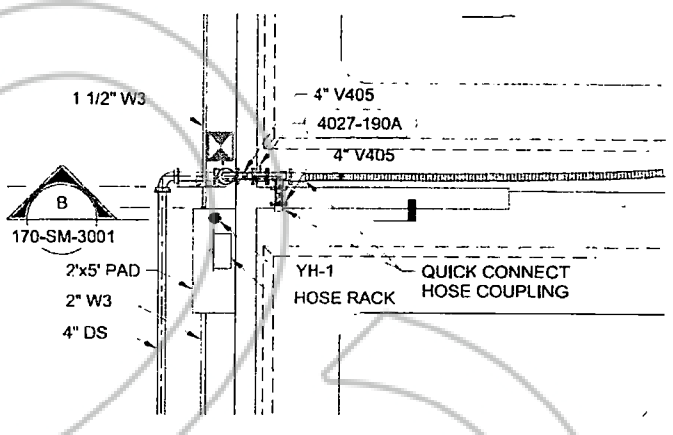
ZONE "F" BSX 8-2 HEATER



INFLUENT PUMP STATION
HEAT TRACE LAYOUT
SCHEMATIC



SECTION



PLAN

SLUDGE DEWATERING PAD
HEAT TRACE LAYOUT
SCHEMATIC

REQUEST FOR INFORMATION FORM

NORTH VALLEY WASTEWATER TREATMENT PLANT IMPROVEMENTS

RESOURCE DEVELOPMENT COMPANY

SUBMITTED TO:	JEREMY WILSON KELLER ASSOCIATES	**RFI #**	**92**
		DATE SUBMITTED:	11/8/2019
		DATE NEEDED:	11/15/2019
SUBMITED BY:	Chris Erb RDC	RDC PROJECT #	18017
SPEC SECTION(S):	40 05 33		
PLAN SHEET(S):	200-E-2110, 2120, 2121 & 6001		

RFI DESCRIPTION:

See attached RFI Description

Attachments	Preliminary Heat Trace Layout, Preliminary Heat Trace Calculations, Misc. Plan Sheet Excerpts, Misc. Product Data Sheets and Excerpts

RFI RESPONSE:

RESPONSE BY: Ethan Reis

DATE: 12/3/2019

COPY

SBR and Headworks Exposed Piping Heat Trace

Proposed approach is acceptable in concept. Contractor provide action submittals for engineer review in accordance with specification 40 05 33.

Utility Water Pumps

Heat trace and insulation is desired for this location. Contractor provide action submittals for engineer review in accordance with specification 40 05 33.

Digested Solids (DS) Pipe Freeze Protection

Heat trace and insulation is desired for this location. Contractor provide action submittals for engineer review in accordance with specification 40 05 33.

Vent and Drain Piping at Air Release Valves (ARV)

Heat trace and insulation is desired for this location. Contractor provide action submittals for engineer review in accordance with specification 40 05 33.

COPY

RFI Description

SBR & Headworks Exposed Piping Heat Trace

Heat trace circuits included on the plans (two (2) 120V 20A circuits) are insufficient based on initial load calculations provided by the heat trace designer. The designer recommends utilizing 208V heat trace circuits, in lieu of 120V circuits, in order to minimize the total number of circuits required from approximately nine (9+/-) 120V circuits to four (4) 208V . The most cost-effective solution would utilize existing conduits (if possible) routed to existing heat tape connection points identified on the plans. Action submittals will be prepared and submitted following resolution of this RFI.

Heat Trace Designer Circuit Recommendations

- Location: North SBR (Zones A, B & C on the attached Preliminary Heat Trace Layout)
  - Recommendation: Three (3) 208V 30A Circuits

- Location: Headworks (Zone D on the attached Preliminary Heat Trace Layout)
  - Recommendation: One (3) 208V 20A Circuit

    Note: This circuit could remain 120V, but for safety and for ease of future maintenance it is recommended that all heat trace circuits utilize the same voltage (208V recommended) and corresponding heater cable consistently throughout.

RDC views the electrical portion of the revisions from the panel board to the power connection points shown on the plans, as extra work (i.e. revised/additional circuit breakers, additional conductors and additional conduits (if any)). Field wiring, components and surface mount conduit required for the installation is RDC's responsibility and not considered extra work.

Utility Water Pumps

No freeze protection (insulation or heat trace) is provided for in the plans and specifications for the utility water pumps. Please advise if heat trace and/or insulation is desired for the utility water pumps 130-PMP-110 & 130-PMP-120.

RDC views any insulation and heat trace for the utility water pumps as extra work.

Digested Solids (DS) Pipe Freeze Protection

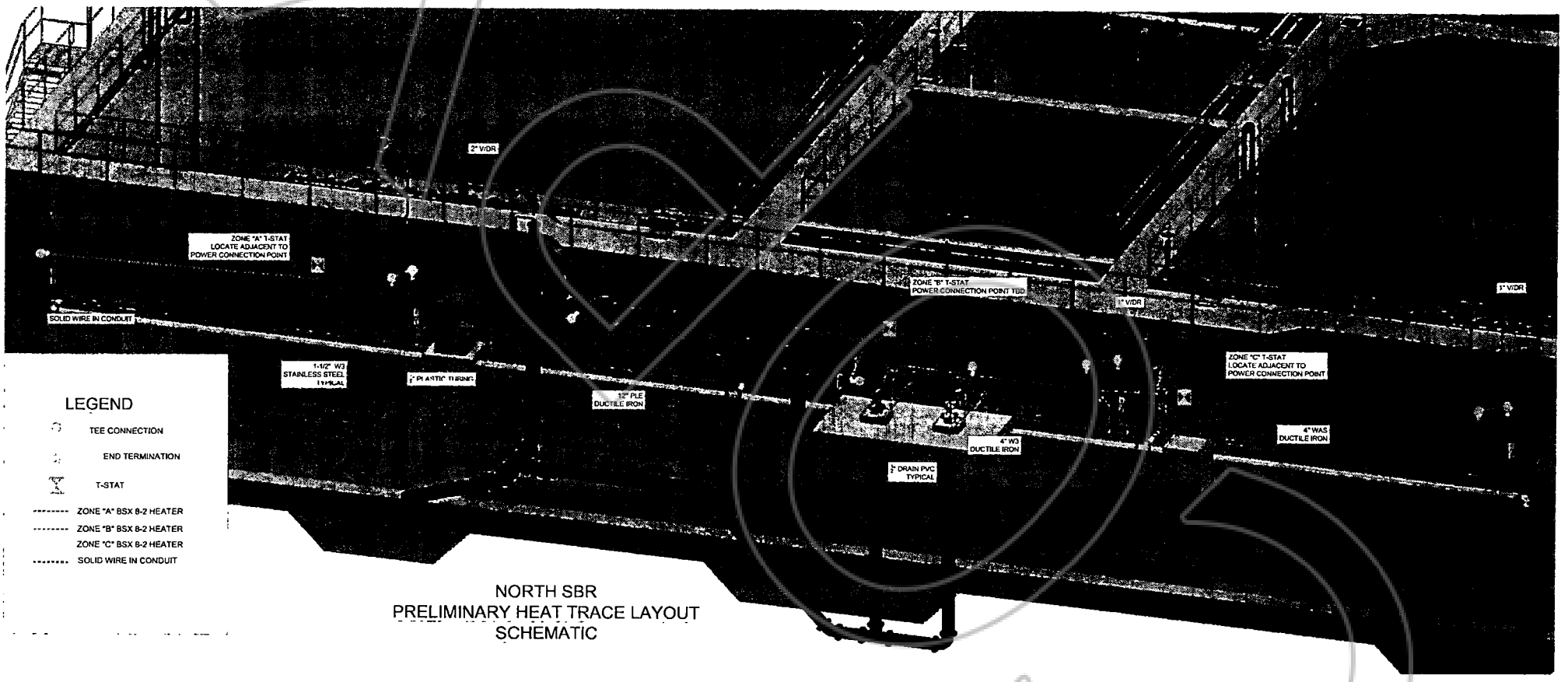
No heat trace circuits are included for the digested solids discharge piping at the sludge dewatering pad. Please advise if heat trace and/or insulation is desired at this location.

Heat trace at this location would be considered extra work.

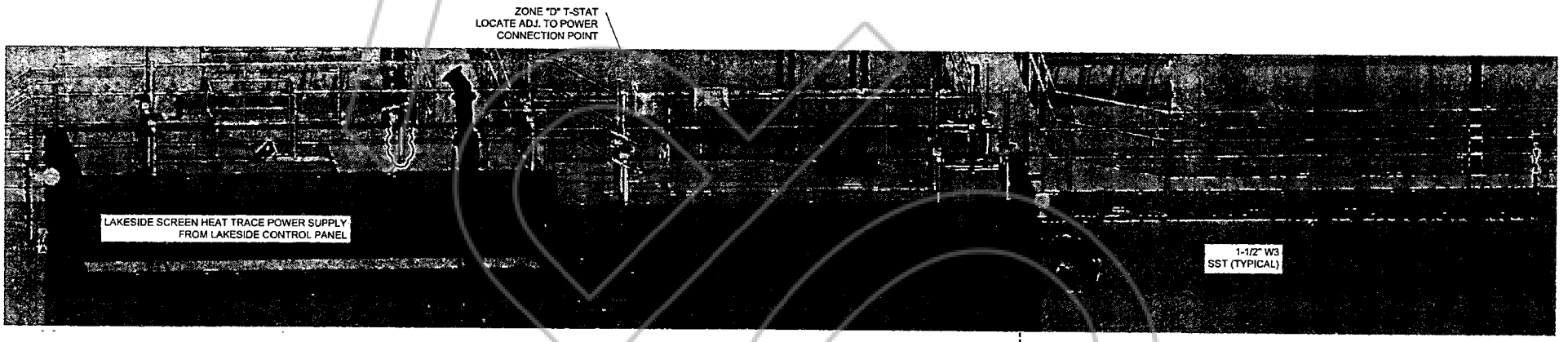
Vent and Drain Piping at Air Release Valves (ARV)

Please confirm heat trace and/or insulation is required for all exposed ARV vent and drain piping on the north side of the SBR. RDC assumes both heat trace and insulation are required for all small diameter ARV vent and drain piping as shown on the attached "North SBR Preliminary Heat Trace Layout Schematic". Please advise if the any of these pipes should not be insulated or heat traced.

COPY



NORTH SBR
PRELIMINARY HEAT TRACE LAYOUT
SCHEMATIC



LEGEND

- TEE CONNECTION
- END TERMINATION
- T-STAT
- ZONE "D" BSX 8-2 HEATER
- SOLID WIRE IN CONDUIT

1-1/2" W3 TO ODOR CONTROL
SST

HEADWORKS
PRELIMINARY HEAT TRACE LAYOUT
SCHEMATIC

UPPER PLAN

EQP-151 PANELBOARD SCHEDULE

LOWER PLAN

COPY

PRODUCT SPECIFICATIONS

BSX™ SELF-REGULATING HEATING CABLE

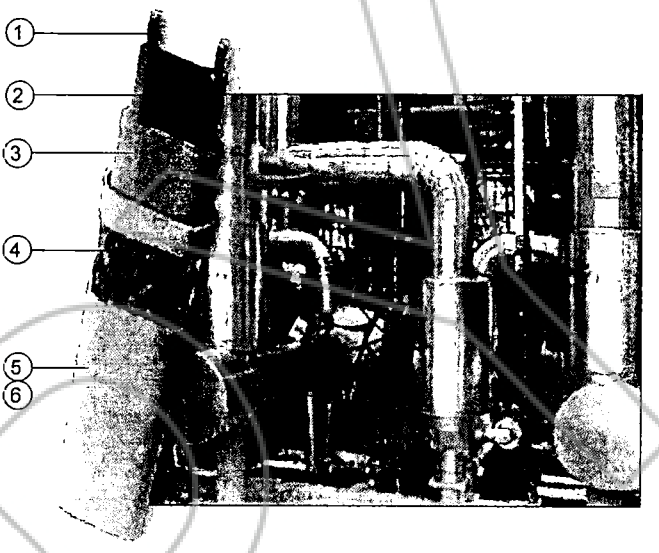
APPLICATION

BSX self-regulating heating cables are designed to provide freeze protection or process temperature maintenance to metallic and nonmetallic piping, tanks and equipment. The heat output of BSX cable varies in response to the surrounding conditions along the entire length of a circuit. Whenever the heat loss of the insulated pipe, tank or equipment increases (as ambient temperature drops), the heat output of the cable increases. Conversely, when the heat loss decreases (as the ambient temperature rises or product flows), the cable reacts by reducing its heat output. BSX cables are approved for use in ordinary (nonclassified) areas and hazardous (classified) areas.

RATINGS

Available watt densities	3, 5, 8, 10 w/ft @ 50°F (10, 16, 26, 33 w/m @ 10°C)
Supply voltages	110-120 or 208-277 Vac
Max. maintenance temperature	150°F (65°C)
Max. continuous exposure temperature	
Power-off	185°F (85°C)
Minimum installation temperature	-60°F (-51°C)
Minimum bend radius	
@ 5°F (-15°C)	0.38" (10mm)
@ -76°F (-60°C)	1.25" (32 mm)
T-rating [1]	
3, 5, 8 w/ft (10, 16, 26 W/m)	T6 185°F (85°C)
10 w/ft (33 W/m)	T5 212°F (100°C)

Notes
1. T-rating per the National Electrical Code and Canadian Electrical Code.



CONSTRUCTION

1 Nickel-plated copper bus wires (16 AWG)

2 Radiation cross-linked semiconductive heating matrix

3 Radiation cross-linked dielectric insulation

4 Tinned copper braid

5 Polyolefin overjacket provides additional protection for cable and braid where exposure to aqueous inorganic chemicals is expected.

OPTIONS

6 FOJ Fluoropolymer overjacket over tinned copper braid provides additional protection to cable and braid where exposure to organic chemicals or corrosives is expected.

BASIC ACCESSORIES

Thermon offers system accessories designed specifically for rapid, trouble-free installation of Thermon heating cables.

All cables require a connection kit to comply with approval requirements. Information on accessories to complete a heater circuit installation can be found in the "Heating Cable Systems Accessories" product specification sheet (Form TEP0010).

THERMON **The Heat Tracing Specialists®**

ISO 9001 REGISTERED Corporate Headquarters:100 Thermon Dr • PO Box 609 San Marcos, TX 78667-0609 • Phone: 512-396-5801 • 1-800-820-4328
For the Thermon office nearest you visit us at . . . www.thermon.com

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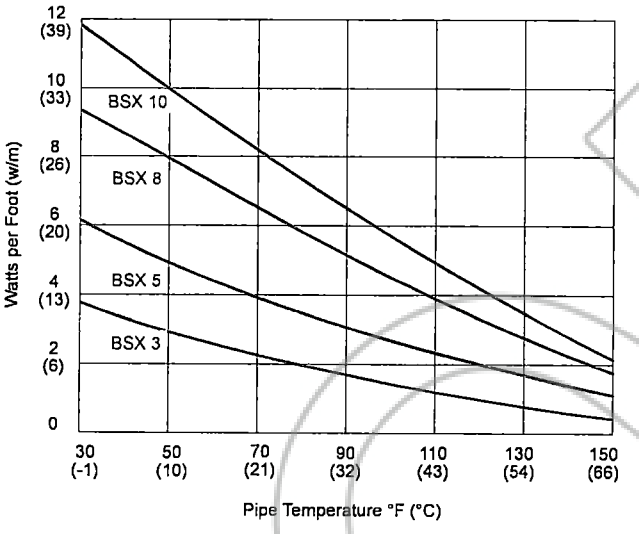
PRODUCT SPECIFICATIONS

BSX™ SELF-REGULATING HEATING CABLE

POWER OUTPUT CURVES [1]

The power outputs shown apply to cable installed on insulated metallic pipe (using the procedures outlined in IEEE 515) at the service voltages stated below. For use on other service voltages, contact Thermon.

Catalog Number 120 Vac Nominal	Catalog Number 240 Vac Nominal	Power Output at 50°F (10°C) w/ft (m)
BSX 3-1	BSX 3-2	3 (10)
BSX 5-1	BSX 5-2	5 (16)
BSX 8-1	BSX 8-2	8 (26)
BSX 10-1	BSX 10-2	10 (33)



CIRCUIT BREAKER SIZING [2]

Maximum circuit lengths for various circuit breaker amperages are shown below. Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The National Electrical Code and Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

120 Vac Service Voltage

Catalog Number	Start-Up Temperature °F (°C)	Max. Circuit Length [3] vs. Breaker Size ft (m) 20A	30A	40A
BSX 3-1	50 (10)	360 (110)	360 (110)	360 (110)
	0 (-18)	325 (99)	360 (110)	360 (110)
	-20 (-29)	285 (87)	360 (110)	360 (110)
	-40 (-40)	260 (79)	360 (110)	360 (110)
BSX 5-1	50 (10)	240 (73)	300 (91)	300 (91)
	0 (-18)	205 (62)	300 (91)	300 (91)
	-20 (-29)	185 (56)	275 (84)	295 (90)
	-40 (-40)	165 (50)	250 (76)	265 (81)
BSX 8-1	50 (10)	190 (58)	240 (73)	240 (73)
	0 (-18)	150 (46)	225 (69)	240 (73)
	-20 (-29)	135 (41)	200 (61)	240 (73)
	-40 (-40)	120 (37)	180 (55)	215 (66)
BSX 10-1	50 (10)	160 (49)	200 (61)	200 (61)
	0 (-18)	110 (34)	170 (52)	200 (61)
	-20 (-29)	100 (30)	150 (46)	200 (61)
	-40 (-40)	90 (27)	135 (41)	180 (55)

~~240~~ 208V Vac Service Voltage

Catalog Number	Start-Up Temperature °F (°C)	Max. Circuit Length [3] vs. Breaker Size ft (m) 20A	30A	40A
BSX 3-2	50 (10)	725 (221)	725 (221)	725 (221)
	0 (-18)	650 (198)	725 (221)	725 (221)
	-20 (-29)	575 (175)	725 (221)	725 (221)
	-40 (-40)	515 (157)	725 (221)	725 (221)
BSX 5-2	50 (10)	480 (146)	600 (183)	600 (183)
	0 (-18)	395 (120)	590 (180)	600 (183)
	-20 (-29)	350 (107)	525 (160)	590 (180)
	-40 (-40)	315 (96)	475 (145)	530 (162)
BSX 8-2	50 (10)	385 (117)	480 (146)	480 (146)
	0 (-18)	285 (87)	425 (130)	480 (146)
	-20 (-29)	255 (78)	380 (122)	480 (146)
	-40 (-40)	230 (70)	345 (116)	430 (131)
BSX 10-2	50 (10)	280 (85)	400 (122)	400 (122)
	0 (-18)	225 (69)	340 (104)	400 (122)
	-20 (-29)	200 (61)	300 (91)	400 (122)
	-40 (-40)	180 (55)	275 (84)	365 (111)

208V

CERTIFICATIONS/APPROVALS

FM Approvals
Ordinary Locations
Hazardous (Classified) Locations
Class I, Division 2, Groups B, C and D
Class II, Division 2, Groups F and G
Class III, Divisions 1 and 2
Class I, Zones 1 and 2, AEx e II

Underwriters Laboratories Inc.
Ordinary Locations
Hazardous (Classified) Locations
Class I, Division 2, Groups A, B, C and D
Class II, Division 2, Groups F and G
Class III, Divisions 1 and 2

Canadian Standards Association
Ordinary Locations
Hazardous (Classified) Locations
Class I, Divisions 1 & 2, Groups A, B, C and D
Class II, Divisions 1 & 2, Groups E, F and G
Ex e II

Notes

1. For more precise power output values as a function of pipe temperature, refer to CompuTrace®.
2. Based on the trip current characteristic of Type QOB or Type QO equipment protection devices. For devices with other trip current characteristics, contact Thermon.
3. The maximum circuit length is for one continuous length of cable, not the sum of segments of cable. Refer to CompuTrace® design software or contact Thermon for current loading of segments.

HEAT TRACING DESIGN OUTLINE

The five steps below outline the design and selection process for an electric heat tracing system. The step-by-step procedures that follow the outline will provide the reader with the detailed information required to design, select and/or specify a fully functional electrical heat tracing system.

Step 1: Establish Design Parameters

Collect relevant project data:

a. Piping/equipment
- Diameter — Length — Material [1]

b. Temperature
- Low ambient — Start-up temperature
- Maintain temperature
- High temperature — Limits/excursions

c. Insulation
- Type — Thickness — Same Size/Oversized?

d. Electrical
- Operating voltage — Circuit breaker capacity
- Electrical area classification

Step 2: Determine Heat Losses

Using information gathered in Step 1 and based on:

a. Heat loss charts/tables

b. Computer design programs — CompuTrace

Step 3: Select the Proper Thermon Heating Cable

Based on:

a. Application requirements
- Maintain temperature
- Maximum exposure temperature

b. Watt density requirements
- Power output at maintain temperature

c. Electrical design
- Available voltage
- Circuit breaker capacity
- Cold start impact

d. Approval requirements
- Hazardous area approval — Code requirements

Step 4: Determine Heat Tracing Circuit Lengths

Based on cable selection, electrical design and pipe lengths with allowances for;
- Valves, pumps, supports, other equipment
- Circuit fabrication and splice kits

Step 5: Choose Options/Accessories

Minimum installation accessories include:

a. Power connection and end termination kits

b. Cable attachment tape

Optional accessories include:
- Thermostatic control and monitoring

BASIS FOR A GOOD DESIGN

To become familiar with the requirements of a properly designed electric heat tracing system, use the five design steps detailed here and on the following pages. Once comfortable with the steps and the information required, use the design worksheet included at the end of this design guide for applying these steps to a complex piping application.

Step 1: Establish Design Parameters

Collect information relative to the following design parameters:

APPLICATION INFORMATION
- Pipe sizes or tubing diameters
- Pipe lengths
- Pipe material (metallic or nonmetallic)
- Type and number of valves, pumps or other equipment
- Type and number of pipe supports

Expected Minimum Ambient Temperature Generally, this number is obtained from weather data compiled for an area and is based on recorded historical data. There are times, however, when the minimum ambient will not be the outside air temperature. Examples include pipes and equipment located underground or inside buildings.

Minimum Start-Up Temperature This temperature differs from the minimum expected ambient in that the heating cable will typically be energized at a higher ambient temperature. This temperature will have an effect on the maximum circuit length and circuit breaker sizing for a given application (see Circuit Length Tables on pages 7-10).

Insulation Material and Thickness The selection charts in this design guide are based on fiberglass insulation with thicknesses shown in Tables 2.2 through 2.7. If insulation materials other than fiberglass are used, refer to the insulation correction factors shown in Table 2.1 or contact Thermon or a Thermon factory representative for design assistance.

Supply Voltage Thermon self-regulating cables are designed in two voltage groups: 110-130 Vac and 208-277 Vac. Determine what voltage(s) are available at a facility for use with heat tracing.

Note

1. All information in this design guide is based on metallic piping. For nonmetallic applications, contact Thermon.

BSX AND RSX 15-2 SELF-REGULATING CABLES

The power outputs shown in Table 3.2 and Graph 3.1 apply to cable installed on insulated metallic pipe at 120 and 240 Vac. When the heating cable will be operated on voltages other than 120 and 240, use Table 3.3 for 120 Vac nominal cable and Table 3.4 for 240 Vac nominal cable.

Table 3.2 BSX and RSX 15-2 Power Outputs at 120 & 240 Vac

Catalog Number 120 Vac Nominal	Catalog Number 240 Vac Nominal	Power Output at 50°F (10°C) W/ft (m)
BSX 3-1	BSX 3-2	3 (10)
BSX 5-1	BSX 5-2	5 (16)
BSX 8-1	BSX 8-2	8 (26)
BSX 10-1	BSX 10-2	10 (33)
–	RSX 15-2	15 (49)

Graph 3.1 BSX and RSX 15-2 Power Output Curves at 120 & 240 Vac

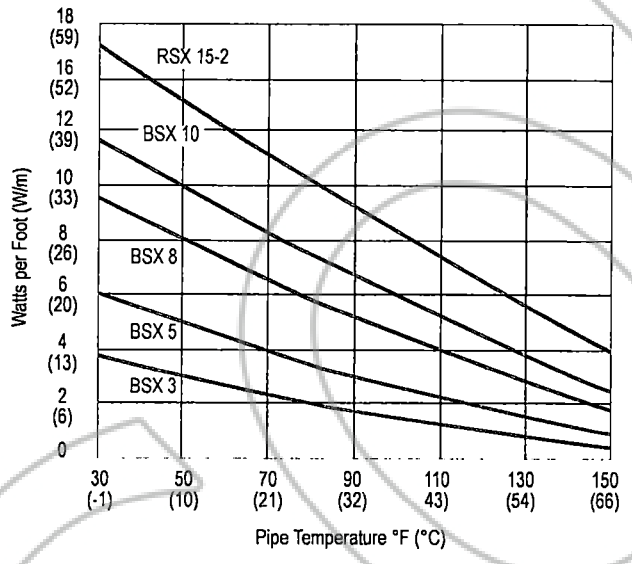


Table 3.3 BSX Power Output Multipliers (110-130 Vac)

Catalog Number	Operating Voltage (Vac) 110	115	120	130
BSX 3-1	0.90	0.93	1.0	1.07
BSX 5-1	0.92	0.96	1.0	1.08
BSX 8-1	0.91	0.96	1.0	1.08
BSX 10-1	0.92	0.96	1.0	1.08

Table 3.4 BSX and RSX 15-2 Power Output Multipliers (208-277 Vac)

Catalog Number	Operating Voltage (Vac) 208	220	240	277
BSX 3-2	0.87	0.90	1.0	1.13
BSX 5-2	0.88	0.92	1.0	1.12
BSX 8-2	0.89	0.93	1.0	1.12
BSX 10-2	0.89	0.93	1.0	1.12
RSX 15-2	0.89	0.93	1.0	1.12

CIRCUIT BREAKER SIZING

Maximum circuit lengths for various circuit breaker amperages are shown in Tables 3.5 and 3.6. Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other local or applicable code.

The circuit lengths shown are for nominal voltages of 120 and 240 Vac. While the power outputs will change based on the applied voltage, the circuit lengths will not significantly change; however, for detailed circuit information use CompuTrace.

Table 3.5 BSX Circuit Length vs. Breaker Size (120 Vac)

120 Vac Service Voltage Catalog Number	Start-Up Temperature °F (°C)	Max. Circuit Length vs. Breaker Size ft (m) 20A	30A	40A
BSX 3-1	50 (10)	360 (110)	360 (110)	360 (110)
	0 (-18)	325 (99)	360 (110)	360 (110)
	-20 (-29)	285 (87)	360 (110)	360 (110)
	-40 (-40)	260 (79)	360 (110)	360 (110)
BSX 5-1	50 (10)	240 (73)	300 (91)	300 (91)
	0 (-18)	205 (62)	300 (91)	300 (91)
	-20 (-29)	185 (56)	275 (84)	295 (90)
	-40 (-40)	165 (50)	250 (76)	265 (81)
BSX 8-1	50 (10)	190 (58)	240 (73)	240 (73)
	0 (-18)	150 (46)	225 (69)	240 (73)
	-20 (-29)	135 (41)	200 (61)	240 (73)
	-40 (-40)	120 (37)	180 (55)	215 (66)
BSX 10-1	50 (10)	160 (49)	200 (61)	200 (61)
	0 (-18)	110 (34)	170 (52)	200 (61)
	-20 (-29)	100 (30)	150 (46)	200 (61)
	-40 (-40)	90 (27)	135 (41)	180 (55)

Table 3.6 BSX & RSX 15-2 Circuit Length vs. Breaker Size (240 Vac)

240 Vac Service Voltage Catalog Number	Start-Up Temperature °F (°C)	Max. Circuit Length vs. Breaker Size ft (m) 20A	30A	40A
BSX 3-2	50 (10)	725 (221)	725 (221)	725 (221)
	0 (-18)	650 (198)	725 (221)	725 (221)
	-20 (-29)	575 (175)	725 (221)	725 (221)
	-40 (-40)	515 (157)	725 (221)	725 (221)
BSX 5-2	50 (10)	480 (146)	600 (183)	600 (183)
	0 (-18)	395 (120)	590 (180)	600 (183)
	-20 (-29)	350 (107)	525 (160)	590 (180)
	-40 (-40)	315 (96)	475 (145)	530 (162)
BSX 8-2	50 (10)	385 (117)	480 (146)	480 (146)
	0 (-18)	285 (87)	425 (130)	480 (146)
	-20 (-29)	255 (78)	380 (122)	480 (146)
	-40 (-40)	230 (70)	345 (116)	430 (131)
BSX 10-2	50 (10)	280 (85)	400 (122)	400 (122)
	0 (-18)	225 (69)	340 (104)	400 (122)
	-20 (-29)	200 (61)	300 (91)	400 (122)
	-40 (-40)	180 (55)	275 (84)	365 (111)
RSX 15-2	50 (10)	205 (63)	320 (98)	380 (116)
	0 (-18)	145 (45)	225 (70)	315 (97)
	-20 (-29)	130 (40)	200 (62)	280 (86)
	-40 (-40)	120 (36)	180 (55)	250 (77)

From: Jeremy Wilson
To: Christopher Erb
Cc: Adam Neiwert
Subject: RE: RFI #092-2 - Heat Trace Circuits (18017 -NVWWTP Douglas County)
Date: Tuesday, March 10, 2020 4:59:19 PM

Chris,

We have confirmation from Jacobs. BCP-151 is OK as is.

I am alright with the follow up RFI to document.

Thank you,

JEREMY WILSON, PE
Keller Associates, Inc.
DIRECT 775-451-7288 | CELL 970-556-4880

From: cerb@resourcedevelopmentco.com <cerb@resourcedevelopmentco.com>
Sent: Tuesday, March 10, 2020 7:24 AM
To: Jeremy Wilson <jwilson@Kellerassociates.com>
Subject: RE: RFI #092-2 - Heat Trace Circuits (18017 -NVWWTP Douglas County)

Jeremy

Please see Jim's question below.

Do we need to upsize the Panel BCP_151 as well?

Let me know how you want to respond to this question (RFI #092-3/Email confirmation)?

Thanks
Chris Erb
RDC

From: Jim Andrews <jim@creekside-electric.com>
Sent: Monday, March 9, 2020 9:58 AM
To: cerb@resourcedevelopmentco.com
Cc: 'Brandon Beckman' <BBECKMAN@RESOURCEDEVELOPMENTCO.COM>; anevarez@resourcedevelopmentco.com
Subject: RE: RFI #092-2 - Heat Trace Circuits (18017 -NVWWTP Douglas County)

Chris,
The engineer has upsized feeder breaker, transformer and BCP-150 main circuit breaker, but did not

COPY

upsize panel BCP-151 where all the added circuits are being supplied. It is still being fed by a 60A circuit breaker from BCP-150.
Can you check on this and make sure he didn't miss upsizing this panel?

Jim Andrews
Estimator/PM
Creekside Electrical Contractors, Inc.
3059 Airport Rd. Carson City, NV 89706
775-841-5558 (o)
775-841-5565 (f)
775-220-3664 (c)

From: cerb@resourcedevelopmentco.com [mailto:cerb@resourcedevelopmentco.com]
Sent: Friday, February 28, 2020 9:24 AM
To: 'Jim Andrews'
Cc: 'Brandon Beckman'; anevarez@resourcedevelopmentco.com
Subject: RFI #092-2 - Heat Trace Circuits (18017 -NVWWTP Douglas County)

Jim

Please provide a PCO for your portion of the work related to RFI #092-2 Heat Trace Circuits (See Attached).

Thanks
Chris Erb
RDC
775-842-0232

COPY

KELLER ASSOCIATES

Work Change Directive

Owner:	Douglas County	**WCD No.:**	34
Project Name:	NVWWTP Improvements Project	**Project No.:**	216030
Contractor:	Resource Development Company	**Issued By:**	Jeremy Wilson
Attention:	Alex Nevarez	**Date Issued:**	10/05/2020

Reason for Change: This WCD covers the labor, materials, equipment, and installation cost to cut and cap the abandoned effluent piping.

Description of change(s): The old effluent pumps have been removed from the operations building. Subsequently the discharge piping was abandoned. However, the discharge piping connects to a live pipeline in a nearby vault after a check valve. Unfortunately, the check valve is no longer functioning which is causing water to flow back into the abandoned pipe. To prevent this, the abandoned pipe will be cut and capped outside of the vault described above and in the picture attached.

It is the engineer's understanding that the upstream section of pipe is completely abandoned with no planned future uses.

Attachments: Contractor's proposed change order and photos.

Contract Sum Adjustment: The proposed basis of adjustment to the Contract Sum or Guaranteed Maximum Price is (Place an X in the appropriate box).

- ☒ Lump Sum increase of $3,418.53
- ☐ Unit Price of
- ☐ Cost of Work not to exceed
- ☐ Contractor Submit TM Ticket

Contract Time Adjustment: A contract time extension of 1 day is anticipated as part of this WCD.

COPY

When signed by the Owner and Engineer authorized representatives and received by the Contractor, this document becomes effective immediately as a Construction Change Directive, and the Contractor shall proceed with the change(s) described above. The Contactor's signature, signed by an authorized representative, indicates agreement with the proposed adjustments in Contract Sum and Contract Time set forth in this Construction Change Directive.

Keller Associates, Inc.

Engineer

1325 Airmotive Way Suite 380

Reno, Nevada 89502

(Address)

By (Authorized Signature)

Jeremy Wilson

(Printed Name)

10/05/2020

Date

Douglas County

Owner

1120 Airport Road, Bldg F2

Minden, Nevada 89423

(Address)

By (Authorized Signature)

Philip Ritger

(Printed Name)

10-07-2020

Date

Resource Development Company

Contractor

1050 Linda Way

Sparks, Nevada 89431

(Address)

By (Authorized Signature)

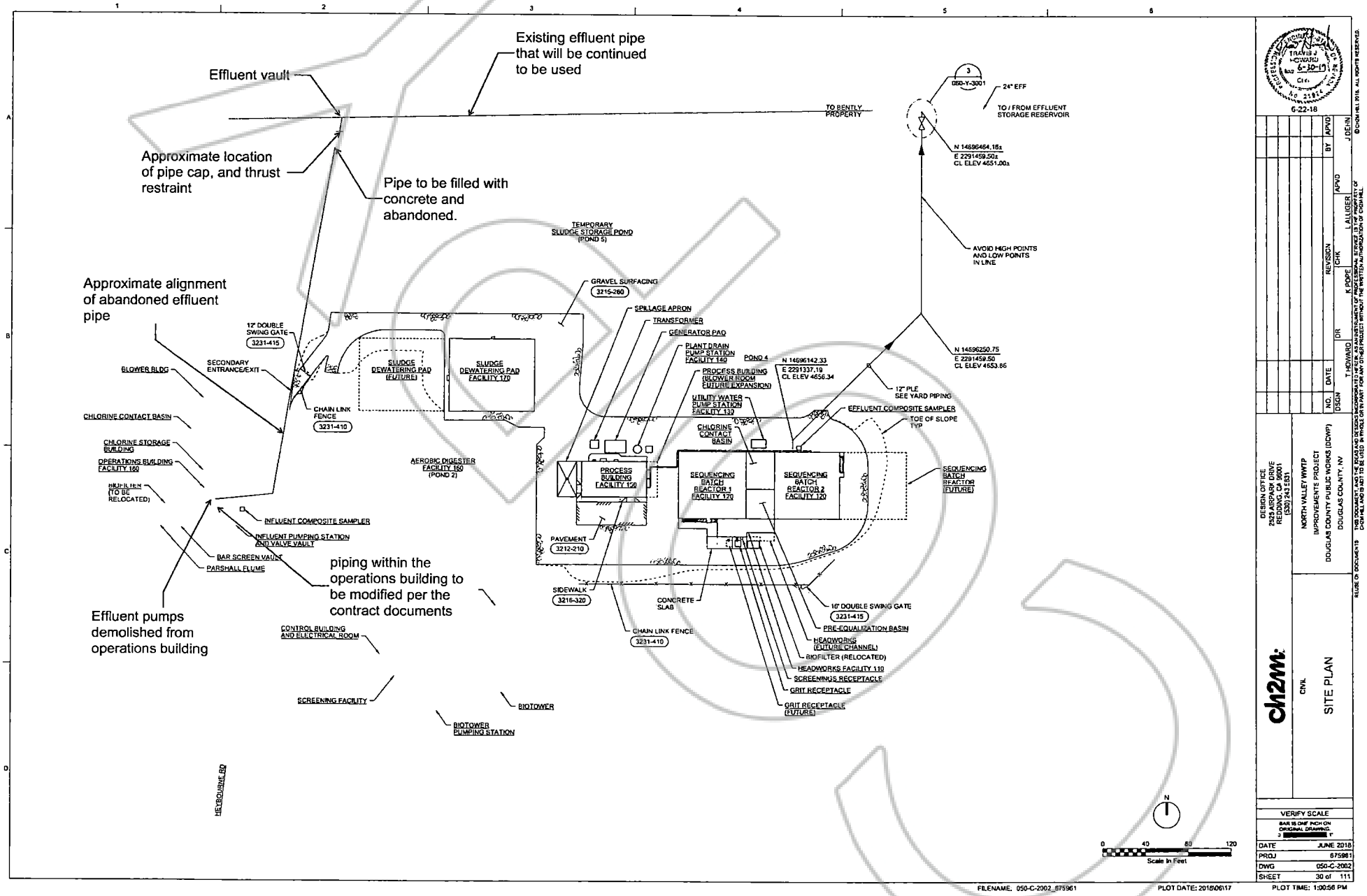
Christopher Erb

(Printed Name)

10/09/20

Date

COPY



THOMAS J. HOWARD — 6-30-19 — 6-22-18

NO.	DATE	REVISION	DR	CHK	APVD
DSGN	T. HOWARD	K. POPE		I. ALLINGER	
				BY	APVD
					J.DEAN

DESIGN OFFICE
2525 AIRPARK DRIVE
RENO, NEVADA 89431
(530) 544-1500

NORTH VALLEY WWTP
IMPROVEMENTS PROJECT
DOUGLAS COUNTY PUBLIC WORKS (DCWP)
DOUGLAS COUNTY, NV

ch2m:

CIVIL

SITE PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"

DATE	JUNE 2018
PROJ	675961
DWG	050-C-2002
SHEET	30 of 111

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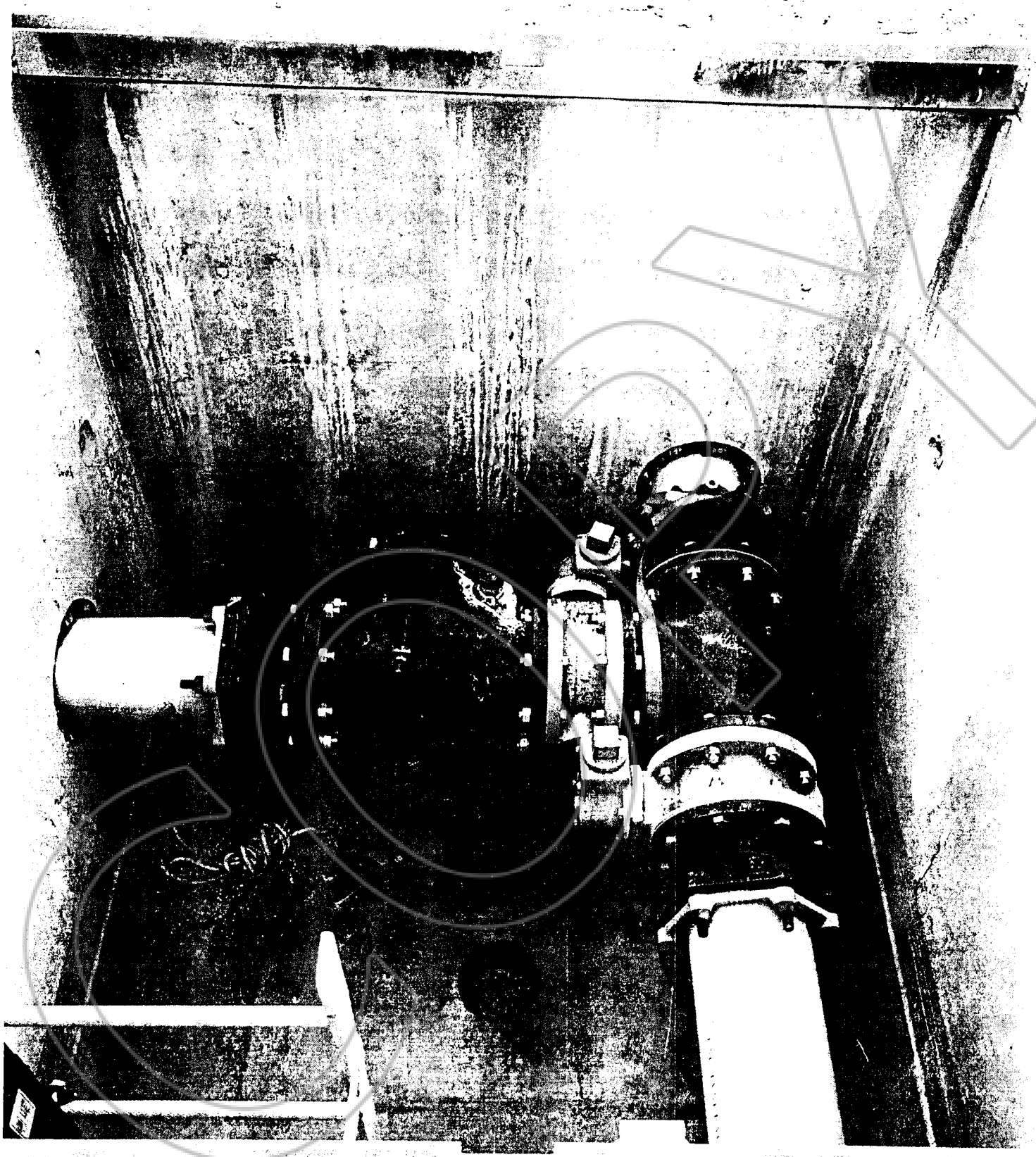
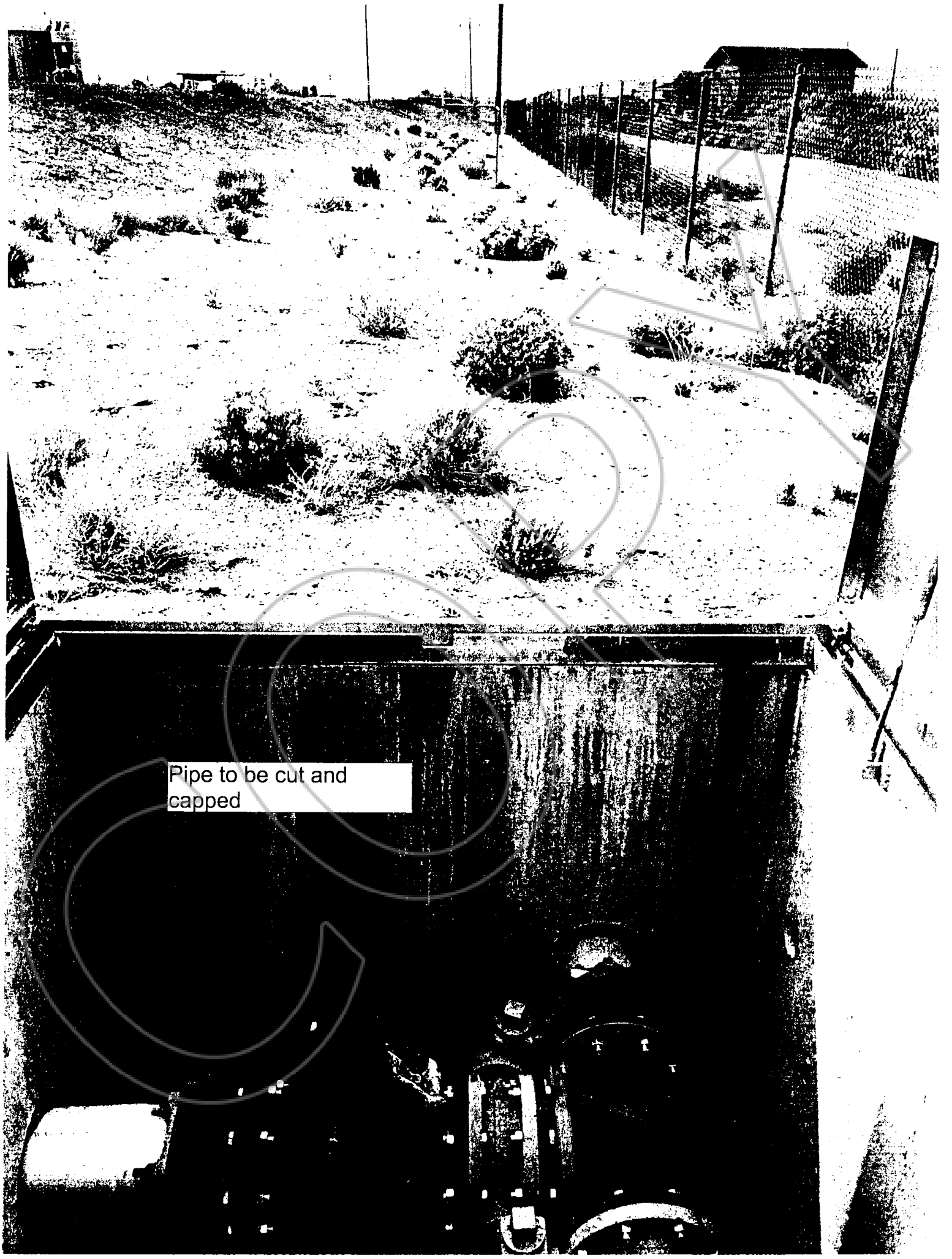
REUSE OF DOCUMENTS

FILENAME: 050-C-2002_675961 PLOT DATE: 20180617 PLOT TIME: 1:00:56 PM




Pipe to be cut and capped

RESOURCE DEVELOPMENT COMPANY

PCO #61 – EFFLUENT PIPE CAP

Date: SEPTEMBER 24, 2020 REVISED OCTOBER 1, 2020

Project: NVWWTP Improvements

ATTN: Jeremy Wilson, PE – Keller Associates

Mr. Wilson,

This PCO is to document the process for RDC to excavate around, cut, and cap the existing effluent pipe to be abandoned. RDC will also fill, cut, and cap the pipe inside the lab building.

PCO #61 Extra Work Total: **$3,418.53**

Additional Contract Days: **1 Contract Days**

Please don't hesitate to contact me if you have any questions or need any clarification.

Sincerely,

Christopher Erb

Christopher Erb

Resource Development Company

Cc: Ron Roman, PE – DCPW

Scott McCullough - DCPW

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1050 Linda Way Sparks, NV 89431-5598
(775) 356-8004 / Fax (775) 356-0610
Nevada License No. 75026 / California License No. 893537

RESOURCE DEVELOPMENT COMPANY

DATE 9/24/2020

PCO #61 - IEFFLUENT PIPE CAP
NVWWTP - DOUGLAS COUNTY
RDC PROJECT # 18017

EQUIPMENT				
	HOURLY RATE		HOURS	SUBTOTAL
Backhoe 310 SE	39.60		8.00	316.80
Work Truck	32.48		8.00	259.84

LABOR				
	HOURLY RATE		HOURS	SUBTOTAL
Superintendent	120.00		4.50	540.00
Project Manager	120.00		1.00	120.00
Operator - B/T/E	77.36		8.00	618.88
Laborer	47.54		16.00	760.64

MATERIAL				
	MATERIAL COST	TAX		SUBTOTAL
CONCRETE	172.00	12.21		184.21
CAPS	80.00	5.68		85.68
	0.00	0.00		0.00

TOTALS					
	SUBTOTAL	MARK-UP %	MARK-UP		TOTAL
Equipment	576.64	15%	86.50		$ 663.14
Labor	2039.52	15%	305.93		$ 2,345.45
Material	269.89	15%	40.48		$ 310.38
Bonds & Insurance (3%)	3318.96	3%	99.57		$ 99.57

INCREASE IN CONTRACT TIME	1 DAYS

JOB TOTAL	3,418.53

Submitted By: Christopher Erb

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Douglas County State of Nevada

CERTIFIED COPY

I certify that the document to which this certificate is attached is a full and correct copy of the original record on file in the Clerk-Treasurer's Office on this

13th day of [illegible], 2022

By [illegible] Deputy