12/20/2007

Exhibit A
Scope of Work

WATER ACTIVITY NAME – Orchard City Reservoir Project

GRANT RECIPIENT – Orchard City

FUNDING SOURCE: Gunnison Basin Account - $480,000.00

BACKGROUND
The drought of recent years, reaching a drastic levels in 2002, forced an ongoing examination by the Town of Orchard City of its water rights, (both in quantity and type) storage, collection and delivery system to its treatment plant. This has brought to light several serious deficiencies and dangerous weaknesses in the system.

The number one problem is that virtually all of the rights are flow rights and the vast majority are still classified as agricultural irrigation water. As such they are only available from mid-April to the end of October during the irrigation system. The bulk of these rights are located in the Surface Creek drainage of the south slope of the Grand Mesa, while the Orchard City treatment plant is located to the west in the Ward Creek drainage. In order to utilize these involves a complicated "paper" trade and exchange process that leaves the Town at the mercy of those water owners who hold rights that can be gotten to the treatment plant. This dramatically' reduces the amount and value of the Town's "back up" supplies.

The Town's primary source of water is decrees on the Lake Fork flow, which have been classified as municipal, but are not the majority of that decree and are junior to many of the larger holders of that irrigation decree. This flow decree is available year around through a collection pipeline network that taps directly into springs. However, there are no storage rights, or any place to store this water if rights are sought when there is excess available during the winter months. The Town's other major source of water, already classified municipal, is one share of Alfalfa Ditch which is the number one decree on Grand Mesa. Because of recent filings to make permanent the above mentioned exchanges this will now be available year around via the Big Ditch.

With this and the Lake Fork degree, during average or above water years this would provide approximately 4.5 cubic feet per second of water at the treatment plant. The present plant has a capacity of 3 second feet, but plans are already being made to double capacity for the growth the Town is experiencing. However, since this is all flow water, in below average or in drought years, this can dwindle rapidly. In 2002 the total of this flow dropped to a combined one-half cubic foot. Because the Town's other waters are mainly irrigation flows they also declined accordingly and the Town was further handicapped in making trades "for additional water. With this planned project the Town will file for an additional use on the Alfalfa decree to include storage of the municipal water. In average years the Lake Fork decree fills or nearly fills the plant capacity with flow so the bulk of this Alfalfa degree could be stored in the new reservoir

approximately one-quarter mile from the treatment plant Maximum yield of this decree would provide 730 acre-feet.

PROPOSED RESERVOIR

The Town has purchased, paid for and has title to two forty acres parcels in question. These parcels were identified by Smith-Williams Consultants, Inc. as a location for an off-stream reservoir with the capacity up to 1,000 acre-feet. A portion of this property will be used to resolve any access issues, ensure an adequate supply of construction materials without lengthy hauls and consolidate the facilities. This reservoir would be fed with a short pipeline out of the Big Ditch. The plan is to construct a facility that would hold about 500 acre-feet with the design to accommodate future enlargement.

RESERVOIR BENEFITS

1. This reservoir would provide more than 100 days of water, based on usage during the 2002 drought season if all flow rights stopped.

2. In addition to drought protection this reservoir would provide a second source of feeding the treatment plant in the event that something happened to the existing pipeline feeding flows to the plant. Since that pipeline parallels the Big Ditch it would also be feasible to bring all or part of the flow water through the reservoir which would act as a stilling basin to settle out sediments and reduce the air bubbles that presently hamper plant capacity. This would also put the Town in a position to file for storage rights to that water when usage on the system did not demand the full flow.

3. This project would also create an emergency winter time source of water. An episode during the winter of 2006 highlighted this weakness in the present raw water system. Part of the collection pipeline for the spring flows is above ground, on trestles where it crosses draws. Heavy snows collapsed such a section and before it was discovered, could be accessed, dug out and repaired, usage nearly emptied the Town's treated water storage.

Presently the only emergency source of winter water is the Town's ownership of less than 110 feet of agricultural irrigation water in Little Gem reservoir at over 9,000 feet elevation. Accessing this in harsh snow winters is extremely difficult and getting the water into the Big Ditch has obstacles to overcome. At about 7,500 feet elevation and accessible by County road within about 1,500 feet of the treatment plant, this reservoir will provide be a much improved winter emergency supply.

4. Another major benefit of this project is protection from wildfire. Being off stream it would greatly limit the infiltration of ash and debris into the reservoir. It would also provide a very accessible source of water for engines and aircraft fighting a fire anywhere on the south/southwest slope of the Grand Mesa.

5. Lastly, the town currently holds a substantial amount of agricultural water shares that we do not use or lease out. We hold this bank of shares as a back up for drought years to exchange for domestic water. If the town had our own reservoir, then we could free up and lease out this

agricultural shares to the local farmers. Therefore, this reservoir would also benefit our local economy and agricultural industry.

SUMMARY OF TASKS

The following Scope of Work was submitted with the application. The applicant indicates that this request of $480,000 is to assist in the funding of Tasks A400 through A800. A previous request for $60,000 was approved by the CWCB at the May 2007 meeting to assist in the funding of Tasks A100 through A300 identified in this scope of work.

The Orchard City Reservoir Engineering Study will consist of the following tasks:

Scope of Work

Smith Williams Consultants, Inc. (Smith Williams) is pleased to present this proposal to Orchard City for engineering services related to the Proposed Reservoir for Orchard City. This proposal focuses on an alternative analysis for determining the most cost efficient dam structure for the proposed reservoir and the final engineering design for the selected alternative.

As part of the proposed scope of work, Smith Williams will prepare detailed final design documents, which will be adequate to obtain approval from the State Engineer's Office and the generation of construction bidding documents.

Task A100: Progress Meetings:

The Project Manager will conduct conference calls with an Orchard City representative to review progress on a weekly basis. Project coordination meetings will be conducted as required to complete the final design. A formal presentation to Orchard City will be required following the completion of the final design.

- **Weekly Meetings** - The primary topics of discussion will be progress to date, progress planned for the next period, maintenance of an action item log, and information needs by the team members or Orchard City to maintain progress. The intent is to notify Orchard City's P.M. as soon as any information or action requirement is determined. Action items will only be formalized at the meeting. The Project Manager will attend all Weekly Meetings, and the Principal-In-Charge will attend as needed, anticipated to be once per month and participate via conference call in all other weekly meetings.

- **Submittal Review Meetings** - It is anticipated that two submittal review meetings will be held, one for the Design Criteria (Task A200) and a second for the Draft Final Design (Task 500). Following review of the submittals, Orchard City will provide its written comments to the Engineer. It is estimated that the review meeting will be held approximately one week after the Engineer receives comments on the submittal.

Approximately one week after the review meeting a memo will be issued with formal responses to comments. The Engineer's Project Manager and Project Engineer will attend the meeting. Other team members will be available if necessary.

- **Presentations** – These meetings will be for presentations to Orchard City and/or Orchard City's Board Members. It is anticipated that three presentation meetings will be held. The first will be the kick-off meeting, the second concurrent with submittal of the Draft Final Design, and the third after the submittal of the Final Design. The Project Principal, Project Manager and Project Engineer will attend the presentation meetings. Other team members will be available if necessary.

Task A200: Information Exchange and Project Kick-off:

At the kick-off meeting specific information will be requested such as tie-in points, final hydraulic requirements, operational requirements, process control requirements, verification of required mechanical systems and any outside interface that might be required. A design criteria will be prepared to summarize the Engineer's understanding of the final design requirements. The design criteria will provide the basis for the final design. The engineer will submit the draft and final design criteria in PDF format.

Task A300: Alternative Analysis:

Smith Williams will complete an alternative analysis of up to three construction methods for the water reservoir. The alternative analysis will be completed for determining the most cost efficient dam structure for the proposed reservoir. The alternatives will take into consideration the design criteria developed in Task A200, as well as regulatory requirements and property restrictions. The alternatives will be compared and evaluated using a number of ranking criteria including but not necessarily limited to the following.

- Land Position
- Area of Disturbance
- Water Storage Capacity
- Water Reservoir Fill Requirements
- Maximum Embankment Height
- Impact from underground works
- Ease of Permitting
- Relative Operational Cost

- Capital Cost
- Operating Cost
- Total Cost Capital and Operating
- Aesthetics

A draft report will be prepared that would provide a discussion on each alternative including the viewed merits and disadvantages of each option when compared to the others from a technical and cost standpoint. "Order-of-magnitude" cost estimates and drawings showing each alternative layout will be included in the report. It is expected that this report will be approximately 10 to 15 pages inclusive of the cost tables and drawings. Four hard copies will be provided to Orchard City.

Task A400: Geotechnical Investigation:

A field investigation will be conducted as part of the final design work to define subsurface conditions within the facility footprint. It is assumed that eight (8) boreholes would be drilled, to depths ranging between of 100 and 300 feet. This field program will require four weeks to complete. Packer permeability testing and/or slug testing will also be completed to determine subsurface hydraulic conductivities within the foundation. Additionally, standard penetration testing will be conducted as the drill holes are advanced. Samples of the subsurface material will be collected for testing in the laboratory.

Test pitting will be conducted within the footprint of the facility, during the 4-week field program, to define further the subsurface conditions and to obtain bulk samples of the foundation materials. In addition, test pits will be excavated in adjacent areas to define borrow sources for select construction materials such as "filter zones" and drain materials. Based on the scope of work, it is anticipated that 40 to 50 test pits will be required. The samples will be tested in the laboratory for engineering characterization purposes and to define material-specific physical properties.

Following the field geotechnical work, Smith Williams will devise a laboratory-testing program to define engineering characteristics of potential construction materials and to define the foundation conditions in the embankment areas. Results from the field and laboratory geotechnical work will be used in the geotechnical analyses, to include slope stability analyses, seepage analyses, and settlement analyses.

This proposal includes the cost to complete the following test work:

- Laboratory analysis
- 60 natural moisture density (ASTM D2216)
- 60 Atterberg limits (ASTM D4318-00)

- 60 gradations (ASTM D422)
- 6 Proctors (ASTM D-1557)
- 10 – 15 CU triaxial shear tests
- Direct shear tests (15 pts)
- 8 permeability tests (ASTM D5084-00, 3 pts test)
- 30 specific gravity tests (ASTM C-128)
- 30 hydrometers

Task A500: Final Design:

The Dam will be designed based on the results of the alternative analysis. The configuration will be optimized, to the extent practical, to achieve the most cost effective safe design. Based on discussions with Orchard City and the requirements of the State Engineer's Office (SEO) for constructing dams the design will include, as a minimum, the following:

- Determination of the probable maximum flood.
- Hydraulic calculations to determine the size of the emergency spillway. Calculations for the design of the overflow spillway and the loading conditions utilized.
- Design calculations to size the outlet structure. In addition, structural calculations used to determine the size of the concrete base mat and walls of the outlet structure. Calculations will size all reinforcing steel in the base mat and walls.
- Hydraulic calculations for determining the required depth and length of the spillway stilling basin. Structural calculations for determining the thickness and amount of reinforcement required for the stilling basin walls and base mat.
- Summary of the geotechnical investigation including logs of test borings and geologic cross-sections.
- A summary of material testing results and the location and logs of test pits.
- A summary of geological investigations consisting of:
  - Regional perspective of the site's geologic and seismic setting at a scale appropriate to the geologic complexity of the area.
  - Seismic evaluation establishing the relationship of the site to all seismic features of concern.
  - Site geology of areas affected by construction activities and appropriate adjacent areas.
  - Plans to compensate for any geological weakness in the dam foundation.
- Foundation treatment and abutment contact design.
- Stability analysis of the structure using the computer program SLOPE/W or equivalent. The stability analysis will consider different loading conditions such as post construction, long term normal pool, rapid drawdown, maximum pool and seismic conditions.
- Seepage considerations consisting of a cutoff trench design, blanket drain and/or seepage collection piping.
- Design of the instrumentation for the dam.

It anticipated that approximately 25 design drawings will be generated as part of the final design efforts. The draft final design drawings and specifications will provide the following information:

General Drawings

Cover Sheet

Drawing Index
Project location
Abbreviations and symbols

Foundation Drawings

Site Exploration
Foundation Plan and Profile
Dam Foundation Treatment Details
Local Excavation for Cutoff Trench

Embankment Drawings

Dam Plan and Profile
Dam Sections and Details
Transverse Contraction Joint Details
Cutoff Trench Plan and Profile
Spillway Plan, Profile Sections and Details
Stilling Basin Sections and Details

Outlet Drawings

Dam Outlet Plan and Longitudinal Section
Dam Outlet Standard Concrete and Reinforcement
Dam Outlet Pipe Encasement Concrete Plan and Sections

Instrumentation Drawings

Instrumentation Plan Profile Sections
Piezometer, Inclinometer and Extensometer Installation Details
Surface Monument Details

Mechanical Drawings

Mechanical Standard Symbols and Abbreviations

Outlet Works Mechanical Standard Details
Outlet Works Gate Sections and Details
Outlet Works Trash Rack Plan, Sections & Details

Piping Drawings

Raw Water Pipeline Plan and Profiles
Raw Pipeline Sections and Details

Specifications

- Site Preparation.
  - Clearing and Grubbing.
  - Soil Stripping.
  - Diversion and Care of Water
- Foundation Preparation.
  - Foundation Dewatering.
  - Cutoff.
  - Exploration.
  - Dental Concrete.
- Earthwork.
  - Excavation.
  - Earth Fill Materials
  - Earth Fill Placement and Compaction
  - Material Handling.
  - Testing Procedures.
- Concrete, Reinforcement
  - Concrete Mixing and Placement.
  - Steel Reinforcement.
  - Admixtures.
  - Curing and Curing Compounds.
- Outlet.
  - Water Control Gates and Valves.
  - Air Vent.
  - Operating Equipment.
  - Bedding Requirements.
- Miscellaneous Structural Work.
  - Metal Fabrication and Installation.
- Mechanical Work.
  - Raw Water Piping.
  - Outlet gate.
- All technical specifications will also include quality control testing requirements and frequencies to assure compliance with the specifications.

The drawings and specifications will be completed in accordance with the SEO guidelines. The package will allow Orchard City the opportunity to review the construction documents prior to submittal to the SEO, bidding and construction.

Review comments related to the draft final design will be incorporated into a final design report. Engineer will submit five (5) copies of the final design report. In addition, the Engineer will provide an electronic version of the report and associated documents on a compact disc (CD) in pdf format that is compatible with Orchard City's computer system.

Task A600: Dam Safety Application

Engineer will assist Orchard City in obtaining approval to construct the Dam from the Colorado State Engineer's Office (SEO). As required, the Engineer will contact the SEO, prepare the documents for Orchard City review and obtain Orchard City's approval for the SEO application to construct a dam. The engineer will address any questions regarding the application with the SEO and make the necessary revisions. The required documents for the SEO approval to construct a new dam include the following:

- Application Form
- Design Drawings
- Specifications
- Design report consisting of
  - Hydrology report
  - Geotechnical report
  - Instrumentation Plan
  - Engineer's cost estimate
- Filing fee

Following approval for construction, but prior to final inspection of the Dam, the following documents need to be prepared and, submitted to the SEO for approval before initial filling of the reservoir may begin:

- Construction Report
- Initial Filling Plan
- Long-term monitoring plan
- Emergency Preparedness Plan

Supporting information for the information listed above consists of but is not limited to dam failure inundation maps and an Instrumentation Monitoring and Reporting Plan. These items are not included in the Final Design Scope of Work.

It should be noted that members of our team have favorable relationships with the SEO and have worked with most of the current SEO staff on a number of recent dam designs and

rehabilitations. As such, we understand their system and have developed a measure of trust with their staff.

Task A700: Engineer's Construction Cost Estimate:

The final report will include an opinion of the total project costs for design and construction of the water reservoir and associated facilities. The total project costs will, as a minimum, include the following:

- Capital costs
  - Engineering services including design, bidding, and construction management
  - Construction including all labor and materials
- Administrative, permitting, and legal costs
- Prepare a proposed project implementation schedule that covers activities from completion of final design, bidding, construction and initial filling of the reservoir

Task A800: Bid Process:

The engineer will provide support during the negotiation process by developing the construction contract documents. The contract documents will contain the information required for the prospective bidders to evaluate the project components and develop costs to complete the work and enter into a construction agreement. Copies of the drawings and specifications will accompany the contract documents. The contract documents will consist of the following:

- Instructions for Bidder
- Contract agreement
- General terms and conditions
- Special conditions
- Form of proposal

The engineer will provide technical assistance during negotiation of the contract. In addition, the engineer will provide technical information regarding the bid documents, conduct a pre-bid meeting at Orchard City's office, and prepare technical letters of clarification.

Staffing

Smith Williams has the necessary in-house technical/support staff and resources available to complete the conceptual design study. Our proposed staff to complete the engineering services includes the following:

1. ***R. Michael Smith, P.E. will be the Principal–in-Charge on the project.*** With over 28 years of progressive experience, Mike will manage the engineering services and provide technical support for the project. Mike will also be available to provide

continuity and will interface with Orchard City in meetings, project tracking, and reporting purposes.

2. ***Derek T. Wittwer, P.E., will be the Project Manager on the project.*** With over 13 years of professional experience primarily related to the mining industry. His experience related to water resources projects is diverse and includes several large projects globally. His most recent work includes being the project manager responsible for the feasibility designs on dams in the Philippines and in Nevada.

3. ***Troy Thompson. P.E. is a registered Senior Civil Engineer*** with over 15 years of professional experience primarily related to water resources in Colorado. He will act as the **Senior Hydrologist** on the project. He is well known and respected by the state of Colorado and has significant experience in the water resources industry in the areas of hydrology and hydraulic design.

4. ***Jay N. Moore, P.E., is a registered Project Civil Engineer*** with more than seven years of design experience. He will be the Project Engineer and will assist with the design of the project. Jay has excellent experience with AutoDesk Land Development and AutoCAD, which would be the two principal design aids used for preparing the detailed design drawings.

5. ***Other technical support staff***, including additional engineering support staff, AutoCAD technicians, and administrative staff, will be assigned to the project as necessary to complete the work.

Estimated Costs for Services

Smith Williams has prepared a cost breakdown for each of the tasks described in the Scope of Work section. A summary of the estimated costs for the project is shown in Table 1. Estimated costs for the individual work tasks are shown in Tables 2 through 9. The hours and rates shown on the tables represent our estimate of the time for the designated staff that would be working on the project and their corresponding hourly rate. During the course of the work, different staff could work on the project and their rate could be slightly different from that shown on the tables; however, Smith Williams will not exceed the budget presented without prior approval. Outside contracted services and expenses will be invoiced at cost plus a 10 percent fee. To the save this surcharge the owner may elect to contact the services (Vehicle Rental, Drill rigs, surveyors, excavation equipment, etc.) directly. Incidental cost to the project such as lodging and meals will be billed on a per diem basis and/or a man-hour load (ODC's). The man-hour is explained below.

Our estimated costs for professional services are based on the following assumptions:

- If the scope of work changes, our estimated costs would be adjusted using trend notices. These notices will define the additional work scope and will offer an estimated budget addition to address the scope change.

- A man-hour load of $7.25 has been included. This includes for general office supplies, blueprints, miscellaneous reproduction, photocopying, courier services, telephone and facsimile (including long distance charges), and plotter, computer, and AutoCAD time.

- We have allowed for one progress meeting per week during completion of alternative design and scoping study activities. We assume these meetings will consist of a one-hour teleconference call.

- Project status reporting will be weekly at the meeting.

- Four (4) hard copies of the draft report (issued for approval) and eight (8) hard copies and one (1) electronic copy of the final report will be provided.

12/20/2007

Overall Budget—December 12, 2007

Task	Cost	Orchard City Portion	WSRA Grant Request Amount	
			May-07	
A100	$ 38,022.50	$ 19,011.25	$ 19,011.25	
A200	$ 26,917.50	$ 13,458.75	$ 13,458.75	
A300	$ 56,694.00	$ 29,164.00	$ 27,530.00	
Total	$ 121,634.00	$ 61,634.00	**$ 60,000.00**	**Basin Funds**
Task	**Cost**	*****Orchard City Portion**	**WSRA Grant Request Amount**	
			Sep-07	
A400	$ 232,095.00	$ -	$232,095.00	
A500	$ 342,570.00	$146,411.00	$196,159.00	
A600	$ 39,682.50	$ 19,841.50	$ 19,841.00	
A700	$ 33,835.00	$ 16,917.50	$ 16,917.50	
A800	$ 29,975.00	$ 14,987.50	$ 14,987.50	
Total	$ 678,157.50	$198,157.50	**$480,000.00**	**Statewide Funds**

Total Project Cost: $ 799,791.50

*****Orchard City has committed $295,000 for land purchase and $5,000 for past engineering work.**

TABLE 1.0
TOWN OF ORCHARD CITY
ORCHARD CITY RESERVOIR
PROPOSAL FOR ENGINEERING SERVICES
SUMMARY OF COST

TASK	A100	A200	A300	A400	A500	A600	A700	A800	TOTAL
PROFESSIONAL FEES									
STAFF CATEGORY									
PRINCIPAL	$9,600.00	$3,200.00	$3,840.00	$9,600.00	$19,200.00	$4,800.00	$12,800.00	$3,200.00	$66,240.00
GEOTECHNICAL CONSULTANT	$0.00	$0.00	$12,800.00	$19,200.00	$48,000.00	$6,400.00	$0.00	$0.00	$86,400.00
SR PROJECT MANAGER	$15,600.00	$0.00	$10,400.00	$15,600.00	$65,000.00	$7,800.00	$10,400.00	$10,400.00	$135,200.00
PROJECT MANAGER	$0.00	$12,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$12,000.00
SENIOR ENGINEER	$0.00	$0.00	$0.00	$0.00	$49,500.00	$0.00	$0.00	$0.00	$49,500.00
PROJECT ENGINEER II	$0.00	$9,500.00	$7,600.00	$19,000.00	$42,750.00	$0.00	$4,750.00	$7,600.00	$91,200.00
PROJECT ENGINEER I	$0.00	$0.00	$0.00	$0.00	$0.00	$5,400.00	$0.00	$0.00	$5,400.00
STAFF ENGINEER II	$0.00	$0.00	$0.00	$17,000.00	$0.00	$0.00	$0.00	$0.00	$17,000.00
STAFF ENGINEER I	$8,400.00	$0.00	$6,400.00	$0.00	$32,000.00	$4,800.00	$4,000.00	$0.00	$53,600.00
ENGINEER II	$0.00	$0.00	$6,000.00	$0.00	$30,000.00	$0.00	$0.00	$0.00	$36,000.00
ENGINEER I	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TECHNICAL SUPERVISOR	$0.00	$0.00	$0.00	$10,200.00	$0.00	$0.00	$0.00	$0.00	$10,200.00
SR. TECHNICIAN II	$0.00	$0.00	$6,000.00	$0.00	$22,500.00	$4,500.00	$0.00	$0.00	$33,000.00
SR. TECHNICIAN I	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TECHNICIAN II	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TECHNICIAN I	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
ADMINISTRATIVE SUPPORT	$2,750.00	$550.00	$0.00	$0.00	$11,000.00	$3,300.00	$0.00	$6,600.00	$24,200.00
ENGINEERING TOTAL	$34,350.00	$25,250.00	$53,040.00	$90,600.00	$319,950.00	$37,000.00	$31,950.00	$27,800.00	$619,940.00
REIMBURSIBLE EXPENSES									
EXPENSE CATEGORY									
AIRFARE	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
LODGING	$500.00	$0.00	$0.00	$3,000.00	$0.00	$0.00	$0.00	$0.00	$500.00
PER DIEM	$175.00	$0.00	$0.00	$1,050.00	$0.00	$0.00	$0.00	$0.00	$175.00
VEHICLE	$750.00	$0.00	$0.00	$4,500.00	$0.00	$0.00	$0.00	$0.00	$750.00
MANHOUR LOAD (ODCs)	$2,247.50	$1,667.50	$3,654.00	$5,945.00	$22,620.00	$2,682.50	$1,885.00	$2,175.00	$7,569.00
OUTSIDE SERVICES	$0.00	$0.00	$0.00	$80,000.00	$0.00	$0.00	$0.00	$0.00	$0.00
LABORATORY TESTING	$0.00	$0.00	$0.00	$45,000.00	$0.00	$0.00	$0.00	$0.00	$0.00
MISCELLANEOUS	$0.00	$0.00	$0.00	$2,000.00	$0.00	$0.00	$0.00	$0.00	$0.00
EXPENSE TOTAL	$3,672.50	$1,667.50	$3,654.00	$141,495.00	$22,620.00	$2,682.50	$1,885.00	$2,175.00	$8,994.00
TASK SUB-TOTAL	$38,022.50	$26,917.50	$56,694.00	$232,095.00	$342,570.00	$39,682.50	$33,835.00	$29,975.00	$799,791.50

NOTE: Man-hour load (ODCs) includes printing/plotting, computer time, phone/fax, express mail and postage.

Detailed Budget for Tasks

TABLE 2.0
TOWN OF ORCHARD CITY
ORCHARD CITY RESERVOIR
PROPOSAL FOR ENGINEERING SERVICES
TASK A100 - PROGRESS MEETINGS

PROFESSIONAL FEES

STAFF CATEGORY	UNIT	RATE	QUANTITY	TOTAL
PRINCIPAL	HR	$160.00	60	$9,600.00
GEOTECHNICAL CONSULTANT	HR	$160.00		
SR PROJECT MANAGER	HR	$130.00	120	$15,600.00
PROJECT MANAGER	HR	$120.00		
SENIOR ENGINEER	HR	$110.00		
PROJECT ENGINEER II	HR	$95.00		
PROJECT ENGINEER I	HR	$90.00		
STAFF ENGINEER II	HR	$85.00		
STAFF ENGINEER I	HR	$80.00	80	$6,400.00
ENGINEER II	HR	$75.00		
ENGINEER I	HR	$70.00		
TECHNICAL SUPERVISOR	HR	$85.00		
SR. TECHNICIAN II	HR	$75.00		
SR. TECHNICIAN I	HR	$70.00		
TECHNICIAN II	HR	$65.00		
TECHNICIAN I	HR	$55.00		
ADMINISTRATIVE SUPPORT	HR	$55.00	50	$2,750.00
			310	
			ENGINEERING TOTAL	**$34,350.00**

REIMBURSIBLE EXPENSES

EXPENSE CATEGORY	UNIT	RATE	QUANTITY	TOTAL
AIRFARE	R/T	$1,500.00		
LODGING	MAN-DAY	$100.00	5	$500.00
PER DIEM	MAN-DAY	$35.00	5	$175.00
VEHICLE	VEH-DAY	$150.00	5	$750.00
MANHOUR LOAD (ODCs)	HR	$7.25	310	$2,247.50
OUTSIDE SERVICES	LS	$10,000.00		
LABORATORY TESTING	LS			
MISCELLANEOUS	LS	$1,000.00		
			EXPENSE TOTAL	**$3,672.50**
			TASK A100 TOTAL	**$38,022.50**

TABLE 3.0
TOWN OF ORCHARD CITY
ORCHARD CITY RESERVOIR
PROPOSAL FOR ENGINEERING SERVICES
TASK A200 - PROJECT KICK-OFF

PROFESSIONAL FEES

STAFF CATEGORY	UNIT	RATE	QUANTITY	TOTAL
PRINCIPAL	HR	$160.00	20	$3,200.00
GEOTECHNICAL CONSULTANT	HR	$160.00		
SR PROJECT MANAGER	HR	$130.00		
PROJECT MANAGER	HR	$120.00	100	$12,000.00
SENIOR ENGINEER	HR	$110.00		
PROJECT ENGINEER II	HR	$95.00	100	$9,500.00
PROJECT ENGINEER I	HR	$90.00		
STAFF ENGINEER II	HR	$85.00		
STAFF ENGINEER I	HR	$80.00		
ENGINEER II	HR	$75.00		
ENGINEER I	HR	$70.00		
TECHNICAL SUPERVISOR	HR	$85.00		
SR. TECHNICIAN II	HR	$75.00		
SR. TECHNICIAN I	HR	$70.00		
TECHNICIAN II	HR	$65.00		
TECHNICIAN I	HR	$55.00		
ADMINISTRATIVE SUPPORT	HR	$55.00	10	$550.00
			230	
			ENGINEERING TOTAL	**$25,250.00**

REIMBURSIBLE EXPENSES

EXPENSE CATEGORY	UNIT	RATE	QUANTITY	TOTAL
AIRFARE	R/T	$1,500.00		
LODGING	MAN-DAY	$100.00		
PER DIEM	MAN-DAY	$35.00		
VEHICLE	VEH-DAY	$150.00		
MANHOUR LOAD (ODCs)	HR	$7.25	230	$1,667.50
OUTSIDE SERVICES	LS	$10,000.00		
LABORATORY TESTING	LS			
MISCELLANEOUS	LS	$1,000.00		
			EXPENSE TOTAL	**$1,667.50**
			TASK A200 TOTAL	**$26,917.50**

TABLE 4.0
TOWN OF ORCHARD CITY
ORCHARD CITY RESERVOIR
PROPOSAL FOR ENGINEERING SERVICES
TASK A300 - ALTERNATIVE ANALYSIS

PROFESSIONAL FEES

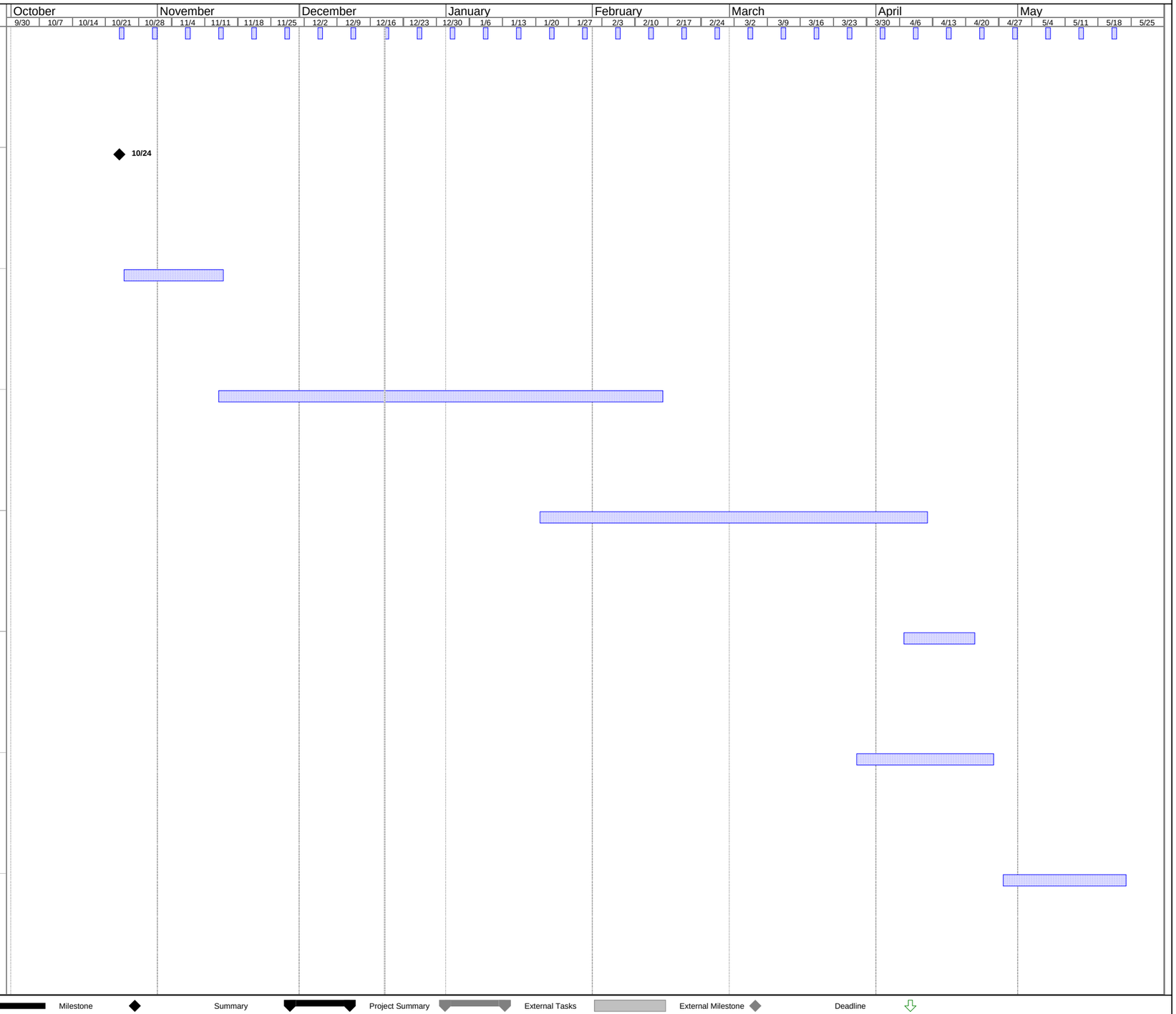
STAFF CATEGORY	UNIT	RATE	QUANTITY	TOTAL
PRINCIPAL	HR	$160.00	24	$3,840.00
GEOTECHNICAL CONSULTANT	HR	$160.00	80	$12,800.00
SR PROJECT MANAGER	HR	$130.00	80	$10,400.00
PROJECT MANAGER	HR	$120.00		
SENIOR ENGINEER	HR	$110.00		
PROJECT ENGINEER II	HR	$95.00	80	$7,600.00
PROJECT ENGINEER I	HR	$90.00		
STAFF ENGINEER II	HR	$85.00		
STAFF ENGINEER I	HR	$80.00	80	$6,400.00
ENGINEER II	HR	$75.00	80	$6,000.00
ENGINEER I	HR	$70.00		
TECHNICAL SUPERVISOR	HR	$85.00		
SR. TECHNICIAN II	HR	$75.00	80	$6,000.00
SR. TECHNICIAN I	HR	$70.00		
TECHNICIAN II	HR	$65.00		
TECHNICIAN I	HR	$55.00		
ADMINISTRATIVE SUPPORT	HR	$55.00		
			504	
			ENGINEERING TOTAL	**$53,040.00**

REIMBURSIBLE EXPENSES

EXPENSE CATEGORY	UNIT	RATE	QUANTITY	TOTAL
AIRFARE	R/T	$1,500.00		
LODGING	MAN-DAY	$100.00		
PER DIEM	MAN-DAY	$35.00		
VEHICLE	VEH-DAY	$150.00		
MANHOUR LOAD (ODCs)	HR	$7.25	504	$3,654.00
OUTSIDE SERVICES	LS	$10,000.00		
LABORATORY TESTING	LS			
MISCELLANEOUS	LS	$1,000.00		
			EXPENSE TOTAL	**$3,654.00**
			TASK A300 TOTAL	**$56,694.00**

The Town of Orchard City Reservoir
Engineering Design Schedule

Activity	Task Name	Duration	Start	Finish
A100	**Progress Meetings**	151 days	Wed 10/24/07	Wed 5/21/08
A200	**Project Kick-Off**	0 days	Wed 10/24/07	Wed 10/24/07
A300	**Alternative Analysis**	15 days	Thu 10/25/07	Wed 11/14/07
A400	**Geotechnical Investigation**	68 days	Wed 11/14/07	Fri 2/15/08
A500	**Final Design**	60 days	Mon 1/21/08	Fri 4/11/08
A600	**Dam Safety Application Submittal**	11 days	Mon 4/7/08	Mon 4/21/08
A700	**Engineer's Construction Cost Estimate**	21 days	Fri 3/28/08	Fri 4/25/08
A800	**Bid Documents**	20 days	Mon 4/28/08	Fri 5/23/08



Project: Project Schedule
Date: Wed 12/19/07

Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

PAYMENT

Invoicing shall be by task. The request for payment shall include: a description of the work accomplished; an estimate of the percent completion for individual tasks and for the entire project in relation to the percentage of budget spent. Costs incurred prior to the effective date of this purchase order are not reimbursable. Invoicing shall be based on actual costs utilizing the rates summarized above.

The last 5 percent of the project budget will be withheld until final project documentation is complete. All products, data and information developed as a result of this purchase order must be provided to CWCB in hard copy and electronic format as part of the project documentation.