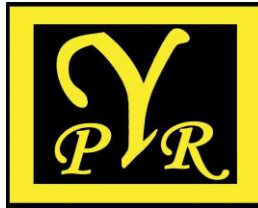


WCID No.10 Midcrown Elevated Storage Tank Painting



Bid Documents
Prepared by
Young Professional Resources
8940 Fourwinds Dr. Suite 309
Windcrest, Texas 78239
Tele: 210-590-9215 Fax: 210-590-9346



FIRM # F-8635



A handwritten signature in blue ink, appearing to read "L.D. Young".

September 04, 2023

Bid Closing Date: October 06, 2023– 10:00 AM (CST)

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INVITATION FOR BIDS (IFB)

The Bexar County Water Control and Improvement District No. 10 will be accepting sealed bids for the **WCID No.10 Midcrown Elevated Storage Tank Painting PROJECT** will be received by and at the office of the District Office until **10:00 AM, October 06, 2023**, and then opened publicly immediately in the Bexar County Water Control and Improvement District No. 10 Office. The selection is scheduled for presentation to the Bexar County Water Control and Improvement District No. 10 Board Meeting at their regularly scheduled meeting.

The work to be performed under this contract consists of: Clean, prepare and paint both interior and exterior surface of the tank, along with all site associated valves and piping. This 100,000-gallon elevated tank is located in Windcrest, Texas 78239 (Intersection of Midcrown and Crestway Drive)

A non-mandatory pre-bid meeting and optional site tour will be conducted on **September 20, 2023, at 10:00 A.M.** at City of Windcrest City hall located at 8601 Midcrown Drive, Windcrest Texas 78239.

The last Tank Inspection Report for this tank and bid documents will be posted on the Bexar County Water Control and Improvement District No. 10 's website by **September 06, 2023**. The website address is **www.bexarcountywcid10.com**. Inspection report is attached as Attachment B and recent photos attached as Attachment C.

Potential Bidders must call the offices of Young Professional resources at 210-590-9215 to register so that all addendums or additional can be forwarded to Potential Bidders

Questions regarding the IFB are due by **September 29, 2023, at 10:00 AM**, and the answers will be posted on the Bexar County Water Control and Improvement District No. 10 's website by **October 03, 2023, at 5:00 PM**.

A bid bond in the amount of 5% of the bid issued by an acceptable surety registered with the U.S. Treasury shall be submitted with each bid. A certified check payable to Bexar County Water Control and Improvement District No. 10 may be submitted in lieu of the bid bond. The Bexar County Water Control and Improvement District No. 10 reserves the right to reject any or all bids and to waive any informality in the bidding.

Bids may be held by the Bexar County Water Control and Improvement District No. 10 for a period not to exceed sixty (60) days from the date of the bid opening for the purpose of reviewing the bids and investigating the Bidder's qualifications prior to the contract award.

David Wallace
General Manager
Bexar County Water Control and Improvement District No. 10

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SCOPE & INTENT

Bexar County Water Control and Improvement District No. 10 (District) is accepting sealed bids for refinishing of one (1) Elevated storage tank for potable water as detailed below.

SCOPE

1. Surface preparation the interior and exterior of Elevated Storage Tank (100,000 gallons) located in Windcrest, Texas.
2. Furnish all materials, equipment, supplies, and accessories required in connection with the work specified herein.
3. Obtain all permits necessary to complete the surface preparation and coatings work designed for this project, including removal, handling, and disposal of used abrasive, hazardous and/or toxic waste materials. For blasting and painting water storage tanks, the contractor shall perform work in compliance with Title 31., Natural Resources and Conservation Part III., Texas Air Control Board Chapter III., Control of Air Pollution from visible Emissions and Particulate Matter Abrasive Blasting of Water Storage Tanks Performed by Portable Operations, 31 TAC 111.131 through 139, latest revisions.
4. Use non-lead containing coatings which comply with all laws, regulations and ordinances of the Federal, State, and Local government including V.O.C. regulations.
5. Specification covers the surface preparation and painting of all surfaces, both interior and exterior, except as otherwise specified or specifically excluded.
6. Protect all adjacent work, vehicular traffic, property, and persons from damage, e.g., over spray, over blast and spillage. Should damage occur, THE CONTRACTOR SHALL make provisions for repair of damage in a timely manner at his/her expense.
7. Properly store and handle materials according to manufacturer's requirements and in compliance with applicable government regulations.
8. Provide scaffolding, ladders, lighting, and equipment as necessary to accomplish work and to provide safe access for inspection by the Bexar County Water Control and Improvement District No. 10 or its designated representative. All operations, equipment and their installations shall comply with all applicable laws, regulations, and ordinances. Compliance with OSHA Standards per 29 CFR 1926 and 29 CFR 1910 is to be enforced by the Contractor.
9. Provide for the safety of all personnel, including but not limited to the use of explosion proof lighting and proper electrical grounding of equipment. Handling and application of all coating materials shall be in accordance with the manufacturers' latest material safety data sheets (MSDS) and/or product data sheets.
10. Remove the tank name plate, clean the face of the plate, clean and repaint the area behind the plate, then remount it.
11. Clean, remove and dispose of sediment and debris from the interior of the water tank.

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12. Surface Preparation and Repainting Internal & External surfaces of Tank connected piping and valves.
13. Remove all rust and prepare surface(s) in accordance with AWWA standards D102.14, Sec. 4.6.
14. Remove existing internal tank access ladder and install new internal tank access ladder, complete with glide lock fall arrest system. Add grab bars for ladders as required by OSHA 1910.23. Ladder detail is attached as Attachment D.
15. Contractor to provide daily site cleanup
16. Add a screen or rubber seal at annular space between access tube and tank roof. There is no separate pay item for this work as this incidental to work being performed.
17. Add a new gasket to the inspection hatch at bottom of access tube. There is no separate pay item for this work as this incidental to work being performed.
18. Repair overflow pipe where leak clamp is installed. There is no separate pay item for this work as this incidental to work being performed.
19. Painter hatch in pedestal should be modified to have complete closure and add a latch. There is no separate pay item for this work as this incidental to work being performed.
20. Add gasket to roof entry hatch. The Hatch lid may have to be reset to close properly. There is no separate pay item for this work as this incidental to work being performed.
21. Access tube hatch diameter should be increased to meet OSHA 191023 minimum head clearance of 30 inches. Make the hatch have complete closure and lockable. There is no separate pay item for this work as this incidental to work being performed.

INTENT OF SPECIFICATIONS

The purpose of these specifications is to ensure the provision of material and workmanship necessary to produce a quality coating system for the existing potable water tanks identified in the Scope. All painting work shall be implemented in strict accordance with the manufacturer's instructions and shall be performed in a manner satisfactory to the Bexar County Water Control and Improvement District No. 10 .

Bidder shall be responsible for furnishing all materials, supplies, labor, and equipment necessary for surface preparation and application of paints and/or protective coating materials in a safe manner with proper handling and removal and disposal of all waste materials.

Intent of Specification:

1. To provide for application of selected paints and coatings application over properly prepared surfaces in a skilled manner to achieve a lasting protective coating.

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2. To present minimum requirements for performance of work, supplemented with specific items which are applicable to this project.
3. To provide requirements for debris handling and storage, testing and removal.
4. Environmental protection, safety, and worker protection, including control of air pollution and visible emissions from particulate matter are to be done in accordance with local, state, and federal policies, standards, procedures, and requirements.
5. Requirements for handling, testing and disposal of hazardous and non-hazardous waste.
6. All surface preparation and painting for Welded Steel Water Storage Tanks.

EXCLUSIONS

1. Unless otherwise specified, painting will not be required on the following items:
 - a. Exposed surfaces of aluminum
 - b. Polished or finished stainless steel
 - c. Nickel, Monel, Copper, Bronze, Lead or Brass
 - d. Rubber and plastic including fiberglass reinforced plastics
 - e. Chromium plated surfaces
2. If contractor applies paint to or causes damage to surfaces to be protected, or unspecified surfaces, removal of coating, repair or replacement of item is required.

END OF SECTION

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INSTRUCTIONS TO BIDDERS

1. Telephoned, faxed or late bids will not be considered.
2. Bids not conforming to scope and specification may not be considered.
3. Lobbying of District Board Members or Staff may disqualify bidders.
4. PRE-BID AND SITE VISIT – A non-mandatory pre-bid meeting will be held on September 20, 2023, at 10:00 A.M. at City of Windcrest City Hall located at 8601 Midcrown Drive Windcrest Texas. Potential bidder shall contact the District Office at 210-655-2888 to schedule site visits at other times. Call must be placed 24 hours in advance of desired visit.
5. Sealed bid packages will be **accepted until 10:00 AM CST, October 06, 2023**, and publicly opened and read aloud immediately following the opening. Any bid received on or after 10:00 a.m. CST will be returned unopened.
6. Bids are to be in a sealed envelope clearly marked “**WCID No.10 Midcrown Elevated Storage Tank Painting project**” and hand delivered, delivered by U.S. Postal Services, or delivered by courier service to Bexar County Water Control and Improvement District No. 10 located at 8601 Midcrown Drive, Windcrest Texas, 78239 prior to the closing time.
7. Faxed or emailed bids will not be opened or accepted and will be returned to the sender with notification of the discrepancy.
8. Contractors may be present at the opening, which unless otherwise notified, will occur at the specified closing time and date.
9. Bids shall be awarded based upon best value and not lowest cost. The contract, if awarded, will be awarded to the responsible bidder whose bid will be most advantageous to Bexar County Water Control and Improvement District No. 10 based upon price and other factors considered as may be determined solely at the discretion of the Bexar County Water Control and Improvement District No. 10. The Bexar County Water Control and Improvement District No. 10 reserves the right to award any combination of Bid Items.
10. Bids will be evaluated in accordance with best value. Time is of the essence and shall be one factor considered along with cost and contractor’s ability and experience in performing similar work.
11. Bidders are expected to examine the drawings, specifications, schedule, and all instructions. Failure to do so will be at the bidder's risk.
12. Pre-Bid Inspection: The exterior of the tanks may be inspected, with the appropriate personal protective equipment (P.P.E.), as provided by the bidder, at any time upon contact and coordination with the Director of Utilities. The District accepts no liability for any injury or damage incurred by the potential bidders as a result of such inspections. Notwithstanding this inspection requirement, any bidder may submit a bid with the complete understanding and acceptance of the existing condition of the tank. All bid prices submitted shall include an allowance to cover the cost of all repairs and other conditions, whether inspected or not.

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13. Each bidder shall furnish the information required by the bid form. The bidder shall sign the bid and print or type his name on the Schedule and each Continuation Sheet thereof on which bidder makes an entry. Any modifications or other changes to this bid package must be initialed by the person signing the bid. Bids signed by an agent are to be accompanied by evidence of his or her authority unless such evidence has been previously furnished to the issuing office.
14. A total shall be entered in the Amount column of the Schedule for each item bid. In the case of a discrepancy between a unit price and extended price, the unit price will be presumed to be correct.
15. The bidder represents that the merchandise to be furnished under this Invitation for Bid is (are) new and that the quality has not deteriorated so as to impair its usefulness.
16. BIDDER understands that the OWNER has provided estimated quantities for bidding purposes. This is a turnkey project requiring that the successful contractor perform all work identified, provide all labor, provide all equipment, and provide new materials in accordance with bid documents and construction plans.
17. Bids cannot be withdrawn or corrected after opening (except reductions and changes by successful bidder, which would be to the advantage of Bexar County Water Control and Improvement District No. 10 , which may or may not be considered by Bexar County Water Control and Improvement District No. 10).
18. Be sure to sign bids. Unsigned bids will not be considered (except in cases where the bid is enclosed with other papers which have been signed and this determination is to be made by Bexar County Water Control and Improvement District No. 10).
19. TAXES: If Federal Excise tax applies: show amount and deduct. Bexar County Water Control and Improvement District No. 10 is exempt from Federal Excise tax and Texas Sales tax.
20. The acceptance of this bid and contract approval is subject to approval by the Bexar County Water Control and Improvement District No. 10 City Council. The Bexar County Water Control and Improvement District No. 10 reserves the right to reject any or all bids, to award the contract in what it deems its best interest and to waive any informality or technicality in the proposal.
21. Plans, specifications, and information for Bidders are on file and may be examined at the District Office at 8601Midcrown Drive, Windcrest Texas, 78239. Contact the District office at 210-655-2888 to schedule an appointment.
22. Paint Brands: The Contractor shall with his Bid furnish a letter stating the system and brand of paint which he intends to use. He shall also provide the technical specification and the manufacturer's recommended method of application with his letter. A list of names and addresses of other locations where he has used these materials within the last five years shall be supplied. The Owner reserves the right of acceptance of any paint proposed based upon its prior performance and application quality by the Contractor.

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The paint systems shall be Tnemec as Specified or a Pre-approved Equal. Approval must be made in writing, at a minimum of 5 days prior to the Bid Date. Sherwin-Williams is a preapproved painting system.

23. The District believes that the data contained in these specifications is sufficient for the preparation of bids. Requests for additional information will be considered depending on the bid time frame and the availability of the requested information. Such information will be submitted to all known bidders simultaneously. In order to ensure a fair and objective bid evaluation, all questions related to this Request for Bid shall be addressed in writing.

Questions must be submitted in writing to Leonard D. Young, PE before 10:00 a.m. CST on September 29, 2023. Question may be sent by email or US. postal Services

Primary Contact Person: Leonard D. Young, PE
Tele: 210-590-9215 or 210373-3204
Email: lyoung@yprconsulting.com
Address: 8940 Fourwinds Drive Ste. 309, Windcrest Texas, 78239

Secondary Contact Person: Jaime Noriega, PE
Tele: 210-590-9215
Email: jaime.noriega@yprconsulting.com
Address: 8940 Fourwinds Drive Ste. 309, Windcrest Texas, 78239

CC Jaime Noriega on all questions

24. Documents Required to Be Submitted -The attached Bid Proposal form must be completed, signed, and returned as part of the Bid submission or the submission will be rejected. Submit bids in one (1) original and two (2) copies. (Attachment A).

References - this solicitation requires references to be submitted with the bid proposal form. An Original and 2 copies are required.

1. A list of three (minimum) Elevated tank painting projects of like size and design completed by the Bidder within the last five (5) years in the State of Texas. The list shall include:
 - a. Entity name
 - b. Mailing Address
 - c. Contact name and title
 - d. Phone number
 - e. Email address
 - f. Painting requirements
 - g. Date work completed

Certifications - this solicitation requires that memberships and certifications be submitted with the bid proposal form (3 copies).

Provide a copy of any memberships and certifications relevant to this IFB, including but not limited to the Society for Protective Coatings (SSPC); NACE (National Association of Corrosion Engineers) International; and the American Water Works Association (AWWA).

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Bexar County Water Control and Improvement District No. 10 may utilize other available information in gaining a comprehensive overview of the Bidder's qualifications and record of performance.

NOTICE TO PROCEEDS (NTP) AND WORKDAYS

1. Once the contract is awarded, there will be a Notice to Proceed (NTP) issued.
2. The contractor will have **60 calendar days** to complete all work.

FIRST ANNIVERSARY INSPECTION

During the 11th month after the completion of the work, the Contractor and Bexar County Water Control and Improvement District No. 10 (District) and or District's representative shall inspect the inside and outside surfaces of the tank, in accordance with Section 5.2 of AWWA Standard D102 to determine whether any repair work is necessary.

GUARANTEE

The bid shall be construed to contain a guarantee for a minimum of one (1) year for all materials and workmanship. Longer guarantees will be considered a factor in selecting successful bidder. Any work proving defective within the guarantee period shall be redone by CONTRACTOR without additional expense to Bexar County Water Control and Improvement District No. 10 for labor or materials.

END OF SECTION

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GENERAL CONDITIONS

The following conditions shall apply to this project.

PERFORMANCE OF WORK BY PRIME CONTRACTOR

The Prime Contractor shall perform all painting, blasting, and cleaning as this work will not be allowed to be subcontracted out.

WORKMANSHIP AND SUPERVISION

The contractor shall construct this project utilizing the highest standards for the industry. Employees performing the work shall use the utmost care and craftsmanship in their trade. All work shall be performed by competent employees under the direction of a qualified supervisor. The Bexar County Water Control and Improvement District No. 10 shall have unimpeded access to jobsite at all times.

LICENSURE AND PERMITS

The contractor shall ensure that all required licenses and permits are obtained and are current. Provide documentation to Leonard D. Young, District Engineer prior to commencement of work.

COMPLIANCE WITH REGULATIONS

The Contractor is responsible for performance of work in accordance with these specifications. All work performed under this contract shall conform to the Bexar County Water Control and Improvement District No. 10 standards and all other laws and regulations whether specifically noted or not.

MOBILIZATION

The Contractor should assume that there are no utilities and facilities available for use at or near the project site. The Contractor shall mobilize all equipment, temporary utilities, materials, and any other temporary facilities required to perform the work. The Contractor shall furnish clean water and temporary sanitary facilities as required for his crews.

ACCESS AND SITE PREPARATION

The Contractor shall establish appropriate access to the project site along a route and in a manner that minimizes damage to the adjacent private property or the environment and as approved by the District. The Contractor shall protect all utilities and structures from damage. The Contractor shall maintain work areas in a clean and orderly condition, free of waste materials, debris, and rubbish.

SITE RESTORATION

Upon completion of the project to the satisfaction of the District's Representative, the Contractor shall restore the site and the access route to match the surrounding grade, restore any drainage ways open and clear of debris and verify that the site is ready for seeding or alternately restored to the conditions acceptable to the District's Representative.

All disturbed work areas surrounding the project site and areas along the access road where grass existed prior to construction shall be repaired with sod. Upon completion of field work, the Contractor shall remove all equipment, temporary utilities, left over materials and any other temporary facilities from all areas where Contractor performed work at the water plant site or offsite areas such as equipment and material storage sites.

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SITE CLEANUP

Remove all waste, surplus materials, rubbish, and construction facilities from the site and restore it to its original condition.

BEXAR COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 10 - FURNISHED PROPERTY

No material, labor, or facilities will be furnished by Bexar County Water Control and Improvement District No. 10 unless otherwise provided for in the Invitation.

SILENCE OF SPECIFICATIONS

The apparent silence of this specification and any supplemental specifications as to any details or the omission from it of a detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail and that only materials of first quality and correct type, size and design are to be used. All workmanship is to be first quality. All interpretations of this specification shall be made upon the basis of this statement, with Bexar County Water Control and Improvement District No. 10 's interpretation to prevail.

BRAND NAME OR TRADE NAME/MARK INSTRUCTIONS

If items in this Invitation to Bid have been identified, described, or referenced in the Invitation for Bid by a "brand name" or Trade Name/Mark description, such identification is intended to be descriptive, but not restrictive, and is to indicate quality and characteristics of products that maybe offered. Products may be considered for award if such products are clearly identified in the bids and are determined by Bexar County Water Control and Improvement District No. 10 to meet its needs in all respects.

START OF WORK

The contractor shall begin work within five (5) days after he is issued a Notice to Proceed by the Bexar County Water Control and Improvement District No. 10 .

WORKING HOURS

Any work on the weekend must be approved by the Bexar County Water Control and Improvement District No. 10 . Contractor shall make a request to work weekends 48 hours prior to weekend work.

REDLINE DRAWINGS

Contractor shall provide at the end of this project a set of understandable redlined drawings which accurately shows the locations installed; type of equipment and date installed on all equipment, components and work performed.

EXECUTION OF AGREEMENT: PERFORMANCE AND PAYMENT BOND:

Subsequent to the award and within five (5) days after the prescribed forms are presented for signature, the successful BIDDER shall execute and deliver to the OWNER a Construction Agreement in the form included in the contract documents in such number of copies as the OWNER may require. Having satisfied all conditions of award as set forth elsewhere in these documents, the successful BIDDER shall, within the period specified in the preceding paragraph, furnish a Performance Bond and Payment Bond, in accordance with the following parameters:

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1. A **Performance Bond** shall be executed in the full amount of the Contract conditioned upon the faithful performance of the Work in accordance with the plans, specifications, and Contract Documents. Said Bond shall be solely for the protection of the Owner.
2. A **Payment Bond** shall be executed in the full amount of the Contract, solely for the protection of all proper claimants supplying labor and material in the prosecution of the Work provided for in the Contract, for the use of each such claimant perfecting a proper claim.
3. When bonds are required they shall serve as security for the faithful performance of the contract, and for the payment of all persons, firms, or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services of any nature including utility and transportation services, employed or used by him in performing the work. Such bonds shall be in the same form as that included in the contract documents and shall bear the same date as, or a date subsequent to that of the Construction Agreement. The current power of attorney for the person who signs for any surety company shall be attached to such bonds. These bonds shall be signed by a guaranty or surety company legally authorized to do business in the State of Texas.

INSURANCES

1. CONTRACTOR shall purchase and maintain such commercial general liability and other insurance as is appropriate for the Work being performed and furnished, and as will provide protection from claims set forth below, which may arise out of, or result from, CONTRACTOR's performance and furnishing of the Work, and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by any of them, to perform or furnish any of the Work, or by anyone for whose acts and/or omissions any of them may be liable:
 - a. Claims under workers' compensation, disability benefits and other similar employee benefit acts;
 - b. Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;
 - c. Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;
 - d. Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (b) by any other person for any other reason;

The insurance shall include the specific coverages and be written for not less than the limits of liability and coverages specified by OWNER herein or required by law, whichever is greater. The commercial general liability insurance shall include completed operations insurance. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall be of an "occurrence" type, and shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused, until at least thirty (30) days prior written notice has been given to OWNER and ENGINEER by certified mail. All such insurance shall remain in effect until final payment, and at all times thereafter when CONTRACTOR may be correcting, removing, or replacing defective Work. All insurance coverages furnished under the Contract Documents shall include the OWNER, ENGINEER and their officials, officers, partners, board members, agents, and employees, as named additional insureds and hereinafter be referred to as "additional insureds."

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2. Specific Coverages of Insurance Required by OWNER.

- a. **Workmen's Compensation and Employer's Liability.** This insurance shall protect the laborer and insure the CONTRACTOR, and insulate the additional insureds, against all claims under applicable state workmen's compensation laws, pursuant to Section 1(a). The additional insureds shall also be protected under an Employer's Liability policy against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a workmen's compensation law. This Employer Liability policy shall include an "all states" endorsement. Employer's liability and Workmen's compensation. The liability limits shall not be less than: Statutory and \$100,000 each occurrence.
- b. **Comprehensive Automobile Liability.** This insurance shall be written in comprehensive form and shall protect the CONTRACTOR and the additional insureds against all claims arising from the use of motor vehicles, and shall cover, on or off the site, all motor vehicles licensed for highway use, whether they are owned, nonowned, or hired. Bodily Injury and property damage. The liability limits shall not be less than: \$500,000.00 combined single limit each occurrence
- c. **Commercial General Liability.** This insurance shall be an "occurrence" type policy written in comprehensive form and shall protect the CONTRACTOR and the additional insureds against all claims arising out of any intentional or negligent act and/or omissions of the CONTRACTOR or his agents, employees, or subcontractors. This policy shall also include protection against claims insured by usual personal injury liability coverage.
Personal Injury and the liability limits shall not be less than:
Personal Injury- \$1,000,000.00 combined single limit each occurrence and
Property damage -\$1,000,000.00 aggregate

If the CONTRACTOR's work, or work under his direction, requires blasting, explosive conditions, or underground operations, the commercial general liability coverage shall contain no exclusion relative to blasting, exploding, collapse of structures, or damage to underground property.

LIQUIDATED DAMAGES

The damage to OWNER by reason of the Contract not being completed as of that date are incapable of definite ascertainment, and the parties hereto have therefore mutually fixed and limited such damages to the sum of **\$500.00** per day of each calendar day the job runs beyond such date, and the fixing of such damages constitutes a part of the consideration for the Contract. It is further agreed that time is of the essence of each and every portion of this Contract and of the Specifications, wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract, additional time is allowed for the completion of any Work, the new time fixed by such extension shall be of the essence of this Contract. Provided that CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in the completion of work is due:

LUMP SUM

Price of an entire group of services, where no breakdown is given for individual items.

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MAJOR BID ITEM

Any individual bid item submitted by Contractor whose total cost, as determined by multiplying the bid schedule line-item quantity for that bid item by the Contract unit price also provided in that bid schedule line item, is equal to or greater than 5 percent of the original contract total amount. The preceding criteria notwithstanding, the Owner and Consultant **reserve the right** to identify or exclude specific bid items as being "Major" in the Special Conditions for each Project.

SEQUENCE OF CONSTRUCTION

The logical and proper order in which the Contractor shall accomplish the Work.

SHOP DRAWINGS

Drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are furnished by the Contractor and prepared by Contractor, first-tier or sub-tier subcontractors, manufacturer, supplier, or distributor, and which illustrates and details some portion of the Work. Shop Drawings shall be furnished to the Owner as submittals.

SPECIFICATIONS

The specific instructions to the Contractor that are provided in the Contract Document as to the requirements for materials, equipment, certain construction procedures, standards, and quality of workmanship for the Work and performance of related services and other technical requirements and forming a part of the Contract.

SUBCONTRACTOR

The individual, firm, equipment vendor, or corporation, having a first-tier subcontract with the prime or general Contractor, subject to the review of qualifications by the Consultant and the Owner's Representative, for the performance of a part of the Work. Sub-tier subcontractors must be identified by the subcontractors and be similarly subject to the review of qualifications by the Consultant and the Owner's Representative for the performance of a part of the Work.

SUBSTANTIAL COMPLETION

When construction of the project or a specified part thereof is sufficiently completed in accordance with the Contract Documents so that the Project, or specified part thereof could be utilized for the Owner's purposes for which it is intended.

SUPERINTENDENT

The Contractor's onsite project representative whom the Contractor has authorized to communicate with the Bexar County Water Control and Improvement District No. 10 .

WORK

The entire completed construction or the various separately identifiable parts thereof required necessary, proper, or incidental and required or reasonably inferable, to produce, construct and fully complete the construction project in strict accordance with the requirements of the Contract Documents. Work is the result of Contractor performing services, furnishing labor, and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

CONSTRUCTION STAKES

The Contractor shall hire a licensed surveyor, at his expense, for field staking and any other surveying requirements pertinent to the project.

END OF SECTION

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SPECIAL CONDITIONS

SITE CONDITIONS

This tank is located adjacent to a to vacant and commercial properties. Extreme care will be necessary to prevent any splattering of paint or other materials on adjacent private property. Special insurance coverage shall be provided to protect the Bexar County Water Control and Improvement District No. 10 , Texas from any damages resulting from such occurrences. Work will be performed on District owned property. It shall be the responsibility of the Contractor to investigate the conditions as they exist and include in the total bid price anticipated for handling this work.

WATER FOR CONSTRUCTION

The District will provide, at no cost, all water needed for construction purposes. The Contractor shall make all provisions for obtaining water, subject to approval of the water superintendent, and shall keep all connections neat and clean.

STORAGE OF MATERIALS

The Contractor shall make all arrangements for storage of materials and equipment during construction. The tank site may be used for orderly and safe storage of materials and equipment. The Contractor shall make arrangements with the District and the District will not be responsible for loss or damage of any material or equipment of the Contractor.

SUBCONTRACTORS

The Contractor shall utilize the services of skilled subcontractors including a Certified Welder and Certified Welding Inspector. All subcontractors, welders and inspectors shall be approved by the Owner prior to use.

ELECTRICITY

All appropriate electric current required by the Contractor shall be furnished at the District's expense; all arrangements for use shall be made by the Contractor.

ORDER OF CONSTRUCTION

The Contractor shall make special effort to coordinate all activities with the Director of Utilities. The Contractor shall be responsible to ensure these activities are scheduled as required by the District and no claim shall be made by the Contractor, due to a lack of coordination between the District and the Contractor. The Contractor shall continually advise the District of its work progress. In the event work cannot proceed on the planned schedule, the District shall be advised of schedule delays or revisions, immediately.

TANK INFORMATION

100,000 Gallon Elevated Storage Tank

Location: Windcrest Texas 78239 (Intersection of Midcrown and Crestway Drive)

COMPLIANCE WITH ORDINANCES AND PUBLIC SAFETY

The Contractor shall comply with all safety regulations, ordinances and laws pertaining to this work. He shall provide and maintain suitable signs, barriers, walkways, scaffolds and other facilities and accessories where needed as required by OSHA, and conduct work in such a manner as to protect and not to interfere with the operations of the utility and the public.

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TESTING OF MATERIALS

The Contractor is responsible for all testing costs incurred. The spent abrasive shall be tested in accordance with the requirements of Texas Commission on Environmental Quality and any other regulating agencies. Copies of all test reports shall be submitted to the Owner.

PAINT APPLICATION

All painting shall be performed in a workmanlike manner by experienced workmen, and in the manner recommended by the manufacturer and according to the specifications herein.

PAINT SYSTEMS

Paint systems shall be as outlined in Technical Provisions, EP 1, Exterior Painting and IP 1, Interior Painting. Contractor shall provide data sheets on the paint system and obtain approval prior to ordering materials.

WATER PARAMETERS

The water stored in the tank has the following characteristics: ph-7.0; dissolved solids — 275 mg/l; total hardness as CaCo₃ — 252 mg/l (at the time of testing).

GUARANTEE

The Contractor shall furnish the Bexar County Water Control and Improvement District No. 10 , a one-year guarantee on the work completed under this Contract. The Owner reserves the right to inspect the tank once during this period and to have the Contractor to repair any defects other than those caused by normal wear or Acts of God. If defects are found and repaired, the Owner may re-inspect the tank again during the original one-year period.

GENERAL MANAGER

Wherever used in the specifications, the word " GENERAL MANAGER" shall mean David Wallace, General Manager for the Bexar County Water Control and Improvement District No. 10.

BID PROPOSAL SHEET

All bids must be submitted on the pages entitled "Bid Proposal". Being a municipality, the Bexar County Water Control and Improvement District No. 10 is exempt from the State of Texas Sales Tax, and will sign an exemption certificate when presented by the Contractor.

PUBLIC RELATIONS

The Contractor shall make a special effort to maintain good public relations. Adequate clean up and assistance to adjacent property owners insofar as the work is concerned shall be included herein.

PAYMENT

Payment will be made on the basis as contained in the proposal for cleaning and painting the interior and exterior of the tank and shall be full compensation for all painting, labor, materials and supplies necessary for the completion of this work as contained herein.

TANK CLEANING

Clean, remove and dispose of sediment and debris from the interior of the water tank.

VALVE AND PIPING PAINTING

Paint these to match the tank exterior or with a color as directed by the owner.

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ROOF VENT PAINTING

Remove and replace the roof vent screen with new industry regulation materials in accordance with TCEQ and AWWA standards. Roof vents shall be gooseneck or roof ventilator and be designed by the engineer based on the maximum outflow from the tank. Vents shall be installed in strict accordance with current AWWA standards and shall be equipped with approved screens to prevent entry of animals, birds, insects, and heavy air contaminants. Screens shall be fabricated of corrosion-resistant material and shall be 16-mesh or finer. Screens shall be securely clamped in place with stainless or galvanized bands or wires and shall be designed to withstand winds of not less than tank design criteria

LADDER REMOVAL AND INSTALLATION

Remove existing internal tank access ladder and install new internal tank access ladder, complete with glide lock fall arrest system. There is no separate pay item for this work as this incidental to work being performed

END OF SECTION

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PRODUCTS AND SPECIFICATIONS

REFERENCE STANDARDS

1. American Society for Testing of Materials (ASTM)
 - a. ASTM D4285 "Standard Test Method for Indicating Oil or Water in Compressed Air"
 - b. ASTM A123 "Specification for Zinc (Hot-Dip) Galvanized Coatings on Iron and Steel Products"
 - c. ASTM A153 "Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware"
 - d. ASTM A385 "Practice for Providing High-Quality Zinc Coatings (Hot-Dip)"
 - e. ASTM E376-89 "Practice for Measuring Coating Thickness by Magnetic-Field or Eddy-Current (Electromagnetic) Test Methods"
 - f. ASTM D4940-89 "Method for Conductimetric Analysis of Water Soluble Ionic Contamination of Blasting Abrasives"
 - g. ASTM D4417-84 "Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel"
2. NACE International "Book of Standards"
 - a. Field Measurement of Surface Profile of Abrasive Blast Cleaned Steel Surfaces Using Replica Tape: RP0287-91
 - b. Discontinuity (Holiday) Testing of Protective Coatings: RP0188-90
 - c. Visual Standard for Surfaces of New Steel Centrifugally Blast Cleaned with Steel Grit and Shot TM0175-75
1. NACE International Publication 6A192, "Dehumidification Equipment in Lining Application"
2. Society for Protective Coatings (SSPC), "Steel Structures Painting Manual, Vol. 1, Good Painting Practice"
3. Society for Protective Coatings (SSPC), "Steel Structures Painting Manual, Vol. 2, Systems and Specification"
 - a. Solvent Cleaning: SSPC-SP-1-82
 - b. Hand Tool Cleaning: SSPC-SP-2-95
 - c. Power Tool Cleaning: SSPC-SP-3-95
 - d. Power Tool Cleaning to Bare Metal: SSPC-SP-11-95
 - e. White Metal Blast Cleaning: SSPC-SP-5/NACE 1-94
 - f. Commercial Blast Cleaning: SSPC-SP-6/NACE 3-94
 - g. Brush-Off Blast Cleaning: SSPC-SP-7/NACE 4-94
 - h. Near-White Blast Cleaning: SSPC-SP-10/NACE 2-94
 - i. Mineral and Slag Abrasives: SSPC-AB 1-91
 - j. Visual Standard for Abrasive Blast Cleaned Steel: SSPC-Guide to Vis 1-89
 - k. Measurement of Dry Paint Thickness with Magnetic Gages: SSPC-PA 2
4. NSF International Standard 61 - Drinking Water System Components.
5. If there is a conflict between cited reference standards and this specification, this specification shall prevail unless otherwise indicated in the procurement documents.

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FLEXIBLE SEALANT

Flexible sealant shall be Sikaflex-1A or approved equal. Sealant color shall be white for all interior applications.

ABRASIVES

Abrasives used for blast cleaning shall be those mentioned in the specifications of the SSPC. Particular attention shall be given to the maximum particle size requirements. Abrasives must be selected to provide the recommended surface profile and degree of cleanliness required.

PAINT SYSTEMS

Coatings shall comply with ANSI/NSF Standard 61. The approval of interior coatings and sealers shall be based on written certification of compliance. Manufacturer's published data shall be submitted concerning transportation, storage, mixing, thinning, pot life, application, curing etc.

Contractor shall furnish one of the alternate proprietary systems **EQUAL TO** the TNE MEC Company, Inc. systems specified herein. All coatings shall be supplied by one coating manufacturer. Approved coating manufacturers are listed as follows:

1. Tnemec Co., Inc., 6800 Corporate Drive, Kansas City, MO 64120.
2. Sherwin-Williams Corporation, 101 Prospect Avenue, N.W., Cleveland, Ohio, 44115.

The coating systems listed below are proprietary to TNE MEC Company, Inc., and Sherwin-Williams Corporation. All coatings and thinners must be supplied by one manufacturer, including shop coating. All paint must be new and purchased for each project.

INTERIOR WET AREAS

Interior wet surfaces are any surfaces exposed to stored water or its vapor. Interior wet areas shall be coated with a three-coat high-build zinc-epoxy-epoxy system, NSF Standard 61 approved for use in potable water. The minimum dry film thickness of the interior coating system shall be 10.5 Mils. Manufacturers' recommended curing times and recoat windows between each coat must be strictly adhered to.

1. Three-coat high-build zinc-epoxy-epoxy system manufactured by **Tnemec Company, Inc.**
 - a. (full) Primer Coat – Tnemec Series 91-H2O or 94-H2O Hydro-Zinc applied at 2.5 – 3.5 Mils DFT.
 - b. Pit Filler – All designated pits shall be filled with Tnemec Pit Filler. Follow Tnemec recommendations for application methods/procedures. Payment for this item shall be based on unit pricing provided by the Contractor in the bid.
 - c. Stripe Coat – All vertical/horizontal seams, ceiling overlapping plate edge, ceiling support beams, support columns, ceiling to shell joint, nuts, bolts, ladders, pits, and all other irregular surfaces shall receive one (1) coat of Tnemec Series N140-1255 (Beige) applied to a dry film thickness of 2.0 – 3.0 Mils DFT. Application shall be spray and back

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brush and/or rolled. Applied coating shall not be recoated until minimum recoating time has been satisfied as per manufacturer's recommendations.

- d. (full) Intermediate Coat – Tnemec Series N140-1255 (Beige) Pota-Pox applied at 4.0 – 6.0 Mils DFT.
- e. (full) Finish Coat – Tnemec Series N140-15BL (Tank White) applied at 4.0 – 6.0 Mils DFT.

Total DFT = 10.5 – 15.5 Mils

2. Three-coat high-build zinc-epoxy-epoxy system manufactured by **Sherwin Williams Corporation.**

- a. (full) Primer Coat – Corothane I Galvapak Two-Pack Zinc-rich Primer B65 Series applied at 2.5 – 3.5 Mils DFT.
- b. Pit Filler – All designated pits shall be filled with Sherwin Williams Steel Seam FT-910. Follow Sherwin-Williams's recommendations for application methods/procedures. Payment for this item shall be based on unit pricing provided by the Contractor in the bid.
- c. Stripe Coat – All vertical/horizontal seams, ceiling overlapping plate edge, ceiling support beams, support columns, ceiling to shell joint, nuts, bolts, ladders, pits, and all other irregular surfaces shall receive one (1) coat of Macropoxy 646 PW, B58 Series (Light Blue/Mill White) applied to a dry film thickness of 2.0 – 3.0 Mils DFT. Application shall be spray and back brush and/or rolled. Applied coating shall not be recoated until minimum recoating time has been satisfied as per manufacturer's recommendations.
- d. (full) Intermediate Coat – Macropoxy 646 PW, B58 Series (Light Blue/Mill White) applied at of 4.0 – 6.0 Mils DFT.
- e. (full) Finish Coat – Macropoxy 646 PW, B58 Series (Mill White) applied to a dry film thickness of 4.0 – 6.0 Mils DFT.

Total DFT = 10.5 – 15.5 Mils

EXTERIOR SURFACES

Exterior surfaces are all surfaces exposed to the weather. Exterior surfaces shall be coated with a three coat high-build zinc-epoxy-polyurethane system. The minimum dry film thickness of the exterior coating system shall be 7.0 Mils. Manufacturers' recommended curing times and recoat windows between each coat shall be strictly adhered to.

- 1. Three-coat high-build zinc-epoxy-polyurethane system manufactured by **Tnemec Company, Inc.:**
- 2. (full) Primer Coat – Tnemec Series 90-97 Tnemec-Zinc applied at 2.5 – 3.5 Mils DFT.

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- a. b. (full) Intermediate Coat – Tnemec Series N69 Epoxyline II applied at 2.5 – 3.5 Mils DFT. Color shall contrast with Primer and Finish Coat colors. The color of this coat of paint shall closely match that of the one (1) finish coat but be a little darker.
- b. (full) Finish Coat – Tnemec Series 1074 (U) Endura Shield (high gloss) applied at 2.0 – 3.0 Mils DFT (Color to be selected by Bexar County Water Control and Improvement District No. 10).

Total DFT = 7.0 – 10.0 Mils

3. Three-coat high-build zinc-epoxy-polyurethane system manufactured by **Sherwin-Williams Corporation**.
 - a. (full) Primer Coat – Corothane I Galvapak Two-Pack Zinc-rich Primer B65 Series applied at 2.5 – 3.5 Mils DFT.
 - b. (full) Intermediate Coat – Macropoxy 646, B58 Series applied at 2.5 – 3.5 Mils DFT. Color shall contrast with primer and finish coat colors. The color of this coat of paint shall closely match that of the one (1) finish coat, but a little darker.
 - c. (full) Finish Coat – Hi-Solids Polyurethane B65 Series applied at 2.0 – 3.0 Mils DFT (Color to be selected by Bexar County Water Control and Improvement District No. 10).

Total DFT = 7.0 – 10.0 Mils

LOGO

Not used

VERTICAL SAFETY RESTRAINT SYSTEM

PART 1: GENERAL

1.01 SUMMARY

- A. Section includes supply and installation of Glideloc vertical rail safety restraint system and related appurtenances.

1.02 REFERENCES

- A. Occupational Safety and Health Administration (OSHA).
 1. 29 CFR 1910.27 Fixed Ladders.
- B. American Society for Testing and Materials (ASTM).
- C. American National Standards Institute, Inc. (ANSI).
 1. A14.3 Safety Requirements for Fixed Ladders.
- D. Canadian Standards Association (CSA).

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1. Z259.2.1 Fall Arresters, Vertical Lifelines and Rails.

1.03 SYSTEM DESCRIPTION

A. The Glideloc vertical rail safety restraint system shall allow the user to ascend or descend uninterrupted the entire length of the system without having to manipulate the safety attachment device (Comfort Fall Arrestor) and provides a secure anchorage to arrest a fall by the user. All essential components shall be included as part of the above referenced system, though not specifically stated in the following specifications, so as to provide a complete and fully operational system.

1.04 SUBMITTALS

A. Submit the following

1. Product Data: Manufacturers' data and product information for manufactured materials and products.

2. Installation Drawings (If applicable): Prepared by material SUPPLIER. For fabrication and erection. Include plans, member profiles, sizes, elevations, and details for anchorages and connections.

3. Operations and Maintenance Manual: Prepared by material SUPPLIER, indicating parts list and maintenance requirements for all equipment.

4. Test Certificate: Indicating completion of proof load testing on installed system.

1.05 QUALITY ASSURANCE

A. In order to assure uniform quality, ease of maintenance and minimal parts storage, it is the intent of these specifications that all components, equipment, connectors, etc. called for under the sections shall be supplied by a single source (SUPPLIER). The equipment SUPPLIER shall, in addition to the CONTRACTOR, assume the responsibility for proper and complete installation.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in manufacturer's original, unopened protective packaging.

B. Store materials in original protective packaging. Prevent soiling, physical damage or wetting.

1.07 PROJECT CONDITIONS

A. Field Measurements: Perform prior to preparation of shop drawings and fabrication drawings to ensure required fit and dimensions.

PART 2: PRODUCTS

2.01 MANUFACTURING

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A. Vertical Fall Protection System: Glideloc Vertical Rail Fall Arrest System as manufactured by Honeywell Safety Products USA, Inc or Approved Equal

2.02 SYSTEM DESIGN

A. The Glideloc vertical rail safety restraint system shall be designed to allow users to climb uninterrupted the entire length of the system without having to unhitch from the system to pass through intermediate support points. The system shall be designed to support three users in case of a fall and to prevent the users from free falling more than 18 inches. The system shall be designed for hands-free operation once the user is properly attached to the system. All components shall be designed by the Safety Restraint System SUPPLIER and shall meet the applicable requirements of ANSI A14.3.

B. Description

1. Safety Restraint System shall consist of Aluminum / Galvanized / Stainless Steel rail attached to the structure. The rail shall be continuous the full length of the system.

2. Stainless steel gates shall provide the ability to enter and exit the system at both the top and bottom of the system.

3. Mounting Brackets shall be spaced at 7 foot intervals.

5. Brackets and supports shall be attached to the structure with appropriate connectors of proper size and, to adequately support the intended load.

C. Required User Equipment

1. Provide three (3) stainless steel vertical safety attachment devices ("Comfort Fall Arrestor") with connector carabineer.

2. Support Harness: Provide three (3) nylon class III full body harnesses with front "D" ring.

PART 3: EXECUTION

3.01 SYSTEM DESCRIPTION

A. The completed fall protection system will allow the user to climb uninterrupted the entire length of the system and provide secure anchorage to arrest a fall by the user. All essential components will be included as part of the above system so as to provide a complete and fully operational system.

3.02 SCOPE OF WORK

A. CONTRACTOR shall be responsible for the installation of the complete Glideloc vertical rail safety restraint system for Ladder / Tower climbing. All materials, including componentry, rail, mounting hardware, and connecting nuts and bolts shall be supplied by the material SUPPLIER (Sperian Fall Arrest Systems, Inc.)

3.03 QUALITY ASSURANCE

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A. The CONTRACTOR shall be regularly engaged in the business of communications tower construction and maintenance. In order to assure uniform quality, ease of installation, and minimal parts storage, all materials called for under this section shall be provided by material SUPPLIER. Once the SUPPLIER has completed the installation training, the CONTRACTOR shall assume the responsibility for proper and complete installation.

B. The material SUPPLIER shall provide complete training to the CONTRACTOR in the form of a single training session to be held at Franklin, Pennsylvania. CONTRACTOR shall include in his bid cost for all time and expenses for each installation supervisor.

3.04 DELIVERY, STORAGE AND HANDLING

A. It shall be the CONTRACTOR'S responsibility to deliver the proper bill of materials to the SUPPLIER for each individual project site.

B. Store materials in clean, dry area protected from dirt, grease, and moisture.

3.05 PROJECT CONDITIONS

A. Field Measurements: notify material SUPPLIER of any discrepancy from project installation drawings as soon as discrepancy is noticed.

3.06 INSTALLATION-GENERAL

A. Install in accordance with material SUPPLIER's approved instructions.

B. Fall protection system shall be installed only under supervision of CONTRACTOR'S trained installation supervisor.

C. Install anchorages and fasteners in accordance with SUPPLIER's requirements to obtain the allowable working loads as published in the product literature and in accordance with this specification.

D. Do not proof load or stress fall protection system until all materials and fasteners are properly installed and ready for service.

3.07 FIELD QUALITY CONTROL

A. After the safety system is installed and properly tensioned, the CONTRACTOR'S trained supervisor shall inspect and operate the system and shall make all final adjustments for proper operation.

3.08 OPERATOR TRAINING

A. Provide facility operator training after system has been installed and certified. Training is to take the form of a single class conducted at the end of installation.

3.09 CLEANING

A. Remove all loose materials, crating and packing materials from premises.

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SCHEDULING

1. Scheduling shall not supersede temperature, humidity or other environmental requirements for coatings application included in these specifications.
2. Coordinate work of other trades and provide conditions for neat, clean, dust-free work.

SUBMITTALS

Submittals for materials and/or systems proposed for use on this project must conform to requirements and shall include, but not be limited to, those items listed for each product/system. Submittals shall be provided to the Engineer for review. Submittal shall be made one week after award of contract.

1. Paint and Protective Coatings:

- a. Manufacturer Technical Data Sheets for all paints, coatings, solvents, detergents, and degreasers proposed.
- b. Manufacturer Material Safety Data Sheets (MSDS) for all paints, coating and thinners proposed.
- c. Color name and/or number with color chart for each specific coating product. Exterior topcoat color shall be WHITE or IVORY as determined by Bexar County Water Control and Improvement District No. 10 .
- d. Manufacturer's statement of conformance with ANSI/NSF 61 (NSF International) requirements for use on potable water tank interior surfaces.
- e. Manufacturer's specific ventilation requirements for products used on interior surfaces. Ventilation requirements shall be provided to ensure adequate evacuation of solvents to prevent solvent entrapment, worker exposure to solvents above the OSHA PEL and provide for timely coating system cure.

2. Abrasive Blast Products

Abrasive blast products to be used on this project shall conform to the Society for Protective Coatings (SSPC) Abrasive Specification No. 1. "Mineral and Slag Abrasives", except that copper slag will not be permitted. Abrasive blast product submittals shall include, but not be limited to, the following:

- a. Manufacturer's certification or laboratory analysis that the product proposed contains less than 1% Free crystalline silica.
- b. Laboratory analysis of blast material presenting results of blast material testing as required in SSPC-AB 1, Table 1 requirements for Chemical and Physical Properties of Abrasives, except that the conductivity test for water soluble contaminants in accordance with ASTM D-4940 shall not exceed 500 microsiemens (micromhos).
- c. Material Safety Data Sheets.
- d. Composition, mesh size, and bulk density.
- e. Recommended application nozzle, air requirements, and pressure.

3. Containment System

The Contractor shall include in his submittal a sample or samples of containment materials including screens, tarpaulins, sheets, films, and ground covers. The submittal shall include

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manufacturer technical data sheets for the proposed containment system. In addition, the following shall be included with the Contractor's submittal.

- a. Outrigger/containment structural support system layout and details.
 - b. For Ground storage tanks, submit proposed arrangement of scaffolds and/or A-frames to support containment materials. Do not support containment from existing tank handrails or ladders. The scaffolding must be designed to support the weight of the containment materials and provide a safe working environment for workers.
 - c. For Ground storage tanks, submit proposed layout of outrigger system, containment hoisting system, details of proposed method of connection to tank shell, list of structural members including, but not limited to, size of member, maximum allowable wind velocity before system must be lowered to prevent structural damage to the system and/or tank, method of determining wind velocity and proposed location of wind velocity measuring device. The outrigger system layout must be reviewed and sealed by a licensed professional engineer registered in the state of Texas.
 - d. Manufacturer technical data sheets for the proposed containment system.
 - e. Manufacturer's certification that proposed containment materials are fire resistant.
 - f. Minimum shade factor for proposed containment materials shall be 95% except that a minimum shade factor of containment materials used with chemical stripping agents shall be 85%.
4. Chemical Stripping Agents - For Rehabilitation of an Existing Tank
- a. Manufacturer's Technical Data Sheet for the materials proposed.
 - b. Material Safety Data Sheets (MSDS).
 - c. Proposed method of application.
 - d. Waste material containment and retrieval system.
5. Dehumidification Equipment
- a. Manufacturer and Supplier
 - b. Support Equipment (e.g., generator)
 - c. Equipment capacity, sized per NACE Publication 6A192
6. Contractor shall submit a color exhibit depicting the tank with proposed color and/or any proposed logos required on the tank. All logos and lettering shall be approved by Engineer and Owner prior to painting.

PRODUCT HANDLING

1. Delivery and Storage
 - a. All paints, coatings and related materials shall be delivered to the job site or Fabrication shop in original unopened containers with the product name, type and batch number, color, and manufacturer date clearly marked on each container.

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- b. All materials used on the job by the Contractor shall be stored in a single place provided by the Contractor or designated by the Engineer at the job site. On site and fabrication shop storage shall comply with OSHA requirements, recommendations of the National Fire Protection Association, City Fire Codes, and manufacturer recommendations.
- c. Oily or solvent-soaked rags and all waste shall be removed from the job site every night, and all necessary precautions shall be taken to reduce fire hazards to a minimum.
- d. Upon completion of the work, if the storage space was a fixed part of the project, it shall be left clean. Any damages to such storage space or its surroundings shall be repaired by the Contractor At his/her expense.

COATING OPERATION ENVIRONMENTAL REQUIREMENTS

1. Tank Interior Humidity and Temperature

- a. During abrasive blast cleaning and painting operations, the relative humidity of the interior air shall not exceed fifty percent (50%). Relative humidity shall be measured by a sling psychrometer or other appropriate psychometric measuring equipment.
- b. The interior air temperature and surface temperature of surfaces to be coated shall be between 50°F and 120°F and at least 5°F above the dew point or as otherwise required by the manufacturer. (Note that for use of Aquatapoxy the maximum surface temperature shall be 100°F.)
- c. The Contractor shall achieve the required conditions for interior air conditions through the use of dehumidification equipment.
 - i. Proposed dehumidification equipment must be submitted for review by the Engineer. Provide a minimum of three air changes per hour unless dehumidification equipment manufacturer's calculations substantiate fewer air changes.
 - ii. The dehumidification equipment shall supply dry, fresh (not recirculated) air within 12 inches of the tank bottom from a system of duct work and blowers. This ventilation system shall operate 24 hrs/day throughout the entire coating cure process.
 - iii. Dehumidification shall be maintained until abrasive cleaning operations, coating operations and cure are complete, but not less than ten (10) days.

2. Tank Exterior Humidity and Temperature

- a. No coating shall be applied to wet or damp surfaces or in rain, snow, fog, or mist.
- b. No coatings shall be applied when it is expected that the ambient air temperature will fall below 50 F or within 5 F of the dew point within 6 hours after application of coatings or paints.
- c. No coating shall be applied when the relative humidity is above 85%, or as specified in the coating manufacturer's product data sheet. Relative humidity and dew point shall be measured by use of a Sling Psychrometer in conjunction with US. Department of Commerce Weather Bureau Psychometric Tables. If the above conditions are exceeded, coating or painting operations shall be delayed until conditions are favorable.
- d. The ambient conditions and surface temperature of the surfaces being coated must be between 50 F and 120 F. The surface temperature shall be at least 5 F above the dew point or within the manufacturer's recommendations. During application of urethane coatings the maximum surface temperature shall be 100 F.

WORKMANSHIP

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1. All work shall be of good workmanship as defined by the latest edition of the "Manual of Good Painting Practices" published by the Society for Protective Coatings (SSPC), 40 24th Street, Pittsburgh, Pennsylvania 15222.
2. These specifications shall not cancel or supersede the directions of the manufacturer regarding the warranty or applicability of the product. In instances of variations between manufacturers recommendations and this specification the more stringent requirement shall govern.
3. The Contractor shall furnish trained personnel experienced in the work to be performed. Contractor personnel shall ensure work is performed in accordance with these specification requirements including, but not limited to: surface cleanliness; anchor profile; ambient conditions; film thickness (wet and dry) and holiday detection. The Contractor shall provide and use such inspection instruments or gauges or other equipment as may be required to verify compliance with manufacturer's instructions and these specifications. All testing equipment and instrumentation shall be in proper operating condition and calibration before and after use where applicable.
4. The Contractor shall provide tools and equipment in working order including moisture traps in air lines to pressure pot and spray gun when air atomization is used. Moisture trap shall be set for continuous bleed during spraying operation. Moisture traps shall be placed as close to spray gun as practical. Process air shall be free from oil and moisture when tested in accordance with ASTM D4285.
5. Primer shall not be applied closer than four inches (4") to any surface scheduled for subsequent blasting or to be field welded.
6. Welds, rivets, corners, crevices, and other default to coat surfaces shall receive a brush applied stripe coat of primer, subsequent to surface preparation, but prior to full primer coat application.
7. All caulk and/or sealant materials shall be applied smooth and continuous.

SURFACE PREPARATION

1. Prior to surface preparation for coating, visible deposits of oil or grease shall be removed in accordance with SSPC-SP-1 or other methods approved by the Engineer.
2. Prior to abrasive blast cleaning, surface imperfections such as sharp fins, sharp edges, weld spatter, or burning slag shall be removed from the surface. Sharp corners and edges shall be ground to a smooth round edge with a radius of not less than 1/16 inch.
3. Abrasive blast cleaned surfaces shall meet the requirements of this specification when examined in accordance with Society for Protective Coatings "Guide to SSPC-VIS 1-89". This applies to all exposed surfaces, including difficult to access areas (e.g., behind stiffener rings). When a tank is to be rehabilitated and the coatings to be removed contain lead, acceptable coating removal methods include wet abrasive blast cleaning, water jetting with or without abrasives, vacuum abrasive blast cleaning, and chemical stripping. Certain coating removal methods require subsequent dry abrasive blasting to achieve the specified surface preparation. Should these methods be selected, the Contractor shall ensure that no fugitive dust escapes the containment system during dry abrasive blasting. This is to be

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accomplished by the use of negative air and/or dust collection systems adequately sized to effectively control dust.

4. For rehabilitation of an existing tank: Moderately Pitted Surfaces - A moderately pitted surface is defined as a surface having pits less than 1/16 inch deep with a frequency of 4 to 5 pits per square foot. Prior to application of the specified coating system, the pitted surface shall be blasted to SSPC-SP10. The first coat may be thinned (not to exceed manufacturer's published recommendations) and applied by stiff bristle brush or roller to all pitted surfaces.
5. For rehabilitation of an existing tank: Badly Pitted Surfaces - A badly pitted surface is defined as a surface having pits greater than 1/16 inch deep and less than 1/2 of the metal thickness with a frequency of 8-12 pits per square foot. Prior to application of the specified system, the pitted surface shall be blasted to SSPC-SP10. Prior to applying the specified system, the pits shall be filled with an epoxy caulk seam sealer applied by putty knife or stiff bristle brush.
6. Prior to painting, all prepared interior surfaces to be coated must have dust removed by vacuuming.
7. Subsequent to achieving the specified surface preparation and prior to coating application interior wetted surfaces must be confirmed free from surface contaminants, visible and non-visible, to a level of less than $7\mu\text{g}/\text{cm}^2$ as sodium chloride. Surfaces will be tested by the District's laboratory for evidence of surface contaminants including soluble iron and salts such as chlorides. A minimum of one test for every 2500 square feet of shell and floor area will be performed. Contractor is to ensure tank interior is dust free at the time of the test and that the surfaces to be tested are clean.
8. Prepared exterior surfaces may be vacuumed or cleaned by an alternative method acceptable to the Engineer. (For rehabilitation of an existing tank, note that use of compressed air during lead paint removal operations is only allowable under full containment.)
9. Prepared and approved surfaces must be coated before the occurrence of contamination, including rust bloom. Surfaces shown to be contaminated or exhibiting rust are to be recleaned to the requirements of the specifications at Contractor's expense.
10. Abraded or otherwise damaged areas of existing paint shall be repaired using comparable materials and procedures as approved by the Engineer.
11. Treat areas of visible mildew with an approved mildewcide, compatible with the coating system to be applied.
12. **Concrete surfaces** shall be pressure washed removing all oil, grease, chalk, dust, dirt, and other contaminants using a solution of hot water and detergent. For mildewed surfaces, add chlorine bleach and allow solution to dry on the surface to a cleanliness level acceptable to Engineer and Owner. All soaps or pressure wash chemicals must be pre-approved by Engineer and Owner prior to use. There is no requirement for painting of concrete surfaces.
13. All areas of seam deterioration, weld undercut and pitting deeper than 1/8" shall be clearly marked for repair. Repair shall be done by arc-gouging and welding. All welding shall be

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done in accordance with AWWA D100 Standard for Welded Steel Tanks for Water Storage. There is no separate pay item.

PIPE AND FITTINGS

1. For Ground tanks the external surface of new and existing piping and fittings within the "dry" tank pedestal shall receive the same surface preparation and coating system as the interior of the tank pedestal.
2. Existing onsite above ground piping and fittings connected directly to the tank shall receive the same surface preparation and coating system as specified for tank exterior. This shall be limited to exposed portions of piping at inlets/outlets and to the nozzle of the adjacent tank on interconnect lines. Additional limits of yard piping may be indicated on the plans.

INACCESSIBLE SURFACES

Inaccessible interior surface of roof plate and rafters shall be prepared and coated as follows:

1. For repair of existing tanks: all inaccessible interior surfaces of roof plate and rafters to be installed shall receive specified surface preparation and a minimum of two full coats prior to final placement.
2. The roof plate / rafter interfaces which are not accessible for surface preparation and coating work shall be jacked off the rafters to facilitate blasting and coating the tops of rafters and the roof plate. Wedges used to hold the roof plate off the rafters shall be moved as required so that all areas between the rafters and roof plate shall be blasted and coated.
3. For wet surfaces, including immersion and condensation zones, a constant positive flow of dehumidified air, with adequate circulation, must be maintained across the finish coat for a period of ten (10) days, minimum. Solvent evacuation shall be from the bottom of the tank. Forced or induced air flow may be required. Any accelerated curing procedure must be recommended in writing by the manufacturer and approved by the Engineer.

Repair damaged areas in galvanized coating as follows:

1. Interior surfaces require an NSF approved cold galvanizing component.
2. Mechanical exterior damage prepared by hand tool (SP-2), or power tool (SP-3) spot cleaning and spot coated with an organic zinc coating approved by the Engineer.
3. Damaged areas exhibiting red rust shall be prepared to bare metal (SP-11) and coated with an inorganic zinc coating approved by the Engineer.

PROTECTION OF SURFACES

The Contractor shall protect all surfaces, which are not to be painted, from overblasting, spraying, over spray, spatters, or spillage of paint.

INSPECTION, TESTING, RECORD KEEPING

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1. The Contractor shall schedule and coordinate his work with the Engineer to allow for expeditious inspection by the owner or designated representative, including the use of ladders, scaffolds, lighting and swingstages to provide regular access for inspections.
2. All surfaces ready to receive a coating must be approved by the Engineer before the application of the next succeeding specified coat. If the Contractor proceeds without such approval, he may, at the direction of the Engineer, be required to remove and/or recoat all such work at no additional cost to the Owner.
3. Wet film thickness readings shall be made by the Painting Contractor at least once every thirty (30) minutes to make certain that proper film thickness is being achieved. More frequent checks may be required by the Engineer at his direction.
4. All coated ferrous metal surfaces which will be in the tank interior including floor, walls, roof and rafter area shall be tested by the Contractor and witnessed by the Engineer for nicks, scrapes and/or pinholes in the coating film using a low voltage wet sponge holiday detector for thin film coating (<20 mils) and high voltage holiday detector for thick film coating (>20 mils) at the direction of the Engineer. Holiday detection shall be in accordance with NACE RP0188-90: "Discontinuity (Holiday) Testing of Protective Coatings." Any deficiencies shall be corrected to the satisfaction of the Engineer.
5. The contractor shall record temperature, humidity, and dew point into a log including date and time reading obtained. A minimum of three such readings shall be obtained on days of coating application. The format for these records is presented in Table 3, "Daily Coating Summary Report" included in this Section. The records shall be entered into a Windows compatible file such as Quatro Pro or Excel and a hard copy submitted with monthly pay requests for those months when coatings are applied. A 3-1/2" disk containing the complete coating summary report for the project is to be furnished to the Engineer at the end of the project, or in the interim, if requested.
6. Paint films showing sags, checks, blisters, teardrops, curtains, fisheyes, or fat edges will not be accepted. Films exhibiting any of these defects shall be entirely removed and the surface recoated at no additional cost to the Owner.
7. Inspection and acceptance of blasted steel surfaces will be made by the Engineer using SSPC-Vis 1-89, "Visual Standard for Abrasive Blast Cleaned Steel", or NACE TM-0175-75 for new steel.
8. Surface profile conformance shall be established by obtaining average results of a minimum of ten (10) equally spaced anchor profile determinations per 1000 square feet. ASTM D4417-84 "Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel" Method A, B or C shall be employed at the discretion of the Engineer. ASTM D4417 Method C shall be employed to resolve any dispute. The average of readings shall be between 2.0 mils and 3.0. Any individual profile points less than 1.5 mils or greater than 4.0 mils will be cause for rejection of the anchor profile. Rejected areas are to be reblasted to correct profile.

SITE CLEAN-UP

The Contractor shall maintain the construction site in a neat and orderly manner throughout the duration of the project.

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QUALITY OF PAINT

The paint products mentioned in the following specifications are set up as standards of quality. The standard "or equal" clause shall apply. No substitution will be considered unless a written request for approval has been received by Bexar County Water Control and Improvement District No. 10 at least 10 days prior to the date for receipt of bids. Each such request shall include the name of the specified material for which a substitute is being requested; the name of the proposed substitute material; and a complete description of the proposed substitute including performance and test data and any other information necessary for an evaluation. The burden of proof of the merit of the proposed substitute is upon the proposer. The decision of Bexar County Water Control and Improvement District No. 10 regarding approval or disapproval of the proposed substitution shall be final.

All material shall be brought to the job site in the original sealed and labeled containers of the paint manufacturer and shall be subject to inspection by Bexar County Water Control and Improvement District No. 10. Colors where not specified, shall be selected by Bexar County Water Control and Improvement District No. 10.

The Contractor shall submit to Bexar County Water Control and Improvement District No. 10, immediately upon completion of the job, certification from the paint manufacturer indicating that the quantity of each coating purchased was sufficient to coat all surfaces in accordance with the specifications and manufacturer's recommendations.

PREPARATIONS

The roof vent, safety climbing devices, and any other non-painted items shall be removed prior to cleaning and painting.

APPLICATION OF PAINT

The Contractor shall apply each coating in accordance with these specifications and the paint manufacturer's recommendations. The coating shall be applied at the specified thickness. If the specified thickness is not obtained, an additional coat(s) of paint shall be applied.

All paint shall be applied in strict accordance with the applicable manufacturer's printed data sheet and container label outlining recommended minimum and maximum surface and air temperatures required for application. Paint shall not be applied to wet or damp surfaces and shall not be applied in rain, snow, fog, or mist, or when the relative humidity exceeds 85%.

No paint shall be applied when it is expected that the relative humidity will exceed 85% and/or the air temperature will drop below recommended levels within 12 hours after paint application. Dew or moisture condensation should be anticipated, and if such conditions are prevalent, painting shall be delayed until certain that the surfaces are dry. Painting should be completed well in advance of the probable time of day when condensation will occur in order to permit the film an appropriate drying time prior to the formation of moisture on the surface.

DRY FILM THICKNESS

Dry film thickness shall be measured in accordance with current SSPC PA2, "Dry Paint Thickness with Magnetic Gauges".

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CONTAINMENT / DISPOSAL REQUIREMENTS

Existing paint systems containing lead and / or other heavy metals may require compliance with certain environmental safety and health regulations during surface procedures. Always reference applicable federal, state, and local regulations prior to proceeding.

When required by federal, state, or local regulation, the entire tank and structure shall be enclosed, and surface preparation debris contained. Refer to SSPC-GUIDE 6 (CON), "Guide for Containing Debris Generated During Paint Removal Operations".

Refer to SSPC-GUIDE 7 (DIS). NOTE: All surface preparation debris must be disposed of in accordance with applicable federal, state, and local regulations.

The owner is the generator of and is responsible for the proper containment and disposal of all waste resulting from the surface preparation of this tank(s). As part of this contract, the contractor shall arrange and pay for all containment, tests, permits, transportation, and disposal of all waste resulting from the surface preparation of this tank(s) in strict accordance with Texas EPA regulations. Copies of all documentation required by Texas EPA regulations shall be submitted to the owner for verification prior to the submission of the contractor's request for final payment.

The painting contractor shall cut and grind flush all exterior containment structure lugs and prepare and paint areas as described in the exterior painting section of these specifications.

Upon removal of the exterior lugs, the painting contractor shall also repair any damaged interior coating by methods described in the interior painting section of these specifications. Abrasive blasting to bare metal (SSPC-SP6) will be required in the damaged areas.

The BEXAR COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 10 realizes there will be a number of days in which wind gusts may prevent the use of the containment system. The CONTRACTOR should anticipate this and plan to perform other tasks on these days. If there is an excessive amount of windy and inclement days precluding the use of the containment system, thereby jeopardizing completion within the time specified, the CONTRACTOR may request in writing to the ENGINEER for a time extension. The BEXAR COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 10 and ENGINEER will determine if a time extension is warranted.

The following shall be adhered to with regard to the tank containment:

1. Full tank containment is required.
2. It shall be the CONTRACTOR'S responsibility to comply with all federal, state, and local requirements governing the removal and disposal of lead and/or chromium based paint and all requirements governing worker safety.
3. The CONTRACTOR furnish and require all workers and authorized persons (ENGINEER, OWNER) to wear personal protective equipment required for the type of environment to which they are exposed. The protective equipment shall include, but not be limited to, respiratory protection equipment (meeting OSHA requirements), eye protection, ear protection, protective clothing, and other items as required. The CONTRACTOR shall provide for decontamination of workers, authorized beyond the containment area.

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4. The CONTRACTOR shall be responsible for the clean-up in accordance with federal, state, and local laws of any release (consistent with federal and state guidelines) of hazardous substances which result from his work. No additional compensation will be provided for any such clean-up.
5. In order to prevent emission of hazardous materials into the surrounding atmosphere and area, the CONTRACTOR shall contain his abrasive blasting operations with a properly designed, erected, and operated enclosure, or by the use of vacuum blasting equipment (if approved for use by the ENGINEER), or by a combination of the two methods.
6. The CONTRACTOR shall completely enclose the tank container and structure with fire-retardant 100% impenetrable containment system to contain the blasting debris and/or paint overspray. The debris must be contained within 30 feet of the base of the tank. Areas of the roof within the surrounding screen shall be contained with pie shape screens with side curtains so that blasting debris falls within the surrounding screen. All roof blasting shall be accomplished within the pie shape screens. The mesh size shall limit emissions into the atmosphere. The enclosure shall be designed to be raised and lowered within fifteen (15) minutes to prevent storm damage to the enclosure, the tank, personnel, and surrounding property. The enclosure shall be designed not to impose excessive loading on the tank and tank appurtenances. Membranes that are impervious to the abrasive and paint debris shall be placed on the ground around the base of the tank to prevent the contained material and any runoff from contaminating the ground.
7. The containment system shall meet the additional requirements of the Society of Protective Coatings - Guide 6 for Class 2A containment as follows:
 - a. CONTAINMENT MATERIALS:
 - (1) Type A1: Rigid - Containment materials consist of singular panels, interlocking panels or modular fabrications constructed of plywood, aluminum, rigid metal, plastic, or similar materials.
 - (2) Type A2: Flexible - Containment materials are comprised of screens, tarps, drapes, plastic sheeting, or similar materials.
 - b. AIR PERMEABILITY OF CONTAINMENT MATERIALS:
 - (1) Type B1: Air Impermeable - Materials that are impervious to dust or wind including but not limited to:
 - i. Tarps or Drapes - Formed or woven material free of holes or openings.
 - ii. Plastic Sheeting - Single or double ply, heavy wall construction plastic. Reinforced plastic may be necessary for some applications. Sheeting should be fire resistant.
 - iii. Panels - Panels of plywood, aluminum, corrugated plastic, metal, or similar rigid materials.
 - c. SUPPORT STRUCTURE:
 - (1) Type C1: Rigid Support Structures - Allow no movement and are comprised of scaffolding and framing to which the containment materials are affixed.
 - (2) Type C2: Flexible Support Structures - Allow minor movement and are comprised of cables, chains, or similar systems to which the containment materials are affixed.
 - d. TREATMENT OF JOINTS:

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(1) Type D1: Fully Sealed Joints - All mating joints between the containment materials and the structure and floor are sealed. Sealing includes overlapping of seams when using flexible materials (overlap a minimum of 2 feet) and the use of stitching, taping, caulking, or other sealing measures.

e. ENTRYWAYS:

(1) Type E2: Entryway Through Resealable Doors - The use of doorways that are capable of being repeatedly resealed. Entryways should not be sealed with "C"-clamps that can only be accessed from one direction.

(2) Type E3: Entryway Through Overlapping Door Tarps – The use of multiple flap overlapping door tarps to minimize dust escape through the entryway.

f. AIR MAKE-UP POINTS:

(1) Type F1: Controlled Air Supply (Intake) - The use of baffles, louvers, flap seals, filters, and ducts on supply air points to preclude inadvertent escape of abrasive and debris. They may or may not be used in combination with fans.

(2) Type F2: Open Air Supply (Intake) - Open air entry points without the use of ducts, valves, or baffles.

g. INPUT AIR FLOW:

(1) Type G1: Forced Input Air Flow - Fans or blowers are used at the supply air points or other locations within containment to assist air flow through the containment structure. When used with a negative pressure system, the input air flow must be properly balanced with the exhaust capacity throughout the range of operations.

(2) Type G2: Natural Input Air Flow - Fans or blowers are not required at air entry points.

h. AIR PRESSURE INSIDE CONTAINMENT:

(1) Type H2: Visual Verification – Negative pressure must be employed as verified through the concave nature of the wall, ceiling, or floor materials while taking into account wind effects. Smoke or other visible means inside or outside the containment can be used to observe air flow patterns.

i. AIR MOVEMENT INSIDE CONTAINMENT:

(1) The air movement guidance below is based on visibility, and may or may not be adequate for protection of the workers from health hazards (e.g., lead):

i. Type I1: Minimum Air Movement is Specified – Achieving air movement through the containment with the use of mechanical ventilation

Minimum velocity = of 100 fpm

Minimum volume of air = of 100 cfm

In addition to the minimum velocity and minimum volume of air, the Contractor shall also meet any minimums required to maintain safe working conditions for the workers. The Contractor shall reduce airborne lead exposure in accordance with the provisions of 29 CFR 1926.62 and prevent the escape of airborne lead particulates from the containment

j. EXIT AIR FLOW/DUST COLLECTION:

(1) Type J1: Air Filtration Required - Forced exit air flow into dust collectors (wet or dry) or baghouses sized appropriately for the type and size of particulate matter and for the volume and velocity of air moved through the containment.

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In areas where the CONTRACTOR intends to use vacuum blasting equipment, the CONTRACTOR must submit to the ENGINEER for approval (prior to the start of any work) full operational data on the system.

As a minimum, the vacuum equipment shall be of a series which has demonstrated containment of a removed lead based paint. This is to have been determined by an independent competent testing authority (university or similar laboratory) to meet the following criteria:

- i. 99% containment of the removed surface containment.
- ii. Maintenance of ambient air quality so as to have no detectable contaminate at 15 feet downward during operation.

If approved for use by the ENGINEER, the CONTRACTOR shall require the manufacturer to conduct a demonstration of the proposed equipment of sufficient duration and scope to establish full compliance with the requirements. Improper use of the enclosure, vacuum blasting equipment or any other approved containment system will not be permitted. Spilling of more than a total of five pounds of blasting residue, or random emissions of blast residue, of a cumulative duration exceeding 10% of the time spent performing the surface preparation and clean-up shall be considered unacceptable. Operations will be halted until the ENGINEER approves the CONTRACTOR'S plan to correct the problem. In addition, the OWNER reserves the right to stop work or to require additional containment methods, if the CONTRACTOR'S operations create a nuisance beyond the project site in the sole opinion of the OWNER, ENGINEER, or the OWNER'S designated representative. Tank containment shall be paid for at the contract unit price for FULL TANK CONTAINMENT.

8. METHODS FOR ASSESSING QUANTITY OF EMISSIONS:

Surface preparation and paint removal operations produce dust and debris which may be emitted into the environment. The methods for assessing quantity of emissions shall meet the requirements of the Society of Protective Coatings - Guide 6 for Methods A and G as follows:

- a. Method A – Observations of visible emissions from the work area provide immediate feedback on the performance of the containment system. Only one method may be used:
 - i. General Surveillance – Visible emissions are permitted at given frequencies or durations provided they do not extend beyond an established boundary line (i.e. property line). Possible frequencies include:
Level 1 Emissions – Random emissions of a cumulative duration of no more than 1% of the workday (e.g., 5 minutes in an 8 hour day)
The workday activities for timing emissions encompass surface preparation and clean-up only.
- b. Method G – Visual Assessment of Site Cleanliness: A visual assessment of the cleanliness of the work site and surrounding property is made each day and upon project completion. Preexisting debris is identified and mapped in advance, or preferably is removed prior to work as part of the contract. By removing the debris in advance, disputes over the responsibility for clean-up are eliminated. By having a visually clean project site before the work begins, it provides another means for verifying the suitability of the project controls. For example, the presence of spent abrasives on the ground will

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indicate that a containment leak or breach has occurred. Under this method, the site and surrounding property are free of all visible debris upon project completion.

The Contractor shall conduct visible emissions in accordance with 10 CFR, Appendix A, Method 22. Also, Method PD/Lead A4 of SSPC publication 95-06, Project Design, provides guidance on visible emissions. Conduct the visible emissions assessments to account for all locations where emissions of lead dust might be generated, including, but not limited to, the containment or work area, dust collection and waste recovery equipment as applicable, and waste container areas. Visual inspections shall also be conducted for releases or spills of dust and debris that have become deposited on surrounding property, structures, and equipment or vehicles.

Visible emissions assessments shall be conducted in all locations where emissions of contaminants might be generated. Casual observations and corrections of visible emissions and releases of dust or debris are an ongoing daily requirement.

An Environmental Monitoring Plan shall be provided, and shall include the assessment of visible emissions and releases, the frequency of observations and inspections that will be made, the equipment and areas (e.g., containment) that will be observed for visible emissions, and the surrounding property and structures that will be examined for debris. The Contractor is responsible for adhering to all federal, state, and local regulations regarding visual emissions.

All results shall be reported in either a log book or other report form.

If unacceptable visible emissions or releases are observed, the Contractor shall immediately shut down the emission-producing operations, clean up the debris, and change work practices, modify the containment system, or take other appropriate corrective action as needed to prevent similar releases from occurring in the future. Document all cases where work has been halted due to unacceptable visible emissions or releases, the cleanup activities invoked, and the corrective action taken to avoid a reoccurrence. The written report shall be provided to the District within 48 hours of the occurrence.

In the event satisfactory results are not obtained with Methods A and G or the Contractor is not following the proper protocol for Methods A and G, the Contractor shall be responsible for utilizing Method D (EPA Ambient Monitoring for Toxic Materials) at no additional cost to the Owner.

9. The containment system attachments to the tank shall be designed by a Professional Engineer registered in the State of Texas not to impose excessive loading on the tank and tank appurtenances. The CONTRACTOR shall submit the Structural Engineer (S.E.) designed, stamped, and signed details of the containment system and the attachment details for review prior to installation of the containment system on the tank. The containment system will place additional loads on the tank which the tank was not originally designed for. The CONTRACTOR shall reinforce the tank as necessary to assure no damage or permanent deformation occurs to the tank. Any damage done to the tank as a direct or indirect result of the containment system shall be repaired or sections replaced by the CONTRACTOR at no additional cost to the OWNER. Neither the ENGINEER nor the OWNER assumes any responsibility for the structural ability of the tank to support the containment system.

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10. The contractor shall be, as a minimum, required to paint the tank while under containment when the wind is blowing towards any existing residences, businesses, or other existing structures.

DISINFECTION AND FILLING OF THE TANK

Adequate ventilation that will effectively remove solvent vapors shall be provided for proper drying of paint on interior surfaces. Following final coat application, the tank shall not be disinfected or filled until the coating system is fully cured. Refer to applicable product data sheet(s) for dry time / temperature requirements. Disinfection shall be done in accordance with the current American Water Works Association standard, AWWA C652, or as instructed by the Bexar County Water Control and Improvement District No. 10 .

All work shall be implemented in accordance with the American Water Works Association's Standard D102-011.

NSF CERTIFICATION

All coatings in contact with potable water or applied to the inside wet area of the tank shall be listed by NSF International or UL under ANSI/NSF Standard 61, Section 5, Protective (Barrier) Materials, Potable Water Tank Coatings.

ADDITIONAL SPECIFICATIONS AND STANDARDS

All roof openings shall be designed in accordance with current AWWA standards. If an alternate 30 inch diameter access opening is not provided in a storage tank, the primary roof access opening shall not be less than 30 inches in diameter. Other roof openings required only for ventilating purposes during cleaning, repairing, or painting operations shall be not less than 24 inches in diameter or as specified by the licensed professional engineer. An existing tank without a 30-inch in diameter access opening must be modified to meet this requirement when major repair or maintenance is performed on the tank. Each access opening shall have a raised curbing at least four inches in height with a lockable cover that overlaps the curbing at least two inches in a downward direction. Where necessary, a gasket shall be used to make a positive seal when the hatch is closed. All hatches shall remain locked except during inspections and maintenance.

Access manways in the riser pipe, shell area, access tube, bowl area or any other location opening directly into the water compartment shall be located in strict accordance with current AWWA standards. These openings shall not be less than 24 inches in diameter. However, in the case of a riser pipe or access tube of 36 inches in diameter or smaller, the access manway may be 18 inches times 24 inches with the vertical dimension not less than 24 inches. The primary access manway in the lower ring or section of a ground storage tank shall be not less than 30 inches in diameter. Where necessary, for any access manway which allows direct access to the water compartment, a gasket shall be used to make a positive seal when the access manway is closed.

END OF SECTION

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(ATTACHMENT A) BID PROPOSAL FORM

BID PROPOSAL FOR

WCID No.10 Midcrown Elevated Storage Tank Painting

THIS BID IS SUBMITTED:

The Bexar County Water Control and Improvement District No. 10
Attn: General Manager
8601 Midcrown Drive
Windcrest, Texas 78239

1. The undersigned BIDDER proposes and agrees, if this BID is accepted, to enter into an agreement with BEXAR COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 10 in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for forty-five days after the day of Bid opening. BIDDER will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of OWNER'S Notice of Award.
3. In submitting the Bid, BIDDER represents, as more fully set forth in the Agreement that:
 - a. BIDDER has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date

Addendums & Numbers

- b. BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
 - c. BIDDER has given OWNER written notice of all conflicts, errors, or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by OWNER is acceptable to BIDDER.

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- d. This Bid is genuine and one made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder to over OWNER.
4. The undersigned BIDDER proposes and agrees to furnish all labor, tools, equipment, material, supervision, and incidentals necessary to complete the work according to the plans and attached specifications for the lump sum bid of each of the following:
- This Bid shall be to perform the proposed work, as per specifications for the cleaning of the interior tank for sediment and debris, internal and external surface preparation, and repainting to TCEQ regulations.
 - The Bid shall include the furnishing of all labor, materials and equipment required to complete this work. Materials shall be new.
 - All items included in specifications are to be performed but may not identified as a Bid Item shall be performed and the costs must be captured in Bid. Some these items listed below but are not limited to those items.
 - Tank Cleaning & Removal of Sediment/Debris
 - Testing
 - Permits
 - Hauling and proper disposal of all debris and materials from site.
 - All welding repairs of weld undercuts and pitting deeper than 1/8 of an inch.

ITEM NO.	QTY	UNIT	DESCRIPTION	UNIT PRICE IN DOLLARS	TOTAL LINE-ITEM COST IN DOLLARS
1	1	LS	Insurance and Bonds		
2	1	LS	Mobilization		
3	1	LS	Containment System (Shrouding)		
4	1	LS	Exterior Blasting (Surface Preparation) and Coating		
5	1	LS	Interior Blasting (Surface Preparation) and Coating		
6	100	LF	Removal of existing internal tank access ladder and install new internal tank access ladder, complete with glide lock fall arrest system.		
7	1	LS	Blasting and Coating Aboveground Yard Piping		
8	1	LS	Remove and Install Replace Roof Vent		

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BID PRICE (Numbers) \$ _____

BID PRICE (Words) _____ **Dollars.**

5. BIDDER agrees that all work will be substantially complete with the time specified in the Contract Agreement and complete and ready for final payment as indicated.

BIDDER accepts the provisions of the Agreement as to liquidate damages in the event of failure to complete work on time.

BIDDER accepts and agrees, unless stipulated in this Bid.

6. The following documents are attached to and made a condition of this Bid:
- a. A tabulation of Subcontractors, Suppliers and other persons and organizations required to be identified in this Bid.
 - b. If additional time is required to order and furnish equipment, please indicate total time required to complete _____.
 - c. Other:

7. Communications concerning this Bid shall be addressed to:

The address of BIDDER indicated below:

The following address:

8. The undersigned BIDDER certifies that he has thoroughly examined these documents (Bid Documents, Contracts, General Conditions, Supplementary and Special, etc.) and that the bid prices contained in this proposal have been carefully checked and are submitted as correct and final.
9. Within ten (10) business days after formal acceptance of this Proposal by a Notice of Award of Contract, the undersigned will execute the Contract Agreement and will furnish approved surety bonds and such other bonds as required by the Contract Documents for the faithful performance of the contract. In the event the Contract Agreement and bonds are not executed within the time above set forth, the attached bid bond in the amount of 5% of the bid total is to become the property of the Bexar County Water Control and Improvement District No. 10 as liquidated damages for the delay and additional work caused thereby.
10. The undersigned agrees to:

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- a. Complete all work covered by these Contract Documents within a reasonable period of time after the date of the executed Contract Agreement as directed by the Bexar County Water Control and Improvement District No. 10 ;
- b. Hereby indicates his interest and ability to perform painting during the late fall/winter months (January 2024 to March 2024) to prevent conflicts with demand.

Submitted on _____, 2023

By:

Title:

If BIDDER is:

An Individual

By _____
(Seal)
(Individual's Name)

Doing business as _____

Business address: _____

Phone No. _____

A Partnership

By _____
(Seal)
(Firm Name)

(General Partner)

Business address: _____

Phone No. _____

A Corporation

By _____
(Corporation Name)

(State of Incorporation)

By _____
(Name of Persons Authorized to Sign)

WCID No.10 Midcrown Elevated Storage Tank Painting

(Title)

(Corporate Seal)

Attest _____

(Secretary)

Phone No. _____

A Joint Venture

By _____

(Name)

(Address)

By _____

(Name)

(Address)

(Each joint venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

ATTACHMENT B

INSPECTION REPORT

WCID No.10 Midcrown Elevated Storage Tank Painting



CLIENT SERVICE IS NUMBER 1

**BOSWELL & REYES
INTERNATIONAL, LLC.**
a mbe/wbe owned company

1503 Sagebrush Drive
Round Rock, Texas 78681
phone | 512-426-3380
e-mail | Robert@brintl.com
e-mail | Marylou@brintl.com
e-mail | Jessica@brintl.com
web | www.brintl.com

POTABLE WATER STORAGE TANK Inspection Form

Section 290.46(f)(3)(D)(ii) of the Texas Commission on Environmental Quality's *Rules and Regulations for Public Water Systems* requires documentation of annual ground, elevated, and pressure storage tank maintenance inspections. [See also 290.46(m) (1) and 290.46(m) (2)]

Location: 506 Crestway Rd, San Antonio, TX 78239
Description: 100,000 Gallon EST
Date & Material of Exterior Coating System: Unknown
Date & Material of Interior Coating System: Unknown

Exterior of Tank

O.K.	Problem	NA	Description
✓			Foundation: settling, cracks, deterioration
✓			Protective Coating: rust, pitting, corrosion, leaks
✓			Water Level Indicator: operable, cable access opening protected
✓			Overflow Pipe: flap valve cover accessible, operable, sealed
✓			Access Ladder: loose bolts or rungs
✓			Roof: low spots for ponding water, holes along seams, rust
✓			Air Vents: proper design, screened sealed edges and seams
		✓	Cathodic Protection Anode Plates: secured and sealed
	✓		Roof Hatch: proper design, locked, hinge bolts secured, gasket
		✓	Pressure Tank Operational Status: pressure release device, pressure gauge, air-water volume device

Interior of Tank

O.K.	Problem	NA	Description
✓			Water Quality: insects, floating debris, sediment on the bottom
✓			Protective Coating: rust, corrosion, scaling
Date: NA			Last Inspection of Pressure Tank Interior

Comments

Lock was not observed on the roof hatch to enter the tank interior.

Name of Inspector: Miguel A Cardenas Diaz

Date of Inspection: July 10, 2023

WCID No.10 Midcrown Elevated Storage Tank Painting



WCID No.10 Midcrown Elevated Storage Tank Painting

Inspection No. 2 of 3

Ron Perrin **Water Technologies**

PO Box 101614
Fort Worth, Texas 76185

Phone 1-888-481-1ROV

Inspection Report

Date of Inspection: 3/18/2022

Location: Bexar County #10- Windcrest
8810 Midtown Dr.

Inspector: Joe Reily

Type: Elevated

Size: 100,000 gallons

TCEQ Title 30. CHAPTER 290.46 (m)(1). (1) Each of the system's ground, elevated, and pressure tanks shall be inspected annually by water system personnel or a contracted inspection service.

(A) Ground and elevated storage tank inspections must determine that the vents are in place and properly screened, the roof hatches closed and locked, flap valves and gasketing provide adequate protection against insects, rodents, and other vermin, the interior and exterior coating systems are continuing to provide adequate protection to all metal surfaces, and the tank remains in a watertight condition.



Tank Overview

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WCID No.10 Midcrown Elevated Storage Tank Painting

Inspection No. 2 of 3

Vents in place and properly screened? **Yes.** Vent screen was found in **good** condition.

STATE RULE: TCEQ Title 30. CHAPTER 290.43 (c) (1) Roof vents shall be gooseneck or roof ventilator and be designed by the engineer based on the maximum outflow from the tank. Vents shall be installed in strict accordance with current AWWA standards and shall be equipped with approved screens to prevent entry of animals, birds, insects and heavy air contaminants. Screens shall be fabricated of corrosion-resistant material and shall be 16-mesh or finer. Screens shall be securely clamped in place with stainless or galvanized bands or wires and shall be designed to withstand winds of not less than tank design criteria (unless specified otherwise by the engineer).



Top vent structure

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Inspection No. 2 of 3

Roof Hatch: properly closed? **Yes**

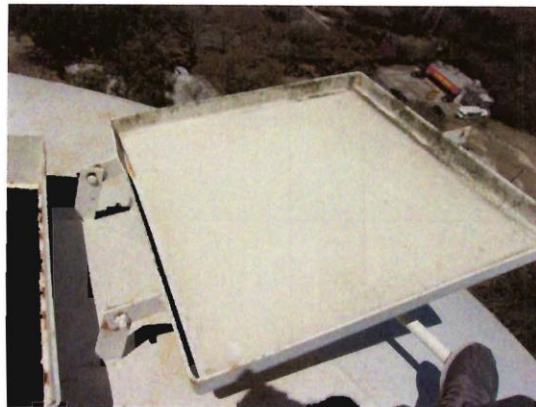
Properly locked? **No lock**

Roof Hatch: proper size and design? **Yes**

STATE RULE: TCEQ Title 30. CHAPTER 290.43 (c) (2) All roof openings shall be designed in accordance with current AWWA standards. If an alternate 30 inch diameter access opening is not provided in a storage tank, the primary roof access opening shall not be less than 30 inches in diameter. Other roof openings required only for ventilating purposes during cleaning, repairing or painting operations shall be not less than 24 inches in diameter or as specified by the licensed professional engineer. An existing tank without a 30-inch in diameter access opening must be modified to meet this requirement when major repair or maintenance is performed on the tank. Each access opening shall have a raised curbing at least four inches in height with a lockable cover that overlaps the curbing at least two inches in a downward direction. Where necessary, a gasket shall be used to make a positive seal when the hatch is closed. All hatches shall remain locked except during inspections and maintenance.



Roof Hatch closed



Roof Hatch opened

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Inspection No. 2 of 3

Is there a 30" Hatch, manway or bolted panel at any location on the tank?

The manway was smaller than 30" and was found in **good** condition.

STATE RULE: TCEQ Title 30. CHAPTER 290.43 (c) (10) Access manways in the riser pipe, shell area, access tube, bowl area or any other location opening directly into the water compartment shall be located in strict accordance with current AWWA standards. These openings shall not be less than 24 inches in diameter. However, in the case of a riser pipe or access tube of 36 inches in diameter or smaller, the access manway may be 18 inches times 24 inches with the vertical dimension not less than 24 inches. The primary access manway in the lower ring or section of a ground storage tank shall be not less than 30 inches in diameter. Where necessary, for any access manway which allows direct access to the water compartment, a gasket shall be used to make a positive seal when the access manway is closed.



Manway

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Inspection No. 2 of 3

Overflow flapper valves and gaskets provide adequate protection against insects, rodents and other vermin? **Yes** Flapper was in **good** condition.

STATE RULE: TCEQ Title 30. CHAPTER 290.43 (c) (3) Overflows shall be designed in strict accordance with current AWWA standards and shall terminate with a gravity-hinged and weighted cover. The cover shall fit tightly with no gap over 1/16 inch. If the overflow terminates at any point other than the ground level, it shall be located near enough and at a position accessible from a ladder or the balcony for inspection purposes. The overflow(s) shall be sized to handle the maximum possible fill rate without exceeding the capacity of the overflow(s). The discharge opening of the overflow(s) shall be above the surface of the ground and shall not be subject to submergence.



Overflow flapper



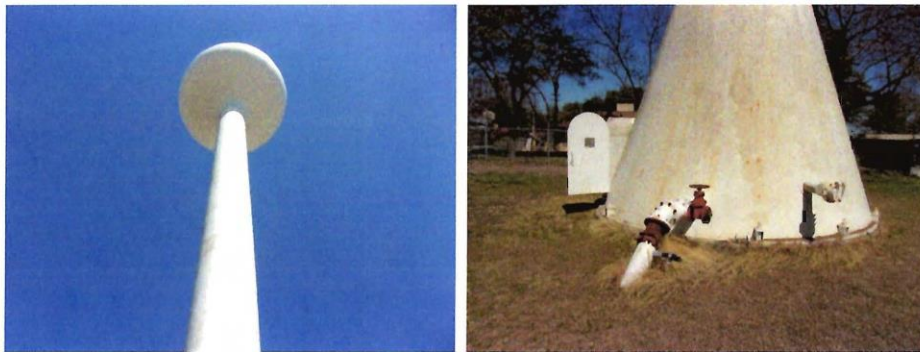
Overflow flapper

WCID No.10 Midcrown Elevated Storage Tank Painting

Inspection No. 2 of 3

Exterior was in **fair** condition, due to staining and chalky paint quality.

STATE RULE: TCEQ Title 30. CHAPTER 290.43 (c) (8) All clearwells, ground storage tanks, standpipes, and elevated tanks shall be painted, disinfected, and maintained in strict accordance with current AWWA standards. However, no temporary coatings, wax grease coatings, or coating materials containing lead will be allowed. No other coatings will be allowed which are not approved for use (as a contact surface with potable water) by the EPA, National Sanitation Foundation (NSF), or United States Food and Drug Administration (FDA). All newly installed coatings must conform to American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 61 and must be certified by an organization accredited by ANSI.



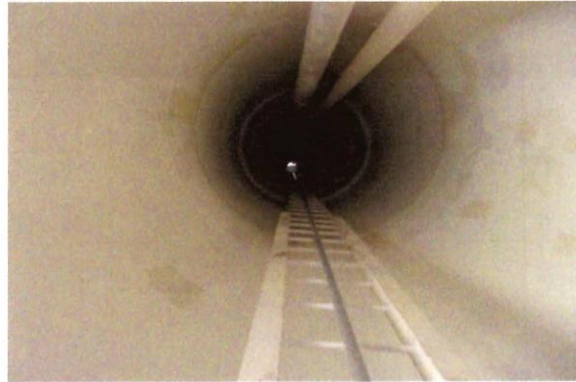
Bottom/Side of tank



Bottom/Side of tank

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Inspection No. 2 of 3



Access way interior



Access way interior



Access way interior

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Inspection No. 2 of 3



Roof of tank



Roof of tank

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Inspection No. 2 of 3

Is the tank in watertight condition? **Yes**

Potable water leaking out? **No**

Rain water leaking in? **No**

STATE RULE: TCEQ Title 30, CHAPTER 290.43 (c) (6) Clearwells and potable water storage tanks shall be thoroughly tight against leakage, shall be located above the groundwater table, and shall have no walls in common with any other plant units containing water in the process of treatment. All associated appurtenances including valves, pipes, and fittings shall be tight against leakage.

Access ladder corroded rungs? **No**

Loose rungs or bolts? **No**

The access ladder was found in **good** condition.



Access ladder

Inside ladder above waterline corroded? **Yes** Below waterline? **Yes**
Loose rungs or bolts above waterline? **No** Below waterline? **No**



Inside ladder

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Inspection No. 2 of 3

Foundation: Settling, cracking, anchor bolt problems, deterioration, foundation settling, Spalling, exposed reinforcing steel, vegetation at tank base? **No**

Foundation was found in **good** condition.



Foundation

Cathodic Protection: **No**

Anode Plates sealed and secured: **N/A**

Low spots on roof: **No**

Holes along seams on roof: **No**

WCID No.10 Midcrown Elevated Storage Tank Painting

Inspection No. 2 of 3

Water Quality: Insects or birds in tank? **No**

Debris on the floor of the tank? **No**

Sediment on bottom? **Yes**

Estimated Depth of sediment (if any)? **2"-4"**



Sediment

CLEANING YOUR WATER TANK IS RECOMMENDED

– Sediment in Your water storage tanks may be harboring contaminants, and worse, allowing them a habitat to grow in.

Sediment levels in your tanks create a habitat where bacteria, protozoa, and viruses can hide from treatment chemicals and thrive. The list of contaminants found in drinking water is staggering, ranging from heavy metals and uranium, to bacteria, protozoa, and viruses. Even treatment chemicals used for disinfection can form harmful chemical by-products in the treated water.

Is the water level indicator working? **Yes**

STATE RULE: TCEQ Title 30. CHAPTER 290.43 (c)(4) All clearwells and water storage tanks shall have a liquid level indicator located at the tank site. The indicator can be a float with a moving target, an ultrasonic level indicator, or a pressure gauge calibrated in feet of water. If an elevated tank or standpipe has a float with moving target indicator, it must also have a pressure indicator located at ground level. Pressure gauges must not be less than three inches in diameter and calibrated at not more than two-foot intervals. Remote reading gauges at the owner's treatment plant or pumping station will not eliminate the requirement for a gauge at the tank site unless the tank is located at the plant or station.

Oil on the surface of stored water? **No**

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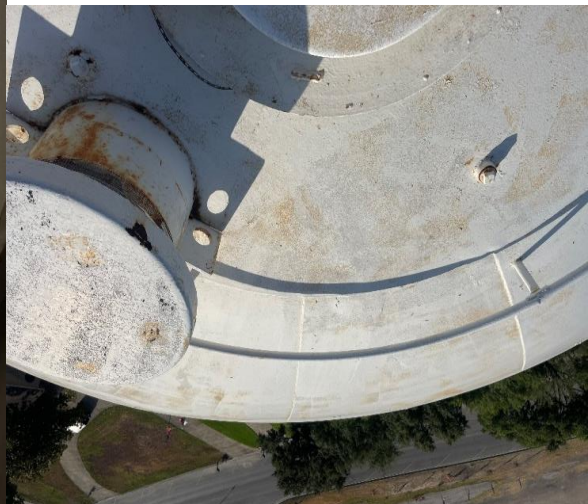
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ATTACHMENT C

RECENT PHOTOS

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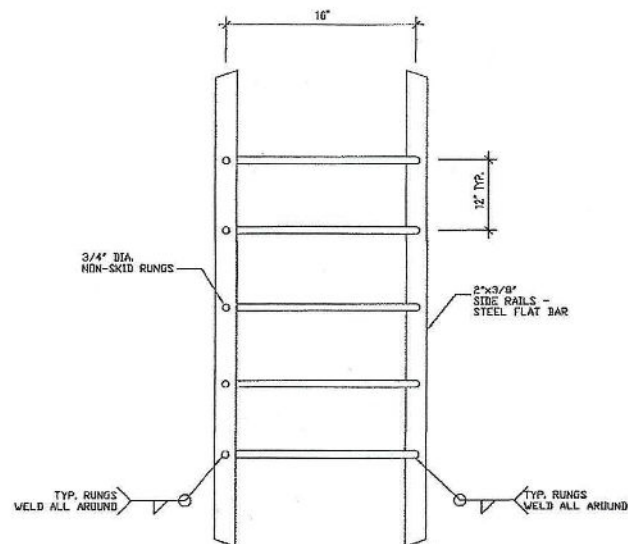
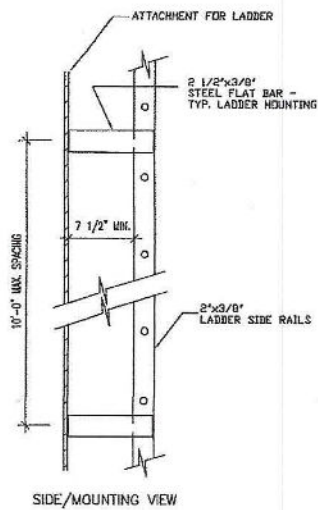
ATTACHMENT D

LADDER DETAIL

WCID No.10 Midcrown Elevated Storage Tank Painting

LADDER DETAIL

Fabricate ladder in 20 Ft. lengths Max. Support w/
2 1/2" wide x 3/8" thick plate stand-offs every 10
FT. Max. both sides.



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LADDER DETAIL

Fabricate ladder in 20 Ft. lengths Max. Support w/
2 1/2" wide x 3/8" thick plate stand-offs every 10
FT. Max. both sides.

