



## **MARINE DIVING SOLUTIONS, LLC**

# **PROPOSAL FOR REPLACEMENT OF A WELDED STEEL ROOFS WITH ALUMINUM DOME ROOF ON ABOVE GROUND, 50' DIAMETER STORAGE RESERVOIRS**

for Town of Johnstown, Colorado

## **OVERVIEW**

Marine Diving Solutions (MDS) is pleased to submit this proposal for our Construction Team to support Town of Johnstown Colorado in achieving its goals for improving customer/client satisfaction by Replacement of a Welded Steel Roof with Aluminum Roof on Above Ground, 50' Diameter Storage Reservoir.



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## EXECUTIVE SUMMARY

- Work closely with and have open lines of communication with the Town of Johnstown, CO (Owner) to complete a turn-key operation with sole source accountability for the replacement of 1 steel roof with 1 aluminum roofs.
- Meet Owner's schedule and critical time lines which are summarized in our Technical Approach.
- Work as a Service Disabled Colorado owned and operated company to utilize as much Colorado personnel. In fact, 100% of MDS's employees live in the State of Colorado. We estimate that 80% of this total project would be completed by Colorado Residents.
- Comply with all OSHA, local, State and Federal standards throughout the project to ensure safety and health guidelines are met.
- MDS will strive to complete the entire project within 1 month total. This is possible by working with a Colorado company and utilizing Domestic Materials.
- Marine Diving Solutions has shown with previous jobs completed throughout Colorado that we are committed to the Owners projects and needs as our main focus.
- Utilize 100% domestic materials.

# PRICING INFORMATION

## General Conditions

- **A. ALUMINUM ROOF COMPLETE AND CONSISTING OF THE FOLLOWING:**
  1. Description: Aluminum geodesic dome
  2. Dome Mounted To: Welded steel tank – **EAVE ANGLE/WIND GIRDER: 4 x 5 x 1/4**
  3. Tank Inside Diameter: 50 feet
  4. Tank Height: 50.00 feet
  5. Design Specifications: AWWA D108 / ASCE 7-10; **ADM 2015**
  6. Deck Live 15 pounds per square foot
  7. Ground Snow Load 30 pounds per square foot
  8. Wind Conditions: Per AWWA D108 / ASCE 7-10: 114mph, Exp. C, I=IV
  9. Design Pressure / Vacuum: Atmospheric / Atmospheric
  10. Operating Pressure / Vacuum: Atmospheric / Atmospheric
  11. Total Weight: 6,054 pounds
    - (1) 30" Square access hatch
    - (1) 20" Diameter ventilator with aluminum bird screen
    - Aluminum counterflashing to the top of tank
    - 1 Fall protection system – Includes center hoist ring with swivel mechanism with 3/8" diameter stainless steel wire rope, cable grab – designed for 5,000# lateral load
    - Included Final drawings and engineering calculations to include CO P.E. stamp
  
- **C. MISCELLANEOUS ITEMS INCLUDE THE FOLLOWING:**
  1. Crating and freight to jobsite.
  2. Roof approval drawings and calculations stamped by a Colorado State Professional Engineer.
  
- **D. PRICE IS BASED & CONTINGENT UPON**
  1. Tank being out-of-service, drained and cleaned (by others).
  2. All walls being level and at a constant elevation.
  3. Each dome is supplied with prime coated steel supports suitable for weld or bolt-on mounting.
  4. No blasting of the tank after dome has been installed.
  5. The tank dome(s) being considered as "water-tight," not "gas-tight".
  6. MDS submitting approvals based on the dimensions provided by the owner.
  7. The dome(s) and perimeter seal being considered as "water-tight".
  
- **E. DEMOLITION:**
  1. Equipment, tools and materials required to remove existing roof.
  
- **F. INSTALLATION:**
  1. Equipment, tools and materials required to build roof cover is included in this quotation.
  2. AWWA water leak test (water and hose to be supplied by others).
  
- **G. GENERAL NOTES**
  1. MDS's field crew will perform a water test after completion of the dome to ensure water tightness. Water supply, hoses and water pumps needed to perform the water test are to be supplied by owner.
  
- **H. BASIC ITEMS NOT INCLUDED**
  1. Electrical, mechanical, venting or plumbing work of any kind.
  2. Building permits, duties, and special fees other than specified herein.
  3. Extra labor and materials if dimensions or conditions are different than specified.
  4. Disinfection of tank and dome.
  5. Prevailing Wage or Union labor.
  6. Existing tank must be level and flat for dome to anchor and seal properly.

## Fee on Cost of Construction/Cost of Work

- **A. Design, Drawings, Engineering, Submittals, Insurance and Mobilization- \$15,000.00**
- **B. Demolition of Existing Steel Roof- \$17,000.00**
- **C. Installation of Girder / Tank Stabilization Features- \$71,000.00**
- **D. Touch Up Painting of Disturbed Areas- \$3,000.00**
- **E. Supply, Construction and Installation of Aluminum Roofs \$62,990**

## Equipment and Personnel Rates

Labor and Equipment Rates			
Labor	Straight Time Rate Hourly	Equipment	Daily Rate
Foreman	\$70.00	90ton Crane	\$1,100.00
Project Manager	\$60.00	55ton Crane	\$750.00
Crane Operator	\$95.00	150 kW Generator	\$400.00
Welder	\$50.00	375CFM Compressor	\$400.00
Laborer III	\$45.00	1 Ton Truck	\$400.00
Laborer II	\$42.50	½ or ¾ Ton Truck	\$350.00
Laborer I	\$40.00	Office Trailer	\$350.00
Engineer	\$130.00	65' Man lift	\$300.00
Office Coordinator	\$45.00	12K Forklift	\$500.00
		Welder	\$160.00
		Plasma Torch	\$200.00
		Blasting Pod & Hose	\$250.00
		Painting Units	\$250.00

## Price

The proposed construction of the roof replacement for this project is **\$168,990.00**

## TECHNICAL APPROACH

MDS has an understanding is that inspections that took place previously that there was a significant amount of corrosion taking place on the roof beams. Further inspections have showed similar deficiencies. After discussions and research, it was decided that replacement of the roof is the best feasible option for a long-term solution to correct the deficiencies. Since aluminum will not corrode like steel in the vapor zone of the tank and aluminum does not need to be blasted and coated compared to steel roofs. We believe that this is the best cost and minimal maintenance solution for the tank and we would be pleased to complete this project for the Town of Johnstown.

At time of notice of award, MDS will start the process of starting submittals and ordering materials. At that time MDS will issue a contract to its only subcontractor, Tank Connections, for moving forward to provide the drawings, supply, construction and installation of the aluminum roofs. MDS will then arrange a meeting with Town of Johnstown and MDS's job foreman to go over a schedule and meet the Town of Johnstown's goals and expectations.

Once the shop drawings have been approved, orders and fabrications will be initiated and begin. Tank Connections manufactures the roof panels themselves and will provide all domestic materials. None of the materials will be coming from foreign countries, therefore the lead time again will be less versus companies using foreign materials. We believe that by providing all domestic materials that we can meet and exceed Town of Johnstown's schedule, goals and expectations in relation to time and scheduling. The estimated lead time for the fabrication of the aluminum geodesic domes is 8-12 weeks.

MDS will assign Ian Stephens as foreman and Evan Stevens as Project Manager. Ian will be in charge of supplying submittals, delivering drawings, ordering materials and submitting the schedule. Evan Stevens will be on site for the duration of the project as the Project Manager. He will oversee meeting deadlines, conduct safety meetings, do quality assurance checks, provide on-site management and on-site record keeping. He will turn in all progress reports to MDS office staff who will submit for monthly progress payments throughout the project. MDS plans to have up to 5 employees working on this contract. This does not include the subcontractor's employees from Tank Connections.

As far as time management, please see the bar graph schedule included in the proposal that shows the sequencing of each task and how we have laid out the items to overlap to effectively control time and scheduling of the project. Below is a brief outline of our key tasks start and end dates.

\*All duration days are in working business days.

<b>Description</b>	<b>Start Date</b>	<b>End Date</b>	<b>Duration</b>
Delivery of Drawings	February 22, 2021	March 8, 2021	14 Days
Order Aluminum Roof	March 8, 2021	May 10, 2021	53 Days
Removal of Steel Roof Tank	April 19, 2021	April 21, 2021	3 Days
Install of Eave Angle / Wind Girder	April 22, 2021	May 10, 2021	12 Days
Install Roof Tank	May 10, 2021	May 14, 2021	5 Days
Tank 4 Complete		May 14, 2021	

## QUALIFICATIONS

Founded in 2013, Marine Diving Solutions opened its doors for providing premium construction on water tanks and reservoirs to meet city/ utility's needs. With our owner, Ian Stephens, having 15 plus years of construction experience in providing safe, quality construction for Water Tank Rehabilitation projects. MDS has the knowledge and experience to conquer any tank need. A few things in particular set us apart from the competition:

- We offer the experience for providing construction services, including work for the federal government, state government and local agencies.
- We have inspected over 900 tanks since we opened our doors.
- Since our 2013 start, we have performed over 50 tank rehabilitation projects throughout Colorado.
- MDS was established in Colorado in 2013 and continue to operate out of Centennial, CO.
- We have an established office and warehouse in Centennial, allowing quick mobilization to Johnstown, and a fabrication shop in Grand Junction with a skilled crew of welders. MDS employs AWS D 1.1 structural welders for our fabrication shop in Grand Junction, Colorado.
- We are committed to utilizing as many Colorado residents as possible with 100% of our full-time staff living in Colorado. MDS is also requesting its subcontractor to utilize as many Colorado residents as possible for this project. Our current prediction is that 70% of the labor for this contract would be from Colorado.
- We are an experienced and proven water tank contractor, to provide steel climbing ladder fall protection, blast and recoats, railing and catwalk modifications, overflow installations, welding, and exterior/interior tank work.
- We have numerous suppliers that can deliver water tank parts for fast and reliable service.
- We have a crew of 13 full time employees, and ten out of the thirteen employees are dedicated to water tank inspections and repairs.
- MDS utilizes recognized local engineering firms to ensure all repairs are structurally worthy.
- MDS's fabrication staff have AWS D1.1 certifications for positions up to 6G. Our shop foremen, Evan Stevens, is an AWS weld inspector and can also certify all welds that are performed.

For the Roof Replacement Project, Marine Diving Solutions has chosen to team up with a company who we feel is a qualified aluminum geodesic dome fabricator, supplier and installation company, Tank Connections. Tank Connections is an ISO 9001 certified company, which means they have undergone thorough inspections of their products. Their product and personnel have proven to be highly qualified for any water storage tank project. The design of welded components shall be done in accordance with the Aluminum Structural Welding Code ANSI/AWS D1.2-90. They certify that all modeling and design requirements of ADM 2010 will be satisfied. After discussing this project with Tank Connections, we have been assured that with their staff capacity and their material supply they are capable of meeting our schedule demands and timeline.

With Ian Stephens as the project foreman for Marine Diving Solutions with his 15+ years of tank rehabilitations experience we ensure to have this project run smoothly and have open lines of communications between Town of Johnstown and Marine Diving Solutions from beginning to end. Evan Stephens being there for the entirety of the project.



## **INSURANCE**

MDS has a specialty insurance coverage due the nature of also being involved in the commercial diving industry. Our policy has 2M in umbrella coverage. All coverage meets and exceeds the State of Colorado's insurance coverages.

## CONCLUSION

MDS is a Colorado owned and operated service disabled veteran owned company that has 100% Colorado based employment. The only subcontractor we would utilize on this project, Tank Connections, would be constructing the roof with all domestic materials. There would be no lag time due to international shipments if we were awarded this project. MDS also employs AWS D 1.1 structural welders for our fabrication shop in Grand Junction, Colorado, which would help to not create any delays with fabrication.

We look forward to working with Town of Johnstown Colorado and supporting your efforts to improve your city needs. We are confident that we can accomplish the scope of work in the timeline given.

If you have questions on this proposal, feel free to contact Ian Stephens at your convenience by email at [ian@marinedivingsolutions.com](mailto:ian@marinedivingsolutions.com) or by phone at 303-309-0091.

Thank you for your consideration,

Ian Stephens  
Owner