



BOT Regular Workshop and Meeting June 7th 2023

Town of Lake City

Jun 7, 2023 at 5:30 PM MDT to Jun 7, 2023 at 8:00 PM MDT

230 N. Bluff Street Armory Multi-Purpose Room

Agenda

I. Workshop 5:30pm

- A. Review of Triple Point WWTP Equipment Package Purchase Agreement**
- B. Discuss Rate Increase for Legal Services from Town Attorney Daniel Krob**
- C. Discuss Lake Fork Valley Conservancy Temporary Access Easement Agreement**
- D. Discuss Town of Lake City Accident Investigation Policy**
- E. Discuss Town of Lake City Chemical Safety Policy**
- F. Discuss Town of Lake City Motor Vehicle Safety Policy**
- G. Discuss Town of Lake City Trenching and Excavation Safety Policy**
- H. Discuss Wesley & LeAnn Williams Water Meter Variance Request and Refund of Previously Paid Tap and Meter Fees**

II. Regular Meeting 7:00pm

- A. Call To Order**
- B. Roll Call**
- C. Minutes 5/17/23**
- D. Bills Payable 6/7/23**
- E. Employee Reports**
 - 1. Parks and Recreation Report (Ben Hake)**
 - 2. Public Works Report (Jameson Johnston)**
 - 3. Town Clerk (Jonathan Broadway)**
 - 4. Town Manager Report (Lex Mulhall)**
 - 5. Building Official Report (Gabe McNeese)**
 - 6. Sheriff's Report (Chris Kambish)**
 - 7. Legal Update (Krob)**
 - 8. Mayor/Trustee Reports**
- F. Correspondence Received**
- G. Citizen Communication**
- H. Additions to the Agenda**
- I. Action Items**

- 1. Discussion and Possible Action to Approve Triple Point WWTP Equipment Package Purchase Agreement**
- 2. Discussion and Possible Action to Approve Rate Increase for Legal Services from Town Attorney Daniel Krob**
- 3. Discussion and Possible Action to Approve Lake Fork Valley Conservancy Temporary Access Easement Agreement**
- 4. Discussion and Possible Action to Approve Town of Lake City Accident Investigation Policy**
- 5. Discussion and Possible Action to Approve Town of Lake City Chemical Safety Policy**
- 6. Discussion and Possible Action to Approve Town of Lake City Motor Vehicle Safety Policy**
- 7. Discussion and Possible Action to Approve Town of Lake City Trenching and Excavation Safety Policy**

CONSOLIDATED CONSULTING SERVICES

Staff Report

SUBJECT: Wastewater Update

Prepared by: Joanne Fagan

Date: June 4, 2023

An updated Process Design Report and the contract part of the project specifications were resubmitted to CDPHE today. We are looking forward to their feedback.

Board packets include a potential equipment purchase agreement between the Town and Triplepoint Environmental LLC (TPE). The Agreement calls for the Town to purchase aeration and ammonia removal equipment from TPE. The equipment package includes 2 - 60 hp and 2 - 75 hp blowers, 41 aerators, media to remove ammonia, some piping, screens, check valves, mixers, immersion heaters with controls, and some appurtenances. The price of the package with ammonia removal media to treat design flows of 0.175 MGD is \$1,168,190.19 and with media to treat the full design load to 2043 is \$1,197,310.19. The reason the Town might want to put off purchasing all the media is because TPE recommends not installing all the media until we need it. If the Town purchases all the media now, TPE would want the Town to store the media TPE thinks should not be installed at this time. Town staff is evaluating whether it makes sense to purchase and store media and will have a recommendation for the Trustees at Board meeting on 6/7.

The Trustees will notice a significant drop in the cost of the agreement. In talking with TPE, staff decided it was in the interest of the project that we scale back what we purchased from TPE. The Town will purchase the equipment and chemical to add alkalinity to help with ammonia removal directly. Similarly, the Town will purchase pumps for recycling some of the effluent from the ammonia basin back to the concrete basin. Finally we reached an agreement that TPE would provide the design and bill of materials for what they classified as piping they would not typically provide and the Town would purchase the pipe and materials. Deleting having TPE providing some of the piping, the alkalinity addition and recycle pumps deleted about \$180,000 from their scope of supply. The Town will need to purchase the materials deleted or have the plant contractor do so. We anticipate that if the Town directly purchases the materials and furnishes those to the construction contractor, there will be a savings of about \$30-40K. It might also allow the Town time to see if Region 10 can help us finding some funding for some of the materials. We had also discussed early on having TPE furnish some monitoring equipment, but that was not in the previous draft documents we provided from them and is not included in the current agreement. That too is something we will have to procure separately and is not needed until late in the project.

One of the things the staff feels is important to point out about what TPE is providing is that it includes some proprietary products. TPE recognizes that their aerators and ammonia removal media is something we would likely have to purchase from TPE and has agreed to lock in the price for such purchases for purchase of their aerators and media (see article 21.7 of the agreement) for a period of 20 years at a base price plus inflation. CCS used a similar provision to try to lock in the price for water treatment modules for two separate water treatment plants. In both cases when the Town tried to exercise that provision it was a bit challenging. The more challenging one was where at large conglomerate who had purchased the relatively small water

treatment company. In that case the town was able to after-market equipment. We share this as there is a risk when purchasing proprietary products. Lake City may not need anything for 15-20 years, but when you do, it might be a bit of challenge. However, in Lake City's case if you could not get the media TPE used, there are other sources media. Replacing the special aerators could be a challenge but there are a number of other ways to get more air into the ponds.

The agreement in the Board packets was negotiated over a number of weeks. We told TPE to have the agreement reviewed by the Trustees on 6/7, we needed to have completed agreement by 6/2 at 5 pm. That did not happen. We were close but TPE had some concerns about some wording that caused discussion to continue into the weekend. We sent TPE the updated draft of the document about which they had concerns late Saturday and as of Sunday night have not heard back so the agreement that is likely to be packets is one we are not sure is acceptable to TPE. The agreement attached also includes TPE calculations to justify what they intend to furnish. They may have updated those and if so we would update what we include in the agreement. We also need TPE to remove draft from the performance guarantee document in the agreement.

SECTION 00300 - PROPOSAL

PROJECT IDENTIFICATION: Town of Lake City – Wastewater Treatment Plant Equipment

THIS PROPOSAL IS SUBMITTED TO: Town of Lake City
P.O. Box 544
Lake City, CO 81235

Proposal of _____ (hereinafter called "Proposer", organized and existing under the laws of the State of _____ doing business as _____ (a corporation, partnership, individual).

To the Town of Lake City (hereinafter called "Owner").

In compliance with your request for Proposals, PROPOSER hereby proposes to perform all WORK for the Wastewater Treatment Equipment in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

PROPOSER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the Work within the number of days and date specified in the Agreement. PROPOSER further agrees to pay as liquidated damages, the sum specified in the Agreement each day thereafter as provided in Agreement

In submitting this Proposal, Proposer represents, as more fully set forth in the Agreement, that:

(a) Proposer has examined copies of all the Proposing Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date	Number
_____	_____
_____	_____

(b) Proposer has familiarized itself with the nature and extent of the Contract Documents, Work, site, conditions at and access to the site, locality, characteristics of the area and physical conditions, and all other features of the terrain, and with the local conditions and site constraints, and federal, state, and local laws, ordinances, rules, and regulations that in any manner may affect cost, progress, or performance or furnishing of the Work, or apply in any manner whatsoever to the Work. After a proposal has been submitted, the Proposer shall not assert that there was a misunderstanding concerning the nature or quantities of Work to be done or the conditions under which the Work will need to be performed.

(c) Proposer has given Engineer written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Proposer.

(d) Proposer hereby certifies that, as of the date hereof, it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement, and the Contractor will participate in the federal e-verify program or the state program pursuant to CRS 8-17-102(5) in order to confirm eligibility of all employees who are newly hired for employment under this agreement.

Proposer agrees to perform all Work described in the Contract Documents for the following price(s) which includes the full scope of work specified and detailed in Section 00350 Measurement and Payment and as required to complete the work:

Lake City Wastewater Treatment Equipment Proposal Form

<u>DESCRIPTION</u>	<u>Price</u>
Aeration	537,468.55
Nitrox	550,772.72
Design	87,059.30
Freight	26,400.00
Bonds	<u>37,609.62</u>
 Base Sub Total	 1,239,310.19
 Future Media deduct	 (29,120.00)
Design – Air header, Piping, Air distribution Manifolds	8,000.00
Package Deduct	<u>(50,000.00)</u>
 Total	 1,168,190.19

3. Additional services fee schedule is attached.

4. Stipulated replacement costs as per paragraph 21.9 of the Agreement is attached.

Proposer agrees that the Work will be substantially complete within the timeframe described in the Agreement and completed and ready for final payment within accordance with the time required in the Agreement.

Proposer accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work on time.

The following documents are attached to and made a condition of this Proposal:

(a) A tabulation of Subcontractors, Suppliers and other persons and organizations required to be identified in this Proposal.

(b) A statement of Proposer's Qualification with supporting data and references regarding similar projects.

Submitted on _____, 20_____.

Respectfully submitted:

Signature Address

Title Date

License number (if applicable) Phone

SEAL - (if PROPOSAL is by a corporation

SECTION 00350 - MEASUREMENT AND PAYMENT

PART I – GENERAL

This section is intended to further define the scope of the proposal items on the proposal form. It is the intent of these Contract Documents that the costs for all the work required for a complete equipment package as described in the Contract Documents be included on the proposal form. Nothing in this Section or in the Proposal Form, including not finding a specific item or scope described, will negate the equipment Contractor's responsibility to furnish a complete, functional project as described in the Contract Documents.

All pricing shall be the complete cost to complete the Work whether specifically listed or needed to complete the work including materials, equipment, labor, quality control, installation and start up oversight, and all testing, testing equipment, protection of the work and shall demonstrate all components and assembled units will comply with required permits (mechanical, electrical etc) including UL listing, compliance with applicable Town and Colorado Department of Public Health and Environment (CDPHE) regulations and standards, including but not limited to American Iron and Steel, OSHA, and EEO, compliance with terms of easements and permits, safety, coordination with others, all submittals specified (including O&M manuals and as-constructed drawings), schedules, furnish specific location information for project surveying and staking of the equipment package, and shall include overhead profit, supervision, all applicable taxes, copyright, licensing, trademark and patent fees, warranties, and incidental work, tools, and materials and the associated costs of complying with all the requirements of the Contract Documents. All pricing shall be F.O.B. the Lake City Wastewater Treatment plant

In places, access to the work areas is limited. EP Contractor shall carefully inspect the site prior to submitting a proposal and include the costs associated with the limited access, site constraints, and any needed improvements and include the costs of such work in the proposal items which are impacted by such constraints.

The Work to be provided under this contract to furnish and install the equipment package specified in these contract documents to provide aeration and ammonia removal equipment for the Owner's wastewater treatment plant as detailed herein.

Furnish all material, equipment, labor, and shipping for an equipment package complete with all the appurtenances necessary for the package to perform as specified in Section 11,300 of the Agreement.

QUALIFICATION STATEMENT

Please complete all the questions. If additional space is needed, please attach a separate sheet of paper which references the question number.

EP Contractor Name: Triplepoint Environmental, LLC _____

Address: 6586 S Kenton St. Centennial, CO 80111 _____

Telephone 312-428-4634 _____ Email tom@lagoons.com__

Principal Owner/Officer: Brady O’Leary, Managing Director _____

Name Title
 Corporation Partnership Individual Joint Venture

I. TYPES OF WORK (list years of experience for each type of work desired)

Aeration Equipment x___ Nitrification x ___
Control Equipment x Package WW plants ___

Other (list) Denitrification, Phosphorus reduction, Design Build, header piping design, recirculation design

II. GENERAL EXPERIENCE INFORMATION

2.1 How many years has your organization been in business under your present business name?
Under the current owners? 11 _____

2.2 Date of organization or incorporation: 2008_
State
Delaware

2.3 Names, Titles of Officers/Owners/Partners:
Brady, O’Leary – Managing Director; Patrick Hill – Managing Member

If a partnership is it a general, limited, or association?

2.4 If you have controlling interest in any firm(s) other than the one listed above, list here: no

2.5 List percent of materials and equipment are typically included in equipment package are produced internally 55%

List other major vendors: Kaeser, Gardner Denver, Aerzen, _____

If the answer to any of questions 2.6 - 2.11 is yes, provide explanation and/or details on a separate sheet of paper.

2.6 Have you or your organization or any officer or partner thereof failed to complete a contract awarded to it? Yes No If yes, give details:

2.7 Has the firm, any of its officers, principals, superintendents, or managers been involved in any litigation or court proceeding in the past eight (8) years? Yes No If yes, explain (listing type, kind, plaintiff, defendant, current status, etc.

2.8 Are there any judgments, claims, arbitration matters, unresolved contract disputes, or suits pending or outstanding against the firm, or any of its officers or principals? Yes No If yes, explain.

2.9 In the last eight years (8) has your firm, any of its officers, principals, managers, or superintendents filed any lawsuits or requested arbitration or formal mediation for or related to a construction contract? Yes No If yes, explain.

2.10 Has the firm, any of its officers, principals, superintendents, or managers been involved in any bankruptcy action as a bankrupt? Yes No If yes, explain

2.11 In the last eight (8) years has any of the firms officers, principals, managers, or superintendents ever been an officer or principal in another organization when it failed to complete a construction contract or filed any claims, lawsuits or requested arbitration or formal mediation for a construction contract? Yes No If yes, explain.

2.12 List on a separate sheet of paper the major projects your firm, its officers and principals, has completed during at least the last 5 years, providing, at a minimum, the following information for each project.

Name, Address, Phone, Contact Name of: Project, Owner, and Engineer If other than this firm, list Name, Address, Phone for Firm
Type of Project
Contract Amount, Date Completed
Percentage of work done with own forces and nature of that work

2.13 Total average annual construction valve of work for the last 5 years. \$ 7 million

2.14 List on a separate sheet of paper the major projects your firm has in progress at this time, providing, at a minimum, the following information for each project.

Name, Contact Name, Address, Phone of: Project, Owner, and Engineer, Type of Project

Contract Amount, Scheduled & Expected Completion Date, Percent Completed Percentage of work done being done with own forces and nature of that work

2.15 Total value of work under contract and in progress \$ 15 million

III. PERSONNEL OF ORGANIZATION

3.1 Provide resumes for the organization's principals, officers, and superintendents and managers the organization intends to assign to this project. Resumes shall include the last 3 projects of similar scope on which each person worked and define the role each played.

IV. REFERENCES

4.1 Surety - List the Surety Companies that have bonded your work for the past five years (use a separate paper if necessary):

Name of Surety Name, Address of Agent	Project and Location	Period of Bond From To	Maximum Limits & General Comments
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See attached TPENV Vendor Reference for Surety name and address.

4.1.a Total Currently Bonded \$550k Total Current Bond Limits \$5,000,000.00
See TPENV Vendor Reference attachment.

4.2 Bank Reference: See TPENV Vendor Reference attachment.

4.3 Trade References: See PENV Vendor Reference attachment.

V. FINANCIAL INFORMATION (See PENV Vendor Reference attachment.)

3.1 If requested, provide a financial statement with balance sheet and income statement and the following minimum information:

Current Assets: Cash, joint venture accounts, accounts receivable, notes receivable, accrued interest on notes, deposits, materials, prepaid expenses, net fixed assets, and other assets.

Current Liabilities: Accounts Payable, notes payable, accrued interest on notes, provision for incomes taxes, advances received from owners, accrued salaries, accrued payroll taxes, other

liabilities and capital (capital stock, authorized and outstanding shares of value, earned surplus and retained earnings).

Name of firm preparing the statement and date of the statement Fractional CFO Is Jack

- 3.2 Is the financial statement for the same exact firm as the qualification statement? If not, what is the relationship and the financial responsibility of the organization whose financial statement is provided?
- 3.3 Will the organization whose financial statement is provided act as a guarantor for the contract for which this qualification statement is provided? Yes ____.

AFFIDAVIT

Tom Daugherty certifies and says: That he is an authorized representative (Western Region Manager) of (Triplepoint Environmental) submitting this statement of experience; that s/he has read the same, and that the same is true of his/her knowledge; that the statement is for the purpose of providing construction proposals/proposals for the Lake City Wastewater Equipment and that any vendor or other agent therein named is hereby authorized to provide information necessary to verify the statement; and that furthermore, should this statement at any time cease to properly or truly represent his condition in any substantial respect, it will refrain from further work for the Town until it shall have submitted a revised and corrected statement.

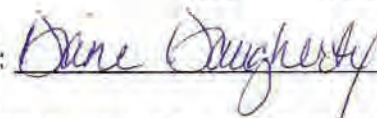
I certify and declare under penalty of perjury that the foregoing and attached information provided herein is true, correct, and sufficiently complete to not be misleading:

Subscribed on this January 26, 2023 at

Note: Use full corporate name & attach corporate seal here, if corporation

Official must sign here 

Title Western Region Manager _____

Attested: 

NOTE: Statement will be returned and proposals and/or proposals rejected unless this affidavit is completed in EVERY respect.

CONSTRUCTION CONTRACT

AGREEMENT

EQUIPMENT CONTRACT AGREEMENT

THIS AGREEMENT is made between the **TOWN OF LAKE CITY**, Colorado, (Owner or Town) and the Equipment Package (EP) Contractor, **__Triplepoint Environmental_LLC__** or the Purchase and Support of and aeration and nitrification equipment and such supporting components (Equipment Package) needed to meet the performance requirements contained in the Contract Documents.

The Owner's Representative (OR) is: Consolidated Consulting Services

The Owner and EP Contractor agree as follows:

ARTICLE 1

THE WORK:

The EP Contractor shall perform all the Work required by the Contract Documents as enumerated in Article 6.

ARTICLE 2

TIME OF COMMENCEMENT AND COMPLETION:

2.1 The Work to be performed under this Contract shall be commenced upon Owner emailing a Notice to Proceed to the EP Contractor.

2.2 Shop drawings, process design narrative and design calculations suitable for design review and submittal to the Colorado Department of Public Health and Environment (CDPHE) shall be delivered to the Town within 30 days of the Owner emailing a Notice to Proceed to the EP Contractor.

2.3 , Once CDPHE review comments are received, the EP Contractor will have 14 days to address CDPHE concerns.

2.4 The Equipment Package and all supporting appurtenances and materials shall be delivered to and unloaded into the Town's wastewater treatment plant (FOB the plant site) in accordance with the schedule noted below:

Air and Recycle Piping materials by September 1, 2023

Blowers by October 15, 2023

4 Aerators by October 15, 2023,

Balance of the aerators and equipment by 3/15/24

Handling and Installation instructions shall be provided to the plant contractor and the Town in advance of shipping each type of equipment.

2.5 The EP Contractor shall coordinate his schedule with that of the Plant Contractor to arrange equipment deliveries as needed to ensure smooth progression of the work of all parties, and EP Contractor shall be on site within 10 working days of being notified by the Plant Contractor that he is ready for installation of the equipment.

2.6 Failure to meet the deadlines outlined above will be considered an exceedance of the contract time.

2.7 Additional non-warranty support services shall be performed upon request of the Town in accordance with Exhibit A and Article 19.

ARTICLE 3

CONTRACT AMOUNT AND BASIS:

The Owner shall pay the EP Contractor for the satisfactory performance of the Work, subject to additions and deductions by Change Order as provided in the General Conditions, the following:

Total Sum listed in the Notice of Award for the Equipment Package, all supplemental equipment and materials, and required support as required by this contract including Part III of the Technical Specifications.

Payment for additional authorized non-warranty support services shall be in accordance with the schedule and provisions set out in Exhibit A and Article 19.

ARTICLE 4

PROGRESS PAYMENTS:

Based upon Applications for Payment submitted to the OR by the EP Contractor and Certificates for Payment issued by the OR, the Owner shall make progress payments to the EP Contractor as follows:

10% of the above specified of the total equipment package cost shall be due with 30 days when both parties have signed Agreement.

20% of the above specified of the total equipment package cost shall be invoiced when the project submittal receives approval from the Town.

EP Contractor may invoice on a monthly basis for the cost of materials received in Lake City. In no event, will more than 90% of the total contract price be paid until the Work has been completed and the Contract has been fully performed, as further described in Article 5, below.

When the final scope including all equipment and documentation is received on site in Lake City the balance up to 90% of the above specified of the total equipment package cost maybe be invoiced.

Upon the satisfactory completion of startup and acceptance testing (including any modifications required based on results of the Acceptance Testing), submission of an updated O&M manual, and submission of the Request for Final Payment, Owner shall pay EP Contractor the 10% of the above specified of the total equipment package cost subject to the terms of Article 5 below.

ARTICLE 5

FINAL PAYMENT:

After completion of the Work, provided the Contract be then fully performed, (other than services subject to Exhibit A), subject to the provisions of Article 16 of the General Conditions, the Owner shall publish a Notice of Final Settlement twice at least 10 days prior to the date of final settlement for payment of the above lump sum. The Owner shall withhold from final payments any amounts as required pursuant to C.R.S. 38-26-107.

ARTICLE 6

ENUMERATION OF CONTRACT DOCUMENTS:

The Contract Documents are as noted in Paragraph 7.1 of the General Conditions and are indicated as follows:

- Agreement including General Conditions
- Proposal and Measurement and Payment
- CDPHE State Revolving Fund Required Specifications
- Technical Specifications
- Town Approved shop Drawings
- Change Orders - if any
- Modifications - if any
- Written Interpretation of OR - if any
- Performance Bond
- Payment Bond
- Notice of award
- Exhibits A (fee schedule) and B (2043 Design Criteria)

ARTICLE 7

CONTRACT DOCUMENTS:

7.1 The Contract Documents consist of this Agreement (which includes the General Conditions), and other documents indicated above. These form the Contract and what is required by any one shall be as binding as if required by all. The intention of the Contract Documents is to include all labor, materials, equipment and other items as provided in Paragraph 10.2 necessary for the proper

execution and completion of the Work and the terms and conditions of payment therefor, and also to include all Work which may be reasonably inferable from the Contract Documents as being necessary to produce the intended results.

7.2 By executing the Contract, the EP Contractor represents that he has familiar with the site, local conditions and local requirements, and the scope of work that is required.

7.3 The term Work as used in the Contract Documents includes all labor necessary to produce the end product required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in and/or needed to produce such end product.

ARTICLE 8

OWNER'S REPRESENTATIVE (OR)

8.1 The OR will provide general administration of the Contract and will be the Owner's representative during construction and until issuance of the final Certificate for Payment.

8.2 The OR shall at all times have access to the Work wherever it is in preparation and progress.

8.3 The OR will make periodic visits to the site to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of his on-site observations, he will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work of the EP Contractor. The OR will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The OR will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the EP Contractor's failure to carry out the Work in accordance with the Contract Documents.

8.4 Based on such observations and the EP Contractor's Applications for Payment, the OR will verify the amounts owing to the EP Contractor and will issue Certificates for Payment in accordance with Article 16.

8.5 The OR will be, in the first instance, the interpreter of the requirements of the Contract Documents. He will make decisions on all claims and disputes between the Owner and the EP Contractor.

8.6 The OR will have authority to reject Work which does not conform to the Contract Documents.

ARTICLE 9

OWNER:

9.1 The Owner shall secure any required permanent easements or real property necessary for the completed project and advise EP Contractor of the boundaries of Owner's easements or property.

9.2 The Owner shall issue all instructions to the EP Contractor through the OR.

ARTICLE 10

EP CONTRACTOR:

10.1 The EP Contractor shall supervise and direct the Work, using his best skill and attention. The EP Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

10.2 Unless otherwise specifically noted, the EP Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

10.3 The EP Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him.

10.4 The EP Contractor warrants to the Owner and the OR that all materials and equipment incorporated in the Work will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards may be considered defective. Materials incorporated in the Work and not specifically covered in the Specifications shall be the best of their kind.

10.5 The EP Contractor shall pay all sales, consumer, use and other similar taxes required by law for the execution of the Work at EP Contractor's expense except as provided in Article 24. The Owner is exempt from state and local sales and use taxes. EP Contractor shall take steps to obtain such exemption from the Colorado Department of Revenue pursuant to C.R.S. 39-26-114(1)(a) XIX and 114(d).

10.6 The EP Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and orders of any public authority bearing on the performance of the Work, and shall notify the OR if the Drawings and Specifications are at variance therewith.

10.7 The EP Contractor shall be responsible for the acts and omissions of all his employees and all Subcontractors, their agents and employees and all other persons performing any of the Work under a contract with the EP Contractor.

10.8 The EP Contractor shall review, stamp with his approval and submit all samples, calculations, and shop drawings as directed for approval of the OR for conformance with the design concept and with the information given in the Contract Documents (See Section 11300 sub section 1.3). The Work shall be in accordance with Owner and CDPHE approved samples and shop drawings and consistent with submitted and approved calculations.

10.9 The EP Contractor shall comply with all applicable terms of the State Revolving Loan fund General Requirements

ARTICLE 11
SUBCONTRACTS:

11.1 A Subcontractor is a person who has a contract with the EP Contractor to perform any of the Work.

11.2 Unless otherwise specified in the Contract Documents or in the Instructions to Proposers, the EP Contractor, as soon as practicable after the award of the Contract, shall furnish to the OR in writing a list of the names of Subcontractors proposed for the principal portions of the Work. The EP Contractor shall not employ any Subcontractor to whom the OR or the Owner may have a reasonable objection. The EP Contractor shall not be required to employ any Subcontractor to whom he has a reasonable objection. Contracts between the EP Contractor and the Subcontractor shall be in accordance with the terms of this Agreement and shall include the General Conditions of this Agreement insofar as applicable.

ARTICLE 12
SEPARATE CONTRACTS AND OWNER WORK:

12.1 The Owner reserves the right to award other contracts in connection with other portions of the Project or other work on the site or to perform such work itself.

12.2 The EP Contractor shall afford other contractors or Owner reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly coordinate his Work with theirs.

12.3 Any costs caused by defective or ill-timed work shall be borne by the party responsible therefor.

12.4 The Owner arrange and pay for the installation of equipment with technical assistance from the EP Contractor as described in the Specifications.

ARTICLE 13
ROYALTIES AND PATENTS:

The EP Contractor shall pay all royalties and license fees. The EP Contractor shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof.

ARTICLE 14
PERFORMANCE AND PAYMENT BONDS:

A Performance and a Payment Bond shall be submitted, with Owner as payee-beneficiary, by EP

Contractor for all contracts in excess of \$50,000 or if indicated in Article 6.

Each bond shall be in the amount of the contract sum and shall either be in the form supplied by Owner or shall be in such other form as approved by Owner. Each bond shall comply with the requirements of C.R.S. 38-26-105 and 106.

ARTICLE 15

TIME AND LIQUIDATED DAMAGES:

15.1 All time limits stated in Article 2.4 and elsewhere in the Contract Documents are of the essence of the Contract. EP Contractor further agrees to pay as liquidated damage for delay in meeting any deadline, in the sum of \$500 for each day that expires after the number of days specified for each deadline in the contract documents.

15.2 If the EP Contractor is delayed at any time in the progress of the Work by changes ordered in the Work, by labor disputes, fire, unusual delay in transportation, unavoidable casualties, causes beyond the EP Contractor's control, or by any cause which the OR may determine justifies the delay, then the Contract Time shall be extended by Change Order for such reasonable time as the OR may determine. EP Contractor waives any claim for damages due to delay.

ARTICLE 16

PAYMENTS:

16.1 Payments shall be made as provided in Article 4 of this Agreement.

16.2 Payments may be withheld on account of (1) defective Work not remedied, (2) claims asserted or evidence which indicates probable assertion of claims, (3) failure of the EP Contractor to make payments properly to Subcontractors or for labor, materials, or equipment, (4) damage to another contractor or Owner, or (5) unsatisfactory prosecution of the Work by the EP Contractor.

16.3 Final payment shall not be due until (1) the EP Contractor has delivered to the Owner a bond, a clean irrevocable letter of credit, cash or other security satisfactory to the Owner indemnifying Owner against any claim which has been asserted by anyone for labor, materials, equipment or otherwise arising out of the contract or on account of any claim which either Owner or EP Contractor believes may be asserted, (2) the EP Contractor has advised the Owner the any claims EP Contractor believes exist, (3) the Owner has inspected and approved the Work as complying with the contract, (4) written consent of surety, if any is required, and (5) any manufacturers or suppliers warranties and equipment literature, and any as-built plans and O&M Manuals required are delivered to Owner.

16.4 The making of final payment shall constitute a waiver of all claims by the Owner except those arising from (1) unsettled claims, (2) faulty or defective Work appearing after Substantial Completion, (3) failure of the Work to comply with the requirements of the Contract Documents, or (4) terms of any warranties, continuing provisions or special guarantees required by the Contract Documents. The acceptance of final payment shall constitute a waiver of all claims by the EP

Contractor except those previously made in writing and still unsettled.

ARTICLE 17

PROTECTION OF PERSONS AND PROPERTY AND RISK OF LOSS:

The EP Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. He shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to (1) all employees on the Work and other persons including subcontractors, if any, who may be affected thereby, (2) all the Work and all materials and equipment to be incorporated therein, and (3) other property at the site or elsewhere. EP Contractor shall bear all risk of loss to the work, or materials or equipment for the work due to fire, theft, vandalism, or other casualty or cause, until the equipment package is delivered and unloaded at the job site, accepted by the Owner. He shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. All damage or loss to any property caused in whole or in part by the EP Contractor, any Subcontractor, any Sub-subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the EP Contractor.

ARTICLE 18

INDEMNIFICATION AND INSURANCE:

18.1: Indemnification:

The EP CONTRACTOR agrees to indemnify and hold harmless OWNER, its officers, employees, consultants, insurers, and self-insurance pool, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, or any other loss of any kind whatsoever, which arise out of or are in any manner connected with this contract, if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the act, omission, error, EP Contractor error, mistake, negligence, or other fault of the EP CONTRACTOR, any subcontractor of the EP CONTRACTOR, or any officer, employee, representative, or agent of the EP CONTRACTOR or of any subcontractor of the EP CONTRACTOR, or which arise out of any workmen's compensation claim of any employee of the EP CONTRACTOR or of any employee of any subcontractor of the EP CONTRACTOR. The EP CONTRACTOR agrees to investigate, handle, respond to, and to provide defense for and defend against, any such liability, claims or demands at the sole expense of the EP CONTRACTOR, or at the option of OWNER, agrees to pay OWNER or reimburse OWNER for the defense costs incurred by OWNER in connection with, any such liability, claims, or demands. The EP CONTRACTOR also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent. The obligation of this Section 18.1 shall not extend to any injury, loss, or damage which is caused solely by the act, omission, or other fault of the OWNER, its officers, or its employees.

18.2 Insurance:

The EP CONTRACTOR agrees to procure and maintain, at its own cost, a policy or policies of

insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the EP CONTRACTOR pursuant to Section 18.1. Such insurance shall be in addition to any other insurance requirements imposed by this contract or by law. The EP CONTRACTOR shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section 18.1 by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

18.2.1 EP CONTRACTOR shall procure and maintain, and shall cause any subcontractor of the EP CONTRACTOR to procure and maintain, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to OWNER. All coverages shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by the EP CONTRACTOR pursuant to Section 18.1. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

18.2.1(A) Workmen's Compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this contract, and Employers' Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease - policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease - each employee. Evidence of qualified self-insured status may be substituted for the Workmen's Compensation requirements of this paragraph.

18.2.1(B) Commercial General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground hazards. The policy shall contain a severability of interests provision.

18.2.1(C) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate with respect to each of EP CONTRACTOR's owned, hired and non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision. If the EP CONTRACTOR has no owned automobiles, the requirements of this Paragraph (3) shall be met as applicable by each employee of the EP CONTRACTOR providing services to the OWNER under this contract.

18.2.2 The policy required by paragraphs 18.2.1(B) and (C) above shall be endorsed to include OWNER and OWNER's officers and employees as additional insureds. Every policy required above shall be primary insurance and any insurance carried by OWNER, its officers, or its employees, or carried by or provided through any insurance pool of OWNER, shall be excess and not contributory insurance to that provided by EP CONTRACTOR. No additional insured endorsement to any policy shall contain any exclusion for bodily injury or property damage arising from completed operations. The EP CONTRACTOR shall be solely responsible for any deductible losses under any policy required

above.

18.2.3 The certificate of insurance provided by OWNER shall be completed by the EP CONTRACTOR's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by OWNER prior to commencement of the contract. No other form of certificate shall be used. The certificate shall identify this contract and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to OWNER. The completed certificate of insurance shall be sent to OWNER.

18.2.4 Failure on the part of the EP CONTRACTOR to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which OWNER may immediately terminate this contract, or at its discretion OWNER may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by OWNER shall be repaid by EP CONTRACTOR to OWNER upon demand, or OWNER may offset the cost of the premiums against any monies due to EP CONTRACTOR from OWNER.

18.2.5 OWNER reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

18.2.6 The parties hereto understand and agree that OWNER is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$150,000 per person and \$600,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, {24-10-101 et seq., 10 C.R.S., as from time to time amended, or otherwise available to OWNER, its officers, or its employees.

18.2.7 Subrogation Waiver – All insurance policies in any way related to the project and secured and maintained by the EP CONTRACTOR as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against OWNER or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

18.2.8 The Agreement shall not be executed, and no notice or authorization to proceed shall be given until the Certificates required above, are submitted and approved by the Owner.

18.2.9 In carrying out any of the provisions of this Agreement or in exercising any power or authority thereby, there shall be no personal liability of the Owner, its governing body, staff, consultants, officials, attorneys, representatives, agents, or employees.

ARTICLE 19

SUPPORT SERVICES:

EP Contractor agrees to provide support services for the fees listed in Exhibit A for services the Town requests that are not otherwise covered by the warranty or performance guarantee. Such fees shall remain in effect for a period of five years following final payment in accordance with the provisions

below.

- 19.1 Such services shall be initiated upon request of the Owner and completed with due diligence thereafter.
- 19.2 The EP Contractor shall be responsible for EP Contractor quality, technical accuracy, timely completion and coordination of all designs, plans, reports, specifications, drawings and other services rendered by the EP Contractor, and shall, without additional compensation, promptly remedy and correct any errors, omissions or other deficiencies.
- 19.3 In consideration of the proper performance of the services for work covered by Exhibit A, the Town agrees to pay the EP Contractor in accordance with the Provisions attached as Exhibit "A". Monthly partial payments based upon the EP Contractor's billings are permissible. The amounts of all such partial payments shall be based upon the EP Contractor's progress in completing the work.
- 19.4 The Town's approval of drawings, designs, plans, specifications, reports and incidental work or materials furnished hereunder shall not in any way relieve the EP Contractor of responsibility for the technical accuracy of the Work. The Town's approval or acceptance of, or payment for, any services shall not be construed as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

ARTICLE 20

CHANGES IN THE WORK:

20.1 The Owner without invalidating the Contract may order Changes in the Work consisting of additions, deletions, or modifications with the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by written Change Order signed by the Owner.

20.2 The Contract Sum and the Contract Time may be changed only by Change Order.

20.3 The cost or credit to the Owner, if any, from a Change in the Work shall be determined by unit prices if specified in the contract documents, or by mutual agreement.

ARTICLE 21

CORRECTION OF WORK AND WARRANTIES:

21.1 The EP Contractor shall correct any Work that fails to conform to the requirements of the Contract Documents where such failure to conform appears during the progress of the Work.

21.2 EP Contractor shall promptly remedy any defects due to faulty materials, equipment or workmanship which appear within a period of two years from the Date of Final Settlement of the Contract or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee, warranty or other provision required by the Contract Documents.

21.3 EP Contractor warrants that the Equipment Package shall meet the minimum performance requirements of listed in Exhibit B for a period of five (5) years from the date of final settlement and shall make such operational changes, repairs or replacement required.

21.4 The SELLER hereby warrants the products provided as part of this Agreement are free from defects in materials and workmanship for a period of five (5) years from the date of final settlement. This excludes the blowers and control panels for which the warranty is 24 months. If there are issues during the warranty period, the EP Contractor shall promptly furnish and install replacement equipment at EP Contractor's cost, FOB the Lake City WWTP.,

21.5 If the EP Contractor fails to repair or replace the defective portion of the Work within a reasonable time, The Town may take corrective action and collect the costs of doing so from the EP Contractor.

21.6 The provisions of this Article 21 apply to Work (including equipment and materials) done by Subcontractors as well as to Work done by direct employees of the EP Contractor, and are in addition to any other remedies or warranties provided by law, or other provisions of the contract documents.

21.7 EP Contractor warrants that it will provide replacement media for a period of 20 years from date of final settlement at market price, but not to exceed \$ 3,200 per cubic meter and Ares Aerator assemblies for \$3,900 each adjusted for inflation based on the Producer Price Index by Commodity: Machinery and Equipment: Industrial Controls and Related Parts and Accessories (WPU11750799) | FRED | St. Louis Fed (stlouisfed.org) with the base figure beginning from the date of final settlement.

ARTICLE 22

TERMINATION BY THE EP CONTRACTOR:

If the OR fails to issue a Certificate of Payment for a period of thirty days through no fault of the EP Contractor, or if the Owner fails to make payment thereon for a period of thirty days after receipt of OR's recommendation for payment and approval for the payment by the funding agencies, the EP Contractor may, upon seven days' written notice to the Owner and the OR, terminate the Contract and recover from the Owner payment for all Work executed and for any proven loss sustained upon any materials, equipment tools, and construction equipment and machinery, including reasonable profit and damages.

ARTICLE 23

TERMINATION BY THE OWNER:

If the EP Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, after seven days' written notice to the EP Contractor and without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the EP Contractor or, at his option, may terminate EP Contractor's work under the Contract and take

possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the EP Contractor and may finish the Work by whatever method he may deem expedient, and if the unpaid balance of the Contract Sum exceeds the expense of finishing the Work, such excess shall be paid to the EP Contractor, but if such expense exceeds such unpaid balance, the EP Contractor shall pay the difference to the Owner. These rights and remedies are in addition to any right to damages or other rights and remedies allowed by law.

ARTICLE 24

PERMITS:

Owner shall be responsible for the Building, Electrical and Plumbing Permit fees to install the equipment furnished under this contract at the Owner's site.

ARTICLE 25

MISCELLANEOUS PROVISIONS:

25.1 This contract shall comply with all applicable federal and Colorado state laws and shall be governed by the applicable law of the State of Colorado notwithstanding provisions herein to the contrary.

25.2 EP Contractor shall not assign this contract. The provisions of the contract are binding on the heirs, successors or assignees of the parties.

25.3 The rights and remedies available under this contract shall be in addition to any rights and remedies allowed by law.

25.4 No failure to enforce any provision of the contract on account of any breach thereof, shall be considered as a waiver of any right to enforce provisions of this contract concerning any subsequent or continuing breach.

25.5 The terms of this agreement shall remain in full force and effect following final payment.

ARTICLE 26

ADDITIONAL PROVISIONS:

26.1 The Owner and EP Contractor shall cooperate in good faith and with due diligence to obtain CDPHE approval of the Equipment Package substantially as proposed. EP Contractor shall revise his design submittal, and plans and drawings and provide additional submittals as necessary to meet CDPHE requirements and requests in a timely manner. If the Town determines that obtaining CDPHE approval with the EP Contractor's Proposal will not occur within a reasonable time, the Town may terminate this contract and neither party shall have any further obligations under it.

26.2a. This project is funded in part by funding from the State Revolving Loan Fund (SRF) and from Energy and Mineral Impact (EIAF) funds. EP Contractor shall strictly adhere and implement applicable requirements of the funding agencies and the applicable requirements of the SRF general conditions

included with the contract including but not limited to demonstrating that they are not debarred or excluded from participation in federal assistance or benefit programs Davis Bacon and Related Acts, American Iron and Steel (AIS) Executive Order 11246, OSHA. It is also funded by the Colorado Water Resource and Power Development Authority (CWRPDA) and is subject to technical review by the Colorado Department of Public Health and Environment (CDPHE). EP Contractor shall comply with all applicable CDPHE, DOLA, and CWRPDA requirements and applicable laws and regulations. Copies of each of the funding contracts is available for review at Town Hall.

26.2b. The State of Colorado, DOLA, CDPHE, CWRPDA, the State Auditor, or the Town, or any properly delegated or authorized representatives of these entities, including independent certified public accountants of their choosing, shall have the right to inspect, examine and audit the EP Contractor's records, books, accounts, and other relevant documents concerning this contract for a period of five years after final payment.

26.3 The EP Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The EP Contractor shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the EP Contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract

26.4 C.R.S. 8-17.5 and E-Verify Requirements

26.4a. EP Contractor certifies, warrants, and agrees that it or its sub contractors do not knowingly employ or contract with an illegal alien who will perform work under this Agreement, and shall confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Agreement through participation in Federal E-Verify Program or the state program established pursuant to CRS 8-17.5-102(5)(c).

26.4b. EP Contractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement or enter into a contract with a subcontractor that fails to certify to EP Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

26.4c. EP Contractor hereby certifies that it has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this agreement through participation in either the e-verify program or the state program.

26.4d. EP Contractor is prohibited from using either the e-verify program or the state program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

26.4e. If EP Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, EP Contractor shall be required to:

(i) notify the subcontractor, the Owner, and State within three (3) days that EP Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

(ii) terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to this subparagraph the subcontractor does not stop employing or contracting with the illegal alien; except that EP Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

26.4f. EP Contractor shall comply with any reasonable in the course of investigation undertaken pursuant to CRS 8.17.5-102(5) by the Colorado Department of Labor and Employment.

26.4g. If EP Contractor fails to comply with any requirement of this subsection of the Agreement or CRS 8.17.5-101 et seq. the Owner may terminate this Agreement for breach. If this Agreement is so terminated, EP Contractor shall be liable for actual and consequential damages to the Town.

26.4h In addition to complying with the above requirements, EP Contractor is also responsible to comply with federal employment verification requirements including requirements that all employees complete the I-9 Employment Eligibility Verification Form at time of hire and that employer verify the information using e-verify or other legally acceptable method.

27.1 EP Contractor hereby assigns all manufacturers' warranties to Owner and shall assist the Owner in enforcing such warranties. No limitation of any manufacturer's warranties, or additional warranties of EP Contractor, shall be construed to limit the obligations of the EP Contractor under any warranties or other provisions of the contract documents.

27.2 The EP Contractor must comply with all State Statutes including but not limited to the requirements HB 13-1292

27.3 Limitation of Liability. EP Contractor shall not be liable for any loss of profits, business, goodwill, interruption of business or damages related to this Agreement. Notwithstanding anything else to the contrary, EP Contractor shall not be liable for any special or punitive damages, except in the event of EP Contractor's intentional acts or gross negligence for any of its responsibilities under this Contract.

This Agreement is dated _____.

TOWN OF LAKE CITY, COLORADO

By _____

EP CONTRACTOR:

By _____

Sample EXHIBIT A – Article 19: Additional Support Services Fee Schedule

EP Contractor will provide the following additional support services upon receipt of a written request of the Town referencing Article 19 Services for the following fees:

Remote services related to controls, operations, etc. \$175 hr

Phone support for technical equipment issues \$175 hr

On site assistance for equipment issues. \$2000 day rate includes travel and per diem

Travel time

Exhibit B

Design Requirements

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Current			-						-				
Equiv Pop		700	700	700	750	1200	3000	4000	2600	2000	1750	750	750
Inf Q	(MDG)	0.08	0.08	0.08	0.08	0.1	0.18	0.18	0.13	0.1	0.08	0.07	0.07
Inf BOD	(mg/l)	250	250	225	225	275	400	450	450	425	425	425	350
Inf BOD	(ppd)	167	167	150	150	229	600	676	488	354	284	248	204
Inf NH3	(mg/l)	30	30	30	40	50	55	55	60	60	40	40	40
Inf TKN	(mg/l)	45	45	50	50	65	75	80	80	80	75	60	60
Liq Temp	(C)	1.5	1.5	3.5	6	8	12	16		12	7	4	2
Eff BOD	(mg/l)	25	25	25	25	25	25	25	25	25	25	25	25
Eff TSS	(mg/l)	25	25	25	25	25	25	25	25	25	25	25	25
Eff NH3	(mg/l)	9	9	9	8	7	6	7	6	6	8	8	9
Eff TIN*	(mg/l)	60	60	60	60	60	60	60	60	60	60	60	60

2043													
Equiv Pop		1400	1400	1400	1600	2200	5000	5000	4000	3500	2500	1500	1400
Inf Q	(MDG)	0.16	0.16	0.16	0.16	0.2	0.3	0.3	0.26	0.2	0.16	0.14	0.14
Inf BOD	(mg/l)	250	250	225	225	275	400	450	450	425	425	425	350
Inf BOD	(ppd)	334	334	300	300	459	1001	1126	976	709	567	496	409
Inf NH3	(mg/l)	30	30	30	40	50	55	5	60	60	40	40	40
Inf TKN	(mg/l)	55	55	55	55	65	75	85	85	85	80	70	55
Inf TKN	(ppd)	73.4	73.4	73.4	73.4	108.4	187.7	212.7	184.3	141.8	106.8	81.7	64.2
Liq Temp	(C)	1.5	1.5	3.5	6	8	12	16	16	12	7	4	2
Eff BOD	(mg/l)	25	25	25	25	25	25	25	25	25	25	25	25
Eff TSS	(mg/l)	25	25	25	25	25	25	25	25	25	25	25	25
Eff NH3	(mg/l)	9	9	9	8	7	6	7	6	6	8	8	9
Eff TIN*	(mg/l)	60	60	60	60	60	60	60	60	60	60	60	60

Liquid Temp is guess w/o insulated cover		
* Effluent 2 yr rolling TIN avg	45	
* Effluent Daily Max for TIN	80	
pH year round	6.5-9	

NOTICE OF AWARD

DATED:

TO: _____
Proposer

ADDRESS: _____

PROJECT NAME: Town of Lake City – Wastewater Treatment Plant Equipment

CONTRACT FOR: Town of Lake City – Wastewater Treatment Plant Equipment
Name of Contract as it appears in Proposal Documents

You are notified that your Proposal dated _____ for the above Contract has been considered. You are the apparent successful proposer and have been awarded a contract for Town of Lake City – Wastewater Treatment Plant Equipment with the following amended scope and pricing:

The Contract Price of your contract is _____ and 00/100 Dollars (\$ _____). The Owner reserves the right to add or deleted work as the project progresses for the unit prices above to insure the project stays within budget.

Actual payments will be based on the quantity and unit price for the work completed in accordance with the Contract Documents.

You must comply with the following conditions precedent within ten days of the date of this Notice of Award, that is by _____.

1. You must deliver to the Owner three fully executed counterparts of the Agreement including required Contract Securities (Bonds) as specified in the Agreement.
2. Certificates of Insurance with the minimum limits and additional insurers listed in the Contract Documents.
3. (List other conditions precedent). (None)

Failure to comply with these conditions within the time specified will entitle Owner to consider you proposal abandoned, to annul this Notice of Award and to declare your Proposal Security forfeited.

Within ten days after you comply with those conditions, Owner will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

Town of Lake City
Owner

BY: _____
Authorized Signature

Title

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by:

_____ on _____, 20

BY: _____ Title: _____

Employer ID Number: _____

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and _____
(Corporation, Partnership, or Individual) (Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

(Name of Owner)

(Address of Owner)

hereinafter called OWNER in the total aggregate penal sum of _____
Dollars (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____ 20____, a copy of which is hereto attached and made a part hereof for the construction of:

Project Name: _____

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER with or without notice to the SURETY and during the one year guaranty period and if the PRINCIPAL shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying same shall in any way affect its

obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that it is expressly agreed that the BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the CONTRACT as so amended. The term "Amendment", wherever used in this BOND, and whether referring to this BOND, the Contract or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the OWNER and the PRINCIPAL shall abridge the right of the other beneficiary hereunder, whose claim may be unsatisfied. The OWNER is the only beneficiaries hereunder.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of which shall be deemed an original, this the _____ day of 20_____ .

ATTEST:

Principal

(Principal) Secretary

By _____(s)

(SEAL)

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

By _____

Witness as to Surety

Attorney-in-Fact

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and _____
(Corporation, Partnership, or Individual) (Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

(Name of Owner)

(Address of Owner)

hereinafter called OWNER in the penal sum of _____ Dollars (\$_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of:

Project Name: _____

NOW, THEREFORE, if the PRINCIPAL shall promptly make payment to all persons, firms, sub-contractors, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such Contract, and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said Work whether by Sub-Contractor or otherwise then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its

obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in __ counterparts, each of which shall be deemed an original, this the ___ day of _____ 20__.

ATTEST:

Principal

(Principal) Secretary

(SEAL)

By _____(s)

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

Witness as to Surety

By
Attorney-in-Fact

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

oOo

NOTICE TO PROCEED

DATED:

TO: _____
EP Contractor

ADDRESS: _____

PROJECT NAME: Town of Lake City – Wastewater Treatment Plant Equipment

CONTRACT FOR: Town of Lake City – Wastewater Treatment Plant Upgrade Equipment
Name of Contract as it appears in Contract Documents

You are notified that the Contract Time under the above contract will commence to run on _____. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 2 of the Agreement the date of Completion is _____.

Before you may start any Work at the site you must provide the Owner certificates of insurance which is required in the Agreement which is required to be purchased in maintained in accordance with the Contract Documents. You must also schedule with the Engineer and attend a pre-construction conference at the office of the Owner.

Also before you may start any Work at the site you must:

Town of Lake City
Owner

BY: _____
Authorized Signature

Title _____

ACCEPTANCE OF NOTICE to Proceed

Receipt of the above Notice to Proceed is hereby acknowledged by:

_____ on _____, 20__

BY: _____ Title:

Employer ID Number: _____

CHANGE ORDER No. _____

PROJECT: Wastewater Treatment Plant Equipment DATE OF ISSUANCE: _____

OWNER: Town of Lake City
Address: P.O. Box 544, Lake City, CO 81235

CONTRACTOR: _____

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

Description: _____

Attachments: _____

CHANGE IN CONTRACT PRICE

CHANGE IN CONTRACT TIME

Original Contract Price

Original Contract Time

Previous Change Orders #_ to #_

Net Change From Previous Change Orders

Contract Price Prior to this Change Order

Contract Time Prior to this Change Order

Net Increase (Decrease) this Change Order

Net Increase (Decrease) this Change Order

Contract Price w/all approved Change Orders

Contract Time w/all appr'd Change Orders

RECOMMENDED:

APPROVED:

APPROVED:

Engineer

Contractor

Owner

FINAL PAYMENT REQUEST

WASTEWATER TREATMENT PLANT EQUIPMENT

TO: Town of Lake City
 P.O. Box 544
 Lake City, CO 81419

Application for Payment _____

Period Ending: _____

Original Contract Amount	\$
Change Order Amount	\$
Total Work Constructed (see attached list)	\$
Total Project	\$
Less Previous Payments	\$
TOTAL AMOUNT DUE - FINAL PAYMENT	\$

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief that all labor covered by the application has been paid including all sub-contractors and that title to all materials and equipment incorporated in the Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all liens, claims, security interests and encumbrances (except such as covered by Bond acceptable to Owner). This final payment represents final payment of all compensation due the Contractor for the Work in the Contract for the Wastewater Treatment Plant Equipment between the Town of Lake City and _____.

Engineer	Contractor	Town of Lake City
Engineer	Contractor	Owner
Title	Title	Title
Date	Date	Date



COLORADO
Department of Public
Health & Environment

State Revolving Fund Required Specifications

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Section 1

Davis Bacon Prevailing Wage Requirements

This contract is governed by the Davis Bacon and Related Acts and is subject to General Decision Number CO20230003 dated 06-02-2023. A copy of this General Decision Number is attached as [CO20230003 06/02/2023](#) to this document.

The SRF Program is subject to Davis Bacon and Related Acts, which extends the requirements of the Davis-Bacon Act. Compliance with the Davis-Bacon Act is required for any project funded by the Drinking Water Revolving Fund (DWRP) or Water Pollution Control Revolving Fund (WPCRF) programs. Non-Compliance with the Davis-Bacon Act may result in debarment and suspension from working on future projects funded with federal dollars for up to three years and/or loss of funding for the current project.

Preamble

With respect to the Clean Water and Safe Drinking Water State Revolving Funds, EPA provides capitalization grants to each State which in turn provides sub-grants or loans to eligible entities within the State. Typically, the subrecipients are municipal or other local governmental entities that manage the funds. For these types of recipients, the provisions set forth under Roman numeral I, below, shall apply. Although EPA and the State remain responsible for ensuring subrecipients' compliance with the wage rate requirements set forth herein, those subrecipients shall have the primary responsibility to maintain payroll records as described in Section 3(ii)(A), below and for compliance as described in Section I - 5.

Attachment 1

Wage Rate Requirements under:

- The Consolidated Appropriations Act, 2016 (P.L 114-133), or
- The Water Resources Reform and Redevelopment Act of 2014 (WRRDA):

I. For Subrecipients that Are Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its Davis - Bacon (DB) responsibilities when DB applies to EPA awards of financial assistance under The 2014 Act with respect to State recipients and subrecipients that are governmental entities. If a subrecipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient. The recipient or subrecipient may also obtain additional guidance from US Department of Labor (DOL) web site at <https://www.dol.gov/agencies/whd/government-contracts/construction>

1. Applicability of the Davis-Bacon (DB) prevailing wage requirements.

Under The Consolidate Appropriations Act, 2016, or The Water Resources Reform and Redevelopment Act of 2014, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a subrecipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the subrecipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

- (a) Subrecipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.
 - (1) While the solicitation remains open, the subrecipient shall monitor <https://sam.gov/> weekly to ensure that the wage determination contained in the solicitation remains current. The subrecipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the subrecipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the subrecipient.
 - (2) If the subrecipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the subrecipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The subrecipient shall monitor <https://sam.gov/> on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.
- (b) If the subrecipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the subrecipient shall insert the appropriate DOL wage determination from <https://sam.gov/> into the ordering instrument.
- (c) Subrecipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.
- (d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a subrecipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the subrecipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the subrecipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The subrecipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

- (a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment works under the Clean Water State Revolving Fund (CWSRF) or a construction project under the Drinking Water State Revolving Fund (DWSRF) financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or The 2014 Act, the following clauses:

(1) Minimum wages.

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, <https://sam.gov/>

- (ii) (A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient(s) to the State award official. The State award official will transmit the request to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative,

will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
 - (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
 - (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding.

- (i) The subrecipient(s) shall, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Federal Agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

- (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-

Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (ii) (A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at www.dol.gov/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).
- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
 - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into

the contract.

- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.
 - (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- (iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.
- (4) Apprentices and trainees--
- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
 - (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less

than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

- (5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- (6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- (7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.
- (10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor

any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U .S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above, or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section, the contractor and any subcontractor responsible, therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the

Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Federal Agency, State, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

- (a) The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.
- (b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.
- (c) The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its assessment of the risks of non-compliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.
- (d) The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.
- (e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at:

<https://www.dol.gov/agencies/whd/contact/local-offices>

Section 2

American Iron and Steel

The State Revolving Fund Program is subject to, and requires compliance with, the American Iron and Steel requirement (AIS). American Iron and Steel requires Water Pollution Control State Revolving Fund (WPCRF) and Drinking Water Revolving Fund (DWRWF) assistance recipients use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed on or after January 17, 2014.

In providing bids, proposals, or services, the Contractor represents and warrants to and for the benefit of the borrower and the State that:

- a. The Contractor has reviewed and understands the American Iron and Steel requirement.
- b. All of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved.
- c. The Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the borrower or the State.

Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the borrower or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the borrower or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the borrower). While the Contractor has no direct contractual privity with the State, as a lender to the borrower for the funding of its project, the borrower and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of the Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

For purposes of the WPCRF and DWRWF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings;
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel;
- Reinforced precast concrete; and
- Construction materials.

If the subrecipient can justify a claim made under one of the categories below, a waiver may be granted. Until a waiver is granted by the EPA, the AIS requirement must be adhered to as described in the act.

A waiver may be provided if EPA determines that:

1. Applying these requirements would be inconsistent with the public interest.
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

All waiver requests must be routed through the Grants and Loans Unit project manager or compliance specialist.

EPA's guidance on AIS requirements, available at http://water.epa.gov/grants_funding/aisrequirement.cfm includes specific instructions for communities interested in applying for a waiver. After receiving a completed application for a waiver from the Grants and Loans Unit, EPA will publish the waiver request and all material submitted with the application on this website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to the EPA.

Approved National Waivers available for borrowers and contractors include:

- April 15, 2014 De Minimis Waiver:

“The EPA is hereby granting a nationwide waiver pursuant to the American Iron and Steel requirements of P.L. 113-76 CAA 2014 (Act), section 436 under the authority of Section 436(b)(1) (public interest waiver) for de minimis incidental components of eligible water infrastructure projects. This action permits the use of products when they occur in de minimis incidental components of such projects funded by the Act that may otherwise be prohibited under section 436(a). Funds used for such de minimis incidental components cumulatively may comprise no more than a total of five percent of the total cost of the material used in and incorporated into a project; the cost of an individual item may not exceed one percent of the total cost of materials used in and incorporated into a project.”

Section 3

National Term on Suspension and Debarment

Under Executive Order 12549, an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program, or a subagreement thereunder for \$25,000 or more.

The status of prospective individuals or organizations can be checked at the System for Award Management at <https://sam.gov/>

It is the prime contractor's responsibility to verify that subcontractors, vendors, suppliers and manufacturers are not on the excluded parties list.

Section 4

Equal Employment Opportunity and Affirmative Action Requirements on Federally Assisted Construction Contracts

A. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

This notice shall be included in, and shall be a part of, all solicitations for offers and bids on all federal and federally assisted construction contracts or subcontracts.

- (1) The Offerer's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
- (2) The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

County	Minority Participation in Each Trade ¹	Female Participation in Each Trade ¹
Fort Collins, Larimer	6.9%	6.9%
Archuleta, Delta, Dolores, Eagle, Garfield, Grand Junction, Gunnison, Hinsdale, Jackson, La Plata, Mesa, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Juan, San Miguel	10.2%	6.9%
Colorado Springs, El Paso, Teller	10.9%	6.9%
Chaffee, Cheyenne, Clear Creek, Grand, Elbert, Kit Cason, Logan, Morgan, Park, Phillips, Sedgwick, Summit, Washington, Yuma	12.8%	6.9%
Greeley, Weld	13.1%	6.9%
Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Gilpin, Jefferson	13.8%	6.9%
Alamosa, Baca, Bent, Conejos, Costilla, Crowley, Custer, Fremont, Huerfano, Kiowa, Lake, Las Animas, Lincoln, Mineral, Otero, Prowers, Rio Grande, Saguache	19.0%	6.9%
Pueblo	27.5%	6.9%

1) Source: FR Vol.45 No. 194 / Friday, October 3, 1980

These goals are applicable to all the contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- (3) The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number for the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed (See Form C).
- (4) As used in this Notice, and in the contract resulting from this solicitation, the covered area is **Hinsdale County**.

B. EQUAL OPPORTUNITY CLAUSES

- (1) The Equal Opportunity Clause published at 41 CFR Part 60-1.4(b) is required to be included in, and is part of, all nonexempt federally assisted construction contracts and subcontracts. By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated.
- (2) In addition to the clauses described above, all federal contracting officers, all applicants, and all non-construction contractors, as applicable, shall include the specifications set forth in this section in all federal and federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to 41 CFR 60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of non-construction Federal contracts and subcontracts covered under the Executive Order.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

A. DEFINITIONS AS USED IN SPECIFICATIONS

- (1) "Covered Area" means the geographical area described in solicitation from which this contract resulted;

- (2) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- (3) "Employer identification number" means the Federal Social Security number used on the employer's quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- (4) "Minority" includes:
 - (a) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (b) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (c) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asian, the Indian Subcontinent, or the Pacific Islands);
 - (d) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).

B. DETAILED SPECIFICATIONS

- (1) Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$25,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
- (2) If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan (Plan) approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area, (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the Equal Employment Opportunity (EEO) clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
- (3) The contractor shall implement the specific affirmative action standards provided in paragraphs (6)(a) through (p) of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
- (4) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

- (5) In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
- (6) The contractor shall take specific affirmative action to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - (a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - (b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations where the contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - (c) Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the contractor may have taken.
 - (d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - (e) Develop on-the-job training opportunities and/or participate in training programs for the areas which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under (7)(b) above.
 - (f) Disseminate the contractor's EEO policy by providing notice of the policy to

unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

- (g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- (h) Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
- (i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations servicing the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- (j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.
- (k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- (l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- (m) Ensure that seniority practices, job classification, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations are followed.

- (n) Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - (o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - (p) Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.
- (7) Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (6)(a) through (p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under (6)(a) through (p) of the specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.
- (8) A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the order if a specific minority group of women is under-utilized).
- (9) The contractor shall not use the goals and timetables of affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- (10) The contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.
- (11) The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
- (12) The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph (6) of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.3.

- (13) The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
- (14) Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

Section 5

Williams-Steiger Occupational Safety and Health Act of 1970

A. Authority

- (1) The contractor is subject to the provisions of the Williams-Steiger Occupational Safety and Health Act of 1970.
- (2) These construction documents and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the Federal law(s), including but not limited to the latest amendment of the following:
 - (a) Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 94-596;
 - (b) art 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;
 - (c) Part 1926 - Safety and Health Regulations for Construction, Chapter XVII of Title 29, Code of Federal Regulations.

B. Safety and Health Program Requirements

- (1) This project, its prime contractor and its subcontractors, shall at all times be governed by Chapter XVII of Title 29, Code of Federal Regulations, Part 1926 - Safety and Health Regulations for Construction (29 CFR 22801), as amended to date.
- (2) To implement the program and to provide safe and healthful working conditions for all persons, general project safety meetings will be conducted at the site at least once each month during the course of construction, by the construction superintendent or his/her designated safety officer. Notice of such meeting shall be issued not less than three (3) days prior, stating the exact time, location, and agenda to be included. Attendance by the owner, architect, general foreman, shop steward(s), and trades, or their designated representatives, witnessed in writing as such, shall be mandatory.
- (3) To further implement the program, each trade shall conduct a short gang meeting, not less than once a week, to review project safety requirements mandatory for all persons during the coming week. The gang foreman shall report the agenda and specific items covered to the project superintendent, who shall incorporate these items in his/her daily log or report.
- (4) The prime contractor and all subcontractors shall immediately report all accidents, injuries, or health hazards to the owner and architect, or their designated representatives, in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970.
- (5) This program shall become a part of the contract documents and the contract between the owner and prime contractor, prime contractor and all subcontractors, as though fully written therein.

Section 6

Discovery of Archaeological and Other Historical Items

A. Construction Procedures

In the event of an archaeological or more recent historical find (e.g., artifacts, housing sites) during any phase of construction, the following procedure should be followed:

- (1) Construction shall be halted, with as little disruption to the archaeological site possible.
- (2) The Contractor shall notify the Owner who shall contact the State Historical Preservation Officer.
- (3) The State Historical Preservation Officer may decide to have an archaeologist inspect the site and make recommendations about the steps needed to protect the site, before construction is resumed.
- (4) The entire event should be handled as expediently as possible in order to hold the loss in construction time to a minimum while still protecting archaeological finds.

B. National Register Status

In the event archaeological/historical data are evaluated to meet National Register criteria, the Advisory Council on Historic Preservation may be notified and asked to comment by the Water Quality Control Division.

Section 7

Disadvantaged Business Enterprise (DBE) - SRF Program Grant Agreement Information and Requirements

OVERVIEW OF DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The Environmental Protection Agency's (EPA) new Disadvantaged Business Enterprise (DBE) rule became effective on May 27, 2008. The new DBE rule sets forth an EPA program that serves the compelling government interest of remedying past and current racial discrimination through agency-wide procurement objectives. The new DBE rule revises and replaces EPA's Minority and Women Business Enterprise (MBE/WBE) Program for funding received after May 27, 2008.

Note that the loan recipient is not a passive conduit of the contractor's DBE information. By submitting the proposed contractor's DBE documentation to the SRF Loan Program for review, the loan recipient is asserting that it has found the proposed contractor's documentation of good faith efforts adequate.

In order to be counted as a MBE/WBE under the new EPA DBE rule, MBE/WBEs must be certified by a federal agency (e.g., EPA, Small Business Administration, and Department of Transportation) or by a State, locality, Indian Tribe, or independent private organization that meets the certification requirements of the new EPA DBE rule. Under the new EPA DBE rule an individual claiming economic disadvantaged status must have an initial and continued personal net worth of less than \$750,000.

Locating potential DBE sub-contractors is the responsibility of the bidder/contractor. The following is a list of resources that may be used to locate potential DBEs:

- The Colorado Department of Transportation maintains a listing of certified DBE'S on its website at: <http://coloradodbe.org/>
- The EPA maintains a searchable list by EPA region for the OSBP Registry at: <https://cfpub.epa.gov/sbvps/index.cfm?fuseaction=app.search>

Applications for certification by EPA can be found on EPA's Small Business Programs website at http://www.epa.gov/osbp/dbe_fair.htm

Each procurement contract signed by a loan participant must include the following term and condition:

"The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract."
(Appendix A to Part 33—Term and Condition)

GUIDANCE FOR UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES REQUIREMENTS OF 40 CFR PART 33

A. REQUIREMENTS

1. Each procurement contract signed by a loan recipient must include the following term and condition:

The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract

which may result in the termination of this contract or other legally available remedies.

2. The recipient and prime contractor will create and maintain a bidders list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. The purpose of a bidders list is to provide the recipient and entities receiving identified loans who conduct competitive bidding with as accurate a database as possible about the universe of MBE/WBE and non-MBE/WBE prime and subcontractors. The list must include all firms that bid or quote on prime contracts, or bid or quote subcontracts on EPA assisted projects, including both MBE/WBEs and non-MBE/WBEs. The bidders list must only be kept until the project period for the identified loan has ended. The following information must be obtained from all prime and subcontractors:
 - (a) Entity's name with point of contact;
 - (b) Entity's mailing address, telephone number, and e-mail address;
 - (c) The procurement on which the entity bid or quoted, and when; and
 - (d) Entity's status as an MBE/WBE or non-MBE/WBE.
3. The recipient and prime contractor will exercise good faith efforts to attract and utilize small, minority, and women's business enterprises primarily through outreach, recruitment, and race/gender neutral activities.
 - (a) At a minimum, fulfillment of six affirmative steps (good faith efforts) is required as set forth below:
 1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian, Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
 2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
 3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian, Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
 4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
 5. Use the services of the SBA and the Minority Business Development Agency of the Department of Commerce.
 6. If the prime contractor awards subcontract, require the prime contractor to take the affirmative Steps 1 through 5 listed above.

4. The prime contractor must pay its subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the owner.
5. The prime contractor must notify the owner in writing prior to any termination of a DBE subcontractor for convenience.
6. If a DBE subcontractor fails to complete work under the subcontract for any reason, the prime contractor must employ the good faith efforts if soliciting a replacement subcontractor, even if the fair share objectives have already been achieved.

B. FAIR SHARE OBJECTIVES

1. The Colorado SRF project goals are:

SRF Project	%MBE	%WBE
Construction	6.1%	6.6%

C. DEFINITIONS

1. Disadvantaged Business Enterprise (DBE) is a business concern which meets the qualifications of a Minority Business Enterprise (MBE), Women's Business Enterprise (WBE)
2. Minority Business Enterprise (MBE) is a business concern which is:
 - (a) Certified as socially and economically disadvantaged by the Small Business Administration;
 - i. Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities.
 - ii. Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system is impaired due to diminished capital and credit opportunities, as compared to others in the same business area who are not socially disadvantaged. In determining the degree of diminished credit and capital opportunities, the Small Business Administration shall consider, but not be limited to, the assets and net worth of such socially disadvantaged individuals. Individuals who certify that they are members of named groups (Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans), are to be considered socially and economically disadvantaged. Economically and socially disadvantaged individuals are deemed to include women.
 - (b) Certified as a minority business enterprise by a State or Federal agency; and
 - (c) An independent business concern which is at least 51 percent owned and controlled by minority group member(s).

- i. A minority group member is an individual who is a citizen of the United States and one of the following:
 1. Black American;
 2. Hispanic American (with origins from Puerto Rico, Mexico, Cuba, South or Central America)
 3. Native American (American Indian, Eskimo, Aleut, native Hawaiian); or
 4. Asian-Pacific American (with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, Taiwan or the Indian subcontinent).
 - ii. In order to satisfy this third criteria of the MBE definition, the minority ownership's interest must be real, substantial and continuing. Such interest is characterized by:
 1. Risk of loss/share of profit commensurate with the proportional ownership; and
 2. Receipt of the customary incidents of ownership, such as compensation (i.e., salary and other personnel compensation).
 - iii. A minority owner must have and exercise control of the business decisions. Characteristics of control include, but are not limited to:
 1. Authority to sign bids and contracts;
 2. Decisions in price negotiations;
 3. Incurring liabilities for the firm;
 4. Final staffing decisions;
 5. Policy-making; and
 6. General company management decisions.
 - iv. Only those firms performing a useful business function according to custom and practice in the industry, are qualified as MBEs. Acting merely as a passive conduit of funds to some other firm where such activity is unnecessary to accomplish the project does not constitute a "useful business function according to custom and practice in the industry." The purpose of this approach is to discourage the use of MBE "fronts" and limit the creation of an artificial supplier and broker marketplace.
3. Women's Business Enterprise (WBE) is a business which is certified as such by a State or Federal agency, or which meets the following definition:

"A women's business enterprise is an independent business concern which is at least 51 percent owned by a woman or women, who also control and operate it. Determination of whether a business is at least 51 percent owned by a woman or otherwise qualified WBE which is 51 percent owned by a married woman in a community property State will not be disqualified because her husband has a 50 percent interest in her share. Similarly, a

business which is 51 percent owned by a married man and 49 percent owned by an unmarried woman will not become a qualified WBE by virtue of his wife's 50 percent interest in his share of the business."

As in the case of a MBE, only United States citizens will be deemed to be WBEs. Similar to the MBE criteria, WBE should meet the criteria cited in subparagraphs C.2.a., C.2.b, and C.2.c(2), (3), and (4).

4. Fair Share or Fair Share Objective: A fair share or a fair share objective is an amount of funds reasonably commensurate with the total project funding and the availability of qualified MBEs and WBEs, taking into account experience on EPA-funded projects and other comparable projects in the area. A fair share objective does not constitute an absolute requirement, but a commitment on the part of the bidder to exercise good faith efforts as defined in this section to use MBEs and WBEs to achieve the fair share objective.
5. Recipient: A party receiving SRF financial assistance.
6. Project: The scope of work for which an SRF loan is awarded.
7. Bidder: A party seeking to obtain a contract with a recipient through a competitive, advertised, sealed bid process.
8. Offeror: A party seeking to obtain a contract with a recipient through a negotiative procurement process.
9. Prime Contractor: A party that has obtained a contract with a recipient through a competitive, advertised, sealed bid process.
10. Good Faith Efforts: Good faith efforts by a recipient, prime contractor, and/or bidder/offeror means efforts to attract and utilize DBEs primarily through outreach, recruitment, and race/gender neutral activities. The following are examples of activities to assist recipients, prime contractors and/or bidders/offerors to comply with good faith efforts.
 - (a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian, Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
 - i. Maintain and update a listing of qualified MBE/WBEs that can be solicited for construction, equipment, services and/or supplies.
 - ii. Provide listings to all interested parties who request copies of the bidding or proposing documents.
 - iii. Contact appropriate sources within your geographic area and state to identify qualified MBE/WBE for placement on your MBE/WBE business listings.
 - iv. Utilize other MBE/WBE listings such as those of the state's minority business

office, the Small Business administration, Minority Business Development Agency (MBDA) of the Department of Commerce, EPA OSDBU, and DOT.

- v. Have state environment agency personnel review solicitation lists.
- (b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- i. Develop realistic delivery schedules which may provide for greater MBE/WBE participation.
 - ii. Advertise through the minority media in order to facilitate MBE/WBE utilization. Such advertisements may include, but are not limited to, contracting and subcontracting opportunities, hiring and employment, or any other matter related to the project.
 - iii. Advertise in general circulation publications, trade publications, state agency publications and minority and women's business focused media concerning contracting opportunities on your projects. Maintain a list of minority and/or women's business-focused publications that may be utilized to solicit MBE/WBEs.
- (c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian, Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- i. Perform an analysis to identify portions of work that can be divided and performed by qualified MBE/WBEs.
 - ii. Scrutinize the elements of the total project to develop economical units of work that are within the bonding range of MBE/WBEs.
 - iii. Conduct meetings, conferences, and follow-ups with MBE/WBE associations and minority media to inform these groups of opportunities to provide construction, equipment, services and supplies.
- (d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- i. Notify MBE/WBEs of future procurement opportunities so they may establish bidding solicitations and procurement plans.
 - ii. Provide MBE/WBE trade organizations with succinct summaries of solicitations.
 - iii. Provide interested MBE/WBEs with adequate information about plans, specifications, timing and other requirements of the proposed projects.
- (e) Use the services of the SBA and the Minority Business Development Agency (MBDA) of the Department of Commerce.

- i. Use the services of outreach programs sponsored by the MBDA and/or the SBA to recruit bona fide firms for placement on DBE bidders lists to assist these firms in the development of bid packaging.
 - ii. Seek out Minority Business Development Centers (MBDC) to assist recipients and prime contractors in identifying MBE/WBEs for potential work opportunities on projects.
- (f) If the prime contract awards subcontracts, require the prime contractor to take steps in Paragraphs (a) through (e) of this section.

D. REPORTING

1. The recipient must submit “DBE Utilization Under Federal Grants, Cooperative Agreements, and Interagency Agreements,” to the Project Administrator beginning with the Federal Fiscal year quarter the bid is awarded and continuing until the project is completed. These reports must be submitted within 5 days of the end of the Federal fiscal quarter or by January 5, April 5, July 5, and October 5. Please e- mail reports to:

CDPHE_grantsandloans@state.co.us

2. Bidders/offerors shall demonstrate compliance with good faith efforts in order to be deemed responsible.
3. The prime contractor must distribute DBE Program Subcontractor Participation Form (EPA Form 6100-2) to all of its DBE subcontractors. The subcontractors can submit completed forms to the State of Colorado, Water Quality Control Division, Grants and Loans Unit.
4. The prime contractor must have its DBE subcontractors complete DBE Program Subcontractor Performance Form (Form 6100-3).
5. The prime contractor must complete DBE Program Subcontractor Utilization Form (Form 6100-4).
6. Form 6100-3 and Form 6100-4 must be submitted by the apparent low-bidder within ten calendar days of the bid opening. Failure to submit this information will be viewed as a non-responsive bid.

Section 8

Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment

The following requirements including terms and conditions apply to this contract and expenditures submitted for reimbursement through the state revolving fund loan covering the work to be completed in this contract.

- A. This term and condition implements 2 CFR 200.216 and is effective for obligations and expenditures of EPA financial assistance funding on or after 8/13/2020.
- B. As required by 2 CFR 200.216, EPA recipients and subrecipients, including borrowers under EPA funded revolving loan fund programs, are prohibited from obligating or expending loan or grant funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in [Public Law 115-232](#), section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). Recipients, subrecipients, and borrowers also may not use EPA funds to purchase:
 1. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
 2. Telecommunications or video surveillance services provided by such entities or using such equipment.
 3. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.
- C. Consistent with 2 CFR 200.471, costs incurred for telecommunications and video surveillance services or equipment such as phones, internet, video surveillance, and cloud servers are allowable except for the following circumstances:
 1. Obligating or expending EPA funds for covered telecommunications and video surveillance services or equipment or services as described in 2 CFR 200.216 to:
 - a) Procure or obtain, extend or renew a contract to procure or obtain;
 - b) Enter into a contract (or extend or renew a contract) to procure; or
 - c) Obtain the equipment, services, or systems.
 2. Certain prohibited equipment, systems, or services, including equipment, systems, or services produced or provided by entities identified in section 889, are recorded in the System for Award Management exclusion list at <https://sam.gov/>
- D. There is no exhaustive list of components and services that fall under the prohibition. Exercise due diligence and be particularly mindful of project components with internet or cellular connections. For example, recipients should be mindful of automatic meter reading (AMR) technology and

advanced metering infrastructure (AMI), instrumentation control systems (e.g. process control systems, distributed control systems and programmable logic controls), and security cameras and other electronic security measures to ensure that those items are procured from a non-excluded entity. Items included in the prohibition are not eligible SRF costs, and the SRF programs cannot reimburse borrowers for these costs.

Section 9

Signage Requirements

The following signage guidelines present a number of options which communities can explore to implement EPA's signage policy. The option selected should meet all of the above basic requirements while remaining cost-effective and accessible to a broad audience. The guidelines describe the following strategies as acceptable options for communities to follow:

- Standard signage;
- Posters or wall signage in a public building or location;
- Newspaper or periodical advertisement for project construction, groundbreaking ceremony, or operation of the new or improved facility;
- Online signage placed on community website or social media outlet;
- Press release.

Each of these options is described in more detail in the sections below.

Implementation Option: Standard Signage

EPA recommends that large projects that involve significant expansion or construction of a new facility elect to publicize through standard signage. This option should be selected for projects where the sign would be near a major road or thoroughfare or where the facility is in a location at which this would effectively publicize the upgrades. Some facilities will not find this an appropriate or cost-effective solution. For example, investing in a large road sign for a facility that is located in a rural area or where access is limited to a smaller service road would likely not be an optimal solution.

Signs can also be located away from the project site if there is another reasonable alternative. For example, a community may elect to place a sign advertising the project near a body of water that receives discharge from a particular facility.

States selecting projects that will implement this requirement through use of a traditional sign should ensure the following are included:

- The name of the facility, project and community;
- Project cost;
- The State Agency/SRF administering the program;
- The EPA and State Agency logos (EPA logo may only be used on a sign).

If the EPA logo is displayed along with logos of other participating entities, the EPA logo must not be displayed in a manner that implies that EPA itself is conducting the project. Instead, the EPA logo must be accompanied with a statement indicating that the recipient received financial assistance from EPA for the project. As provided in the sign specifications from the EPA Office of Public Affairs (OPA), the EPA logo is the identifier for assistance agreement projects. States are required to ensure that recipients comply with the sign specifications provided by the OPA, available at http://www.epa.gov/ogd/tc/epa_logo_seal_specifications_for_infrastructure_grants.pdf. To obtain the appropriate EPA logo graphic file, the recipient should send a request directly to OPA and include the EPA Project Officer in the communication.

Implementation Option: Posters or Brochures

Smaller projects, projects located in rural areas, and other efforts may find that it is more cost effective and practical to advertise efforts through creation of a poster or smaller sign. If the project involves nonpoint source or green infrastructure components, those can be described at the discretion of the state or community.

The poster or brochure and acknowledgement should be visible, as well as a website or other source of information for individuals that may be curious about the SRF program. The community could also implement this option as a short pamphlet or brochure that is placed in one of these locations for community members to read.

Posters or brochures should be placed in a public location that is accessible to a wide audience of community members. This can include, but is not limited to:

- Town or City Hall;
- Community Center;
- Locally owned or operated park or recreational facility;
- Public Library;
- County/municipal government facilities;
- Court house or other public meeting space.

Given the low cost for producing multiple copies of the same poster, pamphlet, or brochure, communities can explore options for displaying these posters in several locations simultaneously. This would achieve the overall objective of reaching a broad audience and publicizing the project.

States have the option of creating a template verbiage and layout to provide to borrowers, particularly smaller or disadvantaged communities. This could reduce the burden on small municipalities which may or may not have the staffing capacity to meet signage requirements on their own.

States selecting projects that will implement this requirement through use of posters or brochures should ensure the following are included:

- Name of facility, project and community;
- State SRF administering the program;
- Project is wholly or partially funded with EPA funding;
- Brief description of project;
- Brief description of the water quality benefits the project will achieve.

Implementation Option: Newsletter, Periodical or Press Release

For communities where there is no suitable public space or where advertisement through signage is unlikely to reach community members effectively, projects can be advertised in a community newsletter or similar periodical. States can use guidelines from their standard public notice practices. For new construction, if a groundbreaking ceremony is to be held, an announcement could publicize or accompany publicity for this event.

In some cases, it may be appropriate for the state agency to issue a formal press release announcing construction of a new facility. Distributing a single prepared statement concisely summarizing the project purpose and the joint funding from EPA and state resources can reach a wide audience as the statement goes through multiple news outlets. Programs should consider whether or not this is an option that is likely to effectively publicize the CWSRF or DWSRF program in local news sources.

If a recipient decides on a public or media event to publicize the accomplishment of significant events related to construction as a result of EPA support, EPA must be provided with at least a ten working day notice of the event and provided the opportunity to attend and participate in the event.

States selecting projects that will implement this requirement through use of a newsletter, periodical or press release should ensure the following are included:

- Name of facility, project and community;
- State SRF administering the program;
- Project is wholly or partially funded with EPA funding;
- Brief description of the project;
- Brief listing of water quality benefits to be achieved.

Implementation Option: Insert or Pamphlet in Water/Sewer Bill

Utilities can consider including a single-page insert within water and sewer bills that are mailed to residents and users in the area. This approach would effectively publicize the project to those individuals directly benefitting from the project. The flyer or insert could emphasize the interest rate and financial savings that the community achieved by taking advantage of SRF funds as well as the environmental and public health benefits to the community.

States selecting projects that will implement this requirement through use of an insert or pamphlet in water/sewer bill should ensure the following are included:

- Name of facility, project and community;
- State SRF administering the program;
- Project is wholly or partially funded with EPA funding;
- Brief description of the project;
- Brief listing of water quality benefits to be achieved.

Implementation Option: Online & Social Media Publicity

Many communities are increasingly finding that the online forum is the most cost-effective approach to publicizing their SRF programs and reaching a broad audience of stakeholders. Online "signage" should follow the minimum information guidelines above and may appear on the town, community or facility website if available. In some cases, communities may be active on social media sites such as Facebook or Twitter. These can be used as an opportunity for publicizing projects and information about how SRF funds are being used in the community. These online announcements/notices may be appropriate for settings where physical signage would not be visible to a wide audience. They can be a more cost-effective option than traditional signs or publicity in print media outlets. This option may be most useful where the community's website is a well-recognized source of information for its residents.

In the case of some projects, such as non-point source or sponsorship projects, there might be additional opportunities for online publicity through partner agencies or organizations. This could take place either on the organization's website or again through social media outlets.

States selecting projects that will implement this requirement through use of online & social media publicity should ensure the following are included:

- Name of facility, project and community;

- State SRF administering the program;
- Project was wholly or partially funded with EPA funding;
- Brief description of the project;
- Brief listing of water quality benefits to be achieved.

Suggested Language for Alternate Options

For any of the alternate implementation options listed above, SRF programs have discretion to structure their signage as they see appropriate. The language below is offered as an option for use in posters, pamphlets, brochures, press releases, or online materials. States may consider using the following:

"Construction of upgrades and improvements to the [Name of Facility, Project Location, or WWTP] were financed by the [Clean Water/Drinking Water] State Revolving Fund. The [CWSRF/DWSRF] program is administered by [State Agency] with joint funding from the U.S. Environmental Protection Agency and [State Name]. This project will [description of project] and will provide water quality benefits [details specifying particular benefits] for community residents and businesses in and near [name of town, city, and/or water body or watershed to benefit from project.] [CWSRF/DWSRF] programs operate around the country to provide states and communities the resources necessary to maintain and improve the infrastructure that protects our valuable water resources nationwide."

For projects in certain areas, states should consider whether or not it is appropriate to include additional details about the projects. Specific benefits, such as reduction of combined sewer overflow (CSO) events, lessening of nutrient pollution, reducing contaminant levels or water pumping costs, or improvements to a particular water body, may be of interest to community residents. In these cases, including them would further serve to showcase positive efforts financed by the SRF programs. Additionally, for projects with components that meet Green Project Reserve (GPR) criteria, States may elect to detail these particular improvements. For example, the state could include quantitative improvements in energy efficiency or water conservation achieved by project upgrades. If the project includes green infrastructure components such as rain gardens and green roofs that have environmental and aesthetic benefits to the community, these can be described briefly as well. Again, this additional information can be included at the discretion of the state when it is appropriate, given the project type, location, and the type of signage or publicity effort selected.

Section 10

SRF Required Forms by Section

SRF forms can be found on this webpage: <https://cdphe.colorado.gov/state-revolving-fund-information> (scroll to the bottom of the page to find the “forms” link)

Section 1 - Davis Bacon Prevailing Wages

- Davis Bacon Certification Form (SRF form);
- WH - 347 - Contractors Payroll Form;
- Standard Form 1444 - Request for Authorization of Additional Classification and Rate;
- Standard Form 1445 - Labor Standards Interview Form.

Section 2 - American Iron and Steel

- American Iron and Steel Certification Form (SRF Form);
- American Iron and Steel Product Spreadsheet (SRF Form).

Section 3 -National Term on Suspension and Debarment

- No applicable forms.

Section 4 - Equal Employment Opportunity and Affirmative Action Requirements

- No applicable forms.

Section 5 - Williams-Steiger Occupational Safety and Health Act of 1970

- No applicable forms.

Section 6 - Discovery of Archaeological and Other Historical Items

- No applicable forms.

Section 7 - Disadvantaged Business Enterprise (DBE)

- Form 6100-2 provided by prime contractor completed by DBE subcontractor and submitted to the CDPHE GLU project manager;
- Form 6100-3 provided by prime contractor completed by DBE subcontractor and submitted CDPHE GLU project manager;
- Form 6100-4 provided by subrecipient completed by prime contractor as part of bid package;
- Form B provided by subrecipient completed by prime contractor submitted to the Compliance Specialist or at cdphe_grantsandloans@state.co.us.

Section 8 - Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment

- No applicable forms.

Section 9 -Signage Requirements

- No applicable forms.

"General Decision Number: CO20230003 06/02/2023

Superseded General Decision Number: CO20220003

State: Colorado

Construction Type: Heavy

Counties: Alamosa, Archuleta, Baca, Bent, Chaffee, Cheyenne, Clear Creek, Conejos, Costilla, Crowley, Custer, Delta, Dolores, Eagle, Elbert, Fremont, Garfield, Gilpin, Grand, Gunnison, Hinsdale, Huerfano, Jackson, Kiowa, Kit Carson, La Plata, Lake, Las Animas, Lincoln, Logan, Mineral, Moffat, Montezuma, Montrose, Morgan, Otero, Ouray, Park, Phillips, Pitkin, Prowers, Rio Blanco, Rio Grande, Routt, Saguache, San Juan, San Miguel, Sedgwick, Summit, Teller, Washington and Yuma Counties in Colorado.

HEAVY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none">. Executive Order 14026 generally applies to the contract.. The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none">. Executive Order 13658 generally applies to the contract.. The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/06/2023
1	02/24/2023
2	06/02/2023

ELEC0012-002 09/01/2021

ALAMOSA, ARCHULETA, BACA, BENT, CHAFFEE, CONEJOS, COSTILLA, CROWLEY, CUSTER, FREMONT, HUERFANO, KIOWA, LAS ANIMAS, MINERAL, OTERO, PROWERS, RIO GRANDE AND SAGUACHE COUNTIES

	Rates	Fringes
Electricians:		
Electrical contract over		
\$1,000,000.....	\$ 29.80	13.00+3%
Electrical contract under		
\$1,000,000.....	\$ 24.85	13.00+3%

 * ELEC0068-011 06/01/2023

CLEAR CREEK, EAGLE, GILPIN, GRAND, JACKSON, LAKE, LOGAN, MORGAN, PHILLIPS, SEDGWICK, SUMMIT, WASHINGTON AND YUMA COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 43.20	18.38

 ELEC0111-002 09/01/2022

	Rates	Fringes
Line Construction:		
Groundmen.....	\$ 23.89	21.25%+7.35
Line Equipment Operator.....	\$ 38.61	21.25%+7.35
Lineman and Welder.....	\$ 53.61	24.25%+7.35

 * ELEC0113-004 06/01/2023

CHEYENNE, ELBERT, KIT CARSON, LINCOLN, PARK AND TELLER COUNTIES

	Rates	Fringes
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ELECTRICIAN.....\$ 35.70 17.52

ELEC0969-003 06/01/2019

DOLORES, GARFIELD, GUNNISON, HINSDALE, LA PLATA, MOFFAT,
MONTEZUMA, RIO BLANCO, AND ROUTT COUNTIES

Rates Fringes

ELECTRICIAN.....\$ 25.20 10.06

ELEC0969-006 01/01/2019

OURAY, PITKIN, SAN JUAN AND SAN MIGUEL COUNTIES

Rates Fringes

ELECTRICIAN.....\$ 30.80 10.92

ELEC0969-010 06/01/2019

DELTA AND MONTROSE COUNTIES

Rates Fringes

ELECTRICIAN.....\$ 25.20 10.06

* ENGI0009-004 05/01/2023

Rates Fringes

Power equipment operators:

Mechanic.....\$ 34.58 14.25
Motor Grader: Blade-finish..\$ 34.58 14.25
Motor Grader: Blade-rough...\$ 34.05 14.25
Roller: self-propelled,
all types over 5 tons.....\$ 34.05 14.25
Roller: self-propelled,
rubber tires under 5 tons...\$ 33.62 14.25
Trackhoe.....\$ 34.21 14.25

PLUM0003-003 06/01/2022

CLEAR CREEK, GILPIN, GRAND, JACKSON, LAKE, LOGAN, MORGAN,
PHILLIPS, SEDGWICK, SUMMIT, WASHINGTON, AND YUMA. PARTS OF
ELBERT, EAGLE, KIT CARSON, LINCOLN, AND PARK COUNTIES

Rates Fringes

PLUMBER.....\$ 46.58 19.29

PLUM0058-010 07/01/2022

ALAMOSA, BACA, BENT, CHAFFEE, CHEYENNE, CONEJOS, COSTILLA, CROWLEY, CUSTER, ELBERT (Southern portion including towns of Elbert, Matherson and Simla), FREMONT, HUERFANO, KIOWA, KIT CARSON (Including towns of Dfalgler, Siebert, Vona, Stratton and Bethune), LAS ANIMAS, LINCOLN (Including towns of Geona and Arriba in the southern portion of the county), MINERAL, OTERO, PARK (Including towns of Fauplay, Hartsel and Lake George), PROWERS, PUEBLO, RIO GRANDE, AND SAGUACHE COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 42.20	16.69

PLUM0058-012 07/01/2022		

TELLER COUNTY

	Rates	Fringes
PLUMBER		
Includes HVAC Work.....	\$ 42.20	16.69

PLUM0145-004 07/01/2022		

ARCHULETA, DELTA, DOLORES, EAGLE (Eagle County is divided from where Pitkin and Lake Counties join on the north, and in a straight line to and including the town of Edwards and northerly to the south east corner of Routt County), GARFIELD, GUNNISON, HINSDALE, LA PLATA, MOFFAT, MONTEZUMA, MONTROSE, OURAY, PITKIN, RIO BLANCO, ROUTT, SAN JUAN AND SAN MIGUEL COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 36.47	14.82

* SUCO2001-005 12/20/2001		

	Rates	Fringes
Carpenters:		
Form Building and Setting...	\$ 16.16 **	.82
All Other Work.....	\$ 15.72 **	
Cement Mason/Concrete Finisher...	\$ 14.76 **	2.28
Laborer, common.....	\$ 11.11 **	3.80
PIPEFITTER.....	\$ 18.13	1.84
Power equipment operators:		
Backhoe.....	\$ 15.93 **	3.58
Bobcat/Skid Loader.....	\$ 20.22	4.41
Bulldozer.....	\$ 15.08 **	4.44
Excavator.....	\$ 15.39 **	

Front End Loader.....\$ 15.86 ** 3.59

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information. determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or

"UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISIO"



American Iron and Steel Certification

Project Name: _____

Period From: _____ To: _____

Section 436 of the Consolidated Appropriations Act, 2014 states that:

None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

To meet this requirement, the undersigned hereby certifies that all iron and steel products which are to be incorporated into the (Name of Construction Contract), has been manufactured and/or fabricated using domestic iron and steel as defined by the above referenced section 436 of P.L. 113-76 and EPA's Guidance Memorandum dated March 20, 2014 for Implementation of American Iron & Steel unless an appropriate waiver has been granted by the Administrator of the Environmental Protection Agency.

Name of Loan Recipient

Date

Signature of Authorized Official

Print Name and Title of Authorized Official

NOTE: A current completed copy of the American Iron and Steel Products tracking spreadsheet MUST accompany this document.





American Iron and Steel Certification

Borrower Name: _____

Contractor: _____

Project Number: _____ Date: _____

Procurement Date	Product Description	Quantity	Cost	*Type of Certification Used ~Manufacturer/Fabricatin g Shipment Wavier (Pick One)	New or Existing Certification

* used to verify chain of custody control for product
~ includes melting, bonding, coating, galvanizing, cutting, etc.



COLORADO

**Department of Public
Health & Environment**

Project Name: _____

Period From: _____ To: _____

Davis-Bacon Act CERTIFICATION

I certify to the best of my knowledge and belief that the above referenced project:

Complies with Davis-Bacon and Related Acts and that all laborers and mechanics employed by contractors and subcontractors during the above referenced period were paid wages at rates not less than those listed on the prevailing wage rate contained in the contract documents and that all applicable provisions of the Davis-Bacon and Related Acts have been met.

Name of Loan Recipient

Date

Signature of Authorized Official

Print Name and Title of Authorized Official

PAYROLL

(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)



Rev. Dec. 2008

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

OMB No.: 1235-0008
Expires: 01/31/2015

NAME OF CONTRACTOR <input type="checkbox"/> OR SUBCONTRACTOR	ADDRESS
--	---------

PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION	PROJECT OR CONTRACT NO.
-------------	-----------------	----------------------	-------------------------

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT/RSST	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS					(9) NET WAGES PAID FOR WEEK
				HOURS WORKED EACH DAY										FICA	WITH- HOLDING TAX	OTHER	TOTAL DEDUCTIONS		
				S	S	S	S	S	S	S									
			O																
			S																
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

Date _____

I, _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the
(Contractor or Subcontractor)

_____;
(Building or Work)

_____ day of _____, _____, and ending the _____ day of _____, _____,
all persons employed on said project have been paid the full weekly wages earned, that no rebates have
been or will be made either directly or indirectly to or on behalf of said

_____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly
from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part
3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,
63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are
correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the
applicable wage rates contained in any wage determination incorporated into the contract; that the classifications
set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship
program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and
Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered
with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

— in addition to the basic hourly wage rates paid to each laborer or mechanic listed in
the above referenced payroll, payments of fringe benefits as listed in the contract
have been or will be made to appropriate programs for the benefit of such employees,
except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

— Each laborer or mechanic listed in the above referenced payroll has been paid,
as indicated on the payroll, an amount not less than the sum of the applicable
basic hourly wage rate plus the amount of the required fringe benefits as listed
in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR
SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE
31 OF THE UNITED STATES CODE.

**Request For Wage Determination And
Response To Request**

(Construction Wage Rate Requirements Statute and Related Statutes)

U.S. Department of Labor

Wage and Hour Division

<p>FOR DEPARTMENT OF LABOR USE</p> <p>Response To Request</p> <p><input type="checkbox"/> Use area determination issued for this area</p> <p>_____</p> <p>_____</p> <p><input type="checkbox"/> The attached decision noted below is applicable to this project</p> <p>Decision Number _____</p> <p>Date of Decision _____</p> <p>Expires _____</p> <p>Supersedes Decision Number _____</p> <p>Approved _____</p>	<p>Mail Your Request To:</p> <p>U.S. Department of Labor Wage and Hour Division Branch of Construction Contract Wage Determinations Washington, D.C. 20210</p> <p>Requesting Officer (Typed name <i>and signature</i>)</p> <p>Department, Agency, or Bureau _____ Phone Number _____</p> <p>Date of Request _____ Estimated Advertising Date _____ Estimated Bid Opening Date _____</p> <p>Prior Decision Number (if any) _____ Estimated \$ Value of Contract _____ Type of Work _____</p> <p style="margin-left: 40px;"><input type="checkbox"/> Under 1/2 Mil <input type="checkbox"/> 1 to 5 Mil <input type="checkbox"/> Bldg. <input type="checkbox"/> Highway</p> <p style="margin-left: 40px;"><input type="checkbox"/> 1/2 to 1 Mil <input type="checkbox"/> Over 5 Mil <input type="checkbox"/> Resid. <input type="checkbox"/> Heavy</p> <p>Address to which wage determination should be mailed. (Print or type)</p> <div style="border: 1px solid black; height: 150px; margin: 10px 0;"></div> <p>Location of Project (City, County, State, Zip Code) _____</p> <p>Description of Work (Be specific) (Print or type) _____</p>	<p>CHECK OR LIST CRAFTS NEEDED (Attach continuation sheet if needed)</p> <p>_____ Asbestos workers</p> <p>_____ Boilermakers</p> <p>_____ Bricklayers</p> <p>_____ Carpenters</p> <p>_____ Cement masons</p> <p>_____ Electricians</p> <p>_____ Glaziers</p> <p>_____ Ironworkers</p> <p>_____ Laborers (Specify classes)</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ Lathers</p> <p>_____ Marble & tile setters, terrazzo workers</p> <p>_____ Painters</p> <p>_____ Piledrivermen</p> <p>_____ Plasterers</p> <p>_____ Plumbers</p> <p>_____ Roofers</p> <p>_____ Sheet metal workers</p> <p>_____ Soft floor layers</p> <p>_____ Steamfitters</p> <p>_____ Welders-rate for craft</p> <p>_____ Truck drivers</p> <p>_____ Power equipment operators (Specify types)</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>Other Crafts</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p>
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**REQUEST FOR AUTHORIZATION OF
ADDITIONAL CLASSIFICATION AND RATE**

CHECK APPROPRIATE BOX
 SERVICE CONTRACT
 CONSTRUCTION CONTRACT

OMB Control Number: 9000-0089
Expiration Date: 10/31/2019

PAPERWORK REDUCTION ACT STATEMENT: Public reporting burden for this collection of information is estimated to average .5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspects of this collection of information, including suggestions for reducing this burden, to U.S. General Services Administration, Regulatory Secretariat (MVCB)/IC 9000-0089, Office of Governmentwide Acquisition Policy, 1800 F Street, NW, Washington, DC 20405.

INSTRUCTIONS: THE CONTRACTOR SHALL COMPLETE ITEMS 3 THROUGH 16, KEEP A PENDING COPY, AND SUBMIT THE REQUEST, IN QUADRUPPLICATE, TO THE CONTRACTING OFFICER.

1. TO: ADMINISTRATOR, WAGE AND HOUR DIVISION U.S. DEPARTMENT OF LABOR WASHINGTON, DC 20210	2. FROM: (REPORTING OFFICE)
---	------------------------------------

3. CONTRACTOR	4. DATE OF REQUEST
---------------	--------------------

5. CONTRACT NUMBER	6. DATE BID OPENED (SEALED BIDDING)	7. DATE OF AWARD	8. DATE CONTRACT WORK STARTED	9. DATE OPTION EXERCISED (IF APPLICABLE) (SERVICE CONTRACT ONLY)
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10. SUBCONTRACTOR (IF ANY)

11. PROJECT AND DESCRIPTION OF WORK (ATTACH ADDITIONAL SHEET IF NEEDED)

12. LOCATION (CITY, COUNTY AND STATE)

13. IN ORDER TO COMPLETE THE WORK PROVIDED FOR UNDER THE ABOVE CONTRACT, IT IS NECESSARY TO ESTABLISH THE FOLLOWING RATE(S) FOR THE INDICATED CLASSIFICATION(S) NOT INCLUDED IN THE DEPARTMENT OF LABOR DETERMINATION

NUMBER: _____ DATED: _____

a. LIST IN ORDER: PROPOSED CLASSIFICATION TITLE(S); JOB DESCRIPTION(S); DUTIES; AND RATIONALE FOR PROPOSED CLASSIFICATIONS (Service contracts only) <i>(Use reverse or attach additional sheets, if necessary)</i>	b. WAGE RATE(S)	c. FRINGE BENEFITS PAYMENTS

14. SIGNATURE AND TITLE OF SUBCONTRACTOR REPRESENTATIVE (IF ANY)	15. SIGNATURE AND TITLE OF PRIME CONTRACTOR REPRESENTATIVE
--	--

16. SIGNATURE OF EMPLOYEE OR REPRESENTATIVE	TITLE	CHECK APPROPRIATE BOX-REFERENCING BLOCK 13. <input type="checkbox"/> AGREE <input type="checkbox"/> DISAGREE
---	-------	---

TO BE COMPLETED BY CONTRACTING OFFICER (CHECK AS APPROPRIATE - SEE FAR 22.1019 (SERVICE CONTRACT LABOR STANDARDS) OR FAR 22.406-3 (CONSTRUCTION WAGE RATE REQUIREMENTS))

- THE INTERESTED PARTIES AGREE AND THE CONTRACTING OFFICER RECOMMENDS APPROVAL BY THE WAGE AND HOUR DIVISION. AVAILABLE INFORMATION AND RECOMMENDATIONS ARE ATTACHED.
- THE INTERESTED PARTIES CANNOT AGREE ON THE PROPOSED CLASSIFICATION AND WAGE RATE. A DETERMINATION OF THE QUESTION BY THE WAGE AND HOUR DIVISION IS THEREFORE REQUESTED. AVAILABLE INFORMATION AND RECOMMENDATIONS ARE ATTACHED.
(Send 3 copies to the Department of Labor)

SIGNATURE OF CONTRACTING OFFICER OR REPRESENTATIVE	TITLE AND COMMERCIAL TELEPHONE NUMBER	DATE SUBMITTED
--	---------------------------------------	----------------

LABOR STANDARDS INTERVIEW

CONTRACT NUMBER			EMPLOYEE INFORMATION		
NAME OF PRIME CONTRACTOR			LAST NAME		MI
			FIRST NAME		
NAME OF EMPLOYER			STREET ADDRESS		
			CITY		STATE
SUPERVISOR'S NAME			WORK CLASSIFICATION		
LAST NAME		FIRST NAME			

ACTION	CHECK BELOW	
	YES	NO
Do you work over 8 hours per day?		
Do you work over 40 hours per week?		
Are you paid at least time and a half for overtime hours?		
Are you receiving any cash payments for fringe benefits required by the posted wage determination decision?		
WHAT DEDUCTIONS OTHER THAN TAXES AND SOCIAL SECURITY ARE MADE FROM YOUR PAY?		

HOW MANY HOURS DID YOU WORK ON YOUR LAST WORK DAY BEFORE THIS INTERVIEW?	TOOLS YOU USE	
DATE OF LAST WORK DAY BEFORE INTERVIEW (YYMMDD)		
DATE YOU BEGAN WORK ON THIS PROJECT (YYMMDD)		

THE ABOVE IS CORRECT TO THE BEST OF MY KNOWLEDGE

EMPLOYEE'S SIGNATURE			DATE (YYMMDD)
INTERVIEWER	SIGNATURE	TYPED OR PRINTED NAME	DATE (YYMMDD)

INTERVIEWER'S COMMENTS

WORK EMPLOYEE WAS DOING WHEN INTERVIEWED	ACTION <i>(If explanation is needed, use comments section)</i>	YES	NO
	IS EMPLOYEE PROPERLY CLASSIFIED AND PAID?		
	ARE WAGE RATES AND POSTERS DISPLAYED?		

FOR USE BY PAYROLL CHECKER

IS ABOVE INFORMATION IN AGREEMENT WITH PAYROLL DATA?

YES NO

COMMENTS

CHECKER			
LAST NAME	FIRST NAME	MI	JOB TITLE
SIGNATURE			DATE (YYMMDD)



FORM B - DBE PROCUREMENTS MADE DURING QUARTER

Federal Quarter & Year: _____

1st (Oct-Dec); 2nd (Jan-Mar);
 3rd (Apr-Jun); 4th (Jul-Sep)

Procurement Made By		Business Enterprise		Total Dollar Value of Procurement	Date of Procurement Award MM/DD/YY	Type of Product or Service (see key below)	Name/Address of DBE Contractor or Vendor
Loan Recipient	Prime Contractor	MBE	WBE				
				\$			
				\$			
				\$			
				\$			

Type of Product or Service: 1=Construction 2=Supplies 3=Services 4=Equipment

Loan Recipient:		SRF Project Number			Amount Paid this Quarter	Cumulative Amount Paid to Date
DBE Reporting Contact for Loan Recipient:		Phone:	SRF Loan Amount:	MBEs:	\$	\$
State SRF Contact: Matt Alms		Phone: (303) 692-6264	e-mail: matt.alms@state.co.us	WBEs:	\$	\$
Print Name of Signature Authority of Loan Recipient:			Telephone Number:	Signature:		Date:
Print Name of Prime Contractor & Project Manager			Telephone Number:	Signature of Contractor Project Manager:		Date:

Form is due within 5 days after the end of each quarter throughout construction- 1/5, 4/5, 7/5, 10/5.

Instructions for completing and submitting Form B.

1. Federal Quarter/Year: Enter the corresponding quarter and federal fiscal year for each quarter submitted. Do not enter multiple quarters on one sheet.
2. Procurement Made By: Check whether the procurement was awarded by the recipient or the prime contractor
3. Business Enterprise: Check whether the business enterprise was Minority owned (MBE) or Women owned (WBE) business
4. Total Value of Procurement: Enter the total amount of the bid award
5. Date of Procurement Award: Enter the date the bid was **awarded**
6. Name/Address of DBE Contractor or Vendor: Enter the full name and address including city, state and zip of the awarded bidder. Use one sheet per prime contractor for all awards; do not use separate sheets for each business awarded.
7. Loan Recipient: Enter the full name of the recipient.
8. SRF Project Number: Enter the project number of the loan recipient as identified in the Intended Use Plan. This is a 6 digit number ending in the letter W (wastewater) or D (drinking water). If you do not know the project number, contact your project manager for assistance.
9. Loan Recipient DBE Contact: Enter the name of the person responsible for completing Form B.
10. Phone: Enter the phone number of the person responsible for completing Form B.
11. SRF Loan Amount: Enter the amount of the loan that was closed with the Colorado Water Resources and Power Development Authority Exhibit B of the loan agreement.
12. Amount Paid This Quarter: Enter the total amount disbursed to the awarded business for each quarter for each of the MBE and/or WBE you have paid out. Do not use a separate sheet for each business paid just use a total amount and do not enter a contract award amount.
13. Cumulative Amount Paid to Date: Add the previous quarter cumulative amount to the amount paid in the current quarter to calculate the cumulative amount paid to date.
14. Print Name of Signature Authority for Loan Recipient: This should be the same person who has authority to sign off on pay requests
15. Telephone Number: Phone number of 14.
16. Signature: Signature of 14. The form is incomplete if there are no signatures and will be returned to the loan recipient.
17. Date: Date the form was signed by 14.
18. Print Name of Prime Contractor & Project Manager: Company name and project manager name.
19. Telephone Number: Phone number of 18. .
20. Signature of Contractor Project Manager: Signature of 18. The form is incomplete if there are no signatures and will be returned to the loan recipient.
21. Date: Date the form was signed by 18.



**Disadvantaged Business Enterprise (DBE) Program
 DBE Subcontractor Participation Form**

A Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE subcontractor the opportunity to describe work received and/or report any concerns regarding the project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services , Equipment or Supplies	Amount Received by Prime Contractor



Please use the space below to report any concerns regarding the above funded project:

Subcontractor Signature	Print Name
Title	Date



This form is intended to capture the DBE subcontractor’s description of work to be performed and the price of the work submitted to the prime contractor. An SRF Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractors bid or proposal package.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services , Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: ___DOT ___SBA ___Other: _____		Meets/ exceeds certification standards? ___YES ___NO ___Unknown



I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

Subcontractor Signature	Print Name
Title	Date



**Disadvantaged Business Enterprise (DBE) Program
 DBE Subcontractor Utilization Form**

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity:			

I have identified potential DBE certified subcontractors	<input type="checkbox"/> YES	<input checked="" type="radio"/> NO
--	------------------------------	-------------------------------------

If yes, please complete the table below. If no, please explain:

Subcontractor Name/ Company Name	Company Address/ Phone/ Email	Est. Dollar Amt	Currently DBE Certified?

Continue on back if needed

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Section 11300

AERATION AND NITRIFICATION EQUIPMENT

PART 1 – GENERAL

1.1. DESCRIPTION

This specification defines requirements for aeration and nitrification (ammonia removal) equipment package to be provided by the Equipment Package (EP) Contractor. Included with the equipment package should be all hardware, controls, and piping to allow for years of trouble-free operation of the aeration and nitrification equipment, with only occasional operator intervention. More specifically the package furnished by the Contractor shall include, but not be limited to: aerators, diffusers, blowers, mixers, VFD drives (if specified), high surface area media, insulated covers, piping, valves, monitoring equipment, controls including automatic and programmable controls for heating and an Ethernet port to add additional monitoring and logging at later date, process integration panel, any heating and/or cooling elements and controls needed for the system proposed to function to meet design requirements, and appurtenances as specified herein and/or required for complete system to remove BOD, TSS, TKN including NH₃, and meet the limits provided in Exhibit B of the Agreement.

Note that anywhere these specifications reference a nitrification basin, the term is intended to also include a polishing reactor, or other ammonia removal system. Note that environmental conditions in Lake City make it impractical to recycle and/or waste sludge on a regular basis.

The EP Contractor shall furnish all labor, materials, tools, equipment to perform all work and services necessary for and incidental to the furnishing and installation assistance to the Plant Contractor which includes EP Contractor assisting by participating and overseeing the installation of a complete aerated lagoon system and nitrification equipment package, complete and ready for operation in accordance with the provisions of these contract documents. EP Contractor shall provide installation assistance, startup, commissioning and staff training services as specified herein. The EP Contractor shall also assist the Owner during the Startup / Acceptance and Performance Testing periods.

The plant renovation needs to be constructed in phases so that the Town can continue to properly continue to treat wastewater while the new work is furnished and installed. A phasing plan of operation which addresses phasing of the renovations has been submitted to CDPHE.

System supplied must meet the design criteria and requirements of the Colorado Department of Public Health and Environment (CDPHE). Although pre-approval of the system is not required, the site specific package must be able to receive approval of CDPHE in a timely manner, i.e, design shall be submitted to CDPHE, once CDPHE review comments are received, the EP Contractor will have 14 days to address CDPHE concerns and have the updates submitted back to the project engineer. If

more than one resubmittal of documents is required due to incomplete or problematic responses that will be considered an exceedance of the contract time.

1.2 Quality Control and Assurance

EP Contractor and equipment furnished shall be from a source that has successfully completed at least 5 similar systems in an environment and with the seasonal variations as found in Lake City CO.

Manufacturer's authorized representative shall be trained and approved for installation supervision of units required for this Project and successfully completed installation oversight, startup and training at least at 3 similar treatment facilities.

All equipment required in this section shall be supplied by a single manufacturer. This does not require that all equipment be manufactured by a single manufacturer but does require that the equipment supplier of the system shall be responsible for the complete system.

All equipment furnished under by EP Contractor shall be new. The equipment furnished by the EP Contractor shall comply with the applicable provisions of the following standards:

1. Hydraulic Institute
2. Institute of Electrical and Electronic Engineers (IEEE)
3. National Electric Code (NEC)
4. Standards of National Electrical Manufacturers Association (NEMA)
5. Underwriter's Laboratory (UL)
6. D1784 – Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
7. D1785 – Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
8. D3350 – Specification for Polyethylene Plastic Pipe and Fittings Materials
9. F714 - Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
10. ASTM A778 for stainless steel pipe
11. ASTM A36 Standard Specifications for Structural Steel
12. American Society of Civil Engineers (ASCE): Standard No. 002 "Measurement of Oxygen Transfer Efficiency in Clean Water"
13. Colorado Department of Public Health and Environment (CDPHE) Wastewater Design Criteria and Regulations

1.3. SUBMITTALS

The EP Contractor shall furnish to Engineer with the equipment submittal package within the timeframes in the Agreement. Contractor shall mark each submittal with his certification that the submittal has been checked for compliance with contract documents. Submittal shall include the date of submission, and if applicable, a complete list of all revisions.

At a minimum, submittal package shall meet the following requirements:

1.3.01. Shop Drawings - The EP Contractor shall submit shop drawings for review and approval including the documents listed herein.

Make all shop drawings accurately to a scale sufficiently large to show all pertinent features of the item, its layout, setting, and method of connection to the Work. Include legends for all symbols. The data shown on the Shop Drawings and for materials shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable Engineer to review the information as required. Drawings shall show the overall dimensions and layout of the equipment including anchoring/foundation details, piping and wiring interface points, and the location of equipment required to be accessed during normal operation and maintenance of the system and replacement. All drawings shall be submitted electronically in AutoCAD 2020 format to scale as well as in hard copy and shall be of sufficient scope and detail for submission to CDPHE for their review and for construction.

The EP Contractor shall submit the following:

Manufacturer's literature clearly marked to identify the applicable model number and optional features if applicable. Provide system illustrations, narrative description, specifications, dimensions, material of construction, performance data, weights, pump curves, and engineering data for the Contractor supplied equipment. If Contractor uses manufacturer's standard schematic drawings, he must clearly modify drawings to delete information which is not applicable to project and add to the standard information additional information that is applicable to project. Show dimensions and clearances required, performance characteristics and capacities, and controls, and any other pertinent data applicable to the project. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance data and charts, and other standard descriptive data shall be clearly marked as to what data is applicable and what is not applicable.

a. Schematic drawings and hydraulic profiles for the EP Contractor's complete system for review by Engineer and for submittal to CDPHE for CDPHE design review. Show equipment supplied by the Contractor including all piping, pipe sizing, direction of flow, and function for treating wastewater. Demonstrate how the different lines are backflow protected, in a manner consistent with CDPHE design criteria. Electrical schematic diagram, with narrative description, shall show the motor horsepower and other electrical load information as well as the electrical function and layout. The EP Contractor is responsible for tagging and numbering of equipment he is furnishing.

b. Control system schematic diagram showing the control system components and their physical interconnections including field wiring diagram. A narrative description of the proposed

control system and the scope of the programming work to be performed by the EP Contractor shall be included with the schematics. Manufacturer's catalog information for each panel component.

c. Process design calculations including design calculation for all major piece of equipment (diffusers, blowers, media, etc.) and justification for the sizing of the components. Design calculations for biological processes for aeration and nitrification.

d. Manufacturer's product data for all aeration blowers, including blower curves and calculations showing how discharge conditions were determined for each blower.

e. Structural and seismic design calculations for the blower skirts signed and sealed by a licensed professional engineer licensed in Colorado. This can be furnished up to 3 weeks later than the submittal package deadline, however, if the structural engineer requires changes to what was previously submitted, those changes will need to be completed within one week and all impacts of those changes would be at the EP Contractor's expense.

f. Drawings showing plan and elevation view of each piece of equipment and identify termination points and all components.

g. Special tools information. Furnish details of all special tools required to properly check, test, replace and maintain all furnished components with current pricing information. (Note Contractor shall furnish all special tools needed to operate and maintain the system being furnished.)

h. Functional Process Description and Control Sequence Tables showing all valves and equipment position/activation for all process steps.

i. Manufacturer's instructions for shipping, storage and handling, and installation.

j. Suggested spare parts list to maintain equipment in service for a period of a least 5 years.

1.3.02 Test Reports - At least fourteen (14) days prior to delivery of the equipment package, the Contractor shall submit the following reports:

a. Certified diffuser performance test data shall be submitted. It shall include air flow versus head loss data, and Standard Oxygen Transfer Tests conducted in clean water in accordance with the standards set forth by the ASCE Subcommittee on Oxygen Transfer Standards. Any tests must be completed in a minimum of 10' diameter tank; no single column tests will be accepted.

b. Standard Oxygen Transfer Efficiency calculations to verify the clean water oxygen transfer efficiency of the diffuser at low flow, design flow, and maximum airflow.

c. Head loss Calculations for the complete aeration system from blower discharge through all piping to the diffuser/aerator. Calculations shall include the total head loss across the membrane, balancing orifice, piping system and Ares aeration unit at both design and maximum airflow.

1.3.03. Information Package - At least thirty (30) days prior to any delivery, the Contractor shall submit the following electronically to Owner:

- a. Approved Bill of Material cross-referencing the shop drawings.
- b. Approved Technical Submittals.
- c. Special handling and storage requirement for EP Contractor provided equipment on site (including any specific storage requirements for components).
- d. Schedule of EP Contractor field services (schedule to be coordinated with Owner and Plant Contractor).
- e. Detailed startup plan including schedule.

1.3.04. Operation and Maintenance Manuals. Submit three (3) hard copies and two (2) searchable pdf copies of operating and maintenance manuals for all operating apparatus and equipment furnished under the EP Contract to the Engineer following final approval of applicable submittals and prior to shipment of Equipment. One copy may be submitted for review and the remaining copies submitted after approval of the review copy. Following Acceptance (the 90 day start up period) testing, the EP Contractor shall revise the O&M manual as needed and as applicable provide the updated manual to the Owner prior to final payment and start of warranty periods.

Bind manuals in durable covers with: front cover stating general nature of the manual, clearly indexed or provided with thumb tabs for each item or product (bookmark pdf copies), and include a directory of all subcontractors and maintenance contractors with names, addresses and phone numbers, indicating the area of responsibility for each. Prepare all such manuals in approximately 8-1/2" X 11" format, except that ledger size sheets may be used for plans and diagrams. Emergency data shall be clearly marked and tabbed. Manuals shall contain full information for the system as a whole and for each item of operating equipment and components including:

A description of the operation of the entire system and explanation of the function of each piece of equipment and a detail description of the operation and controls.

Schematic diagrams, narrative description, and as-built wiring of control, mechanical, and electrical systems, circuit directories for each electrical, control, and communication panel which correspond to the labeling of same of sufficient scale to be easily readable,

Valve Directory showing the tagging of all valves, valve number, location, function, and their normal and emergency operating position,

For every blower, pump, and motor provide: make, model, and serial number, nameplate information, voltage amperage and power factor for motors, suction and discharge pressures, lubrication, and maintenance schedule for pump.

Instructions for installation, start-up and shut down operations, normal and emergency operations, indicate pressures, temperatures, valve positions, etc.

Inspection and maintenance requirements, procedures, schedules, safety precautions, and manufacturer's literature for all pieces of equipment and systems including (but not limited to) pumps, compressors, blowers, valves, control equipment, heaters, MCC, valves, etc. Include information on regular maintenance with schedules for daily, weekly, monthly, and less frequent tasks, assembly and disassembly of repairable units, troubleshooting guides, lubrication schedules, data sheets and complete nomenclature of all replaceable parts, their part numbers, current cost, and name and address of nearest vendor of parts and at least one alternate supplier,

Operating procedures for normal, bypass, and emergency operation including positions of all switches, valves, levers, etc. during start-up, shut down, summer, winter operating conditions,

For each item, list the manufacturer and supplier including: addresses, phone numbers, name of local representative and local service agency if different from supplier. Mark neatly the correct model number and data for the model number where the literature covers more than one model, and delete, or otherwise clearly indicate, all manufacturers' data with which this installation is not concerned. Catalog cuts are not acceptable unless they contain complete O & M and other instructional data.

Include copies of all guarantees and warranties issued and copies of all approved shop drawings with all data concerning changes made during construction. Final payment will not be approved until the required O & M materials are received and approved.

Program files, if there are program files as part of the equipment provided, shall be submitted electronically on a CD-ROM or USB drive in a format that allows Owner to reinstall all control programs, PLC's etc. and restart the control program.

The O&M manuals shall be submitted electronically in searchable Adobe Acrobat format with an electronic Table of Content. Scanned drawings shall have a minimum resolution of 400 DPI.

Record Drawings - Furnish record plan and elevation drawings and schematics in both hard copy and Autocad 2020 format that clearly show the location of each, screens, points of chemical addition, pump, tank, media, pipe, valve, and other components of the system to scale and with detail drawings of the system.

PART 2 – PRODUCTS

2.1. DESIGN AND PERFORMANCE REQUIREMENTS

2.1.01 – Recent Discharge Monitoring Results

Discharge monitoring results from 2016 to fall of 2022 are provided as an attachment to this specification. In addition, the Town has collected some data by individual cell as listed below:

	Ammonia					Kjeldahl Nitrogen					BOD			
	Inf	Cell #1	Cell #2	Cell #3	Eff	Inf	Cell #1	Cell #2	Cell #3	Eff	Inf	Cell #1	% Rem	Eff
02/23/22	24.7	22.4			18.9	42	37			24.8	164.2	118.1	28.1%	6.06
Begin anaerobic test in Cell 1														
03/02/22	19.1	22.8			19.3	32.92	23.76			34.68	193.5	77.1	60.2%	3.45
03/09/22	24.6	18.92			16.84	49.6	33.92			23.56	144.9	102.9	29.0%	1.28
03/16/22	19.8	19.6			14.73	44	36.96			24.18	215.9	104.7	51.5%	4.44
03/22/22	23.1	24.7			18.1	51.6	40.8			23.04	244.8	105	0.5711	3.57
End anaerobic test														
08/22/22	91.2					115.6								
09/29/22	36.7	26.7		2.98	1.75	63.3	52.8	19.62		14.56	246			12.6
10/12/22	26.6	23.34	2.46	1.176	1.288	73.7	36.54	12.84	7.88	9.14	6.6			6.6
11/08/22	36.9	29.8	3.99		1.65	58.8	46.4	10.7		5.95				

	TSS			E coli	Temp			D.O.		
	Inf	Cell #1	Eff		Inf	Cell #1	Eff	Inf	Cell #1	Eff
02/23/22	90	225	3.4		17.1	5.8	5.8	4.08	7.61	5.18
Begin anaerobic test in Cell 1										
03/02/22	125	51.67	3.4		9.6	5.8	5.9	5.31	2.75	5.18
03/09/22	211.67	113.3	2.6	<1	7.9	7.5	5.2	2.57	1.43	5.7
03/16/22	104	80.8	3.4		6.7	5.4	6.3	4.72	1.92	4.42
03/22/22	90	96	3		6.7	5.4	13.6	8.39	1.92	2.75
End anaerobic test										
08/22/22										
09/29/22										
10/12/22										

2.1.02 – Design Conditions

Design conditions are provided in Exhibit B of the Agreement.

Other discharge requirements are included in the Town discharge permit copy of which is attached.

In addition, the minimum dissolved oxygen level in the effluent must be a minimum of 4 mg/l as a daily limit and the equipment package shall provide adequate alkalinity and other needed nutrients and additives to achieve the specified effluent quality and maintain adequate temperatures for required treatment.

2.1.03 Control System Strategy

Contractor's system shall allow the Town to control the air supply manually and by time or pond dissolved oxygen levels.

The system should be designed to allow the operator to supply less air during periods of low load or to reduce the number of blower and/or the speed of the blower motors, diffusers/ aerators in use during those periods as the operator determines most beneficial. Sufficient manual controls, and redundancy shall be provided to allow for operation of all equipment controlled through the master control panel.

2.1.04 Performance Requirements

Aeration and nitrification systems shall be designed to be installed in the lagoons and nitrification tank proposed in the plant upgrade.

The aeration system shall be designed to provide oxygen to peak BOD and TKN loading. Design of the aeration system shall be based on needing 1.75 pounds of dissolved oxygen per pound of BOD removed and 4.6 # / # ammonia removed at a minimum adjusted to field conditions in Lake City. If lower rates are proposed they will need to be justified to CDPHE and the Owner who will determine if the lower rates are acceptable.

Aeration and nitrification / ammonia removal systems shall be design to meet CDPHE redundancy requirements as shall any other equipment furnished as part of the package.

2.1.05 Scope of Supply

The manufacturer shall supply all process equipment and design necessary to achieve the performance standards stated in section 2.1.02, including but not limited to:

1. Aeration diffusers
2. High surface area media
3. Any required screening or media retention sieves

4. Heating units and/or insulated covers as needed for the system proposed
5. Furnish bill of materials and drawing for air distribution piping arrangement and sizing from blower discharge to air supply header to and into the aeration and nitrification basins (cells) including but not limited to air supply manifolds, control valves, hose barb connection, hose clamps, flexible weighted tubing, and complete weighted aeration unit assemblies as referenced in Triplepoint's scope of supply for project number 3487.
6. All connections and valves required to properly install, operate, and maintain of aeration equipment.
7. Air supply blowers with individual variable frequency drives
8. Shop drawings and process engineering design

2.1.06. Guaranteed Performance Requirement:

The Contractor shall guarantee the equipment package provided will meet the discharge parameters listed above in section 2.1.02 for a period 5 years as detailed in the performance guarantee attached.

2.2. Aeration System

Aeration system shall provide submerged air to the treatment units and the system provide all the oxygen and mixing needed under field conditions in Lake City for specified reductions in BOD, TSS, and NH3. Units shall be compatible with the lagoon configuration shown on the preliminary design plans. Units providing air from the bottom part of the cell shall be weighted to ensure that release air at the depths intended.

The EP Contractor shall configure the system to make it possible to field isolate each diffuser, aeration chain, and/or aerator from the system. Each shall be removable from the surface for inspection, repair, and replacement without having to turn off the air to more than 3 units. Systems that require draining the basin to service equipment are not acceptable.

2.2.01 Design Responsibility

EP Contractor shall be responsible for:

Determining the size and number of aeration units, air supply and distribution piping arrangement and sizing from the air supply header, and other equipment required to provide the air flow rates required for the biological and nitrification treatment and to assure proper mixing within the lagoons and/or basins.

Providing an air distribution layout and the number of aeration assemblies required to:

1. Demonstrate uniform air delivery to all diffusers at design airflow in compliance with the air supply treatment requirement.
2. Demonstrate the oxygen transfer efficiency at standard conditions for the aeration assembly and under field conditions.
3. Demonstrate aeration assembly mixing capacity and the area of influence is sufficient to ensure the required mix regime in each lagoon or and basin and prevent short circuiting or deposition of solids.
4. The number and size of the aeration assemblies will be determined by their oxygen transfer efficiency, mixing capacity, and the area of influence.
5. Demonstrate the aeration units have a non-clog design.
6. Demonstrate compliance with the air supply and mixing pressure requirement and provide baseline data for the increase in aeration assembly backpressure requirement.
7. Demonstrate design (and operation) compliance with CDPHE redundancy requirements.
8. Demonstrate the aeration system can operate efficiently over a flow ranging from 0.045 to 0.30 MGD and an organic load ranging from 60 to 1100 ppd BOD. For other parameters listed in the design table, use the table concentrations and the flow range listed in this bullet point.

2.2.02 General Aerator Requirements:

Aeration System shall be sized and designed to ensure complete mix in Cell 1, Cell 2A and the MBBR basin and shall provide a minimum SOR of 6150 ppd in Cell 1, 842 ppd in Cell 2A, 100 ppd in Cell 2B, and 2300 ppd in the nitrox basin. Aeration system for MBBR basin shall keep the media suspended, and provide a minimum of 5 mg/l of dissolved oxygen to the tanks. The aeration system shall also provide air to the mixers in the existing concrete basin.

1. With the exception of integrated check-valves, no mechanical, moving parts shall be used.
2. Each diffuser/aerator shall have an integrated check-valve capable of preventing backflow of water into air distribution system.
3. All hardware shall contain locking features to minimize likelihood of inadvertent disassembly during shipping, handling, installation, and operation.
4. All screwed plumbing fittings that do not utilize a gasket shall use appropriate Teflon type joint sealant or equivalent to minimize leakage and loosening of parts over time.
5. A single appropriately sized hose barb shall be integrated to diffuser/aerator and used as an air inlet point. Flexible weighted tubing shall be attached to said hose barb by a

stainless-steel hose clamp. This hose barb shall be integral with unit to reduce likelihood of breakage or failure should someone try to drag or lift unit by hose.

6. Units shall be weighted to ensure that release air at the depths intended.

2.2.03 Materials:

All materials must be compatible with raw sewage, partially treated sewage and with disinfection chemicals.

1. All submerged and buried hardware shall be of Type 316 or better stainless steel.
2. All non-submerged hardware shall be of Type 304 or better stainless steel.
3. All removable fittings shall be of Type 304, 316 or better stainless steel.
4. All ballast shall be of non-corrosive and non-toxic material or shall be permanently sealed within or coated with such material.
5. All other parts shall be of 316 stainless steel, PVC, HDPE, GPP, EPDM or equivalent, non-corrosive, non-toxic, and non-degradable materials suitable for complete immersion in a typical wastewater environment.

2.2.04. Removal

Means for easily removing and replacing aeration unit from above shall be provided including:

- i. A floating marker buoy shall be permanently attached to each unit by a stainless-steel or marine rope tether of proper length to float directly above the aeration unit.
- ii. Tether shall be capable of lifting at least five times the weight (out of water) of the installed aeration unit.
- iii. Aerators shall be removable from the ponds without needing to adjust water level.

2.2.05. Feeder Tube

1. Feeder tubing (flexible weighted tubing) used as the connection between the aeration unit and the header or lateral piping shall be low density, polyethylene or PVC tubing with self-contained integral ballast, and be ultra-violet stabilized. No tubing with external and/or intermittent ballast added will be accepted.
2. All polyethylene tubing shall conform to the requirements of ASTM D 1248.
3. Tubing length shall be of sufficient size to allow removal of the aeration unit from above for cleaning, maintenance, repair, or replacement.
4. Tubing inside diameter shall be sized to minimize friction loss. Tubing shall be connected at both ends with Type 316 stainless steel hose clamps to stainless steel hose barbs.

2.2.06. Manifolds

1. All feeder tubes shall extend from the shore to no more than 3 diffusers/ aerators.
2. Stainless steel manifolds (supplied with aerators) mounted to the header piping along shore shall provide a means of airflow control and flow-balancing.
3. Each manifold shall consist of a number of welded ports (based on system layout).
4. Each port shall include a stainless-steel ball valve the same size as the line and hose barb for connection to each aeration diffuser airline.
5. Stainless steel hose clamps shall be used to attach the feeder tubing to the manifold.
6. Manifold sizing shall be determined by manufacturer based on system design.
7. All piping and manifolds shall be sized for a velocity of less than 3 fps.
8. Isolation valves shall be full port and able to be throttled. Each shall be marked and tagged as required for process piping valves to be installed by the Plant Contractor in accordance with Section 02722 of the Plant Contract.

2.2.07. Air Supply Blowers

1. Blower unit(s): 4 or more of sufficient horsepower to provide the necessary air; with the largest unit for standby. Given the wide range of operating conditions between seasonal demands and current versus design demands, the Owner prefers the use 4 blowers and to not use starters larger than #3.
2. Each blower shall a VFD drive which shall also act as a soft start. A common drive for multiple blowers is not acceptable.
3. Blowers should be designed for airflow and pressure needed to supply all equipment that requires aeration.
4. High efficiency TEFC/IP-55 motors shall be used to minimize energy consumption.
5. Provide sound attenuating enclosures shall limit the noise to 65 db or less at 6 feet outside the building and no more than 80 db at 4' from the blower inside the building. Note that distance is about as far from the blower as one can get in the building. Noise dampening enclosure shall include a minimum of 1" foam insulation and foam shall comply with UL94-HF 1 for flammability. The enclosure shall be minimum 16-gauge steel or fiberglass and provide suitable protection for indoor or outdoor installation. The enclosure shall have piano hinged panels and removable panels to allow maintenance access including tensioner adjustment and oil change. Panels shall incorporate locking closures. At least one integral ventilation fan with wiring to connect to the electrical supply, sized to provide adequate cooling of the package, shall be provided. Blowers are required to be inside a building.

6. Blowers shall have automatic belt tensioning: motor mounted on swing frame, spring supported, with visual indication of tension.
7. Provide inlet filter assemblies, inlet and outlet expansion joints, filter restrictor gauges, inlet/discharge silencers, check valves, pressure relief valves, pressure gauges, temperature gauges/switches, flexible inlet and discharge piping couplers, etc. and isolation valves as required for a complete installation.
8. Provide spare parts and accessories set per blower, including two (2) spare intake filters, two (2) V-belt sets and two (2) quarts of each lubricant.
9. Provide galvanized intake hood with bird screen.

2.2.08. Air Lines

If called for in the Agreement, EP Contractor shall furnish all air lines needed to transport air from the blower discharge to aerator, diffuser, etc to meet oxygen and mixing demands. All air lines shall be size for the maximum amount of air plus 25% that will be needed for the cell. That includes providing line capacity to both sides the Cell 2 for it to operate in complete mix mode when Cell 1 is out of service. Valving for the air lines shall be sufficient that no more 3 diffusers are served by a single valve.

2.3 Insulated Covers

- A. A modular floating insulated cover may be provided for each lagoon/basin in order to prevent heat loss of the wastewater in the winter months.
- B. The insulation if part of the proposed package shall be designed by the EP Contractor's engineer to ensure that there will be adequate heat retention to maintain the temperature of the basins at 10° C unless the Contractor can demonstrate to the Owner and CDPHE that a lower temperature will consistently meet the performance requirements Exhibit B of the Agreement
- C. Insulation that is vulnerable to UV degradation shall be encased in a material that will withstand UV exposure for 25 years at the conditions expected at the Lake City plant
- D. The cover shall be designed so as to not trap air under the cover system or between the panel and the panel cover or under the cover.

2.4 Immersion Tank Heater

Contractor is responsible for ensuring the water temperatures are warm enough for nitrification. If the lagoon cells are not insulated or adequately insulated, an electric immersion heater may be provided in order to maintain a minimum of 10°C unless the Contractor can demonstrate to the

Owner and CDPHE that a lower temperature will consistently meet the performance requirements in sub section 2.1.02 above.

If heater is proposed it shall be:

- A. Contractor sized heating system to ensure the temperatures are maintained to ensure adequate nitrification to ensure the effluent limits are maintained
- B. wall-mounted unit provided with wire and wiring boxes for electrical connection.
- C. made of stainless-steel sheath elements and riser.
- D. a support system sufficient to stabilize the heater elements in the turbulent tank.
- E. Should a K-type thermocouple and thermowell assembly be incorporated it shall be located a minimum of 3' distance from the heater elements with the thermocouple wire placed in a separate conduit in order to avoid signal interference.
- F. Temperature data shall be transmitted to the control panel system at adjustable increments stating at no less than 15-minute increments. Control system shall have the ability to signal a dialer when temperature drops below a settable temperature.

2.5 High Surface Area Media

- A. High surface area media shall be supplied to provide enough surface area for nitrifying bacteria to grow and achieve nitrification for flows up to 0.175 MGD with the understanding that additional media shall be purchased at the guaranteed price listed in Article 21.7 of the Agreement and installed in order to meet the 2043 design criteria in the Agreement.
- B. Media shall be manufactured of durable virgin-made high-density polyethylene or approved equal and be resistant to a wide range of aqueous solutions, acids, alkalis, oxidizing agents, oils, fats and alcohols.
- C. Media shall allow for a high concentration of microorganisms to thrive within the internally protected areas and significant void space to eliminate biomass plugging and allow for transfer of oxygen and nutrients to the biofilm.
- D. The media shall have a specific gravity of 0.90 to 1.05 to allow it to float freely in the water column where the bacteria can gain access to food and oxygen.

- E. The media fill percentage shall be designed to allow for right density such that the aeration can sufficiently turbulate and allow for anti-clogging effect whereby biomass cannot build up on the pieces and hinder the process.
- F. Media system shall include a means to retain the media in the media basin.
- G. Maximum headloss through the nitrification basin including feeder pipes and headers shall be 0.25' or less at less at peak design flow.
- H. Maximum depth of the basin to contain the media shall not exceed 13' water depth.
- I. Contractor shall furnish any cleaning equipment and materials needed to ensure that the media performs properly during a 20-year design life.

2.6 Screening

The existing headworks includes a 1" opening bar screen and a coarse grit removal chamber ahead of the first treatment cells. If additional screening is needed for the equipment package proposed, the screening system, including screen, basin, piping, power, cleaning equipment etc. for a complete screening system shall be provided as part of the equipment package.

2.7 Recycle System

The recycle shall recycle effluent from the nitrox unit or the upstream end of the Cell 3 to the concrete basin. The system shall consist of pumps, piping, mixers and controls/VFD's for the pumps and mixers. Pumps shall be capable of pumping as little as 40 gpm at a TDH of 3 ft to 200 gpm at 24 ft TDH. This can be accomplished using multiple pumps plus one pump to meet CDPHE redundancy requirement. Mixers for placement in the corners of the floor of the concrete basin shall capable of completely mixing the 300,000 gallon basin with one mixer out of service. Unless added by change order the EP Contractor's scope of supply is limited to furnishing the mixers and ensuring there is adequate air in the blower package to run the mixers.

2.8 Instrumentation and Control System

System shall include an interface so that an operator can manually operate the system at the plant. The control system shall record all abnormal conditions and allow for the town to add alarms for those situations in the future. Access to the interface shall provide sufficient security to prevent the operator from setting the parameters outside safe operating limits.

The EP Contractor will supply a control panel to control the blowers and if needed and/or furnished, control of the immersion tank heater, chemical feed system, recycle system etc. In cases where the

control panel will be mounted outside, it shall be enclosed in an outdoor rated NEMA 4 weatherproof enclosure.

The panel shall be delivered completely assembled, pre-wired, tested UL listed, meeting the 2023 NEC and ready for installation. Wire shall be copper, and sized for its load per NEC/NFPA79 requirements. All wires will terminate on screw clamping terminal blocks. Wires between the panel and the equipment shall be enclosed in conduits sealed from moisture. Low voltage control conductors (24VDC) shall be separated from those carrying high voltage power (120VAC and above).

The control panel shall have sufficiently sized motor starters if needed for the blowers along with starters for the blower enclosure fans if needed. The enclosure fans shall have a 15 min off delay after the blower is switched off to allow for enclosure cooling.

The control panel must be capable of controlling any combination of blowers and to rotate each between duty and standby. Controls shall ensure a stagger delay in the start of each blower and motors to avoid a surge in electrical demand.

If a heater is furnished, an integrated temperature controller shall be furnished that allows for heating based on basin temperature monitoring thermocouple input and have a digital readout with buttons necessary to adjust the minimum temperature setting.

Each blower shall have non resettable operating hour counter displayed on the control panel that logs the time in tenths of hours, pressure gauges, out flow volume, stop/start emergency switch, reset button, alarm indicator, and alarm output to SCADA. If the control panel is not in sight of the blowers, a stop/start emergency switch shall be provided for each blower.

Pressure gauges shall be liquid filled with a minimum 3" diameter.

2.9 Electrical Requirements

All electrical components and completed panels shall be UL listed for industrial use in a wastewater treatment plant. Electronics shall also be FM approved.

Top, rear, sides and bottom panel plates shall be no less than USS 14 gauge. Panels shall be designed for front access. All locks on panels shall be keyed the same. All panels shall be labeled.

Enclosures shall be provided so that power brought to the cabinet in the specified voltage only needs to be terminated at a fused disconnect switch that is interlocked to the enclosure door. A power supply shall be provided to convert the base voltage of the system (i.e., 120/240V 1 phase, 208 V 3 phase, 230V 3 phase, or 460V 3 Phase) to alternate voltages that may be required by components of the equipment package.

A surge suppressor shall be included in the enclosure to protect the power supply, the PLC and I/O modules, and instruments as applicable from power surges and lightning.

Wiring within the panel shall be routed through plastic wire ways for neatness and organization. Conductors for high (120 VAC and above) and low (24VDC) voltage shall remain separated and where not separated, properly shielded. Wire shall be copper, and sized for its load per NEC/NFPA79 requirements. All wires will terminate through a ferrule type connector and terminate on finger safe, screw clamping terminal blocks. Wires shall be color coded and labelled.

Instruments and control devices shall be mounted in the front doors of the control panel enclosure including but not limited to the following:

- Pilot light to indicate a general alarm condition
- Pilot light to indicate that instrumentation voltage is present
- Lighted emergency stop (e-stop) pushbutton (lit when the e-stop is engaged) Pushbutton for e-stop reset
- Fused disconnect door latch

The doors shall be suitably reinforced between mounting cut-outs and drillings to supports instruments and devices without deformation.

Doors shall be essentially full height with turned-back edges and additional bracing to ensure rigidity and prevent sagging. Doors shall be mounted with strong piano-type hinges.

Where applicable, control voltage for motor starters, lights, relays, timers and auxiliaries shall be 120 VAC single phase supplied from a control power transformer in the panel supplied by Contractor.

Indicating lights and control devices shall be heavy-duty, gasketed, oil-tight 30.5 mm type and shall maintain the overall rating of the control panel. Each device shall be identified by an engraved or etched nameplate indicating the application or system action. Indicating lights shall be push-to-test type with LED lamps.

Auxiliaries and time-delay relays shall be heavy-duty, industrial type. Elapsed time meters shall be 99,999.99 hours span, non-resettable.

Dialer: The Owner will furnish a dialer that shall connect to the control panel alarms furnished by the EP Contractor.

2.10 Spare Parts

In addition to the spare parts listed to be provided elsewhere, EP Contractor shall furnish the following spare parts:

- Repair kit for each blower, diffusers, aerator, and pump furnished
- Appropriate lubricant for each blower, aerator, pump, motor, etc furnished
- Touch up paint for each paint system

See also section 2.2.07 above.

PART 3 - EXECUTION

3.1. Preparation of Installation

The plant contractor shall construct the earthwork and basin(s) to the lines and grades shown on the project drawings as amended by agreement between the Owner, Engineer, and plant contractor during construction. He shall also make all electrical and mechanical connections consistent with Equipment Package (EP) Contractor's installation instructions furnished to the Town as part of the EP Contractor's submittal. The EP Contractor's representative shall examine the earthen cells and basins with the plant contractor, Owner and Engineer to ensure the cells and basins have been constructed in compliance with requirements for the installation of the aeration system and ammonia removal system. All parties shall also check the electrical and mechanical installation and connections. The EP Contractor representative shall also examine the materials and equipment furnished by the EP Contractor for damage and other defects and reject components in unsatisfactory conditions. Installation shall only proceed when all unsatisfactory conditions have been corrected and the EP contractor's representative has given written concurrence that the work has been completed in a manner to allow for the EP Contractor's equipment and materials to be properly installed.

3.2. EP Contractor's Field Services

EP Contractor's representative shall oversee and assist the plant contractor during installation, startup, commissioning and acceptance testing (the initial 90 days of operation at typical flows and loading) as well as approving the installation and provide procedures for testing before start up. The EP Contractor shall provide field staff familiar with the startup and commissioning work (having done at least 3 comparable start ups) for up to at least an aggregate of 11 days including two trips to site as needed for two separate start-ups This time will be used to provide assistance to the Owner's team for startup and commissioning and train the Owner's staff. Training of Owner's staff shall include demonstration of all mechanical and control functions included with the system. A minimum of 6 hours (no more than 2 hours in any day) shall be spent reviewing operations, maintenance, emergency operations, and troubleshooting functions with the Owner's staff. During the initial week of operation, EP Contractor shall provide on site services for the EP Contractor's

representative to correct equipment or systems malfunctions. The EP Contractor's representative will be expected to effectively interface with the plant contractor, Engineer and Owner's Staff during troubleshooting activities (electrical, aeration, SCADA, mechanical) that may arise during the initial operation. The EP Contractor's representative will also provide as needed for the correction of any defects in EP Contractor's equipment or systems.

In addition to the field services required during installation, 11 months after the full plant has been in service, the EP Contractor shall provide a qualified representative to complete an inspection of the wastewater treatment plant. The inspection shall be to determine whether the plant is properly operating and continuously meeting discharge permit requirements as outlined in these specifications. The EP Contractor shall provide a written report to the Engineer and Owner certifying whether the plant is operating properly and meeting permit requirements at the conclusion of this inspection. If operational deficiencies are noted, report shall include how the EP Contractor intends to remedy the deficiencies.

3.3 Tests and Inspection

After the installation of equipment is complete and the installation is certified by the EP Contractor's representative, startup / field acceptance tests shall be conducted. The test procedures shall be generally as specified herein; specific written test procedures shall be submitted by the EP Contractor for review and approval by the Engineer. The field acceptance tests shall be conducted by the plant contractor and the Town under the direct supervision of the EP Contractor's representative.

Water Quality Testing: Town shall sample and provide test results during the first 90 days of operation at normal flows and load that include (at a minimum) parameters in the performance guarantee. To the extent there is an effluent excursion after the initial 90-day period, Triplepoint shall reimburse the Customer for the additional cost of for the weekly sampling versus the costs of biweekly sampling if the laboratory analysis indicates no influent excursions above design values in exhibit B of the Agreement and no detrimental operational changes were made.

Air test: After the air distribution system is flushed, all air lines, headers, manifolds and piping incidentals shall be pressure tested by the plant contractor to 20 psi or 1.5 times operating pressure whichever is greater for one minute to ensure no leakage is present.

Level Test: The basins shall be flooded with clear water to the tops of the diffusers. The level of the diffusers shall then be checked to ensure that they are at the same elevation, within +/- 3 inches.

Air Leakage: The aeration system shall be turned on and the header pipe shall be observed for leakage. All leaking joints shall be repaired or replaced.

If any of the equipment fails a field acceptance test the equipment shall be repaired or replaced as deemed necessary by the Engineer.

The EP Contractor's representative shall furnish test and inspection reports to the Engineer.

3.4 EP Contractor's Certification

Provide EP Contractor's Certificate of Installation stating that the equipment is installed per the EP Contractor's recommendations and in accordance with the Equipment Contract Documents and that the plant is ready for start-up.

During start-up, EP contractor shall observe plant operations and following startup provide EP Contractor's Certificate of Performance stating that the equipment meets or exceeds the performance requirements as defined in the Equipment Contract Documents.

The final certification from the EP Contractor shall be provided at the successful conclusion of the Performance testing stating including explaining any changes to operations recommended during performance testing and stating that the plant met the performance testing requirements and is expected to perform per the contract documents going forward.

3.5 Plant Start-up and Performance Testing

After initial testing of all equipment and materials included the EP Contractor's package, the EP Contractor's representative shall assist and oversee a preliminary "running-in" period, per the Contract Documents, to make field tests and necessary adjustments. The EP Contractor shall be allowed a 90 day startup period to allow the biological processes to become established. Should he choose to do so, he may seed the plant to help encourage growth of the desired microorganism. Note that due to the construction phasing plan there may be two separate start-ups of the equipment.

Place each piece of equipment in the system in operation until the entire system is functioning. All components shall continue to operate without alarms or shut downs, except as intended, for seven (7) consecutive days during a period of at least average load for the startup period to be deemed completed. Conclusion of the startup period shall be certified by the EP contractor with concurrence from the Engineer and Town.

EP Contractor's representative shall operate the equipment through the design performance range consistent with available flows. Adjust, balance, and calibrate and verify that the equipment, safety devices, controls, and process system operate within the design conditions. Each safety device shall be tested for proper setting and signal. Response shall be checked for each equipment item and alarm. Simulation signals may be used to check equipment and alarm responses.

Prepare EP Contractor's representative's installation report and submit within 10 days after completion of field testing of the equipment package. Including the following information:

1. Field testing results including all the data collected in an easily understandable format.
2. A comparison of test results with design parameters in tabular form.
3. Descriptions of installation deficiencies not resolved to the EP Contractor's representative satisfaction.
4. Description of problems or potential problems and how they were resolved.
5. Recommendations for optimizing operations
6. Record copy of materials used for training session including outlined summary of course.
7. EP Contractor's Certificate of Installation and Certificate of Performance.

At the successful conclusion of the startup period of operation, the EP contractor shall furnish a report summarizing operations during the startup period including adjustments to operations and include his conclusion that the startup period is completed. The Town and Engineer will review the report and either concur with the conclusion or notify the EP Contractor of any concerns.

Following the Town's concurrence that the startup has been successfully completed, the 5 year Performance Test will commence. Requirements for Performance Testing are detailed in the Performance Guarantee included as an attachment to this document.

Should the system not meet the performance requirements in Section 2.1.02 above during the performance guarantee period of the contract, EP Contractor shall modify the system as needed to cause the system to meet those requirements at EP Contractor's expense.

3.6. Warranty / Performance Guarantee

Performance and acceptance testing must be satisfactorily completed prior to the release of the final 5% of payment and shall be the start point for the full system warranty period.

Performance guarantee shall be for a period for 5 years from final payment. During that period plant shall consistently meet the effluent requirements in Exhibit B of the Agreement and all equipment shall perform to its design parameters. Equipment warranty for the blowers and control panels shall be 2 years and for aeration and nitrox equipment shall be 5 years from final payment.

A detailed Performance Guarantee is an attachment to this Contract

Attachments:

Discharge Monitoring Results 2016-2022
CDPHE Redundancy Requirements
Phasing Plan of Operation
Performance Guarantee
Triplepoint Aeration Calculations
Triplepoint Nitrox (MBBR) Calculations
Excelsoir Blower Compact #8 Package

Lake City WWTP DMR	LIMIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2022													
Influent Flow Avg		0.064	0.07	0.061	0.063	0.088	0.11	0.134	0.117	0.102	0.068	0.064	
Max		0.074	0.084	0.075	0.069	0.126	0.124	0.172	0.146	0.127	0.096	0.071	
Effluent Flow Avg		0.054	0.076	0.064	0.018	0.053	0.122	0.159	0.144	0.112	0.065	0.05	
Max		0.074	0.112	0.081	0.047	0.144	0.168	0.207	0.171	0.162	0.0111	0.073	
Dif bet Inf Eff Q		19%	-8%	-5%	250%	66%	-10%	-16%	-19%	-9%	5%	28%	
Influent BOD		167.0	371	348	204	227	262	407	327	246	402	423	314
Effluent BOD		4.7	4	4.4	6.7	9.4	12	4.1	9.3	12.6	6.6	12.5	4.3
Effluent 7 Day Avg		4.7	4	4.4	6.7	9.4	12						
BOD % Removal		97.2%	98.9%	98.7%	96.7%	95.9%	95.4%	99.0%	97.2%	94.9%	98.30%	97%	98.60%
BOD ave inf. ppd		89.14	216.59	177.04	107.19	166.60	240.36	454.85	319.08	209.27	227.98	225.78	
Influent TSS		69.0	172	110	146	80	57	182	111	100	133	117	51.9
Effluent TSS		2.0	3	2	4	9.8	39.5	22.7	14.3	59.2	43	38	15.7
TSS % Removal													
E. coli - 30 d		218.0	<1	<1	410.6	325.5	47.4	1	10.9	648.8	7.5	8	7.4
7 d													
TRC Avg		0.180	0.15	0.16	0.16	0.17	0.19	0.21	0.11	0.1	0.16	0.19	
pH min		7.110	7.11	7.01	7.21	7.17	6.29	7.77	6.53	6.51	6.52	7.35	
pH max		7.770	7.67	7.69	8.09	8.8	7.71	6.79	7.27	6.87	7.31	8.44	
Influent NH3			24.7	21.85			30.4	46.7	44.9	63.95	26.6	36.9	
Effluent NH3		12.500	18.9	18.05	12.4	26.8	5.6		11.8	2.175	1.444	2.075	7.2
Influent TKN			42	41.26			48.4	74.8	62.8	89.45	73.7	58.8	
Cell 1 TKN			37	28.84						52.8	36.54	46.4	
Effluent TKN			24.8	30.12					24.2	8.1	16.77	6.625	14.9
Eff TIN									34.3	27	23.2	20.4	26.5
Nitrate				2.6					21.3	11.6	17	17.4	19
Nitrite				0.13					1.2	12.8	4.6	0.54	0.26
Total P inf											15.6	14.7	9.2
Total P eff				13.3					6.4	8.1	7	6.2	5.9
TDS raw										160			
TDS inf													
TDS eff				324			327			349			394

2021													
Influent Flow Avg	0.225	0.077	0.07	0.064	0.065	0.091	0.131	0.142	0.115	0.104	0.0775	0.066	
Max		0.089	0.092	0.07	0.079	0.12	0.162	0.166	0.139	0.118	0.098	0.141	
Effluent Flow Avg		0.069	0.69	0.057	0.02	0.11	0.146	0.169	0.133	0.113	0.0665	0.032	
Max		0.082	0.084	0.074	0.036	0.19	0.182	0.225	0.166	0.125	0.111	0.065	
Dif bet Inf Eff Q		12%	-90%	12%	225%	-17%	-10%	-16%	-14%	-8%	17%	106%	
Influent BOD		193.0	142	152	109	176	91	169	362	183	161	165	191
Effluent BOD	30	<4	4.1	9.6	<4	18.4	7.9	13.3	20.8	20.6	21.2	6.4	4
Effluent 7 Day Avg	45	<4		9.6	<4	18.4	7.9	13.3	20.8	20.6	21.2	6.4	4
BOD % Removal	0.85	98.0	97.1%	94	96	89.5%	91.3%	92.1%	94.3%	88.7%	86.8%	96.1%	97.9%
BOD ave inf. ppd	450	123.94	82.90	81.13	59.09	133.57	99.42	200.14	347.19	158.73	104.06	90.82	
Influent TSS		43.300	35	55	64	56	51.6	143	240	140	44	45.2	73.3
Effluent TSS	75	7.800	5	5.2	<5	15.2	16	13.2	50	96	21	10.2	7.3
TSS % Removal		82.000	86	90	92	73	69	91	79	31	52	77	90
E. coli - 30 d	1920	130.000	2	62	<1	<1	4	12.2	200	160	2400	1	1
7 d													
TRC Avg	0.29	0.180	0.18	0.17	0.17	0.16	0.19	0.22	0.17	0.18	0.18	0.16	
pH min	6.5	7.380	7.53	7.52	7.49	8.9	0.1	7.35	5.98	6.33	6.53	6.66	
pH max	9	7.650	7.69	7.68	8.89	7.34	0.28	7.79	7.77	7.04	7.99	7.95	
Influent NH3													
Effluent NH3		25.700	24.1	22	11.7	12.7	7.5	21.9	4.9	1.5	23.9	3.6	
TDS raw													
TDS inf													
TDS eff							337			405			
2020													
Influent Flow Avg	0.225	0.089	0.082	0.073	0.07	0.09	0.132	0.144	0.11	0.105	0.076	0.062	0.067
Max		0.104	0.119	0.097	0.099	0.113	0.177	0.17	0.133	0.123	0.095	0.076	0.079
Effluent Flow Avg		0.087	0.077	0.064	0.037	0.081	0.131	0.157	0.118	0.115	0.077	0.061	0.07

Max		0.109	0.111	0.083	0.079	0.122	0.153	0.184	0.142	0.139	0.105	0.068	0.087
Dif bet Inf Eff Q		2%	6%	14%	89%	11%	1%	-8%	-7%	-9%	-1%	2%	-4%
Influent BOD		291.0	143	299	164	257	445	441	386	282	427	534	197
Effluent BOD	30	3.4	2.9	4	17.5	22.8	4	15.2	21.9	14.4	4.6	18.8	4
Effluent 7 Day Avg	45												
BOD % Removal	0.85	98.8%	98.0%	98.7%	89.3%	91.1%	99.1%	96.6%	94.3%	94.9%	98.9%	96.5%	98.0%
BOD ave inf. ppd	450	216.0	97.7	182	95.7	190.7	490	529	354	247	271	276	110
Influent TSS		26.7	34.6	168	224	84	158	130	85.3	50.7	163	56	131
Effluent TSS	75	<5	7.8	<5	20.4	13.4	7.4	27.5	10.7	7.6	<5	<5	<5
TSS % Removal													
E. coli - 30 d	1920	<2	<2	<2	50	140	<2	2	2	2	7	<2	<2
7 d													
TRC Avg	0.29	0.3	0.27	0.27	0.21	0.17	0.19	0.19	0.16	0.19	0.19	0.23	0.19
pH min	6.5	7.4	7.31	6.96	7.43	7.3	7	7.32	7.33	7.4	7.28	7.48	7.22
pH max	9	7.5	7.63	7.62	8.84	8.85	7.62	7.62	7.67	7.7	7.9	7.82	7.52
Influent NH3													
Effluent NH3		16.2	21	22	17	16.9	13.9	27.5	37.6	26.7	31.5	21.4	22
TDS raw													
TDS inf													
TDS eff				260			283			137			411
2019													
Influent Flow Avg	0.225	0.047	0.064	0.055	0.078	0.105	0.184	0.155	0.129	0.123	0.184	0.124	0.075
Max		0.053	0.085	0.076	0.114	0.134	0.22	0.22	0.175	0.2	0.393	0.181	0.086
Effluent Flow Avg		0.069	0.084	0.067	0.055	0.076	0.178	0.18	0.115	0.131	0.21	0.136	0.07
Max		0.690	0.119	0.105	0.099	0.119	0.22	0.22	0.173	0.219	0.447	0.22	0.082
Dif bet Inf Eff Q - = gain in Q		-32%	-24%	-18%	42%	38%	3%	-14%	12%	-6%	-12%	-9%	7%
Influent BOD		277.000	179	210	157	160	102	419	266	194	62.4	108	191
Effluent BOD	30	3.300	11.1	4.5	3.4	7.4	5.4	7.7	8.9	6.8	9.1	4.4	3.6

Effluent 7 day	45												
BOD % Removal	0.85	98.000	93	98	97	95	94	98	97	96	85	95	98
BOD ave inf. ppd	450	108.000	96	96	102	140	156	541	286	199	95.7	112	119
Influent TSS		53.300	46	52	73	46	35	140	49	64	153	26.8	281
Effluent TSS	75	<5	11	<5	<5	16	9.8	7.5	12.2	13.1	26.5	5.3	<5
TSS % Removal													
E. coli - 30 d	1920	70.000	1600	80	<2	<2	8	4	0	<2	30	<2	<2
7 d													
TRC Avg	0.29	0.160	0.17	0.19	0.17	0.17	0.18	0.17	0.16	0.19	0.18	0.21	0.27
pH min	6.5	7.310	7.46	7.22	7.51	8.12	6.99	7.23	7.66	7.32	7.4	7.3	7
pH max	9	7.530	7.71	7.62	8.65	8.88	8.12	7.6	7.46	7.61	7.7	7.45	7.52
Influent NH3													
Effluent NH3		5.300	23.7	5.3	20.6	15	7.8	25.9	30.1	18.2	17.8	6.7	10.1
TDS raw													
TDS inf													
TDS eff				289			314			379			269
2018													
Influent Flow Avg	0.225	0.050	0.048	0.047	0.052	0.082	0.084	0.116	0.091	0.061	0.051	0.042	0.046
Max		0.065	0.056	0.05	0.079	0.123	0.102	0.146	0.116	0.097	0.062	0.056	0.056
Effluent Flow Avg		0.074	0.075	0.063	0.037	0.085	0.098	0.134	0.111	0.074	0.062	0.049	0.059
Max		0.100	0.088	0.09	0.089	0.176	0.164	0.161	0.168	0.127	0.082	0.064	0.071
Dif bet Inf Eff Q - = gain in Q		-32%	-36%	-25%	41%	-4%	-14%	-13%	-18%	-18%	-18%	-14%	-22%
Influent BOD		229.000	194	147	139	93.4	230	337	330	206	190	230	362
Effluent BOD	30	4.100	3.6	4.6	6.5	5	25.3	16.8	180	14	15.7	8	3.1
Effluent 7 day	45												
BOD % Removal	0.85	98.000	98	97	95	95	89	95	45	93	91	97	99
BOD ave inf. ppd	450	95.000	78	58	60	64	161	326	250	104	81	81	139
Influent TSS		57.000	37	42.7	43.3	31.5	42	124	102	68	77	59	52
Effluent TSS	75	5.000	<5	<5	<5	<5	27	30.8	17	12.7	15.4	5.8	<5

TSS % Removal													
E. coli - 30 d	1920	17.000	17	<2	<2	<2	4	<2	500	2	<2	<2	<2
7 d													
TRC Avg	0.29	0.220	0.18	0.26	0.24	0.13	0.16	0.16	0.17	0.18	0.2	0.23	0.17
pH min	6.5	7.000	7.2	7.47	7.13	6.97	6.6	7.08	7.25	6.77	7.16	7.31	7.17
pH max	9	7.450	7.66	7.87	8.32	8.64	7.68	7.58	7.58	7.3	7.63	7.65	7.36
Influent NH3													
Effluent NH3		16.300	20.1	22.2	16.6	19.1	11.8	27.4	24.2	8.7	15.7	17.4	16.2
TDS raw													
TDS inf													
TDS eff				316			325			379			364
2017													
Influent Flow Avg	0.225	0.030	0.036	0.041	0.056	0.094	0.16	0.14	0.108	0.082	0.049	0.045	0.047
Max		0.036	0.064	0.049	0.108	0.18	0.2	0.18	0.155	0.13	0.07	0.055	0.051
Effluent Flow Avg		0.037	0.043	0.046	0.062	0.12	0.17	0.17	0.13	0.12	0.067	0.066	0.067
Max		0.069	0.064	0.047	0.13	0.18	0.21	0.21	0.187	0.18	0.093	0.113	0.075
Dif bet Inf Eff Q - = gain in Q		-19%	-16%	-11%	-10%	-22%	-6%	-18%	-17%	-32%	-27%	-32%	-30%
Influent BOD		234.000	246	215	188	118	104	364	481	371	228	192	216
Effluent BOD	30	4.500	7.9	7	5.2	15.2	10.8	7.6	12	17.9	7.7	9.6	6.1
Effluent 7 day	45												
BOD % Removal	0.85	98.000	97	97	97	87	89	98	97	95	96	95	97
BOD ave inf. ppd	450	58.000	74	74	88	93	138	425	433	253	93	72	85
Influent TSS		158.000	59	48	33.5	34.7	30.3	156	204	96	47	32	140
Effluent TSS	75	<5.0	5.3	<5	13.3	34	24	8.1	10.8	16.3	10.3	8	5.5
TSS % Removal													
E. coli - 30 d	1920	30.000	<2	<2	<2	30	22	261	<2	<2	<2	<2	2
7 d													
TRC Avg	0.29	0.240	0.21	0.21	0.19	0.21	0.14	0.16	0.15	0.18	0.23	0.24	0.23
pH min	6.5	6.500	6.8	6.6	7.1	6.5	6.7	6.7	6.9	6.9	6.9	7	7
pH max	9	7.300	7.5	7.5	8.5	8.4	7.2	7.4	7.3	7.3	7.6	7.5	7.3

Influent NH3													
Effluent NH3		16.900	21.8	27	23.8	8.3	7.2	23.9	22.9	22.9	20	16.4	13.1
TDS raw													
TDS inf													
TDS eff				314			265			359			368
River													
Fecal													
Ammonia													
TDS													
2016													
Influent Flow Avg	0.225	0.036	0.045	0.027	0.031	0.05	0.115	0.1	0.067	0.056	0.035	0.028	0.021
Max													
Effluent Flow Avg		0.046	0.055	0.034	0.021	0.065	0.161	0.12	0.082	0.081	0.085	0.028	0.046
Max		0.062	0.76	0.04	0.034	0.1	0.21	0.2	0.128	0.13	0.105	0.051	0.064
Dif bet Inf Eff Q - = gain in Q		-22%	-18%	-21%	48%	-23%	-29%	-17%	-18%	-31%	-59%	0%	-54%
Influent BOD		51.000	154	60	55	81	82	327	248	147	65	50	30
Effluent BOD	30	2.200	4	4.8	4.8	10.2	15	23	46	6.8	10	4.7	2
Effluent 7 day													
BOD % Removal	0.85	99.000	97	98	98	95	83	94	88	98	95	98	99
BOD ave inf. ppd	450	15.312	57.8	13.5	14.2	33.8	78.6	272.7	138.6	68.7	19.0	#N/A	#N/A
Influent TSS		42.700	32	84	-	47.2	28.4	65	49	59.3	101	27	63
Effluent TSS	75	<5.0	<5.0	<5.0	-	13.3	35.5	36.7	56.7	21.5	13.2	8.4	5.3
TSS % Removal													
E. coli - 30 d	1920	2.000	-	<2	<2	<2	1600	300	170	2	<2	<2	<2
7 d													
TRC Avg	0.29												
pH min	6.5	6.500	6.6	6.7	6.9	6.5	6.9	6.6	6.5	6.6	6.7	6.9	6.5
pH max	9	7.300	7.46	7.5	8.5	8.9	7.15	7.5	6.9	7	7.2	7.4	7.2
Influent NH3													
Effluent NH3		19.700	21.8	21	22.2	21.4	13.5	29	3.8	1	4.7	8	13.6

843 2.3.2 Flow Measurement

844 The monitoring of the various flows throughout a WWTP under various flow and
845 organic loading conditions helps provide an audit of plant performance and aids in
846 forecasting the need for additional treatment capacity. Therefore, the design of
847 any new or expanded wastewater treatment facility must include adequate flow
848 metering and/or measuring of all pertinent liquid and sludge flow streams. The
849 PDR must include a list of locations where flow metering and/or measuring devices
850 will be provided. For purposes of these criteria, flow metering requires recording
851 whereas flow measuring does not require recording.

852 Flow metering at the headworks area of any treatment facility must be provided.
853 The metering device must be equipped with a local flow indication instrument and
854 a flow recording-totalizing device suitable for providing permanent flow records.
855 Where influent flow metering is not practical and the same results may be
856 obtained with effluent metering, this type of flow metering arrangement will be
857 considered. If influent flow is significantly different from effluent flow, both must
858 be measured (e.g., installations such as lagoons, sequencing batch reactors, and
859 plants with excess flow storage or flow equalization). Influent and effluent
860 metering must be provided as reasonably anticipated to be required by the
861 Colorado Discharge Permit System (CDPS) permit.

862 Influent measurements must be representative of the volume of all influent wastes
863 received at the facility, including septage, biosolids, etc. and must be taken
864 before the influent wastestream joins or is diluted by any other wastestream or
865 substance (e.g., internal recycle flows). Effluent measurements must be taken
866 after internal recycle flows are removed and before the effluent joins or is diluted
867 by any body of water. Flow meters must be located with adequate upstream and
868 downstream hydraulic conditions at each metering device (e.g., avoiding
869 turbulence, eddy currents, air entrainment) to ensure that accuracies within $\pm 10\%$
870 of actual flows during the full range of anticipated flow variations.

871 The flow measurement equipment (e.g., flume, weir, magnetic meter, venturi
872 meter) must be consistent with the proposed application. All flow measurement
873 equipment must be sized to function effectively over the full range of flows
874 expected and must be protected against freezing. Flow measurement devices must
875 be accessible for maintenance and calibration.

876 Where multiple treatment units are proposed, such as two or more clarifiers or two
877 or more aeration basins, provision must be included for isolation and proportional
878 flow splitting to each treatment unit (e.g., measurement and adjustment as
879 needed).

880 Flow metering equipment may control chemical addition by signals such that the
881 paced unit varies the chemical, etc. in proportion to the flow variations.

882 2.3.3 Installations of Mechanical Equipment

883 The design specifications must identify when a trained manufacturer
884 representative is required to check the installation and initial operation of major
885 ~~mechanical equipment items.~~

886 2.3.4 Unit Process Redundancy

887 At least two process treatment units of each type must be provided for domestic
888 WWTPs with a design capacity equal to or greater than 40,000 gpd. Where two
889 units are proposed, each unit must have a design flow of at least 50 percent of the

890 total design flow. The hydraulic capacity (not necessarily the treatment capacity)
891 of the remaining units must be sufficient to hydraulically pass the peak wastewater
892 flow without overflow with the largest unit out of service. Other chapters of this
893 document provide specific process redundancy requirements (e.g., disinfection).
894 Design of a single unit must include a description of bypass and backup processes
895 for periods when the train is not functioning during planned and unplanned (i.e.,
896 emergency) events of short, intermediate, and long-term duration. If a single train
897 is used, an emergency operation plan (e.g., equipment, procedures, emergency
898 storage, hauling) must be provided to maintain operation during operational
899 impairment, such as power failures, flooding, equipment failure, and maintenance
900 shutdowns.

901 For all treatment plants, firm capacity (i.e., largest unit out of service) must be
902 provided for treatment process related equipment (e.g., pumps, blowers, chemical
903 feed pumps) to maintain 100 percent of the design capacity when the largest
904 equipment unit is out of service, unless a specific alternative requirement is
905 identified in the particular section of these criteria.

906 With more automation, designs with redundant, separate alarms, notification
907 methods, and/or controllers may be appropriate for critical process points. Spare
908 programmable logic controllers must be commercially available and operating
909 software with set points must be maintained onsite for uploading at the facility, or
910 spare proprietary programmable logic controllers must be stored and readily
911 available at a location in the United States.

912 All lift stations and treatment plants must have an option for full manual (“hands”)
913 operational capability outside of the SCADA system. Similarly, all lift stations and
914 treatment plants must have capability for some redundant alarms that function
915 outside of the SCADA system.

916 In a situation where the DWWTW is expected to serve a built out service area and
917 to operate at or near design capacity without future expansion, the design must
918 consider if more than two process trains, or an extra process train (i.e., beyond
919 two trains for design capacity), are needed to provide more capacity when a basin
920 or process train is removed from service during future maintenance.

921 2.3.5 Maintenance Provisions

922 Piping must be designed with no isolated pockets that cannot be drained. The
923 DWWTW must have provisions for cleaning all pipes that are subject to clogging or
924 accumulation of solids (e.g., scum, sludge, lime feed and sludge, drain) without
925 causing violation of effluent limitations.

926 Chemical or process air feed lines must be designed to enable repair or
927 replacement without drainage of the basins, wetwells, or tanks.

928 Vital mechanical or electrical components (e.g., pumps, mixers, bar screens,
929 aerators, diffusers, instrumentation, and valves, but not piping, tanks, basins,
930 channels, or wells) must have provisions (e.g., availability of other equipment) to
931 enable repair or replacement without interrupting DWWTW operation or causing
932 the DWWTW to violate effluent limitations.

933 The DWWTW must have lifting and handling equipment available to aid in the
934 maintenance and replacement of all components. Means must be provided for
935 removal of components located above and below the ground level of buildings and
936 other structures.

Phasing Plan

1.3.6.c. Phased Construction

The Town has already started to widen the road on the west side of the plant to create space to move the proposed polishing pond a bit west of its current location. Construction of the new building and ammonia basin at least to the point where it does not impact widening the road should be completed before the private access is moved the west. Work on the plant renovation will start with the installation a temporary baffle curtain in the existing large earthen cell to create a quiescent area in that cell allowing the Town to take the existing polishing pond off line. Once the polishing pond is off line it will be drained. Most of the sludge in the polishing pond has already been removed, but once the cell is drained the remaining sludge will be removed. Once cleaned out, the construction of the new polishing pond will commence mostly within the footprint of the existing polishing pond although the new cell will be farther from the steep slope to the east. The existing bypass piping will be used to route the discharge from the existing large earthen basin to the chlorine contact chamber. Both the concrete basin and the existing earthen basin will remain in use with air and power from the existing blower building. Construction of the new building and the ammonia removal basin should also be progressing during this phase. If the new polishing pond is completed and available for use in June and July it is recommended that the existing earthen cell remain in use and the new polishing pond be put into use for the peak summer months.

During the construction of the balance of the proposed facilities influent flow will be routed to the concrete basin which will be set up to run in complete mix mode with surface aeration. Power for the surface aeration could come from taking the existing blowers off line and using those buckets to power the aerators. From the concrete basin, flow will travel to the renovated polishing pond. The baffle curtain in the renovated pond will be used to allow for aeration and mixing in the upstream side and a quiescent area in the downstream side. Unless the new building and blowers are installed in time, temporary power lines will be extended from the existing MCC to the west side of the renovated polishing pond as a source of power for the aeration of the upstream side of the pond. Electrical disconnects will also be provided at the concrete basin and upstream side of the polishing pond so that aerators can be used in it during and post construction. This will allow for replacement of the existing blowers using new blowers while maintaining aeration and mixing in the concrete basin and polishing pond during construction. Attachment 12 is a graphic of the phase plan proposed.

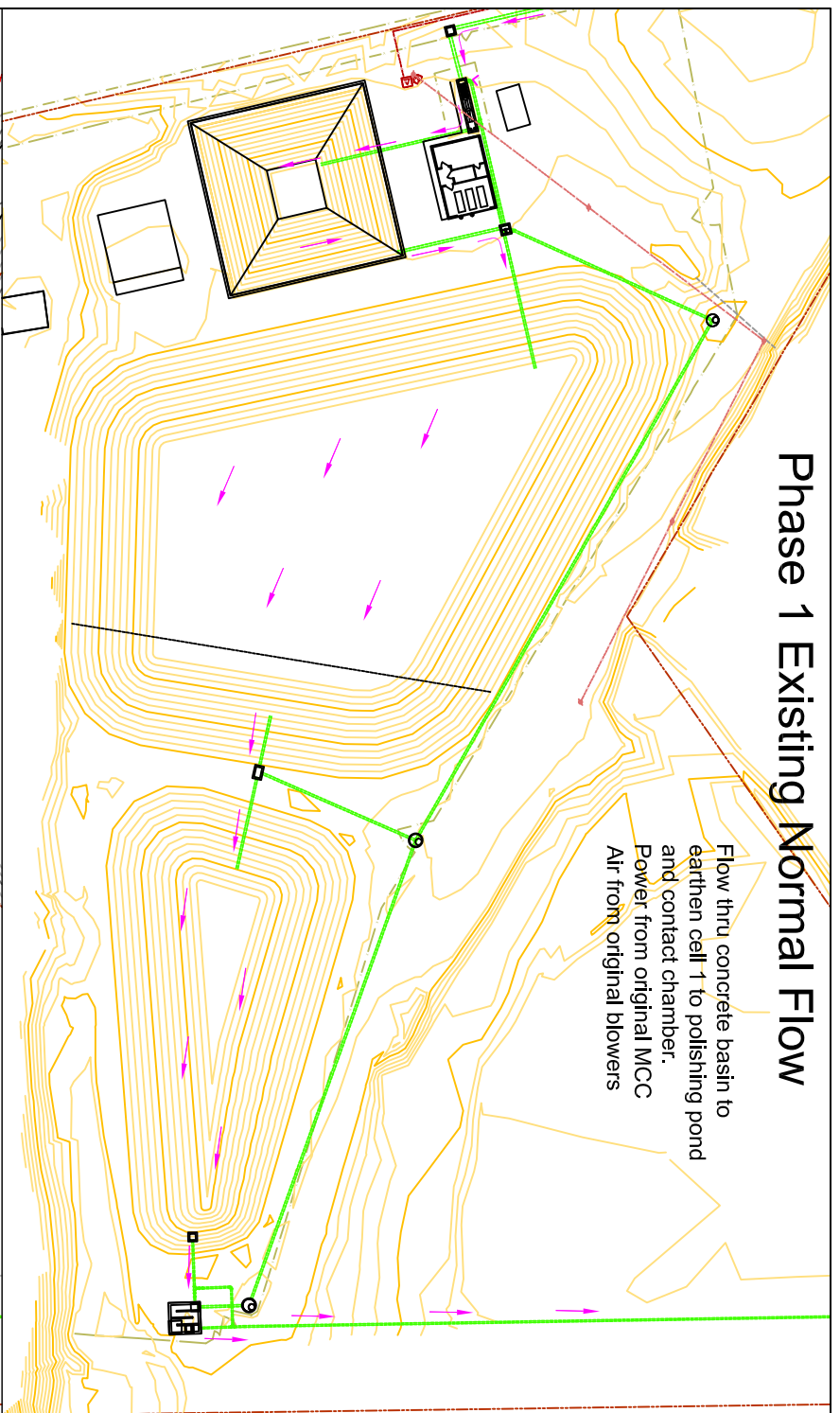
Using the concrete basin and the new polishing pond will allow for the larger earthen cell to be removed from service, drained, sludge removed, and the area cleaned up. Calculations to show that the plant can be operated without the large cell in use are included in the design calculations (attachment 3). It is anticipated that the Contractor will want to construction both Cell 1 and Cell 2 simultaneously. New blowers and aeration system will also be furnished and installed during this timeframe. Once the new cells are liner, tested, startup will begin for all the new equipment, controls and treatment cells.

1.3.6. d. Outfall diffuser

The facility does not require an outfall diffuser. The existing outfall pipe will remain in use.

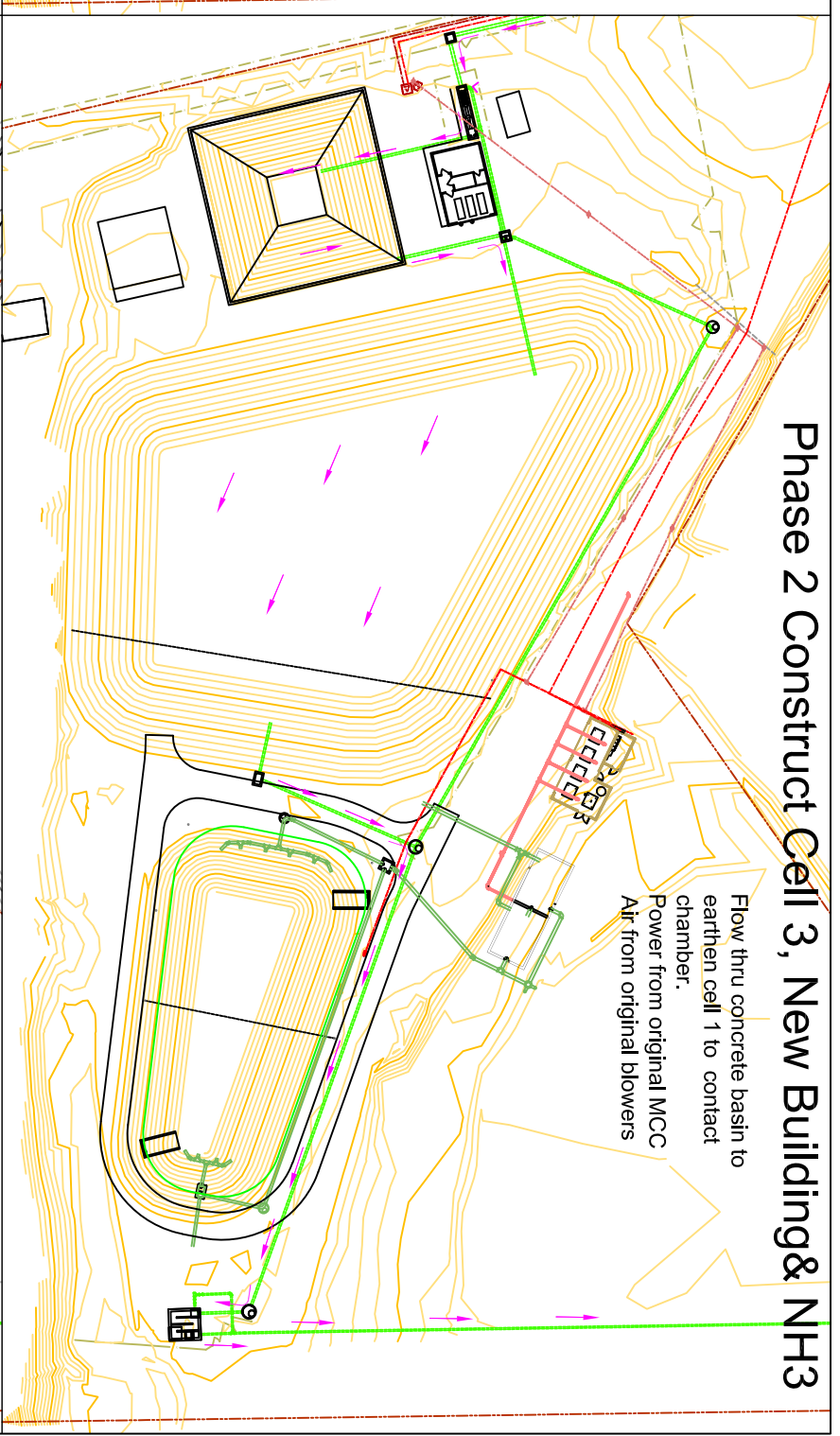
1.3.6. e. Upset and Response Plan

Power Failure – Power failures are typically short in duration, less than 2 hours. The lagoon treatment system can be without air and mixing for that period of time without significant adverse impacts. The [SCADA-dialer](#) system will have battery backup. The flow monitoring equipment also has limited backup power. Discussions with Gunnison Electric, the electric provider to the plant indicated that they are



Phase 1 Existing Normal Flow

Flow thru concrete basin to earthen cell 1 to polishing pond and contact chamber.
 Power from original MCC
 Air from original blowers



Phase 2 Construct Cell 3, New Building & NH3

Flow thru concrete basin to earthen cell 1 to contact chamber.
 Power from original MCC
 Air from original blowers



Phase 3 Construct Cell 1, Cell 2

Flow thru concrete basin to new polishing pond to contact chamber.
 Air from blowers to C3
 Conc basin air from existing building and surface aspirators



Phase 4 Final Normal Flow

Except at peak flow, flow bypasses concrete basin and goes directly to new Cell 1 then to Cell 2, the ammonia basin and the polishing pond and contact chamber.
 Concrete basin may be used as anoxic basin w/recycle from NH3
 Power from new MCC
 Air from new blowers

ADDING NEW BUILDING CONSTRUCTION TO PHASE
 2. MODIFIED LOCATION OF TEMP POWER AND AIR

TOWN OF LAKE CITY
 WASTEWATER TREATMENT PLANT

PHASING PLAN

Consolidated Consulting Services	Project No.
P.O. Box 1079, Ridgway, CO 81432	Drawn By
Phone: 970-837-2838	Checked By
Fax: 970-837-2838	Approved By
Project No. 27	Scale: 1/8" = 1'-0"



TRIPLEPOINT EQUIPMENT PERFORMANCE GUARANTEE

GUARANTEE

Triplepoint stands behind its equipment by guaranteeing that it will perform as represented in the Basis of Design calculations summary provided with each proposal. Triplepoint will correct any non-performing equipment at no cost to the customer subject to the terms & conditions herein.

TERMS & CONDITIONS

The Equipment Performance Guarantee is contingent upon the following terms & conditions being met:

1. The design assumptions provided by the Customer and thereby included in the Basis of Design provided by Triplepoint, including daily flow and influent loading consistent with the monitoring schedule required in section 4, below, are accurate to actual field conditions.
2. The influent wastewater does not or has not contained any threshold concentration of inorganic pollutants or other such materials, solutions, or product that are inhibitory to biological treatment processes.
3. A comprehensive laboratory analysis of the influent wastewater was disclosed to Triplepoint during the consultation process so the system could be designed appropriately given site conditions.
4. Water quality data is recorded weekly (during startup and acclimation period up to 90 days) that include (at a minimum) parameters listed in the chart below. After acclimation biweekly testing is acceptable. If an effluent excursion occurs, weekly testing must commence. The more data available, the faster Triplepoint can interpret and propose operational guidance. To the extent there is an effluent excursion after the initial 90-day period, Triplepoint shall reimburse the Customer for the additional cost of for the weekly sampling versus the costs of biweekly sampling if the laboratory analysis indicates no influent excursions above design values in the basis of design and no detrimental operational changes were made.

5.

Raw Influent	Plant Effluent
BOD	BOD
TKN	NH3-N
	TN

TSS	TSS
pH	pH
DO	DO
Water Temp	Water temp
Oil and Grease	Oil and Grease

6. In the event BOD, TKN or solids loading to influent exceed set limitations, Triplepoint is not liable for effluent excursions above the effluent values in the design conditions the basis of design in the proposal.
7. The pre-existing site conditions were accurately represented to Triplepoint during the consultation phase, including sludge depth and composition.
8. A Triplepoint representative was present to inspect the installation and start-up of the system and provided a "Certificate of Proper Installation."
9. The system has been online for a minimum of 90 days in order for the proper biological process to be established and/or acclimation to be achieved. Any deficiencies in the operation of the initial 90-day period shall be the responsibility of Triplepoint to remedy. – save operational malfeasance by an operator.
10. The required Operation and Maintenance procedures have been substantially followed as per the O&M manual for each piece of equipment provided by Triplepoint at the time of installation. Evidence can be provided for this.
11. Triplepoint products have not been subjected to neglect, misuse or damaged in any way.
12. The wastewater system, which the Triplepoint products are incorporated in, has had a continuous flow of wastewater needed in order to maintain viable biology. Any disruption to the daily influent flow has not exceeded 24 hours.
13. Any performance failure has been reported to Triplepoint within 14 days of the Town becoming aware of the issue.
14. Evidence of sufficient records proving adherence to these terms and conditions can be provided to Triplepoint upon request. This requirement shall be satisfied by providing weekly water quality data for the initial 90-day period and thereafter biweekly water quality data reports.

EXCLUSIONS

This Product Performance Guarantee specifically excludes the following:

1. Acts of God, such as adverse weather events or any other such instance of uncontrollable natural forces in operation.
2. This Equipment Performance Guarantee does guarantee biological treatment performance. Biological treatment calculations provided in the Basis of Design documentation are based on best practice in the field of wastewater treatment, unless the defect in performance is caused by a variable that Triplepoint could not have reasonably anticipated in the exercise of their professional judgment, this performance guarantee shall apply.
3. Failure caused by any equipment or incident outside of Triplepoint’s control, including but not limited to, failure of ancillary equipment not provided by Triplepoint.
4. Failure of utilities such as, but not limited to electricity, air, water etc.

5. Failure of Customer to arrange for adequate operating staff to operate and maintain the equipment in accordance to the in general conformance with Operation and Maintenance manual provided.

LIMITS OF LIABILITY

If a Triplepoint system fails to perform as advertised in the Basis of Design provided upon completion of the consultation process, the terms and conditions as set out herein have been met and none of the above exclusions applies, Triplepoint shall at its sole option and expense, as Customer's sole remedy hereunder, either: (a) repair, replace or modify the system as Triplepoint deems appropriate; or (b) pay, in the form of liquidated damages, a lump sum amount equal to 100% of the price paid by Customer for the equipment within a period of 365 days.

DRAFT

Basis of Design

Lake City, CO

9-May-23

Aeration Design Calculations

SUMMARY - General Design Parameters					
v4.4 D	Design Scenario Name		0.3 MGD	0.275 MGD	0.175 MGD
1	Influent Flowrate	MGD	0.300	0.275	0.175
2	Influent Concentration	mg/L	450.0	450.0	450.0
3	Effluent Conc. (Summer)	mg/L	7.0	5.7	1.8
4	Effluent Conc. (Winter)	mg/L	27.3	23.4	9.4
5	Actual Oxygen Supplied	lb/day	2307.8	2252.6	2250.4
6	Air included for nitrification?		No	No	No
7	Number of Aerators		29	29	29
8	Estimated Tubing Length	ft	2000	2000	2000
9	Standard Airflow	SCFM	1631.63	1582.14	1575.74
10	Inlet Airflow	ICFM	2617.00	2537.00	2527.00
11	Design Pressure (w/cushion)	psig	7.77	7.77	7.77
12	Projected Brake Hp	bhp	143.56	139.17	138.62
13	Estimated Design Hp	hp	200.0	200.0	200.0

SUMMARY - Aerators

Cell Name	Air Supplied Via:	Manifolds	Manifolds	Manifolds
	Aerator Type:	750T	750T	750T
Basin		0	0	0
Cell 1		18	18	18
Cell 2A		6	6	6
Cell 2B		2	2	2
Cell 3A		2	2	2
Cell 3B		1	1	1

SUMMARY - Biological Treatment Calculations

Item	Description	Units	0.3 MGD	0.275 MGD	0.175 MGD	
1	Number of Treatment Cells		4	4	4	
2	Flow Regime		Series	Series	Series	
3	Site Elevation - HWL	ft	8630	8630	8630	
Basin						
4	Wastewater Flowrate	MGD	0.3	0.3	0.2	
5	Treatment Volume	M-Gal	0.2	0.2	0.2	
6	Treatment Time	days	0.8	0.9	1.3	
7	Treatment Type	-	Facultative	Facultative	Facultative	
8	Std Reaction Rate, k_{20}	days ⁻¹	0.06	0.06	0.06	
9	Design Water Temp	°C	20	20	20	
10	Design Reaction Rate, k_T	days ⁻¹	0.026	0.026	0.026	
Summer	11	Biological Treatment Eff.	%	4.5%	4.9%	7.5%
	12	Influent BOD Loading	lb/day	1,124	1,031	656
	13	Influent BOD Concentration	mg/L	450.0	450.0	450.0
	14	BOD Removed	lb/day	51	50	49
	15	Effluent BOD Loading	lb/day	1,074	980	607
	16	Effluent BOD Concentration	mg/L	429.8	428.0	416.4
Winter	17	Design Water Temp	°C	1.0	1.0	1.0
	18	Biological Treatment Eff.	%	2.3%	2.6%	4.0%

Wir	19	BOD Removed	lb/day	26.4	26.3	25.9
	20	Effluent BOD Concentration	mg/L	439.4	438.5	432.2
	N1	Influent NBOD Loading	lb/day	212	195	124
	N2	Influent NBOD Conc.	mg/L	84.9	84.9	84.9
	N3	Assumed NBOD Removed	lb/day	-	-	-
	N4	Effluent NBOD Loading*	lb/day	212	195	124
	N5	Assumed Eff. NBOD Conc.	mg/L	85	85	85
Cell 1						
	21	Wastewater Flowrate	MGD	0.3	0.3	0.2
	22	Treatment Volume	M-Gal	0.8	0.8	0.8
	23	Treatment Time	days	2.7	3.0	4.7
	24	Treatment Type	-	Complete Mix	Complete Mix	Complete Mix
	25	Std Reaction Rate, k_{20}	days ⁻¹	2.5	2.5	2.5
Summer	26	Design Water Temp	°C	20	20	20
	27	Design Reaction Rate, k_T	days ⁻¹	1.087	1.087	1.087
	28	Biological Treatment Eff.	%	87.3%	88.2%	92.2%
	29	Influent BOD Loading	lb/day	1074	980	607
	30	Influent BOD Concentration	mg/L	429.8	428.0	416.4
	31	BOD Removed	lb/day	937	865	559
	32	Effluent BOD Loading	lb/day	137	116	48
	33	Effluent BOD Concentration	mg/L	54.8	50.5	32.7
Winter	34	Design Water Temp	°C	1.0	1.0	1.0
	35	Biological Treatment Eff.	%	77.8%	79.2%	85.7%
	36	BOD Removed	lb/day	853.9	795.8	539.9
	37	Effluent BOD Concentration	mg/L	97.7	91.1	61.8
	N6	Influent NBOD Loading	lb/day	212	195	124
	N7	Influent NBOD Conc.	mg/L	84.9	84.9	84.9
	N8	Assumed NBOD Removed	lb/day	-	-	-
	N9	Effluent NBOD Loading*	lb/day	212	195	124
	N10	Assumed Eff. NBOD Conc.	mg/L	85	85	85
Cell 2A						
	38	Wastewater Flowrate	MGD	0.3	0.3	0.2
	39	Treatment Volume	M-Gal	0.3	0.3	0.3
	40	Treatment Time	days	1.1	1.2	1.8
	41	Treatment Type	-	Complete Mix	Complete Mix	Complete Mix
	42	Std Reaction Rate, k_{20}	days ⁻¹	2.5	2.5	2.5
Summer	43	Design Water Temp	°C	20	20	20
	44	Design Reaction Rate, k_T	days ⁻¹	1.087	1.087	1.087
	45	Biological Treatment Eff.	%	73.0%	74.6%	82.2%
	46	Influent BOD Loading	lb/day	136.8	115.7	47.6
	47	Influent BOD Concentration	mg/L	54.8	50.5	32.7
	48	BOD Removed	lb/day	100	86	39
	49	Effluent BOD Loading	lb/day	37.01	29.36	8.47
	50	Effluent BOD Concentration	mg/L	14.8	12.8	5.8
Winter	51	Design Water Temp	°C	1.0	1.0	1.0
	52	Biological Treatment Eff.	%	57.9%	60.0%	70.3%
	53	BOD Removed	lb/day	141.5	125.3	63.3
	54	Effluent BOD Concentration	mg/L	41.1	36.4	18.4
	N11	Influent NBOD Loading	lb/day	212	195	124
	N12	Influent NBOD Conc.	mg/L	84.9	84.9	84.9
	N13	Assumed NBOD Removed	lb/day	-	-	-
	N14	Effluent NBOD Loading*	lb/day	212	195	124
	N15	Assumed Eff. NBOD Conc.	mg/L	85	85	85

Cell 2B

55	Wastewater Flowrate	MGD	0.3	0.3	0.2	
56	Treatment Volume	M-Gal	0.3	0.3	0.3	
57	Treatment Time	days	1.1	1.2	1.8	
58	Treatment Type	-	Partial Mix	Partial Mix	Partial Mix	
59	Std Reaction Rate, k_{20}	days ⁻¹	0.28	0.28	0.28	
<hr/>						
Summer	60	Design Water Temp	°C	20	20	
	61	Design Reaction Rate, k_T	days ⁻¹	0.122	0.122	0.122
	62	Biological Treatment Eff.	%	23.2%	24.8%	34.1%
	63	Influent BOD Loading	lb/day	37	29	8
	64	Influent BOD Concentration	mg/L	14.8	12.8	5.8
	65	BOD Removed	lb/day	9	7	3
	66	Effluent BOD Loading	lb/day	28	22	6
67	Effluent BOD Concentration	mg/L	11.4	9.6	3.8	
<hr/>						
Winter	68	Design Water Temp	°C	1.0	1.0	
	69	Biological Treatment Eff.	%	13.4%	14.4%	20.9%
	70	BOD Removed	lb/day	13.7	12.0	5.6
	71	Effluent BOD Concentration	mg/L	35.6	31.1	14.5
<hr/>						
N16	Influent NBOD Loading	lb/day	212	195	124	
N17	Influent NBOD Conc.	mg/L	84.9	84.9	84.9	
N18	Assumed NBOD Removed	lb/day	-	-	-	
N19	Effluent NBOD Loading*	lb/day	212	195	124	
N20	Assumed Eff. NBOD Conc.	mg/L	85	85	85	
<hr/>						
Cell 3A						
72	Wastewater Flowrate	MGD	0.3	0.3	0.2	
73	Treatment Volume	M-Gal	0.3	0.3	0.3	
74	Treatment Time	days	1.0	1.1	1.7	
75	Treatment Type	-	Partial Mix	Partial Mix	Partial Mix	
76	Std Reaction Rate, k_{20}	days ⁻¹	0.28	0.28	0.28	
<hr/>						
Summer	77	Design Water Temp	°C	20	20	
	78	Design Reaction Rate, k_T	days ⁻¹	0.122	0.122	0.122
	79	Biological Treatment Eff.	%	21.7%	23.3%	32.3%
	80	Influent BOD Loading	lb/day	28	22	6
	81	Influent BOD Concentration	mg/L	11.4	9.6	3.8
	82	BOD Removed	lb/day	6	5	2
	83	Effluent BOD Loading	lb/day	22	17	4
84	Effluent BOD Concentration	mg/L	8.9	7.4	2.6	
<hr/>						
Winter	85	Design Water Temp	°C	1.0	1.0	
	86	Biological Treatment Eff.	%	12.4%	13.4%	19.6%
	87	BOD Removed	lb/day	11.0	9.6	4.1
	88	Effluent BOD Concentration	mg/L	31.2	27.0	11.7
<hr/>						
N21	Influent NBOD Loading	lb/day	212	195	124	
N22	Influent NBOD Conc.	mg/L	84.9	84.9	84.9	
N23	Assumed NBOD Removed	lb/day	-	-	-	
N24	Effluent NBOD Loading*	lb/day	212	195	124	
N25	Assumed Eff. NBOD Conc.	mg/L	85	85	85	
<hr/>						
Cell 3B						
89	Wastewater Flowrate	MGD	0.3	0.3	0.2	
90	Treatment Volume	M-Gal	0.3	0.3	0.3	
91	Treatment Time	days	1.0	1.1	1.7	
92	Treatment Type	-	Partial Mix	Partial Mix	Partial Mix	
93	Std Reaction Rate, k_{20}	days ⁻¹	0.28	0.28	0.28	
<hr/>						
94	Design Water Temp	°C	20	20	20	
95	Design Reaction Rate, k_T	days ⁻¹	0.122	0.122	0.122	

Summer	96	Biological Treatment Eff.	%	21.7%	23.3%	32.3%
	97	Influent BOD Loading	lb/day	22	17	4
	98	Influent BOD Concentration	mg/L	8.9	7.4	2.6
	99	BOD Removed	lb/day	5	4	1
	100	Effluent BOD Loading	lb/day	17	13	3
	101	Effluent BOD Concentration	mg/L	7.0	5.7	1.8
Winter	102	Design Water Temp	°C	1.0	1.0	1.0
	103	Biological Treatment Eff.	%	12.4%	13.4%	19.6%
	104	BOD Removed	lb/day	9.7	8.3	3.3
	105	Effluent BOD Concentration	mg/L	27.3	23.4	9.4
	N26	Influent NBOD Loading	lb/day	212	195	124
	N27	Influent NBOD Conc.	mg/L	84.9	84.9	84.9
	N28	Assumed NBOD Removed	lb/day	-	-	-
	N29	Effluent NBOD Loading*	lb/day	212	195	124
	N30	Assumed Eff. NBOD Conc.	mg/L	85	85	85

*Values for nitrification are assumed. Actual nitrogen removal varies based on conditions such as ten

SUMMARY - Aeration Calculations

Item	Description	Units	0.3 MGD	0.275 MGD	0.175 MGD
1	Site Elevation	ft	8630	8630	8630
2	O ₂ Loading Factor (BOD ₅)	O ₂ /BOD	1.75	1.75	1.75
3	Alpha-value, α		0.60	0.60	0.60
4	Beta-value, β		0.95	0.95	0.95
5	Theta-value, θ		1.02	1.02	1.02

Basin

Cell 1

22	Lagoon Side Water Depth	ft	12.00	12.00	12.00
23	Air Release Depth	ft	11.25	11.25	11.25
24	AOR - Total	lb/day	1640	1513	979
25	SOTE/ft	%/ft	1.74%	1.75%	1.75%
26	SOTE	%	19.53%	19.68%	19.68%
27	Design DO Concentration	mg/L	2.0	2.0	2.0
28	FTE		5.74%	5.79%	5.79%
29	Air requirement	scfm	1140	1099	1099
30	Airflow per aeration unit	scfm	63.3	61.0	61.0
31	Aerator Type		750T	750T	750T
32	Number of aeration units	units	18	18	18
33	Water Pressure	psig	4.87	4.87	4.87
34	Aerator Pressure Loss	psig	0.61	0.60	0.60
35	Header/Feeder P Loss	psig	0.83	0.80	0.80
36	Total Operating Pressure	psig	6.31	6.27	6.27
37	Design Motor Pressure	psig	7.31	7.27	7.27

Cell 2A

38	Lagoon Side Water Depth	ft	12.00	12.00	12.00
39	Air Release Depth	ft	11.25	11.25	11.25
40	AOR - Total	lb/day	248	219	111
41	SOTE/ft	%/ft	1.69%	1.69%	1.69%
42	SOTE	%	19.05%	19.05%	19.05%
43	Design DO Concentration	mg/L	2.0	2.0	2.0
44	FTE		5.60%	5.60%	5.60%
45	Air requirement	scfm	433	433	433
46	Airflow per aeration unit	scfm	72.1	72.1	72.1
47	Aerator Type		750T	750T	750T
48	Number of aeration units	units	6	6	6
49	Water Pressure	psig	4.87	4.87	4.87

50	Aerator Pressure Loss	psig	0.62	0.62	0.62
51	Header/Feeder P Loss	psig	1.28	1.28	1.28
52	Total Operating Pressure	psig	6.77	6.77	6.77
53	Design Motor Pressure	psig	7.77	7.77	7.77

Cell 2B

54	Lagoon Side Water Depth	ft	12.00	12.00	12.00
55	Air Release Depth	ft	11.25	11.25	11.25
56	AOR - Total	lb/day	24	21	20
57	SOTE/ft	%/ft	2.78%	2.91%	2.95%
58	SOTE	%	31.32%	32.79%	33.13%
59	Design DO Concentration	mg/L	2.0	2.0	2.0
60	FTE		9.21%	9.64%	9.74%
61	Air requirement	scfm	10	9	8
62	Airflow per aeration unit	scfm	5.2	4.3	4.1
63	Aerator Type		750T	750T	750T
64	Number of aeration units	units	2	2	2
65	Water Pressure	psig	4.87	4.87	4.87
66	Aerator Pressure Loss	psig	0.48	0.47	0.47
67	Header/Feeder P Loss	psig	0.41	0.41	0.41
68	Total Operating Pressure	psig	5.76	5.75	5.75
69	Design Motor Pressure	psig	6.76	6.75	6.75

Cell 3A

70	Lagoon Side Water Depth	ft	12.00	12.00	12.00
71	Air Release Depth	ft	11.25	11.25	11.25
72	AOR - Total	lb/day	19	17	13
73	SOTE/ft	%/ft	2.28%	2.28%	2.28%
74	SOTE	%	25.61%	25.61%	25.61%
75	Design DO Concentration	mg/L	5.0	5.0	5.0
76	FTE		2.00%	2.00%	2.00%
77	Air requirement	scfm	38	33	26
78	Airflow per aeration unit	scfm	19.2	16.6	12.9
79	Aerator Type		750T	750T	750T
80	Number of aeration units	units	2	2	2
81	Water Pressure	psig	4.87	4.87	4.87
82	Aerator Pressure Loss	psig	0.51	0.51	0.51
83	Header/Feeder P Loss	psig	0.44	0.44	0.44
84	Total Operating Pressure	psig	5.81	5.81	5.81
85	Design Motor Pressure	psig	6.81	6.81	6.81

Cell 3B

86	Lagoon Side Water Depth	ft	12.00	12.00	12.00
87	Air Release Depth	ft	11.25	11.25	11.25
88	AOR - Total	lb/day	17	14	17
89	SOTE/ft	%/ft	1.99%	1.99%	1.99%
90	SOTE	%	22.43%	22.43%	22.43%
91	Design DO Concentration	mg/L	2.0	2.0	2.0
92	FTE		6.60%	6.60%	6.60%
93	Air requirement	scfm	10	9	10
94	Airflow per aeration unit	scfm	10.2	8.8	10.3
95	Aerator Type		750T	750T	750T
96	Number of aeration units	units	1	1	1
97	Water Pressure	psig	4.87	4.87	4.87
98	Aerator Pressure Loss	psig	0.55	0.55	0.55
99	Header/Feeder P Loss	psig	0.51	0.51	0.51
100	Total Operating Pressure	psig	5.93	5.93	5.93
101	Design Motor Pressure	psig	6.93	6.93	6.93

PROJECT NO.: 3487

PROJECT NAME: Lake City POTW Nitrox

PROJECT LOCATION: Lake City, CO

DATE: May 15, 2023

PREPARED FOR

Joanne Fagan, P.E.

PREPARED BY

Triplepoint Environmental, LLC

Tom Daugherty, Western Region Manager

Office: (312) 428-4634

Fax: (312) 957-4712

Cell: (208) 699-7090

Email: tom@lagoons.com

Basis of Design –Nitrox+D

The NitrOx™ Process

The patent pending NitrOx Process was developed based on the principle that nitrification will reliably occur when the proper conditions are created. For wastewater lagoon systems that receive primarily domestic waste, the critical conditions required for nitrification include:

1. **CBOD** of 20-30 mg/L
2. **Dissolved oxygen** of 4.6 lb/O₂ per pound of NH₃-N (Metcalf & Eddy)
3. **Sufficient Population of Nitrifying bacteria**
4. Given sufficient Nitrifying bacteria, a **water temperature of 4-5 °C**

NitrOx Process utilizes the existing lagoon infrastructure for 90% BOD removal, after which nitrifying bacteria begin to nitrify. The effluent from the lagoons then flows hydraulically or is pumped into a two-stage nitrification reactor. In colder climates where the winter water temperature drops below 4 °C, a thermal regulation heat exchanger is added in order to increase the water temperature, typically only a few degrees during the coldest months of the year. In the two NitrOx reactor cells, there are millions of individual biofilm carriers that provide a habitat for nitrifying bacteria –ensuring that there are sufficient nitrifying bacteria even in the coldest water conditions. Each Nitrox reactor cell has an aeration grid to provide the necessary oxygen, as well as to create a complete mix environment to keep the biofilm carriers in constant motion. The two cells are covered with floating insulated covers to mitigate heat loss and the media is kept in the tanks with stainless steel sieves. Finally, the effluent from the second NitrOx reactor is discharged into a final polishing/clarification lagoon prior to the ultimate discharge from the lagoon system.

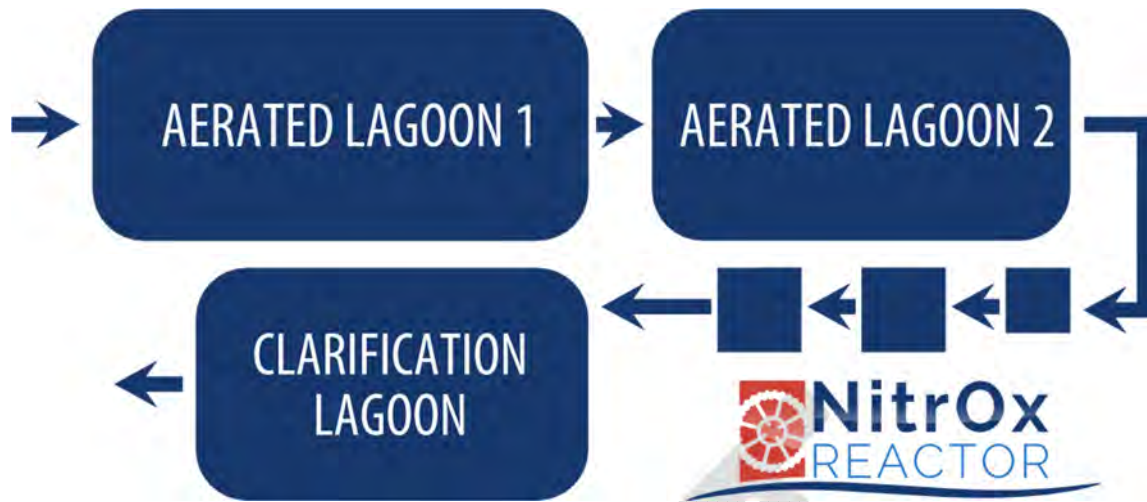


Figure 1: Basic flow diagram of the NitrOx Lagoon Ammonia Removal Process

Basis of Design - NitrOx with Fine Bubble Ares

Lake City, CO

5-May-23

ARES-FB

SUMMARY - Design Input Values

	Plant Influent Characteristics	Units	Values
1	Annual Average Daily Flow	gpd	275,000
2	Maximum Monthly Average Daily Flow	gpd	275,000
3	Peak Daily Flow	gpd	825,000
4	Peak Hourly Flow	gpd	1,100,000
5	Influent BOD	mg/L	450
6	Influent BOD	lbs/day	1,032.1
7	Influent TSS	mg/L	300
8	Influent TSS	lbs/day	688.1
9	Influent NH3-N	mg/L	55.0
10	Influent NH3-N	lbs/day	126.1
11	Influent TKN	mg/L	85.0
12	Influent TKN	lbs/day	194.9
A1	Influent NOx-N	mg/L	0.0
A2	Influent NOx-N	lbs/day	0.0
13	Influent pH		7
14	Water Temperature	deg-C	7
	NitrOx Influent Characteristics	Units	Values
15	Annual Average Daily Flow	gpd	275,000
16	Maximum Monthly Average Daily Flow	gpd	275,000
17	Peak Daily Flow	gpd	550,000
18	Peak Hourly Flow	gpd	687,500
19	Influent BOD	mg/L	31
20	Influent TSS	mg/L	47
21	Influent NH3-N	mg/L	55.0
22	Influent TKN	mg/L	68.2

23	Design Influent TKN	mg/L	68.2
A3	Design Influent NOx-N	mg/L	0
A4	Alkalinity Required as CaCO3 (Minimum)	mg/L	680
24	Influent pH		7
25	NitrOx Water Temperature	deg-C	5

SUMMARY - General Design Parameters			
NitrOx Tank Sizing Summary		Units	Values
26	Number of Treatment Trains Proposed		1
27	Number of Tanks Per Train		2
28	Total Number of Tanks		2
29	Length of Each	ft	24.0
30	Width of Each	ft	16.0
31	Side Water Depth of Each	ft	13
32	Tank Height of Each	ft	16
33	Volume of Each	gallons	37,340
34	Volume Total	gallons	74,680
35	Hydraulic Retention Time at Max Month Flow	hours	6.5
36	Hydraulic Retention Time at Peak Hourly Flow	hours	2.6
40	Number of Ares Units per Tank		6
41	Total Number of Ares Units		12
NitrOx Air Requirement (Per Treatment Train)		Stage 1	Stage 2
42	AOR (lbs/day)	368	378
43	Assumed Diffuser Subm. at AWL (ft.)	12.25	12.25
44	Elevation (ft.)	8,630	8,630
45	Alpha	0.75	0.75
46	Beta	0.95	0.95
47	Target DO Residual (MBBR Process) (mg/L)	5.0	5.0
48	SOR (lbs/day)	1,884	1,934
49	Target Diffuser Efficiency/ft. Submergence	1.7	1.7
50	Airflow (scfm)	353	362
NitrOx Blower Requirement Summary		Units	Values
51	No. of Blowers (Includes one redundant)		2
52	Airflow Requirement per Blower	scfm	715
53	Airflow per 1,000 scfm	scfm/1,000 cf	72
54	Water Pressure at Air Release Depth	psig	5.30
55	Piping and Diffuser Losses	psig	1.50
57	Maximum Design Discharge Pressure	psig	6.80
58	Assumed Overall Efficiency		0.62
59	Approximate BHP Requirement/Blower	bhp	58.0
60	Approximate BHP Requirement Total	bhp	58.0
61	Estimated Nameplate HP / Blower	hp	75
62	Blower Type		Tri-Lobe PD

SUMMARY - Calculated Output Values			
NitrOx Effluent Parameters		Units	Values
63	Effluent SCBOD	mg/L	7.5
64	Effluent SCBOD	lbs/day	17.2
65	Effluent NH3-N in Winter (Monthly Average)	mg/L	8.0

66	Effluent NH3-N in Winter (Monthly Average)	lbs/day	18.3
67	Effluent NH3-N in Summer (Monthly Average)	mg/L	6.0
68	Effluent NH3-N in Summer (Monthly Average)	lbs/day	13.8

Scope of Supply – NitrOx

NitrOx Reactor System Integrated Equipment	Qty	Unit
PD Blowers with Sound Dampening Weather Resistant Enclosure 60 HP PD blowers (Shared with Aeration)	2	ea
NEMA Panel with VFD Control for Blowers (contiguous with aeration panel)	2	ea
Hi-Surface Area Media Tank Fill (Includes future needs)	2	ea
Ares FB Aeration Grid	12	ea
Custom Welded Media Retention Sieves and Duckbills	4	ea
Bucket Screening System	1	ea
Immersive Tank Heaters and Thermocouple, Auto Control	1	ea
Insulated Tank Covers	2	ea
Detailed Installation and layout plan (Shop Drawings)	1	ea
Installation Supervision and Training	6	days
Air Piping From Blower	1	lot
Freight Prepaid	1	lot

- NOTES:
- EXISTING CONDITIONS ARE TAKEN FROM AERIAL PHOTOGRAPHS, FIELD OBSERVATIONS, AND/OR PRIOR CONSTRUCTION DOCUMENTS, WHEN AVAILABLE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS. DRAWINGS ARE INTENDED FOR PLANNING PURPOSES TO PROVIDE A GENERAL OVERVIEW OF INSTALLATION OPTIONS AVAILABLE FOR USE WITH THE TRIPLEPOINT AERATION SYSTEM. REVISION MAY BE NECESSARY TO ACCOMMODATE PROJECT-SPECIFIC FEATURES.
 - ALL DIMENSIONS AND SIZES ARE PRELIMINARY AND MAY NEED TO BE ALTERED DURING DETAILED DESIGN. IT IS RECOMMENDED THAT HEADER PIPE BE BURIED OR INSTALLED ON FLAT SURFACE OF BERM. ADDITIONAL PIPE SUPPORT WILL BE REQUIRED FOR INSTALLATION OF HEADER ON SLOPED PART OF BERM.
 - EXPANSION JOINTS, ISOLATION JOINTS, PIPE RESTRAINTS, AND PIPE SUPPORTS MAY BE REQUIRED. CONTRACTOR SHALL CONSULT ENGINEER'S CONSTRUCTION DOCUMENTS FOR REQUIREMENTS AND SPECIFICATIONS.

PRELIMINARY AERATION LAYOUT

LAKE CITY, CO

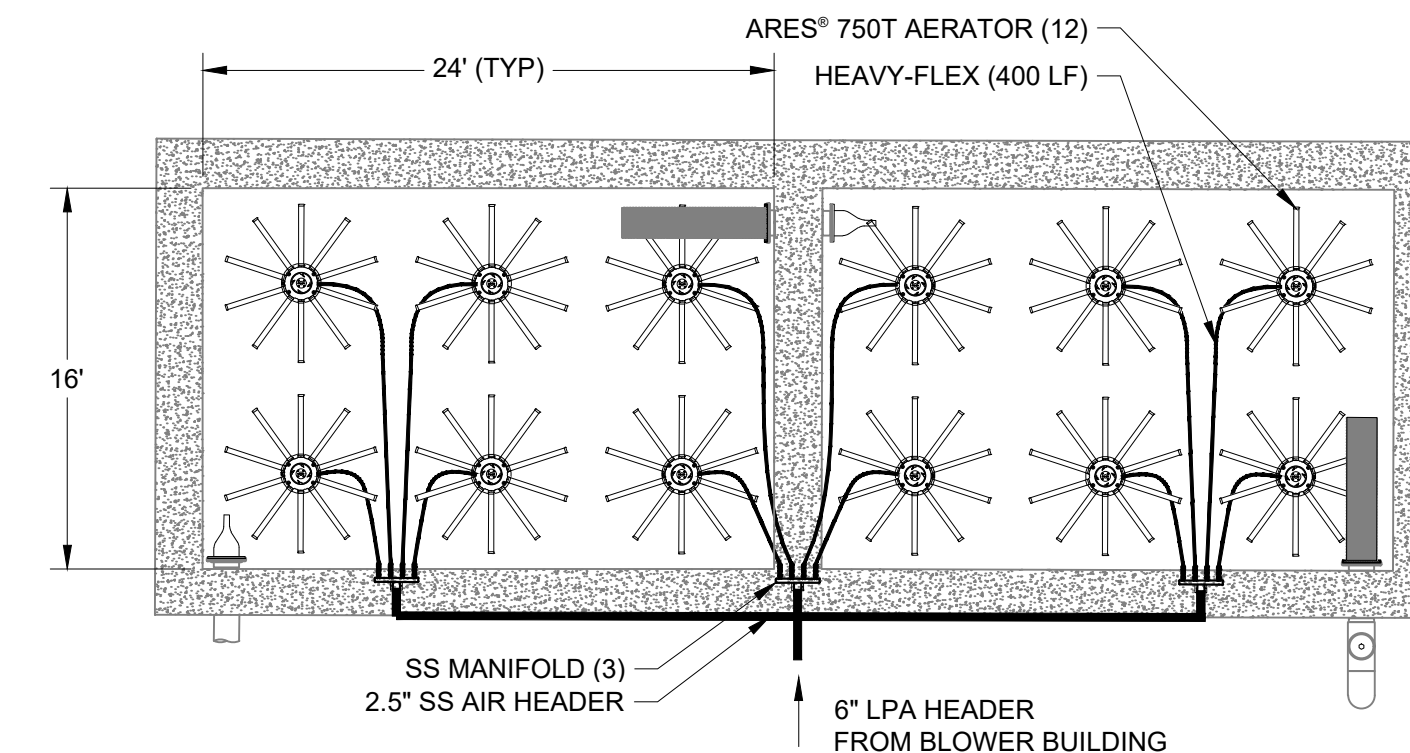


PLAN VIEW
SCALE: 1"=30'
0 15' 30'

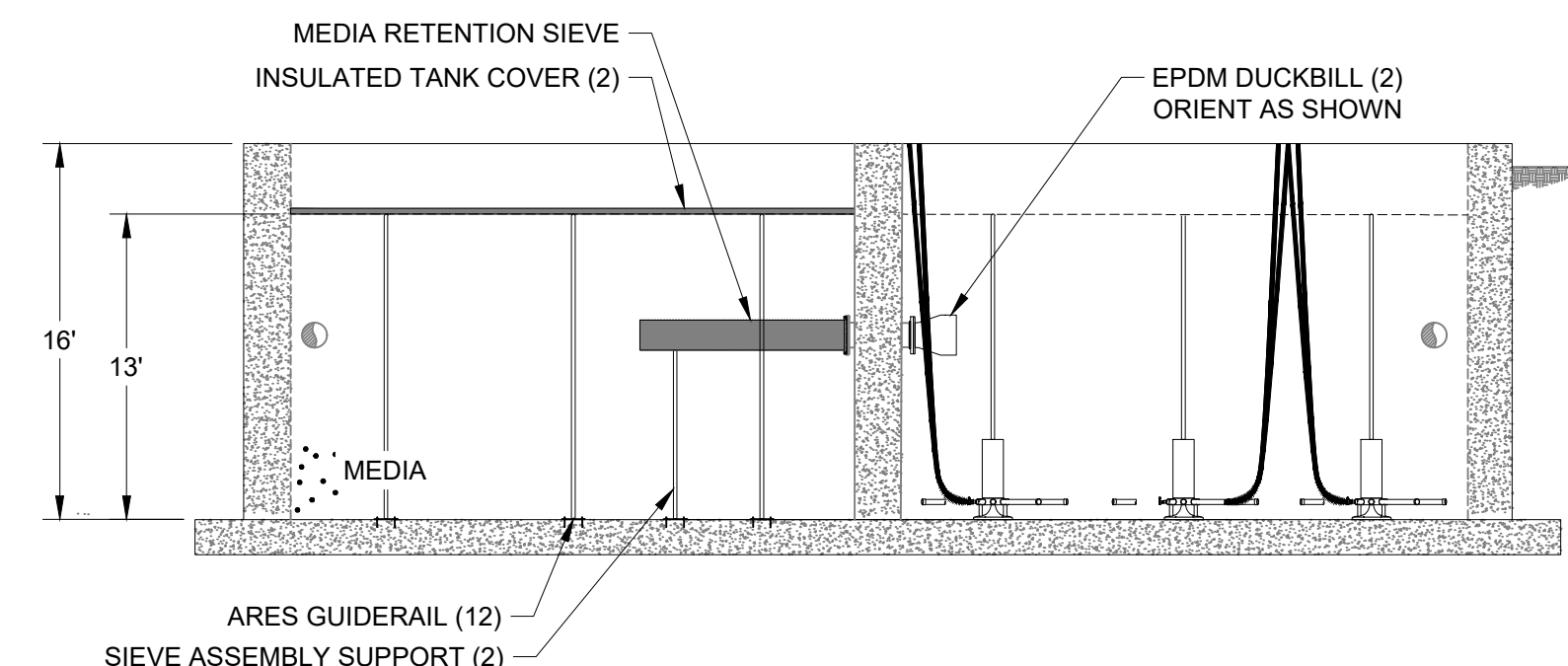
TYPICAL SCOPE OF SUPPLY			
ITEM	DESCRIPTION	TPE	BYO
1	BLOWERS	X	
2	BLOWER PADS/BUILDING		X
3	HEADER PIPING & VALVES		X
4	LATERALS AND/OR RISER STUBS		X
5	AERATOR CONTROL MANIFOLDS	X	
6	AERATOR CONTROL VALVES	X	
7	FLEXIBLE TUBING	X	
8	AERATORS	X	

TPE = TRIPLEPOINT ENVIRONMENTAL
BYO = BY OTHERS

NOTE: THIS SCOPE OF SUPPLY IS TYPICAL. CHECK QUOTATION FROM TRIPLEPOINT ENVIRONMENTAL, LLC FOR COMPLETE SCOPE OF SUPPLY.



NITROX PLAN VIEW
SCALE: NTS



NITROX SECTION VIEW
SCALE: NTS

triplepoint
ENVIRONMENTAL

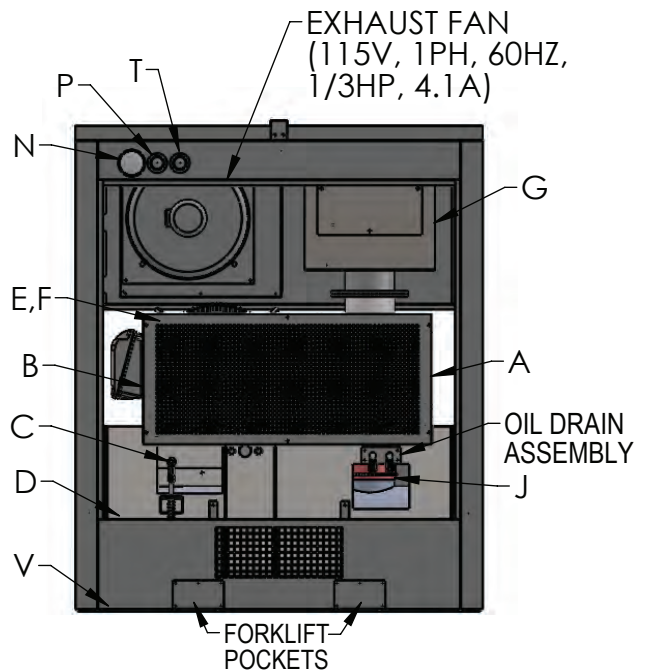
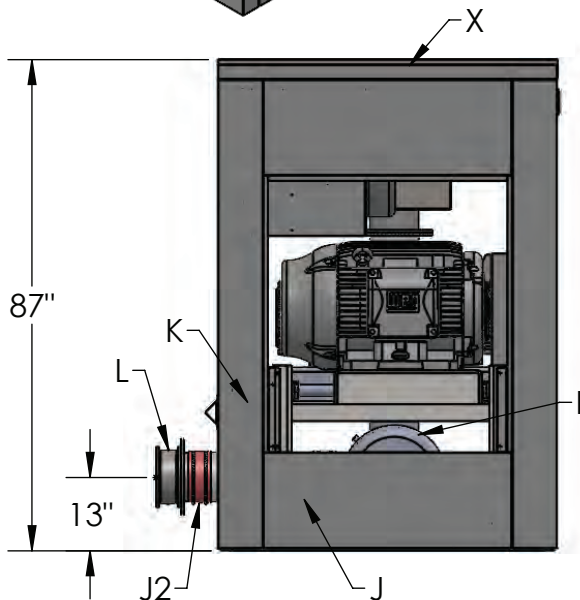
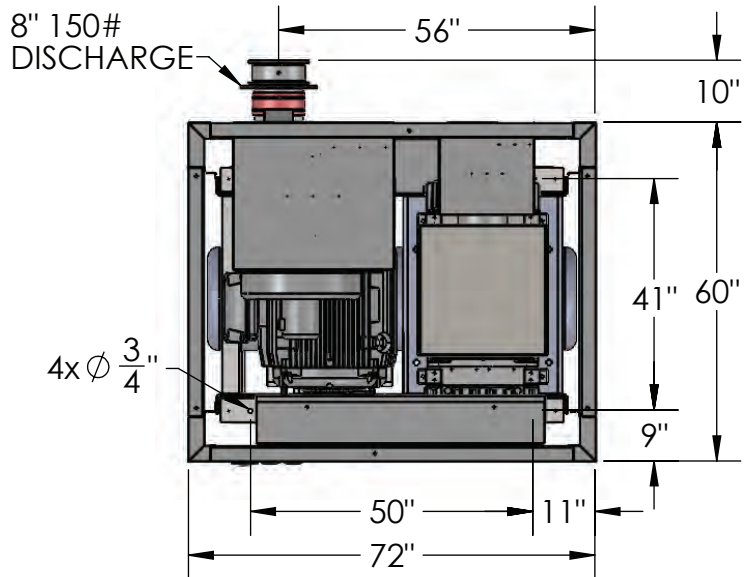
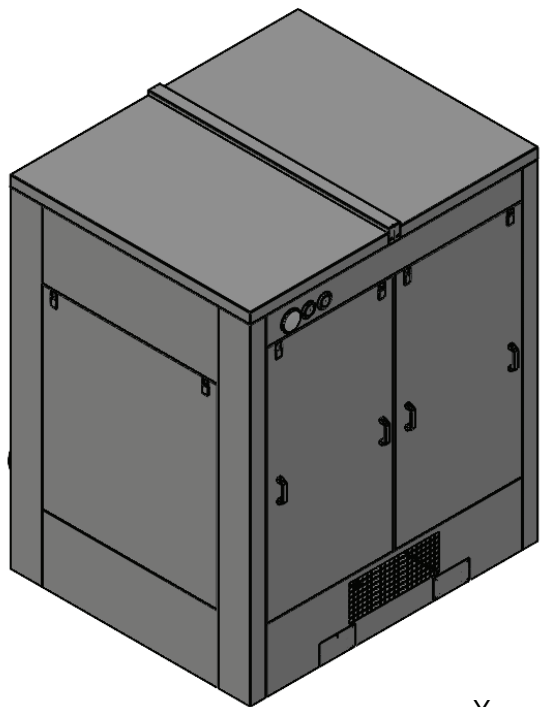
TRIPLEPOINT ENVIRONMENTAL, LLC
6586 S. KENTON ST. CENTENNIAL, CO 80111
(312) 428-4634

REV #	DESCRIPTION	DATE
A	PRELIMINARY AERATION LAYOUT	07/18/23
B	NITROX DIMENSIONAL UPDATE	03/14/23
C	AERATOR COUNT: NITROX DIMENSIONS	04/25/23
D	ADDED AERATOR TO 2B; MOVED 3B UNIT	05/10/23

LAKE CITY, CO
PROPOSED AERATION
IMPROVEMENTS

**PRELIMINARY
AERATION LAYOUT**

DATE:	01/18/23
PROJECT NO.:	
CAD:	
SHEET:	1 OF 1



Letter	Description
A	BLOWER:
B	MOTOR: HP, 1800RPM, TEFC, T, 208-230/460/3/60
C	MOTOR TILT BASE
D	ELEVATED STEEL BASE
E	V-BELT DRIVE
	BLOWER SHEAVE:
	MOTOR SHEAVE:
	BELTS: CD =
F	BELT GUARD: STEEL
G	INLET FILTER SILENCER: 8"
I	DISCHARGE SILENCER: 8"
J	FLEXIBLE PIPE CONNECTOR: G.R. 8100-8"
J2	DISCHARGE FLEXIBLE PIPE CONNECTOR: G.R. 8100-8"
K	RELIEF VALVE:
L	CHECK VALVE: F.H. 518-8"
N	DIFFERENTIAL PRESSURE GAUGE: DWYER 2020, 0-20"WC
P	PRESSURE GAUGE: WKA 213.53, 2 1/2", 0-15PSIG
T	TEMPERATURE GAUGE: WKA TI.V25, 2 1/2", 30-300°F
V	VIBRATION ISOLATION PADS: VMC CORK-RIBBED, 1" THICK
X	NOISE ENCLOSURE: ALUMINUM EXTERIOR W/ ACOUSTIC FOAM, 5 TILT-OUT LATCHING DOORS, & EXHAUST FAN W/ T-STAT

ESTIMATED BLOWER PACKAGE WEIGHT: 5,600#
 BLOWER ROTATION: CCW
 MIN. BLOWER SPEED: xxHZ
 TOLERANCE: ± 1/2"
 DISCHARGE PIPING MUST BE INDEPENDENTLY SUPPORTED.
 COMPONENTS: J2 & L WILL SHIP LOOSE.
 NOTE: ATTACH FORKLIFT POCKET COVERS AFTER PACKAGE IS INSTALLED.



BLANDON, PENNSYLVANIA

PRELIMINARY DRAWING
 DIMENSIONS SUBJECT TO CHANGE
 P.O.#

DATE: 3/3/2023 SCALE: 1:34

DWG#: #8 COMPACT REV#: 0

COUNCIL COMMUNICATION

DATE: May 15, 2023

SUBJECT: RATE ADJUSTMENT AMENDMENT FOR TOWN ATTORNEY CONTRACT

PRESENTED BY: Dan Krob, Town Attorney

AGENDA ITEM DESCRIPTION:

It has been my pleasure to serve as the Town Attorney for the Town of Lake City since fall of 2021. Since then, we have not adjusted the rates we charge the Town. Our rates remained the same for 2021, 2022, and into 2023. During that time, the costs of providing legal services, such as malpractice insurance, continuing legal education, electronic legal research, and office rent, have continued to increase.

Consistent with what I charge my other municipal clients and also to ensure that we can continue to provide Lake City the high quality legal services it deserves, it is necessary for us to raise our hourly rates to those set forth in the amendment to our representation agreement with the Town. My rate will increase from \$175 to \$195 per hour. This represents an increase of 11% since the last rate adjustment in 2016 by Krob Law Office to our municipal clients which equates to roughly 1.3% per year for the past seven years.

I briefly discussed this proposed rate increase with Town staff last year, but determined it was not in the best interest of the Town to impose it until we resolved some time consuming threatened litigation, transitioned your former Town Clerk to Town Manager, hired a new Town Clerk, and ensured Town Staff was up to speed in their new roles. The litigation has been resolved and the Trustees did an excellent job hiring very capable, quick learning, and self-motivated Manager and Clerk who routinely require less and less guidance from legal. Accordingly, it is my sincere hope the proposed amendment should not have any impact on your proposed budget. The routine issues are commonly handled by staff and my efforts will be focused primarily on more complex and unique legal issues as they may arise. As a result, absent major litigation or major projects, I anticipate the amount our office bills the Town in 2023 to go down somewhat.

We look forward to serving the Town of Lake City for years to come and will be glad to answer any questions Trustees may have.

RECOMMENDATION:

The Town Attorney requests approval of the amendment increasing the rates for legal services.

SUGGESTED MOTIONS:

I move to approve the Amendment to Town Attorney's Legal Representation Agreement as presented.

TEMPORARY ACCESS EASEMENT AGREEMENT

THIS TEMPORARY ACCESS EASEMENT AGREEMENT is made and entered into this ___ day of June, 2023, by and between the Town of Lake City, Colorado, a Colorado municipal corporation, whose address is 230 N Bluff Street, Lake City, CO 81235, (hereinafter the “Grantor”), and Lake Fork Valley Conservancy, a Colorado non-profit corporation, whose address is P.O. Box 123 Lake City, CO 81235 (hereinafter the “Grantee”), collectively, the “Parties”.

WITNESSETH:

WHEREAS, Grantee is the owner of real property located in Hinsdale County, Colorado, more particularly described as follows (hereinafter “Grantee’s Property”) and depicted on Exhibit A, attached hereto and incorporated herein:

Property Legal Description: LOTS 2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17- 18-19-20-21-22-23-24-25-26-27-28-29-30-31, BLOCK 4 SUBJECT TO HIGHWAY RIGHT OF WAY, TOWN OF LAKE CITY; LOTS 31-32 BLOCK 13 TOWN OF LAKE CITY.

County of Hinsdale, State of Colorado,

WHEREAS, the Grantee owns certain Rights-of-way surrounding the Grantee’s property generally described as north of the 8-1/2 street bridge in Lake City, Colorado (hereinafter the “ROW”); and

WHEREAS, the Parties desire to Grantee, its lessees, licensees, successors and assigns, the right, privilege and access to Grantee’s Property via Grantor’s ROW in accordance with the provisions of this Agreement.

NOW THEREFORE, in consideration of the mutual obligations and other consideration set forth herein, the Parties agree as follows:

1. Grantor hereby grants the Grantee a Non-exclusive, non-motorized, pedestrian easement for the purpose of non-motorized ingress and egress to the Grantee’s Property across any and all Rights-of-Way adjacent to Grantee’s Property (“Temporary Access Easement”).
2. Grantee may only make improvements upon the Temporary Access Easement to the extent reasonably necessary, in the sole discretion of the Grantor, to facilitate pedestrian access to Grantee’s Property and only with the express written consent of such improvements or alterations.
3. Such Temporary Access Easement shall automatically terminate in the event the Grantor determines it is in the best interest of the citizens of Lake City to do so for any reason, including but not limited to, the Grantor utilizes the Temporary Access Easement for road improvements or expansion.
4. The Temporary Access Easement may be terminated by the Grantor for any reason upon 30 days written notice to the Grantee.
5. This Temporary Access Easement and the rights and obligations provided for hereunder shall attached to and run with the affected land and shall be binding not only upon the parties hereto, but also upon their heirs, successors, and assigns, unless and until such time as the Temporary Access Easement is terminated by the Grantor.
6. The Grantee shall cooperate with the Grantor and shall not impair the Grantor’s use of the ROW.

7. This Agreement shall be modified in writing only, which writing must be executed by the Parties hereto in order to be effective.

IN WITNESS WHEREOF, the parties hereto have executed this TEMPORARY ACCESS EASEMENT AGREEMENT as of the day and year first above written.

GRANTOR:

Town of Lake City, Colorado

Dave Roberts, Mayor

ATTEST:

Jonathan Broadway, Town Clerk

GRANTEE:

Lake Fork Valley Conservancy

Zach Dutra, Title

Accident Investigation Policy & Program

1.0 Purpose

- 1.1 The purpose of the Town of Lake City Accident Investigation Policy & Program is to investigate all accidents and near misses, to identify the root cause(s) and develop corrective actions that can be taken to prevent future occurrences. Assigning blame to employees is **not** the purpose of this program.

2.0 Administrative Duties/Responsibilities:

- 2.1 **Program Administrator.** The Town Manager is the Accident Investigation Program Administrator who reports directly to the Board of Trustees and is responsible for this policy and program. All evaluations, investigations, training, and recommended solutions are coordinated under the direction of the Program Administrator in collaboration with management. The Program Administrator monitors the results of the program and determines additional areas of focus that are needed. The Program Administrator also:

- 2.1.1 Ensures supervisors and employees are properly trained to conduct accident investigations.
- 2.1.2 Ensures a system is in place for employees to report accidents and near misses.
- 2.1.3 Ensures accurate records are maintained and provides documentation upon request.
- 2.1.4 Follows up on all corrective actions suggested during the accident investigation process.
- 2.1.5 Ensures approved corrective actions are implemented in a timely manner.
- 2.1.6 Conducts an annual review of the program.

- 2.2 **Managers and Supervisors.** The Directors of Public Works and Parks & Recreation are:

- 2.2.1 Accountable for the health and safety of all employees within their departments through their active support of the accident investigation program.
- 2.2.2 Required to attend accident investigation training to familiarize themselves with the elements of the program.
- 2.2.3 Responsible for ensuring that employees under their supervision have received the appropriate training on accident and near miss reporting.
- 2.2.4 Responsible for initiating the accident investigation process within 24 hours of an incident.
- 2.2.5 Responsible for implementing approved corrective actions and ensuring they are completed appropriately through active follow-up.

- 2.3 **Employees.** Every Town of Lake City employee is responsible for conducting himself/herself in accordance with this policy and program. All employees will:

- 2.3.1 Attend accident and near miss training.
- 2.3.2 Report all accidents and near misses as soon as possible to their supervisor, but no longer than two hours after the time of the incident.

3.0 Definitions:

- 3.1 **Accident** - An undesired event that results in personal injury or property damage.
- 3.2 **Administrative (or Work Practice) Controls** – Procedures that are used to reduce the duration, frequency, or severity of exposure to a hazard. These may include work methods training, job rotation and gradual introduction to work.
- 3.3 **Engineering Controls** – A method of eliminating or reducing the quantity or severity of job risk factors by redesigning equipment, processes, tools, and workstations.
- 3.4 **Near Miss** – An incident where no property was damaged and no personal injury sustained, but where damage and/or injury easily could have occurred given a slight shift in time or position.
- 3.5 **Personal Protective Equipment (PPE)** – Gloves, kneepads and other equipment worn by employees that may help reduce hazards until other controls can be implemented, or to supplement existing controls.
- 3.6 **Root Cause** – A condition that contributes to an incident or near miss. They are not always obvious, and may include items like lack of training, poor safety leadership, lack of rule enforcement or poor safety procedures.

4.0 Reporting:

- 4.1 All employees are required to report any accident or near miss to their immediate supervisor within two hours of the incident. The Supervisor's Accident Investigation Report Form is to be used by the supervisor to document the details of an accident or near miss and any proposed corrective action(s) for future prevention. Supervisors/Managers are to begin the accident investigation process within 24 hours of the initial incident. A copy of the initial report is to be forwarded to the Program Administrator within 48 hours of an accident or near miss.

5.0 Event Reconstruction:

Points to Consider. To discover the root cause(s) of an accident or near-miss, you must reconstruct the chain of events and decisions that occurred prior to the incident. Hindsight is 20/20, so be open-minded because it is easy to jump to conclusions. Be sure to focus on the events that did happen instead of those that were supposed to happen.

- 5.1 **Interviews.** Within 24 hours, the manager or supervisor of the employee who was involved in the accident or near miss will begin interviewing employees who were involved or in close proximity to the incident, or who are familiar with the related process or work practices. All individuals will be interviewed separately. A minimum of two people must be interviewed for any accident or near miss reported.
- 5.2 **Event Timeline.** An event timeline will be developed for each reported accident or near miss. This timeline will start with the accident or near miss and be developed **in reverse** using information obtained from the interviews. Each task, event and employee decision that took place are to be added to the timeline. Also, the timeline will include all physical and emotional conditions known at the time of each action, event or decision along with the employee's knowledge, motivation, goals and focus at the time of any action, event or decision.

Points to Consider. Of all operation failures, approximately 10 percent are equipment failures and 90 percent are due to human error. Of those human errors, 30 percent are a result of mental lapses that cannot be remedied, and 70 percent are due to a problem or conflict within the system/process. Therefore, unless an incident can be solely attributed to equipment failure, the investigation should focus on the **process** and what changes could be made to limit the impact of human error.

5.3 Identifying Root Cause(s). After the timeline has been established, the investigator(s) will identify the root cause(s) that contributed to the accident or near miss.

Points to Consider. Many tools are available for identifying the root causes of workplace incidents. Your organization may use fault tree analysis, barrier analysis or accident mapping. Perhaps the simplest method is known as the “5 whys.” In this question-asking technique, the investigator asks the same question repeatedly – usually “What caused or allowed this condition/practice to occur?” or simply “Why?” - until the root cause(s) are found. The example below illustrates how the 5-whys might be applied to an incident.

Incident: While repairing a conveyor belt at the recycle center, Bob suffered an injury to his finger when it started unexpectedly.

1. **Why** was Bob's finger injured? The conveyor he was repairing unexpectedly started causing Bob's finger to get caught on the belt roller.
2. **Why** did the conveyor belt start move? Another employee started the machine without realizing Bob was in the danger zone. Bob had shut down the machine, but not performed an energy lockout so there was still power to the belt.
3. **Why** didn't Bob perform an energy lockout? The machine was not locked out because there is not a company lockout/tagout program. Bob has never been trained on hazardous energy control because management thought it was too expensive.

Root causes: Lack of lockout/tagout program, lack of employee training on hazardous energy control and poor safety leadership as demonstrated by unwillingness to spend money on employee safety training.

5.4 Recommending Specific Solution(s).

- 5.4.1 After the root causes are identified, corrective actions will be identified to reduce or eliminate those hazardous conditions. The manager/supervisor and employees will develop and propose specific improvements that are operationally feasible. Those possible improvements will be submitted to the Program Administrator for validation, final approval, and guidance for an implementation strategy.
- 5.4.2 When selecting and recommending these corrective actions, possible solutions will be prioritized using the following hierarchy. In this hierarchy of hazard control, the most desirable solutions come from the first level, with the following levels offering increasingly fewer desirable options.
 - 5.4.2.1 Elimination - eliminating the hazard from the workplace.

- 5.4.2.2 Substitution - replacing a hazardous substance or activity with a less hazardous one.
- 5.4.2.3 Engineering controls - providing guards, ventilation, or other equipment to control the hazard.
- 5.4.2.4 Administrative controls - developing policies and procedures for safe work practices.
- 5.4.2.5 Personal protective equipment - using respirators, earplugs, safety glasses, etc.
- 5.4.3 Recommended corrective actions will come from the highest possible level of the hierarchy of hazard control.

5.5 **Monitoring Changes.** Once implemented, corrective actions will be monitored by the manager/supervisor for effectiveness, to verify that net risk is not increased and to determine that the root cause of the incident has been eliminated or reduced. The manager/supervisor will conduct follow-up interviews with employees who were part of the accident investigation to determine if the implemented corrective actions require any adjustments to provide maximum safety to the employees.

6.0 Periodic Program Review:

- 6.1 At least annually, the Program Administrator will conduct a program review to assess the progress and success of the program. The review will consider the following:
 - 6.1.1 Evaluation of all training programs and records.
 - 6.1.2 The need for retraining managers, supervisors, and employees.
 - 6.1.3 The length of time between accidents, investigations, and implementation of corrective actions.
 - 6.1.4 The program's success based upon comparison to previous years, using the following criteria:
 - 6.1.4.1 Frequency of accidents and near misses.
 - 6.1.4.2 Use of CIRSA's loss reports and analysis.
 - 6.1.4.3 Employee feedback through direct interviews, walk-through observations, written surveys and questionnaires and reevaluations.

7.0 Training Requirements:

- 7.1 New and previously untrained employees will receive training about this program and how it will be applied when investigating near misses and accidents. Employees and supervisors will receive refresher training at least every five years. Upon hire or promotion into their position, managers and supervisors will be trained on Town of Lake City investigation philosophy and the methods that should be used to conduct an accident investigation according to this program.
- 7.2 The minimum training for all employees will include the following elements:
 - 7.2.1 An explanation of the Accident Investigation Program and their role in it.
 - 7.2.2 An emphasis on the importance and method of prompt reporting of accidents and near misses.
 - 7.2.3 Review of the accident investigation form, with emphasis on determining contributing factors and corrective actions

INSTRUCTIONS FOR SUPERVISOR'S INVESTIGATION REPORT

The following information should be used to complete the Supervisor's Accident/Incident Investigation Report. This report should be filled out as soon as possible by the immediate supervisor of the department involved, and upon completion should be sent to the entity employee responsible for filing formal claim notices with CIRSA (or other appropriate claim handler).

This report is designed in a general format that is suitable for use on accidents involving employee injury, vehicular damage, property damage, or general liability. This form should also be utilized for reporting incidents or "near-misses", that may not result in actual injury or physical damage. Near miss incidents may signify there is an unsafe condition waiting for a more severe event to happen, and if properly investigated, the incident may be prevented.

Should additional space be needed when completing this report, please attach the information securely and make a note on the original form referencing the attached material.

1. Entity: State the name of the entity for which this report applies.
2. Date: Record actual date of loss not the date on which the report is being completed.
3. Time: Time at which the actual loss occurred.
4. Name: List name(s) or description of item(s) involved.
5. Department: Indicate under which department and if applicable which shift the incident occurred.
6. Location of Incident: Indicate the actual physical location of the incident. (ie. shops, water plant, park, etc.) and provide the address.
7. New Employee, Equipment or Operation: Indicate if there was a new person, piece of equipment, or procedure involved.
8. Type of Incident: Classify the incident as accurately as possible, and check all that apply. There may be several areas involved;

** A fire in an entity's building injuring a private citizen and several employees. This could involve five or more claims including property, equipment, fire, workers = compensation, and public liability.

9. Be aware that the report likely is a public document and its content could affect the entity's liability for damage to property or injury to persons. If the accident/incident has resulted or may result in injury or damage to persons or property other than your entity's, please contact your Risk Manager, internal Claims Coordinator, or Entity Attorney prior to the completion of this form.
10. What Happened: Describe the event or series of events that resulted in the incident or accident. Include all people or property involved, damaged, lost, etc. including items from other departments or private property. Be as specific as possible and include any relevant events occurring prior, during or after the accident/incident. Use only facts and do not submit the

opinions of yourself or others.

Determine from the available evidence why this accident/incident occurred; utilize the six action words to assist you in thinking through the situation. When completing this section, consider information such as the following examples.

** Reporting any faulty equipment or lack of proper equipment.

** Noting improper or unsafe working conditions such as slippery floor, icy roads, liquid spill, poor housekeeping, missing warning signs. Again avoid placing blame on any individual or entering personal opinion. Concentrate on the facts.

11. What Should Be Done To Prevent a Recurrence: To prevent a recurrence, determine what actions, if any, are required to eliminate the hazards involved and restore safe working conditions. By using the words to the right of this space, evaluate if examples such as the following will reduce the possibility of a recurrence.

** Additional training.

** Increased equipment maintenance.

** Improved material handling.

** Re-selection of equipment, material, or people, etc.

The categories of Administrative/Management, Environment, Equipment, Material, and People are a breakdown of the five main variables in the work place, and listed under these variables are the supervisory inputs that affect them.

Examples include:

** If there was an accident involving Administrative/Management policies or procedures, these should be reevaluated to determine if changes in the policy or procedure, scheduling, purchasing or logistics are needed.

** If there was an accident involving Environmental factors, determine if weather, housekeeping, noise, light or chemicals are involved and how they effected the situation or could be changed to reduce the possibility of another accident.

** If there was an accident involving Equipment, you would study the effect that Selection, Arrangement, Use, and/or Maintenance, Availability, Convenience, or Appropriateness of that piece of equipment had in causing the accident.

** If there was an accident involving Material, determine if the Selection, Placement, Handling, Processing, and /or Availability of the material contributed to the accident.

** If there was an accident involving People, determine if a change in the Selection, Placement, Training, and/or Coaching of these people would have avoided the accident or may prevent a similar future accident.

12. What Actions Have Been Taken: Have any changes or improvements been made to remedy the situation? If an extremely hazardous condition is discovered, immediate action should be taken to prevent further loss. Take or recommend action consistent with your authority.

Regardless of the type of hazard, documented follow up action is important to determine if the hazard is being adequately controlled. While documentation cannot be included in this section due to the timeliness of reporting, the plan for follow up action should be listed.

Examples include:

- ** New machine guard in place and weekly inspections started to verify guard use.
- ** Driver enrolled in defensive driving course and supervisor will perform monthly road observations.
- ** No smoking policy established for city shop and on-site supervisors will enforce.

13. How Will Corrective Actions Improve Conditions or Behavior: After determining the action to be taken, describe how this will improve the situation by eliminating or controlling a particular condition or behavior.

Examples include:

- ** New chairs have been ordered for City Hall that will provide improved back support.
- ** A body belt has been installed in the "cherry-picker" to prevent workers from falling.
- ** A physical fitness program has been mandated for the Police Department to improve strength and flexibility.

14. Investigated By: Name and title of supervisor who is completing this report and the date on which it was completed.

15. Reviewed By: Name and title of person to which this form is reviewed (usually risk manager, department director, personnel manager, clerk, or whomever is responsible for handling safety, claims, and insurance for the entity).

SUPERVISOR'S ACCIDENT/INCIDENT INVESTIGATION REPORT

1. Entity	2. Date	3. Time AM PM
4. Name: Employee, Vehicle, Building, Etc.		
5. Department	6. Location of Incident	7. New Employee/Equipment or Operation? Yes No

8. Type of Incident
Check All That Apply

<input type="checkbox"/> near miss	<input type="checkbox"/> fire/explosion	<input type="checkbox"/> potential hazard
<input type="checkbox"/> property damage	<input type="checkbox"/> employee injury/ illness	<input type="checkbox"/> entity premises incident
<input type="checkbox"/> equipment damage	<input type="checkbox"/> vehicular accident	<input type="checkbox"/> other

9. If the incident involves damage to non-entity property or injury to persons who are not entity employees, contact your Risk Manager, internal Claims Contact or Entity Attorney before completing this form.

10. Describe what took place or what caused you to make this investigation. Get all the facts by studying the hazard or situation involved.

Ask the following questions:

Who? What? When? Where? How? Why? _____

11. What should be done to prevent a recurrence?

Circle the following items that require additional attention:

Admin./Mgt.	Environment	Equipment	Material	People
Policies	Weather	Selection	Selection	Selection
Procedures	Housekeeping	Arrangement	Placement	Placement
Scheduling	Temperature	Use	Handling	Training
Purchasing	Noise	Maintenance	Process	Coaching
Logistics	Light	Availability	Availability	
	Toxic/Hazardous Material	Convenient Appropriate		

12. What actions have been taken? _____

Take or recommend action, consistent with your authority.

13. How will corrective actions improve conditions or behavior?

14. Investigated By	Title	Date	15. Reviewed By	Title	Date
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Chemical Safety Program

1.0 Purpose:

2.0 Administrative Duties/Responsibilities:

The Public Works and Parks and Recreation Directors are responsible for administering and maintaining this written program.

Additional responsibilities are assigned to the positions listed below.

2.1 Each Director is responsible for the following:

- Implementing the Chemical Safety Program for their employees who use, handle or work near hazardous chemicals.
- Ensuring the current Safety Data Sheets for the chemicals used within the department are available to all employees.
- Ensuring all employees within the department are properly trained prior to first use and receive the correct Personal Protective Equipment.
- Maintaining the chemical inventory for their respective departments.
- Complete a hazard assessment for each chemical in use.
- Ensuring employees who use or handle the chemicals are following this program and the manufacturer's directions for use.
- Ensure all original and secondary containers are properly labeled.

2.2 Employees are responsible for the following:

- Follow this program and follow the manufacturer's directions for use.
- Review the Safety Data Sheet for each chemical prior to use.
- Use all required Personal Protective Equipment while handling the chemicals.

3.0 Definitions:

3.1 Globally Harmonized System (GHS): The Globally Harmonized System of Classification and Labeling of Chemicals is an internationally agreed-upon standard managed by the United Nations.

- 3.2 Safety Data Sheet (SDS): A document created by a chemical manufacturer to convey the information about the composition, properties and hazards of a product and the safety measures necessary for use.
- 3.3 Original Container: A container which a chemical is transported from the manufacturer or supplier to the customer.
- 3.4 Secondary Container: A container which holds a chemical which is not the original container supplied by the manufacturer.

4.0 Equipment/Resource Needs:

The following equipment may be necessary for the proper storage and use of chemicals in the workplace. Refer to the adopted building or fire code, or the Safety Data Sheet for each chemical for further information.

- 4.1 Personal Protective Equipment: [This is a sample list of commonly used personal protective equipment required for the use of chemicals.]

- Goggles
- Face Shield
- Natural Rubber Globes
- Latex or Nitril Gloves
- Chemical Resistant Apron
- Half Face Respirator
- Full Face Respirator
- Self-Contained Breathing Apparatus

- 4.2 Storage Equipment:

- Spill Containment Pallets
- Flammable Materials Storage Cabinet
- Transfer Pump

- 4.3 Spill Response & Cleanup

- Absorbent Materials (Soaker Socks, Pig Mats, Etc)

- Fire Extinguisher
- Bucket
- Overpack container
- Disposal Bags
- Broom
- Shovel

5.0 Hazard Evaluation:

A hazard evaluation should be conducted for all of the existing chemicals in the workplace. The purpose of this hazard assessment is to identify the potential hazard as well as proper controls necessary to safely use it. Controls should be applicable to the physical and health hazards associated with the chemicals. This includes exposure limits, engineering controls and personal protective equipment.

Refer to the CIRSA Hazard Evaluation Guide for more information.

6.0 Medical Qualifications:

This program requires personnel to receive medical clearance prior to performing the work tasks. The following medical clearances must be completed:

For any chemicals which require the use of respirators. See the Respirator Program for further information.

7.0 Hazard Communication Training Requirements:

Employees shall be trained on the use and handling of chemicals upon hire, when a new chemical is introduced into the workplace, and when a new job or task is assigned to the employee.

Refresher training shall be conducted [bi-annually].

Training shall consist of the following topics:

- 7.1 Chemical Inventory location and format.
- 7.2 Labeling of original and secondary containers using the Globally Harmonized System (GHS).
- 7.3 How to obtain, read and understand the information located in the Safety Data Sheets (SDS).

7.4 Personal Protective Equipment (PPE).

7.5 Tools and equipment including transfer pumps, approved secondary containers, and storage cabinets.

7.6 Storage, spill response and disposal

7.7 Other chemical specific procedures

8.0 Storage:

8.1 All chemicals shall be stored in compliance with the [most current International Fire Code, (IFC)] as adopted by the City/Town of [Name].

8.2 Hazardous materials, such as flammable and combustible liquids, flammable gases, oxidizers, and toxic materials shall be stored in compliance with Chapter 50 of the IFC, where appropriate.

8.3 Flammable and combustible materials will be stored in approved storage cabinets.

9.0 Handling and Use:

9.1 All chemicals shall only be used in accordance with the manufacturer's directions. Employees will review the manufacturer's instructions and the Safety Data Sheet prior to using the chemical.

9.2 All Personal Protective Equipment required by the manufacturer shall be worn when using the chemical.

10.0 Emergency Response:

10.1 First Aid: Employees will review the Safety Data Sheet to determine the appropriate first aid measures prior to using the chemical. All necessary first aid equipment shall be identified and located prior to use. This includes, but is not limited to eyewash stations, safety showers and burn kits.

10.2 Spill cleanup and disposal: A chemical spill cleanup kit appropriate for the chemical hazards and amount on site will be kept near where the chemical is used. When caustic materials are in use, appropriate materials should be kept on site to neutralize the chemical.

10.3 Fire Hazards: Appropriate fire extinguishers shall be kept on site for the type of chemicals in use. This can include common dry chemical extinguishers, as well as carbon dioxide, or Class-D extinguishers for combustible metals.

11.0 Labeling:

All chemical containers shall be properly labeled to clearly convey the contents and hazards. Labels should follow the Globally Harmonized System (GHS) [or specify other labeling method in use.]

11.1 Original Containers: Labels affixed to containers by the manufacturer shall not be removed or modified. Any container which is provided without the hazard information included in the GHS label shall have an additional label affixed to it to include this information. All containers used by more than one person or shift should be properly labeled with the product identity, manufacturers' name, address, phone number, and extent of hazard such as flammable, explosive, toxic or corrosive.

11.2 Secondary Containers: Any secondary container shall be labeled using a GHS compliant label [or other labeling method in use.] All secondary containers should be properly labeled as to their contents if the person that filled them leaves them unattended. This could lead to an accidental chemical exposure.

12.0 Recordkeeping:

12.1 Chemical Inventory: An inventory shall be developed which includes all hazardous chemicals present in the workplace. The inventory shall include the name of the product, manufacturer name, amount typically on hand (including units of measurement) and location. The inventory should be updated when new chemicals are purchased and reviewed again annually to ensure accuracy. During the inventory, inspect the containers to ensure they have GHS compliant labels.

12.2 Safety Data Sheets: Safety Data Sheets for all chemicals in the inventory shall be made available to employees. These documents are stored [enter location or description]. Safety Data Sheets can be obtained from the manufacturer or supplier.

13.0 Assessment/Program Review:

This program will be reviewed every [five] years to ensure it meets the needs of the City/Town, and all applicable guidelines and standards.

14.0 Appendix A: Sample Chemical Inventory

Product Name	Manufacturer	Amount	Location
<i>Sample Name</i>	<i>ABC Chemical Corp</i>	<i>10 Gallons</i>	<i>Fleet Chemical Cabinet</i>

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townclerk@townoflakecity.co

TOWN OF LAKE CITY

Motor Vehicle Safety

1.0 Purpose

Many employees operate owned, leased, rental or personal vehicles as part of their jobs. Employees are expected to operate vehicles safely to prevent incidents which may result in injuries and property loss. This program requires the full cooperation of each driver to operate-vehicles safely and to adhere to the responsibilities outlined in the Motor Vehicle Safety Program, while obeying all Federal, State and Local laws applying to the operation of motor vehicles.

2.0 Administrative Duties/Responsibilities:

The Town Manager is responsible for administering and maintaining this written program.

Additional responsibilities are assigned to the positions listed below.

2.1 Town Manager

- 2.1.1 Implement the motor vehicle safety program in their areas of responsibility.
- 2.1.2 Provide assistance and the resources necessary to implement and maintain the program.

2.2 Department Head

- 2.2.1 Investigate and report all incidents involving a motor vehicle used in performing business. Forward all incident reports to the Department Head.
- 2.2.2 Be responsible for taking appropriate action to manage high risk drivers as defined by this program.
- 2.2.3 Manage all elements set forth in the Motor Vehicle Safety Program. Review motor vehicle incident reports.
- 2.2.4 Revise and distribute changes to the Motor Vehicle Safety Program to managers, supervisors, and drivers, as necessary.
- 2.2.5 Maintain appropriate records.
- 2.2.6 Monitor federal, state, and local regulations to comply with all regulations and implement any policy/procedure change in a timely manner.
- 2.2.7 Monitor the effectiveness of the Motor Vehicle Safety Program.

2.3 Employee

- 2.3.1 Always operate a motor vehicle in a safe manner.
- 2.3.2 Maintain a valid driver's license and minimum insurance requirements on personal vehicles used in company business.
- 2.3.3 Comply with all requirements of this program.
- 2.3.4 Citations received while in the possession or operation of any [Entity] vehicle are the personal responsibility of the operator of that vehicle. Citations may not be paid with [Entity] funds.

3.0 Definitions:

- 3.1 Aggressive Driving - The behavior of an individual who "commits a combination of moving traffic offences to endanger other persons or property.
- 3.2 Alcohol - wine, beer, and distilled spirits.
- 3.3 Blood Alcohol Concentration (BAC) - The amount of alcohol in a person's body measured by grams of alcohol per deciliter or 100 milliliters blood, or grams of alcohol per 210 liters of breath.
- 3.4 Commercial Motor Vehicle - Any self-propelled or towed motor vehicle used on a highway in interstate commerce to transport passengers or property when the vehicle has a gross vehicle weight rating or gross combination weight rating, 10,001 pounds or more, is designed or used to transport more than 8 passengers (including the driver) for compensation, or is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation, or is used to transport hazardous materials in any amount that requires a placard.
- 3.5 Distracted Driving - Any activity that could divert a person's attention away from the primary task of driving. Includes activities such as texting or talking on a cell phone while driving.
- 3.6 Driving - Operating a motor vehicle on a public road and does not include operating a motor vehicle when the vehicle has pulled over to the side of, or off, an active roadway and has stopped in a location where it can safely remain stationary.

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TOWN OF LAKE CITY

- 3.7 Driving under the influence of alcohol, drugs, or a combination of alcohol and drugs - Operating a vehicle while the alcohol and/or drug concentration in the blood or breath, as determined by chemical or other tests, equals, or exceeds the level established by the State, or is equivalent to the standard offense, for driving under the influence of alcohol or drugs in the State.
- 3.8 Drugs - Controlled substances, as that term is defined under section 102(6) of the Controlled Substances Act, 21 U.S.C. 802(6).
- 3.9 Fatigued driving – When the driver, after prolonged periods of continuous driving, experiences mental and physical functional disorder.
- 3.10 FMCSA – the Federal Motor Carrier Safety Administration.
- 3.11 Licensed driver - An individual who possesses a valid driver’s license.
- 3.12 Major Violation – Offenses typically determined to be major violations may include:
- Driving under the influence of alcohol or drugs (DUI) or while ability is impaired (DWAI)
 - Reckless driving
 - Racing/speed contests
 - Speeding 20 mph or more over the posted speed limit
 - Leaving the scene of an accident
 - Failure to report an accident
 - Making a false accident report
 - Vehicular homicide or manslaughter
 - Attempting to elude a police officer
 - Driving while license is suspended, revoked or restricted
 - Driving an entity vehicle that has been locked/tagged out
- 3.13 Minor Violation - Offenses typically determined to be minor violations may include:
- Speeding less than 20 mph over the posted speed limit
 - Running a stop sign or red light
 - Improper turn
 - Passing across a double yellow line

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- Failure to yield
- Following too close
- Failure to wear a seatbelt
- Careless driving
- Failure to possess a valid Colorado driver's license
- Failure to provide proof of insurance if operating their personal vehicle
- Motor vehicle equipment violations
- Operating a defective or unsafe vehicle
- Failure to stop for a school bus with its red flashers activated

- 3.14 Motor Vehicle Record (MVR) — a summary of a driver's convictions and accidents on file with his or her home state.
- 3.15 Passenger motor vehicle - A passenger car, pickup truck, van, minivan, or sport utility vehicle with a gross vehicle weight rating of less than 10,000 pounds.
- 3.16 Public road - Any road under the jurisdiction of and maintained by a public authority and open to public travel.
- 3.17 Texting - Reading from or manually entering data into a personal wireless communications device, including doing so for the purpose of SMS texting, e-mailing, instant messaging, or engaging in any other form of electronic data retrieval or electronic data communication.

4.0 Equipment/Resource Needs:

Senior management involvement is essential for setting policies and allocating resources for a safe driving program.

5.0 Hazard Evaluation:

Driving is a complex activity. Given the wide variety of hazards encountered, a step-by-step approach to identify and keep track of hazards will be used. A hazard evaluation will be conducted for each task prior to starting the work. This will be accomplished as a site-specific or task-specific evaluation or as part of a comprehensive job safety analysis program.

Changes or modifications to the original scope of work require a stop work and reassessment to ensure any new hazards are identified and properly controlled prior to continuing work. Below are some common hazards that will be evaluated as part of this program.

5.1 Driver Hazards

- Aggressive or high-risk driving - failing to yield right of way, following too closely, improper passing, ignoring traffic control device, speeding
- Distraction - texting or talking on cell phone, using GPS or two-way radio, grooming, eating, involved conversation with passenger, etc.
- Does not know correct procedures for using equipment (e.g., how to apply tire chains)
- Does not properly recognize driving-related hazards and/or does not adjust driving accordingly
- Does not wear seatbelt, does not require passenger to wear seatbelt
- Driver not familiar with driving responsibilities or route, unprepared
- Driving too fast for road / traffic conditions
- Failure to pay attention to driving responsibilities, complacency
- Fatigue - reduced vigilance, slower reactions, poor decisions
- Impaired by alcohol, medication or prescription or illicit drugs
- Insufficient orientation or training: driver does not have necessary skills or is unfamiliar with procedures to operate vehicle
- Medical condition that could affect driving abilities (e.g., heart condition, sleep apnea)
- Poor nutrition and/or hydration - fatigue, attitude
- Poor vision (eye health)
- Slip, trip or fall while entering or exiting vehicle
- Violence from passenger

5.2 Journey Hazards

- Avoidable and unnecessary driving is NOT avoided
- Backing / reversing
- Collision with farm animals, wildlife
- Collision with oncoming vehicle (their fault)
- Collision with pedestrian or cyclist

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- Congested traffic - unexpected delays, frustration, stress
- Extreme temperature conditions - severe heat or cold
- Limited visibility - fog, excessive dust, travelling into sunset or sunrise
- Long duration trips (more than 2 hours); unpredictable or irregular schedules, shift work, driving between midnight and 6:00 am
- No trip plan, check-in procedure, emergency procedures or communications device
- Poor traction conditions - summer: heavy rain, rain after lengthy hot period, winter: freeze / thaw cycles, shaded corners, temperatures a little above or below freezing
- Poor trip scheduling - unrealistic time allowed, inefficient route selection, avoidable delays not eliminated
- Route includes intersections or roads with known high crash frequency such as uncontrolled railway crossings

5.3 Vehicle Hazards

- Car slips off jack during tire change
- Cracked / damaged windshield
- Electrical energy shock (e.g., improper battery boost)
- Faulty brakes
- Faulty head lights, taillights, or signals, etc.
- Improper lockout (e.g., vehicle rolls into another vehicle, person)
- Improperly adjusted mirrors - visibility
- Improperly adjusted seat and headrest - MSI strain, visibility
- Lack of emergency equipment or first aid supplies
- Loose items in cab, disorganized driving workspace
- Sudden release of air pressure from airline or hydraulic pressure (e.g., lift truck, on-board hydraulic equipment)
- Tires not suited for application (e.g., all-season tires rather than winter tires)
- Unsecured, overloaded, or unbalanced load
- Vehicle not maintained according to manufacturer specifications
- Vehicle not selected or equipped for use (e.g., under-powered, wrong axle configuration)
- Vehicles not regularly inspected

6.0 Medical Qualifications:

This program requires personnel who operate a Commercial Motor Vehicle to receive medical clearance prior to performing the work tasks. The following medical clearances must be completed:

- 6.1 Vision - Drivers are required to have at least 20/40 acuity in each eye with or without correction. They are also required to have at least 70" peripheral in the horizontal meridian, measured in each eye.
- 6.2 Hearing - Drivers must be able to perceive what is known as a "forced whisper" at a distance of 5ft or less, with or without a hearing aid. This standard equates to an average hearing loss in the better ear of less than 40 db.
- 6.3 Blood pressure/pulse rate - The medical examiner will check the driver's blood pressure and pulse to look for high blood pressure and irregular heartbeats.
- 6.4 Urinalysis - A urinalysis is required. The test looks for indications of underlying medical conditions such as diabetes.
- 6.5 Physical Examination - The physical exam will cover a dozen different categories:
 - General appearance
 - Eyes (cataracts, glaucoma, macular degeneration, etc.)
 - Ears (scarring of tympanic membrane, perforated ear drums, etc.)
 - Mouth and throat (to look for problems breathing or swallowing)
 - Heart (murmurs, extra sounds, pacemaker, etc.)
 - Lungs and chest, not including breast examination (abnormal breathing, impaired respiratory functions, cyanosis, etc.)
 - Abdomen and Viscera (enlarged liver, viscera, muscle weakness)
 - Vascular (abnormal pulse, carotid, varicose veins)
 - Genito-urinary (hernias)
 - Extremities (limb impaired)
 - Spine, other musculoskeletal (previous surgery, limitation of motion, tenderness, etc.)
 - Neurological (impaired equilibrium, coordination or speech pattern, ataxia, asymmetric deep tendon reflexes)

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A DOT physical can only be completed by a medical examiner certified by the FMCSA. It is up to the Medical Examiner to determine if a candidate meets all the requirements, and to mark the report to the best of their knowledge.

In addition to the DOT physical, operators of CMVs that require a Commercial Driver's License (CDL) must participate in a Drug and Alcohol Testing Program. The types of testing include:

- Pre-employment
- Random
- Post-Accident
- Return to Duty

7.0 Training Requirements:

This program will provide continuous driver safety training and communication. Even experienced drivers benefit from periodic training and reminders of safe driving practices and skills. Training shall be conducted in the following areas prior to performing the work tasks outlined in this program.

7.1 The following non-Commercial vehicle training elements are required:

- Vehicle specific orientation
- Annual route specific training
- Defensive driving
- Post-incident retraining

7.2 For drivers with a CDL the FMCSA has the following training requirements:

- Entry-Level driver training
- Longer Combination vehicle
- Hazardous Materials training
- Reasonable Suspicion Training for Supervisors

8.0 Topic Specific Sections/Procedures:

The following program requirements will be put in place to ensure that only capable and eligible drivers are hired. These program requirements will also detail training, supervision of drivers and how to maintain vehicles owned or leased by the [Entity].

8.1 Driver Recruitment

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Documented driver selection guidelines describing experience required, medical examination requirements, MVR review criteria, and preemployment safety screening program review.

8.2 Incident and Crash Review

All crashes involving [Entity] vehicles, take-home vehicles, or vehicles rented or leased by the [Entity] for official use will be thoroughly investigated and an attempt made to determine the cause of the crash. All employees involved in a motor vehicle crash will receive the same treatment and consideration as any citizen regarding the issuance of a traffic citation, except in the case of the vehicle being operated under emergency conditions, then no citation will be issued. Preventable crashes may result in a recommendation for corrective action by the employee's supervisor.

Guidance: Depending solely on the police department's investigation is not sufficient since their investigation tends to focus only on fault rather than addressing preventability. The driver's supervisor is the person responsible for conducting this accident investigation. However, in small entities this may not be practicable, and someone else may be needed to perform the investigative function.

In addition to accident investigation, some method of accident review will provide a follow-up on the results of the accident investigation. If, for example, an accident was determined to have been preventable, a review system can help determine what steps may be needed to help correct any driving habits that may lead to a similar mistake in the future. Such steps might include remedial training, counseling, or some form of disciplinary action. This accident review 'board' can vary between entities of varying size. A large entity may have a formal accident review panel composed of several department heads or the manager, while a small entity may use its board as an informal accident review panel. The structure of the accident review process is less important than the fact that accident review is effectively being done. Sample policies are attached for your review.

8.3 Driver Recognition

A driver recognition program will be put in place. The components of this program are as follows:

Guidance: Programs can be developed to recognize and reward those drivers that demonstrate compliance with this program. Such "rewards" can range from something as

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simple as a personal acknowledgment to a formal safety incentive program. Likewise, drivers who do not routinely demonstrate compliance should be identified and counseled in some forum, such as a safety meeting to re-emphasize the need to comply with this program.

8.4 Seat Belts

The use of seat belts is required under state law and while operating all entity vehicles or personal vehicles on (name of entity) business and by this policy.

8.5 Vehicle Specification and Selection

There shall be a Policy in place that details the specifications for vehicles, trailers and other motorized equipment used in operations. This Policy can help determine which equipment is proper for safe operations rather than external factors such as cost, availability or driver wants.

8.6 Inspection and Maintenance

Scheduling preventative maintenance will allow you to plan repair work that will not curtail operations and anticipate problems and promote corrections before they become serious. All maintenance will be performed by a qualified mechanic and the manufacturer's recommended maintenance program and schedule should be reviewed and maintained.

A daily safety inspection will be made of all vehicles before operation to detect any obvious safety hazards. Inspection is required of vehicles alone or with a trailer with a gross vehicle weight rating (GVWR) of 10,000 pounds combined under DOT regulations. There is no exemption for vehicles not leaving city limits. The state patrol may stop and demand to see the required documentation under this regulation. Inspections must be documented, and records kept. An example vehicle inspection form is included in Appendix C.

8.7 Motor Vehicle Records Review

The [Entity] will conduct an annual motor vehicle record review of all employees who routinely operate entity and personal vehicles for [Entity] business. Drivers' license numbers will be verified by the Department Head and submitted to the Safety Coordinator along with a completed DR 2489. The employee must notify their supervisor immediately if the employee's driver's license is suspended, revoked, or restricted for any reason. Failure

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to comply with any part of this policy can be grounds for disciplinary action up to and including termination.

- 8.7.1 All new job applicants of [Entity] will submit their driver's license number to the Department Head prior to hiring. The Safety Coordinator shall order a motor vehicle record review prior to hiring an employee into a driving position.
- 8.7.2 Every current employee will have a valid Colorado driver's license of the appropriate type with all required endorsements for the vehicle that they operate.
- 8.7.3 An MVR is obtained and reviewed at least annually, at the Departments expense, for all current employees that are required to have a driver's license for the position they hold.
- 8.7.4 MVRs for current employees are requested and reviewed after a preventable on the job collision.
- 8.7.5 MVRs for current employees are requested and reviewed if a complaint is received regarding the employee's driving while on business.
- 8.7.6 MVRs for current employees are requested and reviewed if an employee transfers to a position requiring a driver's license or into a position that requires a different type of driver's license or additional endorsements.
- 8.7.7 Motor Vehicle Record (MVR's) or driver license checks will be obtained by submitting a completed form DR2489 for each driver. The form DR2489 will have all the Driver Information completed. Based on guidance from the DMV the first box referring to a governmental agency under DDPA (Driver Privacy Protection Act) will be checked, however, the box for Commercial Driver's License holder near the bottom of this section will be checked even if the person has a CDL though the instructions state "Check 1 Box Only". A form DR 2559 will be used for any drivers that do not currently work for [Entity] but may be used to check driver histories during the hiring process.
- 8.7.8 This information will be forwarded to:
 - 8.7.8.1 Regular or Priority Mailing address:
Department of Revenue

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Motor Vehicle Business Group
Driver Control Section
Denver, CO 80261-0016

8.7.8.2 Business address:

Department of Revenue
Motor Vehicle Business Group
Driver Control Section
1881 Pierce Street
Lakewood, CO 80214

8.7.8.3 Express mail address:

Department of Revenue
Motor Vehicle Business Group
Driver Control Section
1881 Pierce Street
Lakewood, CO 80214

- 8.7.9 All discrepancies will be investigated by the Department Heads. Any employees determined to be operating entity vehicles or equipment without a valid license will be suspended from operating the equipment until a valid driver's license is submitted to the Safety Coordinator.

Note: You can use any express mail service to send your information. However, if you want returned information express mailed, use only pre-paid express mail through the U. S. Postal Service. The Department of Revenue will NOT use Federal Express or any other type of overnight service.

9.0 Recordkeeping:

Documentation of the qualification of each driver will be maintained. Examples of items to be kept in the driver's qualification and/or personnel files include:(1) Copy of employee authorization for MVR (2) Copy of MVRs (3) Training records (4) Copy of current driver's license (5) Other items specific to drivers with a CDL

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10.0 Assessment/Program Review:

Procedure will be enacted specifying audit functions that management completes to ensure all program requirements are being met. Audit results communicated back to top management. The program will be reviewed initially upon implementation and annually thereafter. All findings will be reported back to top management.

11.0 Appendix:

Appendix A – Winter Driving Considerations

Appendix B – Motor Vehicle Record Review Criteria.

Appendix C – Vehicle Inspection Form

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Appendix A – Winter Driving Considerations

The following considerations should be put in place when drivers must travel during extreme weather conditions:

- Vehicle maintenance procedures are adjusted for seasonal differences. Special consideration is given to equipment such as the battery, heating system, tires and tread depth, tire pressure, wiper blades, and wiper fluid.
- Policy established that allows drivers to consult with their supervisor to adjust driving hours and to stop driving if they are fatigued or the weather is bad.
- Pre-trip vehicle inspections are modified to include checking all vehicle cameras and sensors that could be covered in snow or ice.
- Procedure in place to ensure all vehicles are equipped with an emergency kit that includes ice scraper, blankets, flashlight, batteries, flares, jumper cables, first aid kit, bottled water, and non-perishable snacks.
- Drivers are properly trained on any safety features built into vehicles such as traction control, anti-lock braking, auto chains etc.

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Appendix B – Motor Vehicle Record Review Criteria

On an annual basis, the [Entity] will review a current MVR for each driver. The [Entity] may require more frequent background checks if at-risk driver behaviors are identified. Suspension or revocation of an employee's operator's license may impact the employee's ability to perform their job duties which may result in disciplinary action up to and including termination.

1.1.1 MVRs are graded into the following categories: Clear, Acceptable, Marginal, and unacceptable.

1.1.1.1 A Clear MVR is defined as having no minor conviction or preventable collisions in the last 3 years and no major violations/convictions in the last 5 years.

1.1.1.2 An Acceptable MVR is defined as no major violations/convictions in the last 5 years, or 2 minor convictions in the last 3 years, or 1 preventable collision and 1 minor conviction in the last 3 years.

1.1.1.3 A Marginal MVR is defined as 3 minor violations/convictions in the last 3 years, or 2 preventable collisions in the last 3 years, or any combination of minor convictions or preventable collisions totaling 3 in the last 3 years.

1.1.1.4 An Unacceptable MVR is defined as 1 or more major violations/convictions in the last 3 years, or 4 or more minor convictions in the last 3 years, or 3 or more preventable collisions in the last 3 years, or any combination of minor convictions or preventable collisions totaling 4 in the last 3 years.

1.1.2 When an employee's MVR is graded Unacceptable corrective action up to and including termination of employment is taken.

1.1.3 When an employee's MVR is graded Marginal corrective action including but not limited to the following will be taken:

- Attending a defensive driving training program,
- Participating in a documented ride along evaluation,
- Other actions deemed appropriate.

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Appendix C – Vehicle Inspection Form

Vehicle Inspection Report

Check ANY Defective Item and Give Details under "Remarks."

Date: _____

Vehicle Number: _____

- Air Compressor
- Air Lines
- Battery
- Brake Accessories
- Brakes
- Carburetor
- Clutch
- Defroster/Heater
- Drive Line
- Engine
- Fifth Wheel
- Front Axle
- Fuel Tanks

- Horn
- Lights
 - Head – Stop
 - Tail – Dash
 - Turn Indicators
- Mirrors
- Oil Pressure
- On-Board Recorder
- Radiator
- Rear End
- Reflectors
- Safety Equipment
 - Fire Extinguisher
 - Flags – Flares – Fuses
 - Spare Bulbs and Fuses

- Springs
- Starter
- Steering
- Tachometer
- Tires
- Transmission
- Windows
- Windshield Wipers
- Other

Trailer Number: _____

- Brake Connections
- Brakes
- Coupling Chains
- Coupling King Pin
- Doors

- Hitch
- Landing Gear
- Lights – All
- Roof
- Springs

- Tarpaulin
- Tires
- Wheels
- Other

Remarks: _____

Condition of the above vehicle is satisfactory

Driver's Signature: _____

Above Defects Corrected

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Above Defects Need Not Be Corrected For Safe Operation of Vehicle

Mechanic's Signature: _____ Date: _____

Driver's Signature: _____ Date: _____

TRENCHING AND EXCAVATION SAFETY POLICY

1.0 Purpose:

This program sets forth the practices required for trenches or excavations with a depth of four feet or greater along any portion of its length. All excavations or trenches 4 feet or greater in depth shall be appropriately benched, shored, or sloped according to the procedures and requirements set forth in this policy. Excavations or trenches 20 feet deep or greater must have a protective system designed by a registered professional engineer.

The risk manager or municipal designated safety person has the primary responsibility for assisting departments in implementation of this policy through coordinating training and consultation. This includes:

On site evaluation to monitor use of safe work practices and procedures. Assisting with atmospheric testing and equipment selection as needed

1. Providing or identifying appropriate training for Competent Persons and staff
2. Providing technical assistance as needed
3. Reviewing and updating the program at least annually.

2.0 Administrative Duties/Responsibilities:

- 2.1 Departments have the primary responsibility for providing training, trench protection systems, effective barricades and supporting the use of other protective measures deemed prudent and necessary by the competent person.
- 2.2 Supervisors have the primary responsibility for the implementation of the Trenching and Excavation Safety Policy in their work area. The supervisor has ultimate responsibility for the safety of the employees and general public affected by the excavation. This includes evaluation of the work to be performed, determination of the means of protection that will be used and adherence to the provisions of this policy as appropriate. The supervisor must ensure daily, or more often as required, that site conditions are safe for employees to work in excavations. The supervisor or a member of the work group must be a "competent person" as defined by OSHA.
- 2.3 Employees have the primary responsibility for working in accordance with the provisions of this policy. No employees should enter an excavation meeting the scope of this policy until authorized by the competent person.

3.0 Definitions:

- 3.1 Benching: A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near- vertical surfaces between levels.
- 3.2 Cave-in: The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.
- 3.3 Competent Person: One who is capable to identify existing and predictable hazards in the surroundings or working conditions that may affect employees and the general public, and who has authority to take prompt corrective measures to eliminate them.
The Competent Person(s):
 - 3.3.1 Must be trained in and knowledgeable of excavation and trenching standard, and other programs that may apply (Hazard Communication, Confined Space, Respiratory Protection)
 - 3.3.2 Must be capable of recognizing hazardous conditions and must have authority to stop work and ensure that hazards are corrected
 - 3.3.3 Performs and documents the 'Daily Excavation Inspection', and knows when inspections should be performed
 - 3.3.4 Must assure that the location of underground installations or utilities have been properly located.
 - 3.3.5 Must identify and ensure the use of adequate protective systems, work methods and personal protective equipment (PPE) on the excavation site.
- 3.4 Excavation:
 - 3.4.1 Any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.
 - 3.4.2 Fissured - Refers to soil that tends to break along definite planes of fracture with little resistance or a material that exhibits open cracks such as tension cracks in an exposed surface.
 - 3.4.3 Hazardous Atmosphere - Atmosphere that is oxygen deficient, potentially explosive, flammable, poisonous, corrosive, oxidizing, irritating, toxic, or otherwise harmful in a manner that may result in death or serious injury.

- 3.5 Protective System: Methods for protecting personnel working in excavations from cave-in, material falling or rolling in from the exterior or from collapse of adjacent structures. Protective systems include the use of support systems, sloping and benching systems, shield systems and other systems that provide the necessary protection.
- 3.6 Registered Professional Engineer (RPE): A person who is registered as a professional engineer.
- 3.7 Shield (Shield System): A structure that can withstand the forces imposed on it by a cave-in and thereby protect employees with the structure. Shields can be a permanent structure or can be designed to be portable and moved along as work progresses. Also known as trench boxes or trench shields.
- 3.8 Shoring (Shoring System): A structure such as a metal hydraulic, mechanical, or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.
- 3.9 Sloping (Sloping System): A method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation to prevent cave-ins. The angle of incline varies with differences in such factors as the soil type, environmental exposure conditions, and application of surcharge loads.
- 3.10 Soil Types:
- 3.10.1 Soil Type A - Most stable: clay, silty clay, and hardpan (resists penetration). No soil is Type A if it is fissured, is subject to vibration of any type, has previously been disturbed, or has seeping water.
- 3.10.2 Soil Type B - Medium stability: silt, sandy loam, medium clay, and unstable dry rock; previously disturbed soils unless otherwise classified as Type C.
- 3.10.3 Soil Type C - Least stable: gravel, loamy sand, soft clay, submerged soil or dense, heavy unstable rock, and soil from which any water is seeping.
- 3.11 Soil: Mixed Types (Layered Geological Strata) – The soil must be classified based on the soil classification of the weakest soil layer. Each layer may be classified individually if a more stable layer lies below a less stable layer, i.e. where a Type C soil rests on top of stable rock.
- 3.12 Trench (Trench Excavation): A narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation as to reduce the dimension measured from the forms or

structure to the side of the excavation to 15 feet or less, the excavation is also considered to be a trench.

4.0 Equipment/Resource Needs:

- 4.1 Personal Protective Equipment such as hard-hats, safety eyewear, reflective vests, gloves, and waterproof footwear.
- 4.2 Signs, barricades, and cones - traffic control for both motor vehicles and pedestrian traffic.
- 4.3 Stop/Slow paddles, flags or signs for flagging operations.
- 4.4 Soil testing equipment.
- 4.5 Dewatering equipment.
- 4.6 Trench boxes and/or shoring.
- 4.7 Ladders of multiple lengths.
- 4.8 Atmospheric monitoring devices.
- 4.9 Respiratory equipment.
- 4.10 Ventilation equipment.
- 4.11 Confined space equipment.
- 4.12 Lockout/Tagout equipment.
- 4.13 Fall protection.

5.0 Hazard Evaluation and Emergencies:

- 5.1 Hazardous Atmospheres and Confined Spaces
 - 5.1.1 Testing for Atmospheric Contaminants If there is any possibility that the trench or excavation could contain a hazardous atmosphere, atmospheric testing must be conducted prior to entry. Conditions that might warrant atmospheric testing would be if the excavation was made in a landfill area or if the excavation is adjacent to sources of contamination (e.g. sewage or fuel leaks).
 - 5.1.2 Testing should be conducted before employees enter the trench and should be done regularly to ensure that the trench remains safe. The frequency of testing

should be increased if equipment is operating in the trench that could produce airborne contaminants.

- 5.1.3 Employees required to wear respiratory protection must be trained, and fit-tested.
- 5.1.4 Trenches and excavations with hazardous concentrations of airborne contaminants or oxygen deficient atmospheres qualify as confined spaces.
- 5.1.5 Employees shall not be permitted to work in hazardous and/or toxic atmospheres. These include atmospheres with:
 - 5.1.5.1 Less than 19.5% oxygen
 - 5.1.5.2 A combustible gas concentration greater than 20% of the lower flammable limit.
 - 5.1.5.3 Concentrations of hazardous substance that exceed those specified in the Threshold Limit Values for airborne contaminants established by the American Conference of Governmental Hygienist (ACGIH).
- 5.2 Standing Water and Water Accumulations:
 - 5.2.1 Workers must not enter or work in excavations with standing water or in which water is accumulating unless adequate protection is provided. Protective methods for these circumstances must include:
 - 5.2.1.1 Use of special support or shield systems approved by a registered professional engineer.
 - 5.2.1.2 Water removal equipment used and monitored by a competent person
 - 5.2.1.3 Safety harnesses and lifelines used in conformance with 29 CFR 1926.104
 - 5.2.2 During rainstorms employees must exit the trench. The excavation must be carefully inspected by a competent person after each rain and before employees are permitted to re-enter the trench. Protective measures such as diversion ditches and dikes should be used to limit surface runoff water from entering the excavation.
- 5.3 Emergencies
 - 5.3.1 Personnel are not training to perform trench rescues should not place themselves at risk in order to attempt the rescue of someone trapped due to a cave-in.
 - 5.3.2 In the event of a serious injury or trapped worker requiring specialized rescue, 911 must be called immediately.

5.3.3 While waiting for emergency response personnel to arrive, workers at the site should take measures to support the rescue team and to further protect personnel on site.

6.0 Medical Qualifications:

6.1 Note: While there are no industry-specific medical qualification guidelines for this program, each employee performing these tasks must be capable of performing all required physical and mental tasks required. Fitness for Duty evaluations should be considered. Americans with Disabilities (ADA) guidelines must be followed.

7.0 Training Requirements:

7.3 Any employee required to dig or enter an excavation shall attend, at a minimum, trenching and excavation safety awareness training prior to beginning related work. The training is provided by the risk manager or designated safety person and covers the potential hazards encountered when working in and around excavations and the procedures that need to be followed to avoid these hazards,

7.4 Additional training is required for any employee designated to be the competent person for a trenching and excavation job. Competent person training covers the following areas in detail:

7.4.1 Hazards related to excavation work.

7.4.2 Work practices and selection of appropriate protective systems.

7.4.3 Methods of evaluating soil and the site.

7.4.4 Inspection procedures.

7.4.5 Specific requirements of the policy and of related policies.

7.4.6 Emergency procedures.

8 Procedures:

8.1 Dig Permit: A competent person shall be identified by name on the dig permit for all excavations with a depth of four feet or greater at any portion that personnel may enter.

8.1.1 The location of sewers, telephone, fuel, electric, water lines, or any other underground installations that may be encountered during excavation work must be determined and marked prior to opening an excavation. The Project

Manager shall make arrangements as necessary with the appropriate utility agency for the protection, removal, shutdown, or relocation of underground installations.

- 8.1.2 If it is not possible to establish the exact location of these installations, the work may proceed with caution if detection equipment or other safe and acceptable means are used to locate the utility.
 - 8.1.3 Excavations must not endanger the underground installations, or the employees engaged in the work. Utilities left in place should be protected by barricades, shoring, suspension, or other means as necessary to protect employees.
- 8.2 Protection of the Public: Excavations must be isolated from public access by a substantial physical barrier. Barricades, lighting and posting shall be installed as appropriate prior to the start of excavation operations. All temporary excavations of this type shall be backfilled as soon as possible
- 8.2.1 Guardrails, fences, or barricades shall be installed around excavations adjacent to walkways, roads, paths, or other traffic areas. Use of barricade tape alone is not considered a sufficient method of isolation when the excavation is unattended. Warning lights or other illumination shall be used as necessary for the safety of the public at night.
 - 8.2.2 Wells, holes, pits, and similar excavations must be effectively barricaded or covered and posted.
 - 8.2.3 Walkways or bridges used by the general public to cross excavations must be equipped with standard guardrails.
- 8.3 Surface Encumbrances: All equipment, materials, supplies, buildings, roadways, trees, utility vaults, boulders, etc. that could present a hazard to employees working in the excavation must be removed or supported as necessary to protect employees.
- 8.4 Soil Classification: The competent person in charge of the excavation shall be responsible for determining the soil type. All previously disturbed soil is automatically considered Type B or C soil. Soil may be considered Type C by default and no additional tests required.
- 8.4.1 To classify soil as type B the competent person shall use a visual test coupled with one or more manual tests.
 - 8.4.2 Visual test: Evaluate the conditions around the site including the soil adjacent to the site and the soil being excavated.

- 8.4.3 Identify any signs of vibration. Check for crack-line openings along the failure zone, look for existing utilities that indicate that the soil has been previously disturbed, and observe the open side of the excavation for indications of layered geologic structuring.
- 8.4.4 Look for signs of bulging, boiling, or sloughing, as well as signs of water seepage from the sides or bottom of the excavation.
- 8.4.5 The area adjacent to the excavation should be evaluated for foundations or other intrusions into the failure zone, and the evaluator should check the spoil distance from the edge of the excavation.
- 8.4.6 Any one of the following will cause soil to be classified as Type C
 - 8.4.6.1 Water seepage into excavation
 - 8.4.6.2 Vibration from road traffic or equipment
 - 8.4.6.3 Signs of bulging, boiling, or sloughing
 - 8.4.6.4 Crack lines along failure zone

8.5 Manual Tests:

- 8.5.1 Thumb penetration test: Attempt to press the thumb firmly into the soil in question. If the thumb penetrates no further than the length of the nail, it is probably Type B soil. If the thumb penetrates the full length of the thumb, it is Type C. It should be noted that the thumb penetration test is the least accurate testing method.
- 8.5.2 Dry strength test: Take a sample of dry soil. If it crumbles freely or with moderate pressure into individual grains it is considered granular (Type C). Dry soil that falls into clumps that subsequently break into smaller clumps (and the smaller clumps can only be broken with difficulty) it is probably clay in combination with gravel, sand, or silt (Type B).
- 8.5.3 Plasticity or Wet Thread Test Take a moist sample of the soil. Mold it into a ball and then attempt to roll it into a thin thread approximately 1/8 inch in diameter by two inches in length. If the soil sample does not break when held by one end, it may be considered Type B. A pocket penetrometer, shear vane, or torvane may also be used to determine the unconfined compression strength of soils.

8.6 Protective Systems: In excavations greater than 4 feet in depth a method to protect people entering the excavation from cave in must be employed. Acceptable protective methods include sloping, benching, shielding, and shoring.

8.6.1 Benching, Sloping, Shoring, and Shielding Requirements

8.6.2 General: Excavations under the base of the footing of a foundation or wall require a support system designed by a registered professional engineer. Sidewalks, pavement, utility vaults or other similar structures shall not be undermined unless a support system or another method of protection is provided to protect employees from their possible collapse. Sloping or benching are often the preferred methods of protection; however, shoring or shielding is used when the location or depth makes sloping to the allowable angle impractical.

8.6.3 Sloping: Maximum allowable slopes for excavations less than 20' based on soil type and angle to the horizontal are as follows:

8.6.4 Type B soil must have walls sloped to a maximum angle of 45-degrees (1:1 slope) from horizontal in all directions.

8.6.5 Type C soil must have walls sloped at a maximum angle of 34-degrees (1:1.5 slope) from horizontal in all directions.

8.7 Benching Requirements:

8.7.1 In Type B soil, the vertical height of the benches must not exceed 4 feet. Benches in increments of 2 feet or less is preferred. The angle developed by the edge of the benches must not exceed the maximum allowable slope for that soil type (Type B soil 45-degrees).

8.7.2 Benching is not permitted in Type C soil.

8.8 Shielding:

8.8.1 Trench boxes or trench shields are intended to protect workers from cave-ins and similar incidents. The trench shield is lowered into the excavation and workers may then enter the protected area within the shield. Only trench shields designed or certified by a registered professional engineer may be used. The use is limited to those trenches for which the shield is certified (e.g. maximum depth and material). The manufacturer must approve any modifications to the shields. The excavated area between the outside of the trench box and the face of the trench should be as small as possible. The space between the trench box and the excavation side should be backfilled to prevent lateral movement of the box.

8.8.2 Trench boxes may be used in combination with sloping and benching. The box must extend at least 18 inches above the surrounding area if there is sloping

toward the excavation. This can be accomplished by providing a benched area adjacent to the box.

- 8.8.3 Shields may be placed two feet above the bottom of an excavation, provided they are calculated to support the full depth of the excavation and there is no caving under or behind the shield.
- 8.8.4 Workers must enter and leave the shielded area in a protected manner, such as by a ladder or ramp. Workers may not remain in the shielded area while it is being moved.

8.9 Shoring:

- 8.9.1 All shoring shall be installed from the top down and removed from the bottom up. Hydraulic shoring shall be checked at least once per shift for leaking hoses and/or cylinders, broken connections, cracked nipples, bent bases, and any other damaged or defective parts. The top cylinder of hydraulic shoring shall be no more than 18 inches below the top of the excavation. The bottom of the cylinder shall be no higher than four feet from the bottom of the excavation. (Two feet of trench wall may be exposed beneath the bottom of the rail or plywood sheeting, if used.)
- 8.9.2 Three vertical shores, evenly spaced, must be used to form a system. Wales are installed no more than two feet from the top, no more than four feet from the bottom, and no more than four feet apart, vertically.

8.10 Inspections:

- 8.10.1 Frequent inspection of the excavation and surrounding area by the Competent Person is critical to ensure the safety of the workers involved in work within the trench. An excavation inspection form is included as Appendix A in this document. The Competent Person must conduct inspections of the entire excavation site: Daily and before the start of each shift.
 - 8.10.1.1 As dictated by the work being done in the trench.
 - 8.10.1.2 After every rainstorm.
 - 8.10.1.3 When fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom, or other similar conditions occur.
 - 8.10.1.4 When there is a change in the size, location, or placement of the spoil pile.

8.10.1.5 When there is any indication of change or movement in adjacent structures.

8.11 Spoil:

8.11.1 Temporary spoil shall be placed no closer than 2 feet from the surface edge of the excavation. The distance is measured from the nearest base of the spoil to the cut. This distance should not be measured from the crown of the spoil deposit. This distance requirement ensures that loose rock or soil from the temporary spoil will not fall on employees in the trench.

8.11.2 The spoil should be placed so that it channels rainwater and other run-off water away from the excavation. Spoil should be placed so that it cannot accidentally run, slide, or fall back into the excavation.

8.12 Surface Crossing of Trenches:

8.12.1 Surface crossing of trenches should not be made unless absolutely necessary. However, if necessary, they are only permitted under the following conditions:

8.12.1.1 Vehicle crossings must be designed by and installed under the supervision of a registered professional engineer.

8.12.1.2 Walkways or bridges must have a minimum clear width of 20 inches, be fitted with standard rails, and extend a minimum of 24 inches past the surface edge of the trench.

8.13 Ingress and Egress:

8.13.1 Trenches 4 feet or more in depth shall be provided with ladders or other fixed means of egress. Spacing must be such that a worker will not have to travel more than 25 feet to the nearest means of egress. Ladders must be secured and extend a minimum of 36 inches above the landing. Metal ladders should be used with caution, particularly when electric utilities are present.

8.14 Exposure to Vehicles:

8.14.1 Employees exposed to vehicular traffic shall be provided with and required to wear reflective vests or other suitable garments marked with or made of reflectorized or high-visibility materials. Trained flag persons, signs, signals, and barricades shall be used when necessary.

8.15 Exposure to Falling Loads:

- 8.15.1 Employees are not allowed in the excavation while heavy equipment is digging. Employees must not work under loads being lifted or moved by heavy equipment used for digging or lifting. Employees are required to stand away from equipment that is being loaded or unloaded to avoid being struck by falling materials or spillage.

Appendix A

OSHA and Safety References:

1.0 Video: 5 Things you should know to stay safe:

1.1 https://www.youtube.com/watch?v=zV-sVn_AUEM#action=share

2.0 OSHA Trenching and Excavation Safety:

2.1 <https://www.osha.gov/Publications/osha2226.pdf>

Wesley & LeAnn Williams
PO Box 1148
Lake City, CO 81235
760-223-1555

May 23, 2023

Lake City Board of Trustees:

We have paid tap fees and meter fees for the garage next to The Country Store at 916 N. Hwy 149, lot 13 – block 5. The garage was built around 1999, before we bought the property. We have plans to begin construction on the upstairs portion of the garage to finish it out as a two bedroom apartment for employee housing or possible rental. Last week we discovered that there was already water and sewer to the property. Jamison brought out a camera and checked the sewer line and found it went across the back of our property and dumps into the city sewer line at the south east corner of our property.

He also checked the water line to the garage and found that it is metered through the same meter as the store and found no leaks. The water line follows a similar path from the meter, west and north, around the back side of the store building.

We are requesting a variance in regards to the requirement to have a separate meter for a separate structure. The water line to the garage is separate from the store but runs through the same meter. It is two buildings on one piece of property. We receive one property tax statement for lots 11-12-13. The garage and parking area in front of it are integral to the operation of our business.

We are also requesting a refund of tap and meter fees of \$6953.38 paid on 8/18/22 since both the water and sewer lines are already tapped into the city service lines.

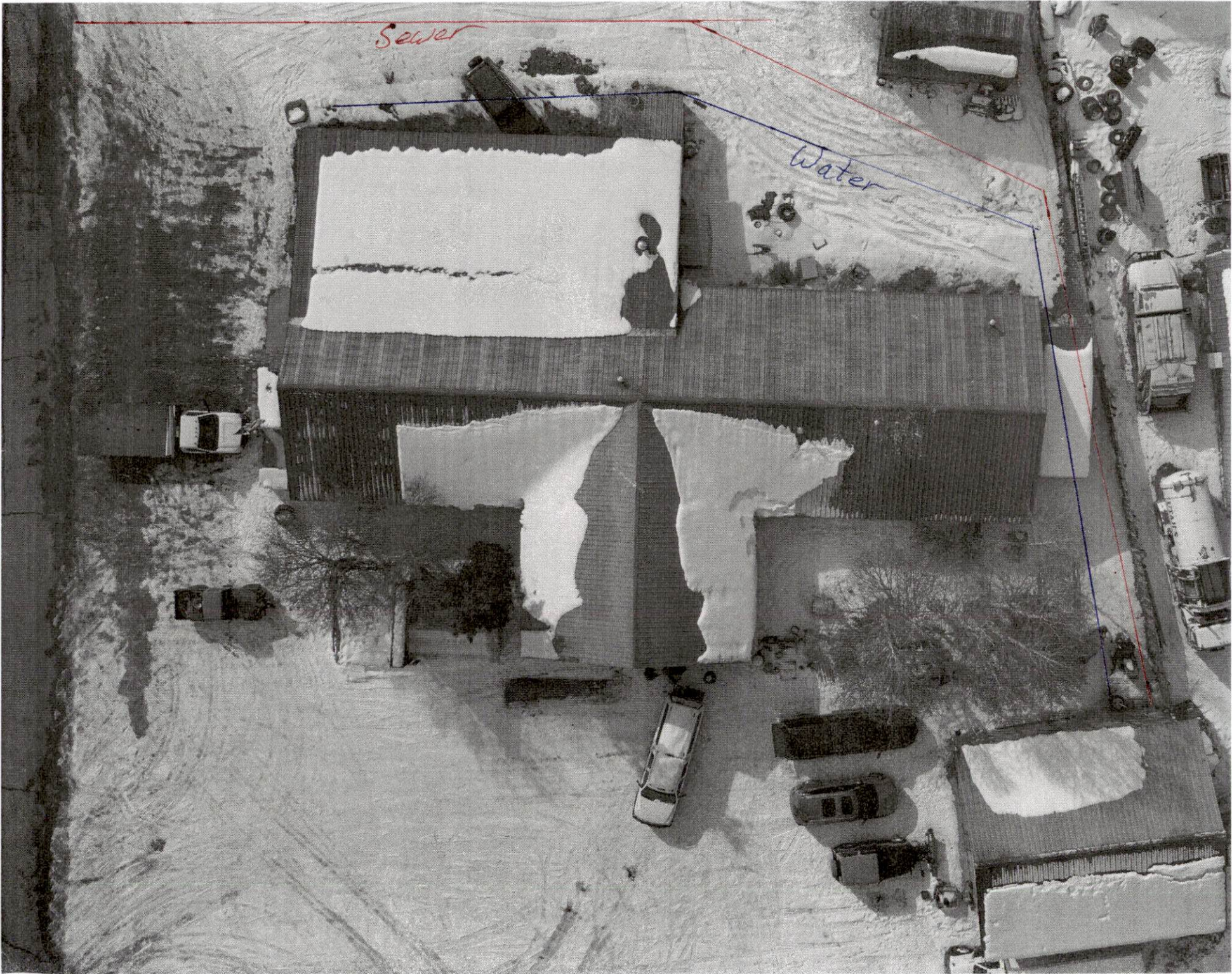
Respectfully,

The image shows two handwritten signatures in black ink. The first signature is on the left and the second is on the right, both appearing to be cursive and somewhat stylized.

Wesley & LeAnn Williams

Sewer

Water



Meeting Minutes

Meeting Name: BOCC/BOT Joint Workshop & BOT Regular Workshop and Meeting

Meeting Start Time: 5:00 PM MDT

Meeting Start Date: 5/17/2023

Meeting End Time: 8:05 PM MDT

Meeting End Date: 5/17/2023

Meeting Location: Armory Multi-Purpose Room and Virtual via Zoom

Agenda:

I. BOCC/BOT Joint Workshop Start Time – 5:00pm

- A. Discuss Process for Public Comment on Town/County Program Allowing OHVs on Highway 149.
- B. Discuss Scenic Byways Program Grant. (Kristine Borchers)
- C. Discuss County Partnering with the Town on the Use of Granicus to Identify Short-Term Rentals.
- D. Discuss Lake San Cristobal Infill (Robert Hurd).
- E. GCEA Update by Mike McBride CEO

Joint Workshop End Time – 6:26pm

II. BOT Regular Workshop Start Time – 6:43pm

- A. Workforce Housing Discussion with Planning and Zoning Commission.
- B. Discuss Emergency Ordinance 2023-05 an Ordinance Amending Ordinance 2023-03 to Increase the Aggregate Principal CWRPDA Loan from \$3,016,500 to \$3,616,500 for the WWTP Renovation Project
- C. Discuss Emergency Ordinance 2023-06 an Ordinance Amending Sections 21-30 and 21-32 of the Town Code Regarding Water and Sewer Plant Investment Fees
- D. Review of Application for Transfer of Ownership of Fermented Malt Beverage Beer/Wine (City) Liquor License at 231 Gunnison Ave from Burian's Mountain Adventures Inc. to B's Cabins & Mini Mart Co.
- E. Review of Triple Point WWTP Equipment Package Purchase Agreement

Regular Workshop End Time – 7:32pm

III. BOT Regular Meeting Start Time – 7:32pm

A. Call to Order

B. Roll Call: Present: Mayor Roberts and Trustees Bruce, Hamel, Heaton, Horn, Kendall and Woods.

C. Approval of Minutes – May 3, 2023: Motion made by Trustee Heaton, seconded by Trustee Bruce. Motion passed with all present voting yes in a roll call vote except for Trustee Horn who abstained due to absence.

D. Approval of Bills Payable Totaling \$122,565.56. Motion made by Trustee Bruce, seconded by Trustee Hamel. Motion passed with all present voting yes in a roll call vote.

E. Committee Reports

1. Lake San Cristobal Water Activity Enterprise (Woods)

2. Historic Preservation Commission (Fox)

3. Chamber of Commerce (Kendall)

4. Marketing Committee (Bruce)

5. DIRT (Hamel)

6. High Alpine Region Team (Woods)

7. Region 10 (Roberts/Hamel)

8. Planning and Zoning (Pierce)

9. Town Manager/Treasurer Report (Mulhall)

10. Legal Update

11. Mayor/Trustee Report

F. Correspondence Received – NONE

G. Citizen Communications – Kate Hopson shared that 5/20 is Community Cleanup Day and 6/7-6/11 is Lake City Star Week.

H. Additions to the Agenda

1. Discussion and Possible Action to Consider Having a Special Meeting About Short-Term Rentals on June 14th at 5pm. Motion made by Trustee Bruce, seconded by Trustee Hamel . Motion passed with all present voting 6 to 1 in a roll call vote.

6 Yes – Trustees Bruce, Hamel, Heaton, Horn, Kendall & Mayor Roberts.

1 No – Trustee Woods.

I. Action Items

1. Discussion and Possible Action to Approve Emergency Ordinance 2023-05 an Ordinance Amending Ordinance 2023-03 to Increase the Aggregate Principal CWRPDA Loan from \$3,016,500 to \$3,616, 500 for the WWTP Renovation Project. Motion made by Trustee Heaton, seconded by Trustee Bruce. Motion passed with all present voting yes in a roll call vote.
2. Discussion and Possible Action to Approve Ordinance 2023-06 an Ordinance Amending Sections 21-30 and 21-32 of the Town Code Regarding Water and Sewer Plant Investment Fees. Motion made by Trustee Kendall, seconded by Trustee Hamel. Motion passed with all present voting 6 to 1 in a roll call vote.
6 Yes – Trustees Bruce, Hamel, Heaton, Horn, Kendall & Mayor Roberts.
1 No – Trustee Woods.
3. Discussion and Possible Action to Approve Review of Application for Transfer of Ownership of Fermented Malt Beverage Beer/Wine (City) Liquor License at 231 Gunnison Ave from Burian’s Mountain Adventures Inc. to B’s Cabins & Mini Mart Co. Motion made by Trustee Woods, seconded by Trustee Kendall. Motion passed with all present voting yes in a roll call vote.

BOT Regular Meeting Adjournment – 8:05pm

Mayor

ATTEST

Town Clerk

Town of Lake City
Bills Payable
6/7/2023

Vendor Name	Description	Invoice Amount	GL
1 Aflac	Aflac Insurance	\$494.20	GF
2 Aqua Smart, Inc.	PW - Seaquest - Dry (1,200 Lbs) & Freight	\$6,114.25	WS
3 Ben Hake	PR - Ben Hake Mileage Reimbursement	\$205.67	GF
4 Blue Spruce Building Materials, Inc	TA - Employee House Motion Detection Light	\$17.99	GF
5 Blue Spruce Building Materials, Inc	PR - Posts, Mason Line, Concrete, Pails, Stain, etc.	\$1,144.49	GF
6 Blue Spruce Building Materials, Inc	PR - Shop Towels & All Purpose Cleaner	\$21.38	GF
7 Blue Spruce Building Materials, Inc	PR - Hose Repair Couplings	\$30.51	GF
8 Blue Spruce Building Materials, Inc	PW - Broom, MasterLock, Rake, Concrete, Drill Bits, etc.	\$890.72	WS
9 Blue Spruce Building Materials, Inc	PR - Screws, Bits, Punch Pin, Nuts, Washers, etc.	\$311.84	GF
10 Card Member Service	TA - BOT Meeting Food	\$93.71	GF
11 Card Member Service	TA - American Furniture Warehouse Credit	-\$96.02	GF
12 Card Member Service	TA - Stamps	\$63.00	GF
13 Card Member Service	TA - Google GSuite & Cloud	\$138.26	GF
14 Card Member Service	TA - BillFlash Monthly Support	\$19.95	GF
15 Card Member Service	TA - CDW MS Office 365	\$8.30	GF
16 Card Member Service	TA - Zoom Cloud Recording	\$40.00	GF
17 Card Member Service	TA - Conference Meal	\$60.42	GF
18 Card Member Service	TA - CMCA Conference Registration	\$1,051.45	GF
19 Card Member Service	TA - CPM Course Registration	\$500.00	GF
20 Card Member Service	March Credit Card Fee Reimbursement	-\$39.00	GF
21 Card Member Service	PR - Gravel	\$147.60	GF
22 Card Member Service	PR - Steel Barricades	\$3,109.11	GF
23 Card Member Service	PR - Weight Room Weights	\$1,003.73	GF
24 Card Member Service	PR - Sirius XM	\$1.60	GF
25 Card Member Service	PR - Garmin	\$34.95	GF
26 Card Member Service	PW - UPS Shipping	\$67.24	WS
27 Card Member Service	PW - Microsoft 365	\$6.99	WS
28 Caselle	TA - Contract Support and Maintenance 07/01/2023 to 07/31/2023	\$1,196.00	GF
29 CEBT	TA - Health and Dental Insurance	\$1,729.60	GF
30 CEBT	PR - Health and Dental Insurance	\$1,729.60	GF
31 CEBT	PW - Health and Dental Insurance	\$2,594.40	WS
32 CommWest	TA - Town Hall Phone System	\$84.00	GF
33 Grand Junction Pipe & Supply	PR - Sprinkler Rotors	\$210.00	GF
34 Gunnison County Electric	WWTP 480v, 800amp 3 Phase Electric Upgrade	\$45,635.00	WS
35 Hinsdale County	PR - Unleaded Fuel	\$168.47	GF
36 Hinsdale County	PW - Diesel & Unleaded Fuel	\$670.88	WS
37 Michelle Pierce	Consulting Services - May 2023	\$250.00	GF
38 Quill Corp	TA - Brother Printer Labels & Binders	\$158.96	GF
39 SGS North America, Inc	PW - Tests (Kjeldahl Nitrogen, Phosphorus, Inorganic Nitrogen) & Disposal Fee	\$229.21	WS
40 SGS North America, Inc	PW - Tests (Biochemical Oxygen Demand, Total Suspended Solids) & Disposal Fee	\$199.04	WS
41 SGS North America, Inc	PW - Tests (Fecal Coliform)	\$39.29	WS
42 Silver World Publishing	TA - Classified Ad for Sealed Bids x 2	\$20.00	GF
43 Silver World Publishing	TA - Bills Payable x 2, Legal Ordinance x 4	\$770.00	GF
44 U.S. Tractor & Harvest	PW - Oil Filter, Rocker Switch, Bolt, Filter Element	\$481.24	WS
45 UNCC	PW - RTL Transmissions	\$30.96	WS
46 Xerox Financial Services	TA - Xerox Copier Lease Payment & Equipment Protection Program	\$199.54	GF

Total Bills Payable June 7,2023: \$71,838.53

MAYOR

ATTEST:

TOWN CLERK

Public Works Report

May, 2023

For the month of May, the Town of Lake City produced gallons 14, 719,500 of safe drinking water and the Wastewater Treatment Plant processed 2,146,584 gallons of wastewater. For the same period last year the Town produced 14, 723,200 gallons of water and processed 2,723,118 gallons of wastewater.

Water : As we gear up for summer Public Works turned on both parks sprinkler systems. There were a few repairs that were handled in house. We adjusted the sprinkler heads as well, to make sure we were getting the water where we wanted it. With summer costumers coming back to town we had some meters to repair as well. With construction season is full swing we had a few water taps that were installed on our system. The Towns ditch was also brought on line in mid-May. We found a few water leaks around town that were repaired. We assisted with the repairs. We submitted the CCR on both the website and in the newspaper. This is required every year per state statute. We have been working on rising valves that were coved during the highway paving project last year. I was able to get CenturyLink to repair the phone at Bluff well and reprogramed the dialer.

Wastewater: With costumers arriving in town we had many calls with sewer issues. We have been working trough the issues as they arrive. Our main focus has been on raising the manholes covered by the paving project. This is very time consuming and has pushed us behind schedule on sewer jetting. We plan on starting jetting once all manholes have been fixed. Other than that the WWTP project has been a high priority.

Streets and Alleys: We have been busy improving road ways, drainages and cleaning culverts all over Town. We did some cold patching around town to help with potholes.. We also deployed speed bump and more signage around town. We have been stockpiling material form different projects for the Plant project and widening the road. We also hauled material and filled in a low stop on 3rd street. We also worked on streets and alleys and built up the road ways.

Other: We replaced every wayfinding sign that was owed by the Town. We will add more signage in places that never had signs. We also got signs for EMS at Memorial park so that people will hopefully not block access to the airfield.

Respectfully Submitted,
Jameson Johnston
Public Works Director Interim

Town Clerk Report

May 2023

Administration/Records Management/Human Resource Duties

- I have been added as an administrator to the town's Facebook account and am now also posting notices and updates here.
- I have finished updating the town website with all documents, contact information, notices, etc. and everything is current to date.
- We received \$2138.45 in revenue for parks and recreation from Ice Wall shirt sales from October to April.
- We received \$2500 in donations for the parks and recreation dog park projects.
- I processed 16 gym memberships and collected a total of \$1010 in membership fees.
- I processed 2 new Short-Term Rental applications which were approved without protest.
- I processed 3 more liquor licenses with one being a transfer of ownership and the other two renewals.
- I processed all of the Facility Use and Rental Agreement applications and Special Event Liquor License Permit applications that we have to date for events this year.
- I worked to clear up some confusion that was created by a resident posting the town's STR renters notice at neighboring properties to theirs in the hopes of getting them to comply with nighttime lighting wishes.

CIRSA Audit/Training Records

- The town completed the yearly CIRSA audit and I have streamlined the training record keeping process to be compliant and easily accessible.

Saving Places Conference Reimbursement

- I applied for and the HPC/Town was awarded a \$300 in person attendee registration fee reimbursement for the February 2023 Saving Places Conference.

CMCA Conference Scholarship

- I applied for and was awarded a \$500 scholarship for the 2023 Colorado Municipal Clerks Institute which takes place from July 10th through the 14th 2023.

Sheriff's Report

May 2023

BOCC/ BOTT

5/1-5: Deputy Pantleo attended "Train the Trainer" class in Grand Junction. This class was hosted by the West Central POST Region covering the cost of tuition. This class focused on the adult learning process and the development of law enforcement specific training plans. The certification also qualifies Deputy Pantleo to instruct in POST academy classes.

5/1: Deputy Pantleo completed his Gracie Survival Tactics (GST) instructor certification. GST is arrest control and defensive tactics training based on Brazilian Jiu Jitsu and adapted to law enforcement. Pantleo's work on this certification began early in the year and included 50 hours of hands-on training. Pantleo was assisted by reserve deputies Coxwell, Trivisono and Hernandez.

5/2: Sheriff Kambish responded to the area of South Water Street for a suspicious vehicle. Kambish searched the area and discovered the vehicle in question. Upon contacting the driver Kambish discovered employees of the Texan Resort were testing their camp radios around the property and decided to see just how far the signal would reach which led them onto South Water. After identifying the occupants of the vehicle Kambish was notified one had a warrant for their arrest. The individual reported to the Sheriff's Office and the warrant was cleared in court the following Friday.

5/10: Deputy Frank earned his initial Narcotic Detection certification. After some clerical/ administrative hurdles are cleared, Deputy Frank will begin working with members of the Sheriff's Office and will significantly enhance our abilities to detect illegal narcotics brought into our community.

5/12: Deputies Starnes and Pantleo responded to an unattended death at the Beer Garden camping area located on County Road 20. Upon arrival Deputies discovered a deceased female in a black Jeep. The Hinsdale County Coroner was called to the scene as it became immediately obvious the female had succumbed to a self-inflicted gunshot wound. Deputy Starnes completed his investigation and released the deceased and all associated property to the coroner, except for the handgun used in the act, which was booked into evidence.

5/16-18: Wildland Fire response volunteers attended S-212 Wildfire Power Saws class. Both members qualified as basic fellers.

5/18: Deputy Poet began her field training orientation (FTO) with the Sheriff's Office. Poet's FTO is expected to last 8 weeks as she learns the ins and outs of law enforcement in Hinsdale County.

5/19: Office personnel attended defensive tactics training led by Deputy Pantleo.

5/20: The Sheriff's Office held firearms training and qualifications for all certified and reserve personnel led by Sheriff Kambish. The training included 8 hours of pistol and patrol rifle training, all who attended passed annual qualifications for both pistol and rifle.

5/22: Deputies Pantleo and Zeckser responded to the 600 block of N. Gunnison Avenue for a death investigation. On that morning residents of the home woke to find a female resident died during the

night. Attempts of resuscitation were attempted while 911 was being called but were unsuccessful. Deputies concluded their investigation, and the deceased was removed from the home by the coroner. The investigation remains open pending the autopsy report.

5/22: Deputy Zeckser responded to a business in the 200 block of N. Gunnison Av. Upon arrival Zeckser was told 6 bottles of hot sauce had been stolen from the restaurant. The reporting party stated the value of the stolen items was \$15. No suspects were located.

Traffic Citations:

Speeding: 9

Failure to show proof of insurance: 3

Operated OHV with too many passengers: 1

SECTION 00300 - PROPOSAL

PROJECT IDENTIFICATION: Town of Lake City – Wastewater Treatment Plant Equipment

THIS PROPOSAL IS SUBMITTED TO: Town of Lake City
P.O. Box 544
Lake City, CO 81235

Proposal of _____ (hereinafter called "Proposer", organized and existing under the laws of the State of _____ doing business as _____ (a corporation, partnership, individual).

To the Town of Lake City (hereinafter called "Owner").

In compliance with your request for Proposals, PROPOSER hereby proposes to perform all WORK for the Wastewater Treatment Equipment in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

PROPOSER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the Work within the number of days and date specified in the Agreement. PROPOSER further agrees to pay as liquidated damages, the sum specified in the Agreement each day thereafter as provided in Agreement

In submitting this Proposal, Proposer represents, as more fully set forth in the Agreement, that:

(a) Proposer has examined copies of all the Proposing Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date	Number
_____	_____
_____	_____

(b) Proposer has familiarized itself with the nature and extent of the Contract Documents, Work, site, conditions at and access to the site, locality, characteristics of the area and physical conditions, and all other features of the terrain, and with the local conditions and site constraints, and federal, state, and local laws, ordinances, rules, and regulations that in any manner may affect cost, progress, or performance or furnishing of the Work, or apply in any manner whatsoever to the Work. After a proposal has been submitted, the Proposer shall not assert that there was a misunderstanding concerning the nature or quantities of Work to be done or the conditions under which the Work will need to be performed.

(c) Proposer has given Engineer written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Proposer.

(d) Proposer hereby certifies that, as of the date hereof, it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement, and the Contractor will participate in the federal e-verify program or the state program pursuant to CRS 8-17-102(5) in order to confirm eligibility of all employees who are newly hired for employment under this agreement.

Proposer agrees to perform all Work described in the Contract Documents for the following price(s) which includes the full scope of work specified and detailed in Section 00350 Measurement and Payment and as required to complete the work:

Lake City Wastewater Treatment Equipment Proposal Form

<u>DESCRIPTION</u>	<u>Price</u>
Aeration	537,468.55
Nitrox	550,772.72
Design	87,059.30
Freight	26,400.00
Bonds	<u>37,609.62</u>
Base Sub Total	1,239,310.19
Future Media deduct	(29,120.00)
Design – Air header, Piping, Air distribution Manifolds	8,000.00
Package Deduct	<u>(50,000.00)</u>
Total	1,168,190.19

3. Additional services fee schedule is attached.

4. Stipulated replacement costs as per paragraph 21.9 of the Agreement is attached.

Proposer agrees that the Work will be substantially complete within the timeframe described in the Agreement and completed and ready for final payment within accordance with the time required in the Agreement.

Proposer accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work on time.

The following documents are attached to and made a condition of this Proposal:

(a) A tabulation of Subcontractors, Suppliers and other persons and organizations required to be identified in this Proposal.

(b) A statement of Proposer's Qualification with supporting data and references regarding similar projects.

Submitted on _____, 20_____.

Respectfully submitted:

Signature Address

Title Date

License number (if applicable) Phone

SEAL - (if PROPOSAL is by a corporation

SECTION 00350 - MEASUREMENT AND PAYMENT

PART I – GENERAL

This section is intended to further define the scope of the proposal items on the proposal form. It is the intent of these Contract Documents that the costs for all the work required for a complete equipment package as described in the Contract Documents be included on the proposal form. Nothing in this Section or in the Proposal Form, including not finding a specific item or scope described, will negate the equipment Contractor's responsibility to furnish a complete, functional project as described in the Contract Documents.

All pricing shall be the complete cost to complete the Work whether specifically listed or needed to complete the work including materials, equipment, labor, quality control, installation and start up oversight, and all testing, testing equipment, protection of the work and shall demonstrate all components and assembled units will comply with required permits (mechanical, electrical etc) including UL listing, compliance with applicable Town and Colorado Department of Public Health and Environment (CDPHE) regulations and standards, including but not limited to American Iron and Steel, OSHA, and EEO, compliance with terms of easements and permits, safety, coordination with others, all submittals specified (including O&M manuals and as-constructed drawings), schedules, furnish specific location information for project surveying and staking of the equipment package, and shall include overhead profit, supervision, all applicable taxes, copyright, licensing, trademark and patent fees, warranties, and incidental work, tools, and materials and the associated costs of complying with all the requirements of the Contract Documents. All pricing shall be F.O.B. the Lake City Wastewater Treatment plant

In places, access to the work areas is limited. EP Contractor shall carefully inspect the site prior to submitting a proposal and include the costs associated with the limited access, site constraints, and any needed improvements and include the costs of such work in the proposal items which are impacted by such constraints.

The Work to be provided under this contract to furnish and install the equipment package specified in these contract documents to provide aeration and ammonia removal equipment for the Owner's wastewater treatment plant as detailed herein.

Furnish all material, equipment, labor, and shipping for an equipment package complete with all the appurtenances necessary for the package to perform as specified in Section 11,300 of the Agreement.

QUALIFICATION STATEMENT

Please complete all the questions. If additional space is needed, please attach a separate sheet of paper which references the question number.

EP Contractor Name: Triplepoint Environmental, LLC _____

Address: 6586 S Kenton St. Centennial, CO 80111 _____

Telephone 312-428-4634 _____ Email tom@lagoons.com__

Principal Owner/Officer: Brady O'Leary, Managing Director _____

	Name	Title
<input checked="" type="checkbox"/> Corporation	<input type="checkbox"/> Partnership	<input type="checkbox"/> Individual
	<input type="checkbox"/> Individual	<input type="checkbox"/> Joint Venture

I. TYPES OF WORK (list years of experience for each type of work desired)

Aeration Equipment	x	x	Nitrification	x	_____
Control Equipment	x		Package WW plants		_____

Other (list) Denitrification, Phosphorus reduction, Design Build, header piping design, recirculation design

II. GENERAL EXPERIENCE INFORMATION

2.1 How many years has your organization been in business under your present business name?
Under the current owners? 1 1 _____

2.2 Date of organization or incorporation: 2008_
State
Delaware

2.3 Names, Titles of Officers/Owners/Partners:
Brady, O'Leary – Managing Director; Patrick
Hill – Managing Member

If a partnership is it a general, limited, or association?

2.4 If you have controlling interest in any firm(s) other than the one listed above, list here: no

2.5 List percent of materials and equipment are typically included in equipment package are produced internally 55%

List other major vendors: Kaeser, Gardner Denver, Aerzen, _____

If the answer to any of questions 2.6 - 2.11 is yes, provide explanation and/or details on a separate sheet of paper.

2.6 Have you or your organization or any officer or partner thereof failed to complete a contract awarded to it? Yes No If yes, give details:

2.7 Has the firm, any of its officers, principals, superintendents, or managers been involved in any litigation or court proceeding in the past eight (8) years? Yes No If yes, explain (listing type, kind, plaintiff, defendant, current status, etc.

2.8 Are there any judgments, claims, arbitration matters, unresolved contract disputes, or suits pending or outstanding against the firm, or any of its officers or principals? Yes No If yes, explain.

2.9 In the last eight years (8) has your firm, any of its officers, principals, managers, or superintendents filed any lawsuits or requested arbitration or formal mediation for or related to a construction contract? Yes No If yes, explain.

2.10 Has the firm, any of its officers, principals, superintendents, or managers been involved in any bankruptcy action as a bankrupt? Yes No If yes, explain

2.11 In the last eight (8) years has any of the firms officers, principals, managers, or superintendents ever been an officer or principal in another organization when it failed to complete a construction contract or filed any claims, lawsuits or requested arbitration or formal mediation for a construction contract? Yes No If yes, explain.

2.12 List on a separate sheet of paper the major projects your firm, its officers and principals, has completed during at least the last 5 years, providing, at a minimum, the following information for each project.

Name, Address, Phone, Contact Name of: Project, Owner, and Engineer If other than this firm, list Name, Address, Phone for Firm
Type of Project
Contract Amount, Date Completed
Percentage of work done with own forces and nature of that work

2.13 Total average annual construction valve of work for the last 5 years. \$ 7 million

2.14 List on a separate sheet of paper the major projects your firm has in progress at this time, providing, at a minimum, the following information for each project.

Name, Contact Name, Address, Phone of: Project, Owner, and Engineer, Type of Project

Contract Amount, Scheduled & Expected Completion Date, Percent Completed Percentage of work done being done with own forces and nature of that work

2.15 Total value of work under contract and in progress \$ 15 million

III. PERSONNEL OF ORGANIZATION

3.1 Provide resumes for the organization's principals, officers, and superintendents and managers the organization intends to assign to this project. Resumes shall include the last 3 projects of similar scope on which each person worked and define the role each played.

IV. REFERENCES

4.1 Surety - List the Surety Companies that have bonded your work for the past five years (use a separate paper if necessary):

Name of Surety Name, Address of Agent	Project and Location	Period of Bond From To	Maximum Limits & General Comments
---	----------------------------	---------------------------	--------------------------------------

See attached TPENV Vendor Reference for Surety name and address.

4.1.a Total Currently Bonded \$550k Total Current Bond Limits \$5,000,000.00
See TPENV Vendor Reference attachment.

4.2 Bank Reference: See TPENV Vendor Reference attachment.

4.3 Trade References: See PENV Vendor Reference attachment.

V. FINANCIAL INFORMATION (See PENV Vendor Reference attachment.)

3.1 If requested, provide a financial statement with balance sheet and income statement and the following minimum information:

Current Assets: Cash, joint venture accounts, accounts receivable, notes receivable, accrued interest on notes, deposits, materials, prepaid expenses, net fixed assets, and other assets.

Current Liabilities: Accounts Payable, notes payable, accrued interest on notes, provision for incomes taxes, advances received from owners, accrued salaries, accrued payroll taxes, other

liabilities and capital (capital stock, authorized and outstanding shares of value, earned surplus and retained earnings).

Name of firm preparing the statement and date of the statement Fractional CFO Is Jack

- 3.2 Is the financial statement for the same exact firm as the qualification statement? If not, what is the relationship and the financial responsibility of the organization whose financial statement is provided?
- 3.3 Will the organization whose financial statement is provided act as a guarantor for the contract for which this qualification statement is provided? Yes ____.

AFFIDAVIT

Tom Daugherty certifies and says: That he is an authorized representative (Western Region Manager) of (Triplepoint Environmental) submitting this statement of experience; that s/he has read the same, and that the same is true of his/her knowledge; that the statement is for the purpose of providing construction proposals/proposals for the Lake City Wastewater Equipment and that any vendor or other agent therein named is hereby authorized to provide information necessary to verify the statement; and that furthermore, should this statement at any time cease to properly or truly represent his condition in any substantial respect, it will refrain from further work for the Town until it shall have submitted a revised and corrected statement.

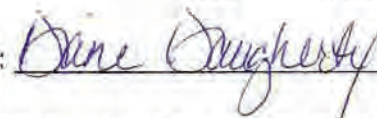
I certify and declare under penalty of perjury that the foregoing and attached information provided herein is true, correct, and sufficiently complete to not be misleading:

Subscribed on this January 26, 2023 at

Note: Use full corporate name & attach corporate seal here, if corporation

Official must sign here 

Title Western Region Manager _____

Attested: 

NOTE: Statement will be returned and proposals and/or proposals rejected unless this affidavit is completed in EVERY respect.

CONSTRUCTION CONTRACT

AGREEMENT

EQUIPMENT CONTRACT AGREEMENT

THIS AGREEMENT is made between the **TOWN OF LAKE CITY**, Colorado, (Owner or Town) and the Equipment Package (EP) Contractor, **__Triplepoint Environmental_LLC__** or the Purchase and Support of and aeration and nitrification equipment and such supporting components (Equipment Package) needed to meet the performance requirements contained in the Contract Documents.

The Owner's Representative (OR) is: Consolidated Consulting Services

The Owner and EP Contractor agree as follows:

ARTICLE 1

THE WORK:

The EP Contractor shall perform all the Work required by the Contract Documents as enumerated in Article 6.

ARTICLE 2

TIME OF COMMENCEMENT AND COMPLETION:

2.1 The Work to be performed under this Contract shall be commenced upon Owner emailing a Notice to Proceed to the EP Contractor.

2.2 Shop drawings, process design narrative and design calculations suitable for design review and submittal to the Colorado Department of Public Health and Environment (CDPHE) shall be delivered to the Town within 30 days of the Owner emailing a Notice to Proceed to the EP Contractor.

2.3 , Once CDPHE review comments are received, the EP Contractor will have 14 days to address CDPHE concerns.

2.4 The Equipment Package and all supporting appurtenances and materials shall be delivered to and unloaded into the Town's wastewater treatment plant (FOB the plant site) in accordance with the schedule noted below:

Air and Recycle Piping materials by September 1, 2023

Blowers by October 15, 2023

4 Aerators by October 15, 2023,

Balance of the aerators and equipment by 3/15/24

Handling and Installation instructions shall be provided to the plant contractor and the Town in advance of shipping each type of equipment.

2.5 The EP Contractor shall coordinate his schedule with that of the Plant Contractor to arrange equipment deliveries as needed to ensure smooth progression of the work of all parties, and EP Contractor shall be on site within 10 working days of being notified by the Plant Contractor that he is ready for installation of the equipment.

2.6 Failure to meet the deadlines outlined above will be considered an exceedance of the contract time.

2.7 Additional non-warranty support services shall be performed upon request of the Town in accordance with Exhibit A and Article 19.

ARTICLE 3

CONTRACT AMOUNT AND BASIS:

The Owner shall pay the EP Contractor for the satisfactory performance of the Work, subject to additions and deductions by Change Order as provided in the General Conditions, the following:

Total Sum listed in the Notice of Award for the Equipment Package, all supplemental equipment and materials, and required support as required by this contract including Part III of the Technical Specifications.

Payment for additional authorized non-warranty support services shall be in accordance with the schedule and provisions set out in Exhibit A and Article 19.

ARTICLE 4

PROGRESS PAYMENTS:

Based upon Applications for Payment submitted to the OR by the EP Contractor and Certificates for Payment issued by the OR, the Owner shall make progress payments to the EP Contractor as follows:

10% of the above specified of the total equipment package cost shall be due with 30 days when both parties have signed Agreement.

20% of the above specified of the total equipment package cost shall be invoiced when the project submittal receives approval from the Town.

EP Contractor may invoice on a monthly basis for the cost of materials received in Lake City. In no event, will more than 90% of the total contract price be paid until the Work has been completed and the Contract has been fully performed, as further described in Article 5, below.

When the final scope including all equipment and documentation is received on site in Lake City the balance up to 90% of the above specified of the total equipment package cost maybe be invoiced.

Upon the satisfactory completion of startup and acceptance testing (including any modifications required based on results of the Acceptance Testing), submission of an updated O&M manual, and submission of the Request for Final Payment, Owner shall pay EP Contractor the 10% of the above specified of the total equipment package cost subject to the terms of Article 5 below.

ARTICLE 5

FINAL PAYMENT:

After completion of the Work, provided the Contract be then fully performed, (other than services subject to Exhibit A), subject to the provisions of Article 16 of the General Conditions, the Owner shall publish a Notice of Final Settlement twice at least 10 days prior to the date of final settlement for payment of the above lump sum. The Owner shall withhold from final payments any amounts as required pursuant to C.R.S. 38-26-107.

ARTICLE 6

ENUMERATION OF CONTRACT DOCUMENTS:

The Contract Documents are as noted in Paragraph 7.1 of the General Conditions and are indicated as follows:

- Agreement including General Conditions
- Proposal and Measurement and Payment
- CDPHE State Revolving Fund Required Specifications
- Technical Specifications
- Town Approved shop Drawings
- Change Orders - if any
- Modifications - if any
- Written Interpretation of OR - if any
- Performance Bond
- Payment Bond
- Notice of award
- Exhibits A (fee schedule) and B (2043 Design Criteria)

ARTICLE 7

CONTRACT DOCUMENTS:

7.1 The Contract Documents consist of this Agreement (which includes the General Conditions), and other documents indicated above. These form the Contract and what is required by any one shall be as binding as if required by all. The intention of the Contract Documents is to include all labor, materials, equipment and other items as provided in Paragraph 10.2 necessary for the proper

execution and completion of the Work and the terms and conditions of payment therefor, and also to include all Work which may be reasonably inferable from the Contract Documents as being necessary to produce the intended results.

7.2 By executing the Contract, the EP Contractor represents that he has familiar with the site, local conditions and local requirements, and the scope of work that is required.

7.3 The term Work as used in the Contract Documents includes all labor necessary to produce the end product required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in and/or needed to produce such end product.

ARTICLE 8

OWNER'S REPRESENTATIVE (OR)

8.1 The OR will provide general administration of the Contract and will be the Owner's representative during construction and until issuance of the final Certificate for Payment.

8.2 The OR shall at all times have access to the Work wherever it is in preparation and progress.

8.3 The OR will make periodic visits to the site to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of his on-site observations, he will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work of the EP Contractor. The OR will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The OR will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the EP Contractor's failure to carry out the Work in accordance with the Contract Documents.

8.4 Based on such observations and the EP Contractor's Applications for Payment, the OR will verify the amounts owing to the EP Contractor and will issue Certificates for Payment in accordance with Article 16.

8.5 The OR will be, in the first instance, the interpreter of the requirements of the Contract Documents. He will make decisions on all claims and disputes between the Owner and the EP Contractor.

8.6 The OR will have authority to reject Work which does not conform to the Contract Documents.

ARTICLE 9

OWNER:

9.1 The Owner shall secure any required permanent easements or real property necessary for the completed project and advise EP Contractor of the boundaries of Owner's easements or property.

9.2 The Owner shall issue all instructions to the EP Contractor through the OR.

ARTICLE 10

EP CONTRACTOR:

10.1 The EP Contractor shall supervise and direct the Work, using his best skill and attention. The EP Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

10.2 Unless otherwise specifically noted, the EP Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

10.3 The EP Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him.

10.4 The EP Contractor warrants to the Owner and the OR that all materials and equipment incorporated in the Work will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards may be considered defective. Materials incorporated in the Work and not specifically covered in the Specifications shall be the best of their kind.

10.5 The EP Contractor shall pay all sales, consumer, use and other similar taxes required by law for the execution of the Work at EP Contractor's expense except as provided in Article 24. The Owner is exempt from state and local sales and use taxes. EP Contractor shall take steps to obtain such exemption from the Colorado Department of Revenue pursuant to C.R.S. 39-26-114(1)(a) XIX and 114(d).

10.6 The EP Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and orders of any public authority bearing on the performance of the Work, and shall notify the OR if the Drawings and Specifications are at variance therewith.

10.7 The EP Contractor shall be responsible for the acts and omissions of all his employees and all Subcontractors, their agents and employees and all other persons performing any of the Work under a contract with the EP Contractor.

10.8 The EP Contractor shall review, stamp with his approval and submit all samples, calculations, and shop drawings as directed for approval of the OR for conformance with the design concept and with the information given in the Contract Documents (See Section 11300 sub section 1.3). The Work shall be in accordance with Owner and CDPHE approved samples and shop drawings and consistent with submitted and approved calculations.

10.9 The EP Contractor shall comply with all applicable terms of the State Revolving Loan fund General Requirements

ARTICLE 11
SUBCONTRACTS:

11.1 A Subcontractor is a person who has a contract with the EP Contractor to perform any of the Work.

11.2 Unless otherwise specified in the Contract Documents or in the Instructions to Proposers, the EP Contractor, as soon as practicable after the award of the Contract, shall furnish to the OR in writing a list of the names of Subcontractors proposed for the principal portions of the Work. The EP Contractor shall not employ any Subcontractor to whom the OR or the Owner may have a reasonable objection. The EP Contractor shall not be required to employ any Subcontractor to whom he has a reasonable objection. Contracts between the EP Contractor and the Subcontractor shall be in accordance with the terms of this Agreement and shall include the General Conditions of this Agreement insofar as applicable.

ARTICLE 12
SEPARATE CONTRACTS AND OWNER WORK:

12.1 The Owner reserves the right to award other contracts in connection with other portions of the Project or other work on the site or to perform such work itself.

12.2 The EP Contractor shall afford other contractors or Owner reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly coordinate his Work with theirs.

12.3 Any costs caused by defective or ill-timed work shall be borne by the party responsible therefor.

12.4 The Owner arrange and pay for the installation of equipment with technical assistance from the EP Contractor as described in the Specifications.

ARTICLE 13
ROYALTIES AND PATENTS:

The EP Contractor shall pay all royalties and license fees. The EP Contractor shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof.

ARTICLE 14
PERFORMANCE AND PAYMENT BONDS:

A Performance and a Payment Bond shall be submitted, with Owner as payee-beneficiary, by EP

Contractor for all contracts in excess of \$50,000 or if indicated in Article 6.

Each bond shall be in the amount of the contract sum and shall either be in the form supplied by Owner or shall be in such other form as approved by Owner. Each bond shall comply with the requirements of C.R.S. 38-26-105 and 106.

ARTICLE 15

TIME AND LIQUIDATED DAMAGES:

15.1 All time limits stated in Article 2.4 and elsewhere in the Contract Documents are of the essence of the Contract. EP Contractor further agrees to pay as liquidated damage for delay in meeting any deadline, in the sum of \$500 for each day that expires after the number of days specified for each deadline in the contract documents.

15.2 If the EP Contractor is delayed at any time in the progress of the Work by changes ordered in the Work, by labor disputes, fire, unusual delay in transportation, unavoidable casualties, causes beyond the EP Contractor's control, or by any cause which the OR may determine justifies the delay, then the Contract Time shall be extended by Change Order for such reasonable time as the OR may determine. EP Contractor waives any claim for damages due to delay.

ARTICLE 16

PAYMENTS:

16.1 Payments shall be made as provided in Article 4 of this Agreement.

16.2 Payments may be withheld on account of (1) defective Work not remedied, (2) claims asserted or evidence which indicates probable assertion of claims, (3) failure of the EP Contractor to make payments properly to Subcontractors or for labor, materials, or equipment, (4) damage to another contractor or Owner, or (5) unsatisfactory prosecution of the Work by the EP Contractor.

16.3 Final payment shall not be due until (1) the EP Contractor has delivered to the Owner a bond, a clean irrevocable letter of credit, cash or other security satisfactory to the Owner indemnifying Owner against any claim which has been asserted by anyone for labor, materials, equipment or otherwise arising out of the contract or on account of any claim which either Owner or EP Contractor believes may be asserted, (2) the EP Contractor has advised the Owner the any claims EP Contractor believes exist, (3) the Owner has inspected and approved the Work as complying with the contract, (4) written consent of surety, if any is required, and (5) any manufacturers or suppliers warranties and equipment literature, and any as-built plans and O&M Manuals required are delivered to Owner.

16.4 The making of final payment shall constitute a waiver of all claims by the Owner except those arising from (1) unsettled claims, (2) faulty or defective Work appearing after Substantial Completion, (3) failure of the Work to comply with the requirements of the Contract Documents, or (4) terms of any warranties, continuing provisions or special guarantees required by the Contract Documents. The acceptance of final payment shall constitute a waiver of all claims by the EP

Contractor except those previously made in writing and still unsettled.

ARTICLE 17

PROTECTION OF PERSONS AND PROPERTY AND RISK OF LOSS:

The EP Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. He shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to (1) all employees on the Work and other persons including subcontractors, if any, who may be affected thereby, (2) all the Work and all materials and equipment to be incorporated therein, and (3) other property at the site or elsewhere. EP Contractor shall bear all risk of loss to the work, or materials or equipment for the work due to fire, theft, vandalism, or other casualty or cause, until the equipment package is delivered and unloaded at the job site, accepted by the Owner. He shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. All damage or loss to any property caused in whole or in part by the EP Contractor, any Subcontractor, any Sub-subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the EP Contractor.

ARTICLE 18

INDEMNIFICATION AND INSURANCE:

18.1: Indemnification:

The EP CONTRACTOR agrees to indemnify and hold harmless OWNER, its officers, employees, consultants, insurers, and self-insurance pool, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, or any other loss of any kind whatsoever, which arise out of or are in any manner connected with this contract, if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the act, omission, error, EP Contractor error, mistake, negligence, or other fault of the EP CONTRACTOR, any subcontractor of the EP CONTRACTOR, or any officer, employee, representative, or agent of the EP CONTRACTOR or of any subcontractor of the EP CONTRACTOR, or which arise out of any workmen's compensation claim of any employee of the EP CONTRACTOR or of any employee of any subcontractor of the EP CONTRACTOR. The EP CONTRACTOR agrees to investigate, handle, respond to, and to provide defense for and defend against, any such liability, claims or demands at the sole expense of the EP CONTRACTOR, or at the option of OWNER, agrees to pay OWNER or reimburse OWNER for the defense costs incurred by OWNER in connection with, any such liability, claims, or demands. The EP CONTRACTOR also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent. The obligation of this Section 18.1 shall not extend to any injury, loss, or damage which is caused solely by the act, omission, or other fault of the OWNER, its officers, or its employees.

18.2 Insurance:

The EP CONTRACTOR agrees to procure and maintain, at its own cost, a policy or policies of

insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the EP CONTRACTOR pursuant to Section 18.1. Such insurance shall be in addition to any other insurance requirements imposed by this contract or by law. The EP CONTRACTOR shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section 18.1 by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

18.2.1 EP CONTRACTOR shall procure and maintain, and shall cause any subcontractor of the EP CONTRACTOR to procure and maintain, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to OWNER. All coverages shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by the EP CONTRACTOR pursuant to Section 18.1. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

18.2.1(A) Workmen's Compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this contract, and Employers' Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease - policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease - each employee. Evidence of qualified self-insured status may be substituted for the Workmen's Compensation requirements of this paragraph.

18.2.1(B) Commercial General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground hazards. The policy shall contain a severability of interests provision.

18.2.1(C) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate with respect to each of EP CONTRACTOR's owned, hired and non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision. If the EP CONTRACTOR has no owned automobiles, the requirements of this Paragraph (3) shall be met as applicable by each employee of the EP CONTRACTOR providing services to the OWNER under this contract.

18.2.2 The policy required by paragraphs 18.2.1(B) and (C) above shall be endorsed to include OWNER and OWNER's officers and employees as additional insureds. Every policy required above shall be primary insurance and any insurance carried by OWNER, its officers, or its employees, or carried by or provided through any insurance pool of OWNER, shall be excess and not contributory insurance to that provided by EP CONTRACTOR. No additional insured endorsement to any policy shall contain any exclusion for bodily injury or property damage arising from completed operations. The EP CONTRACTOR shall be solely responsible for any deductible losses under any policy required

above.

18.2.3 The certificate of insurance provided by OWNER shall be completed by the EP CONTRACTOR's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by OWNER prior to commencement of the contract. No other form of certificate shall be used. The certificate shall identify this contract and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to OWNER. The completed certificate of insurance shall be sent to OWNER.

18.2.4 Failure on the part of the EP CONTRACTOR to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which OWNER may immediately terminate this contract, or at its discretion OWNER may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by OWNER shall be repaid by EP CONTRACTOR to OWNER upon demand, or OWNER may offset the cost of the premiums against any monies due to EP CONTRACTOR from OWNER.

18.2.5 OWNER reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

18.2.6 The parties hereto understand and agree that OWNER is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$150,000 per person and \$600,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, {24-10-101 et seq., 10 C.R.S., as from time to time amended, or otherwise available to OWNER, its officers, or its employees.

18.2.7 Subrogation Waiver – All insurance policies in any way related to the project and secured and maintained by the EP CONTRACTOR as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against OWNER or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

18.2.8 The Agreement shall not be executed, and no notice or authorization to proceed shall be given until the Certificates required above, are submitted and approved by the Owner.

18.2.9 In carrying out any of the provisions of this Agreement or in exercising any power or authority thereby, there shall be no personal liability of the Owner, its governing body, staff, consultants, officials, attorneys, representatives, agents, or employees.

ARTICLE 19

SUPPORT SERVICES:

EP Contractor agrees to provide support services for the fees listed in Exhibit A for services the Town requests that are not otherwise covered by the warranty or performance guarantee. Such fees shall remain in effect for a period of five years following final payment in accordance with the provisions

below.

- 19.1 Such services shall be initiated upon request of the Owner and completed with due diligence thereafter.
- 19.2 The EP Contractor shall be responsible for EP Contractor quality, technical accuracy, timely completion and coordination of all designs, plans, reports, specifications, drawings and other services rendered by the EP Contractor, and shall, without additional compensation, promptly remedy and correct any errors, omissions or other deficiencies.
- 19.3 In consideration of the proper performance of the services for work covered by Exhibit A, the Town agrees to pay the EP Contractor in accordance with the Provisions attached as Exhibit "A". Monthly partial payments based upon the EP Contractor's billings are permissible. The amounts of all such partial payments shall be based upon the EP Contractor's progress in completing the work.
- 19.4 The Town's approval of drawings, designs, plans, specifications, reports and incidental work or materials furnished hereunder shall not in any way relieve the EP Contractor of responsibility for the technical accuracy of the Work. The Town's approval or acceptance of, or payment for, any services shall not be construed as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

ARTICLE 20

CHANGES IN THE WORK:

20.1 The Owner without invalidating the Contract may order Changes in the Work consisting of additions, deletions, or modifications with the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by written Change Order signed by the Owner.

20.2 The Contract Sum and the Contract Time may be changed only by Change Order.

20.3 The cost or credit to the Owner, if any, from a Change in the Work shall be determined by unit prices if specified in the contract documents, or by mutual agreement.

ARTICLE 21

CORRECTION OF WORK AND WARRANTIES:

21.1 The EP Contractor shall correct any Work that fails to conform to the requirements of the Contract Documents where such failure to conform appears during the progress of the Work.

21.2 EP Contractor shall promptly remedy any defects due to faulty materials, equipment or workmanship which appear within a period of two years from the Date of Final Settlement of the Contract or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee, warranty or other provision required by the Contract Documents.

21.3 EP Contractor warrants that the Equipment Package shall meet the minimum performance requirements of listed in Exhibit B for a period of five (5) years from the date of final settlement and shall make such operational changes, repairs or replacement required.

21.4 The SELLER hereby warrants the products provided as part of this Agreement are free from defects in materials and workmanship for a period of five (5) years from the date of final settlement. This excludes the blowers and control panels for which the warranty is 24 months. If there are issues during the warranty period, the EP Contractor shall promptly furnish and install replacement equipment at EP Contractor's cost, FOB the Lake City WWTP.,

21.5 If the EP Contractor fails to repair or replace the defective portion of the Work within a reasonable time, The Town may take corrective action and collect the costs of doing so from the EP Contractor.

21.6 The provisions of this Article 21 apply to Work (including equipment and materials) done by Subcontractors as well as to Work done by direct employees of the EP Contractor, and are in addition to any other remedies or warranties provided by law, or other provisions of the contract documents.

21.7 EP Contractor warrants that it will provide replacement media for a period of 20 years from date of final settlement at market price, but not to exceed \$ 3,200 per cubic meter and Ares Aerator assemblies for \$3,900 each adjusted for inflation based on the Producer Price Index by Commodity: Machinery and Equipment: Industrial Controls and Related Parts and Accessories (WPU11750799) | FRED | St. Louis Fed (stlouisfed.org) with the base figure beginning from the date of final settlement.

ARTICLE 22

TERMINATION BY THE EP CONTRACTOR:

If the OR fails to issue a Certificate of Payment for a period of thirty days through no fault of the EP Contractor, or if the Owner fails to make payment thereon for a period of thirty days after receipt of OR's recommendation for payment and approval for the payment by the funding agencies, the EP Contractor may, upon seven days' written notice to the Owner and the OR, terminate the Contract and recover from the Owner payment for all Work executed and for any proven loss sustained upon any materials, equipment tools, and construction equipment and machinery, including reasonable profit and damages.

ARTICLE 23

TERMINATION BY THE OWNER:

If the EP Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, after seven days' written notice to the EP Contractor and without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the EP Contractor or, at his option, may terminate EP Contractor's work under the Contract and take

possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the EP Contractor and may finish the Work by whatever method he may deem expedient, and if the unpaid balance of the Contract Sum exceeds the expense of finishing the Work, such excess shall be paid to the EP Contractor, but if such expense exceeds such unpaid balance, the EP Contractor shall pay the difference to the Owner. These rights and remedies are in addition to any right to damages or other rights and remedies allowed by law.

ARTICLE 24

PERMITS:

Owner shall be responsible for the Building, Electrical and Plumbing Permit fees to install the equipment furnished under this contract at the Owner's site.

ARTICLE 25

MISCELLANEOUS PROVISIONS:

25.1 This contract shall comply with all applicable federal and Colorado state laws and shall be governed by the applicable law of the State of Colorado notwithstanding provisions herein to the contrary.

25.2 EP Contractor shall not assign this contract. The provisions of the contract are binding on the heirs, successors or assignees of the parties.

25.3 The rights and remedies available under this contract shall be in addition to any rights and remedies allowed by law.

25.4 No failure to enforce any provision of the contract on account of any breach thereof, shall be considered as a waiver of any right to enforce provisions of this contract concerning any subsequent or continuing breach.

25.5 The terms of this agreement shall remain in full force and effect following final payment.

ARTICLE 26

ADDITIONAL PROVISIONS:

26.1 The Owner and EP Contractor shall cooperate in good faith and with due diligence to obtain CDPHE approval of the Equipment Package substantially as proposed. EP Contractor shall revise his design submittal, and plans and drawings and provide additional submittals as necessary to meet CDPHE requirements and requests in a timely manner. If the Town determines that obtaining CDPHE approval with the EP Contractor's Proposal will not occur within a reasonable time, the Town may terminate this contract and neither party shall have any further obligations under it.

26.2a. This project is funded in part by funding from the State Revolving Loan Fund (SRF) and from Energy and Mineral Impact (EIAF) funds. EP Contractor shall strictly adhere and implement applicable requirements of the funding agencies and the applicable requirements of the SRF general conditions

included with the contract including but not limited to demonstrating that they are not debarred or excluded from participation in federal assistance or benefit programs Davis Bacon and Related Acts, American Iron and Steel (AIS) Executive Order 11246, OSHA. It is also funded by the Colorado Water Resource and Power Development Authority (CWRPDA) and is subject to technical review by the Colorado Department of Public Health and Environment (CDPHE). EP Contractor shall comply with all applicable CDPHE, DOLA, and CWRPDA requirements and applicable laws and regulations. Copies of each of the funding contracts is available for review at Town Hall.

26.2b. The State of Colorado, DOLA, CDPHE, CWRPDA, the State Auditor, or the Town, or any properly delegated or authorized representatives of these entities, including independent certified public accountants of their choosing, shall have the right to inspect, examine and audit the EP Contractor's records, books, accounts, and other relevant documents concerning this contract for a period of five years after final payment.

26.3 The EP Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The EP Contractor shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the EP Contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract

26.4 C.R.S. 8-17.5 and E-Verify Requirements

26.4a. EP Contractor certifies, warrants, and agrees that it or its sub contractors do not knowingly employ or contract with an illegal alien who will perform work under this Agreement, and shall confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Agreement through participation in Federal E-Verify Program or the state program established pursuant to CRS 8-17.5-102(5)(c).

26.4b. EP Contractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement or enter into a contract with a subcontractor that fails to certify to EP Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

26.4c. EP Contractor hereby certifies that it has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this agreement through participation in either the e-verify program or the state program.

26.4d. EP Contractor is prohibited from using either the e-verify program or the state program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

26.4e. If EP Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, EP Contractor shall be required to:

(i) notify the subcontractor, the Owner, and State within three (3) days that EP Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

(ii) terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to this subparagraph the subcontractor does not stop employing or contracting with the illegal alien; except that EP Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

26.4f. EP Contractor shall comply with any reasonable in the course of investigation undertaken pursuant to CRS 8.17.5-102(5) by the Colorado Department of Labor and Employment.

26.4g. If EP Contractor fails to comply with any requirement of this subsection of the Agreement or CRS 8.17.5-101 et seq. the Owner may terminate this Agreement for breach. If this Agreement is so terminated, EP Contractor shall be liable for actual and consequential damages to the Town.

26.4h In addition to complying with the above requirements, EP Contractor is also responsible to comply with federal employment verification requirements including requirements that all employees complete the I-9 Employment Eligibility Verification Form at time of hire and that employer verify the information using e-verify or other legally acceptable method.

27.1 EP Contractor hereby assigns all manufacturers' warranties to Owner and shall assist the Owner in enforcing such warranties. No limitation of any manufacturer's warranties, or additional warranties of EP Contractor, shall be construed to limit the obligations of the EP Contractor under any warranties or other provisions of the contract documents.

27.2 The EP Contractor must comply with all State Statutes including but not limited to the requirements HB 13-1292

27.3 Limitation of Liability. EP Contractor shall not be liable for any loss of profits, business, goodwill, interruption of business or damages related to this Agreement. Notwithstanding anything else to the contrary, EP Contractor shall not be liable for any special or punitive damages, except in the event of EP Contractor's intentional acts or gross negligence for any of its responsibilities under this Contract.

This Agreement is dated _____.

TOWN OF LAKE CITY, COLORADO

By _____

EP CONTRACTOR:

By _____

Sample EXHIBIT A – Article 19: Additional Support Services Fee Schedule

EP Contractor will provide the following additional support services upon receipt of a written request of the Town referencing Article 19 Services for the following fees:

Remote services related to controls, operations, etc. \$175 hr

Phone support for technical equipment issues \$175 hr

On site assistance for equipment issues. \$2000 day rate includes travel and per diem

Travel time

Exhibit B

Design Requirements

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Current			-						-				
Equiv Pop		700	700	700	750	1200	3000	4000	2600	2000	1750	750	750
Inf Q	(MDG)	0.08	0.08	0.08	0.08	0.1	0.18	0.18	0.13	0.1	0.08	0.07	0.07
Inf BOD	(mg/l)	250	250	225	225	275	400	450	450	425	425	425	350
Inf BOD	(ppd)	167	167	150	150	229	600	676	488	354	284	248	204
Inf NH3	(mg/l)	30	30	30	40	50	55	55	60	60	40	40	40
Inf TKN	(mg/l)	45	45	50	50	65	75	80	80	80	75	60	60
Liq Temp	(C)	1.5	1.5	3.5	6	8	12	16		12	7	4	2
Eff BOD	(mg/l)	25	25	25	25	25	25	25	25	25	25	25	25
Eff TSS	(mg/l)	25	25	25	25	25	25	25	25	25	25	25	25
Eff NH3	(mg/l)	9	9	9	8	7	6	7	6	6	8	8	9
Eff TIN*	(mg/l)	60	60	60	60	60	60	60	60	60	60	60	60

2043													
Equiv Pop		1400	1400	1400	1600	2200	5000	5000	4000	3500	2500	1500	1400
Inf Q	(MDG)	0.16	0.16	0.16	0.16	0.2	0.3	0.3	0.26	0.2	0.16	0.14	0.14
Inf BOD	(mg/l)	250	250	225	225	275	400	450	450	425	425	425	350
Inf BOD	(ppd)	334	334	300	300	459	1001	1126	976	709	567	496	409
Inf NH3	(mg/l)	30	30	30	40	50	55	5	60	60	40	40	40
Inf TKN	(mg/l)	55	55	55	55	65	75	85	85	85	80	70	55
Inf TKN	(ppd)	73.4	73.4	73.4	73.4	108.4	187.7	212.7	184.3	141.8	106.8	81.7	64.2
Liq Temp	(C)	1.5	1.5	3.5	6	8	12	16	16	12	7	4	2
Eff BOD	(mg/l)	25	25	25	25	25	25	25	25	25	25	25	25
Eff TSS	(mg/l)	25	25	25	25	25	25	25	25	25	25	25	25
Eff NH3	(mg/l)	9	9	9	8	7	6	7	6	6	8	8	9
Eff TIN*	(mg/l)	60	60	60	60	60	60	60	60	60	60	60	60

Liquid Temp is guess w/o insulated cover		
* Effluent 2 yr rolling TIN avg	45	
* Effluent Daily Max for TIN	80	
pH year round	6.5-9	

NOTICE OF AWARD

DATED:

TO: _____
Proposer

ADDRESS: _____

PROJECT NAME: Town of Lake City – Wastewater Treatment Plant Equipment

CONTRACT FOR: Town of Lake City – Wastewater Treatment Plant Equipment
Name of Contract as it appears in Proposal Documents

You are notified that your Proposal dated _____ for the above Contract has been considered. You are the apparent successful proposer and have been awarded a contract for Town of Lake City – Wastewater Treatment Plant Equipment with the following amended scope and pricing:

The Contract Price of your contract is _____ and 00/100 Dollars (\$ _____). The Owner reserves the right to add or deleted work as the project progresses for the unit prices above to insure the project stays within budget.

Actual payments will be based on the quantity and unit price for the work completed in accordance with the Contract Documents.

You must comply with the following conditions precedent within ten days of the date of this Notice of Award, that is by _____.

1. You must deliver to the Owner three fully executed counterparts of the Agreement including required Contract Securities (Bonds) as specified in the Agreement.
2. Certificates of Insurance with the minimum limits and additional insurers listed in the Contract Documents.
3. (List other conditions precedent). (None)

Failure to comply with these conditions within the time specified will entitle Owner to consider you proposal abandoned, to annul this Notice of Award and to declare your Proposal Security forfeited.

Within ten days after you comply with those conditions, Owner will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

Town of Lake City
Owner

BY: _____
Authorized Signature

Title

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by:

_____ on _____, 20

BY: _____ Title: _____

Employer ID Number: _____

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and _____
(Corporation, Partnership, or Individual) (Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

(Name of Owner)

(Address of Owner)

hereinafter called OWNER in the total aggregate penal sum of _____
Dollars (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____ 20____, a copy of which is hereto attached and made a part hereof for the construction of:

Project Name: _____

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER with or without notice to the SURETY and during the one year guaranty period and if the PRINCIPAL shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying same shall in any way affect its

obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that it is expressly agreed that the BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the CONTRACT as so amended. The term "Amendment", wherever used in this BOND, and whether referring to this BOND, the Contract or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the OWNER and the PRINCIPAL shall abridge the right of the other beneficiary hereunder, whose claim may be unsatisfied. The OWNER is the only beneficiaries hereunder.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of which shall be deemed an original, this the _____ day of 20_____ .

ATTEST:

Principal

(Principal) Secretary

By _____(s)

(SEAL)

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

Witness as to Surety

By _____

Attorney-in-Fact

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and _____
(Corporation, Partnership, or Individual) (Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

(Name of Owner)

(Address of Owner)

hereinafter called OWNER in the penal sum of _____ Dollars (\$_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of:

Project Name: _____

NOW, THEREFORE, if the PRINCIPAL shall promptly make payment to all persons, firms, sub-contractors, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such Contract, and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said Work whether by Sub-Contractor or otherwise then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its

obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in __ counterparts, each of which shall be deemed an original, this the ___ day of _____ 20__.

ATTEST:

Principal

(Principal) Secretary

(SEAL)

By _____(s)

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

Witness as to Surety

By
Attorney-in-Fact

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

oOo

NOTICE TO PROCEED

DATED:

TO: _____
EP Contractor

ADDRESS: _____

PROJECT NAME: Town of Lake City – Wastewater Treatment Plant Equipment

CONTRACT FOR: Town of Lake City – Wastewater Treatment Plant Upgrade Equipment
Name of Contract as it appears in Contract Documents

You are notified that the Contract Time under the above contract will commence to run on _____. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 2 of the Agreement the date of Completion is _____.

Before you may start any Work at the site you must provide the Owner certificates of insurance which is required in the Agreement which is required to be purchased in maintained in accordance with the Contract Documents. You must also schedule with the Engineer and attend a pre-construction conference at the office of the Owner.

Also before you may start any Work at the site you must:

Town of Lake City
Owner

BY: _____
Authorized Signature

Title _____

ACCEPTANCE OF NOTICE to Proceed

Receipt of the above Notice to Proceed is hereby acknowledged by:

_____ on _____, 20__

BY: _____ Title:

Employer ID Number: _____

CHANGE ORDER No. _____

PROJECT: Wastewater Treatment Plant Equipment DATE OF ISSUANCE: _____

OWNER: Town of Lake City
Address: P.O. Box 544, Lake City, CO 81235

CONTRACTOR: _____

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

Description: _____

Attachments: _____

CHANGE IN CONTRACT PRICE

CHANGE IN CONTRACT TIME

Original Contract Price

Original Contract Time

Previous Change Orders #_ to #_

Net Change From Previous Change Orders

Contract Price Prior to this Change Order

Contract Time Prior to this Change Order

Net Increase (Decrease) this Change Order

Net Increase (Decrease) this Change Order

Contract Price w/all approved Change Orders

Contract Time w/all appr'd Change Orders

RECOMMENDED:

APPROVED:

APPROVED:

Engineer

Contractor

Owner

FINAL PAYMENT REQUEST

WASTEWATER TREATMENT PLANT EQUIPMENT

TO: Town of Lake City
P.O. Box 544
Lake City, CO 81419

Application for Payment _____

Period Ending: _____

Original Contract Amount	\$
Change Order Amount	\$
Total Work Constructed (see attached list)	\$
Total Project	\$
Less Previous Payments	\$
TOTAL AMOUNT DUE - FINAL PAYMENT	\$

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief that all labor covered by the application has been paid including all sub-contractors and that title to all materials and equipment incorporated in the Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all liens, claims, security interests and encumbrances (except such as covered by Bond acceptable to Owner). This final payment represents final payment of all compensation due the Contractor for the Work in the Contract for the Wastewater Treatment Plant Equipment between the Town of Lake City and _____.

Engineer	Contractor	Town of Lake City
_____ Engineer	_____ Contractor	_____ Owner
_____ Title	_____ Title	_____ Title
_____ Date	_____ Date	_____ Date



COLORADO
Department of Public
Health & Environment

State Revolving Fund Required Specifications

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Section 1

Davis Bacon Prevailing Wage Requirements

This contract is governed by the Davis Bacon and Related Acts and is subject to General Decision Number CO20230003 dated 06-02-2023. A copy of this General Decision Number is attached as [CO20230003 06/02/2023](#) to this document.

The SRF Program is subject to Davis Bacon and Related Acts, which extends the requirements of the Davis-Bacon Act. Compliance with the Davis-Bacon Act is required for any project funded by the Drinking Water Revolving Fund (DWRP) or Water Pollution Control Revolving Fund (WPCRF) programs. Non-Compliance with the Davis-Bacon Act may result in debarment and suspension from working on future projects funded with federal dollars for up to three years and/or loss of funding for the current project.

Preamble

With respect to the Clean Water and Safe Drinking Water State Revolving Funds, EPA provides capitalization grants to each State which in turn provides sub-grants or loans to eligible entities within the State. Typically, the subrecipients are municipal or other local governmental entities that manage the funds. For these types of recipients, the provisions set forth under Roman numeral I, below, shall apply. Although EPA and the State remain responsible for ensuring subrecipients' compliance with the wage rate requirements set forth herein, those subrecipients shall have the primary responsibility to maintain payroll records as described in Section 3(ii)(A), below and for compliance as described in Section I - 5.

Attachment 1

Wage Rate Requirements under:

- The Consolidated Appropriations Act, 2016 (P.L 114-133), or
- The Water Resources Reform and Redevelopment Act of 2014 (WRRDA):

I. For Subrecipients that Are Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its Davis - Bacon (DB) responsibilities when DB applies to EPA awards of financial assistance under The 2014 Act with respect to State recipients and subrecipients that are governmental entities. If a subrecipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient. The recipient or subrecipient may also obtain additional guidance from US Department of Labor (DOL) web site at <https://www.dol.gov/agencies/whd/government-contracts/construction>

1. Applicability of the Davis-Bacon (DB) prevailing wage requirements.

Under The Consolidate Appropriations Act, 2016, or The Water Resources Reform and Redevelopment Act of 2014, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a subrecipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the subrecipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

- (a) Subrecipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.
 - (1) While the solicitation remains open, the subrecipient shall monitor <https://sam.gov/> weekly to ensure that the wage determination contained in the solicitation remains current. The subrecipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the subrecipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the subrecipient.
 - (2) If the subrecipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the subrecipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The subrecipient shall monitor <https://sam.gov/> on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.
- (b) If the subrecipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the subrecipient shall insert the appropriate DOL wage determination from <https://sam.gov/> into the ordering instrument.
- (c) Subrecipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.
- (d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a subrecipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the subrecipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the subrecipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The subrecipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

- (a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment works under the Clean Water State Revolving Fund (CWSRF) or a construction project under the Drinking Water State Revolving Fund (DWSRF) financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or The 2014 Act, the following clauses:

(1) Minimum wages.

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, <https://sam.gov/>

- (ii) (A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient(s) to the State award official. The State award official will transmit the request to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative,

will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
 - (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
 - (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding.

- (i) The subrecipient(s) shall, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Federal Agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

- (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-

Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (ii) (A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at www.dol.gov/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).
- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
 - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into

the contract.

- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.
 - (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- (iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.
- (4) Apprentices and trainees--
- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
 - (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less

than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

- (5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- (6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- (7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.
- (10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor

any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U .S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above, or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section, the contractor and any subcontractor responsible, therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the

Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Federal Agency, State, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

- (a) The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.
- (b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.
- (c) The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its assessment of the risks of non-compliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.
- (d) The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.
- (e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at:

<https://www.dol.gov/agencies/whd/contact/local-offices>

Section 2

American Iron and Steel

The State Revolving Fund Program is subject to, and requires compliance with, the American Iron and Steel requirement (AIS). American Iron and Steel requires Water Pollution Control State Revolving Fund (WPCRF) and Drinking Water Revolving Fund (DWRWF) assistance recipients use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed on or after January 17, 2014.

In providing bids, proposals, or services, the Contractor represents and warrants to and for the benefit of the borrower and the State that:

- a. The Contractor has reviewed and understands the American Iron and Steel requirement.
- b. All of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved.
- c. The Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the borrower or the State.

Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the borrower or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the borrower or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the borrower). While the Contractor has no direct contractual privity with the State, as a lender to the borrower for the funding of its project, the borrower and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of the Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

For purposes of the WPCRF and DWRWF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings;
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel;
- Reinforced precast concrete; and
- Construction materials.

If the subrecipient can justify a claim made under one of the categories below, a waiver may be granted. Until a waiver is granted by the EPA, the AIS requirement must be adhered to as described in the act.

A waiver may be provided if EPA determines that:

1. Applying these requirements would be inconsistent with the public interest.
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

All waiver requests must be routed through the Grants and Loans Unit project manager or compliance specialist.

EPA's guidance on AIS requirements, available at http://water.epa.gov/grants_funding/aisrequirement.cfm includes specific instructions for communities interested in applying for a waiver. After receiving a completed application for a waiver from the Grants and Loans Unit, EPA will publish the waiver request and all material submitted with the application on this website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to the EPA.

Approved National Waivers available for borrowers and contractors include:

- April 15, 2014 De Minimis Waiver:

“The EPA is hereby granting a nationwide waiver pursuant to the American Iron and Steel requirements of P.L. 113-76 CAA 2014 (Act), section 436 under the authority of Section 436(b)(1) (public interest waiver) for de minimis incidental components of eligible water infrastructure projects. This action permits the use of products when they occur in de minimis incidental components of such projects funded by the Act that may otherwise be prohibited under section 436(a). Funds used for such de minimis incidental components cumulatively may comprise no more than a total of five percent of the total cost of the material used in and incorporated into a project; the cost of an individual item may not exceed one percent of the total cost of materials used in and incorporated into a project.”

Section 3

National Term on Suspension and Debarment

Under Executive Order 12549, an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program, or a subagreement thereunder for \$25,000 or more.

The status of prospective individuals or organizations can be checked at the System for Award Management at <https://sam.gov/>

It is the prime contractor's responsibility to verify that subcontractors, vendors, suppliers and manufacturers are not on the excluded parties list.

Section 4

Equal Employment Opportunity and Affirmative Action Requirements on Federally Assisted Construction Contracts

A. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

This notice shall be included in, and shall be a part of, all solicitations for offers and bids on all federal and federally assisted construction contracts or subcontracts.

- (1) The Offerer's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
- (2) The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

County	Minority Participation in Each Trade ¹	Female Participation in Each Trade ¹
Fort Collins, Larimer	6.9%	6.9%
Archuleta, Delta, Dolores, Eagle, Garfield, Grand Junction, Gunnison, Hinsdale, Jackson, La Plata, Mesa, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Juan, San Miguel	10.2%	6.9%
Colorado Springs, El Paso, Teller	10.9%	6.9%
Chaffee, Cheyenne, Clear Creek, Grand, Elbert, Kit Cason, Logan, Morgan, Park, Phillips, Sedgwick, Summit, Washington, Yuma	12.8%	6.9%
Greeley, Weld	13.1%	6.9%
Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Gilpin, Jefferson	13.8%	6.9%
Alamosa, Baca, Bent, Conejos, Costilla, Crowley, Custer, Fremont, Huerfano, Kiowa, Lake, Las Animas, Lincoln, Mineral, Otero, Prowers, Rio Grande, Saguache	19.0%	6.9%
Pueblo	27.5%	6.9%

1) Source: FR Vol.45 No. 194 / Friday, October 3, 1980

These goals are applicable to all the contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- (3) The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number for the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed (See Form C).
- (4) As used in this Notice, and in the contract resulting from this solicitation, the covered area is **Hinsdale County**.

B. EQUAL OPPORTUNITY CLAUSES

- (1) The Equal Opportunity Clause published at 41 CFR Part 60-1.4(b) is required to be included in, and is part of, all nonexempt federally assisted construction contracts and subcontracts. By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated.
- (2) In addition to the clauses described above, all federal contracting officers, all applicants, and all non-construction contractors, as applicable, shall include the specifications set forth in this section in all federal and federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to 41 CFR 60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of non-construction Federal contracts and subcontracts covered under the Executive Order.

***STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)***

A. DEFINITIONS AS USED IN SPECIFICATIONS

- (1) "Covered Area" means the geographical area described in solicitation from which this contract resulted;

- (2) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- (3) "Employer identification number" means the Federal Social Security number used on the employer's quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- (4) "Minority" includes:
 - (a) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (b) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (c) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asian, the Indian Subcontinent, or the Pacific Islands);
 - (d) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).

B. DETAILED SPECIFICATIONS

- (1) Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$25,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
- (2) If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan (Plan) approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area, (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the Equal Employment Opportunity (EEO) clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
- (3) The contractor shall implement the specific affirmative action standards provided in paragraphs (6)(a) through (p) of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
- (4) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

- (5) In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
- (6) The contractor shall take specific affirmative action to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - (a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - (b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations where the contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - (c) Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the contractor may have taken.
 - (d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - (e) Develop on-the-job training opportunities and/or participate in training programs for the areas which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under (7)(b) above.
 - (f) Disseminate the contractor's EEO policy by providing notice of the policy to

unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

- (g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- (h) Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
- (i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations servicing the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- (j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.
- (k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- (l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- (m) Ensure that seniority practices, job classification, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations are followed.

- (n) Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - (o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - (p) Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.
- (7) Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (6)(a) through (p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under (6)(a) through (p) of the specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.
- (8) A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the order if a specific minority group of women is under-utilized).
- (9) The contractor shall not use the goals and timetables of affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- (10) The contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246.
- (11) The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
- (12) The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph (6) of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.3.

- (13) The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
- (14) Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

Section 5

Williams-Steiger Occupational Safety and Health Act of 1970

A. Authority

- (1) The contractor is subject to the provisions of the Williams-Steiger Occupational Safety and Health Act of 1970.
- (2) These construction documents and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the Federal law(s), including but not limited to the latest amendment of the following:
 - (a) Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 94-596;
 - (b) art 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;
 - (c) Part 1926 - Safety and Health Regulations for Construction, Chapter XVII of Title 29, Code of Federal Regulations.

B. Safety and Health Program Requirements

- (1) This project, its prime contractor and its subcontractors, shall at all times be governed by Chapter XVII of Title 29, Code of Federal Regulations, Part 1926 - Safety and Health Regulations for Construction (29 CFR 22801), as amended to date.
- (2) To implement the program and to provide safe and healthful working conditions for all persons, general project safety meetings will be conducted at the site at least once each month during the course of construction, by the construction superintendent or his/her designated safety officer. Notice of such meeting shall be issued not less than three (3) days prior, stating the exact time, location, and agenda to be included. Attendance by the owner, architect, general foreman, shop steward(s), and trades, or their designated representatives, witnessed in writing as such, shall be mandatory.
- (3) To further implement the program, each trade shall conduct a short gang meeting, not less than once a week, to review project safety requirements mandatory for all persons during the coming week. The gang foreman shall report the agenda and specific items covered to the project superintendent, who shall incorporate these items in his/her daily log or report.
- (4) The prime contractor and all subcontractors shall immediately report all accidents, injuries, or health hazards to the owner and architect, or their designated representatives, in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970.
- (5) This program shall become a part of the contract documents and the contract between the owner and prime contractor, prime contractor and all subcontractors, as though fully written therein.

Section 6

Discovery of Archaeological and Other Historical Items

A. Construction Procedures

In the event of an archaeological or more recent historical find (e.g., artifacts, housing sites) during any phase of construction, the following procedure should be followed:

- (1) Construction shall be halted, with as little disruption to the archaeological site possible.
- (2) The Contractor shall notify the Owner who shall contact the State Historical Preservation Officer.
- (3) The State Historical Preservation Officer may decide to have an archaeologist inspect the site and make recommendations about the steps needed to protect the site, before construction is resumed.
- (4) The entire event should be handled as expediently as possible in order to hold the loss in construction time to a minimum while still protecting archaeological finds.

B. National Register Status

In the event archaeological/historical data are evaluated to meet National Register criteria, the Advisory Council on Historic Preservation may be notified and asked to comment by the Water Quality Control Division.

Section 7

Disadvantaged Business Enterprise (DBE) - SRF Program Grant Agreement Information and Requirements

OVERVIEW OF DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

The Environmental Protection Agency's (EPA) new Disadvantaged Business Enterprise (DBE) rule became effective on May 27, 2008. The new DBE rule sets forth an EPA program that serves the compelling government interest of remedying past and current racial discrimination through agency-wide procurement objectives. The new DBE rule revises and replaces EPA's Minority and Women Business Enterprise (MBE/WBE) Program for funding received after May 27, 2008.

Note that the loan recipient is not a passive conduit of the contractor's DBE information. By submitting the proposed contractor's DBE documentation to the SRF Loan Program for review, the loan recipient is asserting that it has found the proposed contractor's documentation of good faith efforts adequate.

In order to be counted as a MBE/WBE under the new EPA DBE rule, MBE/WBEs must be certified by a federal agency (e.g., EPA, Small Business Administration, and Department of Transportation) or by a State, locality, Indian Tribe, or independent private organization that meets the certification requirements of the new EPA DBE rule. Under the new EPA DBE rule an individual claiming economic disadvantaged status must have an initial and continued personal net worth of less than \$750,000.

Locating potential DBE sub-contractors is the responsibility of the bidder/contractor. The following is a list of resources that may be used to locate potential DBEs:

- The Colorado Department of Transportation maintains a listing of certified DBE'S on its website at: <http://coloradodbe.org/>
- The EPA maintains a searchable list by EPA region for the OSBP Registry at: <https://cfpub.epa.gov/sbvps/index.cfm?fuseaction=app.search>

Applications for certification by EPA can be found on EPA's Small Business Programs website at http://www.epa.gov/osbp/dbe_fair.htm

Each procurement contract signed by a loan participant must include the following term and condition:

"The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract."
(Appendix A to Part 33—Term and Condition)

GUIDANCE FOR UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES REQUIREMENTS OF 40 CFR PART 33

A. REQUIREMENTS

1. Each procurement contract signed by a loan recipient must include the following term and condition:

The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract

which may result in the termination of this contract or other legally available remedies.

2. The recipient and prime contractor will create and maintain a bidders list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. The purpose of a bidders list is to provide the recipient and entities receiving identified loans who conduct competitive bidding with as accurate a database as possible about the universe of MBE/WBE and non-MBE/WBE prime and subcontractors. The list must include all firms that bid or quote on prime contracts, or bid or quote subcontracts on EPA assisted projects, including both MBE/WBEs and non-MBE/WBEs. The bidders list must only be kept until the project period for the identified loan has ended. The following information must be obtained from all prime and subcontractors:
 - (a) Entity's name with point of contact;
 - (b) Entity's mailing address, telephone number, and e-mail address;
 - (c) The procurement on which the entity bid or quoted, and when; and
 - (d) Entity's status as an MBE/WBE or non-MBE/WBE.
3. The recipient and prime contractor will exercise good faith efforts to attract and utilize small, minority, and women's business enterprises primarily through outreach, recruitment, and race/gender neutral activities.
 - (a) At a minimum, fulfillment of six affirmative steps (good faith efforts) is required as set forth below:
 1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian, Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
 2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
 3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian, Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
 4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
 5. Use the services of the SBA and the Minority Business Development Agency of the Department of Commerce.
 6. If the prime contractor awards subcontract, require the prime contractor to take the affirmative Steps 1 through 5 listed above.

4. The prime contractor must pay its subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the owner.
5. The prime contractor must notify the owner in writing prior to any termination of a DBE subcontractor for convenience.
6. If a DBE subcontractor fails to complete work under the subcontract for any reason, the prime contractor must employ the good faith efforts if soliciting a replacement subcontractor, even if the fair share objectives have already been achieved.

B. FAIR SHARE OBJECTIVES

1. The Colorado SRF project goals are:

SRF Project	%MBE	%WBE
Construction	6.1%	6.6%

C. DEFINITIONS

1. Disadvantaged Business Enterprise (DBE) is a business concern which meets the qualifications of a Minority Business Enterprise (MBE), Women's Business Enterprise (WBE)
2. Minority Business Enterprise (MBE) is a business concern which is:
 - (a) Certified as socially and economically disadvantaged by the Small Business Administration;
 - i. Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities.
 - ii. Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free enterprise system is impaired due to diminished capital and credit opportunities, as compared to others in the same business area who are not socially disadvantaged. In determining the degree of diminished credit and capital opportunities, the Small Business Administration shall consider, but not be limited to, the assets and net worth of such socially disadvantaged individuals. Individuals who certify that they are members of named groups (Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans), are to be considered socially and economically disadvantaged. Economically and socially disadvantaged individuals are deemed to include women.
 - (b) Certified as a minority business enterprise by a State or Federal agency; and
 - (c) An independent business concern which is at least 51 percent owned and controlled by minority group member(s).

- i. A minority group member is an individual who is a citizen of the United States and one of the following:
 1. Black American;
 2. Hispanic American (with origins from Puerto Rico, Mexico, Cuba, South or Central America)
 3. Native American (American Indian, Eskimo, Aleut, native Hawaiian); or
 4. Asian-Pacific American (with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, Taiwan or the Indian subcontinent).
 - ii. In order to satisfy this third criteria of the MBE definition, the minority ownership's interest must be real, substantial and continuing. Such interest is characterized by:
 1. Risk of loss/share of profit commensurate with the proportional ownership; and
 2. Receipt of the customary incidents of ownership, such as compensation (i.e., salary and other personnel compensation).
 - iii. A minority owner must have and exercise control of the business decisions. Characteristics of control include, but are not limited to:
 1. Authority to sign bids and contracts;
 2. Decisions in price negotiations;
 3. Incurring liabilities for the firm;
 4. Final staffing decisions;
 5. Policy-making; and
 6. General company management decisions.
 - iv. Only those firms performing a useful business function according to custom and practice in the industry, are qualified as MBEs. Acting merely as a passive conduit of funds to some other firm where such activity is unnecessary to accomplish the project does not constitute a "useful business function according to custom and practice in the industry." The purpose of this approach is to discourage the use of MBE "fronts" and limit the creation of an artificial supplier and broker marketplace.
3. Women's Business Enterprise (WBE) is a business which is certified as such by a State or Federal agency, or which meets the following definition:

"A women's business enterprise is an independent business concern which is at least 51 percent owned by a woman or women, who also control and operate it. Determination of whether a business is at least 51 percent owned by a woman or otherwise qualified WBE which is 51 percent owned by a married woman in a community property State will not be disqualified because her husband has a 50 percent interest in her share. Similarly, a

business which is 51 percent owned by a married man and 49 percent owned by an unmarried woman will not become a qualified WBE by virtue of his wife's 50 percent interest in his share of the business."

As in the case of a MBE, only United States citizens will be deemed to be WBEs. Similar to the MBE criteria, WBE should meet the criteria cited in subparagraphs C.2.a., C.2.b, and C.2.c(2), (3), and (4).

4. Fair Share or Fair Share Objective: A fair share or a fair share objective is an amount of funds reasonably commensurate with the total project funding and the availability of qualified MBEs and WBEs, taking into account experience on EPA-funded projects and other comparable projects in the area. A fair share objective does not constitute an absolute requirement, but a commitment on the part of the bidder to exercise good faith efforts as defined in this section to use MBEs and WBEs to achieve the fair share objective.
5. Recipient: A party receiving SRF financial assistance.
6. Project: The scope of work for which an SRF loan is awarded.
7. Bidder: A party seeking to obtain a contract with a recipient through a competitive, advertised, sealed bid process.
8. Offeror: A party seeking to obtain a contract with a recipient through a negotiative procurement process.
9. Prime Contractor: A party that has obtained a contract with a recipient through a competitive, advertised, sealed bid process.
10. Good Faith Efforts: Good faith efforts by a recipient, prime contractor, and/or bidder/offeror means efforts to attract and utilize DBEs primarily through outreach, recruitment, and race/gender neutral activities. The following are examples of activities to assist recipients, prime contractors and/or bidders/offerors to comply with good faith efforts.
 - (a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian, Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
 - i. Maintain and update a listing of qualified MBE/WBEs that can be solicited for construction, equipment, services and/or supplies.
 - ii. Provide listings to all interested parties who request copies of the bidding or proposing documents.
 - iii. Contact appropriate sources within your geographic area and state to identify qualified MBE/WBE for placement on your MBE/WBE business listings.
 - iv. Utilize other MBE/WBE listings such as those of the state's minority business

office, the Small Business administration, Minority Business Development Agency (MBDA) of the Department of Commerce, EPA OSDBU, and DOT.

- v. Have state environment agency personnel review solicitation lists.
- (b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- i. Develop realistic delivery schedules which may provide for greater MBE/WBE participation.
 - ii. Advertise through the minority media in order to facilitate MBE/WBE utilization. Such advertisements may include, but are not limited to, contracting and subcontracting opportunities, hiring and employment, or any other matter related to the project.
 - iii. Advertise in general circulation publications, trade publications, state agency publications and minority and women's business focused media concerning contracting opportunities on your projects. Maintain a list of minority and/or women's business-focused publications that may be utilized to solicit MBE/WBEs.
- (c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian, Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- i. Perform an analysis to identify portions of work that can be divided and performed by qualified MBE/WBEs.
 - ii. Scrutinize the elements of the total project to develop economical units of work that are within the bonding range of MBE/WBEs.
 - iii. Conduct meetings, conferences, and follow-ups with MBE/WBE associations and minority media to inform these groups of opportunities to provide construction, equipment, services and supplies.
- (d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- i. Notify MBE/WBEs of future procurement opportunities so they may establish bidding solicitations and procurement plans.
 - ii. Provide MBE/WBE trade organizations with succinct summaries of solicitations.
 - iii. Provide interested MBE/WBEs with adequate information about plans, specifications, timing and other requirements of the proposed projects.
- (e) Use the services of the SBA and the Minority Business Development Agency (MBDA) of the Department of Commerce.

- i. Use the services of outreach programs sponsored by the MBDA and/or the SBA to recruit bona fide firms for placement on DBE bidders lists to assist these firms in the development of bid packaging.
 - ii. Seek out Minority Business Development Centers (MBDC) to assist recipients and prime contractors in identifying MBE/WBEs for potential work opportunities on projects.
- (f) If the prime contract awards subcontracts, require the prime contractor to take steps in Paragraphs (a) through (e) of this section.

D. REPORTING

1. The recipient must submit “DBE Utilization Under Federal Grants, Cooperative Agreements, and Interagency Agreements,” to the Project Administrator beginning with the Federal Fiscal year quarter the bid is awarded and continuing until the project is completed. These reports must be submitted within 5 days of the end of the Federal fiscal quarter or by January 5, April 5, July 5, and October 5. Please e- mail reports to:

CDPHE_grantsandloans@state.co.us

2. Bidders/offerors shall demonstrate compliance with good faith efforts in order to be deemed responsible.
3. The prime contractor must distribute DBE Program Subcontractor Participation Form (EPA Form 6100-2) to all of its DBE subcontractors. The subcontractors can submit completed forms to the State of Colorado, Water Quality Control Division, Grants and Loans Unit.
4. The prime contractor must have its DBE subcontractors complete DBE Program Subcontractor Performance Form (Form 6100-3).
5. The prime contractor must complete DBE Program Subcontractor Utilization Form (Form 6100-4).
6. Form 6100-3 and Form 6100-4 must be submitted by the apparent low-bidder within ten calendar days of the bid opening. Failure to submit this information will be viewed as a non-responsive bid.

Section 8

Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment

The following requirements including terms and conditions apply to this contract and expenditures submitted for reimbursement through the state revolving fund loan covering the work to be completed in this contract.

- A. This term and condition implements 2 CFR 200.216 and is effective for obligations and expenditures of EPA financial assistance funding on or after 8/13/2020.
- B. As required by 2 CFR 200.216, EPA recipients and subrecipients, including borrowers under EPA funded revolving loan fund programs, are prohibited from obligating or expending loan or grant funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in [Public Law 115-232](#), section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). Recipients, subrecipients, and borrowers also may not use EPA funds to purchase:
 1. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
 2. Telecommunications or video surveillance services provided by such entities or using such equipment.
 3. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.
- C. Consistent with 2 CFR 200.471, costs incurred for telecommunications and video surveillance services or equipment such as phones, internet, video surveillance, and cloud servers are allowable except for the following circumstances:
 1. Obligating or expending EPA funds for covered telecommunications and video surveillance services or equipment or services as described in 2 CFR 200.216 to:
 - a) Procure or obtain, extend or renew a contract to procure or obtain;
 - b) Enter into a contract (or extend or renew a contract) to procure; or
 - c) Obtain the equipment, services, or systems.
 2. Certain prohibited equipment, systems, or services, including equipment, systems, or services produced or provided by entities identified in section 889, are recorded in the System for Award Management exclusion list at <https://sam.gov/>
- D. There is no exhaustive list of components and services that fall under the prohibition. Exercise due diligence and be particularly mindful of project components with internet or cellular connections. For example, recipients should be mindful of automatic meter reading (AMR) technology and

advanced metering infrastructure (AMI), instrumentation control systems (e.g. process control systems, distributed control systems and programmable logic controls), and security cameras and other electronic security measures to ensure that those items are procured from a non-excluded entity. Items included in the prohibition are not eligible SRF costs, and the SRF programs cannot reimburse borrowers for these costs.

Section 9

Signage Requirements

The following signage guidelines present a number of options which communities can explore to implement EPA's signage policy. The option selected should meet all of the above basic requirements while remaining cost-effective and accessible to a broad audience. The guidelines describe the following strategies as acceptable options for communities to follow:

- Standard signage;
- Posters or wall signage in a public building or location;
- Newspaper or periodical advertisement for project construction, groundbreaking ceremony, or operation of the new or improved facility;
- Online signage placed on community website or social media outlet;
- Press release.

Each of these options is described in more detail in the sections below.

Implementation Option: Standard Signage

EPA recommends that large projects that involve significant expansion or construction of a new facility elect to publicize through standard signage. This option should be selected for projects where the sign would be near a major road or thoroughfare or where the facility is in a location at which this would effectively publicize the upgrades. Some facilities will not find this an appropriate or cost-effective solution. For example, investing in a large road sign for a facility that is located in a rural area or where access is limited to a smaller service road would likely not be an optimal solution.

Signs can also be located away from the project site if there is another reasonable alternative. For example, a community may elect to place a sign advertising the project near a body of water that receives discharge from a particular facility.

States selecting projects that will implement this requirement through use of a traditional sign should ensure the following are included:

- The name of the facility, project and community;
- Project cost;
- The State Agency/SRF administering the program;
- The EPA and State Agency logos (EPA logo may only be used on a sign).

If the EPA logo is displayed along with logos of other participating entities, the EPA logo must not be displayed in a manner that implies that EPA itself is conducting the project. Instead, the EPA logo must be accompanied with a statement indicating that the recipient received financial assistance from EPA for the project. As provided in the sign specifications from the EPA Office of Public Affairs (OPA), the EPA logo is the identifier for assistance agreement projects. States are required to ensure that recipients comply with the sign specifications provided by the OPA, available at http://www.epa.gov/ogd/tc/epa_logo_seal_specifications_for_infrastructure_grants.pdf. To obtain the appropriate EPA logo graphic file, the recipient should send a request directly to OPA and include the EPA Project Officer in the communication.

Implementation Option: Posters or Brochures

Smaller projects, projects located in rural areas, and other efforts may find that it is more cost effective and practical to advertise efforts through creation of a poster or smaller sign. If the project involves nonpoint source or green infrastructure components, those can be described at the discretion of the state or community.

The poster or brochure and acknowledgement should be visible, as well as a website or other source of information for individuals that may be curious about the SRF program. The community could also implement this option as a short pamphlet or brochure that is placed in one of these locations for community members to read.

Posters or brochures should be placed in a public location that is accessible to a wide audience of community members. This can include, but is not limited to:

- Town or City Hall;
- Community Center;
- Locally owned or operated park or recreational facility;
- Public Library;
- County/municipal government facilities;
- Court house or other public meeting space.

Given the low cost for producing multiple copies of the same poster, pamphlet, or brochure, communities can explore options for displaying these posters in several locations simultaneously. This would achieve the overall objective of reaching a broad audience and publicizing the project.

States have the option of creating a template verbiage and layout to provide to borrowers, particularly smaller or disadvantaged communities. This could reduce the burden on small municipalities which may or may not have the staffing capacity to meet signage requirements on their own.

States selecting projects that will implement this requirement through use of posters or brochures should ensure the following are included:

- Name of facility, project and community;
- State SRF administering the program;
- Project is wholly or partially funded with EPA funding;
- Brief description of project;
- Brief description of the water quality benefits the project will achieve.

Implementation Option: Newsletter, Periodical or Press Release

For communities where there is no suitable public space or where advertisement through signage is unlikely to reach community members effectively, projects can be advertised in a community newsletter or similar periodical. States can use guidelines from their standard public notice practices. For new construction, if a groundbreaking ceremony is to be held, an announcement could publicize or accompany publicity for this event.

In some cases, it may be appropriate for the state agency to issue a formal press release announcing construction of a new facility. Distributing a single prepared statement concisely summarizing the project purpose and the joint funding from EPA and state resources can reach a wide audience as the statement goes through multiple news outlets. Programs should consider whether or not this is an option that is likely to effectively publicize the CWSRF or DWSRF program in local news sources.

If a recipient decides on a public or media event to publicize the accomplishment of significant events related to construction as a result of EPA support, EPA must be provided with at least a ten working day notice of the event and provided the opportunity to attend and participate in the event.

States selecting projects that will implement this requirement through use of a newsletter, periodical or press release should ensure the following are included:

- Name of facility, project and community;
- State SRF administering the program;
- Project is wholly or partially funded with EPA funding;
- Brief description of the project;
- Brief listing of water quality benefits to be achieved.

Implementation Option: Insert or Pamphlet in Water/Sewer Bill

Utilities can consider including a single-page insert within water and sewer bills that are mailed to residents and users in the area. This approach would effectively publicize the project to those individuals directly benefitting from the project. The flyer or insert could emphasize the interest rate and financial savings that the community achieved by taking advantage of SRF funds as well as the environmental and public health benefits to the community.

States selecting projects that will implement this requirement through use of an insert or pamphlet in water/sewer bill should ensure the following are included:

- Name of facility, project and community;
- State SRF administering the program;
- Project is wholly or partially funded with EPA funding;
- Brief description of the project;
- Brief listing of water quality benefits to be achieved.

Implementation Option: Online & Social Media Publicity

Many communities are increasingly finding that the online forum is the most cost-effective approach to publicizing their SRF programs and reaching a broad audience of stakeholders. Online "signage" should follow the minimum information guidelines above and may appear on the town, community or facility website if available. In some cases, communities may be active on social media sites such as Facebook or Twitter. These can be used as an opportunity for publicizing projects and information about how SRF funds are being used in the community. These online announcements/notices may be appropriate for settings where physical signage would not be visible to a wide audience. They can be a more cost-effective option than traditional signs or publicity in print media outlets. This option may be most useful where the community's website is a well-recognized source of information for its residents.

In the case of some projects, such as non-point source or sponsorship projects, there might be additional opportunities for online publicity through partner agencies or organizations. This could take place either on the organization's website or again through social media outlets.

States selecting projects that will implement this requirement through use of online & social media publicity should ensure the following are included:

- Name of facility, project and community;

- State SRF administering the program;
- Project was wholly or partially funded with EPA funding;
- Brief description of the project;
- Brief listing of water quality benefits to be achieved.

Suggested Language for Alternate Options

For any of the alternate implementation options listed above, SRF programs have discretion to structure their signage as they see appropriate. The language below is offered as an option for use in posters, pamphlets, brochures, press releases, or online materials. States may consider using the following:

"Construction of upgrades and improvements to the [Name of Facility, Project Location, or WWTP] were financed by the [Clean Water/Drinking Water] State Revolving Fund. The [CWSRF/DWSRF] program is administered by [State Agency] with joint funding from the U.S. Environmental Protection Agency and [State Name]. This project will [description of project] and will provide water quality benefits [details specifying particular benefits] for community residents and businesses in and near [name of town, city, and/or water body or watershed to benefit from project.] [CWSRF/DWSRF] programs operate around the country to provide states and communities the resources necessary to maintain and improve the infrastructure that protects our valuable water resources nationwide."

For projects in certain areas, states should consider whether or not it is appropriate to include additional details about the projects. Specific benefits, such as reduction of combined sewer overflow (CSO) events, lessening of nutrient pollution, reducing contaminant levels or water pumping costs, or improvements to a particular water body, may be of interest to community residents. In these cases, including them would further serve to showcase positive efforts financed by the SRF programs. Additionally, for projects with components that meet Green Project Reserve (GPR) criteria, States may elect to detail these particular improvements. For example, the state could include quantitative improvements in energy efficiency or water conservation achieved by project upgrades. If the project includes green infrastructure components such as rain gardens and green roofs that have environmental and aesthetic benefits to the community, these can be described briefly as well. Again, this additional information can be included at the discretion of the state when it is appropriate, given the project type, location, and the type of signage or publicity effort selected.

Section 10

SRF Required Forms by Section

SRF forms can be found on this webpage: <https://cdphe.colorado.gov/state-revolving-fund-information> (scroll to the bottom of the page to find the “forms” link)

Section 1 - Davis Bacon Prevailing Wages

- Davis Bacon Certification Form (SRF form);
- WH - 347 - Contractors Payroll Form;
- Standard Form 1444 - Request for Authorization of Additional Classification and Rate;
- Standard Form 1445 - Labor Standards Interview Form.

Section 2 - American Iron and Steel

- American Iron and Steel Certification Form (SRF Form);
- American Iron and Steel Product Spreadsheet (SRF Form).

Section 3 -National Term on Suspension and Debarment

- No applicable forms.

Section 4 - Equal Employment Opportunity and Affirmative Action Requirements

- No applicable forms.

Section 5 - Williams-Steiger Occupational Safety and Health Act of 1970

- No applicable forms.

Section 6 - Discovery of Archaeological and Other Historical Items

- No applicable forms.

Section 7 - Disadvantaged Business Enterprise (DBE)

- Form 6100-2 provided by prime contractor completed by DBE subcontractor and submitted to the CDPHE GLU project manager;
- Form 6100-3 provided by prime contractor completed by DBE subcontractor and submitted CDPHE GLU project manager;
- Form 6100-4 provided by subrecipient completed by prime contractor as part of bid package;
- Form B provided by subrecipient completed by prime contractor submitted to the Compliance Specialist or at cdphe_grantsandloans@state.co.us.

Section 8 - Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment

- No applicable forms.

Section 9 -Signage Requirements

- No applicable forms.

"General Decision Number: CO20230003 06/02/2023

Superseded General Decision Number: CO20220003

State: Colorado

Construction Type: Heavy

Counties: Alamosa, Archuleta, Baca, Bent, Chaffee, Cheyenne, Clear Creek, Conejos, Costilla, Crowley, Custer, Delta, Dolores, Eagle, Elbert, Fremont, Garfield, Gilpin, Grand, Gunnison, Hinsdale, Huerfano, Jackson, Kiowa, Kit Carson, La Plata, Lake, Las Animas, Lincoln, Logan, Mineral, Moffat, Montezuma, Montrose, Morgan, Otero, Ouray, Park, Phillips, Pitkin, Prowers, Rio Blanco, Rio Grande, Routt, Saguache, San Juan, San Miguel, Sedgwick, Summit, Teller, Washington and Yuma Counties in Colorado.

HEAVY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none">. Executive Order 14026 generally applies to the contract.. The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none">. Executive Order 13658 generally applies to the contract.. The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/06/2023
1	02/24/2023
2	06/02/2023

ELEC0012-002 09/01/2021

ALAMOSA, ARCHULETA, BACA, BENT, CHAFFEE, CONEJOS, COSTILLA, CROWLEY, CUSTER, FREMONT, HUERFANO, KIOWA, LAS ANIMAS, MINERAL, OTERO, PROWERS, RIO GRANDE AND SAGUACHE COUNTIES

	Rates	Fringes
Electricians:		
Electrical contract over		
\$1,000,000.....	\$ 29.80	13.00+3%
Electrical contract under		
\$1,000,000.....	\$ 24.85	13.00+3%

 * ELEC0068-011 06/01/2023

CLEAR CREEK, EAGLE, GILPIN, GRAND, JACKSON, LAKE, LOGAN, MORGAN, PHILLIPS, SEDGWICK, SUMMIT, WASHINGTON AND YUMA COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 43.20	18.38

 ELEC0111-002 09/01/2022

	Rates	Fringes
Line Construction:		
Groundmen.....	\$ 23.89	21.25%+7.35
Line Equipment Operator.....	\$ 38.61	21.25%+7.35
Lineman and Welder.....	\$ 53.61	24.25%+7.35

 * ELEC0113-004 06/01/2023

CHEYENNE, ELBERT, KIT CARSON, LINCOLN, PARK AND TELLER COUNTIES

	Rates	Fringes
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ELECTRICIAN.....\$ 35.70 17.52

ELEC0969-003 06/01/2019

DOLORES, GARFIELD, GUNNISON, HINSDALE, LA PLATA, MOFFAT,
MONTEZUMA, RIO BLANCO, AND ROUTT COUNTIES

Rates Fringes

ELECTRICIAN.....\$ 25.20 10.06

ELEC0969-006 01/01/2019

OURAY, PITKIN, SAN JUAN AND SAN MIGUEL COUNTIES

Rates Fringes

ELECTRICIAN.....\$ 30.80 10.92

ELEC0969-010 06/01/2019

DELTA AND MONTROSE COUNTIES

Rates Fringes

ELECTRICIAN.....\$ 25.20 10.06

* ENGI0009-004 05/01/2023

Rates Fringes

Power equipment operators:

Mechanic.....\$ 34.58 14.25
Motor Grader: Blade-finish..\$ 34.58 14.25
Motor Grader: Blade-rough...\$ 34.05 14.25
Roller: self-propelled,
all types over 5 tons.....\$ 34.05 14.25
Roller: self-propelled,
rubber tires under 5 tons...\$ 33.62 14.25
Trackhoe.....\$ 34.21 14.25

PLUM0003-003 06/01/2022

CLEAR CREEK, GILPIN, GRAND, JACKSON, LAKE, LOGAN, MORGAN,
PHILLIPS, SEDGWICK, SUMMIT, WASHINGTON, AND YUMA. PARTS OF
ELBERT, EAGLE, KIT CARSON, LINCOLN, AND PARK COUNTIES

Rates Fringes

PLUMBER.....\$ 46.58 19.29

PLUM0058-010 07/01/2022

ALAMOSA, BACA, BENT, CHAFFEE, CHEYENNE, CONEJOS, COSTILLA, CROWLEY, CUSTER, ELBERT (Southern portion including towns of Elbert, Matherson and Simla), FREMONT, HUERFANO, KIOWA, KIT CARSON (Including towns of Dfalgler, Siebert, Vona, Stratton and Bethune), LAS ANIMAS, LINCOLN (Including towns of Geona and Arriba in the southern portion of the county), MINERAL, OTERO, PARK (Including towns of Fauplay, Hartsel and Lake George), PROWERS, PUEBLO, RIO GRANDE, AND SAGUACHE COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 42.20	16.69

 PLUM0058-012 07/01/2022

TELLER COUNTY

	Rates	Fringes
PLUMBER		
Includes HVAC Work.....	\$ 42.20	16.69

 PLUM0145-004 07/01/2022

ARCHULETA, DELTA, DOLORES, EAGLE (Eagle County is divided from where Pitkin and Lake Counties join on the north, and in a straight line to and including the town of Edwards and northerly to the south east corner of Routt County), GARFIELD, GUNNISON, HINSDALE, LA PLATA, MOFFAT, MONTEZUMA, MONTROSE, OURAY, PITKIN, RIO BLANCO, ROUTT, SAN JUAN AND SAN MIGUEL COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 36.47	14.82

 * SUCO2001-005 12/20/2001

	Rates	Fringes
Carpenters:		
Form Building and Setting...	\$ 16.16 **	.82
All Other Work.....	\$ 15.72 **	
Cement Mason/Concrete Finisher...	\$ 14.76 **	2.28
Laborer, common.....	\$ 11.11 **	3.80
PIPEFITTER.....	\$ 18.13	1.84
Power equipment operators:		
Backhoe.....	\$ 15.93 **	3.58
Bobcat/Skid Loader.....	\$ 20.22	4.41
Bulldozer.....	\$ 15.08 **	4.44
Excavator.....	\$ 15.39 **	

Front End Loader.....\$ 15.86 ** 3.59

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information. determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or

"UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"



American Iron and Steel Certification

Project Name: _____

Period From: _____ To: _____

Section 436 of the Consolidated Appropriations Act, 2014 states that:

None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

To meet this requirement, the undersigned hereby certifies that all iron and steel products which are to be incorporated into the (Name of Construction Contract), has been manufactured and/or fabricated using domestic iron and steel as defined by the above referenced section 436 of P.L. 113-76 and EPA's Guidance Memorandum dated March 20, 2014 for Implementation of American Iron & Steel unless an appropriate waiver has been granted by the Administrator of the Environmental Protection Agency.

Name of Loan Recipient

Date

Signature of Authorized Official

Print Name and Title of Authorized Official

NOTE: A current completed copy of the American Iron and Steel Products tracking spreadsheet MUST accompany this document.





American Iron and Steel Certification

Borrower Name: _____

Contractor: _____

Project Number: _____ Date: _____

Procurement Date	Product Description	Quantity	Cost	*Type of Certification Used ~Manufacturer/Fabricating Shipment Wavier (Pick One)	New or Existing Certification

* used to verify chain of custody control for product
 ~ includes melting, bonding, coating, galvanizing, cutting, etc.



Project Name: _____

Period From: _____ To: _____

Davis-Bacon Act CERTIFICATION

I certify to the best of my knowledge and belief that the above referenced project:

Complies with Davis-Bacon and Related Acts and that all laborers and mechanics employed by contractors and subcontractors during the above referenced period were paid wages at rates not less than those listed on the prevailing wage rate contained in the contract documents and that all applicable provisions of the Davis-Bacon and Related Acts have been met.

Name of Loan Recipient

Date

Signature of Authorized Official

Print Name and Title of Authorized Official

PAYROLL

(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)



Rev. Dec. 2008

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

OMB No.: 1235-0008
Expires: 01/31/2015

NAME OF CONTRACTOR <input type="checkbox"/> OR SUBCONTRACTOR	ADDRESS
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PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION	PROJECT OR CONTRACT NO.
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(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT/RSST	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS					(9) NET WAGES PAID FOR WEEK
				HOURS WORKED EACH DAY										FICA	WITH- HOLDING TAX	OTHER	TOTAL DEDUCTIONS		
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			S																
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

Date _____

I, _____
 (Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the
 (Contractor or Subcontractor)

_____;
 (Building or Work)

_____ day of _____, _____, and ending the _____ day of _____, _____,

all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ from the full
 (Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

— in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

— Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.

**Request For Wage Determination And
Response To Request**

(Construction Wage Rate Requirements Statute and Related Statutes)

U.S. Department of Labor

Wage and Hour Division

<p>FOR DEPARTMENT OF LABOR USE</p> <p>Response To Request</p> <p><input type="checkbox"/> Use area determination issued for this area</p> <p>_____</p> <p>_____</p> <p><input type="checkbox"/> The attached decision noted below is applicable to this project</p> <p>Decision Number _____</p> <p>Date of Decision _____</p> <p>Expires _____</p> <p>Supersedes Decision Number _____</p> <p>Approved _____</p>	<p>Mail Your Request To:</p> <p>U.S. Department of Labor Wage and Hour Division Branch of Construction Contract Wage Determinations Washington, D.C. 20210</p> <p>Requesting Officer (Typed name <i>and signature</i>) _____</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Department, Agency, or Bureau _____</td> <td style="width:50%;">Phone Number _____</td> </tr> <tr> <td>Date of Request _____</td> <td>Estimated Advertising Date _____</td> </tr> <tr> <td>Prior Decision Number (if any) _____</td> <td>Estimated Bid Opening Date _____</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">Estimated \$ Value of Contract</td> <td colspan="2">Type of Work</td> </tr> <tr> <td><input type="checkbox"/> Under 1/2 Mil <input type="checkbox"/> 1 to 5 Mil</td> <td><input type="checkbox"/> Bldg.</td> <td><input type="checkbox"/> Highway</td> </tr> <tr> <td><input type="checkbox"/> 1/2 to 1 Mil <input type="checkbox"/> Over 5 Mil</td> <td><input type="checkbox"/> Resid.</td> <td><input type="checkbox"/> Heavy</td> </tr> </table> <p>Address to which wage determination should be mailed. (Print or type)</p> <div style="border: 1px solid black; height: 150px; margin: 10px 0;"></div> <p>Location of Project (<i>City, County, State, Zip Code</i>) _____</p> <p>Description of Work (<i>Be specific</i>) (Print or type) _____</p>	Department, Agency, or Bureau _____	Phone Number _____	Date of Request _____	Estimated Advertising Date _____	Prior Decision Number (if any) _____	Estimated Bid Opening Date _____	Estimated \$ Value of Contract	Type of Work		<input type="checkbox"/> Under 1/2 Mil <input type="checkbox"/> 1 to 5 Mil	<input type="checkbox"/> Bldg.	<input type="checkbox"/> Highway	<input type="checkbox"/> 1/2 to 1 Mil <input type="checkbox"/> Over 5 Mil	<input type="checkbox"/> Resid.	<input type="checkbox"/> Heavy	<p>CHECK OR LIST CRAFTS NEEDED (Attach continuation sheet if needed)</p> <p>_____ Asbestos workers</p> <p>_____ Boilermakers</p> <p>_____ Bricklayers</p> <p>_____ Carpenters</p> <p>_____ Cement masons</p> <p>_____ Electricians</p> <p>_____ Glaziers</p> <p>_____ Ironworkers</p> <p>_____ Laborers (Specify classes)</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ Lathers</p> <p>_____ Marble & tile setters, terrazzo workers</p> <p>_____ Painters</p> <p>_____ Piledrivermen</p> <p>_____ Plasterers</p> <p>_____ Plumbers</p> <p>_____ Roofers</p> <p>_____ Sheet metal workers</p> <p>_____ Soft floor layers</p> <p>_____ Steamfitters</p> <p>_____ Welders-rate for craft</p> <p>_____ Truck drivers</p> <p>_____ Power equipment operators (Specify types)</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>Other Crafts</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p> <p>_____ _____</p>
Department, Agency, or Bureau _____	Phone Number _____																
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Estimated \$ Value of Contract	Type of Work																
<input type="checkbox"/> Under 1/2 Mil <input type="checkbox"/> 1 to 5 Mil	<input type="checkbox"/> Bldg.	<input type="checkbox"/> Highway															
<input type="checkbox"/> 1/2 to 1 Mil <input type="checkbox"/> Over 5 Mil	<input type="checkbox"/> Resid.	<input type="checkbox"/> Heavy															

**REQUEST FOR AUTHORIZATION OF
ADDITIONAL CLASSIFICATION AND RATE**

CHECK APPROPRIATE BOX
 SERVICE CONTRACT
 CONSTRUCTION CONTRACT

OMB Control Number: 9000-0089
Expiration Date: 10/31/2019

PAPERWORK REDUCTION ACT STATEMENT: Public reporting burden for this collection of information is estimated to average .5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspects of this collection of information, including suggestions for reducing this burden, to U.S. General Services Administration, Regulatory Secretariat (MVCB)/IC 9000-0089, Office of Governmentwide Acquisition Policy, 1800 F Street, NW, Washington, DC 20405.

INSTRUCTIONS: THE CONTRACTOR SHALL COMPLETE ITEMS 3 THROUGH 16, KEEP A PENDING COPY, AND SUBMIT THE REQUEST, IN QUADRUPPLICATE, TO THE CONTRACTING OFFICER.

1. TO: ADMINISTRATOR, WAGE AND HOUR DIVISION U.S. DEPARTMENT OF LABOR WASHINGTON, DC 20210	2. FROM: (REPORTING OFFICE)
---	------------------------------------

3. CONTRACTOR	4. DATE OF REQUEST
---------------	--------------------

5. CONTRACT NUMBER	6. DATE BID OPENED (SEALED BIDDING)	7. DATE OF AWARD	8. DATE CONTRACT WORK STARTED	9. DATE OPTION EXERCISED (IF APPLICABLE) (SERVICE CONTRACT ONLY)
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10. SUBCONTRACTOR (IF ANY)

11. PROJECT AND DESCRIPTION OF WORK (ATTACH ADDITIONAL SHEET IF NEEDED)

12. LOCATION (CITY, COUNTY AND STATE)

13. IN ORDER TO COMPLETE THE WORK PROVIDED FOR UNDER THE ABOVE CONTRACT, IT IS NECESSARY TO ESTABLISH THE FOLLOWING RATE(S) FOR THE INDICATED CLASSIFICATION(S) NOT INCLUDED IN THE DEPARTMENT OF LABOR DETERMINATION

NUMBER: _____ DATED: _____

a. LIST IN ORDER: PROPOSED CLASSIFICATION TITLE(S); JOB DESCRIPTION(S); DUTIES; AND RATIONALE FOR PROPOSED CLASSIFICATIONS (Service contracts only) <i>(Use reverse or attach additional sheets, if necessary)</i>	b. WAGE RATE(S)	c. FRINGE BENEFITS PAYMENTS

14. SIGNATURE AND TITLE OF SUBCONTRACTOR REPRESENTATIVE (IF ANY)	15. SIGNATURE AND TITLE OF PRIME CONTRACTOR REPRESENTATIVE
--	--

16. SIGNATURE OF EMPLOYEE OR REPRESENTATIVE	TITLE	CHECK APPROPRIATE BOX-REFERENCING BLOCK 13. <input type="checkbox"/> AGREE <input type="checkbox"/> DISAGREE
---	-------	---

TO BE COMPLETED BY CONTRACTING OFFICER (CHECK AS APPROPRIATE - SEE FAR 22.1019 (SERVICE CONTRACT LABOR STANDARDS) OR FAR 22.406-3 (CONSTRUCTION WAGE RATE REQUIREMENTS))

- THE INTERESTED PARTIES AGREE AND THE CONTRACTING OFFICER RECOMMENDS APPROVAL BY THE WAGE AND HOUR DIVISION. AVAILABLE INFORMATION AND RECOMMENDATIONS ARE ATTACHED.
- THE INTERESTED PARTIES CANNOT AGREE ON THE PROPOSED CLASSIFICATION AND WAGE RATE. A DETERMINATION OF THE QUESTION BY THE WAGE AND HOUR DIVISION IS THEREFORE REQUESTED. AVAILABLE INFORMATION AND RECOMMENDATIONS ARE ATTACHED.
(Send 3 copies to the Department of Labor)

SIGNATURE OF CONTRACTING OFFICER OR REPRESENTATIVE	TITLE AND COMMERCIAL TELEPHONE NUMBER	DATE SUBMITTED
--	---------------------------------------	----------------

LABOR STANDARDS INTERVIEW

CONTRACT NUMBER				EMPLOYEE INFORMATION				
NAME OF PRIME CONTRACTOR				LAST NAME		FIRST NAME		MI
				STREET ADDRESS				
NAME OF EMPLOYER				CITY		STATE	ZIP CODE	
				SUPERVISOR'S NAME		WORK CLASSIFICATION		WAGE RATE
LAST NAME		FIRST NAME		MI				

ACTION	CHECK BELOW	
	YES	NO
Do you work over 8 hours per day?		
Do you work over 40 hours per week?		
Are you paid at least time and a half for overtime hours?		
Are you receiving any cash payments for fringe benefits required by the posted wage determination decision?		
WHAT DEDUCTIONS OTHER THAN TAXES AND SOCIAL SECURITY ARE MADE FROM YOUR PAY?		

HOW MANY HOURS DID YOU WORK ON YOUR LAST WORK DAY BEFORE THIS INTERVIEW?	TOOLS YOU USE	
DATE OF LAST WORK DAY BEFORE INTERVIEW (YYMMDD)		
DATE YOU BEGAN WORK ON THIS PROJECT (YYMMDD)		

THE ABOVE IS CORRECT TO THE BEST OF MY KNOWLEDGE

EMPLOYEE'S SIGNATURE			DATE (YYMMDD)
INTERVIEWER	SIGNATURE	TYPED OR PRINTED NAME	DATE (YYMMDD)

INTERVIEWER'S COMMENTS

WORK EMPLOYEE WAS DOING WHEN INTERVIEWED	ACTION <i>(If explanation is needed, use comments section)</i>	YES	NO
	IS EMPLOYEE PROPERLY CLASSIFIED AND PAID?		
	ARE WAGE RATES AND POSTERS DISPLAYED?		

FOR USE BY PAYROLL CHECKER

IS ABOVE INFORMATION IN AGREEMENT WITH PAYROLL DATA?

YES NO

COMMENTS

CHECKER			
LAST NAME	FIRST NAME	MI	JOB TITLE
SIGNATURE			DATE (YYMMDD)



FORM B - DBE PROCUREMENTS MADE DURING QUARTER

Federal Quarter & Year: _____

1st (Oct-Dec); 2nd (Jan-Mar);
 3rd (Apr-Jun); 4th (Jul-Sep)

Procurement Made By		Business Enterprise		Total Dollar Value of Procurement	Date of Procurement Award MM/DD/YY	Type of Product or Service (see key below)	Name/Address of DBE Contractor or Vendor
Loan Recipient	Prime Contractor	MBE	WBE				
				\$			
				\$			
				\$			
				\$			

Type of Product or Service: 1=Construction 2=Supplies 3=Services 4=Equipment

Loan Recipient:		SRF Project Number			Amount Paid this Quarter	Cumulative Amount Paid to Date
DBE Reporting Contact for Loan Recipient:		Phone:	SRF Loan Amount:	MBEs:	\$	\$
State SRF Contact: Matt Alms		Phone: (303) 692-6264	e-mail: matt.alms@state.co.us	WBEs:	\$	\$
Print Name of Signature Authority of Loan Recipient:			Telephone Number:	Signature:		Date:
Print Name of Prime Contractor & Project Manager			Telephone Number:	Signature of Contractor Project Manager:		Date:

Form is due within 5 days after the end of each quarter throughout construction- 1/5, 4/5, 7/5, 10/5.

Instructions for completing and submitting Form B.

1. Federal Quarter/Year: Enter the corresponding quarter and federal fiscal year for each quarter submitted. Do not enter multiple quarters on one sheet.
2. Procurement Made By: Check whether the procurement was awarded by the recipient or the prime contractor
3. Business Enterprise: Check whether the business enterprise was Minority owned (MBE) or Women owned (WBE) business
4. Total Value of Procurement: Enter the total amount of the bid award
5. Date of Procurement Award: Enter the date the bid was **awarded**
6. Name/Address of DBE Contractor or Vendor: Enter the full name and address including city, state and zip of the awarded bidder. Use one sheet per prime contractor for all awards; do not use separate sheets for each business awarded.
7. Loan Recipient: Enter the full name of the recipient.
8. SRF Project Number: Enter the project number of the loan recipient as identified in the Intended Use Plan. This is a 6 digit number ending in the letter W (wastewater) or D (drinking water). If you do not know the project number, contact your project manager for assistance.
9. Loan Recipient DBE Contact: Enter the name of the person responsible for completing Form B.
10. Phone: Enter the phone number of the person responsible for completing Form B.
11. SRF Loan Amount: Enter the amount of the loan that was closed with the Colorado Water Resources and Power Development Authority Exhibit B of the loan agreement.
12. Amount Paid This Quarter: Enter the total amount disbursed to the awarded business for each quarter for each of the MBE and/or WBE you have paid out. Do not use a separate sheet for each business paid just use a total amount and do not enter a contract award amount.
13. Cumulative Amount Paid to Date: Add the previous quarter cumulative amount to the amount paid in the current quarter to calculate the cumulative amount paid to date.
14. Print Name of Signature Authority for Loan Recipient: This should be the same person who has authority to sign off on pay requests
15. Telephone Number: Phone number of 14.
16. Signature: Signature of 14. The form is incomplete if there are no signatures and will be returned to the loan recipient.
17. Date: Date the form was signed by 14.
18. Print Name of Prime Contractor & Project Manager: Company name and project manager name.
19. Telephone Number: Phone number of 18. .
20. Signature of Contractor Project Manager: Signature of 18. The form is incomplete if there are no signatures and will be returned to the loan recipient.
21. Date: Date the form was signed by 18.



**Disadvantaged Business Enterprise (DBE) Program
 DBE Subcontractor Participation Form**

A Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE subcontractor the opportunity to describe work received and/or report any concerns regarding the project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services , Equipment or Supplies	Amount Received by Prime Contractor



COLORADO
Department of Public
Health & Environment

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Participation Form**

Please use the space below to report any concerns regarding the above funded project:

Subcontractor Signature	Print Name
Title	Date



This form is intended to capture the DBE subcontractor’s description of work to be performed and the price of the work submitted to the prime contractor. An SRF Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractors bid or proposal package.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services , Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: ___DOT ___SBA ___Other: _____		Meets/ exceeds certification standards? ___YES ___NO ___Unknown



I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

Subcontractor Signature	Print Name
Title	Date



**Disadvantaged Business Enterprise (DBE) Program
 DBE Subcontractor Utilization Form**

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity:			

I have identified potential DBE certified subcontractors	___ YES	<input checked="" type="radio"/> NO
--	---------	-------------------------------------

If yes, please complete the table below. If no, please explain:

Subcontractor Name/ Company Name	Company Address/ Phone/ Email	Est. Dollar Amt	Currently DBE Certified?

Continue on back if needed

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Section 11300

AERATION AND NITRIFICATION EQUIPMENT

PART 1 – GENERAL

1.1. DESCRIPTION

This specification defines requirements for aeration and nitrification (ammonia removal) equipment package to be provided by the Equipment Package (EP) Contractor. Included with the equipment package should be all hardware, controls, and piping to allow for years of trouble-free operation of the aeration and nitrification equipment, with only occasional operator intervention. More specifically the package furnished by the Contractor shall include, but not be limited to: aerators, diffusers, blowers, mixers, VFD drives (if specified), high surface area media, insulated covers, piping, valves, monitoring equipment, controls including automatic and programmable controls for heating and an Ethernet port to add additional monitoring and logging at later date, process integration panel, any heating and/or cooling elements and controls needed for the system proposed to function to meet design requirements, and appurtenances as specified herein and/or required for complete system to remove BOD, TSS, TKN including NH₃, and meet the limits provided in Exhibit B of the Agreement.

Note that anywhere these specifications reference a nitrification basin, the term is intended to also include a polishing reactor, or other ammonia removal system. Note that environmental conditions in Lake City make it impractical to recycle and/or waste sludge on a regular basis.

The EP Contractor shall furnish all labor, materials, tools, equipment to perform all work and services necessary for and incidental to the furnishing and installation assistance to the Plant Contractor which includes EP Contractor assisting by participating and overseeing the installation of a complete aerated lagoon system and nitrification equipment package, complete and ready for operation in accordance with the provisions of these contract documents. EP Contractor shall provide installation assistance, startup, commissioning and staff training services as specified herein. The EP Contractor shall also assist the Owner during the Startup / Acceptance and Performance Testing periods.

The plant renovation needs to be constructed in phases so that the Town can continue to properly continue to treat wastewater while the new work is furnished and installed. A phasing plan of operation which addresses phasing of the renovations has been submitted to CDPHE.

System supplied must meet the design criteria and requirements of the Colorado Department of Public Health and Environment (CDPHE). Although pre-approval of the system is not required, the site specific package must be able to receive approval of CDPHE in a timely manner, i.e, design shall be submitted to CDPHE, once CDPHE review comments are received, the EP Contractor will have 14 days to address CDPHE concerns and have the updates submitted back to the project engineer. If

more than one resubmittal of documents is required due to incomplete or problematic responses that will be considered an exceedance of the contract time.

1.2 Quality Control and Assurance

EP Contractor and equipment furnished shall be from a source that has successfully completed at least 5 similar systems in an environment and with the seasonal variations as found in Lake City CO.

Manufacturer's authorized representative shall be trained and approved for installation supervision of units required for this Project and successfully completed installation oversight, startup and training at least at 3 similar treatment facilities.

All equipment required in this section shall be supplied by a single manufacturer. This does not require that all equipment be manufactured by a single manufacturer but does require that the equipment supplier of the system shall be responsible for the complete system.

All equipment furnished under by EP Contractor shall be new. The equipment furnished by the EP Contractor shall comply with the applicable provisions of the following standards:

1. Hydraulic Institute
2. Institute of Electrical and Electronic Engineers (IEEE)
3. National Electric Code (NEC)
4. Standards of National Electrical Manufacturers Association (NEMA)
5. Underwriter's Laboratory (UL)
6. D1784 – Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
7. D1785 – Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
8. D3350 – Specification for Polyethylene Plastic Pipe and Fittings Materials
9. F714 - Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
10. ASTM A778 for stainless steel pipe
11. ASTM A36 Standard Specifications for Structural Steel
12. American Society of Civil Engineers (ASCE): Standard No. 002 "Measurement of Oxygen Transfer Efficiency in Clean Water"
13. Colorado Department of Public Health and Environment (CDPHE) Wastewater Design Criteria and Regulations

1.3. SUBMITTALS

The EP Contractor shall furnish to Engineer with the equipment submittal package within the timeframes in the Agreement. Contractor shall mark each submittal with his certification that the submittal has been checked for compliance with contract documents. Submittal shall include the date of submission, and if applicable, a complete list of all revisions.

At a minimum, submittal package shall meet the following requirements:

1.3.01. Shop Drawings - The EP Contractor shall submit shop drawings for review and approval including the documents listed herein.

Make all shop drawings accurately to a scale sufficiently large to show all pertinent features of the item, its layout, setting, and method of connection to the Work. Include legends for all symbols. The data shown on the Shop Drawings and for materials shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable Engineer to review the information as required. Drawings shall show the overall dimensions and layout of the equipment including anchoring/foundation details, piping and wiring interface points, and the location of equipment required to be accessed during normal operation and maintenance of the system and replacement. All drawings shall be submitted electronically in AutoCAD 2020 format to scale as well as in hard copy and shall be of sufficient scope and detail for submission to CDPHE for their review and for construction.

The EP Contractor shall submit the following:

Manufacturer's literature clearly marked to identify the applicable model number and optional features if applicable. Provide system illustrations, narrative description, specifications, dimensions, material of construction, performance data, weights, pump curves, and engineering data for the Contractor supplied equipment. If Contractor uses manufacturer's standard schematic drawings, he must clearly modify drawings to delete information which is not applicable to project and add to the standard information additional information that is applicable to project. Show dimensions and clearances required, performance characteristics and capacities, and controls, and any other pertinent data applicable to the project. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance data and charts, and other standard descriptive data shall be clearly marked as to what data is applicable and what is not applicable.

a. Schematic drawings and hydraulic profiles for the EP Contractor's complete system for review by Engineer and for submittal to CDPHE for CDPHE design review. Show equipment supplied by the Contractor including all piping, pipe sizing, direction of flow, and function for treating wastewater. Demonstrate how the different lines are backflow protected, in a manner consistent with CDPHE design criteria. Electrical schematic diagram, with narrative description, shall show the motor horsepower and other electrical load information as well as the electrical function and layout. The EP Contractor is responsible for tagging and numbering of equipment he is furnishing.

b. Control system schematic diagram showing the control system components and their physical interconnections including field wiring diagram. A narrative description of the proposed

control system and the scope of the programming work to be performed by the EP Contractor shall be included with the schematics. Manufacturer's catalog information for each panel component.

c. Process design calculations including design calculation for all major piece of equipment (diffusers, blowers, media, etc.) and justification for the sizing of the components. Design calculations for biological processes for aeration and nitrification.

d. Manufacturer's product data for all aeration blowers, including blower curves and calculations showing how discharge conditions were determined for each blower.

e. Structural and seismic design calculations for the blower skirts signed and sealed by a licensed professional engineer licensed in Colorado. This can be furnished up to 3 weeks later than the submittal package deadline, however, if the structural engineer requires changes to what was previously submitted, those changes will need to be completed within one week and all impacts of those changes would be at the EP Contractor's expense.

f. Drawings showing plan and elevation view of each piece of equipment and identify termination points and all components.

g. Special tools information. Furnish details of all special tools required to properly check, test, replace and maintain all furnished components with current pricing information. (Note Contractor shall furnish all special tools needed to operate and maintain the system being furnished.)

h. Functional Process Description and Control Sequence Tables showing all valves and equipment position/activation for all process steps.

i. Manufacturer's instructions for shipping, storage and handling, and installation.

j. Suggested spare parts list to maintain equipment in service for a period of a least 5 years.

1.3.02 Test Reports - At least fourteen (14) days prior to delivery of the equipment package, the Contractor shall submit the following reports:

a. Certified diffuser performance test data shall be submitted. It shall include air flow versus head loss data, and Standard Oxygen Transfer Tests conducted in clean water in accordance with the standards set forth by the ASCE Subcommittee on Oxygen Transfer Standards. Any tests must be completed in a minimum of 10' diameter tank; no single column tests will be accepted.

b. Standard Oxygen Transfer Efficiency calculations to verify the clean water oxygen transfer efficiency of the diffuser at low flow, design flow, and maximum airflow.

c. Head loss Calculations for the complete aeration system from blower discharge through all piping to the diffuser/aerator. Calculations shall include the total head loss across the membrane, balancing orifice, piping system and Ares aeration unit at both design and maximum airflow.

1.3.03. Information Package - At least thirty (30) days prior to any delivery, the Contractor shall submit the following electronically to Owner:

- a. Approved Bill of Material cross-referencing the shop drawings.
- b. Approved Technical Submittals.
- c. Special handling and storage requirement for EP Contractor provided equipment on site (including any specific storage requirements for components).
- d. Schedule of EP Contractor field services (schedule to be coordinated with Owner and Plant Contractor).
- e. Detailed startup plan including schedule.

1.3.04. Operation and Maintenance Manuals. Submit three (3) hard copies and two (2) searchable pdf copies of operating and maintenance manuals for all operating apparatus and equipment furnished under the EP Contract to the Engineer following final approval of applicable submittals and prior to shipment of Equipment. One copy may be submitted for review and the remaining copies submitted after approval of the review copy. Following Acceptance (the 90 day start up period) testing, the EP Contractor shall revise the O&M manual as needed and as applicable provide the updated manual to the Owner prior to final payment and start of warranty periods.

Bind manuals in durable covers with: front cover stating general nature of the manual, clearly indexed or provided with thumb tabs for each item or product (bookmark pdf copies), and include a directory of all subcontractors and maintenance contractors with names, addresses and phone numbers, indicating the area of responsibility for each. Prepare all such manuals in approximately 8-1/2" X 11" format, except that ledger size sheets may be used for plans and diagrams. Emergency data shall be clearly marked and tabbed. Manuals shall contain full information for the system as a whole and for each item of operating equipment and components including:

A description of the operation of the entire system and explanation of the function of each piece of equipment and a detail description of the operation and controls.

Schematic diagrams, narrative description, and as-built wiring of control, mechanical, and electrical systems, circuit directories for each electrical, control, and communication panel which correspond to the labeling of same of sufficient scale to be easily readable,

Valve Directory showing the tagging of all valves, valve number, location, function, and their normal and emergency operating position,

For every blower, pump, and motor provide: make, model, and serial number, nameplate information, voltage amperage and power factor for motors, suction and discharge pressures, lubrication, and maintenance schedule for pump.

Instructions for installation, start-up and shut down operations, normal and emergency operations, indicate pressures, temperatures, valve positions, etc.

Inspection and maintenance requirements, procedures, schedules, safety precautions, and manufacturer's literature for all pieces of equipment and systems including (but not limited to) pumps, compressors, blowers, valves, control equipment, heaters, MCC, valves, etc. Include information on regular maintenance with schedules for daily, weekly, monthly, and less frequent tasks, assembly and disassembly of repairable units, troubleshooting guides, lubrication schedules, data sheets and complete nomenclature of all replaceable parts, their part numbers, current cost, and name and address of nearest vendor of parts and at least one alternate supplier,

Operating procedures for normal, bypass, and emergency operation including positions of all switches, valves, levers, etc. during start-up, shut down, summer, winter operating conditions,

For each item, list the manufacturer and supplier including: addresses, phone numbers, name of local representative and local service agency if different from supplier. Mark neatly the correct model number and data for the model number where the literature covers more than one model, and delete, or otherwise clearly indicate, all manufacturers' data with which this installation is not concerned. Catalog cuts are not acceptable unless they contain complete O & M and other instructional data.

Include copies of all guarantees and warranties issued and copies of all approved shop drawings with all data concerning changes made during construction. Final payment will not be approved until the required O & M materials are received and approved.

Program files, if there are program files as part of the equipment provided, shall be submitted electronically on a CD-ROM or USB drive in a format that allows Owner to reinstall all control programs, PLC's etc. and restart the control program.

The O&M manuals shall be submitted electronically in searchable Adobe Acrobat format with an electronic Table of Content. Scanned drawings shall have a minimum resolution of 400 DPI.

Record Drawings - Furnish record plan and elevation drawings and schematics in both hard copy and Autocad 2020 format that clearly show the location of each, screens, points of chemical addition, pump, tank, media, pipe, valve, and other components of the system to scale and with detail drawings of the system.

PART 2 – PRODUCTS

2.1. DESIGN AND PERFORMANCE REQUIREMENTS

2.1.01 – Recent Discharge Monitoring Results

Discharge monitoring results from 2016 to fall of 2022 are provided as an attachment to this specification. In addition, the Town has collected some data by individual cell as listed below:

	Ammonia					Kjeldahl Nitrogen					BOD			
	Inf	Cell #1	Cell #2	Cell #3	Eff	Inf	Cell #1	Cell #2	Cell #3	Eff	Inf	Cell #1	% Rem	Eff
02/23/22	24.7	22.4			18.9	42	37			24.8	164.2	118.1	28.1%	6.06
Begin anaerobic test in Cell 1														
03/02/22	19.1	22.8			19.3	32.92	23.76			34.68	193.5	77.1	60.2%	3.45
03/09/22	24.6	18.92			16.84	49.6	33.92			23.56	144.9	102.9	29.0%	1.28
03/16/22	19.8	19.6			14.73	44	36.96			24.18	215.9	104.7	51.5%	4.44
03/22/22	23.1	24.7			18.1	51.6	40.8			23.04	244.8	105	0.5711	3.57
End anaerobic test														
08/22/22	91.2					115.6								
09/29/22	36.7	26.7		2.98	1.75	63.3	52.8	19.62		14.56	246			12.6
10/12/22	26.6	23.34	2.46	1.176	1.288	73.7	36.54	12.84	7.88	9.14	6.6			6.6
11/08/22	36.9	29.8	3.99		1.65	58.8	46.4	10.7		5.95				

	TSS			E coli	Temp			D.O.		
	Inf	Cell #1	Eff		Inf	Cell #1	Eff	Inf	Cell #1	Eff
02/23/22	90	225	3.4		17.1	5.8	5.8	4.08	7.61	5.18
Begin anaerobic test in Cell 1										
03/02/22	125	51.67	3.4		9.6	5.8	5.9	5.31	2.75	5.18
03/09/22	211.67	113.3	2.6	<1	7.9	7.5	5.2	2.57	1.43	5.7
03/16/22	104	80.8	3.4		6.7	5.4	6.3	4.72	1.92	4.42
03/22/22	90	96	3		6.7	5.4	13.6	8.39	1.92	2.75
End anaerobic test										
08/22/22										
09/29/22										
10/12/22										

2.1.02 – Design Conditions

Design conditions are provided in Exhibit B of the Agreement.

Other discharge requirements are included in the Town discharge permit copy of which is attached.

In addition, the minimum dissolved oxygen level in the effluent must be a minimum of 4 mg/l as a daily limit and the equipment package shall provide adequate alkalinity and other needed nutrients and additives to achieve the specified effluent quality and maintain adequate temperatures for required treatment.

2.1.03 Control System Strategy

Contractor's system shall allow the Town to control the air supply manually and by time or pond dissolved oxygen levels.

The system should be designed to allow the operator to supply less air during periods of low load or to reduce the number of blower and/or the speed of the blower motors, diffusers/ aerators in use during those periods as the operator determines most beneficial. Sufficient manual controls, and redundancy shall be provided to allow for operation of all equipment controlled through the master control panel.

2.1.04 Performance Requirements

Aeration and nitrification systems shall be designed to be installed in the lagoons and nitrification tank proposed in the plant upgrade.

The aeration system shall be designed to provide oxygen to peak BOD and TKN loading. Design of the aeration system shall be based on needing 1.75 pounds of dissolved oxygen per pound of BOD removed and 4.6 # / # ammonia removed at a minimum adjusted to field conditions in Lake City. If lower rates are proposed they will need to be justified to CDPHE and the Owner who will determine if the lower rates are acceptable.

Aeration and nitrification / ammonia removal systems shall be design to meet CDPHE redundancy requirements as shall any other equipment furnished as part of the package.

2.1.05 Scope of Supply

The manufacturer shall supply all process equipment and design necessary to achieve the performance standards stated in section 2.1.02, including but not limited to:

1. Aeration diffusers
2. High surface area media
3. Any required screening or media retention sieves

4. Heating units and/or insulated covers as needed for the system proposed
5. Furnish bill of materials and drawing for air distribution piping arrangement and sizing from blower discharge to air supply header to and into the aeration and nitrification basins (cells) including but not limited to air supply manifolds, control valves, hose barb connection, hose clamps, flexible weighted tubing, and complete weighted aeration unit assemblies as referenced in Triplepoint's scope of supply for project number 3487.
6. All connections and valves required to properly install, operate, and maintain of aeration equipment.
7. Air supply blowers with individual variable frequency drives
8. Shop drawings and process engineering design

2.1.06. Guaranteed Performance Requirement:

The Contractor shall guarantee the equipment package provided will meet the discharge parameters listed above in section 2.1.02 for a period 5 years as detailed in the performance guarantee attached.

2.2. Aeration System

Aeration system shall provide submerged air to the treatment units and the system provide all the oxygen and mixing needed under field conditions in Lake City for specified reductions in BOD, TSS, and NH3. Units shall be compatible with the lagoon configuration shown on the preliminary design plans. Units providing air from the bottom part of the cell shall be weighted to ensure that release air at the depths intended.

The EP Contractor shall configure the system to make it possible to field isolate each diffuser, aeration chain, and/or aerator from the system. Each shall be removable from the surface for inspection, repair, and replacement without having to turn off the air to more than 3 units. Systems that require draining the basin to service equipment are not acceptable.

2.2.01 Design Responsibility

EP Contractor shall be responsible for:

Determining the size and number of aeration units, air supply and distribution piping arrangement and sizing from the air supply header, and other equipment required to provide the air flow rates required for the biological and nitrification treatment and to assure proper mixing within the lagoons and/or basins.

Providing an air distribution layout and the number of aeration assemblies required to:

1. Demonstrate uniform air delivery to all diffusers at design airflow in compliance with the air supply treatment requirement.
2. Demonstrate the oxygen transfer efficiency at standard conditions for the aeration assembly and under field conditions.
3. Demonstrate aeration assembly mixing capacity and the area of influence is sufficient to ensure the required mix regime in each lagoon or and basin and prevent short circuiting or deposition of solids.
4. The number and size of the aeration assemblies will be determined by their oxygen transfer efficiency, mixing capacity, and the area of influence.
5. Demonstrate the aeration units have a non-clog design.
6. Demonstrate compliance with the air supply and mixing pressure requirement and provide baseline data for the increase in aeration assembly backpressure requirement.
7. Demonstrate design (and operation) compliance with CDPHE redundancy requirements.
8. Demonstrate the aeration system can operate efficiently over a flow ranging from 0.045 to 0.30 MGD and an organic load ranging from 60 to 1100 ppd BOD. For other parameters listed in the design table, use the table concentrations and the flow range listed in this bullet point.

2.2.02 General Aerator Requirements:

Aeration System shall be sized and designed to ensure complete mix in Cell 1, Cell 2A and the MBBR basin and shall provide a minimum SOR of 6150 ppd in Cell 1, 842 ppd in Cell 2A, 100 ppd in Cell 2B, and 2300 ppd in the nitrox basin. Aeration system for MBBR basin shall keep the media suspended, and provide a minimum of 5 mg/l of dissolved oxygen to the tanks. The aeration system shall also provide air to the mixers in the existing concrete basin.

1. With the exception of integrated check-valves, no mechanical, moving parts shall be used.
2. Each diffuser/aerator shall have an integrated check-valve capable of preventing backflow of water into air distribution system.
3. All hardware shall contain locking features to minimize likelihood of inadvertent disassembly during shipping, handling, installation, and operation.
4. All screwed plumbing fittings that do not utilize a gasket shall use appropriate Teflon type joint sealant or equivalent to minimize leakage and loosening of parts over time.
5. A single appropriately sized hose barb shall be integrated to diffuser/aerator and used as an air inlet point. Flexible weighted tubing shall be attached to said hose barb by a

stainless-steel hose clamp. This hose barb shall be integral with unit to reduce likelihood of breakage or failure should someone try to drag or lift unit by hose.

6. Units shall be weighted to ensure that release air at the depths intended.

2.2.03 Materials:

All materials must be compatible with raw sewage, partially treated sewage and with disinfection chemicals.

1. All submerged and buried hardware shall be of Type 316 or better stainless steel.
2. All non-submerged hardware shall be of Type 304 or better stainless steel.
3. All removable fittings shall be of Type 304, 316 or better stainless steel.
4. All ballast shall be of non-corrosive and non-toxic material or shall be permanently sealed within or coated with such material.
5. All other parts shall be of 316 stainless steel, PVC, HDPE, GPP, EPDM or equivalent, non-corrosive, non-toxic, and non-degradable materials suitable for complete immersion in a typical wastewater environment.

2.2.04. Removal

Means for easily removing and replacing aeration unit from above shall be provided including:

- i. A floating marker buoy shall be permanently attached to each unit by a stainless-steel or marine rope tether of proper length to float directly above the aeration unit.
- ii. Tether shall be capable of lifting at least five times the weight (out of water) of the installed aeration unit.
- iii. Aerators shall be removable from the ponds without needing to adjust water level.

2.2.05. Feeder Tube

1. Feeder tubing (flexible weighted tubing) used as the connection between the aeration unit and the header or lateral piping shall be low density, polyethylene or PVC tubing with self-contained integral ballast, and be ultra-violet stabilized. No tubing with external and/or intermittent ballast added will be accepted.
2. All polyethylene tubing shall conform to the requirements of ASTM D 1248.
3. Tubing length shall be of sufficient size to allow removal of the aeration unit from above for cleaning, maintenance, repair, or replacement.
4. Tubing inside diameter shall be sized to minimize friction loss. Tubing shall be connected at both ends with Type 316 stainless steel hose clamps to stainless steel hose barbs.

2.2.06. Manifolds

1. All feeder tubes shall extend from the shore to no more than 3 diffusers/ aerators.
2. Stainless steel manifolds (supplied with aerators) mounted to the header piping along shore shall provide a means of airflow control and flow-balancing.
3. Each manifold shall consist of a number of welded ports (based on system layout).
4. Each port shall include a stainless-steel ball valve the same size as the line and hose barb for connection to each aeration diffuser airline.
5. Stainless steel hose clamps shall be used to attach the feeder tubing to the manifold.
6. Manifold sizing shall be determined by manufacturer based on system design.
7. All piping and manifolds shall be sized for a velocity of less than 3 fps.
8. Isolation valves shall be full port and able to be throttled. Each shall be marked and tagged as required for process piping valves to be installed by the Plant Contractor in accordance with Section 02722 of the Plant Contract.

2.2.07. Air Supply Blowers

1. Blower unit(s): 4 or more of sufficient horsepower to provide the necessary air; with the largest unit for standby. Given the wide range of operating conditions between seasonal demands and current versus design demands, the Owner prefers the use 4 blowers and to not use starters larger than #3.
2. Each blower shall a VFD drive which shall also act as a soft start. A common drive for multiple blowers is not acceptable.
3. Blowers should be designed for airflow and pressure needed to supply all equipment that requires aeration.
4. High efficiency TEFC/IP-55 motors shall be used to minimize energy consumption.
5. Provide sound attenuating enclosures shall limit the noise to 65 db or less at 6 feet outside the building and no more than 80 db at 4' from the blower inside the building. Note that distance is about as far from the blower as one can get in the building. Noise dampening enclosure shall include a minimum of 1" foam insulation and foam shall comply with UL94-HF 1 for flammability. The enclosure shall be minimum 16-gauge steel or fiberglass and provide suitable protection for indoor or outdoor installation. The enclosure shall have piano hinged panels and removable panels to allow maintenance access including tensioner adjustment and oil change. Panels shall incorporate locking closures. At least one integral ventilation fan with wiring to connect to the electrical supply, sized to provide adequate cooling of the package, shall be provided. Blowers are required to be inside a building.

6. Blowers shall have automatic belt tensioning: motor mounted on swing frame, spring supported, with visual indication of tension.
7. Provide inlet filter assemblies, inlet and outlet expansion joints, filter restrictor gauges, inlet/discharge silencers, check valves, pressure relief valves, pressure gauges, temperature gauges/switches, flexible inlet and discharge piping couplers, etc. and isolation valves as required for a complete installation.
8. Provide spare parts and accessories set per blower, including two (2) spare intake filters, two (2) V-belt sets and two (2) quarts of each lubricant.
9. Provide galvanized intake hood with bird screen.

2.2.08. Air Lines

If called for in the Agreement, EP Contractor shall furnish all air lines needed to transport air from the blower discharge to aerator, diffuser, etc to meet oxygen and mixing demands. All air lines shall be size for the maximum amount of air plus 25% that will be needed for the cell. That includes providing line capacity to both sides the Cell 2 for it to operate in complete mix mode when Cell 1 is out of service. Valving for the air lines shall be sufficient that no more 3 diffusers are served by a single valve.

2.3 Insulated Covers

- A. A modular floating insulated cover may be provided for each lagoon/basin in order to prevent heat loss of the wastewater in the winter months.
- B. The insulation if part of the proposed package shall be designed by the EP Contractor's engineer to ensure that there will be adequate heat retention to maintain the temperature of the basins at 10° C unless the Contractor can demonstrate to the Owner and CDPHE that a lower temperature will consistently meet the performance requirements Exhibit B of the Agreement
- C. Insulation that is vulnerable to UV degradation shall be encased in a material that will withstand UV exposure for 25 years at the conditions expected at the Lake City plant
- D. The cover shall be designed so as to not trap air under the cover system or between the panel and the panel cover or under the cover.

2.4 Immersion Tank Heater

Contractor is responsible for ensuring the water temperatures are warm enough for nitrification. If the lagoon cells are not insulated or adequately insulated, an electric immersion heater may be provided in order to maintain a minimum of 10°C unless the Contractor can demonstrate to the

Owner and CDPHE that a lower temperature will consistently meet the performance requirements in sub section 2.1.02 above.

If heater is proposed it shall be:

- A. Contractor sized heating system to ensure the temperatures are maintained to ensure adequate nitrification to ensure the effluent limits are maintained
- B. wall-mounted unit provided with wire and wiring boxes for electrical connection.
- C. made of stainless-steel sheath elements and riser.
- D. a support system sufficient to stabilize the heater elements in the turbulent tank.
- E. Should a K-type thermocouple and thermowell assembly be incorporated it shall be located a minimum of 3' distance from the heater elements with the thermocouple wire placed in a separate conduit in order to avoid signal interference.
- F. Temperature data shall be transmitted to the control panel system at adjustable increments stating at no less than 15-minute increments. Control system shall have the ability to signal a dialer when temperature drops below a settable temperature.

2.5 High Surface Area Media

- A. High surface area media shall be supplied to provide enough surface area for nitrifying bacteria to grow and achieve nitrification for flows up to 0.175 MGD with the understanding that additional media shall be purchased at the guaranteed price listed in Article 21.7 of the Agreement and installed in order to meet the 2043 design criteria in the Agreement.
- B. Media shall be manufactured of durable virgin-made high-density polyethylene or approved equal and be resistant to a wide range of aqueous solutions, acids, alkalis, oxidizing agents, oils, fats and alcohols.
- C. Media shall allow for a high concentration of microorganisms to thrive within the internally protected areas and significant void space to eliminate biomass plugging and allow for transfer of oxygen and nutrients to the biofilm.
- D. The media shall have a specific gravity of 0.90 to 1.05 to allow it to float freely in the water column where the bacteria can gain access to food and oxygen.

- E. The media fill percentage shall be designed to allow for right density such that the aeration can sufficiently turbulate and allow for anti-clogging effect whereby biomass cannot build up on the pieces and hinder the process.
- F. Media system shall include a means to retain the media in the media basin.
- G. Maximum headloss through the nitrification basin including feeder pipes and headers shall be 0.25' or less at less at peak design flow.
- H. Maximum depth of the basin to contain the media shall not exceed 13' water depth.
- I. Contractor shall furnish any cleaning equipment and materials needed to ensure that the media performs properly during a 20-year design life.

2.6 Screening

The existing headworks includes a 1" opening bar screen and a coarse grit removal chamber ahead of the first treatment cells. If additional screening is needed for the equipment package proposed, the screening system, including screen, basin, piping, power, cleaning equipment etc. for a complete screening system shall be provided as part of the equipment package.

2.7 Recycle System

The recycle shall recycle effluent from the nitrox unit or the upstream end of the Cell 3 to the concrete basin. The system shall consist of pumps, piping, mixers and controls/VFD's for the pumps and mixers. Pumps shall be capable of pumping as little as 40 gpm at a TDH of 3 ft to 200 gpm at 24 ft TDH. This can be accomplished using multiple pumps plus one pump to meet CDPHE redundancy requirement. Mixers for placement in the corners of the floor of the concrete basin shall capable of completely mixing the 300,000 gallon basin with one mixer out of service. Unless added by change order the EP Contractor's scope of supply is limited to furnishing the mixers and ensuring there is adequate air in the blower package to run the mixers.

2.8 Instrumentation and Control System

System shall include an interface so that an operator can manually operate the system at the plant. The control system shall record all abnormal conditions and allow for the town to add alarms for those situations in the future. Access to the interface shall provide sufficient security to prevent the operator from setting the parameters outside safe operating limits.

The EP Contractor will supply a control panel to control the blowers and if needed and/or furnished, control of the immersion tank heater, chemical feed system, recycle system etc. In cases where the

control panel will be mounted outside, it shall be enclosed in an outdoor rated NEMA 4 weatherproof enclosure.

The panel shall be delivered completely assembled, pre-wired, tested UL listed, meeting the 2023 NEC and ready for installation. Wire shall be copper, and sized for its load per NEC/NFPA79 requirements. All wires will terminate on screw clamping terminal blocks. Wires between the panel and the equipment shall be enclosed in conduits sealed from moisture. Low voltage control conductors (24VDC) shall be separated from those carrying high voltage power (120VAC and above).

The control panel shall have sufficiently sized motor starters if needed for the blowers along with starters for the blower enclosure fans if needed. The enclosure fans shall have a 15 min off delay after the blower is switched off to allow for enclosure cooling.

The control panel must be capable of controlling any combination of blowers and to rotate each between duty and standby. Controls shall ensure a stagger delay in the start of each blower and motors to avoid a surge in electrical demand.

If a heater is furnished, an integrated temperature controller shall be furnished that allows for heating based on basin temperature monitoring thermocouple input and have a digital readout with buttons necessary to adjust the minimum temperature setting.

Each blower shall have non resettable operating hour counter displayed on the control panel that logs the time in tenths of hours, pressure gauges, out flow volume, stop/start emergency switch, reset button, alarm indicator, and alarm output to SCADA. If the control panel is not in sight of the blowers, a stop/start emergency switch shall be provided for each blower.

Pressure gauges shall be liquid filled with a minimum 3" diameter.

2.9 Electrical Requirements

All electrical components and completed panels shall be UL listed for industrial use in a wastewater treatment plant. Electronics shall also be FM approved.

Top, rear, sides and bottom panel plates shall be no less than USS 14 gauge. Panels shall be designed for front access. All locks on panels shall be keyed the same. All panels shall be labeled.

Enclosures shall be provided so that power brought to the cabinet in the specified voltage only needs to be terminated at a fused disconnect switch that is interlocked to the enclosure door. A power supply shall be provided to convert the base voltage of the system (i.e., 120/240V 1 phase, 208 V 3 phase, 230V 3 phase, or 460V 3 Phase) to alternate voltages that may be required by components of the equipment package.

A surge suppressor shall be included in the enclosure to protect the power supply, the PLC and I/O modules, and instruments as applicable from power surges and lightning.

Wiring within the panel shall be routed through plastic wire ways for neatness and organization. Conductors for high (120 VAC and above) and low (24VDC) voltage shall remain separated and where not separated, properly shielded. Wire shall be copper, and sized for its load per NEC/NFPA79 requirements. All wires will terminate through a ferrule type connector and terminate on finger safe, screw clamping terminal blocks. Wires shall be color coded and labelled.

Instruments and control devices shall be mounted in the front doors of the control panel enclosure including but not limited to the following:

- Pilot light to indicate a general alarm condition
- Pilot light to indicate that instrumentation voltage is present
- Lighted emergency stop (e-stop) pushbutton (lit when the e-stop is engaged) Pushbutton for e-stop reset
- Fused disconnect door latch

The doors shall be suitably reinforced between mounting cut-outs and drillings to supports instruments and devices without deformation.

Doors shall be essentially full height with turned-back edges and additional bracing to ensure rigidity and prevent sagging. Doors shall be mounted with strong piano-type hinges.

Where applicable, control voltage for motor starters, lights, relays, timers and auxiliaries shall be 120 VAC single phase supplied from a control power transformer in the panel supplied by Contractor.

Indicating lights and control devices shall be heavy-duty, gasketed, oil-tight 30.5 mm type and shall maintain the overall rating of the control panel. Each device shall be identified by an engraved or etched nameplate indicating the application or system action. Indicating lights shall be push-to-test type with LED lamps.

Auxiliaries and time-delay relays shall be heavy-duty, industrial type. Elapsed time meters shall be 99,999.99 hours span, non-resettable.

Dialer: The Owner will furnish a dialer that shall connect to the control panel alarms furnished by the EP Contractor.

2.10 Spare Parts

In addition to the spare parts listed to be provided elsewhere, EP Contractor shall furnish the following spare parts:

- Repair kit for each blower, diffusers, aerator, and pump furnished
- Appropriate lubricant for each blower, aerator, pump, motor, etc furnished
- Touch up paint for each paint system
- See also section 2.2.07 above.

PART 3 - EXECUTION

3.1. Preparation of Installation

The plant contractor shall construct the earthwork and basin(s) to the lines and grades shown on the project drawings as amended by agreement between the Owner, Engineer, and plant contractor during construction. He shall also make all electrical and mechanical connections consistent with Equipment Package (EP) Contractor's installation instructions furnished to the Town as part of the EP Contractor's submittal. The EP Contractor's representative shall examine the earthen cells and basins with the plant contractor, Owner and Engineer to ensure the cells and basins have been constructed in compliance with requirements for the installation of the aeration system and ammonia removal system. All parties shall also check the electrical and mechanical installation and connections. The EP Contractor representative shall also examine the materials and equipment furnished by the EP Contractor for damage and other defects and reject components in unsatisfactory conditions. Installation shall only proceed when all unsatisfactory conditions have been corrected and the EP contractor's representative has given written concurrence that the work has been completed in a manner to allow for the EP Contractor's equipment and materials to be properly installed.

3.2. EP Contractor's Field Services

EP Contractor's representative shall oversee and assist the plant contractor during installation, startup, commissioning and acceptance testing (the initial 90 days of operation at typical flows and loading) as well as approving the installation and provide procedures for testing before start up. The EP Contractor shall provide field staff familiar with the startup and commissioning work (having done at least 3 comparable start ups) for up to at least an aggregate of 11 days including two trips to site as needed for two separate start-ups This time will be used to provide assistance to the Owner's team for startup and commissioning and train the Owner's staff. Training of Owner's staff shall include demonstration of all mechanical and control functions included with the system. A minimum of 6 hours (no more than 2 hours in any day) shall be spent reviewing operations, maintenance, emergency operations, and troubleshooting functions with the Owner's staff. During the initial week of operation, EP Contractor shall provide on site services for the EP Contractor's

representative to correct equipment or systems malfunctions. The EP Contractor's representative will be expected to effectively interface with the plant contractor, Engineer and Owner's Staff during troubleshooting activities (electrical, aeration, SCADA, mechanical) that may arise during the initial operation. The EP Contractor's representative will also provide as needed for the correction of any defects in EP Contractor's equipment or systems.

In addition to the field services required during installation, 11 months after the full plant has been in service, the EP Contractor shall provide a qualified representative to complete an inspection of the wastewater treatment plant. The inspection shall be to determine whether the plant is properly operating and continuously meeting discharge permit requirements as outlined in these specifications. The EP Contractor shall provide a written report to the Engineer and Owner certifying whether the plant is operating properly and meeting permit requirements at the conclusion of this inspection. If operational deficiencies are noted, report shall include how the EP Contractor intends to remedy the deficiencies.

3.3 Tests and Inspection

After the installation of equipment is complete and the installation is certified by the EP Contractor's representative, startup / field acceptance tests shall be conducted. The test procedures shall be generally as specified herein; specific written test procedures shall be submitted by the EP Contractor for review and approval by the Engineer. The field acceptance tests shall be conducted by the plant contractor and the Town under the direct supervision of the EP Contractor's representative.

Water Quality Testing: Town shall sample and provide test results during the first 90 days of operation at normal flows and load that include (at a minimum) parameters in the performance guarantee. To the extent there is an effluent excursion after the initial 90-day period, Triplepoint shall reimburse the Customer for the additional cost of for the weekly sampling versus the costs of biweekly sampling if the laboratory analysis indicates no influent excursions above design values in exhibit B of the Agreement and no detrimental operational changes were made.

Air test: After the air distribution system is flushed, all air lines, headers, manifolds and piping incidentals shall be pressure tested by the plant contractor to 20 psi or 1.5 times operating pressure whichever is greater for one minute to ensure no leakage is present.

Level Test: The basins shall be flooded with clear water to the tops of the diffusers. The level of the diffusers shall then be checked to ensure that they are at the same elevation, within +/- 3 inches.

Air Leakage: The aeration system shall be turned on and the header pipe shall be observed for leakage. All leaking joints shall be repaired or replaced.

If any of the equipment fails a field acceptance test the equipment shall be repaired or replaced as deemed necessary by the Engineer.

The EP Contractor's representative shall furnish test and inspection reports to the Engineer.

3.4 EP Contractor's Certification

Provide EP Contractor's Certificate of Installation stating that the equipment is installed per the EP Contractor's recommendations and in accordance with the Equipment Contract Documents and that the plant is ready for start-up.

During start-up, EP contractor shall observe plant operations and following startup provide EP Contractor's Certificate of Performance stating that the equipment meets or exceeds the performance requirements as defined in the Equipment Contract Documents.

The final certification from the EP Contractor shall be provided at the successful conclusion of the Performance testing stating including explaining any changes to operations recommended during performance testing and stating that the plant met the performance testing requirements and is expected to perform per the contract documents going forward.

3.5 Plant Start-up and Performance Testing

After initial testing of all equipment and materials included the EP Contractor's package, the EP Contractor's representative shall assist and oversee a preliminary "running-in" period, per the Contract Documents, to make field tests and necessary adjustments. The EP Contractor shall be allowed a 90 day startup period to allow the biological processes to become established. Should he choose to do so, he may seed the plant to help encourage growth of the desired microorganism. Note that due to the construction phasing plan there may be two separate start-ups of the equipment.

Place each piece of equipment in the system in operation until the entire system is functioning. All components shall continue to operate without alarms or shut downs, except as intended, for seven (7) consecutive days during a period of at least average load for the startup period to be deemed completed. Conclusion of the startup period shall be certified by the EP contractor with concurrence from the Engineer and Town.

EP Contractor's representative shall operate the equipment through the design performance range consistent with available flows. Adjust, balance, and calibrate and verify that the equipment, safety devices, controls, and process system operate within the design conditions. Each safety device shall be tested for proper setting and signal. Response shall be checked for each equipment item and alarm. Simulation signals may be used to check equipment and alarm responses.

Prepare EP Contractor's representative's installation report and submit within 10 days after completion of field testing of the equipment package. Including the following information:

1. Field testing results including all the data collected in an easily understandable format.
2. A comparison of test results with design parameters in tabular form.
3. Descriptions of installation deficiencies not resolved to the EP Contractor's representative satisfaction.
4. Description of problems or potential problems and how they were resolved.
5. Recommendations for optimizing operations
6. Record copy of materials used for training session including outlined summary of course.
7. EP Contractor's Certificate of Installation and Certificate of Performance.

At the successful conclusion of the startup period of operation, the EP contractor shall furnish a report summarizing operations during the startup period including adjustments to operations and include his conclusion that the startup period is completed. The Town and Engineer will review the report and either concur with the conclusion or notify the EP Contractor of any concerns.

Following the Town's concurrence that the startup has been successfully completed, the 5 year Performance Test will commence. Requirements for Performance Testing are detailed in the Performance Guarantee included as an attachment to this document.

Should the system not meet the performance requirements in Section 2.1.02 above during the performance guarantee period of the contract, EP Contractor shall modify the system as needed to cause the system to meet those requirements at EP Contractor's expense.

3.6. Warranty / Performance Guarantee

Performance and acceptance testing must be satisfactorily completed prior to the release of the final 5% of payment and shall be the start point for the full system warranty period.

Performance guarantee shall be for a period for 5 years from final payment. During that period plant shall consistently meet the effluent requirements in Exhibit B of the Agreement and all equipment shall perform to its design parameters. Equipment warranty for the blowers and control panels shall be 2 years and for aeration and nitrox equipment shall be 5 years from final payment.

A detailed Performance Guarantee is an attachment to this Contract

Attachments:

Discharge Monitoring Results 2016-2022
CDPHE Redundancy Requirements
Phasing Plan of Operation
Performance Guarantee
Triplepoint Aeration Calculations
Triplepoint Nitrox (MBBR) Calculations
Excelsoir Blower Compact #8 Package

Lake City WWTP DMR	LIMIT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2022													
Influent Flow Avg		0.064	0.07	0.061	0.063	0.088	0.11	0.134	0.117	0.102	0.068	0.064	
Max		0.074	0.084	0.075	0.069	0.126	0.124	0.172	0.146	0.127	0.096	0.071	
Effluent Flow Avg		0.054	0.076	0.064	0.018	0.053	0.122	0.159	0.144	0.112	0.065	0.05	
Max		0.074	0.112	0.081	0.047	0.144	0.168	0.207	0.171	0.162	0.0111	0.073	
Dif bet Inf Eff Q		19%	-8%	-5%	250%	66%	-10%	-16%	-19%	-9%	5%	28%	
Influent BOD		167.0	371	348	204	227	262	407	327	246	402	423	314
Effluent BOD		4.7	4	4.4	6.7	9.4	12	4.1	9.3	12.6	6.6	12.5	4.3
Effluent 7 Day Avg		4.7	4	4.4	6.7	9.4	12						
BOD % Removal		97.2%	98.9%	98.7%	96.7%	95.9%	95.4%	99.0%	97.2%	94.9%	98.30%	97%	98.60%
BOD ave inf. ppd		89.14	216.59	177.04	107.19	166.60	240.36	454.85	319.08	209.27	227.98	225.78	
Influent TSS		69.0	172	110	146	80	57	182	111	100	133	117	51.9
Effluent TSS		2.0	3	2	4	9.8	39.5	22.7	14.3	59.2	43	38	15.7
TSS % Removal													
E. coli - 30 d		218.0	<1	<1	410.6	325.5	47.4	1	10.9	648.8	7.5	8	7.4
7 d													
TRC Avg		0.180	0.15	0.16	0.16	0.17	0.19	0.21	0.11	0.1	0.16	0.19	
pH min		7.110	7.11	7.01	7.21	7.17	6.29	7.77	6.53	6.51	6.52	7.35	
pH max		7.770	7.67	7.69	8.09	8.8	7.71	6.79	7.27	6.87	7.31	8.44	
Influent NH3			24.7	21.85			30.4	46.7	44.9	63.95	26.6	36.9	
Effluent NH3		12.500	18.9	18.05	12.4	26.8	5.6		11.8	2.175	1.444	2.075	7.2
Influent TKN			42	41.26			48.4	74.8	62.8	89.45	73.7	58.8	
Cell 1 TKN			37	28.84						52.8	36.54	46.4	
Effluent TKN			24.8	30.12					24.2	8.1	16.77	6.625	14.9
Eff TIN									34.3	27	23.2	20.4	26.5
Nitrate				2.6					21.3	11.6	17	17.4	19
Nitrite				0.13					1.2	12.8	4.6	0.54	0.26
Total P inf											15.6	14.7	9.2
Total P eff				13.3					6.4	8.1	7	6.2	5.9
TDS raw										160			
TDS inf													
TDS eff				324			327			349			394

2021													
Influent Flow Avg	0.225	0.077	0.07	0.064	0.065	0.091	0.131	0.142	0.115	0.104	0.0775	0.066	
Max		0.089	0.092	0.07	0.079	0.12	0.162	0.166	0.139	0.118	0.098	0.141	
Effluent Flow Avg		0.069	0.69	0.057	0.02	0.11	0.146	0.169	0.133	0.113	0.0665	0.032	
Max		0.082	0.084	0.074	0.036	0.19	0.182	0.225	0.166	0.125	0.111	0.065	
Dif bet Inf Eff Q		12%	-90%	12%	225%	-17%	-10%	-16%	-14%	-8%	17%	106%	
Influent BOD		193.0	142	152	109	176	91	169	362	183	161	165	191
Effluent BOD	30	<4	4.1	9.6	<4	18.4	7.9	13.3	20.8	20.6	21.2	6.4	4
Effluent 7 Day Avg	45	<4		9.6	<4	18.4	7.9	13.3	20.8	20.6	21.2	6.4	4
BOD % Removal	0.85	98.0	97.1%	94	96	89.5%	91.3%	92.1%	94.3%	88.7%	86.8%	96.1%	97.9%
BOD ave inf. ppd	450	123.94	82.90	81.13	59.09	133.57	99.42	200.14	347.19	158.73	104.06	90.82	
Influent TSS		43.300	35	55	64	56	51.6	143	240	140	44	45.2	73.3
Effluent TSS	75	7.800	5	5.2	<5	15.2	16	13.2	50	96	21	10.2	7.3
TSS % Removal		82.000	86	90	92	73	69	91	79	31	52	77	90
E. coli - 30 d	1920	130.000	2	62	<1	<1	4	12.2	200	160	2400	1	1
7 d													
TRC Avg	0.29	0.180	0.18	0.17	0.17	0.16	0.19	0.22	0.17	0.18	0.18	0.16	
pH min	6.5	7.380	7.53	7.52	7.49	8.9	0.1	7.35	5.98	6.33	6.53	6.66	
pH max	9	7.650	7.69	7.68	8.89	7.34	0.28	7.79	7.77	7.04	7.99	7.95	
Influent NH3													
Effluent NH3		25.700	24.1	22	11.7	12.7	7.5	21.9	4.9	1.5	23.9	3.6	
TDS raw													
TDS inf													
TDS eff							337			405			
2020													
Influent Flow Avg	0.225	0.089	0.082	0.073	0.07	0.09	0.132	0.144	0.11	0.105	0.076	0.062	0.067
Max		0.104	0.119	0.097	0.099	0.113	0.177	0.17	0.133	0.123	0.095	0.076	0.079
Effluent Flow Avg		0.087	0.077	0.064	0.037	0.081	0.131	0.157	0.118	0.115	0.077	0.061	0.07

Max		0.109	0.111	0.083	0.079	0.122	0.153	0.184	0.142	0.139	0.105	0.068	0.087
Dif bet Inf Eff Q		2%	6%	14%	89%	11%	1%	-8%	-7%	-9%	-1%	2%	-4%
Influent BOD		291.0	143	299	164	257	445	441	386	282	427	534	197
Effluent BOD	30	3.4	2.9	4	17.5	22.8	4	15.2	21.9	14.4	4.6	18.8	4
Effluent 7 Day Avg	45												
BOD % Removal	0.85	98.8%	98.0%	98.7%	89.3%	91.1%	99.1%	96.6%	94.3%	94.9%	98.9%	96.5%	98.0%
BOD ave inf. ppd	450	216.0	97.7	182	95.7	190.7	490	529	354	247	271	276	110
Influent TSS		26.7	34.6	168	224	84	158	130	85.3	50.7	163	56	131
Effluent TSS	75	<5	7.8	<5	20.4	13.4	7.4	27.5	10.7	7.6	<5	<5	<5
TSS % Removal													
E. coli - 30 d	1920	<2	<2	<2	50	140	<2	2	2	2	7	<2	<2
7 d													
TRC Avg	0.29	0.3	0.27	0.27	0.21	0.17	0.19	0.19	0.16	0.19	0.19	0.23	0.19
pH min	6.5	7.4	7.31	6.96	7.43	7.3	7	7.32	7.33	7.4	7.28	7.48	7.22
pH max	9	7.5	7.63	7.62	8.84	8.85	7.62	7.62	7.67	7.7	7.9	7.82	7.52
Influent NH3													
Effluent NH3		16.2	21	22	17	16.9	13.9	27.5	37.6	26.7	31.5	21.4	22
TDS raw													
TDS inf													
TDS eff				260			283			137			411
2019													
Influent Flow Avg	0.225	0.047	0.064	0.055	0.078	0.105	0.184	0.155	0.129	0.123	0.184	0.124	0.075
Max		0.053	0.085	0.076	0.114	0.134	0.22	0.22	0.175	0.2	0.393	0.181	0.086
Effluent Flow Avg		0.069	0.084	0.067	0.055	0.076	0.178	0.18	0.115	0.131	0.21	0.136	0.07
Max		0.690	0.119	0.105	0.099	0.119	0.22	0.22	0.173	0.219	0.447	0.22	0.082
Dif bet Inf Eff Q - = gain in Q		-32%	-24%	-18%	42%	38%	3%	-14%	12%	-6%	-12%	-9%	7%
Influent BOD		277.000	179	210	157	160	102	419	266	194	62.4	108	191
Effluent BOD	30	3.300	11.1	4.5	3.4	7.4	5.4	7.7	8.9	6.8	9.1	4.4	3.6

Effluent 7 day	45												
BOD % Removal	0.85	98.000	93	98	97	95	94	98	97	96	85	95	98
BOD ave inf. ppd	450	108.000	96	96	102	140	156	541	286	199	95.7	112	119
Influent TSS		53.300	46	52	73	46	35	140	49	64	153	26.8	281
Effluent TSS	75	<5	11	<5	<5	16	9.8	7.5	12.2	13.1	26.5	5.3	<5
TSS % Removal													
E. coli - 30 d	1920	70.000	1600	80	<2	<2	8	4	0	<2	30	<2	<2
7 d													
TRC Avg	0.29	0.160	0.17	0.19	0.17	0.17	0.18	0.17	0.16	0.19	0.18	0.21	0.27
pH min	6.5	7.310	7.46	7.22	7.51	8.12	6.99	7.23	7.66	7.32	7.4	7.3	7
pH max	9	7.530	7.71	7.62	8.65	8.88	8.12	7.6	7.46	7.61	7.7	7.45	7.52
Influent NH3													
Effluent NH3		5.300	23.7	5.3	20.6	15	7.8	25.9	30.1	18.2	17.8	6.7	10.1
TDS raw													
TDS inf													
TDS eff				289			314			379			269
2018													
Influent Flow Avg	0.225	0.050	0.048	0.047	0.052	0.082	0.084	0.116	0.091	0.061	0.051	0.042	0.046
Max		0.065	0.056	0.05	0.079	0.123	0.102	0.146	0.116	0.097	0.062	0.056	0.056
Effluent Flow Avg		0.074	0.075	0.063	0.037	0.085	0.098	0.134	0.111	0.074	0.062	0.049	0.059
Max		0.100	0.088	0.09	0.089	0.176	0.164	0.161	0.168	0.127	0.082	0.064	0.071
Dif bet Inf Eff Q - = gain in Q		-32%	-36%	-25%	41%	-4%	-14%	-13%	-18%	-18%	-18%	-14%	-22%
Influent BOD		229.000	194	147	139	93.4	230	337	330	206	190	230	362
Effluent BOD	30	4.100	3.6	4.6	6.5	5	25.3	16.8	180	14	15.7	8	3.1
Effluent 7 day	45												
BOD % Removal	0.85	98.000	98	97	95	95	89	95	45	93	91	97	99
BOD ave inf. ppd	450	95.000	78	58	60	64	161	326	250	104	81	81	139
Influent TSS		57.000	37	42.7	43.3	31.5	42	124	102	68	77	59	52
Effluent TSS	75	5.000	<5	<5	<5	<5	27	30.8	17	12.7	15.4	5.8	<5

TSS % Removal													
E. coli - 30 d	1920	17.000	17	<2	<2	<2	4	<2	500	2	<2	<2	<2
7 d													
TRC Avg	0.29	0.220	0.18	0.26	0.24	0.13	0.16	0.16	0.17	0.18	0.2	0.23	0.17
pH min	6.5	7.000	7.2	7.47	7.13	6.97	6.6	7.08	7.25	6.77	7.16	7.31	7.17
pH max	9	7.450	7.66	7.87	8.32	8.64	7.68	7.58	7.58	7.3	7.63	7.65	7.36
Influent NH3													
Effluent NH3		16.300	20.1	22.2	16.6	19.1	11.8	27.4	24.2	8.7	15.7	17.4	16.2
TDS raw													
TDS inf													
TDS eff				316			325			379			364
2017													
Influent Flow Avg	0.225	0.030	0.036	0.041	0.056	0.094	0.16	0.14	0.108	0.082	0.049	0.045	0.047
Max		0.036	0.064	0.049	0.108	0.18	0.2	0.18	0.155	0.13	0.07	0.055	0.051
Effluent Flow Avg		0.037	0.043	0.046	0.062	0.12	0.17	0.17	0.13	0.12	0.067	0.066	0.067
Max		0.069	0.064	0.047	0.13	0.18	0.21	0.21	0.187	0.18	0.093	0.113	0.075
Dif bet Inf Eff Q - = gain in Q		-19%	-16%	-11%	-10%	-22%	-6%	-18%	-17%	-32%	-27%	-32%	-30%
Influent BOD		234.000	246	215	188	118	104	364	481	371	228	192	216
Effluent BOD	30	4.500	7.9	7	5.2	15.2	10.8	7.6	12	17.9	7.7	9.6	6.1
Effluent 7 day	45												
BOD % Removal	0.85	98.000	97	97	97	87	89	98	97	95	96	95	97
BOD ave inf. ppd	450	58.000	74	74	88	93	138	425	433	253	93	72	85
Influent TSS		158.000	59	48	33.5	34.7	30.3	156	204	96	47	32	140
Effluent TSS	75	<5.0	5.3	<5	13.3	34	24	8.1	10.8	16.3	10.3	8	5.5
TSS % Removal													
E. coli - 30 d	1920	30.000	<2	<2	<2	30	22	261	<2	<2	<2	<2	2
7 d													
TRC Avg	0.29	0.240	0.21	0.21	0.19	0.21	0.14	0.16	0.15	0.18	0.23	0.24	0.23
pH min	6.5	6.500	6.8	6.6	7.1	6.5	6.7	6.7	6.9	6.9	6.9	7	7
pH max	9	7.300	7.5	7.5	8.5	8.4	7.2	7.4	7.3	7.3	7.6	7.5	7.3

Influent NH3													
Effluent NH3		16.900	21.8	27	23.8	8.3	7.2	23.9	22.9	22.9	20	16.4	13.1
TDS raw													
TDS inf													
TDS eff				314			265			359			368
River													
Fecal													
Ammonia													
TDS													
2016													
Influent Flow Avg	0.225	0.036	0.045	0.027	0.031	0.05	0.115	0.1	0.067	0.056	0.035	0.028	0.021
Max													
Effluent Flow Avg		0.046	0.055	0.034	0.021	0.065	0.161	0.12	0.082	0.081	0.085	0.028	0.046
Max		0.062	0.76	0.04	0.034	0.1	0.21	0.2	0.128	0.13	0.105	0.051	0.064
Dif bet Inf Eff Q - = gain in Q		-22%	-18%	-21%	48%	-23%	-29%	-17%	-18%	-31%	-59%	0%	-54%
Influent BOD		51.000	154	60	55	81	82	327	248	147	65	50	30
Effluent BOD	30	2.200	4	4.8	4.8	10.2	15	23	46	6.8	10	4.7	2
Effluent 7 day													
BOD % Removal	0.85	99.000	97	98	98	95	83	94	88	98	95	98	99
BOD ave inf. ppd	450	15.312	57.8	13.5	14.2	33.8	78.6	272.7	138.6	68.7	19.0	#N/A	#N/A
Influent TSS		42.700	32	84	-	47.2	28.4	65	49	59.3	101	27	63
Effluent TSS	75	<5.0	<5.0	<5.0	-	13.3	35.5	36.7	56.7	21.5	13.2	8.4	5.3
TSS % Removal													
E. coli - 30 d	1920	2.000	-	<2	<2	<2	1600	300	170	2	<2	<2	<2
7 d													
TRC Avg	0.29												
pH min	6.5	6.500	6.6	6.7	6.9	6.5	6.9	6.6	6.5	6.6	6.7	6.9	6.5
pH max	9	7.300	7.46	7.5	8.5	8.9	7.15	7.5	6.9	7	7.2	7.4	7.2
Influent NH3													
Effluent NH3		19.700	21.8	21	22.2	21.4	13.5	29	3.8	1	4.7	8	13.6

843 2.3.2 Flow Measurement

844 The monitoring of the various flows throughout a WWTP under various flow and
845 organic loading conditions helps provide an audit of plant performance and aids in
846 forecasting the need for additional treatment capacity. Therefore, the design of
847 any new or expanded wastewater treatment facility must include adequate flow
848 metering and/or measuring of all pertinent liquid and sludge flow streams. The
849 PDR must include a list of locations where flow metering and/or measuring devices
850 will be provided. For purposes of these criteria, flow metering requires recording
851 whereas flow measuring does not require recording.

852 Flow metering at the headworks area of any treatment facility must be provided.
853 The metering device must be equipped with a local flow indication instrument and
854 a flow recording-totalizing device suitable for providing permanent flow records.
855 Where influent flow metering is not practical and the same results may be
856 obtained with effluent metering, this type of flow metering arrangement will be
857 considered. If influent flow is significantly different from effluent flow, both must
858 be measured (e.g., installations such as lagoons, sequencing batch reactors, and
859 plants with excess flow storage or flow equalization). Influent and effluent
860 metering must be provided as reasonably anticipated to be required by the
861 Colorado Discharge Permit System (CDPS) permit.

862 Influent measurements must be representative of the volume of all influent wastes
863 received at the facility, including septage, biosolids, etc. and must be taken
864 before the influent wastestream joins or is diluted by any other wastestream or
865 substance (e.g., internal recycle flows). Effluent measurements must be taken
866 after internal recycle flows are removed and before the effluent joins or is diluted
867 by any body of water. Flow meters must be located with adequate upstream and
868 downstream hydraulic conditions at each metering device (e.g., avoiding
869 turbulence, eddy currents, air entrainment) to ensure that accuracies within $\pm 10\%$
870 of actual flows during the full range of anticipated flow variations.

871 The flow measurement equipment (e.g., flume, weir, magnetic meter, venturi
872 meter) must be consistent with the proposed application. All flow measurement
873 equipment must be sized to function effectively over the full range of flows
874 expected and must be protected against freezing. Flow measurement devices must
875 be accessible for maintenance and calibration.

876 Where multiple treatment units are proposed, such as two or more clarifiers or two
877 or more aeration basins, provision must be included for isolation and proportional
878 flow splitting to each treatment unit (e.g., measurement and adjustment as
879 needed).

880 Flow metering equipment may control chemical addition by signals such that the
881 paced unit varies the chemical, etc. in proportion to the flow variations.

882 2.3.3 Installations of Mechanical Equipment

883 The design specifications must identify when a trained manufacturer
884 representative is required to check the installation and initial operation of major
885 ~~mechanical equipment items.~~

886 2.3.4 Unit Process Redundancy

887 At least two process treatment units of each type must be provided for domestic
888 WWTPs with a design capacity equal to or greater than 40,000 gpd. Where two
889 units are proposed, each unit must have a design flow of at least 50 percent of the

890 total design flow. The hydraulic capacity (not necessarily the treatment capacity)
891 of the remaining units must be sufficient to hydraulically pass the peak wastewater
892 flow without overflow with the largest unit out of service. Other chapters of this
893 document provide specific process redundancy requirements (e.g., disinfection).
894 Design of a single unit must include a description of bypass and backup processes
895 for periods when the train is not functioning during planned and unplanned (i.e.,
896 emergency) events of short, intermediate, and long-term duration. If a single train
897 is used, an emergency operation plan (e.g., equipment, procedures, emergency
898 storage, hauling) must be provided to maintain operation during operational
899 impairment, such as power failures, flooding, equipment failure, and maintenance
900 shutdowns.

901 For all treatment plants, firm capacity (i.e., largest unit out of service) must be
902 provided for treatment process related equipment (e.g., pumps, blowers, chemical
903 feed pumps) to maintain 100 percent of the design capacity when the largest
904 equipment unit is out of service, unless a specific alternative requirement is
905 identified in the particular section of these criteria.

906 With more automation, designs with redundant, separate alarms, notification
907 methods, and/or controllers may be appropriate for critical process points. Spare
908 programmable logic controllers must be commercially available and operating
909 software with set points must be maintained onsite for uploading at the facility, or
910 spare proprietary programmable logic controllers must be stored and readily
911 available at a location in the United States.

912 All lift stations and treatment plants must have an option for full manual (“hands”)
913 operational capability outside of the SCADA system. Similarly, all lift stations and
914 treatment plants must have capability for some redundant alarms that function
915 outside of the SCADA system.

916 In a situation where the DWWTW is expected to serve a built out service area and
917 to operate at or near design capacity without future expansion, the design must
918 consider if more than two process trains, or an extra process train (i.e., beyond
919 two trains for design capacity), are needed to provide more capacity when a basin
920 or process train is removed from service during future maintenance.

921 2.3.5 Maintenance Provisions

922 Piping must be designed with no isolated pockets that cannot be drained. The
923 DWWTW must have provisions for cleaning all pipes that are subject to clogging or
924 accumulation of solids (e.g., scum, sludge, lime feed and sludge, drain) without
925 causing violation of effluent limitations.

926 Chemical or process air feed lines must be designed to enable repair or
927 replacement without drainage of the basins, wetwells, or tanks.

928 Vital mechanical or electrical components (e.g., pumps, mixers, bar screens,
929 aerators, diffusers, instrumentation, and valves, but not piping, tanks, basins,
930 channels, or wells) must have provisions (e.g., availability of other equipment) to
931 enable repair or replacement without interrupting DWWTW operation or causing
932 the DWWTW to violate effluent limitations.

933 The DWWTW must have lifting and handling equipment available to aid in the
934 maintenance and replacement of all components. Means must be provided for
935 removal of components located above and below the ground level of buildings and
936 other structures.

Phasing Plan

1.3.6.c. Phased Construction

The Town has already started to widen the road on the west side of the plant to create space to move the proposed polishing pond a bit west of its current location. Construction of the new building and ammonia basin at least to the point where it does not impact widening the road should be completed before the private access is moved the west. Work on the plant renovation will start with the installation a temporary baffle curtain in the existing large earthen cell to create a quiescent area in that cell allowing the Town to take the existing polishing pond off line. Once the polishing pond is off line it will be drained. Most of the sludge in the polishing pond has already been removed, but once the cell is drained the remaining sludge will be removed. Once cleaned out, the construction of the new polishing pond will commence mostly within the footprint of the existing polishing pond although the new cell will be farther from the steep slope to the east. The existing bypass piping will be used to route the discharge from the existing large earthen basin to the chlorine contact chamber. Both the concrete basin and the existing earthen basin will remain in use with air and power from the existing blower building. Construction of the new building and the ammonia removal basin should also be progressing during this phase. If the new polishing pond is completed and available for use in June and July it is recommended that the existing earthen cell remain in use and the new polishing pond be put into use for the peak summer months.

During the construction of the balance of the proposed facilities influent flow will be routed to the concrete basin which will be set up to run in complete mix mode with surface aeration. Power for the surface aeration could come from taking the existing blowers off line and using those buckets to power the aerators. From the concrete basin, flow will travel to the renovated polishing pond. The baffle curtain in the renovated pond will be used to allow for aeration and mixing in the upstream side and a quiescent area in the downstream side. Unless the new building and blowers are installed in time, temporary power lines will be extended from the existing MCC to the west side of the renovated polishing pond as a source of power for the aeration of the upstream side of the pond. Electrical disconnects will also be provided at the concrete basin and upstream side of the polishing pond so that aerators can be used in it during and post construction. This will allow for replacement of the existing blowers using new blowers while maintaining aeration and mixing in the concrete basin and polishing pond during construction. Attachment 12 is a graphic of the phase plan proposed.

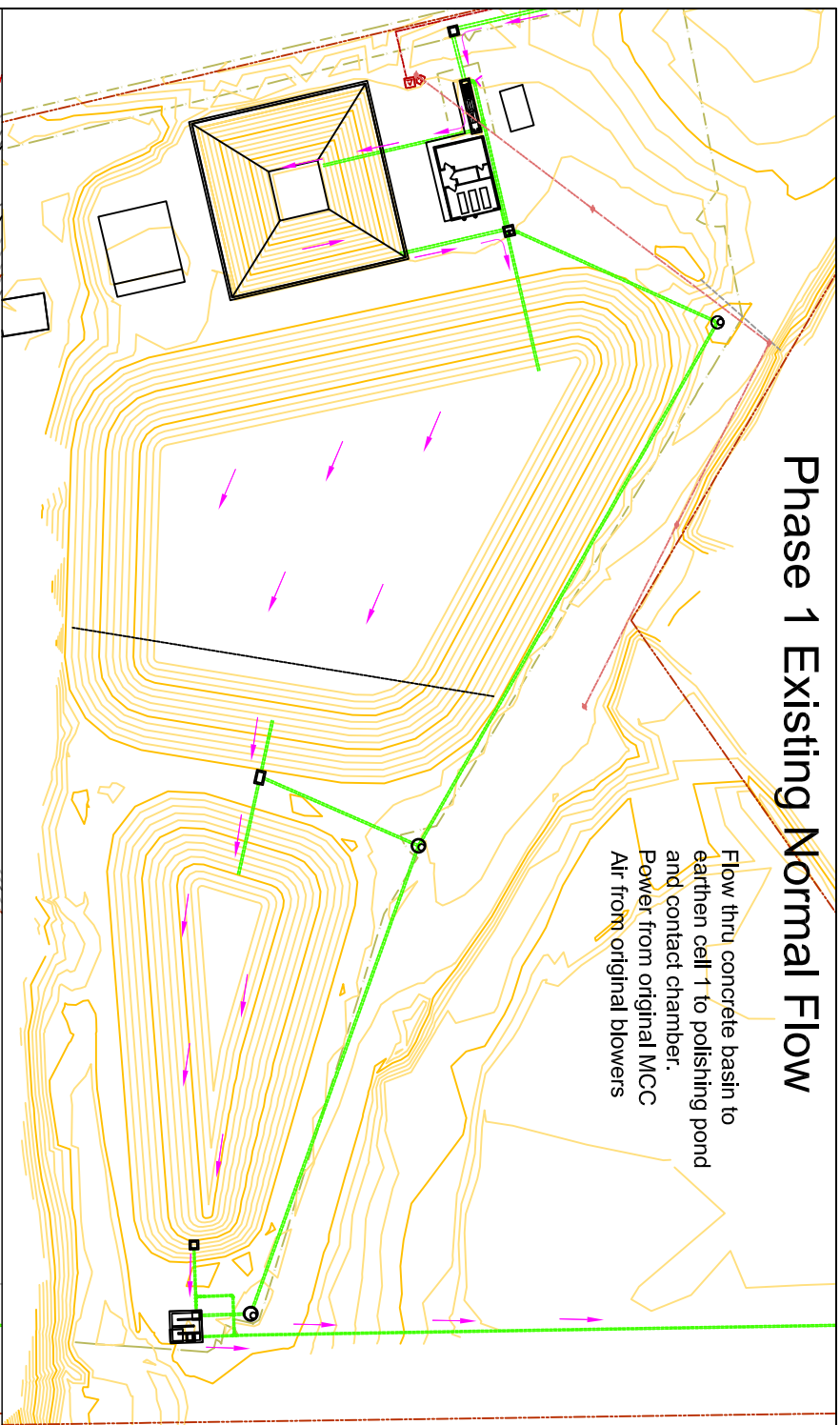
Using the concrete basin and the new polishing pond will allow for the larger earthen cell to be removed from service, drained, sludge removed, and the area cleaned up. Calculations to show that the plant can be operated without the large cell in use are included in the design calculations (attachment 3). It is anticipated that the Contractor will want to construction both Cell 1 and Cell 2 simultaneously. New blowers and aeration system will also be furnished and installed during this timeframe. Once the new cells are liner, tested, startup will begin for all the new equipment, controls and treatment cells.

1.3.6. d. Outfall diffuser

The facility does not require an outfall diffuser. The existing outfall pipe will remain in use.

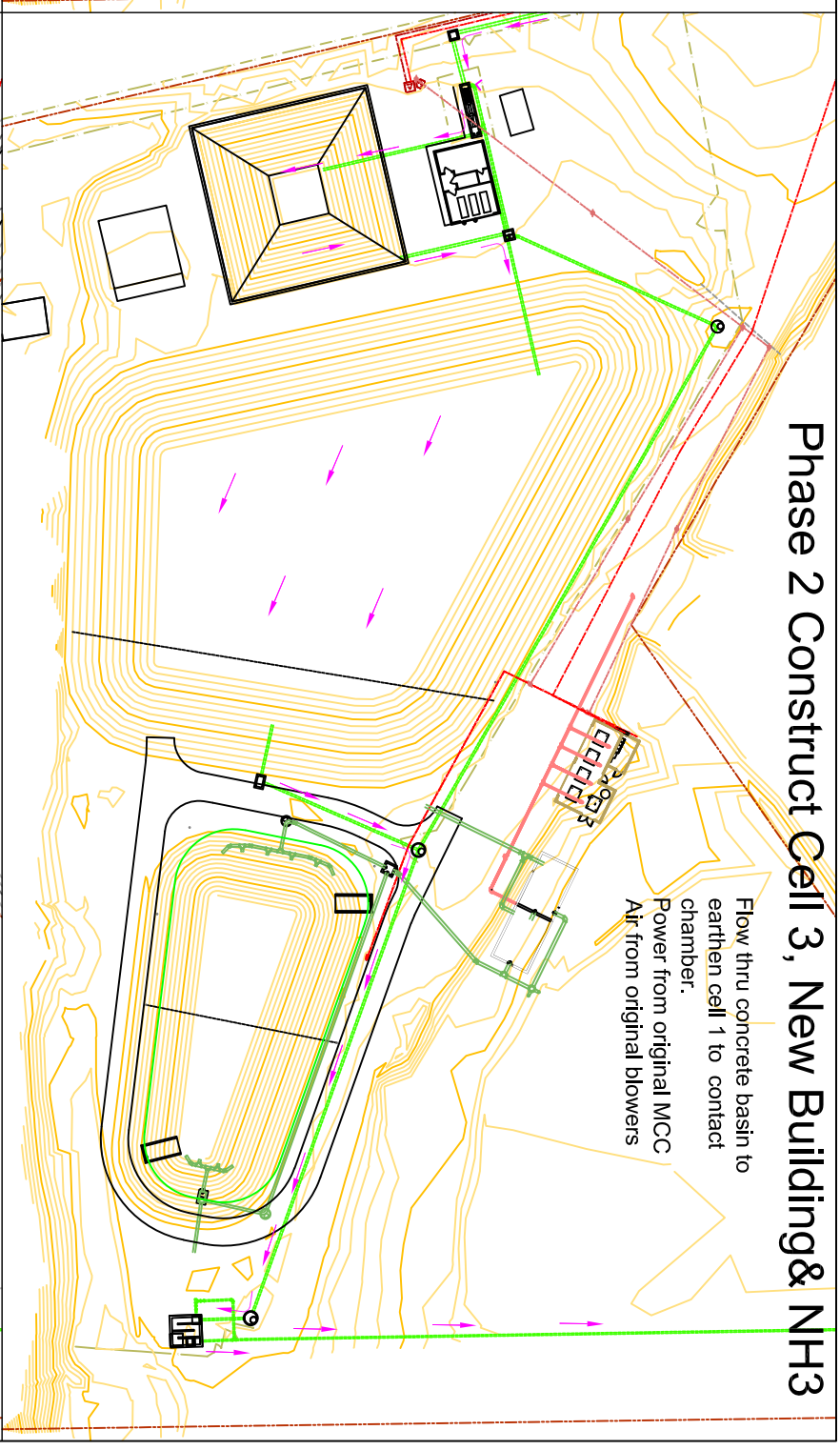
1.3.6. e. Upset and Response Plan

Power Failure – Power failures are typically short in duration, less than 2 hours. The lagoon treatment system can be without air and mixing for that period of time without significant adverse impacts. The [SCADA-dialer](#) system will have battery backup. The flow monitoring equipment also has limited backup power. Discussions with Gunnison Electric, the electric provider to the plant indicated that they are



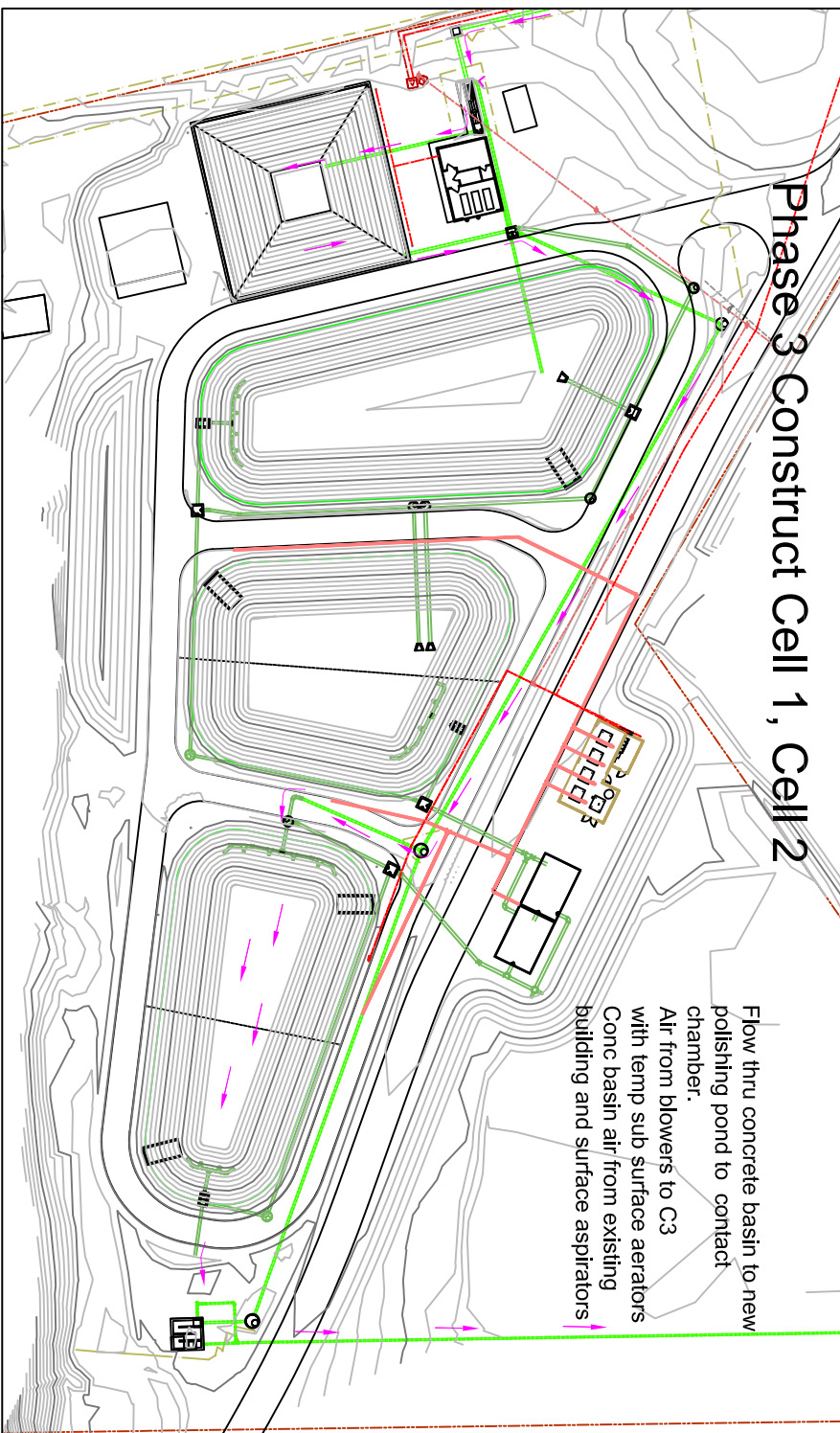
Phase 1 Existing Normal Flow

Flow thru concrete basin to earthen cell 1 to polishing pond and contact chamber.
 Power from original MCC
 Air from original blowers



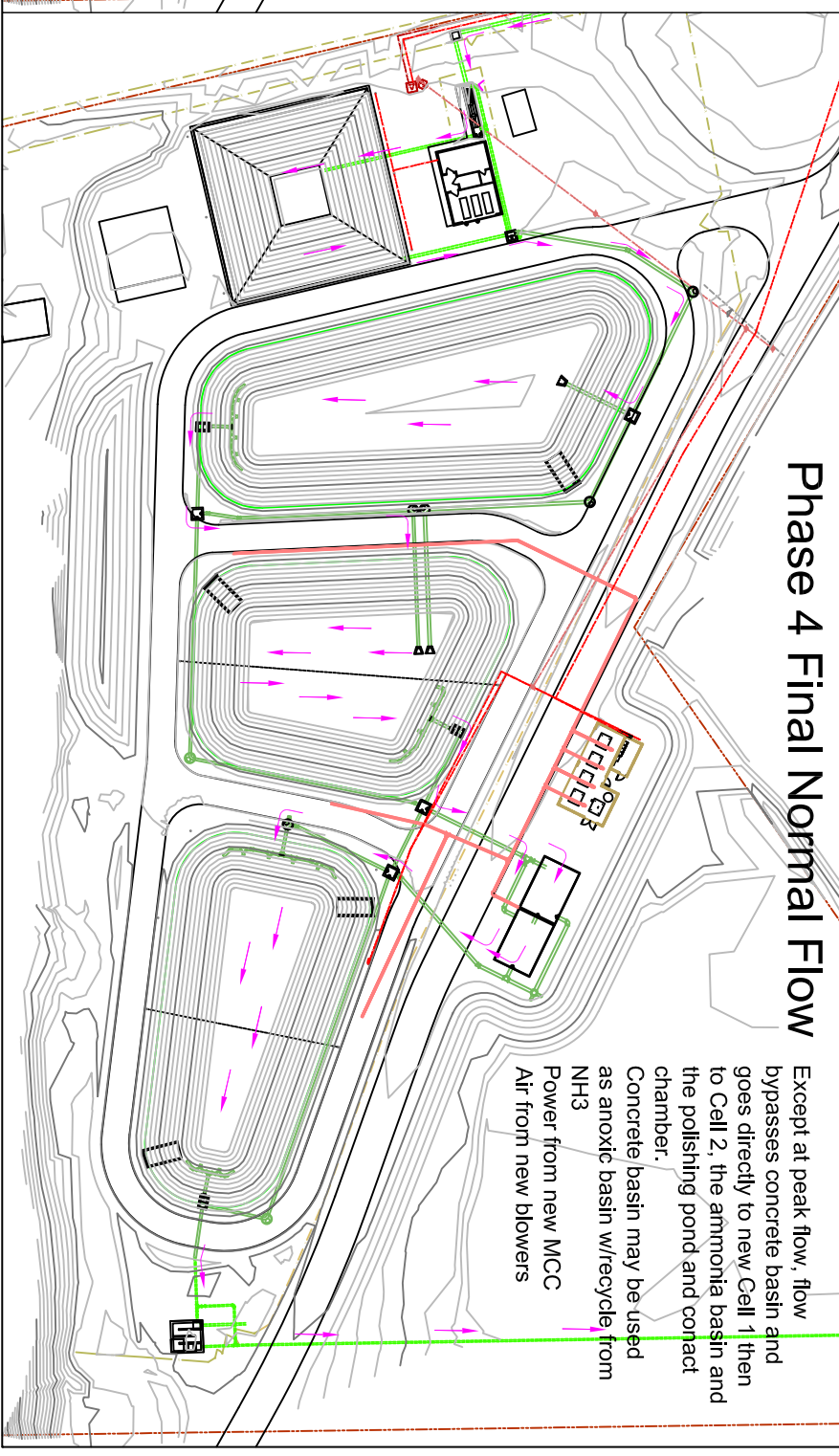
Phase 2 Construct Cell 3, New Building & NH3

Flow thru concrete basin to earthen cell 1 to contact chamber.
 Power from original MCC
 Air from original blowers



Phase 3 Construct Cell 1, Cell 2

Flow thru concrete basin to new polishing pond to contact chamber.
 Air from blowers to C3
 Conc basin air from existing building and surface aspirators



Phase 4 Final Normal Flow

Except at peak flow, flow bypasses concrete basin and goes directly to new Cell 1 then to Cell 2, the ammonia basin and the polishing pond and contact chamber.
 Concrete basin may be used as anoxic basin w/recycle from NH3
 Power from new MCC
 Air from new blowers

ADDING NEW BUILDING CONSTRUCTION TO PHASE
 2. MODIFIED LOCATION OF TEMP POWER AND AIR

TOWN OF LAKE CITY
 WASTEWATER TREATMENT PLANT

PHASING PLAN

Consolidated Consulting Services
 P.O. Box 1079, Ridgway, CO 81432
 Phone: 970.326.0000
 Fax: 970.326.0000
 Email: info@ccs-engineers.com



TRIPLEPOINT EQUIPMENT PERFORMANCE GUARANTEE

GUARANTEE

Triplepoint stands behind its equipment by guaranteeing that it will perform as represented in the Basis of Design calculations summary provided with each proposal. Triplepoint will correct any non-performing equipment at no cost to the customer subject to the terms & conditions herein.

TERMS & CONDITIONS

The Equipment Performance Guarantee is contingent upon the following terms & conditions being met:

1. The design assumptions provided by the Customer and thereby included in the Basis of Design provided by Triplepoint, including daily flow and influent loading consistent with the monitoring schedule required in section 4, below, are accurate to actual field conditions.
2. The influent wastewater does not or has not contained any threshold concentration of inorganic pollutants or other such materials, solutions, or product that are inhibitory to biological treatment processes.
3. A comprehensive laboratory analysis of the influent wastewater was disclosed to Triplepoint during the consultation process so the system could be designed appropriately given site conditions.
4. Water quality data is recorded weekly (during startup and acclimation period up to 90 days) that include (at a minimum) parameters listed in the chart below. After acclimation biweekly testing is acceptable. If an effluent excursion occurs, weekly testing must commence. The more data available, the faster Triplepoint can interpret and propose operational guidance. To the extent there is an effluent excursion after the initial 90-day period, Triplepoint shall reimburse the Customer for the additional cost of for the weekly sampling versus the costs of biweekly sampling if the laboratory analysis indicates no influent excursions above design values in the basis of design and no detrimental operational changes were made.

5.

Raw Influent	Plant Effluent
BOD	BOD
TKN	NH3-N
	TN

TSS	TSS
pH	pH
DO	DO
Water Temp	Water temp
Oil and Grease	Oil and Grease

6. In the event BOD, TKN or solids loading to influent exceed set limitations, Triplepoint is not liable for effluent excursions above the effluent values in the design conditions the basis of design in the proposal.
7. The pre-existing site conditions were accurately represented to Triplepoint during the consultation phase, including sludge depth and composition.
8. A Triplepoint representative was present to inspect the installation and start-up of the system and provided a "Certificate of Proper Installation."
9. The system has been online for a minimum of 90 days in order for the proper biological process to be established and/or acclimation to be achieved. Any deficiencies in the operation of the initial 90-day period shall be the responsibility of Triplepoint to remedy. – save operational malfeasance by an operator.
10. The required Operation and Maintenance procedures have been substantially followed as per the O&M manual for each piece of equipment provided by Triplepoint at the time of installation. Evidence can be provided for this.
11. Triplepoint products have not been subjected to neglect, misuse or damaged in any way.
12. The wastewater system, which the Triplepoint products are incorporated in, has had a continuous flow of wastewater needed in order to maintain viable biology. Any disruption to the daily influent flow has not exceeded 24 hours.
13. Any performance failure has been reported to Triplepoint within 14 days of the Town becoming aware of the issue.
14. Evidence of sufficient records proving adherence to these terms and conditions can be provided to Triplepoint upon request. This requirement shall be satisfied by providing weekly water quality data for the initial 90-day period and thereafter biweekly water quality data reports.

EXCLUSIONS

This Product Performance Guarantee specifically excludes the following:

1. Acts of God, such as adverse weather events or any other such instance of uncontrollable natural forces in operation.
2. This Equipment Performance Guarantee does guarantee biological treatment performance. Biological treatment calculations provided in the Basis of Design documentation are based on best practice in the field of wastewater treatment, unless the defect in performance is caused by a variable that Triplepoint could not have reasonably anticipated in the exercise of their professional judgment, this performance guarantee shall apply.
3. Failure caused by any equipment or incident outside of Triplepoint’s control, including but not limited to, failure of ancillary equipment not provided by Triplepoint.
4. Failure of utilities such as, but not limited to electricity, air, water etc.

5. Failure of Customer to arrange for adequate operating staff to operate and maintain the equipment in accordance to the in general conformance with Operation and Maintenance manual provided.

LIMITS OF LIABILITY

If a Triplepoint system fails to perform as advertised in the Basis of Design provided upon completion of the consultation process, the terms and conditions as set out herein have been met and none of the above exclusions applies, Triplepoint shall at its sole option and expense, as Customer's sole remedy hereunder, either: (a) repair, replace or modify the system as Triplepoint deems appropriate; or (b) pay, in the form of liquidated damages, a lump sum amount equal to 100% of the price paid by Customer for the equipment within a period of 365 days.

DRAFT

Basis of Design

Lake City, CO

9-May-23

Aeration Design Calculations

SUMMARY - General Design Parameters					
v4.4 D	Design Scenario Name		0.3 MGD	0.275 MGD	0.175 MGD
1	Influent Flowrate	MGD	0.300	0.275	0.175
2	Influent Concentration	mg/L	450.0	450.0	450.0
3	Effluent Conc. (Summer)	mg/L	7.0	5.7	1.8
4	Effluent Conc. (Winter)	mg/L	27.3	23.4	9.4
5	Actual Oxygen Supplied	lb/day	2307.8	2252.6	2250.4
6	Air included for nitrification?		No	No	No
7	Number of Aerators		29	29	29
8	Estimated Tubing Length	ft	2000	2000	2000
9	Standard Airflow	SCFM	1631.63	1582.14	1575.74
10	Inlet Airflow	ICFM	2617.00	2537.00	2527.00
11	Design Pressure (w/cushion)	psig	7.77	7.77	7.77
12	Projected Brake Hp	bhp	143.56	139.17	138.62
13	Estimated Design Hp	hp	200.0	200.0	200.0

SUMMARY - Aerators

Cell Name	Air Supplied Via:	Manifolds	Manifolds	Manifolds
	Aerator Type:	750T	750T	750T
Basin		0	0	0
Cell 1		18	18	18
Cell 2A		6	6	6
Cell 2B		2	2	2
Cell 3A		2	2	2
Cell 3B		1	1	1

SUMMARY - Biological Treatment Calculations

Item	Description	Units	0.3 MGD	0.275 MGD	0.175 MGD	
1	Number of Treatment Cells		4	4	4	
2	Flow Regime		Series	Series	Series	
3	Site Elevation - HWL	ft	8630	8630	8630	
Basin						
4	Wastewater Flowrate	MGD	0.3	0.3	0.2	
5	Treatment Volume	M-Gal	0.2	0.2	0.2	
6	Treatment Time	days	0.8	0.9	1.3	
7	Treatment Type	-	Facultative	Facultative	Facultative	
8	Std Reaction Rate, k_{20}	days ⁻¹	0.06	0.06	0.06	
9	Design Water Temp	°C	20	20	20	
10	Design Reaction Rate, k_T	days ⁻¹	0.026	0.026	0.026	
Summer	11	Biological Treatment Eff.	%	4.5%	4.9%	7.5%
	12	Influent BOD Loading	lb/day	1,124	1,031	656
	13	Influent BOD Concentration	mg/L	450.0	450.0	450.0
	14	BOD Removed	lb/day	51	50	49
	15	Effluent BOD Loading	lb/day	1,074	980	607
	16	Effluent BOD Concentration	mg/L	429.8	428.0	416.4
Winter	17	Design Water Temp	°C	1.0	1.0	1.0
	18	Biological Treatment Eff.	%	2.3%	2.6%	4.0%

Wir	19	BOD Removed	lb/day	26.4	26.3	25.9
	20	Effluent BOD Concentration	mg/L	439.4	438.5	432.2
	N1	Influent NBOD Loading	lb/day	212	195	124
	N2	Influent NBOD Conc.	mg/L	84.9	84.9	84.9
	N3	Assumed NBOD Removed	lb/day	-	-	-
	N4	Effluent NBOD Loading*	lb/day	212	195	124
	N5	Assumed Eff. NBOD Conc.	mg/L	85	85	85
Cell 1						
	21	Wastewater Flowrate	MGD	0.3	0.3	0.2
	22	Treatment Volume	M-Gal	0.8	0.8	0.8
	23	Treatment Time	days	2.7	3.0	4.7
	24	Treatment Type	-	Complete Mix	Complete Mix	Complete Mix
	25	Std Reaction Rate, k_{20}	days ⁻¹	2.5	2.5	2.5
Summer	26	Design Water Temp	°C	20	20	20
	27	Design Reaction Rate, k_T	days ⁻¹	1.087	1.087	1.087
	28	Biological Treatment Eff.	%	87.3%	88.2%	92.2%
	29	Influent BOD Loading	lb/day	1074	980	607
	30	Influent BOD Concentration	mg/L	429.8	428.0	416.4
	31	BOD Removed	lb/day	937	865	559
	32	Effluent BOD Loading	lb/day	137	116	48
	33	Effluent BOD Concentration	mg/L	54.8	50.5	32.7
Winter	34	Design Water Temp	°C	1.0	1.0	1.0
	35	Biological Treatment Eff.	%	77.8%	79.2%	85.7%
	36	BOD Removed	lb/day	853.9	795.8	539.9
	37	Effluent BOD Concentration	mg/L	97.7	91.1	61.8
	N6	Influent NBOD Loading	lb/day	212	195	124
	N7	Influent NBOD Conc.	mg/L	84.9	84.9	84.9
	N8	Assumed NBOD Removed	lb/day	-	-	-
	N9	Effluent NBOD Loading*	lb/day	212	195	124
	N10	Assumed Eff. NBOD Conc.	mg/L	85	85	85
Cell 2A						
	38	Wastewater Flowrate	MGD	0.3	0.3	0.2
	39	Treatment Volume	M-Gal	0.3	0.3	0.3
	40	Treatment Time	days	1.1	1.2	1.8
	41	Treatment Type	-	Complete Mix	Complete Mix	Complete Mix
	42	Std Reaction Rate, k_{20}	days ⁻¹	2.5	2.5	2.5
Summer	43	Design Water Temp	°C	20	20	20
	44	Design Reaction Rate, k_T	days ⁻¹	1.087	1.087	1.087
	45	Biological Treatment Eff.	%	73.0%	74.6%	82.2%
	46	Influent BOD Loading	lb/day	136.8	115.7	47.6
	47	Influent BOD Concentration	mg/L	54.8	50.5	32.7
	48	BOD Removed	lb/day	100	86	39
	49	Effluent BOD Loading	lb/day	37.01	29.36	8.47
	50	Effluent BOD Concentration	mg/L	14.8	12.8	5.8
Winter	51	Design Water Temp	°C	1.0	1.0	1.0
	52	Biological Treatment Eff.	%	57.9%	60.0%	70.3%
	53	BOD Removed	lb/day	141.5	125.3	63.3
	54	Effluent BOD Concentration	mg/L	41.1	36.4	18.4
	N11	Influent NBOD Loading	lb/day	212	195	124
	N12	Influent NBOD Conc.	mg/L	84.9	84.9	84.9
	N13	Assumed NBOD Removed	lb/day	-	-	-
	N14	Effluent NBOD Loading*	lb/day	212	195	124
	N15	Assumed Eff. NBOD Conc.	mg/L	85	85	85

Cell 2B

55	Wastewater Flowrate	MGD	0.3	0.3	0.2	
56	Treatment Volume	M-Gal	0.3	0.3	0.3	
57	Treatment Time	days	1.1	1.2	1.8	
58	Treatment Type	-	Partial Mix	Partial Mix	Partial Mix	
59	Std Reaction Rate, k_{20}	days ⁻¹	0.28	0.28	0.28	
<hr/>						
Summer	60	Design Water Temp	°C	20	20	
	61	Design Reaction Rate, k_T	days ⁻¹	0.122	0.122	0.122
	62	Biological Treatment Eff.	%	23.2%	24.8%	34.1%
	63	Influent BOD Loading	lb/day	37	29	8
	64	Influent BOD Concentration	mg/L	14.8	12.8	5.8
	65	BOD Removed	lb/day	9	7	3
	66	Effluent BOD Loading	lb/day	28	22	6
67	Effluent BOD Concentration	mg/L	11.4	9.6	3.8	
<hr/>						
Winter	68	Design Water Temp	°C	1.0	1.0	
	69	Biological Treatment Eff.	%	13.4%	14.4%	20.9%
	70	BOD Removed	lb/day	13.7	12.0	5.6
	71	Effluent BOD Concentration	mg/L	35.6	31.1	14.5
<hr/>						
N16	Influent NBOD Loading	lb/day	212	195	124	
N17	Influent NBOD Conc.	mg/L	84.9	84.9	84.9	
N18	Assumed NBOD Removed	lb/day	-	-	-	
N19	Effluent NBOD Loading*	lb/day	212	195	124	
N20	Assumed Eff. NBOD Conc.	mg/L	85	85	85	
<hr/>						
Cell 3A						
72	Wastewater Flowrate	MGD	0.3	0.3	0.2	
73	Treatment Volume	M-Gal	0.3	0.3	0.3	
74	Treatment Time	days	1.0	1.1	1.7	
75	Treatment Type	-	Partial Mix	Partial Mix	Partial Mix	
76	Std Reaction Rate, k_{20}	days ⁻¹	0.28	0.28	0.28	
<hr/>						
Summer	77	Design Water Temp	°C	20	20	
	78	Design Reaction Rate, k_T	days ⁻¹	0.122	0.122	0.122
	79	Biological Treatment Eff.	%	21.7%	23.3%	32.3%
	80	Influent BOD Loading	lb/day	28	22	6
	81	Influent BOD Concentration	mg/L	11.4	9.6	3.8
	82	BOD Removed	lb/day	6	5	2
	83	Effluent BOD Loading	lb/day	22	17	4
84	Effluent BOD Concentration	mg/L	8.9	7.4	2.6	
<hr/>						
Winter	85	Design Water Temp	°C	1.0	1.0	
	86	Biological Treatment Eff.	%	12.4%	13.4%	19.6%
	87	BOD Removed	lb/day	11.0	9.6	4.1
	88	Effluent BOD Concentration	mg/L	31.2	27.0	11.7
<hr/>						
N21	Influent NBOD Loading	lb/day	212	195	124	
N22	Influent NBOD Conc.	mg/L	84.9	84.9	84.9	
N23	Assumed NBOD Removed	lb/day	-	-	-	
N24	Effluent NBOD Loading*	lb/day	212	195	124	
N25	Assumed Eff. NBOD Conc.	mg/L	85	85	85	
<hr/>						
Cell 3B						
89	Wastewater Flowrate	MGD	0.3	0.3	0.2	
90	Treatment Volume	M-Gal	0.3	0.3	0.3	
91	Treatment Time	days	1.0	1.1	1.7	
92	Treatment Type	-	Partial Mix	Partial Mix	Partial Mix	
93	Std Reaction Rate, k_{20}	days ⁻¹	0.28	0.28	0.28	
<hr/>						
94	Design Water Temp	°C	20	20	20	
95	Design Reaction Rate, k_T	days ⁻¹	0.122	0.122	0.122	

Summer	96	Biological Treatment Eff.	%	21.7%	23.3%	32.3%
	97	Influent BOD Loading	lb/day	22	17	4
	98	Influent BOD Concentration	mg/L	8.9	7.4	2.6
	99	BOD Removed	lb/day	5	4	1
	100	Effluent BOD Loading	lb/day	17	13	3
	101	Effluent BOD Concentration	mg/L	7.0	5.7	1.8
Winter	102	Design Water Temp	°C	1.0	1.0	1.0
	103	Biological Treatment Eff.	%	12.4%	13.4%	19.6%
	104	BOD Removed	lb/day	9.7	8.3	3.3
	105	Effluent BOD Concentration	mg/L	27.3	23.4	9.4
	N26	Influent NBOD Loading	lb/day	212	195	124
	N27	Influent NBOD Conc.	mg/L	84.9	84.9	84.9
	N28	Assumed NBOD Removed	lb/day	-	-	-
	N29	Effluent NBOD Loading*	lb/day	212	195	124
	N30	Assumed Eff. NBOD Conc.	mg/L	85	85	85

*Values for nitrification are assumed. Actual nitrogen removal varies based on conditions such as ten

SUMMARY - Aeration Calculations

Item	Description	Units	0.3 MGD	0.275 MGD	0.175 MGD
1	Site Elevation	ft	8630	8630	8630
2	O ₂ Loading Factor (BOD ₅)	O ₂ /BOD	1.75	1.75	1.75
3	Alpha-value, α		0.60	0.60	0.60
4	Beta-value, β		0.95	0.95	0.95
5	Theta-value, θ		1.02	1.02	1.02

Basin

Cell 1

22	Lagoon Side Water Depth	ft	12.00	12.00	12.00
23	Air Release Depth	ft	11.25	11.25	11.25
24	AOR - Total	lb/day	1640	1513	979
25	SOTE/ft	%/ft	1.74%	1.75%	1.75%
26	SOTE	%	19.53%	19.68%	19.68%
27	Design DO Concentration	mg/L	2.0	2.0	2.0
28	FTE		5.74%	5.79%	5.79%
29	Air requirement	scfm	1140	1099	1099
30	Airflow per aeration unit	scfm	63.3	61.0	61.0
31	Aerator Type		750T	750T	750T
32	Number of aeration units	units	18	18	18
33	Water Pressure	psig	4.87	4.87	4.87
34	Aerator Pressure Loss	psig	0.61	0.60	0.60
35	Header/Feeder P Loss	psig	0.83	0.80	0.80
36	Total Operating Pressure	psig	6.31	6.27	6.27
37	Design Motor Pressure	psig	7.31	7.27	7.27

Cell 2A

38	Lagoon Side Water Depth	ft	12.00	12.00	12.00
39	Air Release Depth	ft	11.25	11.25	11.25
40	AOR - Total	lb/day	248	219	111
41	SOTE/ft	%/ft	1.69%	1.69%	1.69%
42	SOTE	%	19.05%	19.05%	19.05%
43	Design DO Concentration	mg/L	2.0	2.0	2.0
44	FTE		5.60%	5.60%	5.60%
45	Air requirement	scfm	433	433	433
46	Airflow per aeration unit	scfm	72.1	72.1	72.1
47	Aerator Type		750T	750T	750T
48	Number of aeration units	units	6	6	6
49	Water Pressure	psig	4.87	4.87	4.87

50	Aerator Pressure Loss	psig	0.62	0.62	0.62
51	Header/Feeder P Loss	psig	1.28	1.28	1.28
52	Total Operating Pressure	psig	6.77	6.77	6.77
53	Design Motor Pressure	psig	7.77	7.77	7.77

Cell 2B

54	Lagoon Side Water Depth	ft	12.00	12.00	12.00
55	Air Release Depth	ft	11.25	11.25	11.25
56	AOR - Total	lb/day	24	21	20
57	SOTE/ft	%/ft	2.78%	2.91%	2.95%
58	SOTE	%	31.32%	32.79%	33.13%
59	Design DO Concentration	mg/L	2.0	2.0	2.0
60	FTE		9.21%	9.64%	9.74%
61	Air requirement	scfm	10	9	8
62	Airflow per aeration unit	scfm	5.2	4.3	4.1
63	Aerator Type		750T	750T	750T
64	Number of aeration units	units	2	2	2
65	Water Pressure	psig	4.87	4.87	4.87
66	Aerator Pressure Loss	psig	0.48	0.47	0.47
67	Header/Feeder P Loss	psig	0.41	0.41	0.41
68	Total Operating Pressure	psig	5.76	5.75	5.75
69	Design Motor Pressure	psig	6.76	6.75	6.75

Cell 3A

70	Lagoon Side Water Depth	ft	12.00	12.00	12.00
71	Air Release Depth	ft	11.25	11.25	11.25
72	AOR - Total	lb/day	19	17	13
73	SOTE/ft	%/ft	2.28%	2.28%	2.28%
74	SOTE	%	25.61%	25.61%	25.61%
75	Design DO Concentration	mg/L	5.0	5.0	5.0
76	FTE		2.00%	2.00%	2.00%
77	Air requirement	scfm	38	33	26
78	Airflow per aeration unit	scfm	19.2	16.6	12.9
79	Aerator Type		750T	750T	750T
80	Number of aeration units	units	2	2	2
81	Water Pressure	psig	4.87	4.87	4.87
82	Aerator Pressure Loss	psig	0.51	0.51	0.51
83	Header/Feeder P Loss	psig	0.44	0.44	0.44
84	Total Operating Pressure	psig	5.81	5.81	5.81
85	Design Motor Pressure	psig	6.81	6.81	6.81

Cell 3B

86	Lagoon Side Water Depth	ft	12.00	12.00	12.00
87	Air Release Depth	ft	11.25	11.25	11.25
88	AOR - Total	lb/day	17	14	17
89	SOTE/ft	%/ft	1.99%	1.99%	1.99%
90	SOTE	%	22.43%	22.43%	22.43%
91	Design DO Concentration	mg/L	2.0	2.0	2.0
92	FTE		6.60%	6.60%	6.60%
93	Air requirement	scfm	10	9	10
94	Airflow per aeration unit	scfm	10.2	8.8	10.3
95	Aerator Type		750T	750T	750T
96	Number of aeration units	units	1	1	1
97	Water Pressure	psig	4.87	4.87	4.87
98	Aerator Pressure Loss	psig	0.55	0.55	0.55
99	Header/Feeder P Loss	psig	0.51	0.51	0.51
100	Total Operating Pressure	psig	5.93	5.93	5.93
101	Design Motor Pressure	psig	6.93	6.93	6.93

PROJECT NO.: 3487

PROJECT NAME: Lake City POTW Nitrox

PROJECT LOCATION: Lake City, CO

DATE: May 15, 2023

PREPARED FOR

Joanne Fagan, P.E.

PREPARED BY

Triplepoint Environmental, LLC
Tom Daugherty, Western Region Manager
Office: (312) 428-4634
Fax: (312) 957-4712
Cell: (208) 699-7090
Email: tom@lagoons.com

Basis of Design –Nitrox+D

The NitrOx™ Process

The patent pending NitrOx Process was developed based on the principle that nitrification will reliably occur when the proper conditions are created. For wastewater lagoon systems that receive primarily domestic waste, the critical conditions required for nitrification include:

1. **CBOD** of 20-30 mg/L
2. **Dissolved oxygen** of 4.6 lb/O₂ per pound of NH₃-N (Metcalf & Eddy)
3. **Sufficient Population of Nitrifying bacteria**
4. Given sufficient Nitrifying bacteria, a **water temperature of 4-5 °C**

NitrOx Process utilizes the existing lagoon infrastructure for 90% BOD removal, after which nitrifying bacteria begin to nitrify. The effluent from the lagoons then flows hydraulically or is pumped into a two-stage nitrification reactor. In colder climates where the winter water temperature drops below 4 °C, a thermal regulation heat exchanger is added in order to increase the water temperature, typically only a few degrees during the coldest months of the year. In the two NitrOx reactor cells, there are millions of individual biofilm carriers that provide a habitat for nitrifying bacteria –ensuring that there are sufficient nitrifying bacteria even in the coldest water conditions. Each Nitrox reactor cell has an aeration grid to provide the necessary oxygen, as well as to create a complete mix environment to keep the biofilm carriers in constant motion. The two cells are covered with floating insulated covers to mitigate heat loss and the media is kept in the tanks with stainless steel sieves. Finally, the effluent from the second NitrOx reactor is discharged into a final polishing/clarification lagoon prior to the ultimate discharge from the lagoon system.

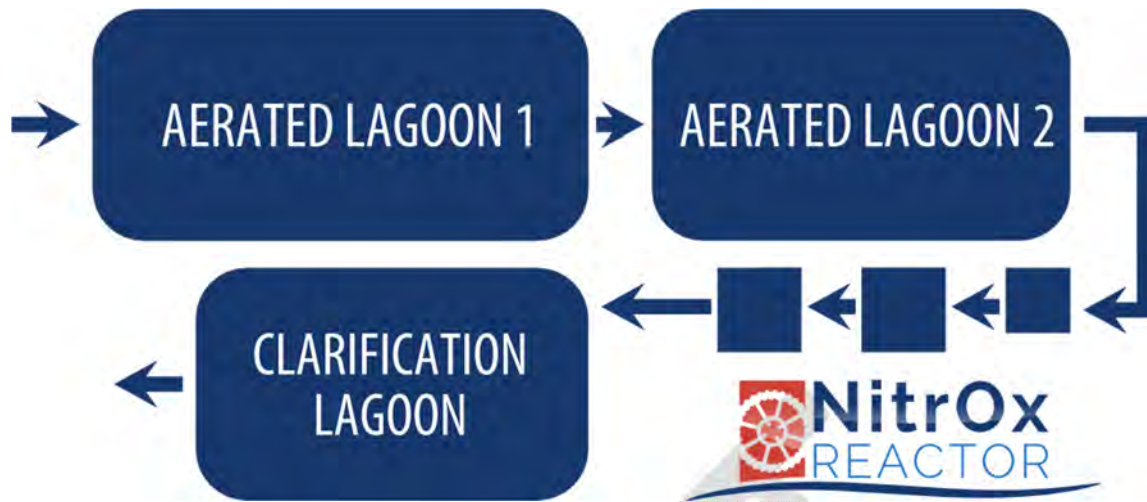


Figure 1: Basic flow diagram of the NitrOx Lagoon Ammonia Removal Process

Basis of Design - NitrOx with Fine Bubble Ares

Lake City, CO

5-May-23

ARES-FB

SUMMARY - Design Input Values

	Plant Influent Characteristics	Units	Values
1	Annual Average Daily Flow	gpd	275,000
2	Maximum Monthly Average Daily Flow	gpd	275,000
3	Peak Daily Flow	gpd	825,000
4	Peak Hourly Flow	gpd	1,100,000
5	Influent BOD	mg/L	450
6	Influent BOD	lbs/day	1,032.1
7	Influent TSS	mg/L	300
8	Influent TSS	lbs/day	688.1
9	Influent NH3-N	mg/L	55.0
10	Influent NH3-N	lbs/day	126.1
11	Influent TKN	mg/L	85.0
12	Influent TKN	lbs/day	194.9
A1	Influent NOx-N	mg/L	0.0
A2	Influent NOx-N	lbs/day	0.0
13	Influent pH		7
14	Water Temperature	deg-C	7
	NitrOx Influent Characteristics	Units	Values
15	Annual Average Daily Flow	gpd	275,000
16	Maximum Monthly Average Daily Flow	gpd	275,000
17	Peak Daily Flow	gpd	550,000
18	Peak Hourly Flow	gpd	687,500
19	Influent BOD	mg/L	31
20	Influent TSS	mg/L	47
21	Influent NH3-N	mg/L	55.0
22	Influent TKN	mg/L	68.2

23	Design Influent TKN	mg/L	68.2
A3	Design Influent NOx-N	mg/L	0
A4	Alkalinity Required as CaCO3 (Minimum)	mg/L	680
24	Influent pH		7
25	NitrOx Water Temperature	deg-C	5

SUMMARY - General Design Parameters			
NitrOx Tank Sizing Summary		Units	Values
26	Number of Treatment Trains Proposed		1
27	Number of Tanks Per Train		2
28	Total Number of Tanks		2
29	Length of Each	ft	24.0
30	Width of Each	ft	16.0
31	Side Water Depth of Each	ft	13
32	Tank Height of Each	ft	16
33	Volume of Each	gallons	37,340
34	Volume Total	gallons	74,680
35	Hydraulic Retention Time at Max Month Flow	hours	6.5
36	Hydraulic Retention Time at Peak Hourly Flow	hours	2.6
40	Number of Ares Units per Tank		6
41	Total Number of Ares Units		12
NitrOx Air Requirement (Per Treatment Train)		Stage 1	Stage 2
42	AOR (lbs/day)	368	378
43	Assumed Diffuser Subm. at AWL (ft.)	12.25	12.25
44	Elevation (ft.)	8,630	8,630
45	Alpha	0.75	0.75
46	Beta	0.95	0.95
47	Target DO Residual (MBBR Process) (mg/L)	5.0	5.0
48	SOR (lbs/day)	1,884	1,934
49	Target Diffuser Efficiency/ft. Submergence	1.7	1.7
50	Airflow (scfm)	353	362
NitrOx Blower Requirement Summary		Units	Values
51	No. of Blowers (Includes one redundant)		2
52	Airflow Requirement per Blower	scfm	715
53	Airflow per 1,000 scfm	scfm/1,000 cf	72
54	Water Pressure at Air Release Depth	psig	5.30
55	Piping and Diffuser Losses	psig	1.50
57	Maximum Design Discharge Pressure	psig	6.80
58	Assumed Overall Efficiency		0.62
59	Approximate BHP Requirement/Blower	bhp	58.0
60	Approximate BHP Requirement Total	bhp	58.0
61	Estimated Nameplate HP / Blower	hp	75
62	Blower Type		Tri-Lobe PD

SUMMARY - Calculated Output Values			
NitrOx Effluent Parameters		Units	Values
63	Effluent SCBOD	mg/L	7.5
64	Effluent SCBOD	lbs/day	17.2
65	Effluent NH3-N in Winter (Monthly Average)	mg/L	8.0

66	Effluent NH3-N in Winter (Monthly Average)	lbs/day	18.3
67	Effluent NH3-N in Summer (Monthly Average)	mg/L	6.0
68	Effluent NH3-N in Summer (Monthly Average)	lbs/day	13.8

Scope of Supply – NitrOx

NitrOx Reactor System Integrated Equipment	Qty	Unit
PD Blowers with Sound Dampening Weather Resistant Enclosure 60 HP PD blowers (Shared with Aeration)	2	ea
NEMA Panel with VFD Control for Blowers (contiguous with aeration panel)	2	ea
Hi-Surface Area Media Tank Fill (Includes future needs)	2	ea
Ares FB Aeration Grid	12	ea
Custom Welded Media Retention Sieves and Duckbills	4	ea
Bucket Screening System	1	ea
Immersive Tank Heaters and Thermocouple, Auto Control	1	ea
Insulated Tank Covers	2	ea
Detailed Installation and layout plan (Shop Drawings)	1	ea
Installation Supervision and Training	6	days
Air Piping From Blower	1	lot
Freight Prepaid	1	lot

- NOTES:
- EXISTING CONDITIONS ARE TAKEN FROM AERIAL PHOTOGRAPHS, FIELD OBSERVATIONS, AND/OR PRIOR CONSTRUCTION DOCUMENTS, WHEN AVAILABLE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS. DRAWINGS ARE INTENDED FOR PLANNING PURPOSES TO PROVIDE A GENERAL OVERVIEW OF INSTALLATION OPTIONS AVAILABLE FOR USE WITH THE TRIPLEPOINT AERATION SYSTEM. REVISION MAY BE NECESSARY TO ACCOMMODATE PROJECT-SPECIFIC FEATURES.
 - ALL DIMENSIONS AND SIZES ARE PRELIMINARY AND MAY NEED TO BE ALTERED DURING DETAILED DESIGN. IT IS RECOMMENDED THAT HEADER PIPE BE BURIED OR INSTALLED ON FLAT SURFACE OF BERM. ADDITIONAL PIPE SUPPORT WILL BE REQUIRED FOR INSTALLATION OF HEADER ON SLOPED PART OF BERM.
 - EXPANSION JOINTS, ISOLATION JOINTS, PIPE RESTRAINTS, AND PIPE SUPPORTS MAY BE REQUIRED. CONTRACTOR SHALL CONSULT ENGINEER'S CONSTRUCTION DOCUMENTS FOR REQUIREMENTS AND SPECIFICATIONS.

PRELIMINARY AERATION LAYOUT

LAKE CITY, CO

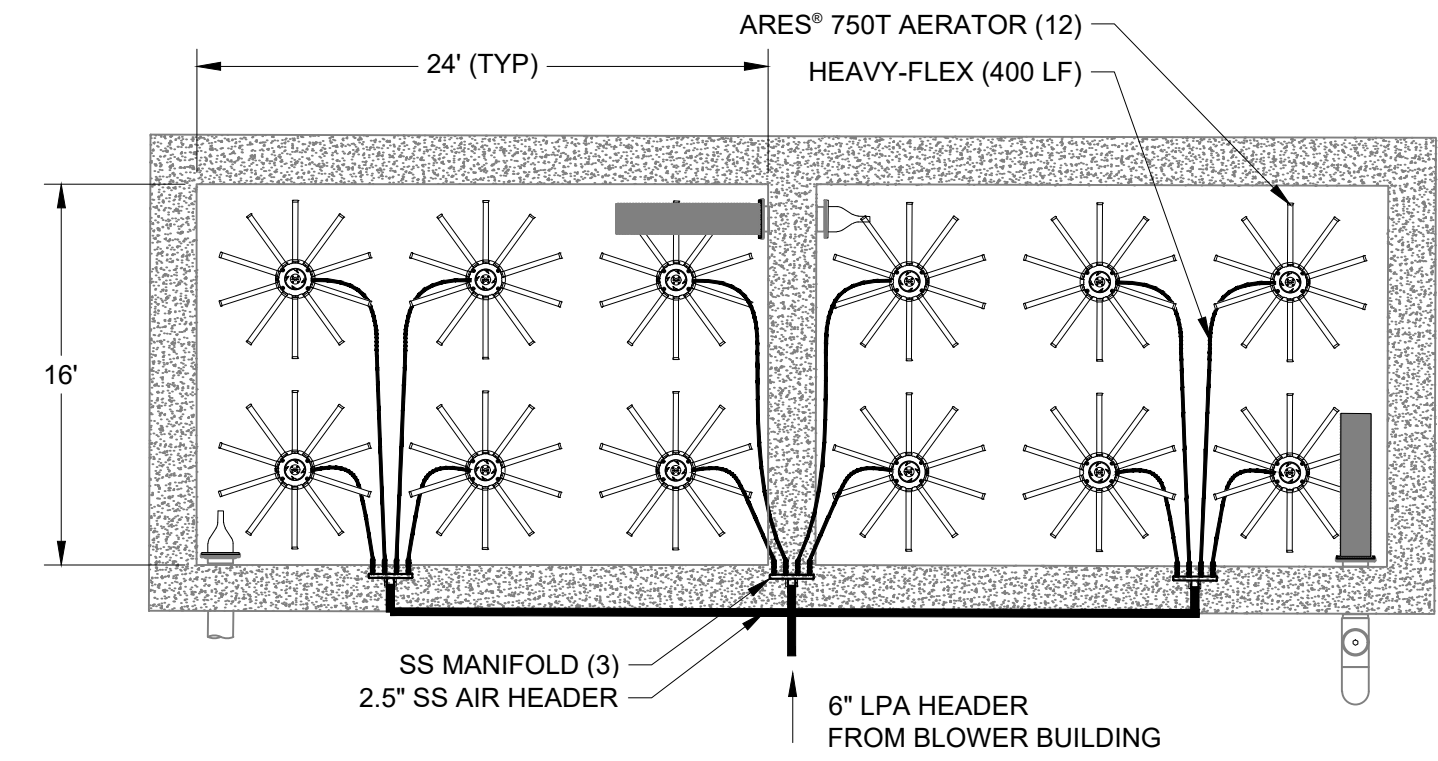


PLAN VIEW
SCALE: 1"=30'
0 15' 30'

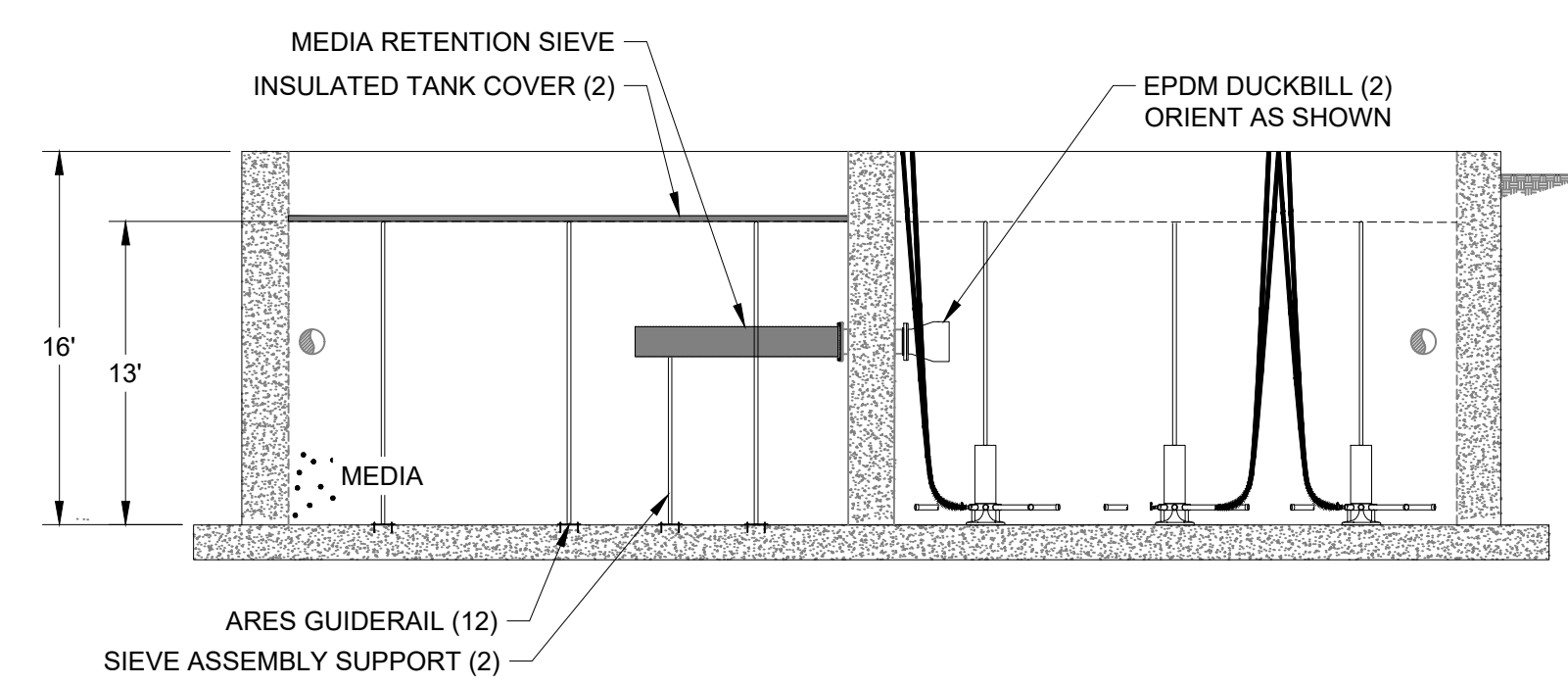
TYPICAL SCOPE OF SUPPLY			
ITEM	DESCRIPTION	TPE	BYO
1	BLOWERS	X	
2	BLOWER PADS/BUILDING		X
3	HEADER PIPING & VALVES		X
4	LATERALS AND/OR RISER STUBS		X
5	AERATOR CONTROL MANIFOLDS	X	
6	AERATOR CONTROL VALVES	X	
7	FLEXIBLE TUBING	X	
8	AERATORS	X	

TPE = TRIPLEPOINT ENVIRONMENTAL
BYO = BY OTHERS


NOTE: THIS SCOPE OF SUPPLY IS TYPICAL. CHECK QUOTATION FROM TRIPLEPOINT ENVIRONMENTAL, LLC FOR COMPLETE SCOPE OF SUPPLY.



NITROX PLAN VIEW
SCALE: NTS



NITROX SECTION VIEW
SCALE: NTS



TRIPLEPOINT ENVIRONMENTAL, LLC
6586 S. KENTON ST. CENTENNIAL, CO 80111
(312) 428-4634

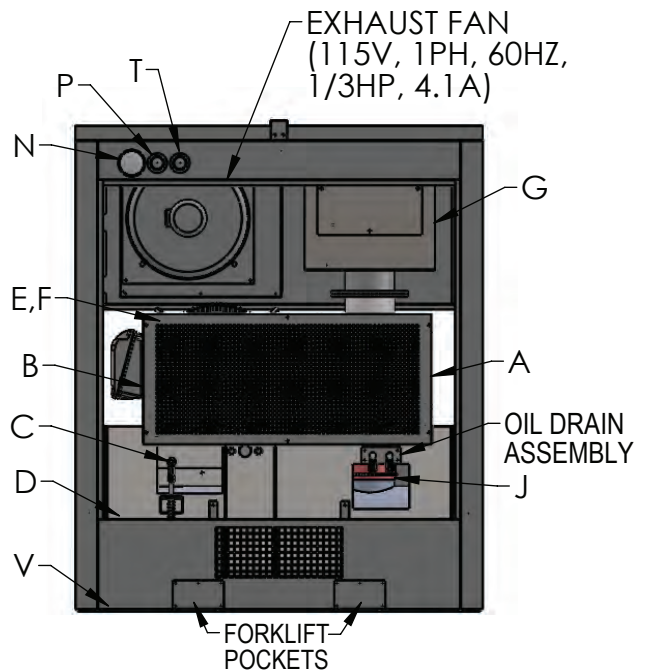
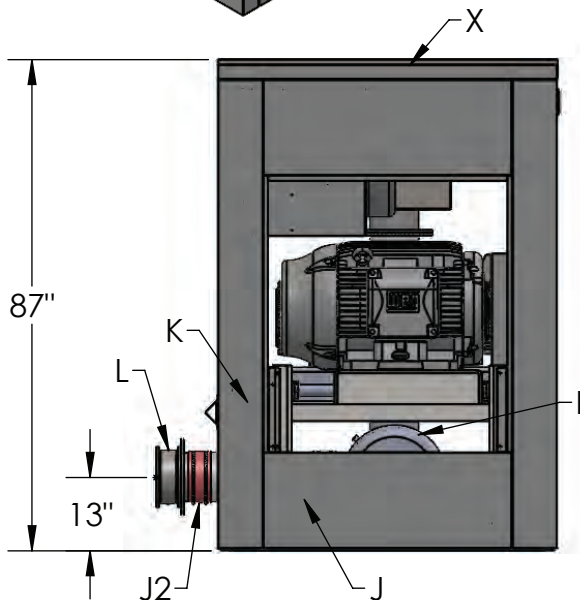
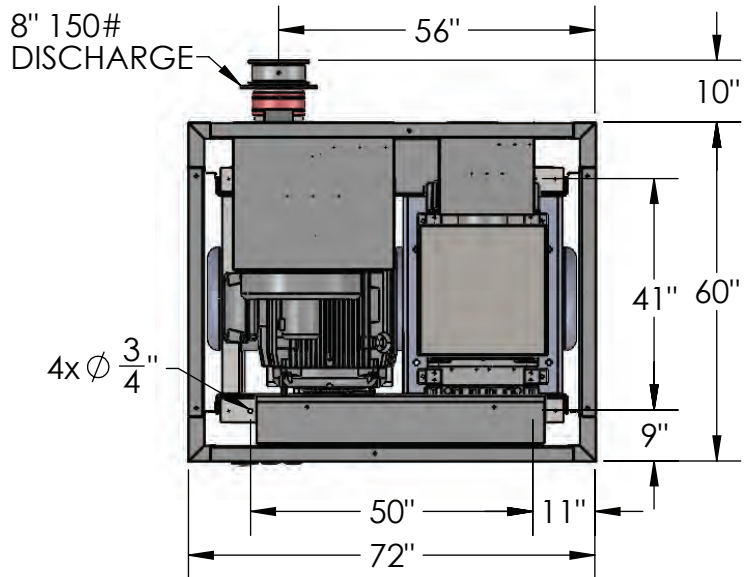
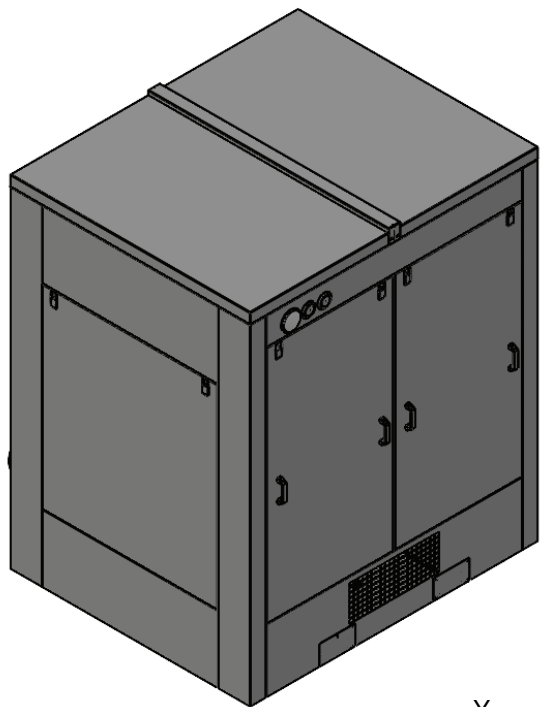
REVISIONS	
DATE	DESCRIPTION
07/18/23	PRELIMINARY AERATION LAYOUT
03/14/23	NITROX DIMENSIONAL UPDATE
04/25/23	AERATOR COUNT: NITROX DIMENSIONS
05/10/23	ADDED AERATOR TO 2B; MOVED 3B UNIT

LAKE CITY, CO
PROPOSED AERATION
IMPROVEMENTS

PRELIMINARY
AERATION LAYOUT

DATE:	01/18/23
PROJECT NO.:	
CAD:	
SHEET:	1 OF 1

5/10/2023 9:08 AM



Letter	Description
A	BLOWER:
B	MOTOR: HP, 1800RPM, TEFC, T, 208-230/460/3/60
C	MOTOR TILT BASE
D	ELEVATED STEEL BASE
E	V-BELT DRIVE
	BLOWER SHEAVE:
	MOTOR SHEAVE:
	BELTS: CD =
F	BELT GUARD: STEEL
G	INLET FILTER SILENCER: 8"
I	DISCHARGE SILENCER: 8"
J	FLEXIBLE PIPE CONNECTOR: G.R. 8100-8"
J2	DISCHARGE FLEXIBLE PIPE CONNECTOR: G.R. 8100-8"
K	RELIEF VALVE:
L	CHECK VALVE: F.H. 518-8"
N	DIFFERENTIAL PRESSURE GAUGE: DWYER 2020, 0-20"WC
P	PRESSURE GAUGE: WKA 213.53, 2 1/2", 0-15PSIG
T	TEMPERATURE GAUGE: WKA TI.V25, 2 1/2", 30-300°F
V	VIBRATION ISOLATION PADS: VMC CORK-RIBBED, 1" THICK
X	NOISE ENCLOSURE: ALUMINUM EXTERIOR W/ ACOUSTIC FOAM, 5 TILT-OUT LATCHING DOORS, & EXHAUST FAN W/ T-STAT

ESTIMATED BLOWER PACKAGE WEIGHT: 5,600#
 BLOWER ROTATION: CCW
 MIN. BLOWER SPEED: xxHZ
 TOLERANCE: ± 1/2"
 DISCHARGE PIPING MUST BE INDEPENDENTLY SUPPORTED.
 COMPONENTS: J2 & L WILL SHIP LOOSE.
 NOTE: ATTACH FORKLIFT POCKET COVERS AFTER PACKAGE IS INSTALLED.



BLANDON, PENNSYLVANIA

PRELIMINARY DRAWING
 DIMENSIONS SUBJECT TO CHANGE
 P.O.#

DATE: 3/3/2023 SCALE: 1:34

DWG#: #8 COMPACT REV#: 0

CONSOLIDATED CONSULTING SERVICES

Staff Report

SUBJECT: Wastewater Update

Prepared by: Joanne Fagan

Date: June 4, 2023

An updated Process Design Report and the contract part of the project specifications were resubmitted to CDPHE today. We are looking forward to their feedback.

Board packets include a potential equipment purchase agreement between the Town and Triplepoint Environmental LLC (TPE). The Agreement calls for the Town to purchase aeration and ammonia removal equipment from TPE. The equipment package includes 2 - 60 hp and 2 - 75 hp blowers, 41 aerators, media to remove ammonia, some piping, screens, check valves, mixers, immersion heaters with controls, and some appurtenances. The price of the package with ammonia removal media to treat design flows of 0.175 MGD is \$1,168,190.19 and with media to treat the full design load to 2043 is \$1,197,310.19. The reason the Town might want to put off purchasing all the media is because TPE recommends not installing all the media until we need it. If the Town purchases all the media now, TPE would want the Town to store the media TPE thinks should not be installed at this time. Town staff is evaluating whether it makes sense to purchase and store media and will have a recommendation for the Trustees at Board meeting on 6/7.

The Trustees will notice a significant drop in the cost of the agreement. In talking with TPE, staff decided it was in the interest of the project that we scale back what we purchased from TPE. The Town will purchase the equipment and chemical to add alkalinity to help with ammonia removal directly. Similarly, the Town will purchase pumps for recycling some of the effluent from the ammonia basin back to the concrete basin. Finally we reached an agreement that TPE would provide the design and bill of materials for what they classified as piping they would not typically provide and the Town would purchase the pipe and materials. Deleting having TPE providing some of the piping, the alkalinity addition and recycle pumps deleted about \$180,000 from their scope of supply. The Town will need to purchase the materials deleted or have the plant contractor do so. We anticipate that if the Town directly purchases the materials and furnishes those to the construction contractor, there will be a savings of about \$30-40K. It might also allow the Town time to see if Region 10 can help us finding some funding for some of the materials. We had also discussed early on having TPE furnish some monitoring equipment, but that was not in the previous draft documents we provided from them and is not included in the current agreement. That too is something we will have to procure separately and is not needed until late in the project.

One of the things the staff feels is important to point out about what TPE is providing is that it includes some proprietary products. TPE recognizes that their aerators and ammonia removal media is something we would likely have to purchase from TPE and has agreed to lock in the price for such purchases for purchase of their aerators and media (see article 21.7 of the agreement) for a period of 20 years at a base price plus inflation. CCS used a similar provision to try to lock in the price for water treatment modules for two separate water treatment plants. In both cases when the Town tried to exercise that provision it was a bit challenging. The more challenging one was where at large conglomerate who had purchased the relatively small water

treatment company. In that case the town was able to after-market equipment. We share this as there is a risk when purchasing proprietary products. Lake City may not need anything for 15-20 years, but when you do, it might be a bit of challenge. However, in Lake City's case if you could not get the media TPE used, there are other sources media. Replacing the special aerators could be a challenge but there are a number of other ways to get more air into the ponds.

The agreement in the Board packets was negotiated over a number of weeks. We told TPE to have the agreement reviewed by the Trustees on 6/7, we needed to have completed agreement by 6/2 at 5 pm. That did not happen. We were close but TPE had some concerns about some wording that caused discussion to continue into the weekend. We sent TPE the updated draft of the document about which they had concerns late Saturday and as of Sunday night have not heard back so the agreement that is likely to be packets is one we are not sure is acceptable to TPE. The agreement attached also includes TPE calculations to justify what they intend to furnish. They may have updated those and if so we would update what we include in the agreement. We also need TPE to remove draft from the performance guarantee document in the agreement.

COUNCIL COMMUNICATION

DATE: May 15, 2023

SUBJECT: RATE ADJUSTMENT AMENDMENT FOR TOWN ATTORNEY CONTRACT

PRESENTED BY: Dan Krob, Town Attorney

AGENDA ITEM DESCRIPTION:

It has been my pleasure to serve as the Town Attorney for the Town of Lake City since fall of 2021. Since then, we have not adjusted the rates we charge the Town. Our rates remained the same for 2021, 2022, and into 2023. During that time, the costs of providing legal services, such as malpractice insurance, continuing legal education, electronic legal research, and office rent, have continued to increase.

Consistent with what I charge my other municipal clients and also to ensure that we can continue to provide Lake City the high quality legal services it deserves, it is necessary for us to raise our hourly rates to those set forth in the amendment to our representation agreement with the Town. My rate will increase from \$175 to \$195 per hour. This represents an increase of 11% since the last rate adjustment in 2016 by Krob Law Office to our municipal clients which equates to roughly 1.3% per year for the past seven years.

I briefly discussed this proposed rate increase with Town staff last year, but determined it was not in the best interest of the Town to impose it until we resolved some time consuming threatened litigation, transitioned your former Town Clerk to Town Manager, hired a new Town Clerk, and ensured Town Staff was up to speed in their new roles. The litigation has been resolved and the Trustees did an excellent job hiring very capable, quick learning, and self-motivated Manager and Clerk who routinely require less and less guidance from legal. Accordingly, it is my sincere hope the proposed amendment should not have any impact on your proposed budget. The routine issues are commonly handled by staff and my efforts will be focused primarily on more complex and unique legal issues as they may arise. As a result, absent major litigation or major projects, I anticipate the amount our office bills the Town in 2023 to go down somewhat.

We look forward to serving the Town of Lake City for years to come and will be glad to answer any questions Trustees may have.

RECOMMENDATION:

The Town Attorney requests approval of the amendment increasing the rates for legal services.

SUGGESTED MOTIONS:

I move to approve the Amendment to Town Attorney's Legal Representation Agreement as presented.

TEMPORARY ACCESS EASEMENT AGREEMENT

THIS TEMPORARY ACCESS EASEMENT AGREEMENT is made and entered into this ___ day of June, 2023, by and between the Town of Lake City, Colorado, a Colorado municipal corporation, whose address is 230 N Bluff Street, Lake City, CO 81235, (hereinafter the “Grantor”), and Lake Fork Valley Conservancy, a Colorado non-profit corporation, whose address is P.O. Box 123 Lake City, CO 81235 (hereinafter the “Grantee”), collectively, the “Parties”.

WITNESSETH:

WHEREAS, Grantee is the owner of real property located in Hinsdale County, Colorado, more particularly described as follows (hereinafter “Grantee’s Property”) and depicted on Exhibit A, attached hereto and incorporated herein:

Property Legal Description: LOTS 2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17- 18-19-20-21-22-23-24-25-26-27-28-29-30-31, BLOCK 4 SUBJECT TO HIGHWAY RIGHT OF WAY, TOWN OF LAKE CITY; LOTS 31-32 BLOCK 13 TOWN OF LAKE CITY.

County of Hinsdale, State of Colorado,

WHEREAS, the Grantee owns certain Rights-of-way surrounding the Grantee’s property generally described as north of the 8-1/2 street bridge in Lake City, Colorado (hereinafter the “ROW”); and

WHEREAS, the Parties desire to Grantee, its lessees, licensees, successors and assigns, the right, privilege and access to Grantee’s Property via Grantor’s ROW in accordance with the provisions of this Agreement.

NOW THEREFORE, in consideration of the mutual obligations and other consideration set forth herein, the Parties agree as follows:

1. Grantor hereby grants the Grantee a Non-exclusive, non-motorized, pedestrian easement for the purpose of non-motorized ingress and egress to the Grantee’s Property across any and all Rights-of-Way adjacent to Grantee’s Property (“Temporary Access Easement”).
2. Grantee may only make improvements upon the Temporary Access Easement to the extent reasonably necessary, in the sole discretion of the Grantor, to facilitate pedestrian access to Grantee’s Property and only with the express written consent of such improvements or alterations.
3. Such Temporary Access Easement shall automatically terminate in the event the Grantor determines it is in the best interest of the citizens of Lake City to do so for any reason, including but not limited to, the Grantor utilizes the Temporary Access Easement for road improvements or expansion.
4. The Temporary Access Easement may be terminated by the Grantor for any reason upon 30 days written notice to the Grantee.
5. This Temporary Access Easement and the rights and obligations provided for hereunder shall attached to and run with the affected land and shall be binding not only upon the parties hereto, but also upon their heirs, successors, and assigns, unless and until such time as the Temporary Access Easement is terminated by the Grantor.
6. The Grantee shall cooperate with the Grantor and shall not impair the Grantor’s use of the ROW.

7. This Agreement shall be modified in writing only, which writing must be executed by the Parties hereto in order to be effective.

IN WITNESS WHEREOF, the parties hereto have executed this TEMPORARY ACCESS EASEMENT AGREEMENT as of the day and year first above written.

GRANTOR:

Town of Lake City, Colorado

Dave Roberts, Mayor

ATTEST:

Jonathan Broadway, Town Clerk

GRANTEE:

Lake Fork Valley Conservancy

Zach Dutra, Title

Accident Investigation Policy & Program

1.0 Purpose

- 1.1 The purpose of the Town of Lake City Accident Investigation Policy & Program is to investigate all accidents and near misses, to identify the root cause(s) and develop corrective actions that can be taken to prevent future occurrences. Assigning blame to employees is **not** the purpose of this program.

2.0 Administrative Duties/Responsibilities:

- 2.1 **Program Administrator.** The Town Manager is the Accident Investigation Program Administrator who reports directly to the Board of Trustees and is responsible for this policy and program. All evaluations, investigations, training, and recommended solutions are coordinated under the direction of the Program Administrator in collaboration with management. The Program Administrator monitors the results of the program and determines additional areas of focus that are needed. The Program Administrator also:

- 2.1.1 Ensures supervisors and employees are properly trained to conduct accident investigations.
- 2.1.2 Ensures a system is in place for employees to report accidents and near misses.
- 2.1.3 Ensures accurate records are maintained and provides documentation upon request.
- 2.1.4 Follows up on all corrective actions suggested during the accident investigation process.
- 2.1.5 Ensures approved corrective actions are implemented in a timely manner.
- 2.1.6 Conducts an annual review of the program.

- 2.2 **Managers and Supervisors.** The Directors of Public Works and Parks & Recreation are:

- 2.2.1 Accountable for the health and safety of all employees within their departments through their active support of the accident investigation program.
- 2.2.2 Required to attend accident investigation training to familiarize themselves with the elements of the program.
- 2.2.3 Responsible for ensuring that employees under their supervision have received the appropriate training on accident and near miss reporting.
- 2.2.4 Responsible for initiating the accident investigation process within 24 hours of an incident.
- 2.2.5 Responsible for implementing approved corrective actions and ensuring they are completed appropriately through active follow-up.

- 2.3 **Employees.** Every Town of Lake City employee is responsible for conducting himself/herself in accordance with this policy and program. All employees will:

- 2.3.1 Attend accident and near miss training.
- 2.3.2 Report all accidents and near misses as soon as possible to their supervisor, but no longer than two hours after the time of the incident.

3.0 Definitions:

- 3.1 **Accident** - An undesired event that results in personal injury or property damage.
- 3.2 **Administrative (or Work Practice) Controls** – Procedures that are used to reduce the duration, frequency, or severity of exposure to a hazard. These may include work methods training, job rotation and gradual introduction to work.
- 3.3 **Engineering Controls** – A method of eliminating or reducing the quantity or severity of job risk factors by redesigning equipment, processes, tools, and workstations.
- 3.4 **Near Miss** – An incident where no property was damaged and no personal injury sustained, but where damage and/or injury easily could have occurred given a slight shift in time or position.
- 3.5 **Personal Protective Equipment (PPE)** – Gloves, kneepads and other equipment worn by employees that may help reduce hazards until other controls can be implemented, or to supplement existing controls.
- 3.6 **Root Cause** – A condition that contributes to an incident or near miss. They are not always obvious, and may include items like lack of training, poor safety leadership, lack of rule enforcement or poor safety procedures.

4.0 Reporting:

- 4.1 All employees are required to report any accident or near miss to their immediate supervisor within two hours of the incident. The Supervisor's Accident Investigation Report Form is to be used by the supervisor to document the details of an accident or near miss and any proposed corrective action(s) for future prevention. Supervisors/Managers are to begin the accident investigation process within 24 hours of the initial incident. A copy of the initial report is to be forwarded to the Program Administrator within 48 hours of an accident or near miss.

5.0 Event Reconstruction:

Points to Consider. To discover the root cause(s) of an accident or near-miss, you must reconstruct the chain of events and decisions that occurred prior to the incident. Hindsight is 20/20, so be open-minded because it is easy to jump to conclusions. Be sure to focus on the events that did happen instead of those that were supposed to happen.

- 5.1 **Interviews.** Within 24 hours, the manager or supervisor of the employee who was involved in the accident or near miss will begin interviewing employees who were involved or in close proximity to the incident, or who are familiar with the related process or work practices. All individuals will be interviewed separately. A minimum of two people must be interviewed for any accident or near miss reported.
- 5.2 **Event Timeline.** An event timeline will be developed for each reported accident or near miss. This timeline will start with the accident or near miss and be developed **in reverse** using information obtained from the interviews. Each task, event and employee decision that took place are to be added to the timeline. Also, the timeline will include all physical and emotional conditions known at the time of each action, event or decision along with the employee's knowledge, motivation, goals and focus at the time of any action, event or decision.

Points to Consider. Of all operation failures, approximately 10 percent are equipment failures and 90 percent are due to human error. Of those human errors, 30 percent are a result of mental lapses that cannot be remedied, and 70 percent are due to a problem or conflict within the system/process. Therefore, unless an incident can be solely attributed to equipment failure, the investigation should focus on the **process** and what changes could be made to limit the impact of human error.

5.3 Identifying Root Cause(s). After the timeline has been established, the investigator(s) will identify the root cause(s) that contributed to the accident or near miss.

Points to Consider. Many tools are available for identifying the root causes of workplace incidents. Your organization may use fault tree analysis, barrier analysis or accident mapping. Perhaps the simplest method is known as the “5 whys.” In this question-asking technique, the investigator asks the same question repeatedly – usually “What caused or allowed this condition/practice to occur?” or simply “Why?” - until the root cause(s) are found. The example below illustrates how the 5-whys might be applied to an incident.

Incident: While repairing a conveyor belt at the recycle center, Bob suffered an injury to his finger when it started unexpectedly.

1. **Why** was Bob's finger injured? The conveyor he was repairing unexpectedly started causing Bob's finger to get caught on the belt roller.
2. **Why** did the conveyor belt start move? Another employee started the machine without realizing Bob was in the danger zone. Bob had shut down the machine, but not performed an energy lockout so there was still power to the belt.
3. **Why** didn't Bob perform an energy lockout? The machine was not locked out because there is not a company lockout/tagout program. Bob has never been trained on hazardous energy control because management thought it was too expensive.

Root causes: Lack of lockout/tagout program, lack of employee training on hazardous energy control and poor safety leadership as demonstrated by unwillingness to spend money on employee safety training.

5.4 Recommending Specific Solution(s).

- 5.4.1 After the root causes are identified, corrective actions will be identified to reduce or eliminate those hazardous conditions. The manager/supervisor and employees will develop and propose specific improvements that are operationally feasible. Those possible improvements will be submitted to the Program Administrator for validation, final approval, and guidance for an implementation strategy.
- 5.4.2 When selecting and recommending these corrective actions, possible solutions will be prioritized using the following hierarchy. In this hierarchy of hazard control, the most desirable solutions come from the first level, with the following levels offering increasingly fewer desirable options.
 - 5.4.2.1 Elimination - eliminating the hazard from the workplace.

- 5.4.2.2 Substitution - replacing a hazardous substance or activity with a less hazardous one.
- 5.4.2.3 Engineering controls - providing guards, ventilation, or other equipment to control the hazard.
- 5.4.2.4 Administrative controls - developing policies and procedures for safe work practices.
- 5.4.2.5 Personal protective equipment - using respirators, earplugs, safety glasses, etc.
- 5.4.3 Recommended corrective actions will come from the highest possible level of the hierarchy of hazard control.

5.5 **Monitoring Changes.** Once implemented, corrective actions will be monitored by the manager/supervisor for effectiveness, to verify that net risk is not increased and to determine that the root cause of the incident has been eliminated or reduced. The manager/supervisor will conduct follow-up interviews with employees who were part of the accident investigation to determine if the implemented corrective actions require any adjustments to provide maximum safety to the employees.

6.0 Periodic Program Review:

6.1 At least annually, the Program Administrator will conduct a program review to assess the progress and success of the program. The review will consider the following:

- 6.1.1 Evaluation of all training programs and records.
- 6.1.2 The need for retraining managers, supervisors, and employees.
- 6.1.3 The length of time between accidents, investigations, and implementation of corrective actions.
- 6.1.4 The program's success based upon comparison to previous years, using the following criteria:
 - 6.1.4.1 Frequency of accidents and near misses.
 - 6.1.4.2 Use of CIRSA's loss reports and analysis.
 - 6.1.4.3 Employee feedback through direct interviews, walk-through observations, written surveys and questionnaires and reevaluations.

7.0 Training Requirements:

7.1 New and previously untrained employees will receive training about this program and how it will be applied when investigating near misses and accidents. Employees and supervisors will receive refresher training at least every five years. Upon hire or promotion into their position, managers and supervisors will be trained on Town of Lake City investigation philosophy and the methods that should be used to conduct an accident investigation according to this program.

7.2 The minimum training for all employees will include the following elements:

- 7.2.1 An explanation of the Accident Investigation Program and their role in it.
- 7.2.2 An emphasis on the importance and method of prompt reporting of accidents and near misses.
- 7.2.3 Review of the accident investigation form, with emphasis on determining contributing factors and corrective actions

INSTRUCTIONS FOR SUPERVISOR'S INVESTIGATION REPORT

The following information should be used to complete the Supervisor's Accident/Incident Investigation Report. This report should be filled out as soon as possible by the immediate supervisor of the department involved, and upon completion should be sent to the entity employee responsible for filing formal claim notices with CIRSA (or other appropriate claim handler).

This report is designed in a general format that is suitable for use on accidents involving employee injury, vehicular damage, property damage, or general liability. This form should also be utilized for reporting incidents or "near-misses", that may not result in actual injury or physical damage. Near miss incidents may signify there is an unsafe condition waiting for a more severe event to happen, and if properly investigated, the incident may be prevented.

Should additional space be needed when completing this report, please attach the information securely and make a note on the original form referencing the attached material.

1. Entity: State the name of the entity for which this report applies.
2. Date: Record actual date of loss not the date on which the report is being completed.
3. Time: Time at which the actual loss occurred.
4. Name: List name(s) or description of item(s) involved.
5. Department: Indicate under which department and if applicable which shift the incident occurred.
6. Location of Incident: Indicate the actual physical location of the incident. (ie. shops, water plant, park, etc.) and provide the address.
7. New Employee, Equipment or Operation: Indicate if there was a new person, piece of equipment, or procedure involved.
8. Type of Incident: Classify the incident as accurately as possible, and check all that apply. There may be several areas involved;

** A fire in an entity's building injuring a private citizen and several employees. This could involve five or more claims including property, equipment, fire, workers = compensation, and public liability.

9. Be aware that the report likely is a public document and its content could affect the entity's liability for damage to property or injury to persons. If the accident/incident has resulted or may result in injury or damage to persons or property other than your entity's, please contact your Risk Manager, internal Claims Coordinator, or Entity Attorney prior to the completion of this form.
10. What Happened: Describe the event or series of events that resulted in the incident or accident. Include all people or property involved, damaged, lost, etc. including items from other departments or private property. Be as specific as possible and include any relevant events occurring prior, during or after the accident/incident. Use only facts and do not submit the

opinions of yourself or others.

Determine from the available evidence why this accident/incident occurred; utilize the six action words to assist you in thinking through the situation. When completing this section, consider information such as the following examples.

** Reporting any faulty equipment or lack of proper equipment.

** Noting improper or unsafe working conditions such as slippery floor, icy roads, liquid spill, poor housekeeping, missing warning signs. Again avoid placing blame on any individual or entering personal opinion. Concentrate on the facts.

11. What Should Be Done To Prevent a Recurrence: To prevent a recurrence, determine what actions, if any, are required to eliminate the hazards involved and restore safe working conditions. By using the words to the right of this space, evaluate if examples such as the following will reduce the possibility of a recurrence.

** Additional training.

** Increased equipment maintenance.

** Improved material handling.

** Re-selection of equipment, material, or people, etc.

The categories of Administrative/Management, Environment, Equipment, Material, and People are a breakdown of the five main variables in the work place, and listed under these variables are the supervisory inputs that affect them.

Examples include:

** If there was an accident involving Administrative/Management policies or procedures, these should be reevaluated to determine if changes in the policy or procedure, scheduling, purchasing or logistics are needed.

** If there was an accident involving Environmental factors, determine if weather, housekeeping, noise, light or chemicals are involved and how they effected the situation or could be changed to reduce the possibility of another accident.

** If there was an accident involving Equipment, you would study the effect that Selection, Arrangement, Use, and/or Maintenance, Availability, Convenience, or Appropriateness of that piece of equipment had in causing the accident.

** If there was an accident involving Material, determine if the Selection, Placement, Handling, Processing, and /or Availability of the material contributed to the accident.

** If there was an accident involving People, determine if a change in the Selection, Placement, Training, and/or Coaching of these people would have avoided the accident or may prevent a similar future accident.

12. What Actions Have Been Taken: Have any changes or improvements been made to remedy the situation? If an extremely hazardous condition is discovered, immediate action should be taken to prevent further loss. Take or recommend action consistent with your authority.

Regardless of the type of hazard, documented follow up action is important to determine if the hazard is being adequately controlled. While documentation cannot be included in this section due to the timeliness of reporting, the plan for follow up action should be listed.

Examples include:

- ** New machine guard in place and weekly inspections started to verify guard use.
- ** Driver enrolled in defensive driving course and supervisor will perform monthly road observations.
- ** No smoking policy established for city shop and on-site supervisors will enforce.

13. How Will Corrective Actions Improve Conditions or Behavior: After determining the action to be taken, describe how this will improve the situation by eliminating or controlling a particular condition or behavior.

Examples include:

- ** New chairs have been ordered for City Hall that will provide improved back support.
- ** A body belt has been installed in the "cherry-picker" to prevent workers from falling.
- ** A physical fitness program has been mandated for the Police Department to improve strength and flexibility.

14. Investigated By: Name and title of supervisor who is completing this report and the date on which it was completed.

15. Reviewed By: Name and title of person to which this form is reviewed (usually risk manager, department director, personnel manager, clerk, or whomever is responsible for handling safety, claims, and insurance for the entity).

SUPERVISOR'S ACCIDENT/INCIDENT INVESTIGATION REPORT

1. Entity	2. Date	3. Time AM PM
4. Name: Employee, Vehicle, Building, Etc.		
5. Department	6. Location of Incident	7. New Employee/Equipment or Operation? Yes No

8. Type of Incident ___ near miss ___ fire/explosion ___ potential hazard
Check All That ___ property damage ___ employee injury/ ___ entity premises
Apply ___ illness ___ incident
 ___ equipment damage ___ vehicular accident ___ other

9. If the incident involves damage to non-entity property or injury to persons who are not entity employees, contact your Risk Manager, internal Claims Contact or Entity Attorney before completing this form.

10. Describe what took place or what caused you to make this investigation. Get all the facts by studying the hazard or situation involved.

Ask the following questions:
Who? What? When? Where? How? Why?

11. What should be done to prevent a recurrence?

- Circle the following items that require additional attention:**
- | | | | | |
|---|---|---|--|---|
| Admin./Mgt.
Policies
Procedures
Scheduling
Purchasing
Logistics | Environment
Weather
Housekeeping
Temperature
Noise
Light
Toxic/Hazardous
Material | Equipment
Selection
Arrangement
Use
Maintenance
Availability
Convenient
Appropriate | Material
Selection
Placement
Handling
Process
Availability | People
Selection
Placement
Training
Coaching |
|---|---|---|--|---|

12. What actions have been taken? _____

Take or recommend action, consistent with your authority.

13. How will corrective actions improve conditions or behavior?

14. Investigated By	Title	Date	15. Reviewed By	Title	Date
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Chemical Safety Program

1.0 Purpose:

2.0 Administrative Duties/Responsibilities:

The Public Works and Parks and Recreation Directors are responsible for administering and maintaining this written program.

Additional responsibilities are assigned to the positions listed below.

2.1 Each Director is responsible for the following:

- Implementing the Chemical Safety Program for their employees who use, handle or work near hazardous chemicals.
- Ensuring the current Safety Data Sheets for the chemicals used within the department are available to all employees.
- Ensuring all employees within the department are properly trained prior to first use and receive the correct Personal Protective Equipment.
- Maintaining the chemical inventory for their respective departments.
- Complete a hazard assessment for each chemical in use.
- Ensuring employees who use or handle the chemicals are following this program and the manufacturer's directions for use.
- Ensure all original and secondary containers are properly labeled.

2.2 Employees are responsible for the following:

- Follow this program and follow the manufacturer's directions for use.
- Review the Safety Data Sheet for each chemical prior to use.
- Use all required Personal Protective Equipment while handling the chemicals.

3.0 Definitions:

3.1 Globally Harmonized System (GHS): The Globally Harmonized System of Classification and Labeling of Chemicals is an internationally agreed-upon standard managed by the United Nations.

- 3.2 Safety Data Sheet (SDS): A document created by a chemical manufacturer to convey the information about the composition, properties and hazards of a product and the safety measures necessary for use.
- 3.3 Original Container: A container which a chemical is transported from the manufacturer or supplier to the customer.
- 3.4 Secondary Container: A container which holds a chemical which is not the original container supplied by the manufacturer.

4.0 Equipment/Resource Needs:

The following equipment may be necessary for the proper storage and use of chemicals in the workplace. Refer to the adopted building or fire code, or the Safety Data Sheet for each chemical for further information.

- 4.1 Personal Protective Equipment: [This is a sample list of commonly used personal protective equipment required for the use of chemicals.]
- Goggles
 - Face Shield
 - Natural Rubber Globes
 - Latex or Nitril Gloves
 - Chemical Resistant Apron
 - Half Face Respirator
 - Full Face Respirator
 - Self-Contained Breathing Apparatus
- 4.2 Storage Equipment:
- Spill Containment Pallets
 - Flammable Materials Storage Cabinet
 - Transfer Pump
- 4.3 Spill Response & Cleanup
- Absorbent Materials (Soaker Socks, Pig Mats, Etc)

- Fire Extinguisher
- Bucket
- Overpack container
- Disposal Bags
- Broom
- Shovel

5.0 Hazard Evaluation:

A hazard evaluation should be conducted for all of the existing chemicals in the workplace. The purpose of this hazard assessment is to identify the potential hazard as well as proper controls necessary to safely use it. Controls should be applicable to the physical and health hazards associated with the chemicals. This includes exposure limits, engineering controls and personal protective equipment.

Refer to the CIRSA Hazard Evaluation Guide for more information.

6.0 Medical Qualifications:

This program requires personnel to receive medical clearance prior to performing the work tasks. The following medical clearances must be completed:

For any chemicals which require the use of respirators. See the Respirator Program for further information.

7.0 Hazard Communication Training Requirements:

Employees shall be trained on the use and handling of chemicals upon hire, when a new chemical is introduced into the workplace, and when a new job or task is assigned to the employee.

Refresher training shall be conducted [bi-annually].

Training shall consist of the following topics:

- 7.1 Chemical Inventory location and format.
- 7.2 Labeling of original and secondary containers using the Globally Harmonized System (GHS).
- 7.3 How to obtain, read and understand the information located in the Safety Data Sheets (SDS).

7.4 Personal Protective Equipment (PPE).

7.5 Tools and equipment including transfer pumps, approved secondary containers, and storage cabinets.

7.6 Storage, spill response and disposal

7.7 Other chemical specific procedures

8.0 Storage:

8.1 All chemicals shall be stored in compliance with the [most current International Fire Code, (IFC)] as adopted by the City/Town of [Name].

8.2 Hazardous materials, such as flammable and combustible liquids, flammable gases, oxidizers, and toxic materials shall be stored in compliance with Chapter 50 of the IFC, where appropriate.

8.3 Flammable and combustible materials will be stored in approved storage cabinets.

9.0 Handling and Use:

9.1 All chemicals shall only be used in accordance with the manufacturer's directions. Employees will review the manufacturer's instructions and the Safety Data Sheet prior to using the chemical.

9.2 All Personal Protective Equipment required by the manufacturer shall be worn when using the chemical.

10.0 Emergency Response:

10.1 First Aid: Employees will review the Safety Data Sheet to determine the appropriate first aid measures prior to using the chemical. All necessary first aid equipment shall be identified and located prior to use. This includes, but is not limited to eyewash stations, safety showers and burn kits.

10.2 Spill cleanup and disposal: A chemical spill cleanup kit appropriate for the chemical hazards and amount on site will be kept near where the chemical is used. When caustic materials are in use, appropriate materials should be kept on site to neutralize the chemical.

10.3 Fire Hazards: Appropriate fire extinguishers shall be kept on site for the type of chemicals in use. This can include common dry chemical extinguishers, as well as carbon dioxide, or Class-D extinguishers for combustible metals.

11.0 Labeling:

All chemical containers shall be properly labeled to clearly convey the contents and hazards. Labels should follow the Globally Harmonized System (GHS) [or specify other labeling method in use.]

11.1 Original Containers: Labels affixed to containers by the manufacturer shall not be removed or modified. Any container which is provided without the hazard information included in the GHS label shall have an additional label affixed to it to include this information. All containers used by more than one person or shift should be properly labeled with the product identity, manufacturers' name, address, phone number, and extent of hazard such as flammable, explosive, toxic or corrosive.

11.2 Secondary Containers: Any secondary container shall be labeled using a GHS compliant label [or other labeling method in use.] All secondary containers should be properly labeled as to their contents if the person that filled them leaves them unattended. This could lead to an accidental chemical exposure.

12.0 Recordkeeping:

12.1 Chemical Inventory: An inventory shall be developed which includes all hazardous chemicals present in the workplace. The inventory shall include the name of the product, manufacturer name, amount typically on hand (including units of measurement) and location. The inventory should be updated when new chemicals are purchased and reviewed again annually to ensure accuracy. During the inventory, inspect the containers to ensure they have GHS compliant labels.

12.2 Safety Data Sheets: Safety Data Sheets for all chemicals in the inventory shall be made available to employees. These documents are stored [enter location or description]. Safety Data Sheets can be obtained from the manufacturer or supplier.

13.0 Assessment/Program Review:

This program will be reviewed every [five] years to ensure it meets the needs of the City/Town, and all applicable guidelines and standards.

14.0 Appendix A: Sample Chemical Inventory

Product Name	Manufacturer	Amount	Location
<i>Sample Name</i>	<i>ABC Chemical Corp</i>	<i>10 Gallons</i>	<i>Fleet Chemical Cabinet</i>

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TOWN OF LAKE CITY

Motor Vehicle Safety

1.0 Purpose

Many employees operate owned, leased, rental or personal vehicles as part of their jobs. Employees are expected to operate vehicles safely to prevent incidents which may result in injuries and property loss. This program requires the full cooperation of each driver to operate-vehicles safely and to adhere to the responsibilities outlined in the Motor Vehicle Safety Program, while obeying all Federal, State and Local laws applying to the operation of motor vehicles.

2.0 Administrative Duties/Responsibilities:

The Town Manager is responsible for administering and maintaining this written program.

Additional responsibilities are assigned to the positions listed below.

2.1 Town Manager

- 2.1.1 Implement the motor vehicle safety program in their areas of responsibility.
- 2.1.2 Provide assistance and the resources necessary to implement and maintain the program.

2.2 Department Head

- 2.2.1 Investigate and report all incidents involving a motor vehicle used in performing business. Forward all incident reports to the Department Head.
- 2.2.2 Be responsible for taking appropriate action to manage high risk drivers as defined by this program.
- 2.2.3 Manage all elements set forth in the Motor Vehicle Safety Program. Review motor vehicle incident reports.
- 2.2.4 Revise and distribute changes to the Motor Vehicle Safety Program to managers, supervisors, and drivers, as necessary.
- 2.2.5 Maintain appropriate records.
- 2.2.6 Monitor federal, state, and local regulations to comply with all regulations and implement any policy/procedure change in a timely manner.
- 2.2.7 Monitor the effectiveness of the Motor Vehicle Safety Program.

2.3 Employee

- 2.3.1 Always operate a motor vehicle in a safe manner.
- 2.3.2 Maintain a valid driver's license and minimum insurance requirements on personal vehicles used in company business.
- 2.3.3 Comply with all requirements of this program.
- 2.3.4 Citations received while in the possession or operation of any [Entity] vehicle are the personal responsibility of the operator of that vehicle. Citations may not be paid with [Entity] funds.

3.0 Definitions:

- 3.1 Aggressive Driving - The behavior of an individual who "commits a combination of moving traffic offences to endanger other persons or property.
- 3.2 Alcohol - wine, beer, and distilled spirits.
- 3.3 Blood Alcohol Concentration (BAC) - The amount of alcohol in a person's body measured by grams of alcohol per deciliter or 100 milliliters blood, or grams of alcohol per 210 liters of breath.
- 3.4 Commercial Motor Vehicle - Any self-propelled or towed motor vehicle used on a highway in interstate commerce to transport passengers or property when the vehicle has a gross vehicle weight rating or gross combination weight rating, 10,001 pounds or more, is designed or used to transport more than 8 passengers (including the driver) for compensation, or is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation, or is used to transport hazardous materials in any amount that requires a placard.
- 3.5 Distracted Driving - Any activity that could divert a person's attention away from the primary task of driving. Includes activities such as texting or talking on a cell phone while driving.
- 3.6 Driving - Operating a motor vehicle on a public road and does not include operating a motor vehicle when the vehicle has pulled over to the side of, or off, an active roadway and has stopped in a location where it can safely remain stationary.

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TOWN OF LAKE CITY

- 3.7 Driving under the influence of alcohol, drugs, or a combination of alcohol and drugs - Operating a vehicle while the alcohol and/or drug concentration in the blood or breath, as determined by chemical or other tests, equals, or exceeds the level established by the State, or is equivalent to the standard offense, for driving under the influence of alcohol or drugs in the State.
- 3.8 Drugs - Controlled substances, as that term is defined under section 102(6) of the Controlled Substances Act, 21 U.S.C. 802(6).
- 3.9 Fatigued driving – When the driver, after prolonged periods of continuous driving, experiences mental and physical functional disorder.
- 3.10 FMCSA – the Federal Motor Carrier Safety Administration.
- 3.11 Licensed driver - An individual who possesses a valid driver’s license.
- 3.12 Major Violation – Offenses typically determined to be major violations may include:
- Driving under the influence of alcohol or drugs (DUI) or while ability is impaired (DWAI)
 - Reckless driving
 - Racing/speed contests
 - Speeding 20 mph or more over the posted speed limit
 - Leaving the scene of an accident
 - Failure to report an accident
 - Making a false accident report
 - Vehicular homicide or manslaughter
 - Attempting to elude a police officer
 - Driving while license is suspended, revoked or restricted
 - Driving an entity vehicle that has been locked/tagged out
- 3.13 Minor Violation - Offenses typically determined to be minor violations may include:
- Speeding less than 20 mph over the posted speed limit
 - Running a stop sign or red light
 - Improper turn
 - Passing across a double yellow line

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TOWN OF LAKE CITY

- Failure to yield
- Following too close
- Failure to wear a seatbelt
- Careless driving
- Failure to possess a valid Colorado driver's license
- Failure to provide proof of insurance if operating their personal vehicle
- Motor vehicle equipment violations
- Operating a defective or unsafe vehicle
- Failure to stop for a school bus with its red flashers activated

3.14 Motor Vehicle Record (MVR) — a summary of a driver's convictions and accidents on file with his or her home state.

3.15 Passenger motor vehicle - A passenger car, pickup truck, van, minivan, or sport utility vehicle with a gross vehicle weight rating of less than 10,000 pounds.

3.16 Public road - Any road under the jurisdiction of and maintained by a public authority and open to public travel.

3.17 Texting - Reading from or manually entering data into a personal wireless communications device, including doing so for the purpose of SMS texting, e-mailing, instant messaging, or engaging in any other form of electronic data retrieval or electronic data communication.

4.0 Equipment/Resource Needs:

Senior management involvement is essential for setting policies and allocating resources for a safe driving program.

5.0 Hazard Evaluation:

Driving is a complex activity. Given the wide variety of hazards encountered, a step-by-step approach to identify and keep track of hazards will be used. A hazard evaluation will be conducted for each task prior to starting the work. This will be accomplished as a site-specific or task-specific evaluation or as part of a comprehensive job safety analysis program.

Changes or modifications to the original scope of work require a stop work and reassessment to ensure any new hazards are identified and properly controlled prior to continuing work. Below are some common hazards that will be evaluated as part of this program.

5.1 Driver Hazards

- Aggressive or high-risk driving - failing to yield right of way, following too closely, improper passing, ignoring traffic control device, speeding
- Distraction - texting or talking on cell phone, using GPS or two-way radio, grooming, eating, involved conversation with passenger, etc.
- Does not know correct procedures for using equipment (e.g., how to apply tire chains)
- Does not properly recognize driving-related hazards and/or does not adjust driving accordingly
- Does not wear seatbelt, does not require passenger to wear seatbelt
- Driver not familiar with driving responsibilities or route, unprepared
- Driving too fast for road / traffic conditions
- Failure to pay attention to driving responsibilities, complacency
- Fatigue - reduced vigilance, slower reactions, poor decisions
- Impaired by alcohol, medication or prescription or illicit drugs
- Insufficient orientation or training: driver does not have necessary skills or is unfamiliar with procedures to operate vehicle
- Medical condition that could affect driving abilities (e.g., heart condition, sleep apnea)
- Poor nutrition and/or hydration - fatigue, attitude
- Poor vision (eye health)
- Slip, trip or fall while entering or exiting vehicle
- Violence from passenger

5.2 Journey Hazards

- Avoidable and unnecessary driving is NOT avoided
- Backing / reversing
- Collision with farm animals, wildlife
- Collision with oncoming vehicle (their fault)
- Collision with pedestrian or cyclist

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TOWN OF LAKE CITY

- Congested traffic - unexpected delays, frustration, stress
- Extreme temperature conditions - severe heat or cold
- Limited visibility - fog, excessive dust, travelling into sunset or sunrise
- Long duration trips (more than 2 hours); unpredictable or irregular schedules, shift work, driving between midnight and 6:00 am
- No trip plan, check-in procedure, emergency procedures or communications device
- Poor traction conditions - summer: heavy rain, rain after lengthy hot period, winter: freeze / thaw cycles, shaded corners, temperatures a little above or below freezing
- Poor trip scheduling - unrealistic time allowed, inefficient route selection, avoidable delays not eliminated
- Route includes intersections or roads with known high crash frequency such as uncontrolled railway crossings

5.3 Vehicle Hazards

- Car slips off jack during tire change
- Cracked / damaged windshield
- Electrical energy shock (e.g., improper battery boost)
- Faulty brakes
- Faulty head lights, taillights, or signals, etc.
- Improper lockout (e.g., vehicle rolls into another vehicle, person)
- Improperly adjusted mirrors - visibility
- Improperly adjusted seat and headrest - MSI strain, visibility
- Lack of emergency equipment or first aid supplies
- Loose items in cab, disorganized driving workspace
- Sudden release of air pressure from airline or hydraulic pressure (e.g., lift truck, on-board hydraulic equipment)
- Tires not suited for application (e.g., all-season tires rather than winter tires)
- Unsecured, overloaded, or unbalanced load
- Vehicle not maintained according to manufacturer specifications
- Vehicle not selected or equipped for use (e.g., under-powered, wrong axle configuration)
- Vehicles not regularly inspected

6.0 Medical Qualifications:

This program requires personnel who operate a Commercial Motor Vehicle to receive medical clearance prior to performing the work tasks. The following medical clearances must be completed:

- 6.1 Vision - Drivers are required to have at least 20/40 acuity in each eye with or without correction. They are also required to have at least 70" peripheral in the horizontal meridian, measured in each eye.
- 6.2 Hearing - Drivers must be able to perceive what is known as a "forced whisper" at a distance of 5ft or less, with or without a hearing aid. This standard equates to an average hearing loss in the better ear of less than 40 db.
- 6.3 Blood pressure/pulse rate - The medical examiner will check the driver's blood pressure and pulse to look for high blood pressure and irregular heartbeats.
- 6.4 Urinalysis - A urinalysis is required. The test looks for indications of underlying medical conditions such as diabetes.
- 6.5 Physical Examination - The physical exam will cover a dozen different categories:
 - General appearance
 - Eyes (cataracts, glaucoma, macular degeneration, etc.)
 - Ears (scarring of tympanic membrane, perforated ear drums, etc.)
 - Mouth and throat (to look for problems breathing or swallowing)
 - Heart (murmurs, extra sounds, pacemaker, etc.)
 - Lungs and chest, not including breast examination (abnormal breathing, impaired respiratory functions, cyanosis, etc.)
 - Abdomen and Viscera (enlarged liver, viscera, muscle weakness)
 - Vascular (abnormal pulse, carotid, varicose veins)
 - Genito-urinary (hernias)
 - Extremities (limb impaired)
 - Spine, other musculoskeletal (previous surgery, limitation of motion, tenderness, etc.)
 - Neurological (impaired equilibrium, coordination or speech pattern, ataxia, asymmetric deep tendon reflexes)

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A DOT physical can only be completed by a medical examiner certified by the FMCSA. It is up to the Medical Examiner to determine if a candidate meets all the requirements, and to mark the report to the best of their knowledge.

In addition to the DOT physical, operators of CMVs that require a Commercial Driver's License (CDL) must participate in a Drug and Alcohol Testing Program. The types of testing include:

- Pre-employment
- Random
- Post-Accident
- Return to Duty

7.0 Training Requirements:

This program will provide continuous driver safety training and communication. Even experienced drivers benefit from periodic training and reminders of safe driving practices and skills. Training shall be conducted in the following areas prior to performing the work tasks outlined in this program.

7.1 The following non-Commercial vehicle training elements are required:

- Vehicle specific orientation
- Annual route specific training
- Defensive driving
- Post-incident retraining

7.2 For drivers with a CDL the FMCSA has the following training requirements:

- Entry-Level driver training
- Longer Combination vehicle
- Hazardous Materials training
- Reasonable Suspicion Training for Supervisors

8.0 Topic Specific Sections/Procedures:

The following program requirements will be put in place to ensure that only capable and eligible drivers are hired. These program requirements will also detail training, supervision of drivers and how to maintain vehicles owned or leased by the [Entity].

8.1 Driver Recruitment

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Documented driver selection guidelines describing experience required, medical examination requirements, MVR review criteria, and preemployment safety screening program review.

8.2 Incident and Crash Review

All crashes involving [Entity] vehicles, take-home vehicles, or vehicles rented or leased by the [Entity] for official use will be thoroughly investigated and an attempt made to determine the cause of the crash. All employees involved in a motor vehicle crash will receive the same treatment and consideration as any citizen regarding the issuance of a traffic citation, except in the case of the vehicle being operated under emergency conditions, then no citation will be issued. Preventable crashes may result in a recommendation for corrective action by the employee's supervisor.

Guidance: Depending solely on the police department's investigation is not sufficient since their investigation tends to focus only on fault rather than addressing preventability. The driver's supervisor is the person responsible for conducting this accident investigation. However, in small entities this may not be practicable, and someone else may be needed to perform the investigative function.

In addition to accident investigation, some method of accident review will provide a follow-up on the results of the accident investigation. If, for example, an accident was determined to have been preventable, a review system can help determine what steps may be needed to help correct any driving habits that may lead to a similar mistake in the future. Such steps might include remedial training, counseling, or some form of disciplinary action. This accident review 'board' can vary between entities of varying size. A large entity may have a formal accident review panel composed of several department heads or the manager, while a small entity may use its board as an informal accident review panel. The structure of the accident review process is less important than the fact that accident review is effectively being done. Sample policies are attached for your review.

8.3 Driver Recognition

A driver recognition program will be put in place. The components of this program are as follows:

Guidance: Programs can be developed to recognize and reward those drivers that demonstrate compliance with this program. Such "rewards" can range from something as

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simple as a personal acknowledgment to a formal safety incentive program. Likewise, drivers who do not routinely demonstrate compliance should be identified and counseled in some forum, such as a safety meeting to re-emphasize the need to comply with this program.

8.4 Seat Belts

The use of seat belts is required under state law and while operating all entity vehicles or personal vehicles on (name of entity) business and by this policy.

8.5 Vehicle Specification and Selection

There shall be a Policy in place that details the specifications for vehicles, trailers and other motorized equipment used in operations. This Policy can help determine which equipment is proper for safe operations rather than external factors such as cost, availability or driver wants.

8.6 Inspection and Maintenance

Scheduling preventative maintenance will allow you to plan repair work that will not curtail operations and anticipate problems and promote corrections before they become serious. All maintenance will be performed by a qualified mechanic and the manufacturer's recommended maintenance program and schedule should be reviewed and maintained.

A daily safety inspection will be made of all vehicles before operation to detect any obvious safety hazards. Inspection is required of vehicles alone or with a trailer with a gross vehicle weight rating (GVWR) of 10,000 pounds combined under DOT regulations. There is no exemption for vehicles not leaving city limits. The state patrol may stop and demand to see the required documentation under this regulation. Inspections must be documented, and records kept. An example vehicle inspection form is included in Appendix C.

8.7 Motor Vehicle Records Review

The [Entity] will conduct an annual motor vehicle record review of all employees who routinely operate entity and personal vehicles for [Entity] business. Drivers' license numbers will be verified by the Department Head and submitted to the Safety Coordinator along with a completed DR 2489. The employee must notify their supervisor immediately if the employee's driver's license is suspended, revoked, or restricted for any reason. Failure

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to comply with any part of this policy can be grounds for disciplinary action up to and including termination.

- 8.7.1 All new job applicants of [Entity] will submit their driver's license number to the Department Head prior to hiring. The Safety Coordinator shall order a motor vehicle record review prior to hiring an employee into a driving position.
- 8.7.2 Every current employee will have a valid Colorado driver's license of the appropriate type with all required endorsements for the vehicle that they operate.
- 8.7.3 An MVR is obtained and reviewed at least annually, at the Departments expense, for all current employees that are required to have a driver's license for the position they hold.
- 8.7.4 MVRs for current employees are requested and reviewed after a preventable on the job collision.
- 8.7.5 MVRs for current employees are requested and reviewed if a complaint is received regarding the employee's driving while on business.
- 8.7.6 MVRs for current employees are requested and reviewed if an employee transfers to a position requiring a driver's license or into a position that requires a different type of driver's license or additional endorsements.
- 8.7.7 Motor Vehicle Record (MVR's) or driver license checks will be obtained by submitting a completed form DR2489 for each driver. The form DR2489 will have all the Driver Information completed. Based on guidance from the DMV the first box referring to a governmental agency under DDPA (Driver Privacy Protection Act) will be checked, however, the box for Commercial Driver's License holder near the bottom of this section will be checked even if the person has a CDL though the instructions state "Check 1 Box Only". A form DR 2559 will be used for any drivers that do not currently work for [Entity] but may be used to check driver histories during the hiring process.
- 8.7.8 This information will be forwarded to:
 - 8.7.8.1 Regular or Priority Mailing address:
Department of Revenue

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Motor Vehicle Business Group
Driver Control Section
Denver, CO 80261-0016

8.7.8.2 Business address:

Department of Revenue
Motor Vehicle Business Group
Driver Control Section
1881 Pierce Street
Lakewood, CO 80214

8.7.8.3 Express mail address:

Department of Revenue
Motor Vehicle Business Group
Driver Control Section
1881 Pierce Street
Lakewood, CO 80214

- 8.7.9 All discrepancies will be investigated by the Department Heads. Any employees determined to be operating entity vehicles or equipment without a valid license will be suspended from operating the equipment until a valid driver's license is submitted to the Safety Coordinator.

Note: You can use any express mail service to send your information. However, if you want returned information express mailed, use only pre-paid express mail through the U. S. Postal Service. The Department of Revenue will NOT use Federal Express or any other type of overnight service.

9.0 Recordkeeping:

Documentation of the qualification of each driver will be maintained. Examples of items to be kept in the driver's qualification and/or personnel files include:(1) Copy of employee authorization for MVR (2) Copy of MVRs (3) Training records (4) Copy of current driver's license (5) Other items specific to drivers with a CDL

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10.0 Assessment/Program Review:

Procedure will be enacted specifying audit functions that management completes to ensure all program requirements are being met. Audit results communicated back to top management. The program will be reviewed initially upon implementation and annually thereafter. All findings will be reported back to top management.

11.0 Appendix:

Appendix A – Winter Driving Considerations

Appendix B – Motor Vehicle Record Review Criteria.

Appendix C – Vehicle Inspection Form

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Appendix A – Winter Driving Considerations

The following considerations should be put in place when drivers must travel during extreme weather conditions:

- Vehicle maintenance procedures are adjusted for seasonal differences. Special consideration is given to equipment such as the battery, heating system, tires and tread depth, tire pressure, wiper blades, and wiper fluid.
- Policy established that allows drivers to consult with their supervisor to adjust driving hours and to stop driving if they are fatigued or the weather is bad.
- Pre-trip vehicle inspections are modified to include checking all vehicle cameras and sensors that could be covered in snow or ice.
- Procedure in place to ensure all vehicles are equipped with an emergency kit that includes ice scraper, blankets, flashlight, batteries, flares, jumper cables, first aid kit, bottled water, and non-perishable snacks.
- Drivers are properly trained on any safety features built into vehicles such as traction control, anti-lock braking, auto chains etc.

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Appendix B – Motor Vehicle Record Review Criteria

On an annual basis, the [Entity] will review a current MVR for each driver. The [Entity] may require more frequent background checks if at-risk driver behaviors are identified. Suspension or revocation of an employee's operator's license may impact the employee's ability to perform their job duties which may result in disciplinary action up to and including termination.

1.1.1 MVRs are graded into the following categories: Clear, Acceptable, Marginal, and unacceptable.

1.1.1.1 A Clear MVR is defined as having no minor conviction or preventable collisions in the last 3 years and no major violations/convictions in the last 5 years.

1.1.1.2 An Acceptable MVR is defined as no major violations/convictions in the last 5 years, or 2 minor convictions in the last 3 years, or 1 preventable collision and 1 minor conviction in the last 3 years.

1.1.1.3 A Marginal MVR is defined as 3 minor violations/convictions in the last 3 years, or 2 preventable collisions in the last 3 years, or any combination of minor convictions or preventable collisions totaling 3 in the last 3 years.

1.1.1.4 An Unacceptable MVR is defined as 1 or more major violations/convictions in the last 3 years, or 4 or more minor convictions in the last 3 years, or 3 or more preventable collisions in the last 3 years, or any combination of minor convictions or preventable collisions totaling 4 in the last 3 years.

1.1.2 When an employee's MVR is graded Unacceptable corrective action up to and including termination of employment is taken.

1.1.3 When an employee's MVR is graded Marginal corrective action including but not limited to the following will be taken:

- Attending a defensive driving training program,
- Participating in a documented ride along evaluation,
- Other actions deemed appropriate.

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Appendix C – Vehicle Inspection Form

Vehicle Inspection Report

Check ANY Defective Item and Give Details under "Remarks."

Date: _____

Vehicle Number: _____

- Air Compressor
- Air Lines
- Battery
- Brake Accessories
- Brakes
- Carburetor
- Clutch
- Defroster/Heater
- Drive Line
- Engine
- Fifth Wheel
- Front Axle
- Fuel Tanks

- Horn
- Lights
 - Head – Stop
 - Tail – Dash
 - Turn Indicators
- Mirrors
- Oil Pressure
- On-Board Recorder
- Radiator
- Rear End
- Reflectors
- Safety Equipment
 - Fire Extinguisher
 - Flags – Flares – Fuses
 - Spare Bulbs and Fuses

- Springs
- Starter
- Steering
- Tachometer
- Tires
- Transmission
- Windows
- Windshield Wipers
- Other

Trailer Number: _____

- Brake Connections
- Brakes
- Coupling Chains
- Coupling King Pin
- Doors

- Hitch
- Landing Gear
- Lights – All
- Roof
- Springs

- Tarpaulin
- Tires
- Wheels
- Other

Remarks: _____

Condition of the above vehicle is satisfactory

Driver's Signature: _____

Above Defects Corrected

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Above Defects Need Not Be Corrected For Safe Operation of Vehicle

Mechanic's Signature: _____ Date: _____

Driver's Signature: _____ Date: _____

TRENCHING AND EXCAVATION SAFETY POLICY

1.0 Purpose:

This program sets forth the practices required for trenches or excavations with a depth of four feet or greater along any portion of its length. All excavations or trenches 4 feet or greater in depth shall be appropriately benched, shored, or sloped according to the procedures and requirements set forth in this policy. Excavations or trenches 20 feet deep or greater must have a protective system designed by a registered professional engineer.

The risk manager or municipal designated safety person has the primary responsibility for assisting departments in implementation of this policy through coordinating training and consultation. This includes:

On site evaluation to monitor use of safe work practices and procedures. Assisting with atmospheric testing and equipment selection as needed

1. Providing or identifying appropriate training for Competent Persons and staff
2. Providing technical assistance as needed
3. Reviewing and updating the program at least annually.

2.0 Administrative Duties/Responsibilities:

- 2.1 Departments have the primary responsibility for providing training, trench protection systems, effective barricades and supporting the use of other protective measures deemed prudent and necessary by the competent person.
- 2.2 Supervisors have the primary responsibility for the implementation of the Trenching and Excavation Safety Policy in their work area. The supervisor has ultimate responsibility for the safety of the employees and general public affected by the excavation. This includes evaluation of the work to be performed, determination of the means of protection that will be used and adherence to the provisions of this policy as appropriate. The supervisor must ensure daily, or more often as required, that site conditions are safe for employees to work in excavations. The supervisor or a member of the work group must be a "competent person" as defined by OSHA.
- 2.3 Employees have the primary responsibility for working in accordance with the provisions of this policy. No employees should enter an excavation meeting the scope of this policy until authorized by the competent person.

3.0 Definitions:

- 3.1 Benching: A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near- vertical surfaces between levels.
- 3.2 Cave-in: The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.
- 3.3 Competent Person: One who is capable to identify existing and predictable hazards in the surroundings or working conditions that may affect employees and the general public, and who has authority to take prompt corrective measures to eliminate them.
The Competent Person(s):
 - 3.3.1 Must be trained in and knowledgeable of excavation and trenching standard, and other programs that may apply (Hazard Communication, Confined Space, Respiratory Protection)
 - 3.3.2 Must be capable of recognizing hazardous conditions and must have authority to stop work and ensure that hazards are corrected
 - 3.3.3 Performs and documents the 'Daily Excavation Inspection', and knows when inspections should be performed
 - 3.3.4 Must assure that the location of underground installations or utilities have been properly located.
 - 3.3.5 Must identify and ensure the use of adequate protective systems, work methods and personal protective equipment (PPE) on the excavation site.
- 3.4 Excavation:
 - 3.4.1 Any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.
 - 3.4.2 Fissured - Refers to soil that tends to break along definite planes of fracture with little resistance or a material that exhibits open cracks such as tension cracks in an exposed surface.
 - 3.4.3 Hazardous Atmosphere - Atmosphere that is oxygen deficient, potentially explosive, flammable, poisonous, corrosive, oxidizing, irritating, toxic, or otherwise harmful in a manner that may result in death or serious injury.

- 3.5 Protective System: Methods for protecting personnel working in excavations from cave-in, material falling or rolling in from the exterior or from collapse of adjacent structures. Protective systems include the use of support systems, sloping and benching systems, shield systems and other systems that provide the necessary protection.
- 3.6 Registered Professional Engineer (RPE): A person who is registered as a professional engineer.
- 3.7 Shield (Shield System): A structure that can withstand the forces imposed on it by a cave-in and thereby protect employees with the structure. Shields can be a permanent structure or can be designed to be portable and moved along as work progresses. Also known as trench boxes or trench shields.
- 3.8 Shoring (Shoring System): A structure such as a metal hydraulic, mechanical, or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.
- 3.9 Sloping (Sloping System): A method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation to prevent cave-ins. The angle of incline varies with differences in such factors as the soil type, environmental exposure conditions, and application of surcharge loads.
- 3.10 Soil Types:
- 3.10.1 Soil Type A - Most stable: clay, silty clay, and hardpan (resists penetration). No soil is Type A if it is fissured, is subject to vibration of any type, has previously been disturbed, or has seeping water.
- 3.10.2 Soil Type B - Medium stability: silt, sandy loam, medium clay, and unstable dry rock; previously disturbed soils unless otherwise classified as Type C.
- 3.10.3 Soil Type C - Least stable: gravel, loamy sand, soft clay, submerged soil or dense, heavy unstable rock, and soil from which any water is seeping.
- 3.11 Soil: Mixed Types (Layered Geological Strata) – The soil must be classified based on the soil classification of the weakest soil layer. Each layer may be classified individually if a more stable layer lies below a less stable layer, i.e. where a Type C soil rests on top of stable rock.
- 3.12 Trench (Trench Excavation): A narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation as to reduce the dimension measured from the forms or

structure to the side of the excavation to 15 feet or less, the excavation is also considered to be a trench.

4.0 Equipment/Resource Needs:

- 4.1 Personal Protective Equipment such as hard-hats, safety eyewear, reflective vests, gloves, and waterproof footwear.
- 4.2 Signs, barricades, and cones - traffic control for both motor vehicles and pedestrian traffic.
- 4.3 Stop/Slow paddles, flags or signs for flagging operations.
- 4.4 Soil testing equipment.
- 4.5 Dewatering equipment.
- 4.6 Trench boxes and/or shoring.
- 4.7 Ladders of multiple lengths.
- 4.8 Atmospheric monitoring devices.
- 4.9 Respiratory equipment.
- 4.10 Ventilation equipment.
- 4.11 Confined space equipment.
- 4.12 Lockout/Tagout equipment.
- 4.13 Fall protection.

5.0 Hazard Evaluation and Emergencies:

- 5.1 Hazardous Atmospheres and Confined Spaces
 - 5.1.1 Testing for Atmospheric Contaminants If there is any possibility that the trench or excavation could contain a hazardous atmosphere, atmospheric testing must be conducted prior to entry. Conditions that might warrant atmospheric testing would be if the excavation was made in a landfill area or if the excavation is adjacent to sources of contamination (e.g. sewage or fuel leaks).
 - 5.1.2 Testing should be conducted before employees enter the trench and should be done regularly to ensure that the trench remains safe. The frequency of testing

should be increased if equipment is operating in the trench that could produce airborne contaminants.

- 5.1.3 Employees required to wear respiratory protection must be trained, and fit-tested.
- 5.1.4 Trenches and excavations with hazardous concentrations of airborne contaminants or oxygen deficient atmospheres qualify as confined spaces.
- 5.1.5 Employees shall not be permitted to work in hazardous and/or toxic atmospheres. These include atmospheres with:
 - 5.1.5.1 Less than 19.5% oxygen
 - 5.1.5.2 A combustible gas concentration greater than 20% of the lower flammable limit.
 - 5.1.5.3 Concentrations of hazardous substance that exceed those specified in the Threshold Limit Values for airborne contaminants established by the American Conference of Governmental Hygienist (ACGIH).
- 5.2 Standing Water and Water Accumulations:
 - 5.2.1 Workers must not enter or work in excavations with standing water or in which water is accumulating unless adequate protection is provided. Protective methods for these circumstances must include:
 - 5.2.1.1 Use of special support or shield systems approved by a registered professional engineer.
 - 5.2.1.2 Water removal equipment used and monitored by a competent person
 - 5.2.1.3 Safety harnesses and lifelines used in conformance with 29 CFR 1926.104
 - 5.2.2 During rainstorms employees must exit the trench. The excavation must be carefully inspected by a competent person after each rain and before employees are permitted to re-enter the trench. Protective measures such as diversion ditches and dikes should be used to limit surface runoff water from entering the excavation.
- 5.3 Emergencies
 - 5.3.1 Personnel are not training to perform trench rescues should not place themselves at risk in order to attempt the rescue of someone trapped due to a cave-in.
 - 5.3.2 In the event of a serious injury or trapped worker requiring specialized rescue, 911 must be called immediately.

5.3.3 While waiting for emergency response personnel to arrive, workers at the site should take measures to support the rescue team and to further protect personnel on site.

6.0 Medical Qualifications:

6.1 Note: While there are no industry-specific medical qualification guidelines for this program, each employee performing these tasks must be capable of performing all required physical and mental tasks required. Fitness for Duty evaluations should be considered. Americans with Disabilities (ADA) guidelines must be followed.

7.0 Training Requirements:

7.3 Any employee required to dig or enter an excavation shall attend, at a minimum, trenching and excavation safety awareness training prior to beginning related work. The training is provided by the risk manager or designated safety person and covers the potential hazards encountered when working in and around excavations and the procedures that need to be followed to avoid these hazards,

7.4 Additional training is required for any employee designated to be the competent person for a trenching and excavation job. Competent person training covers the following areas in detail:

7.4.1 Hazards related to excavation work.

7.4.2 Work practices and selection of appropriate protective systems.

7.4.3 Methods of evaluating soil and the site.

7.4.4 Inspection procedures.

7.4.5 Specific requirements of the policy and of related policies.

7.4.6 Emergency procedures.

8 Procedures:

8.1 Dig Permit: A competent person shall be identified by name on the dig permit for all excavations with a depth of four feet or greater at any portion that personnel may enter.

8.1.1 The location of sewers, telephone, fuel, electric, water lines, or any other underground installations that may be encountered during excavation work must be determined and marked prior to opening an excavation. The Project

Manager shall make arrangements as necessary with the appropriate utility agency for the protection, removal, shutdown, or relocation of underground installations.

- 8.1.2 If it is not possible to establish the exact location of these installations, the work may proceed with caution if detection equipment or other safe and acceptable means are used to locate the utility.
 - 8.1.3 Excavations must not endanger the underground installations, or the employees engaged in the work. Utilities left in place should be protected by barricades, shoring, suspension, or other means as necessary to protect employees.
- 8.2 Protection of the Public: Excavations must be isolated from public access by a substantial physical barrier. Barricades, lighting and posting shall be installed as appropriate prior to the start of excavation operations. All temporary excavations of this type shall be backfilled as soon as possible
- 8.2.1 Guardrails, fences, or barricades shall be installed around excavations adjacent to walkways, roads, paths, or other traffic areas. Use of barricade tape alone is not considered a sufficient method of isolation when the excavation is unattended. Warning lights or other illumination shall be used as necessary for the safety of the public at night.
 - 8.2.2 Wells, holes, pits, and similar excavations must be effectively barricaded or covered and posted.
 - 8.2.3 Walkways or bridges used by the general public to cross excavations must be equipped with standard guardrails.
- 8.3 Surface Encumbrances: All equipment, materials, supplies, buildings, roadways, trees, utility vaults, boulders, etc. that could present a hazard to employees working in the excavation must be removed or supported as necessary to protect employees.
- 8.4 Soil Classification: The competent person in charge of the excavation shall be responsible for determining the soil type. All previously disturbed soil is automatically considered Type B or C soil. Soil may be considered Type C by default and no additional tests required.
- 8.4.1 To classify soil as type B the competent person shall use a visual test coupled with one or more manual tests.
 - 8.4.2 Visual test: Evaluate the conditions around the site including the soil adjacent to the site and the soil being excavated.

- 8.4.3 Identify any signs of vibration. Check for crack-line openings along the failure zone, look for existing utilities that indicate that the soil has been previously disturbed, and observe the open side of the excavation for indications of layered geologic structuring.
- 8.4.4 Look for signs of bulging, boiling, or sloughing, as well as signs of water seepage from the sides or bottom of the excavation.
- 8.4.5 The area adjacent to the excavation should be evaluated for foundations or other intrusions into the failure zone, and the evaluator should check the spoil distance from the edge of the excavation.
- 8.4.6 Any one of the following will cause soil to be classified as Type C
- 8.4.6.1 Water seepage into excavation
 - 8.4.6.2 Vibration from road traffic or equipment
 - 8.4.6.3 Signs of bulging, boiling, or sloughing
 - 8.4.6.4 Crack lines along failure zone
- 8.5 Manual Tests:
- 8.5.1 Thumb penetration test: Attempt to press the thumb firmly into the soil in question. If the thumb penetrates no further than the length of the nail, it is probably Type B soil. If the thumb penetrates the full length of the thumb, it is Type C. It should be noted that the thumb penetration test is the least accurate testing method.
- 8.5.2 Dry strength test: Take a sample of dry soil. If it crumbles freely or with moderate pressure into individual grains it is considered granular (Type C). Dry soil that falls into clumps that subsequently break into smaller clumps (and the smaller clumps can only be broken with difficulty) it is probably clay in combination with gravel, sand, or silt (Type B).
- 8.5.3 Plasticity or Wet Thread Test Take a moist sample of the soil. Mold it into a ball and then attempt to roll it into a thin thread approximately 1/8 inch in diameter by two inches in length. If the soil sample does not break when held by one end, it may be considered Type B. A pocket penetrometer, shear vane, or torvane may also be used to determine the unconfined compression strength of soils.
- 8.6 Protective Systems: In excavations greater than 4 feet in depth a method to protect people entering the excavation from cave in must be employed. Acceptable protective methods include sloping, benching, shielding, and shoring.

8.6.1 Benching, Sloping, Shoring, and Shielding Requirements

8.6.2 General: Excavations under the base of the footing of a foundation or wall require a support system designed by a registered professional engineer. Sidewalks, pavement, utility vaults or other similar structures shall not be undermined unless a support system or another method of protection is provided to protect employees from their possible collapse. Sloping or benching are often the preferred methods of protection; however, shoring or shielding is used when the location or depth makes sloping to the allowable angle impractical.

8.6.3 Sloping: Maximum allowable slopes for excavations less than 20' based on soil type and angle to the horizontal are as follows:

8.6.4 Type B soil must have walls sloped to a maximum angle of 45-degrees (1:1 slope) from horizontal in all directions.

8.6.5 Type C soil must have walls sloped at a maximum angle of 34-degrees (1:1.5 slope) from horizontal in all directions.

8.7 Benching Requirements:

8.7.1 In Type B soil, the vertical height of the benches must not exceed 4 feet. Benches in increments of 2 feet or less is preferred. The angle developed by the edge of the benches must not exceed the maximum allowable slope for that soil type (Type B soil 45-degrees).

8.7.2 Benching is not permitted in Type C soil.

8.8 Shielding:

8.8.1 Trench boxes or trench shields are intended to protect workers from cave-ins and similar incidents. The trench shield is lowered into the excavation and workers may then enter the protected area within the shield. Only trench shields designed or certified by a registered professional engineer may be used. The use is limited to those trenches for which the shield is certified (e.g. maximum depth and material). The manufacturer must approve any modifications to the shields. The excavated area between the outside of the trench box and the face of the trench should be as small as possible. The space between the trench box and the excavation side should be backfilled to prevent lateral movement of the box.

8.8.2 Trench boxes may be used in combination with sloping and benching. The box must extend at least 18 inches above the surrounding area if there is sloping

toward the excavation. This can be accomplished by providing a benched area adjacent to the box.

- 8.8.3 Shields may be placed two feet above the bottom of an excavation, provided they are calculated to support the full depth of the excavation and there is no caving under or behind the shield.
- 8.8.4 Workers must enter and leave the shielded area in a protected manner, such as by a ladder or ramp. Workers may not remain in the shielded area while it is being moved.

8.9 Shoring:

- 8.9.1 All shoring shall be installed from the top down and removed from the bottom up. Hydraulic shoring shall be checked at least once per shift for leaking hoses and/or cylinders, broken connections, cracked nipples, bent bases, and any other damaged or defective parts. The top cylinder of hydraulic shoring shall be no more than 18 inches below the top of the excavation. The bottom of the cylinder shall be no higher than four feet from the bottom of the excavation. (Two feet of trench wall may be exposed beneath the bottom of the rail or plywood sheeting, if used.)
- 8.9.2 Three vertical shores, evenly spaced, must be used to form a system. Wales are installed no more than two feet from the top, no more than four feet from the bottom, and no more than four feet apart, vertically.

8.10 Inspections:

- 8.10.1 Frequent inspection of the excavation and surrounding area by the Competent Person is critical to ensure the safety of the workers involved in work within the trench. An excavation inspection form is included as Appendix A in this document. The Competent Person must conduct inspections of the entire excavation site: Daily and before the start of each shift.
 - 8.10.1.1 As dictated by the work being done in the trench.
 - 8.10.1.2 After every rainstorm.
 - 8.10.1.3 When fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom, or other similar conditions occur.
 - 8.10.1.4 When there is a change in the size, location, or placement of the spoil pile.

8.10.1.5 When there is any indication of change or movement in adjacent structures.

8.11 Spoil:

8.11.1 Temporary spoil shall be placed no closer than 2 feet from the surface edge of the excavation. The distance is measured from the nearest base of the spoil to the cut. This distance should not be measured from the crown of the spoil deposit. This distance requirement ensures that loose rock or soil from the temporary spoil will not fall on employees in the trench.

8.11.2 The spoil should be placed so that it channels rainwater and other run-off water away from the excavation. Spoil should be placed so that it cannot accidentally run, slide, or fall back into the excavation.

8.12 Surface Crossing of Trenches:

8.12.1 Surface crossing of trenches should not be made unless absolutely necessary. However, if necessary, they are only permitted under the following conditions:

8.12.1.1 Vehicle crossings must be designed by and installed under the supervision of a registered professional engineer.

8.12.1.2 Walkways or bridges must have a minimum clear width of 20 inches, be fitted with standard rails, and extend a minimum of 24 inches past the surface edge of the trench.

8.13 Ingress and Egress:

8.13.1 Trenches 4 feet or more in depth shall be provided with ladders or other fixed means of egress. Spacing must be such that a worker will not have to travel more than 25 feet to the nearest means of egress. Ladders must be secured and extend a minimum of 36 inches above the landing. Metal ladders should be used with caution, particularly when electric utilities are present.

8.14 Exposure to Vehicles:

8.14.1 Employees exposed to vehicular traffic shall be provided with and required to wear reflective vests or other suitable garments marked with or made of reflectorized or high-visibility materials. Trained flag persons, signs, signals, and barricades shall be used when necessary.

8.15 Exposure to Falling Loads:

- 8.15.1 Employees are not allowed in the excavation while heavy equipment is digging. Employees must not work under loads being lifted or moved by heavy equipment used for digging or lifting. Employees are required to stand away from equipment that is being loaded or unloaded to avoid being struck by falling materials or spillage.

Appendix A

OSHA and Safety References:

1.0 Video: 5 Things you should know to stay safe:

1.1 https://www.youtube.com/watch?v=zV-sVn_AUEM#action=share

2.0 OSHA Trenching and Excavation Safety:

2.1 <https://www.osha.gov/Publications/osha2226.pdf>