

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
January 25-26, 2016
Agenda Item 24(e)

Applicant & Fiscal Agent: Town of Mancos
Water Activity Name: Mancos Raw Water System Improvements
Water Activity Purpose: M&I
County: Montezuma
Drainage Basin: Southwest/Mancos River Basin
Water Source: West Fork of the Mancos River & Jackson Gulch Reservoir
Amount Requested/Source of Funds: \$81,765 Southwest Basin Account (total grant request)
Matching Funds: Applicant Match: \$81,766 (cash) = 50% of the total project cost of \$163,531
(refer to *Funding Summary/Matching Funds* section below)

Staff Recommendation:

Staff recommends approval of up to \$81,765 from the Southwest Basin Account to help fund the project titled: Mancos Raw Water System Improvements.

Water Activity Summary: WSRA funds, if approved, will be expended to fund replacement of the existing Raw Water Intake System for the Town of Mancos. The current system has very limited means to measure and control water flow from the river and the Water Treatment Plant Operator has to continually monitor the system to ensure that water is flowing to the WTP. Because the flow cannot be accurately metered, water at multiple locations ends up overflowing onto the ground. Additionally, the pipes conveying water to and from the ponds are subject to debris blockage causing more water to be wasted. When the pipe plugs up there is concern with interruption of flow to the treatment plant. More specifically, components of the Raw Water Intake System replacement will consist of:

1. Replace water lines between Pond 1 and Pond 2, and Pond 2 to the Parshall Flume and Control Box;
2. Provide decanter devices at the outlet of Pond 1 and Pond 2 to prevent debris from plugging pipes and causing ponds to overflow;
3. Provide a baffle (curtain) across each of the ponds to reduce short circuiting and improve settling of suspended solids;
4. Provide new Parshall Flume and Control Box and relocate them closer to the raw water pond to allow the Operator to dial in proper flow rates at the river head gate using the new 3" Parshall Flume;
5. Relocation of the Parshall Flume and Control Box further upstream will also provide additional pressure head of the raw water entering the water treatment plant. This will help treatment plant operations;
6. Provide return pipes back to the river to keep water off the ground. Return pipes will be from Pond 1, Pond 2, the control box, and the raw water manhole. These return pipes will provide

the operator with assurance that any excess water flowing through the raw water intake system will quickly be routed back into the River without any of the water spilling onto the ground.

The objectives of these improvements are as follows:

1. Provide accurate metering and control of water entering the pond system;
2. Eliminating extensive water spilling onto the ground and providing return pipes back to the river;
3. Provide better quality raw water going to the water treatment plant by reducing the short circuiting that is happening in the ponds.

Discussion: The proposed project aligns well with several Goals and Measurable Outcomes in the Southwest Basin Implementation Plan, such as “Meet Municipal and Industrial Water Needs” Goal C1: *Pursue a high success rate for identified specific and unique IPPs to meet the municipal gap*; and Goal C2: *Provide safe drinking water to Southwest Colorado’s citizens and visitors* (Section 1 - Basin Goals and Measurable Outcomes, Table 1, page 14), while also supporting the achievement of Measurable Outcomes #1: *Complete 40* IPPs aimed at meeting municipal water needs*; #2: *Consistently meet 100% of residential, commercial and industrial water system demands identified in SWSI 2010 in each sub-basin, while also encouraging education and conservation to reduce demand*; and #3: *Implement at least 1* IPP that protects or enhances the ability of public water supply systems to access and deliver safe drinking water that meets all health-based standards* (Section 1 - Basin Goals and Measurable Outcomes, Table 1, page 14). This proposal assists the Southwest Basin achieve these Goals and Measurable Outcomes by implementing a Mancos River Basin IPP – *Town of Mancos*, ID No. 14-M, Appendix A, page 13 of 18.

It is CWCB staff’s opinion that this proposal advances the Goals and Measurable Outcomes of Colorado’s Water Plan by reflecting the intent of the Programmatic *Critical Actions to Meet Water Gaps* #1 (Support and assist the basin roundtables in moving forward priority municipal, industrial, environmental, and agricultural projects and methods identified in their BIPs through technical, financial and facilitation support when requested by a project proponent and the pertinent BRT.), as exhibited in Chapter 10: *Critical Action Plan*, Section 10.3, A. Supply-Demand Gap, page 10-9.

Issues/Additional Needs: No issues or additional needs have been identified.

Threshold and Evaluation Criteria: The application meets all four Threshold Criteria.

Tier 1-3 Evaluation Criteria: n/a

Funding Summary/Matching Funds:

	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>
Southwest RT WSRA Basin Account	\$81,765	n/a	\$81,765
Town of Mancos	\$81,766	\$0	\$81,766
Total	\$163,531	\$0	\$163,531

CWCB Project Manager: Craig Godbout

All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn

be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform. In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.

SOUTHWEST BASINS ROUNDTABLE

Michael Preston, Chair

c/o Dolores Water Conservancy District

P.O. Box 1150

Cortez, Colorado 81321

970-565-7562

October 20, 2015

Mr. Craig Godbout
Water Supply Management Section
Colorado Water Conservation Board
1580 Logan Street, Suite 600
Denver, Colorado 80203

SUBJECT: Mancos Raw Water Improvements - \$81,765 from Basin Account

Dear Mr. Godbout:

The Southwest Basin Roundtable recommends funding of \$81,765 from the Southwest Basin Account for the Mancos Raw Water Improvements submitted by the Town of Mancos. The application was considered in detail and approved at the October 14, 2015 meeting of the Southwest Basin Roundtable. There was a quorum of Roundtable members present.

The proposed project is an IPP with leverage from other funding sources including resources from the Town made possible by steady incremental increases in water rates.

The completed Grant Application will be forwarded directly to you by the applicant. Please contact the applicant directly or me at 970-565-7562, mpreston@frontier.net, if you have questions or wish to discuss this application in more detail.

Sincerely,



Michael Preston
Southwest Basin Roundtable Chair



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Today's Date: 11-30-15

Mancos Raw Water Improvements

Name of Water Activity/Project

Town of Mancos

Name of Applicant

Southwest Basin
Roundtable

Amount from Statewide Account:

0

Amount from Basin Account(s):

\$81,765.00

Total WSRA Funds Requested:

0

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

FEIN: 84-6000691

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Required Exhibits

- A. Statement of Work, Budget, and Schedule
- B. Project Map
- C. As needed (i.e. letters of support, photos, maps, etc.)

Appendices – Reference Material

- 1. Program Information
- 2. Insurance Requirements
- 3. WSRA Standard Contract Information (Required for Projects Over \$100,000)
- 4. W-9 Form (Required for All Projects Prior to Contracting)

Water Supply Reserve Account – Application Form

Revised October 2013

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCBC). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCBC staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCBC website at: <http://cwcb.state.co.us> Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf>. In addition, the applicant should also refer to the [Supplemental Scoring Matrix](#) applied to Evaluation Criteria Tiers 1-3 for Statewide Account requests.

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Craig Godbout - WSRA Application
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203
Craig.godbout@state.co.us

If you have questions or need additional assistance, please contact Craig Godbout at: 303-866-3441 x3210 or craig.godbout@state.co.us.

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Part I. - Description of the Applicant (Project Sponsor or Owner);

1.	Applicant Name(s):	Town of Mancos		
	Mailing address:	P.O. Box 487 Mancos, CO 81328		
	FEIN #:	84-6000691		
	Primary Contact:	Heather Alvarez	Position/Title:	Town Clerk/Treasurer
	Email:	halvarez@mancoscolorado.com		
	Phone Numbers:	Cell:	Office:	(970) 533-7725
	Alternate Contact:	Robin Schmittel	Position/Title:	Public Works Director
	Email:	rschmittel@mancoscolorado.com		
	Phone Numbers:	Cell:	Office:	(970) 533-7725

2. Eligible entities for WSRA funds include the following. What type of entity is the Applicant?

- ☒ Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
- ☐ Public (Districts) – authorities, Title 32/special districts, (conservancy, conservation, and irrigation districts), and water activity enterprises.
- ☐ Private Incorporated – mutual ditch companies, homeowners associations, corporations.
- ☐ Private individuals, partnerships, and sole proprietors are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
- ☐ Non-governmental organizations – broadly defined as any organization that is not part of the government.

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3. Provide a brief description of your organization

The Town of Mancos is a statutory Town located in the southwest corner of Colorado. We were incorporated in 1894. Our population as of the 2010 census is 1,336 within Town limits and approximately 3,000 citizens in the Mancos Valley. The Town serves customers both inside and outside the municipal limits.

4. If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.

N/A

5. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract is included in Appendix 3. Please review this contract and check the appropriate box.

☒ The Applicant will be able to contract with the CWCB using the Standard Contract

☐ The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

6. The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

TABOR does not apply to this project because the project and funds will be handled through the Town's Enterprise Fund.

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Part II. - Description of the Water Activity/Project

1. What is the primary purpose of this grant application? (Please check only one)

☐

Nonconsumptive (Environmental or Recreational)

☐

Agricultural

☒

Municipal/Industrial

☐

Needs Assessment

☐

Education

☐

Other

Explain:

2. If you feel this project addresses multiple purposes please explain.

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

☐

Study

☒

Implementation

4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

New Storage Created (acre-feet)

New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)

Existing Storage Preserved or Enhanced (acre-feet)

Length of Stream Restored or Protected (linear feet)

Length of Pipe/Canal Built or Improved (linear feet)

Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)

Area of Restored or Preserved Habitat (acres)

Other -- Explain:

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4. To help us map WSRA projects please include a map (Exhibit B) and provide the general coordinates below:

Latitude:

37.374062N

Longitude:

108.256239W

5. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSRA funding will be used for. A full **Statement of Work** with a detailed budget and schedule is required as **Exhibit A** of this application.

The proposed project is the “Mancos Water Projects” with three components located in or near the Town of Mancos (see Exhibit B for more information on locations). The improvements that have been identified specifically for this grant request is are identified as Raw Water Intake System Improvements. For information purposes, the other components of the Mancos Water Projects are replacement of the Town’s Main pressure reducing valve (PRV) and vault, and replacement of an older section of the Town’s water distribution system.

The Raw Water Intake System Improvements is the focus of this grant application from the Colorado Water Conservation Board. The Town has been dealing with extensive water leakage at the raw water intake system on the West Mancos River that feeds the town’s water treatment plant. The current system has limited means to measure and control water from the River, into the settling ponds, then into the raw water transmission going to the water treatment plant (WTP). Additionally, the pipes conveying water to and from the ponds are subject to debris blockage. The result is that water is spilling and being wasted onto the ground.

There are very limited records on the town water system including the raw water intake system. Based upon what was found the raw water intake system and PRV was last worked on in 1960. The proposed improvements will renovate the existing system in a very cost effective manner. Components of the intake system improvements are elaborated in Exhibit A. Goals of the project are to:

- 1. Provide accurate water flow measurement allowing the operator to better manage water coming from the River.*
- 2. Provide return pipes back to the river to keep water off the ground.*
- 3. Prevent debris from blocking piping using decant devices.*

The WSRA funding in addition to Southwest Water Conservation Funds will be used for design and construction of the Raw Water Intake System Improvements. The replacement of the PRV/Vault and older portions of the distribution system are proposed to be funded with a matching DOLA grant and Town Water Funds. The Town will provide funding through water rate increases implemented based upon a “Recommended Water Rate Structure Study” conducted in 2014 (see appendices).

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Part III. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

- a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.¹

Because the project does not include an increase in water right demand above existing water rights utilized by the Town, it is compliant with Section 37-75-102 of the Colorado Revised Statutes. The intent of the project is to reduce water loss through replacement of leaking facilities in the system. No new water rights are required as a result.

- b) The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRT's evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. **Note- If this information is included in the letter from the roundtable chair simply reference that letter.**

Please see letter from Michael Preston, Chair, of the Southwest Basin Roundtable to Craig Godbout, Dated October 20, 2015 recommending funding of \$81,765 by a quorum of Roundtable Members at the October 14, 2015 meeting.

¹ 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

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- c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.² The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

In reducing leakage from Raw Water Intake System Improvement conveyance structures, as well as in the water distribution system and a pressure reducing vault, this project will reduce water loss in all three areas of the project.

- d) Matching Requirement: For requests from the Statewide Fund, the applicants will be required to demonstrate a **25 percent** (or greater) match of the total grant request from the other sources, including but not limited to Basin Funds. A minimum match of 5% of the total grant amount shall be from Basin funds. A minimum match of 5% of the total grant amount must come from the applicant or 3rd party sources. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the contract or purchase order between the applicant and the State of Colorado is executed. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in **Exhibit A** of this application)

The Town of Mancos is not seeking statewide funds for this project.

2. For Applications that include a request for funds from the **Statewide Account**, describe how the water activity/project meets all applicable **Evaluation Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines and repeated below.) Projects will be assessed on how well they meet the Evaluation Criteria. **Please attach additional pages as necessary.**

The Town of Mancos is not seeking statewide funds for this project.

Evaluation Criteria – The following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three “tiers” or categories. Each “tier” is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. The applicant should also refer to the Supplemental Scoring Matrix applied to Evaluation Criteria Tiers 1-3 for Statewide Account requests. WSRA grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide

² 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

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Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.

Tier 1: Promoting Collaboration/Cooperation and Meeting Water Management Goals and Identified Water Needs

- a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).
- b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intrabasin or interbasin needs or issues.
- c. The water activity helps implement projects and processes identified as helping meet Colorado's future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable's basin-wide water needs assessment.

Tier 2: Facilitating Water Activity Implementation

- d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).
- e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

Tier 3: The Water Activity Addresses Other Issues of Statewide Value and Maximizes Benefits

- f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.
 - g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.
 - h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.
 - i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.
 - j. The water activity is complimentary to or assists in the implementation of other CWCB programs.
- Continued: Explanation of how the water activity/project meets all applicable **Evaluation Criteria**.
Please attach additional pages as necessary.

Part IV. – Required Supporting Material

1. **Water Rights, Availability, and Sustainability** – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights,

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and water rights issues, and the name/location of water bodies affected by the water activity.

Water supplies affected by this project fall under existing water rights utilized by the Town of Mancos for their domestic water supply. The Town's raw water supply primarily consists of two sources of water: 1) 1.6 cubic foot per second cubic feet per second (cfs) adjudicated water right decreed from the West Fork of the Mancos River, and 2) 420 Acre-Feet (AF) of Jackson Gulch Reservoir storage water. In addition, the Town acquired the Weston and Jarrett Ditch, which is decreed for 0.967 cfs for irrigation. The Town uses water from the Mancos River, unless their water rights are curtailed by drought or other reason.

The Raw Water Intake System Improvements will involve the West Fork of the Mancos River diversion. The two other project tasks will involve whichever water right is being used for provision of domestic supply at any particular time of the year.

2. Please provide a brief narrative of any related studies or permitting issues.

Attached to this application, please find as Appendices A and B, the Town's "Water Rate Study" and "Infrastructure Needs List" which both identify the proposed project as an urgent need for the Town. No permitting issues should be associated with the project.

3. Statement of Work, Detailed Budget, and Project Schedule

Please see the attached Exhibit A for the Statement of Work, Detailed Budget, and Project Schedule.

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REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 10 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

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The above statements are true to the best of my knowledge:

Signature of Applicant:

Print Applicant's Name:

Project Title:

Date:

Return an electronic version (hardcopy may also be submitted) of this application to:

Craig Godbout – WSRA Application
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203
303-866-3441, ext. 3210 (office)
303-547-8061 (cell)
craig.godbout@state.co.us

TOWN OF MANCOS

Exhibit A.1 - Cost Breakdown - Raw water System Improvements

Southwest Water Conservation District - Southwest Basin Reserve

Water Supply Reserve Account Grant Application

TASKS¹	TASK DESCRIPTION	Water Supply Reserve Account Grant	Matching Funds²	TASK TOTALS
TASK 1	Replace Raw Water Lines, Install Return Lines, Install Decant Devices	\$43,735	\$43,735	\$87,470
TASK 2	Install Baffles (Curtains) Across Pond 1 and Pond 2	\$10,338	\$10,339	\$20,677
TASK 3	Replace Parshall Flume/Control Box and Raw Water Manhole	\$27,692	\$27,692	\$55,384
TOTALS		\$81,765	\$81,766	\$163,531
Note ¹	Tasks include a prorated percentage for Mobilization, Bonding, Insurance/Permits, Clear & Grub, Surveying, Potholing, Re-vegetation, Design, Environmental Clearances, Construction Management			
Note ²	Matching Funds: Southwestern Water Conservation District and Town of Mancos			

Exhibit A
Statement of Work
Date: November 30, 2015

WATER ACTIVITY NAME – “**Mancos Water Projects**” – **Raw Water Intake Improvements**

GRANT RECIPIENT – Town of Mancos

FUNDING SOURCE – Water Supply Reserve Account (Basin Funds Only)

INTRODUCTION AND BACKGROUND

Introduction:

The proposed project is the “**Mancos Water Projects**” with three components located in or near the Town of Mancos (see Exhibit B for more information on locations). **The improvements that have been identified specifically for this grant request is are identified as Raw Water Intake System Improvements.** For information purposes, the other components of the Mancos Water Projects are replacement of the Town’s Main pressure reducing valve (PRV) and vault, and replacement of an older section of the Town’s water distribution system.

The Raw Water Intake System Improvements is the focus of this grant application from the Colorado Water Conservation Board. The Town has been dealing with extensive water leakage at the raw water intake system on the West Mancos River that feeds the town’s water treatment plant. The current system has limited means to measure and control water from the River, into the settling ponds, then into the raw water transmission going to the water treatment plant (WTP).

Additionally, the pipes conveying water to and from the ponds are subject to debris blockage. The result is that water is spilling and being wasted onto the ground. This is an ongoing problem as the water treatment plant operator has very limited means to monitor and adjust flows. The Operator has to make multiple trips to modulate water flows as a result of the configuration of the existing system.

Scope of work:

The proposed plan is to continue to utilize the head gate and water line from the West Mancos River in to Pond 1, and replace the remaining water lines in the raw water system. This included the water line from Pond 1 into Pond 2, the water line from Pond 2 to the Parshall Flume/Control Box Structure, and the water line from the Parshall Flume/Control Box Structure to the manhole that conveys raw water to the water treatment plant (WTP). The current system has very limited means to measure and control water flow from the river and the Water Treatment Plant Operator has to continually monitor the system to ensure that water is flowing to the WTP. Because the flow cannot be accurately metered, water at multiple locations ends up overflowing onto the ground. Additionally, the pipes conveying water to and from the ponds are subject to debris blockage causing more water to be wasted onto the ground. When the pipe plugs up there is concern with interruption of flow to the treatment plant.

There are very limited records on the town water system including the raw water intake system. Based upon what was found, the raw water intake system was last worked on in 1960. The proposed

improvements will renovate the existing system in a very cost effective manner. Components of the intake system improvements include:

1. Replace water lines between Pond 1 and Pond 2, and Pond 2 to the Parshall Flume and Control Box.
2. Provide decanter devices at the outlet of Pond 1 and Pond 2 to prevent debris from plugging pipes and causing ponds to overflow.
3. Provide a baffle (curtain) across each of the ponds to reduce short circuiting and improve settling of suspended solids.
4. Provide new Parshall Flume and Control Box and relocate them closer to the raw water pond to allow the Operator to dial in proper flow rates at the river head gate using the new 3" Parshall Flume.
5. Relocation of the Parshall Flume and Control Box further upstream will also provide additional pressure head of the raw water entering the water treatment plant. This will help treatment plant operations.
6. Provide return pipes back to the river to keep water off the ground. Return pipes will be from Pond 1, Pond 2, the control box, and the raw water manhole. These return pipes will provide the operator with assurance that any excess water flowing through the raw water intake system will quickly be routed back into the River without any of the water spilling onto the ground.

The CWCB WSRA funding in addition to Southwest Water Conservation District (SWCD) Funds will be used for design and construction of these Raw Water Intake System Improvements. The PRV/Vault and Distribution Line replacements items are proposed to be funded with a matching DOLA grant and Town water funds. Town will provide these funds through water rate increases implemented based upon a "Recommended Water Rate Structure Study" conducted in 2014 (see appendices).

OBJECTIVES

Raw Water Intake System Improvements objectives are to:

1. Provide accurate metering and control of water entering the pond system.
2. Eliminating extensive water spilling onto the ground and providing return pipes back to the river.
3. Provide a better quality raw water going to the water treatment plant by reducing the short circuiting that is happening in the ponds.

DESCRIPTION OF TASKS - FOR THE RAW WATER INTAKE SYSTEM IMPROVEMENS

TASK 1 – Replace Raw Water Lines, Install Return Lines, Install Decant Devices.

Description of Task

The existing water line that connects Pond 1 and Pond 2 is poorly located resulting in a reduction of detention time in the ponds. Blockage of this line is frequent and causes pond 1 to over flow wasting water onto the ground. The water line from Pond 2 to the existing Parshall Flume/Control Box can plug and the water surface elevation in both Pond 1 and Pond 2 increases causing Pond 1 to overflow. The water line between the Parshall Flume/Control Box to the raw water intake manhole should be replaced with the rest of the pipes when the system is offline, as it is at least 55 years old.

Install new water return lines from Pond 1 to River, Pond 2 to River, Control Box to River, and Raw Water manhole to River. These return lines will ensure there is not water being wasted on the ground.

Install decant device on Pond 1 outlet and Pond 2 outlet. The decant device will ensure that debris (sticks, grass, etc.) will not block the water lines.

Method/Procedure

Selected contractor will replace the raw water lines to the design invert elevations.

Deliverable

New raw water lines, return lines, and decant devices.

TASK 2 – Install Baffles (curtains) across Pond 1 and Pond 2

Description of Task

Placement of a baffle or curtain across each of the raw ponds will improve the detention time of the ponds and allow more suspended solids to settle out of the water. This will improve the raw water quality going into the Town's water treatment plant (WTP).

Method/Procedure

Selected contractor will install the baffles per design requirements. Each baffle will have flaps cut into the baffle at specific locations to allow water to flow through the baffle to the other side.

Deliverable

Installation of the improvements described above.

TASK 3 – Replace Parshall Flume/Control Box and Raw Water Manhole

Description of Task

The existing 9" Parshall flume is too large and does not allow the Operator to accurately measure water flow and thereby properly adjust the river head gate appropriately. The Flume has also settled adding to inaccuracies. The Control Box valves are rusty and do not work properly. As a result water flows onto the ground at this location. The raw water manhole is where the water feeds into the raw water line to the water treatment plant (WTP). Currently, there is no means to prevent water from overflowing onto the ground. A goal of this project is to replace the Flume with a new 3" Parshall Flume which will give the Operator the ability to adjust the river head gate with confidence. Replace the Control Box with new valves and a return line back to the river, thereby keeping water contained and not spilling onto the ground. Replace the raw water manhole with one that has a return line back to the river. The proposed Parshall Flume/Control Box and raw water manhole will be located further upstream, closer to the Pond 2 outlet. This will shorten the distance the operator has to walk back to the River head gate to make adjustments. This new location will also provide additional pressure head to the water treatment plant.

Method/Procedure

While the raw water system is off line, replace the Parshall Flume/Control Box, raw water manhole and water lines to the elevations identified in the design plans.

Deliverable

Improvements described above.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

BUDGET

A detailed budget for Raw Water Intake System Improvements is presented in Exhibit A.1.

SCHEDULE

Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

Raw Water Intake Improvements - Schedule

1. The Design will commence as soon as funding has been approved and contracts are in place. A topographic survey will be needed to aid in determining necessary invert elevations for the system. The design phase is relatively straight forward.
2. The "Mancos Water Projects" will then be advertised for construction bids, and awarded to the lowest qualified bidder.
3. Construction will commence once the raw water system is taken off line. Because the Town has water rights from Jackson Reservoir, they can readily take the West Mancos River raw water intake system off line.

Raw Water Intake Improvements - Schedule

Task	Start Date	Finish Date
1	Design April-June 2016	Construction Finish December 2016
2	Design April-June 2016	Construction Finish December 2016
3	Design April-June 2016	Construction Finish December 2016

NOTE: Actual completion may depend upon DOLA Contract Execution

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is

completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

Exhibit A.1 – Total Project Budget

"Mancos Water Projects"

Project	Projected Project Cost
PRV Replacement	\$131,761
<u>Raw Water System Improvements</u>	<u>\$163,531</u>
Waterline Replacement	\$243,566
TOTAL Project Cost	\$538,858

**Requested funds from Department of
Local Affairs (DOLA) \$269,429**

**Committed Funds from Southwestern
Water Conservation District (SWCD) \$ 75,000**

**Funds Recommended from Southwest
Basin Roundtable (SBRT) Water
Supply Reserve Account (WSRA) \$ 81,765****

Committed Funds from Town of Mancos \$ 112,664

**** See A.2 for Raw Water Intake Improvements Budget Breakdown**

Exhibit A.2 Cost Break Down and Detailed Budget

MANCOS - RAW WATER POND SYSTEM IMPROVEMENTS				
Russell Planning & Engineering				
9/15/2015				
ITEM DESCRIPTION	UNIT	AMOUNT	PRICE	COST
Clearing and Grubbing	Lump Sum	1	\$3,500.00	\$3,500.00
Construction Surveying	Lump Sum	1	\$2,000.00	\$2,000.00
Potholing	Hrs	5	\$150.00	\$750.00
12-IN 200 C900 (Purple Pipe) River to Pond #1	LF	35	\$55.00	\$1,925.00
Clean Pond #1 & Pond #2	Lump Sum	1	\$8,000.00	\$8,000.00
Pond #1 Baffle Installed	LF	35	\$75.00	\$2,625.00
Pond #2 Baffle Installed	LF	45	\$75.00	\$3,375.00
Crossover pipe 12-IN 200 C900 (Purple Pipe)	LF	80	\$55.00	\$4,400.00
12-IN 200 C900 (Purple Pipe) Pond #1 to River	LF	40	\$55.00	\$2,200.00
12-IN 200 C900 (Purple Pipe) Pond #2 to Control Box	LF	20	\$55.00	\$1,100.00
12-IN 200 C900 (Purple Pipe) Control Box to River	LF	110	\$55.00	\$6,050.00
Floating Decanter	EA	3	\$1,500.00	\$4,500.00
12-IN 200 C900 (Purple Pipe) Control Box to 48-IN MH	LF	30	\$55.00	\$1,650.00
48-IN Pre-Cast Concrete Manhole, Installed	EA	1	\$4,500.00	\$4,500.00
12-IN 200 C900 (Purple Pipe) 48-IN MH to River	LF	110	\$55.00	\$6,050.00
12-IN 200 C900 (Purple Pipe) 48-IN MH to Old MH	LF	570	\$55.00	\$31,350.00
Control Box/Flume Structure Package Includes Purchase & Installation	EA	1	\$27,000.00	\$27,000.00
2 - 12-IN Sluice Gates, Installed				
1 - 3-IN Throat Parshall Flume				
Building over Control Box/Flume	LS	1	\$5,000.00	\$5,000.00
Raw Water Pipe Intake Structure, Installed	1	1	\$1,000.00	\$1,000.00
Remove Existing Pipe	LS	1	\$500.00	\$500.00
Abandon Existing Pipe	LS	1	\$500.00	\$500.00
Erosion Control	1	1	\$500.00	\$500.00
Revegetation	1	1	\$500.00	\$500.00
			TOTAL CONSTRUCTION COSTS	\$ 118,975.00
OTHER COSTS				
Mobilization 5% of Construction Costs	Percentage	1	5%	\$ 5,948.75
Bonds, Insurance, and Permits	Percentage	1	1%	\$ 1,189.75
DESIGN/CONSTRUCTION MANAGEMENT				
Design and Record Drawings	Percentage	1	6%	\$ 7,138.50
Survey for Design & Clearances	Lump Sum	1	\$3,000.00	\$ 3,000.00
Construction Management 5% of Construction Cost	Percentage	1	5%	\$ 5,948.75
			TOTAL OTHER COSTS	\$ 23,225.75

Sub-Total	\$142,200.75
Contingency (15%)	\$21,330.11
Total	\$163,530.86

Exhibit B 1 Projects Location Map Mancos Water Projects

Raw Water Ponds

Latitude 37.374062N
Longitude 108.256239W

Latitude 37.344097N
Longitude 108.286119W

Pressure Relief Valve

160

U.S. Hwy 160

184

Distribution System Improvements

Latitude 37.344097N
Longitude 108.286771W

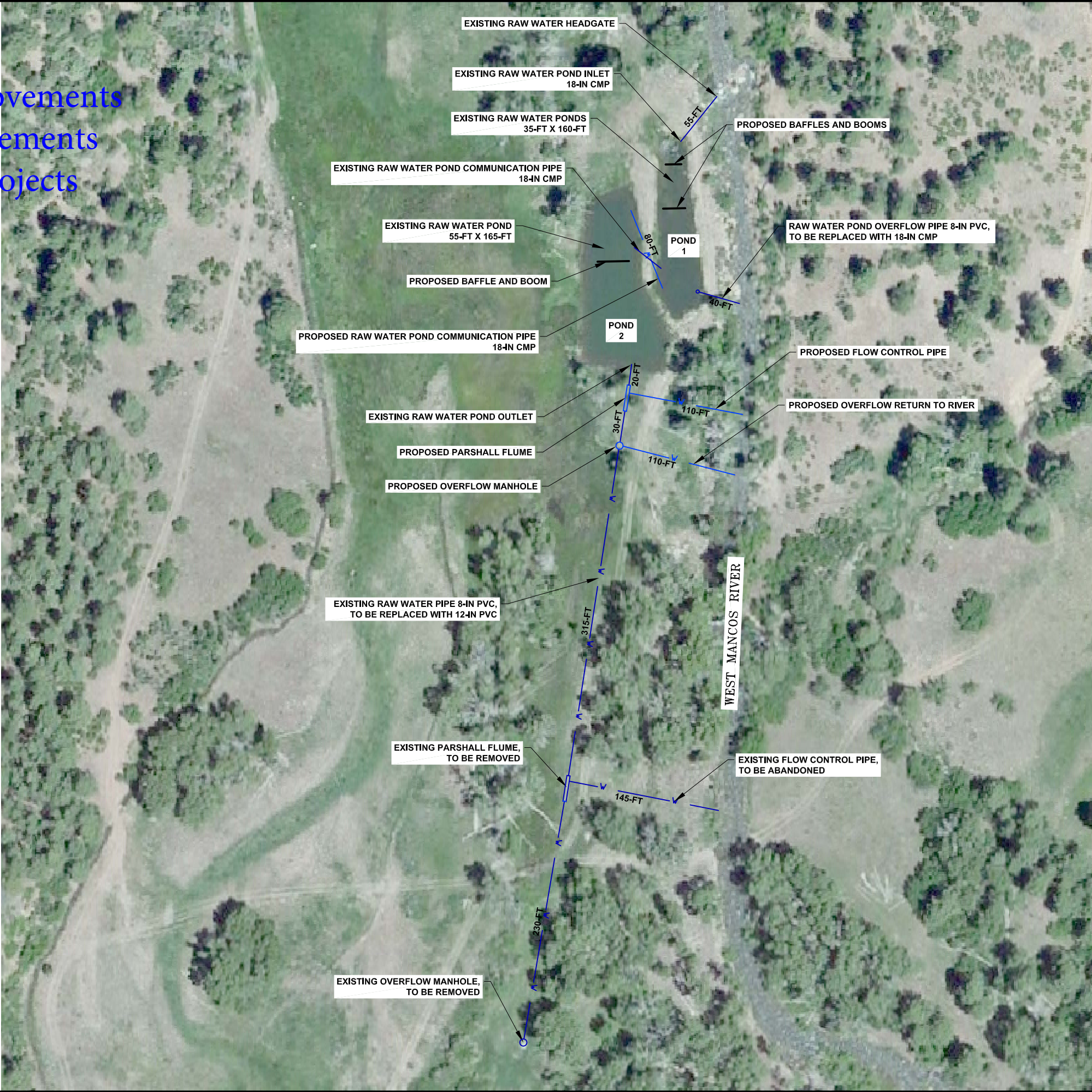
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Google

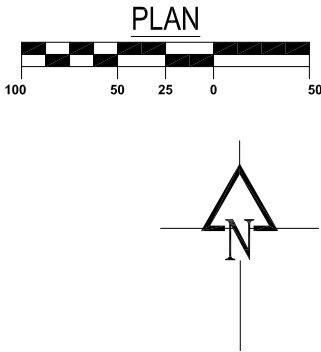
Exhibit B 2
Raw Water Improvements
Site Location Map
Mancos Water Projects



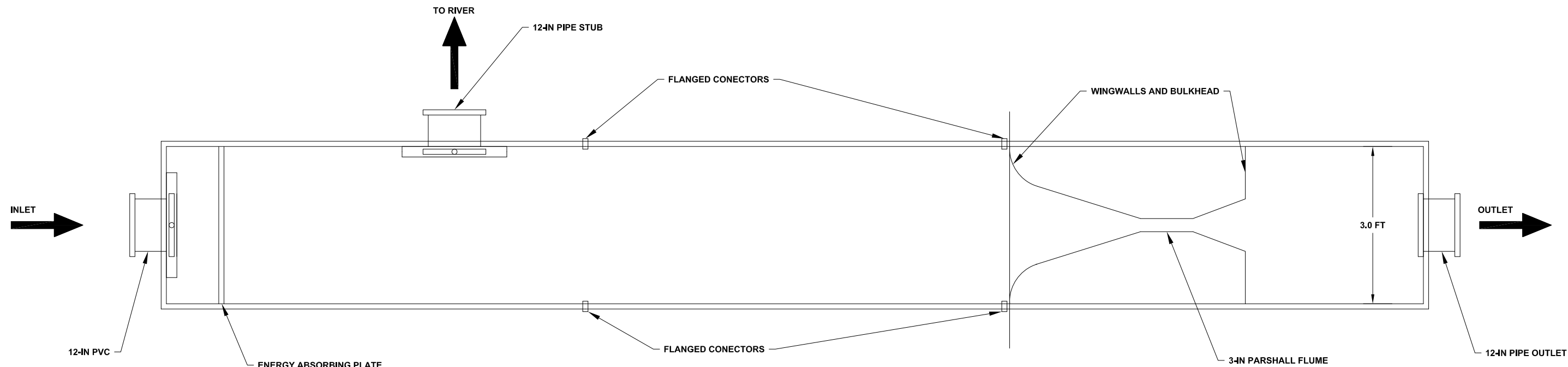
Exhibit B 3
Raw Water Improvements
Proposed Improvements
Mancos Water Projects



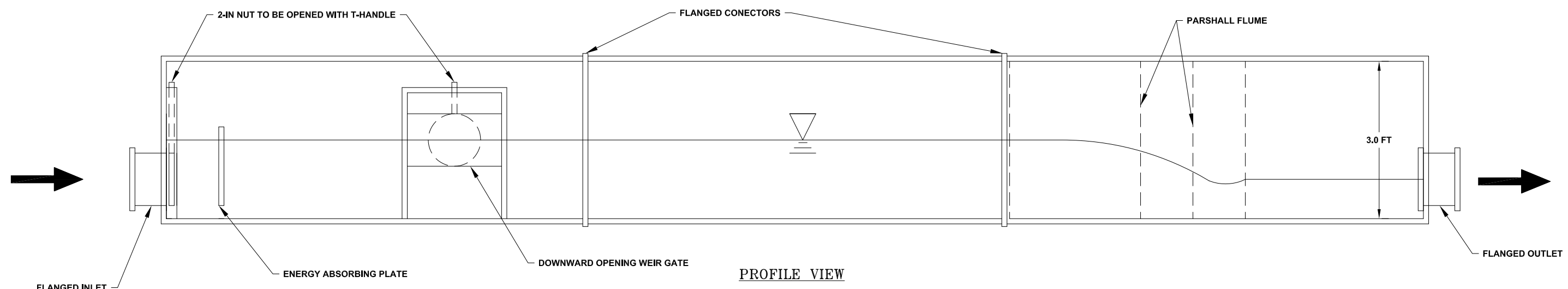
CONCEPTUAL



811 Know what's below. Call before you dig. CALL 811 TWO WORKING DAYS BEFORE YOU DIG	
REVISIONS:	
MANCOS RAW WATER MONTEZUMA COUNTY, COLORADO SITE PLAN	
Russell Planning & Engineering, Inc. Civil Engineering Services 934 Main Avenue, Unit C Durango, Colorado 81301 Phone: (970) 385-4546 Fax: (970) 385-4502	
Drawn: JH Drafted: CO Checked: WF	
Date of Submittal 09/18/2015	
1 OF 2	
1	



PLAN VIEW





PROFILE VIEW

MANCOS GATE AND FLUME STRUCTURE
N.T.S.

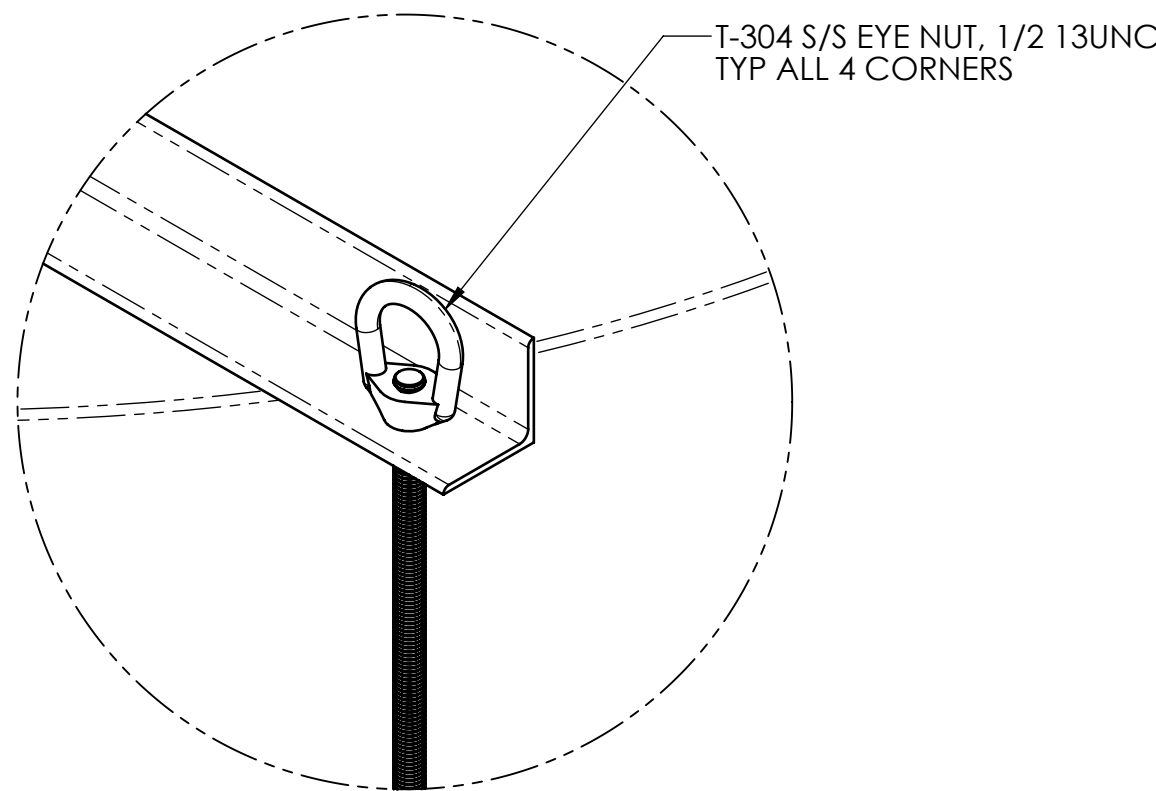
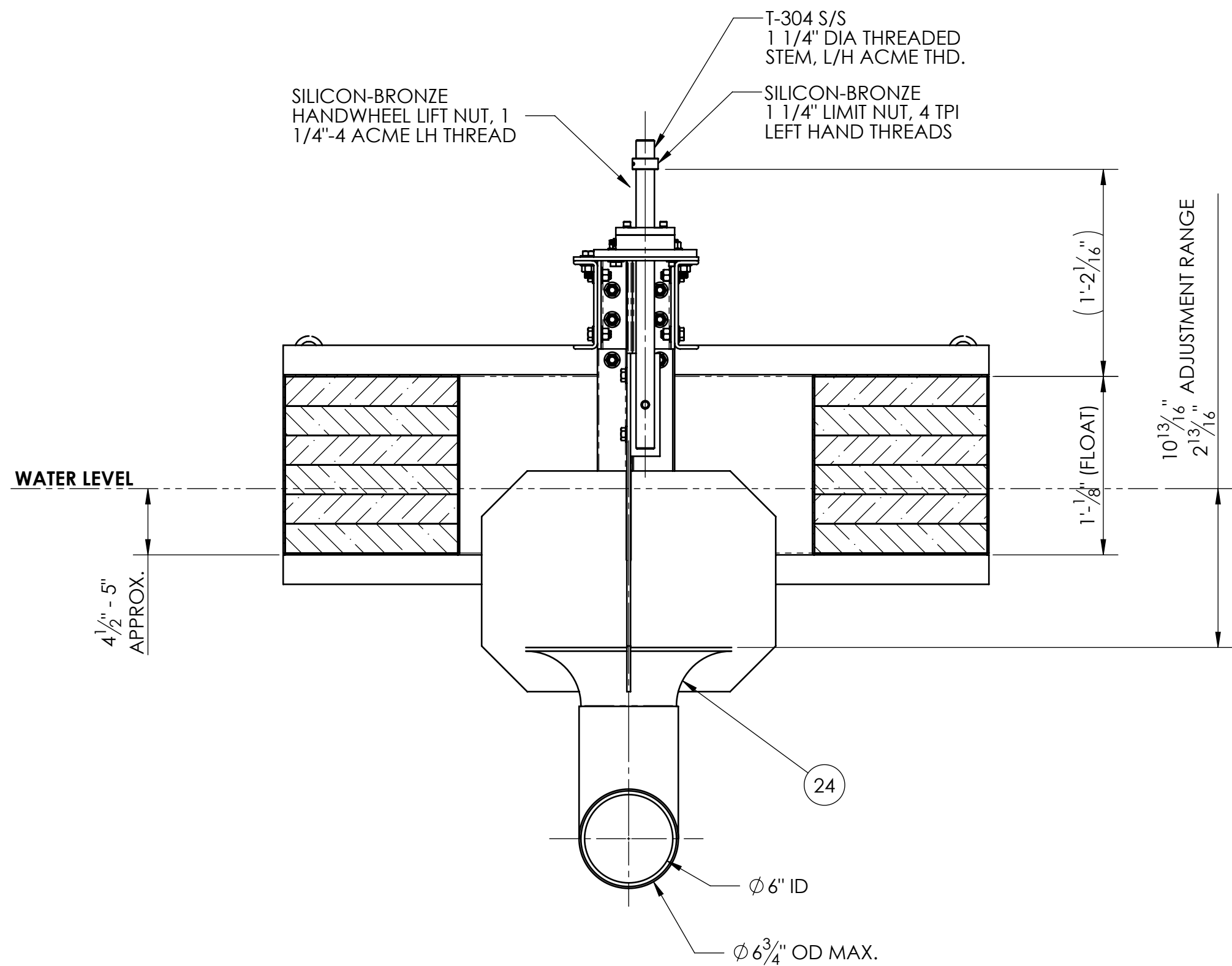
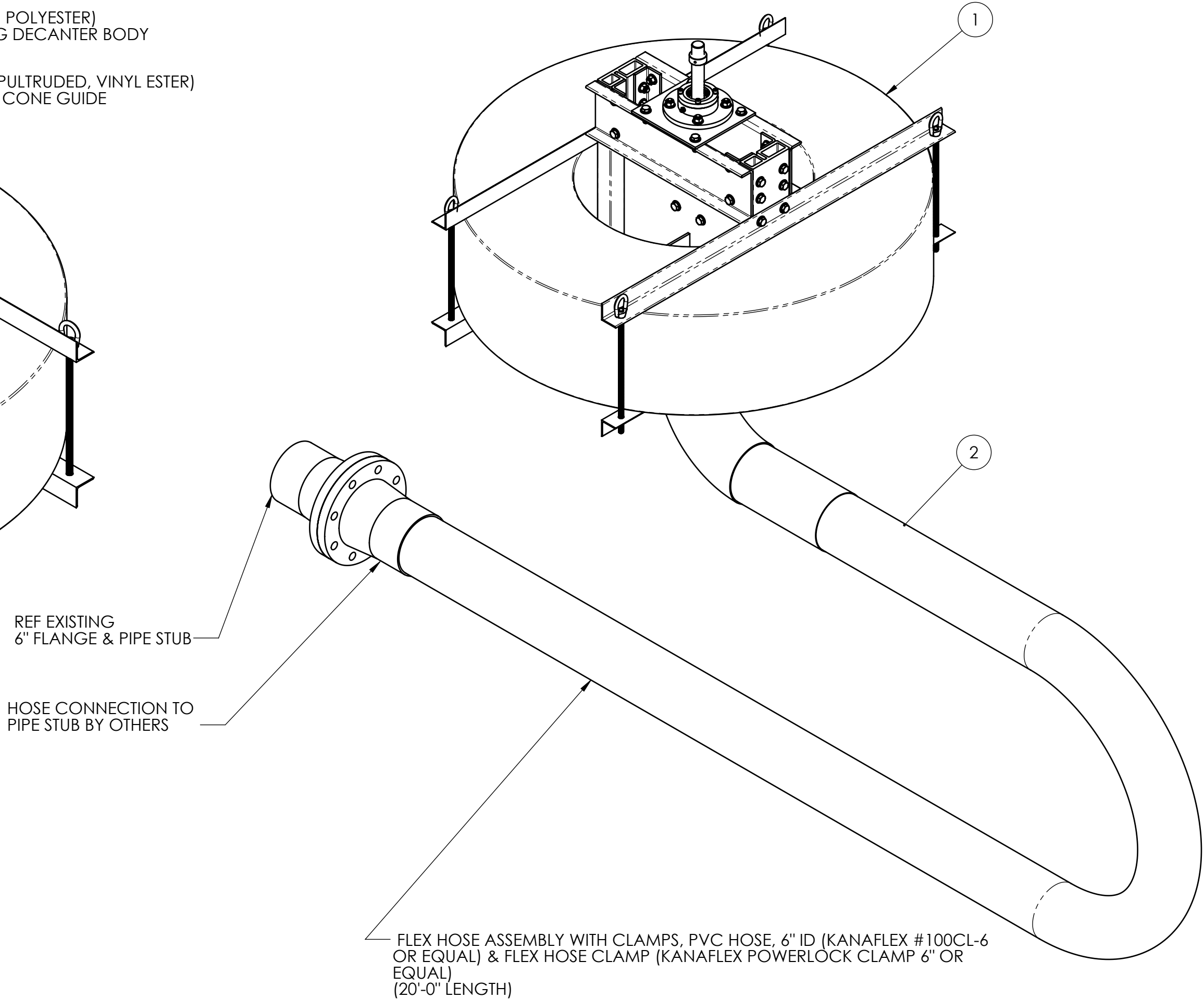
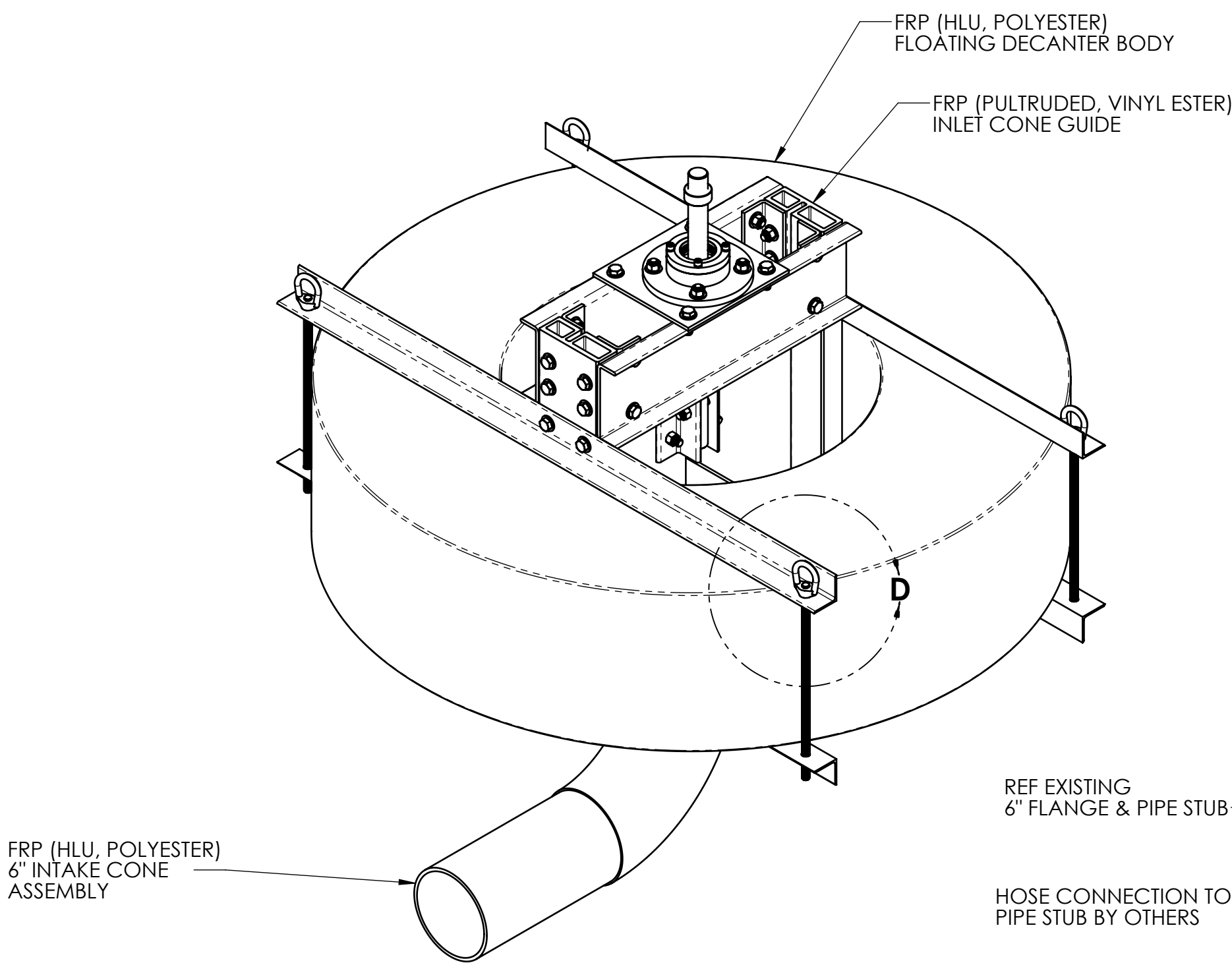
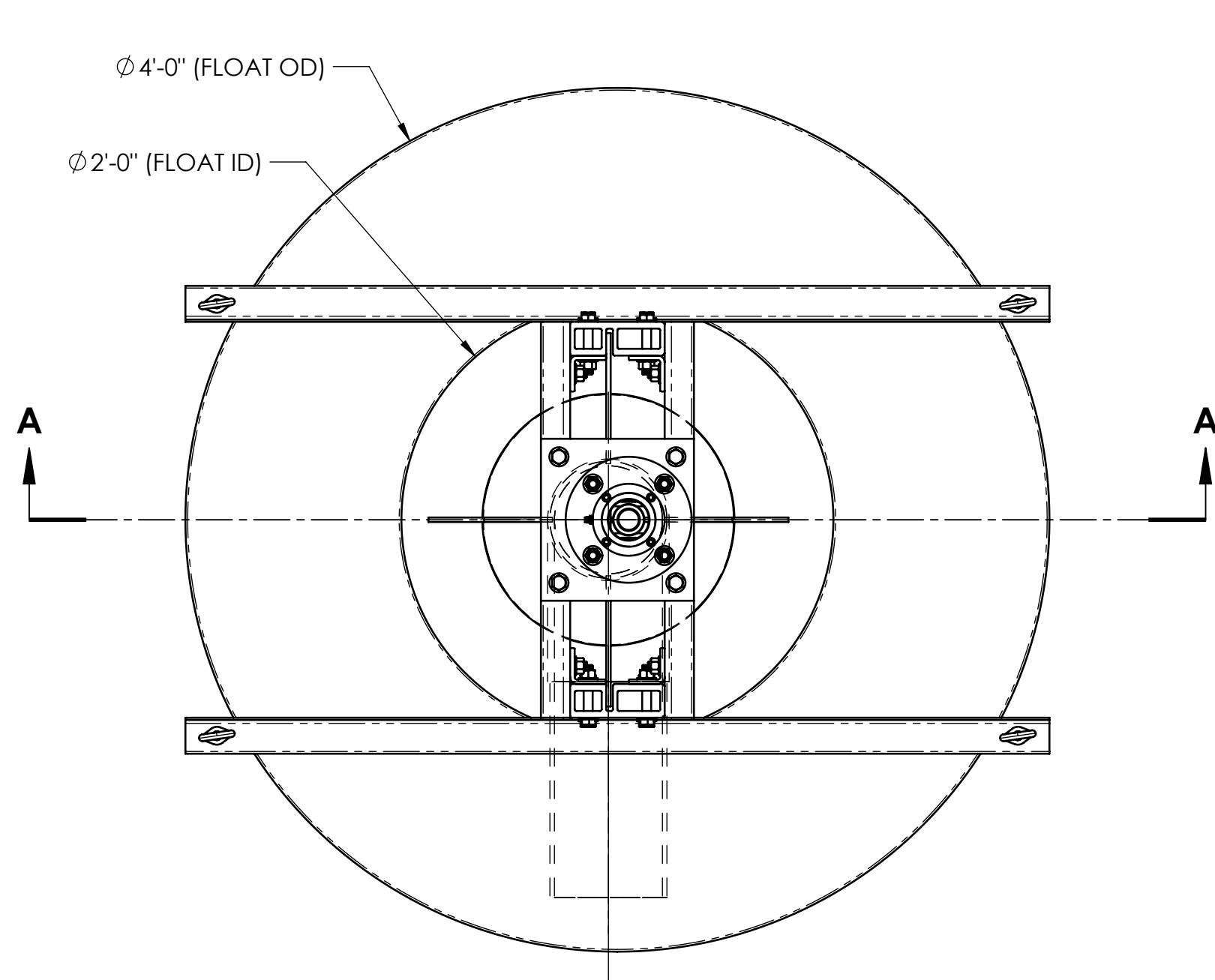
Exhibit B 4
Raw Water Improvements
Proposed Improvements
Mancos Water Projects

CONCEPTUAL

 <p>CALL 811 TWO WORKING DAYS BEFORE YOU DIG</p>	
REVISIONS:	
MANCOS RAW WATER MONTEZUMA COUNTY, COLORADO GATE AND FLUME STRUCTURE	
 <p>Russell Planning & Engineering, Inc. Civil Engineering Services 934 Main Avenue, Unit C Durango, Colorado 81301 Phone: (970) 385-4546 Fax: (970) 385-4502</p>	
Drawn:	JH
Drafted:	CO
Checked:	WF
Date of Submittal 09/18/2015	
2 OF 2	
2	

File Name: R:\Current Projects\Land Projects 3\Mancos - PRV and Headgate 2015\ACAD\Exhibits\DWG\Mancos - Raw Water Plotted: 9/16/2015 12:40 PM Plot Style: HALF-STB Plotted By: CHRISTOPHER OLIVER

REVISIONS				
REV.	DESCRIPTION	NCR/ECO NO.	REVISED BY	DATE
A	FOR APPROVAL		T. BAILEY	7/12/2012




DETAIL D
SCALE 1 : 3

Exhibit B 5 Raw Water Improvements Proposed Decanter Detail Mancos Water Projects

- NOTES:**
- FLOAT MATERIAL IS FRP (FIBERGLASS REINFORCED POLYESTER).
 - FLOAT IS 2# FOAM FILLED.
 - FLOAT COLOR IS GRAY.
 - RESIN: MCWHORTER 712-3765.
 - ALL FASTENERS MATERIAL EXCEPT ADJUSTMENT NUT IS T-304 S/S.
 - DECANTER FLOW RATE RANGE: 144 TO 524 GPM.

BOM TABLE				
ITEM NO.	QTY.	JOB QTY.	DESCRIPTION	MATERIAL
1	1	2	FRP FLOATING DECANTER, Ø 4'-0" W/6" INTAKE CONE	-
2	1	2	FLEX HOSE ASSEMBLY WITH CLAMPS, PVC HOSE, 6" ID (KANAFLEX #100CL-6 OR EQUAL) & FLEX HOSE CLAMP (KANAFLEX POWERLOCK CLAMP 6" OR EQUAL)	PVC Flex

PROJECT: RED LION WTP RED LION, PENNSYLVANIA USA		 TUALATIN, OR.		PLASTI-FAB PART NUMBER:		TITLE: FRP FLOATING DECANTER, Ø 4'-0" W/6" INTAKE CONE			
CUSTOMER: SHERWOOD-LOGAN & ASSOC.		UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN FEET/INCHES		MATERIAL INFORMATION:		QUANTITY (2) EACH			
REP: SHERWOOD-LOGAN & ASSOC.				-					
P.O. NO: 12-202				SPECIAL FINISH REQUIREMENT:					
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PLASTI-FAB. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PLASTI-FAB IS PROHIBITED.		TOLERANCES UNLESS OTHERWISE SPECIFIED:				SIZE		DRAWING NO.:	REV.
		≤ 6'-0"		± 1/16"		NAME:		D	
		≥ 6'-0" AND ≤ 25'-0"		± 1/8"		DATE:		121255-1A-01	
		≥ 25'-0"		± 1/2"		DRAWN BY:		B	
						CHECKED BY:		WEIGHT: 173.27	
						SCALE: 1:8		SHEET: 1 OF 1	