



**BOARD OF SUPERVISORS AGENDA ITEM REPORT  
CONTRACTS / AWARDS / GRANTS**

Award  Contract  Grant

Requested Board Meeting Date: 09/04/18

\* = Mandatory, information must be provided

or Procurement Director Award

**\*Contractor/Vendor Name/Grantor (DBA):**

HDR Constructors, Inc.

**\*Project Title/Description:**

Design-Build Services For: Tres Rios WRF Nutrient Recovery Project (3BBUMP)

**\*Purpose:**

Amendment: Contract No. CT-WW-18-326, Amendment No. One (1). This amendment increases the contract amount by \$1,198,973.71 for a cumulative not-to-exceed amount of \$1,865,680.71 and incorporates Guaranteed Maximum Price No. One (GMP-1). Administering Department: Regional Wastewater Reclamation.

GMP-1 pertains to the ordering of long-lead equipment for this project, and provides for limited contract administration duties directly related to the equipment order. Due to limited subcontracting opportunities, no Small Business Enterprises (SBE) goal is established for GMP-1.

**\*Procurement Method:**

Pursuant to Solicitation for Qualifications No. 262765, on 05/01/18, the Board of Supervisors awarded a contract for design and pre-construction services for this project in the amount of \$666,707.00 for a contract term of 05/01/18 to 12/31/20.

Attachment: Amendment No. One (1).

**\*Program Goals/Predicted Outcomes:**

Struvite formation negatively impacts equipment and treatment processes. This program will allow for better processing and treatment of biosolids by sequestering phosphorus, resulting in the elimination of Struvite formation.

**\*Public Benefit:**

This program will eliminate the use of Ferric Chloride currently used to prevent Struvite formation and will also reduce the amount of Polymer required for processing biosolids. This will result in lower Operation & Maintenance (O & M) costs and will extend equipment life.

**\*Metrics Available to Measure Performance:**

The success of this project will be measured by the final impact on the O & M Budget for processing biosolids.

**\*Retroactive:**

No

10: AOB - 8-22-18  
JRS - 57  
(1)

**Contract / Award Information**

Document Type: \_\_\_\_\_ Department Code: \_\_\_\_\_ Contract Number (i.e.,15-123): \_\_\_\_\_

Effective Date: \_\_\_\_\_ Termination Date: \_\_\_\_\_ Prior Contract Number (Synergen/CMS): \_\_\_\_\_

Expense Amount: \$\* \_\_\_\_\_  Revenue Amount: \$ \_\_\_\_\_

**\*Funding Source(s) required:**

Funding from General Fund?  Yes  No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

Contract is fully or partially funded with Federal Funds?  Yes  No

If Yes, is the Contract to a vendor or subrecipient? \_\_\_\_\_

Were insurance or indemnity clauses modified?  Yes  No

If Yes, attach Risk's approval.

Vendor is using a Social Security Number?  Yes  No

If Yes, attach the required form per Administrative Procedure 22-73.

**Amendment / Revised Award Information**

Document Type: CT Department Code: WW Contract Number (i.e.,15-123): 18-326

Amendment No.: One (1) AMS Version No.: Six (6)

Effective Date: 09/04/18 New Termination Date: \_\_\_\_\_

Prior Contract No. (Synergen/CMS): \_\_\_\_\_

Expense or  Revenue  Increase  Decrease Amount This Amendment: \$ 1,198,973.71

Is there revenue included?  Yes  No If Yes \$ \_\_\_\_\_

**\*Funding Source(s) required:** Regional Wastewater Reclamation Department Obligations

Funding from General Fund?  Yes  No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

**Grant/Amendment Information** (for grants acceptance and awards)  Award  Amendment

Document Type: \_\_\_\_\_ Department Code: \_\_\_\_\_ Grant Number (i.e.,15-123): \_\_\_\_\_

Effective Date: \_\_\_\_\_ Termination Date: \_\_\_\_\_ Amendment Number: \_\_\_\_\_

Match Amount: \$ \_\_\_\_\_  Revenue Amount: \$ \_\_\_\_\_

**\*All Funding Source(s) required:**

\*Match funding from General Fund?  Yes  No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

\*Match funding from other sources?  Yes  No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

\*Funding Source: \_\_\_\_\_

**\*If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?** \_\_\_\_\_

Contact: Keith E. Rogers Keith E. Rogers 08-15-18 Rogers 8-15-18

Department: Procurement May 15/18 8/15/18 Telephone: 724-3542

Department Director Signature/Date: [Signature] 8/16/18

Deputy County Administrator Signature/Date: [Signature] 8/16/18

County Administrator Signature/Date: [Signature] 8/20/18

(Required for Board Agenda/Addendum Items)

<b>PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT</b>	
<b>PROJECT:</b>	<b>Design-Build Services For: Tres Rios WRF Nutrient Recovery Project (3BBUMP)</b>
<b>CONTRACTOR:</b>	<b>HDR Constructors, Inc. 8404 Indian Hills Drive Omaha, NE 68114</b>
<b>CONTRACT NO.:</b>	<b>CT-WW-18-326</b>
<b>AMENDMENT NO.:</b>	<b>One (1)</b>
<b>FUNDING:</b>	<b>Regional Wastewater Reclamation Department Obligations</b>

<b>CONTRACT</b>	
<b>NO.</b>	<u>CT-WW-18-326</u>
<b>AMENDMENT NO.</b>	<u>01</u>
This number must appear on all invoices, correspondence and documents pertaining to this contract.	

<b>CONTRACT TERM:</b> 05/01/2018 - 12/31/2020	<b>ORIGINAL CONTRACT AMOUNT:</b>	\$	666,707.00
<b>TERMINATION PRIOR AMENDMENT:</b> NA	<b>PRIOR AMENDMENT(S):</b>	\$	-
<b>TERMINATION THIS AMENDMENT:</b> 12/31/2020	<b>AMOUNT THIS AMENDMENT:</b>	\$	1,198,973.71
	<b>REVISED CONTRACT AMOUNT:</b>	\$	1,865,680.71

**DESIGN-BUILD CONTRACT AMENDMENT**

**WHEREAS**, County and Design-Builder have entered into the Contract for the project referenced above; and

**WHEREAS**, construction of the project was anticipated to be conducted utilizing multiple Guaranteed Maximum Prices (GMPs); and

**WHEREAS**, design of the project has progressed to the point of selection of the technology provider and the specific equipment required; and

**WHEREAS**, long-lead equipment must now be ordered while design of the project is completed; and

**WHEREAS**, Guaranteed Maximum Price-1 (GMP-1) shall pertain to the purchase of long-lead equipment; and

**WHEREAS**, County and Design-Builder, pursuant to Article 3, have agreed to incorporate GMP-1 into the contract for the purchase of long-lead equipment; and

**WHEREAS**, COUNTY's acceptance of GMP-1 is subject to the understanding of the Parties that all elements of future GMPs, if any, are and remain negotiable; and

**WHEREAS**, COUNTY and DESIGN-BUILDER pursuant to Article 3 have agreed to increase the Contract amount as identified in GMP-1.

**NOW, THEREFORE**, it is agreed as follows:

- CHANGE:     **ARTICLE 3 – Scope of Services, Section 3.1****
- Replace** - Exhibit A – Preliminary Schedule **with** Exhibit A – Preliminary Schedule – GMP-1 (2 pages).
  - Add** - Exhibit C – Phase 2 – Construction Services – GMP-1 (23 pages) to the contract after Exhibit B – Phase 1 Scope of Services and Fee Schedule.

**CHANGE: ARTICLE 5 – Compensation and Payment**

**Add - as sentence 3 to Article 5.2:**

County's total payments to Design-Builder for Phase 2 Work – GMP-1, including sales taxes (if applicable), in the not-to-exceed amount of \$1,198,973.71.

**CHANGE: ARTICLE 6 - Insurance**

**Change Article 6.4.3.1 – Builder's Risk – Installation Floater**

From: Amount equal to the Contract Completed Value \$TBD.

To: Amount equal to the Contract Completed Value \$1,198,973.71.

This Amendment shall be effective on September 4, 2018.

All other provisions of the Contract, not specifically changed by this amendment, shall remain in effect and be binding upon the Parties.

IN WITNESS WHEREOF, the Parties have affixed their signatures to this Amendment on the dates written below.

APPROVED:

\_\_\_\_\_  
Chairman, Board of Supervisors

\_\_\_\_\_  
Date

DESIGN-BUILDER:

Tony Sneed  
Signature

TONY SNEAD VP.  
Name and Title (Please Print)

8/16/2018  
Date

ATTEST:

\_\_\_\_\_  
Clerk of the Board

APPROVED AS TO FORM:

Charles Wesselhoft  
Deputy County Attorney

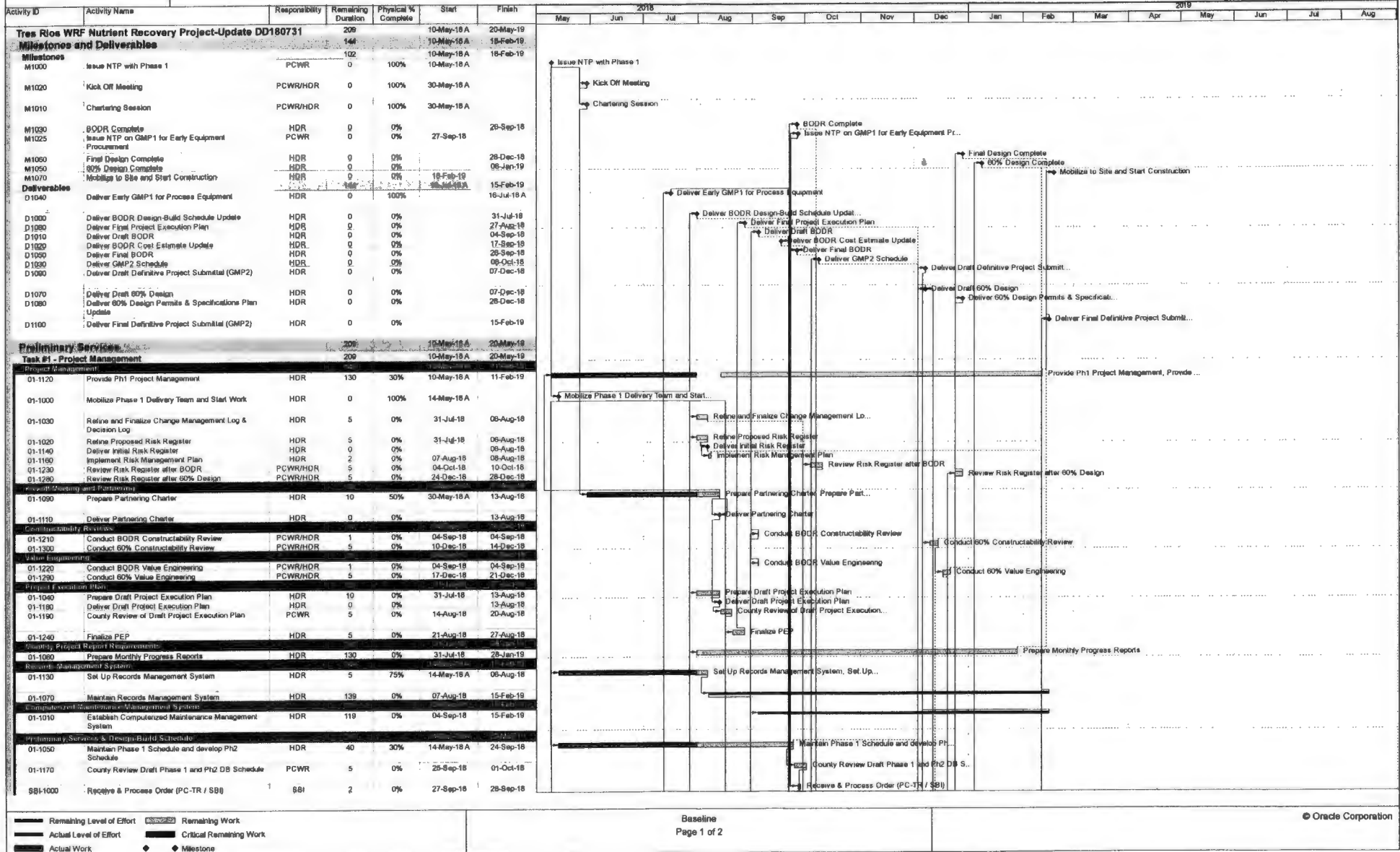
**CHARLES WESSELHOFT**

\_\_\_\_\_  
Printed Name

AUG 15 2018  
Date



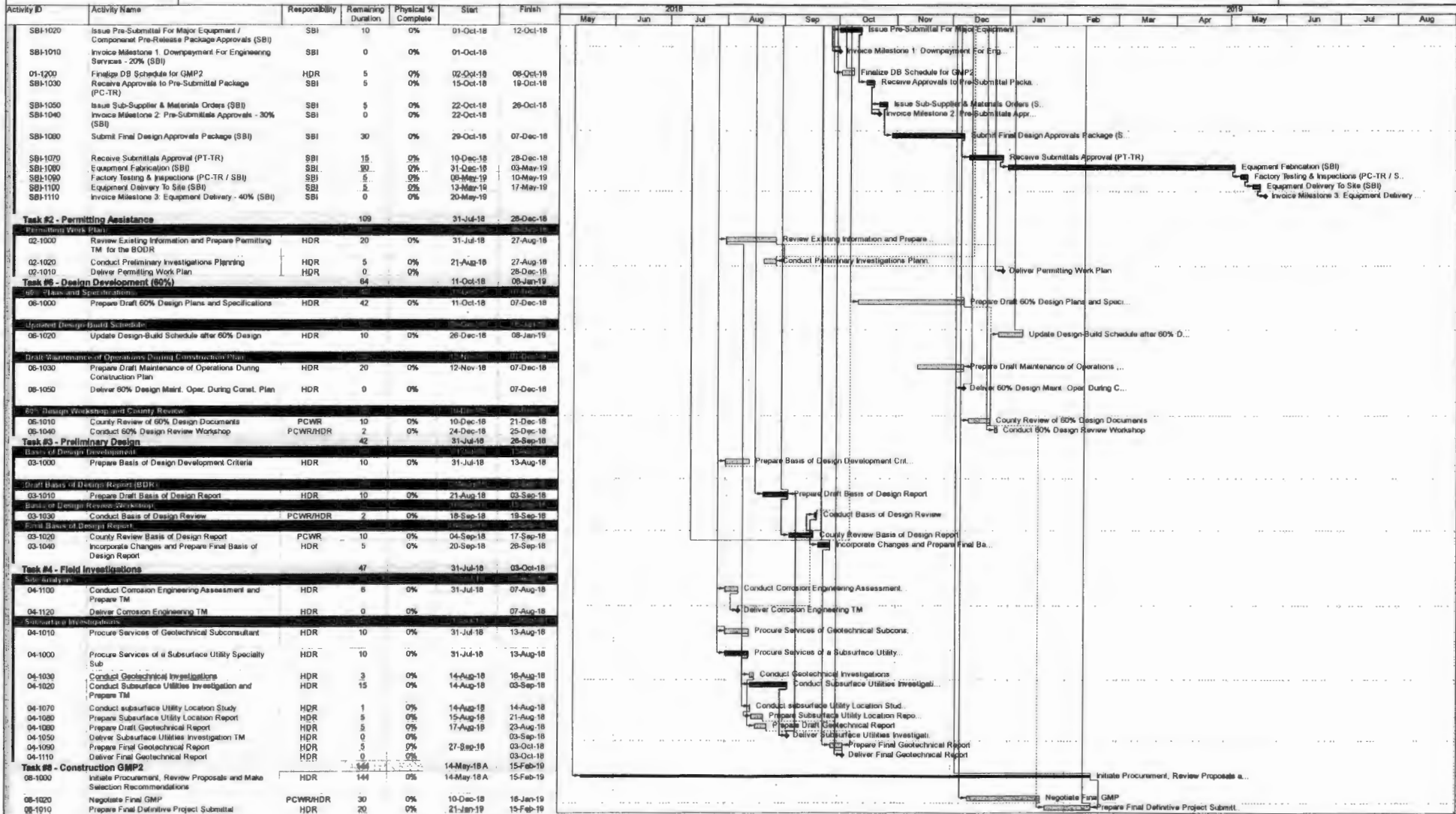
## Tres Rios WRF Nutrient Recovery Project-Update DD180731 Phase 1 Design, Preconstruction and Early Equipment Procurement





# Tres Rios WRF Nutrient Recovery Project-Update DD180731

## Phase 1 Design, Preconstruction and Early Equipment Procurement



Remaining Level of Effort    
  Remaining Work  
 Actual Level of Effort    
  Critical Remaining Work  
 Actual Work    
 ◆ Milestone



July 31, 2018  
Rev 3, 8-14-18

**Pima County**  
**Tres Rios WWTP**  
**Marana, AZ**  
**Attn: Bobby DeAngelo**

RE: Contract #CT-WW-18-326

Mr. DeAngelo,

HDR has prepared a request to establish the GMP for purchase of the primary process equipment for the above referenced contract. We have obtained bids from the two prequalified vendors with their complete inclusions and exclusions. These costs are included in the attachments. We have also included a schedule of values for the selected option. Please note we are also requesting an extension of time with this request of 90 days as detailed in the attached purchasing/submittal schedule.

HDR prepared detailed specifications which are listed out in the attachment (these were sent to Pima County previously) which were utilized for the quotes obtained for the process equipment contained within this GMP 1. These specification sections will be a part of the final design documents for the project, but were issued early to expedite the purchase of this key equipment.

During our past meetings we have worked with Pima County on preferred options so that the final proposals have an Apples to Apples comparison.

Attached exhibits show final costs, including engineering and support costs with details for your review. Along with each vendors proposals and proposed delivery schedules. HDR has prepared an updated project schedule to reflect this GMP 1 work.

The selected vendor (Schwing Bioset) has the specified technology to deliver the phosphorus removal system at the best cost to Pima County

We look forward to getting the Tres Rios project moving ahead

Regards

A handwritten signature in black ink that reads "Gary V. Binger".

Gary V. Binger  
HDR Constructors Inc.

Cc Tony Snead  
Bob Grippin

Scope of work  
Pima County Tres Rios  
Phosphorus Removal Technology Selection  
7-15-18

Scope of supply of the Phosphorus removal technology shall be in accordance with the specifications prepared by HDR Engineering attached to this packet.

The specification sections prepared by HDR to expedite the early purchase of the phosphorus removal equipment are listed below, and will be incorporated within the final project design documents when completed. Schwing Bioset and Airprex proposals are in accordance with these specifications noted here:

07 03 18	Pipe
26 20 00	Low Voltage AC induction motors
26 29 23	Low Voltage Adjustable Frequency Drives
40 27 02	Process Valves and Operators
40 42 19.04	Rotary Positive Displacement Blower
40 91 00	Instrumentation and Controls
40 99 90	Package Control Systems
44 42 56.13	Progressing Cavity Pumps
44 42 56.16	Peristaltic Hose Pump
46 73 73	Phosphorus Precipitation System
General conditions:	Issuance of MPA agreement
	Submittals
	RFI's
Design:	Submittal reviews
	RFI's



### **Assumptions, Clarifications and Exclusions**

The cost shown in the attached exhibits for an establishment of GMP 1 are inclusive of the following activities and scopes for early purchase of the process equipment only.

HDR costs to get the selected vendor under contract including all project controls costs, procurement costs, and reviews by engineering departments as necessary for submittal reviews are included as detailed within the attached exhibits.

Attached for Pima County is the final proposals from Schwing Bioaset which reflect several small scope changes from the vendors original quotations.

Roots blowers are now a part of the Schwing Bioaset final proposal

Defoaming system is a part of the Schwing Bioaset final proposal

Schwing Bioaset has submitted a guarantee letter to meet the bid requirements of the project (Attached for your review) HDR is working with Schwing Bioaset to ensure that Pima County and HDR are fully covered by their Guarantee.

The costs reflected within the GMP 1 included full Sales taxes which can be lowered by State of Arizona statute, should Pima County get any approvals necessary for the lower tax the tax values shown on this GMP 1 can be reduced along with any HDR Fees as necessary for the reduction. We are also showing \$32,000.00 dollars in Design Builder contingency funds to cover any small changes that may come up during submittal reviews so it would not have to go back for additional funding.



July 15, 2018  
Rev1. 8-14-18

Pima County  
Tres Rios WWTP  
Marana, AZ  
Attn: Bobby DeAngelo

RE: Contract #CT-WW-18-326  
Schedule of Values

Line	Schedule of values for GMP 1		Value
1	GC's		\$8,274.99
2	Engineering services for GMP 1		\$17,073.52
3	Schwing Bioset		\$1,013,200.00
4	Subtotal		\$1,038,548.51
5	Bond cost (on lines 4,7,9,)		\$17,245.91
6	Subtotal		\$1,055,794.42
7	HDR Fee 10% (lines 3,5)	10%	\$103,080.36
8	Subtotal		\$1,158,874.78
9	Taxes 6.5% of Marana 8.6 = 5.6% (lines 1,2,5,7)		\$8,098.93
10	Owner Contingency		\$32,000.00
11	<b>Total</b>		<b>\$1,198,973.71</b>
Note: there is no tax, bond or Fee on the owners contingency			

	NuReSys	Recommended
		<b>Carbon Steel</b>
<b>NuReSys</b>		\$ 1,013,200.00
Sales Taxes		\$ 8,098.93
NuReSys HDR Fee 10%		\$ 103,080.36
<b>Total Equip Cost</b>		<b>\$ 1,124,379.29</b>

	Airprex
	<b>Carbon Steel</b>
<b>Airprex</b>	\$ 1,349,000.00
Sales Taxes	\$ 8,098.93
Airprex HDR Fee 10%	\$ 137,141.83
<b>Total Equip Cost</b>	<b>\$ 1,494,240.76</b>

General conditions

	Unit Cost	Hours	
PIC	\$ 271.91	1	\$ 271.91
DB Project Manager	\$ 147.50	16	\$ 2,360.00
Pre Con Manager	\$ 107.00	16	\$ 1,712.00
SCADA (Cal)	\$ 117.52	16	\$ 1,880.32
Purchasing	\$ 88.83	12	\$ 1,065.96
Proj Controls	\$ 61.55	16	\$ 984.80
			<b>\$ 8,274.99</b>

General conditions

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PIC	\$ 271.91	1	\$ 271.91
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SCADA (Cal)	\$ 117.52	16	\$ 1,880.32
Purchasing	\$ 88.83	12	\$ 1,065.96
Proj Controls	\$ 61.55	16	\$ 984.80
			<b>\$ 8,274.99</b>

Engineering Services

Design Manager	\$ 198.81	24	\$ 4,771.44
Process Eng	\$ 195.18	16	\$ 3,122.88
Mech Eng	\$ 157.10	24	\$ 3,770.40
Elect. Eng	\$ 186.23	16	\$ 2,979.68
I & C Eng	\$ 151.82	16	\$ 2,429.12
			<b>\$ 17,073.52</b>

Engineering Services

Design Manager	\$ 198.81	24	\$ 4,771.44
Process Eng	\$ 195.18	16	\$ 3,122.88
Mech Eng	\$ 157.10	24	\$ 3,770.40
Elect. Eng	\$ 186.23	16	\$ 2,979.68
I & C Eng	\$ 151.82	16	\$ 2,429.12
			<b>\$ 17,073.52</b>

subtotal \$ 1,149,727.80

Bond cost \$17,245.91

Owners Contingency \$32,000.00

Total \$1,198,973.71

subtotal \$1,519,589.27

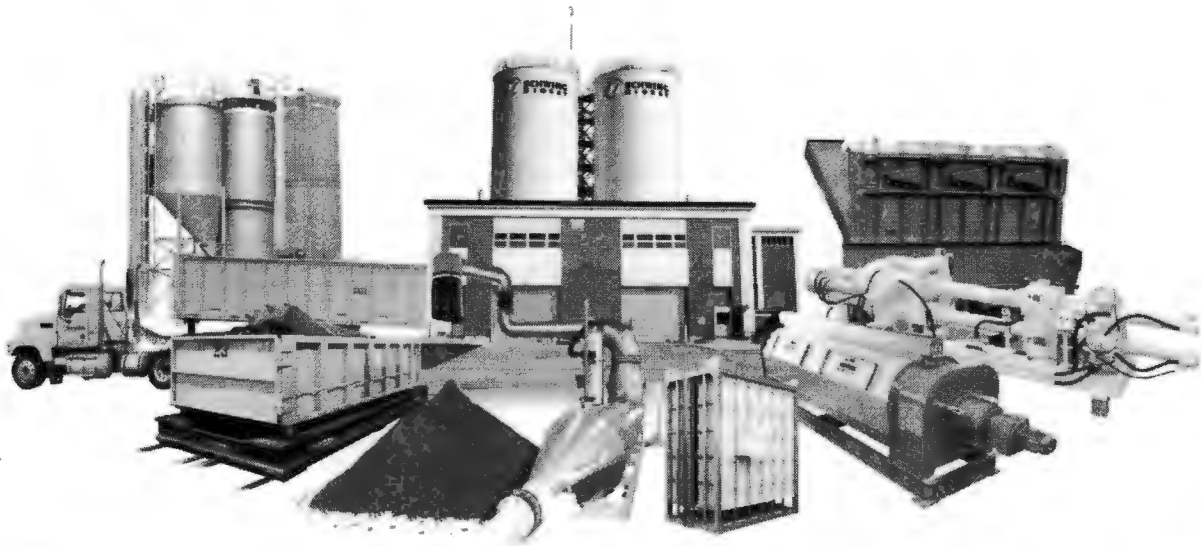
Bond cost \$22,418.38

Owners Contingency \$32,000.00

Total \$1,574,007.65

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# Proposal



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Prepared for:

*Gary Binger, Robert Grippin, Mario Benisch & Ty Morton  
HDR Engineering*

Project:

*Pima County / Tres Rios WRF  
Struvite Management*

*Engineered to Excel*



350 SMC DRIVE  
SOMERSET, WI 54025  
PH: (715) 247-3433  
FAX: (715) 247-3438  
www.schwingbioset.com

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A message from our President/CEO:

Thank you for your inquiry. We are honored you have chosen to discuss how a Schwing Bioset solution can solve your specific challenges. We feel you will soon discover our contributions will provide recognizable value, and our solution will provide the long-term peace of mind only felt when quality products have been selected. Along each step of the way, we are sure your confidence will build that you have made the right choice in selecting Schwing Bioset to assist with the development, design, and execution of your project.

Schwing Bioset has been solving the challenges faced by Wastewater Treatment Plants and Biosolids Management professionals for over thirty years from our simple beginnings as a piston pump supplier. Now in our fourth decade, we offer a wide range of products with best-in-class performance and reliability that we feel is unmatched by anyone in our industry.

Additionally, Schwing Bioset offers best-in-class aftermarket service and spare parts to support our ever expanding customer base. After all, without the support of quality trained service technicians and rapid spare parts delivery, the best technology in the world can't do its job if you can't turn it on.

But we aren't stopping here. Schwing Bioset continues to invest in Research & Development to continually improve our current products and to develop and indentify new technology that will help sustain our Cities for the next generations to come. Reducing power demands, recovering nutrients, increased efficiency, and creating value-added products from biosolids are just a few of the many ways we are evolving from our beginnings in this business as a pump supplier.

And speaking of our business, it is guided by the Core Values shared on the following page. These values act as a beacon to guide us into the future as we grow, keeping us in line with our original goals. Also included is your list of primary contacts into our company. As you communicate your challenges and work towards a solution with us, know that each of these individuals, along with everyone else in our Company, was hired with these Core Values as a benchmark. This team of experts, collectively known as Schwing Bioset, will be working diligently to make your project a success.

Continually looking to the future, we believe the solution offered in this proposal will prove to be your most cost effective and sustainable option to implement within your project. We look forward to your favorable review and to welcoming you to the hundreds of other Wastewater Plants whom already enjoy the benefits of a Schwing Bioset solution. We are *Engineered to Excel.*

Sincerely,  
Thomas Anderson  
President/CEO



## Core Values:

- ☛ Caring: Every employee has pride of ownership in their work with a genuine interest in our Client's success. We offer a workplace that allows a healthy balance between work and home life to inspire exceptional performance.
- ☛ Decent People: We are true professionals who respect the people we work with, both inside and outside of the company, and earn the respect of others.
- ☛ Dedicated Experts: We are comprised of the top talent in our respective fields, recruited and trained for the singular goal of contributing to the success of our Clients and our Company.
- ☛ Solutions Above and Beyond: We develop, provide, and support customer solutions that surpass our Client's expectations.
- ☛ Absolute Customer Satisfaction: We sleep well knowing our customers are happy.

## Your Schwing BioSet, Inc. Contacts:



### Northeast

Eric Wanstrom  
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[ewanstrom@schwingbioset.com](mailto:ewanstrom@schwingbioset.com)

### West

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### Central

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### International

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### Service

Paul Katka  
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[pkatka@schwingbioset.com](mailto:pkatka@schwingbioset.com)

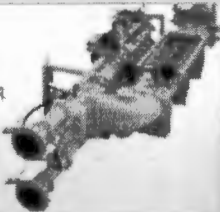
### Spare Parts

Brad Dopp  
715-350-6912  
[bdopp@schwingbioset.com](mailto:bdopp@schwingbioset.com)

## Capabilities:

(Click the images below to link to web page)

**PISTON PUMPS**  
MORE WASTEWATER PLANTS HAVE RELIED ON THE DURABILITY OF OUR PISTON PUMPS THAN ALL OTHER MANUFACTURERS COMBINED.




[LEARN MORE](#)

**SCREW PRESSES**  
OFFERING THE BEST DEWATERING PERFORMANCE IN THE MOST COMPACT FOOTPRINT WITH THE WIDEST RANGE OF MODEL SIZES AVAILABLE.




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**STRUVITE RECOVERY**  
MOST VERSILE PHOSPHORUS RECOVERY TECHNOLOGY AVAILABLE THAT CAN BE APPLIED ON DIGESTATE, CENTRATE, OR A COMBINATION OF BOTH.




[LEARN MORE](#)

**MEMBRANE BIO REACTOR (MBR)**  
CUSTOMIZABLE MEMBRANE TECHNOLOGY SYSTEMS FOR FILTERING WATER AT TREATMENT PLANTS.



[LEARN MORE](#)

**BIOSET PROCESS**  
THE MOST SIMPLE, RELIABLE, AND ECONOMIC CLASS A TECHNOLOGY AVAILABLE. PERIOD.



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**FLUID BED DRYING**  
VERSATILITY IN DESIGN AND SAFETY UNMATCHED BY OTHER DRYING TECHNOLOGIES TO PRODUCE CLASS A GRANULES.



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**SLIDING FRAMES & SILOS**  
ELEGANT DESIGN AND SIMPLE OPERATION RESULT IN THE MOST ECONOMICAL AND WORRY-FREE BIOSOLIDS STORAGE TECHNOLOGY.




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**LIVE BOTTOM HOPPERS**  
MULTI-SCREW LIVE BOTTOM HOPPER SYSTEMS COMPLETE WITH SINGLE OR VARIABLE SPEED DRIVES.



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**CONTAINER WAGONS**  
TAKE YOUR DUMPSTER HANDLING TO THE NEXT LEVEL WITH AN AUTOMATED HANDLING SYSTEM TO MINIMIZE LABOR AND INCREASE PLANT SAFETY.



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**SBI SOLUTIONS**  
PISTON PUMP, BIOSET PROCESS, & SCREW PRESS DEWATERING. A ONE-STOP SOLUTION FOR BIOSOLIDS HANDLING.



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**SERVICE**  
TRAINED TECHNICIANS AND FACTORY SUPPORT TO KEEP YOUR SYSTEM OPERATIONAL.



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MILLIONS OF DOLLARS OF INVENTORY ENSURES QUICK DELIVERY OF THE PART YOU NEED.



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FAX: (715) 247-3438  
www.schwingbioset.com

July 2, 2018

HDR Engineering  
3200 East Camelback Road, Suite 350  
Phoenix, AZ 85018-2311

Attn: Gary Binger, Robert Grippin, Mario Benisch, Ty Morton

Reference: Pima County / Tres Rios WRF  
Digestate Nutrient Sequestration Project

Subject: NuReSys / Schwing Bioset Proposal 2018004, Rev. 4  
Digestate Processing System – Without Struvite Harvest

Schwing Bioset Inc. (SBI) is pleased to provide the following revised proposal of our NuReSys system for the Tres Rios Project. We would like to highlight the following items in our proposal that we feel separate us from our competition, and why we should be the vendor of choice for this project:

**GENERAL COMMENTS:**

1. **Terms Agreement** - *SBI does NOT take any exceptions to the terms provided by HDR* for this project. SBI understands HDR Engineering is under a Performance Design contact and we are willing to shoulder our share of the delivery and performance risk on the project, per the terms provided.
2. **Installation** – For this revision, we are using a three (3) tank approach, consisting of two (2) CO<sub>2</sub> Release Tanks and one (1) Crystallization Reactor. Each of the two (2) CO<sub>2</sub> Release Tanks are rated for one-half the maximum flow to the Phosphate Precipitation System (400 GPM maximum flow to the system, with each CO<sub>2</sub> Release Tank rated for 200 GPM flow). The reasons for this three-tank system is to:
  - a. Provide maximum operational flexibility, such as when overall flow rates are low enough, one of the two CO<sub>2</sub> Release Tanks may be idled, thereby saving electrical power consumption at the idled blower unit.
  - b. Significantly reduce the overall continuous electrical power consumption for the system with the two CO<sub>2</sub> Release Tanks. According to our process modeling, the blower's brake horsepower (BHP) using a single CO<sub>2</sub> Release Tank is approx. 83 BHP at a feed rate of 300 GPM and approx. 96 BHP at 400 GPM. For a two CO<sub>2</sub> Release Tank configuration, these values are (per blower) 19 BHP at 300 GPM and approx. 25 BHP at 400 GPM (38 and 50 BHP, respectively, for both blowers in operation). This is an average savings of approx. 45.5 BHP (33.9 kW) for either flow rate (300 or 400 GPM). Assuming \$0.10 / kWh and that the equipment is operating 95% of the time throughout the year (8,322 operating hours per year).



this BHP differential represents an annual electrical power consumption savings of approx. \$28,236.00. Please note that this is at the nominal anticipated blower volumetric and pressure requirements and does not factor-in additional performance via design reserves on volume and pressure (which would substantially increase this annual electrical power savings). Over the life of the system, our approach for this project should yield the City substantial electrical power consumption savings, relative to a one-tank approach.

- c. Additionally, as the CO<sub>2</sub> Release Tanks are aerated, the lower liquid level via a two CO<sub>2</sub> tank approach will result in an overall smaller bubble diameter as the bubble rises through the liquid, thereby maximizing surface area for the more efficient removal of CO<sub>2</sub> from the sludge, relative to a single tank approach. As we are using one (1) Crystallization Reactor and two (2) CO<sub>2</sub> Release Tanks, we have included sufficient support steel for the two CO<sub>2</sub> Release Tanks in order to achieve a gravity flow arrangement from the CO<sub>2</sub> Release Tanks to the Crystallization Reactor. Please see the attached General Arrangement drawings for further details in this regard.
3. **Project Delivery/Execution** – SBI understands the short timeline nature of this project and we are uniquely positioned to help HDR deliver. Please refer to the attached Gantt chart, created by SBI project management, for details on this project. This compressed schedule has been developed to help minimize the loss of current fiscal year approved Budgeting. Given current project timing, we will be able to invoice for Engineering Services by 6/30/18 (20% per the attached project schedule).
  4. **Competitive Scope/Technical Flexibility** – Following, you will find a proposal for the SBI/NuReSys system for this project. The SBI package is exceptionally designed for the needs of this project and SBI will be competitively priced to offer maximum value to Pima County. Additionally, the equipment will offer the ability for future conversion to alternate configurations that treat centrate and/or include struvite harvesting.
  5. **Experience/Qualifications** - SBI has been involved in the manufacture and support of equipment for the waste water treatment industry for over thirty (30) years. On a 24-hr basis there are hundreds of examples of our equipment in operation across North America. SBI manufacturing and support is headquartered in our Somerset, WI facility. Service and parts are on 24-hour availability from our factory. Local service is also available to Pima County from our mobile technicians based out of Southern California.
    - a. **Pima County, Tres-Rios Experience** – SBI has existing process equipment we manufacture running successfully in the Biosolids Facility at Tres-Rios for almost 20 years. The existing piston pump and truck loading silos were provided by Schwing Bioset under separate contracts and Pima County has had a positive experience with the quality of SBI equipment, and the after-market parts and service that we offer. It is our understanding the Pima County intends to add an additional piston pump to their dewatering facility in the near-term as well. This NuReSys system will be supported by the same SBI team members the Tres-Rios staff works with today.
    - b. **NuReSys References** – SBI is offering the NuReSys System under a long term exclusive contract for North America. This systems effectiveness is proven, holding the second largest install base of Struvite Recovery Systems World Wide to its name.

#### **TECHNICAL COMMENTS:**

1. Per the information you have provided us, this proposal is based on processing digestate at a Design flow rate of 300 GPM and a 400 GPM Peak flow rate.

2. We have included a PFD to graphically show the overall process flow and unit operations, instrumentation, valves, etc. generally included in our scope of supply. We are additionally including a system General Arrangement drawing to illustrate the space envelope requirements in the plant.
3. Per the specifications for the project, we guarantee that the system will reduce free (dissolved) ortho-phosphate (PO<sub>4</sub>-P) between the inlet and out of the Crystallization Reactor by a minimum of 85% and that the effluent from our system will contain no more than 50 mg/L ortho-phosphate (PO<sub>4</sub>-P).
4. ~~We are currently awaiting Roots blower pricing for this application, but have received costing information from Kaeser for this project. As such, this proposal is based on using Kaeser as the selected aeration blower supplier for the CO<sub>2</sub> Release Tanks. However, as the blower specification is more written for a Roots brand blower than a Kaeser unit, Kaeser has presented several exceptions to the blower specification. Please see attachment "40-12-19.04\_Rotary PD Blower ROMP Spec-Markup" for details. Kaeser has also supplied us with an editable blower specification to use as a substitute blower specification should that be of interest to your team. Please see attachment "Blower specification\_Compak BBx9C to HB950C\_2015-2-16" for more details in this regard. We are still pressing Roots for a quotation and, should they present a reasonable alternative to the Kaeser equipment, we will provide you with details of the Roots blower for consideration (technical and / or commercial). This proposal is based on the supply of Roots blowers for the project. In order to expedite your review of the Roots offering, we are including an attachment to this email detailing the Roots scope of supply and their clarifications and / or exceptions to the provided specifications.~~
5. For this proposal, all factory testing will be per manufacturer standard.
6. With respect to field services, Schwing Bioset will act as manufacturer's representative for all equipment, with the exception of the aeration blowers. We will provide a blower manufacturer specific service technician for aeration blower startup and training.
7. With respect to the magnetic flowmeter (qty = 3 in our present scope of supply), Schwing Bioset has standardized on the Promag 50W model / series, which have provided us excellent service in wastewater applications such as this. As such, this proposal is based on the supply of Promag 50 W series / model magnetic flow meters, versus the 50P series / model specified.
8. Due to time constraints, we were not able to obtain spiral staircase costing using all aluminum materials. As such, this proposal is based on the staircase being fabricated with galvanized grating and aluminum handrails.
9. With respect to the anti-foam system, SBI typically deals with foaming within the vessels via water spray. As such, we typically do not require anti-foam chemical injection. However, we are providing optional pricing for a simple anti-foam dosing system in the pricing section of this proposal should the Client have a preference for this method of control should it be necessary.

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## NUTRIENT PROCESSING SUMMARY

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Process Medium:	Anaerobic Digestate	
Flow Rate:	Design: 300 GPM / Peak: 400 GPM	
Average Feed Temperature:	98.2 F / 36.8 C	
Operating Conditions:	24 hr / day, 7 day / week	
Solids Concentration:	2.7 wt% (range 2% to 3%)	
Parameter	NuReSys Feed	NuReSys Effluent
PO <sub>4</sub> -P Concentration:	280 mg/L	~40 mg/L

Total P Concentration:	Not Given	TBD																														
NH <sub>4</sub> -N:	1120 mg/L	~1,011 mg/L (An approx. 9.7% Reduction)																														
Alkalinity meq of CaCO <sub>3</sub> :	Not Given	TBD																														
pH:	Not Given	~7.6 to 8.0																														
PO <sub>4</sub> -P Conversion / Reduction Rate:	85% Minimum																															
Struvite System Balance:	<p>Maximum Struvite Production Rate (based on a theoretical 100% PO<sub>4</sub>-P to Struvite conversion rate and at above-noted flow rates per case):  8.000 lb/day at 300 GPM  10.664 lb/day at 400 GPM</p> <p>Estimated Struvite Production Rates (based on above conversion rates):  6.855 lb/day at 300 GPM  9.140 lb/day at 400 GPM  (produced Struvite assumed to be 100% captured by dewatering)</p>																															
<p>Electric Power:  Nominal Operating / Installed HP [kW]*</p> <p>*Assumes <u>BOTH</u> CO<sub>2</sub> Release Tanks are in Operation.</p>	<p>At 300 GPM:</p> <table border="1"> <tr> <th>BHP</th> <th>kW</th> </tr> <tr> <td>57.8</td> <td>43.1</td> </tr> </table> <p>At 400 GPM:</p> <table border="1"> <tr> <th>BHP</th> <th>kW</th> </tr> <tr> <td>74.5</td> <td>55.6</td> </tr> </table> <p>Installed HP [kW]: 184 [137]  (Does not count redundant units)</p>		BHP	kW	57.8	43.1	BHP	kW	74.5	55.6																						
BHP	kW																															
57.8	43.1																															
BHP	kW																															
74.5	55.6																															
<p>MgCl<sub>2</sub> Dosage Rate Expected Range:  Liters Per Day (LPD) / US Gallons Per Day (GPD), per Various Molar Dosing Rates (MDR)</p> <p>Calculations are Based on a 30 wt% MgCl<sub>2</sub> Solution at 68 F</p>	<p>At 300 GPM:</p> <table border="1"> <tr> <th>MDR</th> <th>1.4</th> <th>1.433</th> <th>1.467</th> <th>1.5</th> </tr> <tr> <th>LPD</th> <td>4,140</td> <td>4,238</td> <td>4,295</td> <td>4,393</td> </tr> <tr> <th>GPD</th> <td>1,094</td> <td>1,120</td> <td>1,135</td> <td>1,160</td> </tr> </table> <p>At 400 GPM:</p> <table border="1"> <tr> <th>MDR</th> <th>1.4</th> <th>1.433</th> <th>1.467</th> <th>1.5</th> </tr> <tr> <th>LPD</th> <td>5,520</td> <td>5,651</td> <td>5,727</td> <td>5,857</td> </tr> <tr> <th>GPD</th> <td>1,458</td> <td>1,493</td> <td>1,513</td> <td>1,547</td> </tr> </table>		MDR	1.4	1.433	1.467	1.5	LPD	4,140	4,238	4,295	4,393	GPD	1,094	1,120	1,135	1,160	MDR	1.4	1.433	1.467	1.5	LPD	5,520	5,651	5,727	5,857	GPD	1,458	1,493	1,513	1,547
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## NURESYS SYSTEM EQUIPMENT SUMMARY

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- A. CO<sub>2</sub> Release Tank – Adjusts pH of medium by removing carbon dioxide to increase pH for optimal struvite formation.
- B. Crystallization Reactor – Continuously-Stirred Tank Reactor provides environment for struvite crystal formation.
- C. Chemical Dosing Systems – Provides metered dosing of Magnesium Chloride (MgCl<sub>2</sub>).
- D. Process Controls – PLC based control logic for process automation and networking.

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### A. CO<sub>2</sub> RELEASE TANK

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<b>Quantity:</b>	<b>Two (2)</b>
Material of Construction:	Painted Carbon Steel <i>304 SS with upper four (4) ft strake and roof in 316 SS.</i>
Vessel Volume:	34,738 gallons [131.5 m <sup>3</sup> ] (NET liquid volume per vessel)
Vessel Height X Diameter:	14' Ø x 30'-6" tall (overall vessel height, not including top-side safety railing, roof pitch or clearance below vessel to grade)
Aeration Blower: Nominal BHP [kW]:  Installed HP [kW]:  Proposed Manufacturer: <del>Kaeser</del> <i>Roots</i> Model: <del>Compak EB291C</del> <i>EAX2-409T-150 60 HP</i>	At 300 GPM: 18.7 [13.9] per Blower, 37.4 [27.9] for 2 Blowers At 400 GPM: 24.8 [18.5] Per Blower, 49.7 [37.1] for 2 Blowers 60 [44.7]
CO <sub>2</sub> Release Tank Underflow Pump <sup>1</sup> : Nominal BHP [kW]: Installed HP [kW]:  Proposed Manufacturer: Netzsch Model: NM090SY01L07V	5.1 [3.8] 30 [22.4] <sup>2</sup>

<sup>1</sup>Active approx. 2 hr. / day for solids transfer operations from CO<sub>2</sub> Release Tank Vessels to the Crystallization Reactor.

<sup>2</sup>CO<sub>2</sub> Release Tank Transfer Pump pressure requirements are significantly less than the Crystallization Reactor's Transfer Pump. However, the Transfer Pump for the CO<sub>2</sub> Release Tank is being provided as the same model as for the Crystallization Reactor Transfer Pump in order to provide common units, maximize parts interchangeability and minimize spare parts warehousing requirements.

#### **Scope includes:**

1. Two (2) CO<sub>2</sub> Release Tanks for trimming pH of process stream with ancillary instruments and

equipment shipped separately for field erection.

2. One (1) air manifold (per vessel) with coarse diffuser nozzles provided near the bottom of the tank for air dispersion. *Manifold is provided in carbon steel 304SS materials with the same surface preparation and coating schedule as for the internal vessel surfaces.*
3. Two (2) lobe type positive displacement variable speed blowers (1 blower per vessel) to provide compressed ambient air to the CO<sub>2</sub> Release tanks. Blower package includes sound attenuation enclosure, air inlet filter, controls. *Please see Roots scope, clarifications and exceptions attachment.*
4. Two (2) progressing cavity (PC) pumps (one per CO<sub>2</sub> Release Tank) to intermittently transfer settled solids from the CO<sub>2</sub> Release Tanks to the inlet connection of the Reactor vessel. Pumps are provided with Netzsch's "Full Service in Place" (FSIP) technology to allow for servicing the pumps without removing them from the system. Pumps duty is significantly less stringent than as for the Crystallization Reactor, but are provided as the same model as for the Crystallization Reactor's transfer pump in order to maximize parts interchangeability and minimize spare parts warehousing.
5. Two (2) pH probes provided per vessel for monitoring sludge pH in the CO<sub>2</sub> Release Tanks.
6. Two (2) magnetic flowmeters (1 per CO<sub>2</sub> Release Tank) to monitor the influent material flow to each of the two vessels.
7. Two (2) automated control valves (one per CO<sub>2</sub> Release Tank) for throttling service are provided to balance and control influent flow to the two vessels.
8. One (1) tank level indicator per vessel provided.
9. One (1) gravity overflow connection per vessel to the Reactor.
10. Process control valves are electrically actuated. Equipment isolation valves supplied as manual types.
11. Vessels are each supplied with support steel to elevate the units to a height sufficient to achieve gravity flow from the CO<sub>2</sub> Release Tanks to the inlet nozzle connection of the Crystallization Reactor. *Support steel is provided in painted mild steel materials.*
12. Top-side access to the CO<sub>2</sub> Release Tanks is via a walkway from the Crystallization Reactor to one of these Release Tanks and a walkway from this Release Tank to the other Release tank (noting that the Crystallization Reactor is provided with a spiral staircase for top-side access). Please see the attached General Arrangement drawings for further details in this regard.
13. Both CO<sub>2</sub> Release Tanks will be provided with top-side safety railing, toe-boards, etc. per OSHA requirements.
14. Both CO<sub>2</sub> Release Tanks will be blasted and painted internally and externally. External surface preparation and finishing is per the specifications given. Internal surface preparation and coating will be per SBI standard SBIE-200.7 for corrosion protection and to minimize the potential for Struvite adhesion. Please see attachment "SBIE-200 Paint Std" for further details on these painting specifications.

SBI scope of supply does not include the following items:

- CO<sub>2</sub> Release Tank feed pump(s) or their motor starters / control.
- Odor control or treatment of odorous air from CO<sub>2</sub> Release Tank. Odor control can be offered as stand-alone package for our process but it is assumed the plant will have existing odor control to tie into.
- All interconnecting piping, fittings, etc., including bypass line.
- Water supply and pumps.

## B. CRYSTALLIZATION REACTOR

Quantity:	One (1)
Material of Construction:	Painted Carbon Steel <del>304 SS with upper four (4) ft strake and roof in 316 SS.</del>
Vessel Volume:	48.076 gallons [182 m <sup>3</sup> ] (NET liquid volume)
Vessel Height X Diameter:	14' Ø x 45'-9" tall (overall vessel height, not including top-side safety railing, roof pitch or clearance below vessel to grade)
Crystallization Reactor Underflow Pump <sup>1</sup> : Nominal BHP [kW]: Installed HP [kW]: Proposed Manufacturer: Netzsch Model: NM090SY01L07V	13.8 [9.9] at 300 GPM 17.7 [13.2] at 400 GPM 30 [22.4]
Tank Mixer: Nominal BHP [kW]: Installed HP [kW]: Proposed Manufacturer: Lightnin' Model: 16S3	1.50 [1.12] 2.25 [1.68] 3.0 [2.24]

<sup>1</sup>In continuous service duty for transferring Reactor effluent to the customer-supplied dewatering EQ tank.

### Scope includes:

1. Agitated Crystallization Reactor with circulating flow to promote struvite crystal formation and maximize Struvite precipitation.
2. Reactor includes one (1) roof-mounted variable speed agitator to promote blending of MgCl<sub>2</sub> with solution. Impeller(s) are coated with Halar to minimize the possibility of Struvite adhesion. Shaft is ~~supplied in 316 SS~~ blasted and coated for corrosion protection and to minimize Struvite adhesion.
3. One (1) progressing cavity (PC) pump to continuously transfer Reactor effluent to the customer-supplied dewatering EQ tank. Pump is provided with Netzsch's "Full Service in Place" (FSIP) technology to allow for servicing the pump without removing it from the system. Pump performance is based on an assumed 300 ft horizontal run from the pump to the EQ tank, an approx. 50 ft vertical lift and approx. 20 PSIG of miscellaneous fittings and piping losses (plus a conservative pressure design reserve).
4. Two (2) pH probes provided for monitoring sludge pH in the Reactor.
5. One (1) tank level indicator provided.
6. Reactor effluent flow (continuous) is via the Reactor's Underflow Pump. Vessel is equipped with an emergency overflow connection to prevent vessel flooding. Overflow disposition TBD (drain or other).
7. Unit is provided with one (1) electromagnetic flowmeter to monitor the flow of material from the Reactor to the dewatering EQ tank and modulate the operating speed of the underflow pump accordingly.
8. Process control valves are electrically actuated. Equipment isolation valves are manual types.
9. Vessel is supplied with support steel to elevate the unit to achieve approx. four feet of clearance

under the unit to grade. *Support steel is provided in painted mild steel materials.*

10. Unit is supplied with a spiral staircase for top-side access. An intermediate landing is also provided for access to the intermediate manway specified for the vessel. Staircase grating is galvanized steel. Handrails are in aluminum.
11. Crystallization Reactor will be provided with top-side aluminum safety railing, toe-boards, etc.
12. Unit will be will be blasted and painted internally and externally. External surface preparation and finishing is per the specifications given. Internal surface preparation and coating will be per SBI standard SBIE-200.7 for corrosion protection and to minimize the potential for Struvite adhesion. Please see attachment "SBIE-200 Paint Std" for further details on these painting specifications

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### C. CHEMICAL DOSING SYSTEM

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Quantity:	One (1)
MgCl <sub>2</sub> Dosing Pump:	
Nominal BHP [kW]:	0.50 [0.37]
Installed HP [kW]:	1.00 [0.75]
Proposed Manufacturer: Flowrox	
Model: LPP-D3/4	

#### Scope includes:

1. Two (2) variable speed MgCl<sub>2</sub> chemical metering pumps to be provided to control magnesium chloride flow into reactor (one in standby).
2. Pumps will be skidded with all accessories at the factory so that the skid is pre-piped and pre-wired to expedite field installation of the equipment.
3. As the pump skid will be provided with a calibration column, we will use the calibration data to develop a flow curve as a function of pump operational speed. As such, we are not providing a separate magnetic flowmeter for the MgCl<sub>2</sub> pump skid.
4. Process control valves are electrically actuated. Equipment isolation valves supplied as manual types.
5. Chemical dosing system to be furnished complete with dosing pump, pressure relief valve, pressure reducing valve, water flushing solenoid valve, isolation valves and all other necessary accessories for a completely-functioning system. All wiring and plumbing to and from the pump skid boundary is by others.

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### D. CONTROLS

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Quantity:	One (1)
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#### Scope includes:

1. Process Control Panel enclosure shall be NEMA 4X, 304 stainless steel, free standing.
2. External power supply shall be 480V / 3Ø / 60Hz. A circuit breaker disconnect switch shall be provided at the front of the panel.
3. Allen Bradley Compactlogix PLC shall be used to control all panel functions.
4. Touch-screen interface shall be used for all operator input, status monitoring, local controls, and alarm notification.

5. A POWER ON/OFF indicator light, EMERGENCY STOP pushbutton, ALARM indicator light, and ALARM RESET pushbutton shall be provided at the front of the panel.
6. Variable speed drives and / or starters for the following equipment shall be furnished by Schwing Bioset and placed in a separate, ventilated enclosure from the control panel enclosure:
  - CO<sub>2</sub> Release Tank Aeration Blowers (VFD), Qty = 2.
  - CO<sub>2</sub> Release Tank Underflow / Solids Transfer Pumps (VFD), Qty = 2.
  - Crystallization Reactor Mixer (VFD), Qty = 1.
  - Crystallization Reactor Underflow / Solids Transfer Pump (VFD), Qty = 1.
  - Magnesium Chloride Dosing Pump (Integral VFD), Qty = 2.

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## **SPARE PARTS**

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One (1) set of "typical One-year spares" will be provided, as follows:

1. One (1) set of spare parts for the CO<sub>2</sub> Release Tank Blowers, consisting of one (1) V-belt set, one (1) filter element set and five (5) quarts of synthetic oil.
2. One (1) set of spare parts for the CO<sub>2</sub> Release Tank and Reactor underflow / solids transfer pumps (common spares to both units), consisting of one (1) stator, one (1) connecting rod with pin joints, one (1) packing set and one (1) bearing.
3. One (1) set of spare parts for the MgCl<sub>2</sub> Dosing Pump, consisting of two (2) spare hose assemblies and one (1) spare roller assembly.
4. One (1) set of electrical spares per specification section 40 99 90, paragraph 1.05.

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## **SPECIAL TOOLS**

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No special tools required or provided.

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## **FIELD SERVICE**

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Schwing Bioset shall provide a NuReSys systems specialist to supervise system installation, assist start-up and / or to train the owner's personnel in the operation and maintenance of the Schwing Bioset supplied equipment.

The NuReSys systems specialist shall be made available for up to Sixteen (16) days over up to Four (4) trips.

If required, additional service may be purchased at the prevailing rates at the time service is performed. Current service rates are as follows:

- US \$150.00 per hour – standard eight (8) hour day.
- US \$225.00 per hour – overtime (over and above the standard eight (8) hour day.)
- US \$300.00 per hour – Sundays and holidays.
- Travel and per diem (i.e., hotel, food, car) expenses at cost + 15%.



Schwing Bioset shall provide a trained service technician and / or Electrical Engineer to supervise system installation, assist start-up, optimize system controls and / or to train the owner's personnel in the operation and maintenance of the Schwing Bioset supplied equipment.

The service technician and / or Electrical Engineer shall be made available for up to Sixteen (16) days over Four (4) trips (total, not each).

If required, additional service technician and / or Electrical Engineer assistance may be purchased at the prevailing rates at the time service is performed. Current service rates are as follows:

- US \$137.00 per hour – standard eight (8) hour day.
- US \$205.50 per hour – overtime (over and above the standard eight (8) hour day.)
- US \$274.00 per hour – Sundays and holidays.
- Travel and per diem (i.e., hotel, food, car) expenses at cost + 15%.

Schwing Bioset shall provide a ~~Kaeser~~ Roots Blower service technician for on-site installation inspection, pre-startup checks, startup and customer training. The technician shall be made available for up to Three (3) days over up to One (1) trip. If required, additional service may be purchased at ~~Kaeser's~~ Roots prevailing rates at the time service is performed.

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**SCOPE OF SUPPLY SUMMARY**

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A. CO <sub>2</sub> Release Tank, with Accessories	Two (2) Units
B. Crystallization Reactor, with Accessories	One (1) Unit
C. Chemical Dosing System, with Accessories	One (1) Lot
D. Controls	One (1) Lot
Field Services	One (1) Lot

Total Base price for above scope of supply..... **\$ 999,700.00**

Optional Pricing: Anti-Foam Chemical Dosing System: Consisting of one (1) approx. 275 gallon tote of anti-foam chemical (freestanding, not skidded), one (1) manual tote shutoff valve, two (2) gear or piston pumps (each rated for 3 LPH flow at approx. 50 PSIG), four (4) manual isolation valves, one (1) NEMA 4X pump enclosure, one (1) back-flow / check valve, one (1) set of factory-installed hoses / tubing / piping / cabling (for chemicals, electrical and / or controls) and one (1) approx. 40" x 48" HDPE or FRP skid / base. All items noted (except for the chemical tote) will be factory-installed on the skid and pre-piped / pre-wired for expedited installation (installation by others). To add the Anti-Foam Chemical Dosing System to our above-noted Base scope of supply above, please ADD ..... **\$ 13,500.00**

All prices are quoted:  
 DAP Jobsite, Tucson, AZ, USA  
 Price is FIRM for thirty (30) days.  
 Price is in US dollars

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**SUBMITTALS**

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As the O&M specification has not been issued yet, this proposal is based on SBI's standard O&M set, as follows:

Pre-Submittal for Major Equipment & Components Pre-Release Package Approvals shall be delivered two (2) weeks (or less) after receipt of approved order. Four (4) hard copies and one (1) electronic version (CD or DVD format) shall be furnished.

Final Designs Approvals will be provided approx. 6 weeks after receipt of customer's comments / approvals of the SBI Pre-Submittals. Four (4) hard copies and one (1) electronic version (CD or DVD format) shall be furnished.

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**O&M MANUALS**

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Five (5) final copies shall be furnished in print form, 2 electronic copies (CD, DVD, or via FTP site).

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**DELIVERY**

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Equipment shall be delivered approx. eighteen (18) to twenty (20) weeks after final design submittals are approved.

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**PAINTING**

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Equipment shall be provided with manufacturer's standard coating system, except as noted above.

Stainless steel surfaces shall be unpainted. Does not include blasting for uniform appearance. All field touch-up painting of equipment shall be performed by installing contractor.

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**EQUIPMENT AND SERVICES TO BE PROVIDED BY OTHERS**

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1. Installation, offloading, field assembly, and erection of the Schwing Bioset, Inc. (SBI) supplied equipment.
2. Storage of equipment and/or costs for long-term storage (longer than 3 months).
3. Racks, trays or supports for hydraulic lines, sludge lines, or control wiring.
4. Miscellaneous metal.
5. Field painting of any of the SBI supplied equipment. All touch up painting required due to normal wear and tear during shipping shall the responsibility of others.
6. Field wiring of any kind.
7. Labor and material for preliminary, final field, system performance, and system integrity tests (SBI shall supervise only).

8. It is the contractor's responsibility to field verify building dimensions, equipment access, and that equipment layout/dimensions are suitable to accommodate the SBI supplied equipment.
9. Water and drain piping of any kind.
10. Spare parts not specifically mentioned in this scope.
11. Anchor bolts, nuts, and washers for the SBI supplied equipment.
12. Cost for Engineer, Owner, or Contractor to witness any shop test.
13. Additional costs to supply alternate products other than specifically mentioned in this scope.
14. Networking, hardware, communication modules, or power supplies not specifically mentioned in this scope.
15. PLC programming software or software licenses not specifically mentioned in this scope.
16. Field service technicians or special tools not specifically mentioned in this scope.
17. Motor starters or variable frequency drives not specifically mentioned in this scope.
18. After equipment is delivered to site, disposal of any hydraulic oil shall be by others.
19. Spare parts not specifically mentioned in this scope.

Thank you for the opportunity to submit a proposal for Tres Rios project. We look forward to HRD's successful review of this proposal. I encourage you to contact any of our many customers. You will find Schwing Bioiset is a well-established manufacturer of the highest quality equipment, who stands behind all our products 100% with service and support.

If you have any further questions, please feel free to contact me at (612) 867-4429, fax (203) 744-2837, or email [jdivalentino@schwingbioiset.com](mailto:jdivalentino@schwingbioiset.com).

Yours Truly,  
**Schwing Bioiset, Inc.**



Joshua R. DiValentino  
Western Regional Sales Manager

cc: Lisa Snyders, P.E. – The Coombs Hopkins Company

Attachments: 2018004 PFD Digestate WO Harvest  
2018004 Equipment GA  
2018004 Project Schedule  
SBIE-200 Paint Std  
40 42 19.04\_Rotary PD Blower\_ROMP Spec Markup  
~~Blower specification\_Compak BBx9C to HB950C\_2015-2-16~~  
*Roots Scope Clarifications and Exceptions 06-15-2018*

## Schwing Bioset, Inc. New Equipment Terms and Conditions

**1. Acceptance and Prices.** These terms and conditions are an integral part of Schwing Bioset, Inc. ("Seller")'s firm offer and form the basis of any agreement resulting from Seller's proposal. The proposal is subject to acceptance within thirty days from its date, and the prices are subject to change without notice prior to acceptance by the party to whom this offer is made, or its authorized agent ("Buyer"). Following acceptance without addition of any other terms and conditions of sale or any other modification by Buyer, the prices stated are firm provided that notification of release for immediate production and shipment is received at Seller's factory not later than five months from Seller's submittals. If through no fault of Seller, the order is not released for manufacture within 5 months from Seller's submittals, Seller reserves the right to increase the price of the order. Any delay in shipment caused by Buyer's actions will subject prices to increase equal to the percentage increase in list prices during that period of delay. In no event will prices be decreased.

Acceptance will have occurred if Buyer signs Seller's proposal, issues written order pursuant to submission of proposal, or permits or accepts performance, or other commercially reasonable manner. If Buyer's order is an acceptance of Seller's proposal, Seller's return of such order with these terms and conditions attached serves as an acknowledgement and confirmation of receipt of order. If order is expressly conditioned upon Seller's acceptance or assent to terms other than those expressed herein, return of order by Seller with these terms and conditions attached serves as notice of objection to such terms and a counter-offer to provide equipment in accordance with scope and terms of the original proposal. If Buyer does not reject or object within ten days, counter-offer will be deemed accepted. If Buyer permits or accepts performance, such terms will be deemed accepted. In order for Seller's acknowledgement of order to be valid it must be made at the corporate level.

**2. Performance.** Seller shall be obligated to furnish only the goods described in Seller's proposal, and submittal data (if such data is issued in connection with this order), and Seller may rely on the acceptance of proposal and submittal data as acceptance of the suitability of the equipment for the particular project. Seller's duty to perform under any order and the price thereof is dependent upon Seller's corporate approval of the order and Seller shall not be responsible for delays in contract formation caused by inclusion of new or different terms by Buyer, or delays in credit approval due to delayed or incomplete credit information by Buyer. Seller's duty to perform is contingent upon the non-occurrence of an Event of Force Majeure. If the order is not approved at the corporate level, Seller may elect to delay performance or to renegotiate with Buyer. If Seller and Buyer are unable to agree on revised prices or terms, the order may be canceled without any liability. If Seller shall be unable to carry out any material obligation under this Agreement due to an Event of Force Majeure, this Agreement shall at Seller's election (i) remain in effect but Seller's obligations shall be suspended until the uncontrollable event terminates or (ii) be terminated upon ten (10) days' notice to Buyer in which event Buyer shall pay Seller for all parts of the Work furnished to the date of termination. An "Event of Force Majeure" shall mean any cause or event beyond the control of Seller. Without limiting the foregoing, "Event of Force Majeure" includes acts of God, acts of terrorism, war or the public enemy, flood, earthquake, tornado, storm, fire, civil disobedience, pandemic insurrections, riots, labor disputes, labor or material shortages, sabotage, restraint by court order or public authority (whether valid or invalid), and action or non-action by or inability to obtain or keep in force the necessary governmental authorizations, permits, licenses, certificates or approvals if not caused by Seller, and the requirements of the United States Government in any manner that diverts either the material or the finished product to the direct or indirect benefit of the Government.

**3. Taxes.** No taxes are included in this quote/order. The amount of any applicable present or future state/local sales/use tax or other government charge upon the production, sale, shipment, and/or use of the goods covered by this quotation shall be paid directly to the taxing authorities by purchaser, and paid tax receipts will be furnished to Schwing Bioset upon request, unless purchaser provides us with an exemption certificate acceptable to the taxing authorities.

**4. Warranty and Liability.** Seller warrants its new equipment against defects in material and workmanship under normal use and service, and which shall not have been subject to misuse, negligence, or accident, for a period of one (1) year that shall commence upon startup or ninety (90) days from delivery, whichever occurs first. Seller will replace or repair free of charge F.O.B. jobsite, such part or parts thereof as in its sole judgment shall be deemed defective. Due to the specialized nature of Seller material handling equipment, Seller field service technicians shall not be restricted in adjusting or repairing Seller furnished equipment, regardless of collective bargaining agreements entered into by other parties. This warranty shall not apply to any equipment manufactured by us which shall have been loaded or operated beyond its rated capacity as specified by Seller. Damage resulting from improper installations or alterations outside our plant will be considered as misuse and not as a defect. Certain parts of the equipment provided by Seller such as the pumping cylinders, valves, pumping rams, screw flights, sliding frame components, trough liners for screws etc. in contact with material, are subject to normal wear. This normal wear is not covered under this warranty. Seller shall not be liable for consequential damages or injuries of any kind, or for expenses, losses, or delays incidental to any failure. Seller reserves the right to make changes and improvements in its product without incurring any obligation to install any such changes or improvements in its products previously manufactured. All warranty is void if equipment is not serviced by a Schwing Bioset certified technician from delivery through termination of warranty period. In the event of a defect or issue with Schwing Bioset supplied equipment, buyer shall notify Schwing Bioset in writing of said defect and offer Schwing Bioset reasonable opportunity to cure. This warranty is in lieu of any other warranty expressed or implied or any other obligation or liability on the part of Seller, and no other person is authorized to make any representations or warranties beyond those herein expressed. Without limiting the generalities of the foregoing, **THERE IS NO IMPLIED WARRANTY OF MARKETABILITY AND NO IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

**5. Indemnity.** Seller agrees to indemnify and hold Buyer harmless from the amount of any final judgment entered against Buyer for injury or death to any person (including employees of Buyer and Seller) or damage to tangible property of Buyer and based solely upon: (a) Seller's defective manufacture of equipment sold to Buyer; (b) Seller's violation of any applicable laws, rules or regulations in connection with the manufacture of said equipment; or (c) Seller's gross negligence or intentional misconduct. The duty to indemnify will continue in full force and effect, notwithstanding the expiration or early termination hereof, with respect to any claims based on facts or conditions that occurred prior to expiration or termination.

**7. Insurance.** Seller agrees to maintain the following insurance during the term of the contract with limits not less than shown below and will, upon request from Buyer, provide a Certificate of Insurance evidencing this coverage:

Commercial General Liability	\$2,000,000 per occurrence
Automobile Liability	\$2,000,000 CSL
Workers Compensation	Statutory Limits

In the event Seller agrees to name Buyer or others as an additional insured, Seller will do so but only under its primary Commercial General Liability policies to the extent of the indemnity obligation assumed herein. In no event does Seller waive its right of subrogation.

**8. Liability Disclaimer. NOTWITHSTANDING ANY PROVISION TO THE CONTRARY, IN NO EVENT SHALL SELLER BE LIABLE FOR ANY SPECIAL, INCIDENTAL, LIQUIDATED, CONSEQUENTIAL (INCLUDING WITHOUT LIMITATION LOST REVENUE OR PROFITS), OR PUNITIVE DAMAGES.** This exclusion applies regardless of whether such damages are sought based on breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory. Should Seller nevertheless be found liable for any damages they shall be limited to the purchase price of the equipment under the order. SELLER DISCLAIMS ANY LIABILITY FOR DAMAGES OF ANY KIND (WHETHER DIRECT OR INDIRECT) ARISING FROM MOLD, FUNGUS, BACTERIA, MICROBIAL GROWTH, OR ANY OTHER CONTAMINATES OR AIRBORNE BIOLOGICAL AGENTS.

**9. Patent Indemnity.** The Seller shall protect and indemnify the Buyer from and against all claims, damages, judgments and loss arising from infringement or alleged infringement of any United States patent by any of the articles or material delivered hereunder, provided that in the event of suit or threat of suit for patent infringement, Seller shall promptly be notified and given full opportunity to negotiate a settlement. Seller does not warrant against infringement by reason of Buyer's design of the articles or the use thereof in combination with other materials or in the operation of any process. In the event of litigation Buyer agrees to reasonably cooperate with Seller. In connection with any proceeding under the provisions of this Article all parties concerned shall be entitled to be represented by counsel at their own expense.

**10. Shipment Dates.** Shipment dates are estimates only. No valid contract may be made to ship within or at a specified time unless in writing, signed by an authorized signatory of Seller. Shipments shall be f.o.b. factory or warehouse at named shipping point with title and risk of loss passing to Buyer upon delivery to the carrier unless quoted otherwise and stated as such in our formal written offer. Seller shall not be liable for damages of any kind including liquidated, consequential, and/or incidental.

**11. Cancellation.** If, following acceptance of proposal by Buyer, all or any portion of the resulting order is canceled by Buyer without default on the part of Seller or without Seller's written consent, Buyer shall be liable to Seller for cancellation charges including but not limited to Seller's incurred costs and such profit as would have been realized by Seller from the transaction had the agreement not been breached by Buyer.

~~**12. Payment.** Payment terms are 10% due at time of order, 10% due at time of submittal approval, 75% due at time goods are shipped, and 5% due upon acceptance of goods, not to exceed 90 days from shipment, unless otherwise expressly agreed to in writing by Seller. Seller reserves the right to add to any account outstanding for more than 30 days a service charge the lesser of 1-1.2% of the principal amount due at the end of each month, or the maximum allowable legal interest rate. Buyer shall be liable to Seller for all collection expenses, including reasonable attorney's fees and court costs, incurred by Seller in attempting to collect any amounts due from Buyer. If requested, Seller will provide appropriate lien waivers upon receipt of payment. Seller reserves the right to suspend or terminate performance in the event of Buyer's non-payment.~~

**13. Returns.** Products may be returned only with permission of Seller and shall be subject to a 25% restocking fee.

**14. Applicable Law.** Any agreement resulting from Seller's proposal will be governed and construed according to Minnesota law.

**15. U.S. Government Work. This provision applies only to indirect sales by Seller to the US Government.** If the Work is in connection with a U.S. Government contract, Buyer certifies that it has provided and will provide current, accurate, and complete information, representations and certifications to all government officials, including but not limited to the contracting officer and officials of the Small Business Administration, on all matters related to the prime contract, including but not limited to all aspects of its ownership, eligibility, and performance. Anything herein notwithstanding, Seller will have no obligations to Buyer unless and until Buyer provides Seller with a true, correct and complete executed copy of the prime contract. Upon request Buyer will provide copies to Seller of all requested written communications with any government official related to the prime contract prior to or concurrent with the execution thereof, including but not limited to any communications related to Buyer's ownership, eligibility or performance of the prime contract. Buyer will obtain written authorization and approval from Seller prior to providing any government official any information about Seller's performance of the work that is the subject of this offer or agreement, other than this written offer or agreement.



350 SMC DRIVE  
SOMERSET, WI 54025  
PH: (715) 247-3433  
FAX: (715) 247-3438  
www.schwingbioset.com

August 14, 2018

HDR Engineering  
3200 East Camelback Road, Suite 350  
Phoenix, AZ 85018-2311

Attn: Gary Binger, Robert Grippin, Mario Benisch, Ty Morton

Reference: Pima County / Tres Rios WRF  
Digestate Nutrient Sequestration Project

Subject: NuReSys / Schwing Bioset Proposal 2018004, Rev. 5  
Digestate Processing System – Without Struvite Harvest

Gentlemen,

This letter serves to modify the payment terms offered in the above referenced tender to the terms noted below:

**12. Payment.** Payment terms are 10% due upon submission of submittals, 10% due at time of submittal approval, 70% due upon delivery, and 10% due upon startup, not to exceed 120 days from shipment, unless otherwise expressly agreed to in writing by Seller. Seller reserves the right to add to any account outstanding for more than 30 days a service charge the lesser of 1-1/2% of the principal amount due at the end of each month, or the maximum allowable legal interest rate. Buyer shall be liable to Seller for all collection expenses, including reasonable attorney's fees and court costs, incurred by Seller in attempting to collect any amounts due from Buyer. If requested, Seller will provide appropriate lien waivers upon receipt of payment. Seller reserves the right to suspend or terminate performance in the event of Buyer's non-payment.

If you have any further questions, please feel free to contact me at (612) 867-4429, fax (203) 744-2837, or email [jdivalentino@schwingbioset.com](mailto:jdivalentino@schwingbioset.com).

Yours Truly,  
**Schwing Bioset, Inc.**

A handwritten signature in black ink, appearing to read "Joshua R. DiValentino".

Joshua R. DiValentino  
Western Regional Sales Manager

cc: Lisa Snyders, P.E. – The Coombs Hopkins Company



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
08/16/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Willis of Minnesota, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	<b>CONTACT NAME:</b> PHONE (A/C No. Ext): 1-877-945-7378      FAX (A/C No.): 1-888-467-2378 E-MAIL ADDRESS: certificates@willis.com	
	<b>INSURER(S) AFFORDING COVERAGE</b> NAIC #	
<b>INSURED</b> HDR Constructors, Inc. 8404 Indian Hills Drive Omaha, NE 68114	<b>INSURER A:</b> Liberty Mutual Fire Insurance Company      23035	
	<b>INSURER B:</b> Liberty Insurance Corporation      42404	
	<b>INSURER C:</b> Great American E & S Insurance Company      37532	
	<b>INSURER D:</b>	
	<b>INSURER E:</b>	
<b>INSURER F:</b>		

**COVERAGES**      **CERTIFICATE NUMBER:** W7205306      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability	Y	Y	TB2-641-444950-038	06/01/2018	06/01/2019	EACH OCCURRENCE \$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000
A	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	AS2-641-444950-048	06/01/2018	06/01/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000
							BODILY INJURY (Per person) \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED    RETENTION \$	Y	Y	TH7-641-444950-068	06/01/2018	06/01/2019	EACH OCCURRENCE \$ 5,000,000
							AGGREGATE \$ 5,000,000
B	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	Y	WA7-64D-444950-018	06/01/2018	06/01/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
							E.L. EACH ACCIDENT \$ 1,000,000
C	Contractors Pollution Liability	Y		CSE E105888 01	01/16/2018	01/16/2019	E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
							Per Incident \$1,000,000
							Aggregate \$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
Re: Design-Build Services for Tres Rios WRF Nutrient Recovery Project (3BBUMP).

Certificate Holder is named as Additional Insured on General Liability, Automobile Liability and Umbrella Liability on a Primary, Non-contributory basis where required by written contract. Waiver of Subrogation applies on General Liability, Automobile Liability, Umbrella Liability and Workers Compensation where required by written contract. Umbrella policy Follows Form of the underlying General Liability, Automobile Liability, and Employers Liability.

<b>CERTIFICATE HOLDER</b>  Pima County Procurement Department Design & Construction Div. 130 W Congress, 3rd floor Tucson, AZ 85701	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## DESIGNATED LOCATION(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Location(s):

**All locations owned by or rented to the Named Insured**

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which can be attributed only to operations at a single designated "location" shown in the Schedule above:
1. A separate Designated Location General Aggregate Limit applies to each designated "location", and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
  2. The Designated Location General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of:
    - a. Insureds;
    - b. Claims made or "suits" brought; or
    - c. Persons or organizations making claims or bringing "suits".
  3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Location General Aggregate Limit for that designated "location". Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Location General Aggregate Limit for any other designated "location" shown in the Schedule above.
  4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Location General Aggregate Limit.

- B.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which cannot be attributed only to operations at a single designated "location" shown in the Schedule above:
1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
  2. Such payments shall not reduce any Designated Location General Aggregate Limit.
- C.** When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Location General Aggregate Limit.
- D.** For the purposes of this endorsement, the **Definitions** Section is amended by the addition of the following definition:
- "Location" means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.
- E.** The provisions of Section III – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

### SCHEDULE

**Designated Construction Project(s):**

**All construction projects not located at premises owned, leased or rented by a Named Insured**

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
  2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of:
    - a. Insureds;
    - b. Claims made or "suits" brought; or
    - c. Persons or organizations making claims or bringing "suits".
  3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
  4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

- B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I – Coverage A, and for all medical expenses caused by accidents under Section I – Coverage C, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
  2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.
- D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E. The provisions of Section III – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED – OWNERS, LESSEES OR  
CONTRACTORS – SCHEDULED PERSON OR  
ORGANIZATION**

This endorsement modifies insurance provided under the following:

**COMMERCIAL GENERAL LIABILITY COVERAGE PART**

**A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

**B.** With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

**C.** With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

**SCHEDULE**

<b>Name Of Additional Insured Person(s) Or Organization(s)</b>	<b>Location(s) Of Covered Operations</b>
<b>Any person or organization with whom you have agreed, through written contract, agreement or permit to provide additional insured coverage.</b>	
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

**SCHEDULE**

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
Any person or organization to whom or to which you are required to provide additional insured status in a written contract, agreement or permit except where such contract or agreement is prohibited.	Any location where you have agreed, through written, contract, agreement or permit, to provide additional insured coverage for completed operations.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

**A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

**B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

Policy Number TB2-641-444950-038  
Issued by

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**OTHER INSURANCE AMENDMENT - SCHEDULED ADDITIONAL INSURED**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART  
LIQUOR LIABILITY COVERAGE PART

**Schedule**

**Person or Organization:** Where required by written contract.

If you are obligated under a written agreement to provide liability insurance on a primary, excess, contingent, or any other basis for any person or organization shown in the Schedule of this endorsement that qualifies as an additional insured on this policy, this policy will apply solely on the basis required by such written agreement and Paragraph 4. Other Insurance of Section IV - Conditions will not apply. If the applicable written agreement does not specify on what basis the liability insurance will apply, the provisions of Paragraph 4. Other Insurance of Section IV - Conditions will govern. However, this insurance is excess over any other insurance available to the additional insured for which it is also covered as an additional insured by attachment of an endorsement to another policy providing coverage for the same "occurrence", claim or "suit".

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **DESIGNATED INSURED FOR COVERED AUTOS LIABILITY COVERAGE**

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM  
BUSINESS AUTO COVERAGE FORM  
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" for Covered Autos Liability Coverage under the Who Is An Insured provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

### **SCHEDULE**

<p><b>Name Of Person(s) Or Organization(s):</b> As required by written contract</p>
<p>Information required to complete this Schedule, if not shown above, will be shown in the Declarations.</p>

Each person or organization shown in the Schedule is an "insured" for Covered Autos Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Paragraph A.1. of Section II – Covered Autos Liability Coverage in the Business Auto and Motor Carrier Coverage Forms and Paragraph D.2. of Section I – Covered Autos Coverages of the Auto Dealers Coverage Form.

Policy Number: AS2-641-444950-048  
Issued by: Liberty Mutual Fire Insurance Co.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**DESIGNATED INSURED - NONCONTRIBUTING**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM  
GARAGE COVERAGE FORM  
MOTOR CARRIERS COVERAGE FORM  
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

**Schedule**

**Name of Person(s) or Organizations(s):**

Any person or organization whose the Named Insured has agreed by written contract to include such person or organization.

**Regarding Designated Contract or Project:**

Any

Each person or organization shown in the Schedule of this endorsement is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as a "insured" under the Who Is An Insured Provision contained in Section II of the Coverage Form.

The following is added to the **Other Insurance Condition**:

If you have agreed in a written agreement that this policy will be primary and without right of contribution from any insurance in force for an Additional Insured for liability arising out of your operations, and the agreement was executed prior to the "bodily injury" or "property damage", then this insurance will be primary and we will not seek contribution from such insurance.



POLICY NUMBER: TB2-641-444950-038

## WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

### SCHEDULE

<b>Name Of Person Or Organization: As required by written contract or agreement</b>
-------------------------------------------------------------------------------------

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.
--------------------------------------------------------------------------------------------------------

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of Section IV – Conditions:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)**

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM  
BUSINESS AUTO COVERAGE FORM  
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

### **SCHEDULE**

**Name(s) Of Person(s) Or Organization(s):**

Any person or organization for whom you perform work under a written contract of the contract requires you to obtain this agreement from us but only if the contract is executed prior to the injury or damage occurring.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

## WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

Where required by contract or written agreement prior to loss.

Issued by:

For attachment to Policy No WA7-64D-444950-018  
\$

Effective Date 6/01/2018

Premium

Issued to:

Policy Number TB2-641-444950-038  
Issued by LIBERTY MUTUAL FIRE INSURANCE COMPANY

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**NOTICE OF CANCELLATION OR MATERIAL REDUCTION IN COVERAGE TO THIRD PARTIES**

This endorsement modifies insurance provided under the following:

- BUSINESS AUTO COVERAGE PART
- MOTOR CARRIER COVERAGE PART
- GARAGE COVERAGE PART
- TRUCKERS COVERAGE PART
- EXCESS AUTOMOBILE LIABILITY INDEMNITY COVERAGE PART
- SELF-INSURED TRUCKER EXCESS LIABILITY COVERAGE PART
- COMMERCIAL GENERAL LIABILITY COVERAGE PART
- EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE PART
- PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
- LIQUOR LIABILITY COVERAGE PART
- COMMERCIAL LIABILITY – UMBRELLA COVERAGE FORM

Schedule		
Name of Other Person(s) / Organization(s):	Email Address or mailing address:	Number Days Notice:
Per Schedule on File		30

- A. If we cancel this policy for any reason other than nonpayment of premium, or make a material reduction in coverage, we will notify the persons or organizations shown in the Schedule above. We will send notice to the email or mailing address listed above at least 10 days, or the number of days listed above, if any, before the cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.
- B. This advance notification of a pending cancellation or material reduction of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.

Policy Number AS2-641-444950-048  
Issued by LIBERTY MUTUAL FIRE INSURANCE COMPANY

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**NOTICE OF CANCELLATION OR MATERIAL REDUCTION IN COVERAGE TO THIRD PARTIES**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE PART  
MOTOR CARRIER COVERAGE PART  
GARAGE COVERAGE PART  
TRUCKERS COVERAGE PART  
EXCESS AUTOMOBILE LIABILITY INDEMNITY COVERAGE PART  
SELF-INSURED TRUCKER EXCESS LIABILITY COVERAGE PART  
COMMERCIAL GENERAL LIABILITY COVERAGE PART  
EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART  
LIQUOR LIABILITY COVERAGE PART  
COMMERCIAL LIABILITY – UMBRELLA COVERAGE FORM

Schedule		
Name of Other Person(s) / Organization(s):	Email Address or mailing address:	Number Days Notice:
Per Schedule on File		30

- A. If we cancel this policy for any reason other than nonpayment of premium, or make a material reduction in coverage, we will notify the persons or organizations shown in the Schedule above. We will send notice to the email or mailing address listed above at least 10 days, or the number of days listed above, if any, before the cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.
- B. This advance notification of a pending cancellation or material reduction of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**NOTICE OF MATERIAL CHANGE**

We will not make changes that reduce the insurance afforded by this policy until written notice of such reduction has been delivered to those scheduled below at least 30 days before the effective date of the material change to the insurance afforded by this policy.

Our failure to provide notice under this endorsement will not affect the validity of the changes except as it relates to the person or organization listed below.

**NAME**

**ADDRESS**

Per Schedule on file.

In no event will the notification be less than the minimum days required for notification by state statute. Notification will be provided to all parties in a manner as required by state statute, if any.

This endorsement is executed by the Liberty Insurance Corporation

Premium:

Effective Date: 6/1/2018 Expiration Date: 6/1/2019

For attachment to Policy No: WA7-64D-444950-018

Countersigned by



Authorized Representative

End. Serial No.

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NOTICE OF CANCELLATION TO THIRD  
PARTIES

- A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule below by email as soon as practical after notifying the first Named Insured.
- B. This advance email notification of a pending cancellation of coverage is intended as a courtesy only.  
Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

SCHEDULE

Name of Other Person(s) / Organization(s):

Per Schedule on file with Company                      30 Days

All other terms and conditions of this policy remain unchanged.

Issued by

For attachment to Policy No. WA7-64D-444950-018    Effective Date 6/01/2018    Premium \$

Issued to



**PROCUREMENT DEPARTMENT**

DESIGN & CONSTRUCTION DIVISION • 130 W. CONGRESS STREET, 3RD FLOOR • TUCSON, ARIZONA 85701-1317  
TELEPHONE (520) 724-3727 • FAX (520) 724-4434

INSURANCE CARRIER VERIFIES PIMA COUNTY IS NAMED AS ADDITIONAL INSURED TO THE COMPREHENSIVE COMMERCIAL GENERAL LIABILITY POLICY AND THE COMPREHENSIVE AUTOMOBILE LIABILITY POLICY REFERENCED BELOW, THE COUNTY BEING ADDED BY ENDORSEMENT TO THE POLICIES.

**HDR Constructors, Inc.**

\_\_\_\_\_  
Insured Firm

TB2-641-444950-038; AS2-641-444950-048

\_\_\_\_\_  
Policy Number

Liberty Mutual Fire Insurance Company

\_\_\_\_\_  
Insurance Carrier

*Colleen Millonig*

Authorized Carrier Signature

Colleen Millonig  
Printed Name

8/16/2018

\_\_\_\_\_  
Date of Signature

NOTE: This document must be included with Insurance Certificates at time of signing contract or renewing contract.





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
08/21/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Willis of Minnesota, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	<b>CONTACT NAME:</b> PHONE (A/C, No, Ext): 1-877-945-7378      FAX (A/C, No): 1-888-467-2378 E-MAIL ADDRESS: certificates@willis.com	
	<b>INSURER(S) AFFORDING COVERAGE</b> <b>NAIC #</b>	
<b>INSURED</b> HDR Constructors, Inc. 4435 Main Street, Suite 1000 Kansas City, MO 64111 USA	<b>INSURER A:</b> American Home Assurance Company      19380	
	<b>INSURER B:</b>	
	<b>INSURER C:</b>	
	<b>INSURER D:</b>	
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

**COVERAGES**      **CERTIFICATE NUMBER: W7237167**      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:					EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY					COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$ \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y/N If yes, describe under DESCRIPTION OF OPERATIONS below					PER STATUTE    OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Builders Risk	Y    Y	0134 618 45	09/04/2018	05/01/2019	Limit: \$1,865,681

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
Re: Tres Rios WRF Nutrient Recovery Project, Location: 7101 N. Casa Grande Highway, Tucson, AZ 85743.  
Contract Value: \$1,865,681

<b>CERTIFICATE HOLDER</b>  Pima County Regional Wastewater Reclamation Department 130 West Congress Street, 3rd Floor Tucson, AZ 85701	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 



**ADDITIONAL REMARKS SCHEDULE**

<b>AGENCY</b> Willis of Minnesota, Inc.		<b>NAMED INSURED</b> HDR Constructors, Inc. 4435 Main Street, Suite 1000 Kansas City, MO 64111 USA	
<b>POLICY NUMBER</b> See Page 1		<b>EFFECTIVE DATE:</b> See Page 1	
<b>CARRIER</b> See Page 1	<b>NAIC CODE</b> See Page 1		

**ADDITIONAL REMARKS**

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,  
**FORM NUMBER:** 25 **FORM TITLE:** Certificate of Liability Insurance

For all Insured Projects\*, and then only as their respective interests may appear, all owners, all contractors and subcontractors of every tier, and tenants at the project location, are recognized as Additional Insureds hereunder. As respects architects, engineers, manufacturers and suppliers, their interest is limited to their site activities only.

Pima County Regional Wastewater Reclamation Department is included as Loss Payee on the Builder's Risk policy when required by written contract, executed prior to the loss.

Waiver of Subrogation is included on the Builder's Risk policy when required by written contract executed prior to the loss.



**NEW HAMPSHIRE INSURANCE COMPANY**  
**Administrative Offices: 175 Water Street, New York, New York 10038**  
(hereinafter called the Company)

**MASTER BUILDER'S RISK POLICY**  
**DECLARATIONS**

POLICY NUMBER: 085053885

RENEWAL OF: 085053885

ITEM 1. Named Insured: HDR CONSTRUCTORS, INC.

Address: 4435 MAIN STREET, SUITE 1000  
KANSAS CITY, MO 64111

ITEM 2. Policy Period:

From: 01 OCT 2017 To: 01 OCT 2018  
at 12:01 A.M. Standard Time at the address of the named insured shown above.

ITEM 3. Limit of Insurance:

\$50,000,000 (100%) PART OF \$50,000,000 PER OCCURRENCE

Total Premium \$ AS PER ISSUED CERTIFICATES Minimum Earned Premium \$

ITEM 4. Perils:

SEE MASTER BUILDER'S RISK POLICY

ITEM 5. Description of Property Covered:

SEE MASTER BUILDER'S RISK POLICY

Coinsurance

NOT APPLICABLE

ITEM 6. Mortgagee Clause: Loss, if any shall be payable to:

NOT APPLICABLE

ITEM 7. Forms Attached:

See attached forms schedule

ITEM 8. Commission:

ITEM 9. TRIA Premium: \$ NOT COVERED

["TRIA Premium" means the premium for Certified Acts of Terrorism Coverage under the Terrorism Risk Insurance Act of 2002, as amended by the Terrorism Risk Insurance Program Reauthorization Act of 2007. The TRIA Premium amount indicated above is included in the COMPANY Annual premium amount indicated above.]

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Authorized Representative OR  
Countersignature (In states where applicable)



## DECLARATIONS

1. **POLICY NUMBER:** 085053885
2. **INSURING COMPANY:** New Hampshire Insurance Company (Admitted)  
Executive Offices: 175 Water Street, New York, New York 10038

3. **A. NAMED INSURED(S) AND MAILING ADDRESS**

HDR Constructors, Inc.  
4435 Main Street, Suite 1000  
Kansas City, MO 64111

and all affiliated and subsidiary companies owned or controlled by the Named Insured as now exist or may hereafter be constituted or acquired.

is included. If the Named Insured is responsible for such insurance as provided herein, and to the extent the full contract value of the **INSURED PROJECT\***, is declared, then this policy will include the interest of Joint Venture Partners for their respective share.

The first Named Insured shown above shall be deemed the sole and irrevocable agent of each and every Insured hereunder for the purpose of giving and receiving notices to/from the Company, giving instruction to or agreeing with the Company as respects Policy alteration, for making or receiving payments for premium or adjustments or premium and as respects the payment of claims, except as required by contract

- B. ADDITIONAL INSURED(S)**

Additional Insureds means all project owner(s), contractors and subcontractors of every tier and any tenant at the **INSURED PROJECT\*** location to the extent required by the **contract document(s)** or subcontract(s) with respect to the **INSURED PROJECT\*** and then only as their respective interests may appear. With respect to architects, engineers, manufacturers and suppliers, notwithstanding any contract or subcontract to the contrary, their interest is limited to their activities at the **INSURED PROJECT\*** location only.

Additional Named Insureds as provided above, may be shown on a Project Certificate issued to this Policy or ACORD Certificates of Insurance (or equivalent) issued by Willis of Minnesota, copies of which will be forwarded, if requested, to the Company.

4. **TERM OF INSURANCE OF THE POLICY**

The terms provided by this Policy shall be effective on **October 1, 2017** and shall continue in effect until **October 1, 2018**, both at **12:01 A.M.** standard time at the address of the Named Insured, but only as respects those **INSURED PROJECTS\*** beginning on or after the effective date and prior to the expiration date and which have been declared to the Company, except as otherwise amended by endorsement to this Policy.

### 13. LOSS PAYEE(S) AND MORTGAGE HOLDER(S)

Loss, if any, shall be adjusted with and made payable to the first Named Insured and designated Loss Payees and/or Mortgage Holders, their successors and/or assigns as shown on any Project Certificate issued to this Policy, or pursuant to any written agreements made by the first Named Insured. Receipt of final payment by the first Named Insured shall constitute a release in full of all liability under this Policy with respect to such loss.

If not scheduled on a Project Certificate, Loss Payees and Mortgage Holders, all as their respective interest may appear and as may be shown on ACORD Certificates of Insurance (or its equivalent) issued by Willis of Minnesota copies of which will be forwarded, if requested, to the Company.

## 8. EXAMINATION UNDER OATH

The Named Insured shall submit and, so far as is within their power, shall cause all other persons to submit, to examination under oath by any persons named by the Company relative to any and all matters in connection with a claim and shall produce for examination all books of account, bills, invoices, and other vouchers or certified copies thereof if originals are lost, at such reasonable time and place as may be designated by the Company or its representatives and shall permit extracts and copies thereof to be made.

## 9. IN CASE OF LOSS

### A. Notice of Loss

The Named Insured will report in writing to the Company every loss **OCCURRENCE\*** which may give rise to a claim under this policy as soon as practicable, but no later than **thirty (30)** days, after it becomes known to the Named Insured's Director of Risk Management.

The knowledge of any **OCCURRENCE\*** by an agent, servant or employee of the Named Insured shall not itself received such notice from such agent, servant or employee.

### B. Proof of Loss

The Named Insured will, as soon as practicable, file with the Company a signed and sworn detailed proof of loss.

### C. Payment of Loss

All adjusted claims, including partial payments thereon, will be due and payable no later than sixty days after presentation and acceptance of proof of loss or partial proof of loss, as the case may be, by this Company or its appointed representative.

## 10. PARTIAL LOSS

The Company hereby grants permission to repair any partial damage to the property insured which can be conveniently and advantageously undertaken. The Company will reimburse the Insured who has suffered the loss for the actual cost of such repairs, subject always to the applicable deductible and limits of liability stated in the Declarations. Nothing in this clause shall be deemed to have waived the requirement that notice of loss be given forthwith to the Company as provided in the policy.

## 11. SUBROGATION

If the Company pays a claim under this policy, they will be subrogated, to the extent of such payment, to all the Insured's rights of recovery from other persons, organizations and entities. The Insured will execute and deliver instruments and papers and do whatever else is necessary to secure such rights.

The Company will have no rights of subrogation against:

- A. Any person or entity, which is a Named Insured or an Additional Insured;
- B. Any other person or entity, which the Insured has waived its rights of subrogation against in writing before the time of loss;
- C. Notwithstanding the foregoing, it is a condition of this policy that the Company shall be subrogated to all the Insured's rights of recovery against:
  - (1) any Architect or Engineer, whether named as an Insured or not, for any loss or damage arising out of the performance of professional services in their capacity as such and caused by any error, omission, deficiency or act of the Architect or Engineer, by any person employed by them or by any others for whose acts they are legally liable, and
  - (2) any manufacturer or supplier of machinery, equipment or other property, whether named as an Insured or not, for the cost of making good any loss or damage which said party has agreed to make good under a guarantee or warranty, whether expressed or implied.

The Insured will act in concert with the Company and all other interest concerned in the exercise of such rights of recovery. The Insured will do nothing after a loss to prejudice such rights of subrogation.

If any amount is recovered as a result of such proceedings, the net amount recovered after deducting the costs of recovery, will accrue first to the Company. Any excess of this amount will be remitted to the Insured. If there is no recovery, the interests instituting the proceedings will bear the expense of the proceedings proportionately.

**12. CONTRIBUTING INSURANCE**

Permission is granted for other policies written upon the same terms, exclusions, limitations and conditions as those contained herein.

This policy will contribute to the total of each loss otherwise payable herein to the extent of the participation of this policy in the total limit of liability as provided by all policies written upon the same terms, exclusions, limitations and conditions as those contained in this policy.

**13. EXCESS INSURANCE**

Permission is granted the Insured to have excess insurance over the limit of liability set forth in this policy without prejudice to this policy, nor will the existence of such insurance, if any, reduce any liability under this policy.

**14. OTHER INSURANCE**

Except as stated in CONTRIBUTING INSURANCE and EXCESS INSURANCE above, if there is other collectible insurance, this policy will cover as excess insurance and will not contribute with such other insurance.

**15. UNDERLYING INSURANCE**

Permission is given for the Insured to purchase insurance on all or any part of the deductible(s) of this policy. The existence of such underlying insurance shall not prejudice or affect any recovery otherwise payable under this policy.

**16. RECOVERY OR SALVAGE**

Any recovery or salvage excluding:

- A. proceeds from subrogation and other insurance recovered or received after a loss settlement under this policy;
- B. any recovery from suretyship, insurance, reinsurance, security or indemnity taken by or for the benefit of the Company;

will apply as if recovered or received prior to the loss settlement and the loss will be readjusted accordingly.

**17. ASSISTANCE AND COOPERATION OF THE INSURED**

hearings and trials and shall assist in effecting settlements, in securing and giving evidence, in obtaining the attendance of witnesses, and in conducting suits.

**18. BANKRUPTCY OR INSOLVENCY**

Bankruptcy or insolvency of the Named Insured shall not relieve the Company of any of its obligations under this policy.

**19. BRANDS & TRADEMARKS**

In case of loss or damage by an insured peril to insured property bearing a brand, trademark or label, the Company may take all or any part of the property at any agreed or appraised value. If so, the Named Insured may, at their own expense:

- A. Stamp salvage on the property or its container, if the stamp will not physically damage the property; or
- B. Remove the brand, trademark or label, if doing so will not physically damage the property. The Named Insured must re-label the property or its container to comply with the law.

**ARIZONA STATUTORY PERFORMANCE BOND**  
**PURSUANT TO TITLE 34, ARIZONA REVISED STATUTES**  
(Penalty of this bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS THAT:

**HDR Constructors, Inc.**

(hereinafter "Principal"), as Principal, and Western Surety Company

(hereinafter "Surety"), a corporation organized and existing under the laws of the State of South Dakota with its principal office in the City of Chicago, IL, holding a certificate of authority to transact surety business in Arizona issued by the Director of Insurance pursuant to Title 20, Chapter 2, Article 1, as Surety, are held and firmly bound unto Pima County, Arizona (hereinafter "Obligee") in the amount of **\$1,865,680.71**, for the payment whereof, Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the **4<sup>th</sup> of September, 2018** for:

**Solicitation No. 262765 Design-Build Services for: Tres Rios WRF Nutrient Recovery Project (3BBUMP)**

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH, that if the Principal faithfully performs and fulfills all of the undertakings, covenants, terms, conditions and agreements of the contract during the original term of the contract and any extension of the contract, with or without notice to the Surety, and during the life of any guaranty required under the contract, and also performs and fulfills all of the undertakings, covenants, terms, conditions and agreements of all duly authorized modifications of the contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, the above obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if it were copies at length in this Contract.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney fees that may be fixed by a judge of the court.

Witness our hands this 4<sup>th</sup> day of September, 2018.

Witness our hands this 4<sup>th</sup> day of September, 2018.

HDR Constructors, Inc.  
8404 Indian Hills Dr., Omaha, NE 68114

Principal

Western Surety Company  
151 N. Franklin St., Chicago, IL 60606 (312) 822-5000

Surety

By: 

By: 

Debra J. Scarborough, Attorney-in-Fact



**ARIZONA STATUTORY PAYMENT BOND**  
PURSUANT TO TITLE 34, ARIZONA REVISED STATUTES  
(Penalty of this bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS THAT:

**HDR Constructors, Inc.**

(hereinafter "Principal"), as Principal, and Western Surety Company

(hereinafter "Surety"), a corporation organized and existing under the laws of the State of South Dakota, with its principal office in the City of Chicago, IL, holding a certificate of authority to transact surety business in Arizona issued by the Director of Department of Insurance pursuant to Title 20, Chapter 2, Article 1, as Surety, are held and firmly bound unto Pima County (hereinafter "Obligee") in the amount of **\$1,865,680.71**, for the payment whereof, Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the, **4<sup>th</sup> of September, 2018** for:

**Solicitation No. 262765 Design-Build Services for: Tres Rios WRF Nutrient Recovery Project (3BBUMP)**

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH, that if the Principal promptly pays all monies due to all persons supplying labor or materials to the Principal or the Principal's subcontractors in the prosecution of the work provided for in the contract, this obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions, conditions and limitations of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if it were copied at length in this Contract.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney fees that may be fixed by a judge in the court.

Witness our hands this 4<sup>th</sup> day of September, 2018.

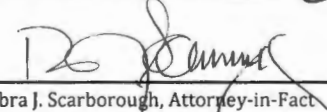
HDR Constructors, Inc.  
8404 Indian Hills Dr., Omaha, NE 68114

Principal

By: 

Western Surety Company  
151 N. Franklin St., Chicago, IL 60606 (312) 822-5000

Surety

By:   
Debra J. Scarborough, Attorney-in-Fact



# Western Surety Company

## POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

**Patrick T. Pribyl, Debra J. Scarborough, Mary T. Flanigan, Christy M. Braile, Jeffrey C. Carey, Charles R. Teter III, Laura M. Buhrmester, Evan D. Sizemore, Charissa D. Lecuyer, Rebecca S. Leal, C. Stephens Griggs, Tahitia M. Fry, Megan L. Burns-Hasty, Individually**

of Kansas City, MO, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

### - In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 14th day of November, 2017.

WESTERN SURETY COMPANY



*Paul T. Bruflat*

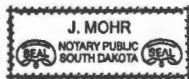
Paul T. Bruflat, Vice President

State of South Dakota }  
County of Minnehaha } ss

On this 14th day of November, 2017, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires

June 23, 2021



*J. Mohr*

J. Mohr, Notary Public

### CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 4th day of September, 2018.



WESTERN SURETY COMPANY

*L. Nelson*

L. Nelson, Assistant Secretary

**Authorizing By-Law**

**ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY**

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.