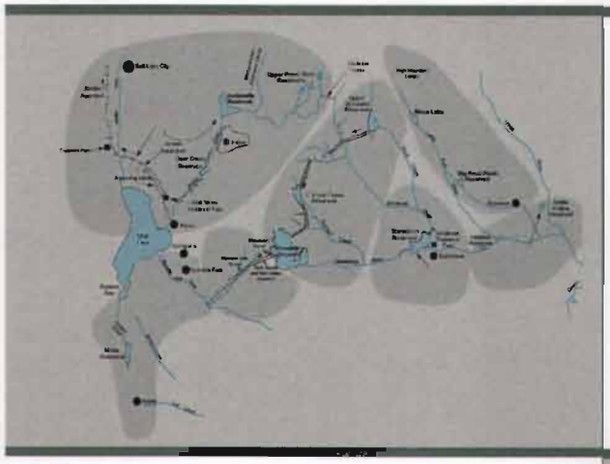
DESIGNS AND ESTIMATES APPENDIX

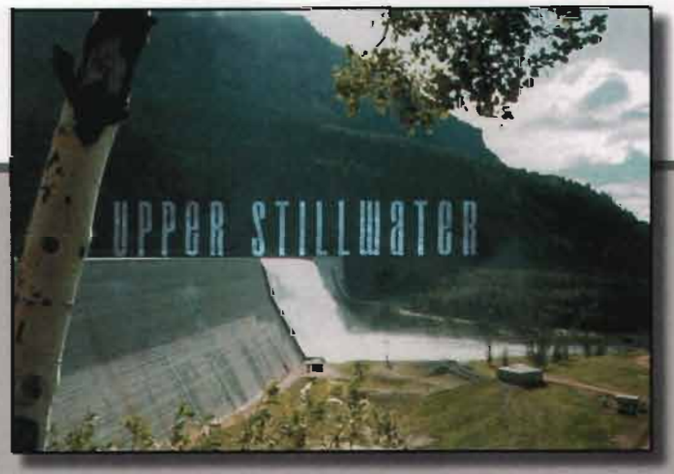
Volume 1 - Narrative and Summary of Costs

Central Utah Project Completion Program



Supplement to the 1988 Definite Plan Report for the Bonneville Unit

October 2004



UTAH RECLAMATION MITIGATION AND CONSERVATION COMMISSION

SUPPLEMENT TO THE BONNEVILLE UNIT DEFINITE PLAN REPORT

DESIGNS AND ESTIMATES APPENDIX
Volume 1

CUP
COMPLETION ACT
CENTRAL UTAH WATER CONSERVANCY DISTRICT

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October 2004

TABLE OF CONTENTS

	Page No.
CHAPTER 1 – INTRODUCTION	1-1
Overview of the Bonneville Unit	1-1
CUPCA Amendments	1-2
CHAPTER 2 – THE BONNEVILLE UNIT	2-1
Water Supply	2-1
Irrigation Water	2-1
Municipal and Industrial Water	2-2
Starvation Collection System	2-8
Strawberry Aqueduct and Collection System	2-8
Ute Indian Tribal Development Project	2-8
Diamond Fork System	2-9
Municipal and Industrial System (M&I System)	2-10
Other CUPCA Program Components	2-10
Wasatch County Water Efficiency Project and Daniel Replacement Project	2-12
Conjunctive Use of Surface Water and Groundwater	2-12
Additional Studies of Utah Lake Salinity and Provo River Water Supply	2-13
Water Management Improvement	2-13
Local Development	2-13
Fish, Wildlife, and Recreation Mitigation and Enhancement	2-14
Ute Indian Water Rights Settlement	2-14
Section 203(a) Uinta Basin Replacement Project	2-14
CHAPTER 3 – DIAMOND FORK SYSTEM	3-1
Water Delivery	3-3
Syar Tunnel and Inlet Portal	3-4
Sixth Water Aqueduct (Pipeline, Shaft and Flow Control Structure)	3-4
Sixth Water Connection to Tanner Ridge Tunnel	3-4
Tanner Ridge Tunnel	3-5
Upper Diamond Fork Pipeline	3-5
Upper Diamond Fork Flow Control Structure	3-5
Diamond Fork Vortex Shafts	3-5
Aeration Chamber and Connection to Upper Diamond Fork Tunnel	3-6
Upper Diamond Fork Tunnel	3-6
Monks Hollow Overflow Structure and Diamond Fork Creek Outlet	3-6
Diamond Fork Pipeline Extension	3-7
Diamond Fork Pipeline	3-7
CHAPTER 4 – THE ULS SYSTEM	4-1
District Water Rights	4-1
Conserved Water (Section 207 Funding)	4-1
Structural Features of the ULS System	4-1
Peak Design Flow in Pipelines	4-4
Flows Through Power Generation Plants	4-5

Spanish Fork Canyon Pipeline 4-6
Spanish Fork – Santaquin Pipeline 4-7
Santaquin – Mona Reservoir Pipeline 4-8
Mapleton – Springville Lateral Pipeline 4-8
Spanish Fork – Provo Reservoir Canal Pipeline 4-10
Hydroelectric Power Plants 4-12
Sixth Water Hydroelectric Power Plant 4-12
Upper Diamond Fork Hydroelectric Power Station 4-13
Substations and Transmission Lines 4-13
General Engineering Considerations 4-14
Pipelines – Hydraulic Analyses 4-14
Power Generation Capabilities 4-18
Gross Energy 4-18
Parasitic Load 4-20
Net Energy Generated 4-21

CHAPTER 5 – BONNEVILLE UNIT OPERATION AND MAINTENANCE RESPONSIBILITIES 5-1
Project Headquarters 5-1
Staff Organization 5-1
Duties of O&M Staff 5-3
Project Facilities Automation and Monitoring 5-3
Scheduled Maintenance 5-3
Recreation Facilities 5-5
General Description 5-5
Administering Agencies 5-6
Upper Stillwater Reservoir Recreation 5-6
Starvation Reservoir Recreation 5-6
Currant Creek Reservoir Recreation 5-7
Strawberry Reservoir Recreation 5-7
Jordanelle Reservoir Recreation 5-7
Stabilized Upper Provo River Reservoirs Recreation 5-7

CHAPTER 6 – BONNEVILLE UNIT OPERATION, MAINTENANCE AND REPLACEMENT COSTS 6-1
OM&R for Irrigation and M&I 6-1
Historical OM&R – Year 2002 6-1
Projected OM&R on New Features 6-6
Projected Bonneville Unit OM&R for Irrigation and M&I 6-8
OM&R Reserve Fund 6-8
Electrical Power Energy 6-9
CUPCA OM&R Costs 6-10
Wasatch County Water Efficiency Project and Daniels Replacement Pipeline 6-11
Section 203(a) Uintah Basin Replacement Project (UBRP) 6-11

Other CUPCA OM&R Costs 6-11
June Sucker Flows in Hobble Creek 6-11
Flows in Lower Provo River 6-12
Daniels Replacement Pipeline (CUPCA Section 303) 6-12
Recreation OM&R Costs 6-12
Wildlife Mitigation Facilities 6-13
Summary of Bonneville Unit OM&R Costs 6-15

CHAPTER 7 – COST ESTIMATES FOR ULS SYSTEM PROPOSED PLAN 7-1
Level of Detail for Cost Estimate 7-1
Summary of ULS Construction Costs 7-1
Sources of Cost Data, General and Facility-Specific Assumptions Used to Develop Cost Basis 7-3
General Assumptions 7-3
Facility-Specific Assumptions 7-3
Spanish Fork Canyon Pipeline 7-3
Spanish Fork – Santaquin Pipeline 7-3
Santaquin – Mona Reservoir Pipeline 7-4
Spanish Fork – Provo Reservoir Canal Pipeline 7-4
Mapleton – Springville Lateral Pipeline 7-4
North Utah County 207 Projects 7-4
Power Generation Plants and Transmission Lines 7-5
Price and Unit Cost 7-5
Right-of-Way Costs 7-6
Field Construction Costs 7-6
Cost for Pipelines 7-6
Sizing Methodology and Cost Estimates for Power Plants 7-14

CHAPTER 8 – ULS SYSTEM CONSTRUCTION ASPECTS 8-1
Construction Schedule 8-1
Rights-of-Way and Easements 8-1
Rights-of-Way 8-1
Easements 8-2
Facility Specific Rights-of-Way and Easements 8-3
Spanish Fork Canyon Pipeline 8-3
Spanish Fork-Santaquin and Santaquin-Mona Reservoir Pipelines 8-3
Mapleton – Springville Lateral Pipeline 8-5
Spanish Fork – Provo Reservoir Canal Pipeline 8-6
Geotechnical Conditions 8-7
Seismic Considerations 8-7
Sixth Water Hydroelectric Power Plant 8-8
Upper Diamond Fork Hydroelectric Power Plant 8-8
Spanish Fork Canyon Pipeline 8-8
Spanish Fork Canyon – Santaquin Pipeline 8-9
Santaquin – Mona Reservoir Reservoir Pipeline 8-10

Spanish Fork Canyon – Provo Reservoir Canal Pipeline 8-10
Mapleton – Springville Lateral Pipeline 8-10
Pipeline Construction Considerations 8-10
Clearing and Grading 8-11
Pipe Trench Excavation 8-11
Pipe Installation 8-12
Crossings 8-13
Open Trench Crossings 8-13
Micro-Tunneling and Jack/Bore Crossings 8-13
Road, Highway and Interstate Crossings 8-14
Railroad Crossings 8-15
Stream, River and Canal Crossings 8-15
Utility Crossings 8-17
Hydroelectric Power Plant Construction Procedures 8-18
Electric Transmission Line Construction Procedures 8-18
Buried Transmission Lines 8-18
Overhead Transmission Lines 8-18
General Schematics Related to ULS Construction 8-19

ATTACHMENT A – PLAN AND PROFILE A-1

ATTACHMENT B – LETTERS AND AGREEMENTS ON OM&R B-1

ATTACHMENT C – USBR CONSTRUCTION COST INDEX C-1

ATTACHMENT D – USBR COST UPDATE ON FORM PF-2B (OCTOBER 2004) . D-1

List of Tables

1-1 Bonneville Unit Features Bonneville Basin (Uinta Basin) Features 1-3
1-2 Bonneville Unit Features Bonneville Basin (Wasatch Front) Features 1-4

2-1 Total Bonneville Unit Water Supply 2-1
2-2 Irrigation Water Provided by Bonneville Unit 2-2
2-3 M&I Water Provided by Bonneville Unit 2-2
2-4 Summary of Bonneville Unit Features 2-4
2-5 Bonneville Unit Components 2-11

3-1 Distribution of Transbasin Diversion From Strawberry Reservoir 3-3

4-1 Summary of Generation Stations and Transmission Lines 4-4
4-2 Summary of Pipeline Dimensions 4-4
4-3 Peak Design Flows for Pipelines 4-5
4-4 Projected Flows Through ULS Power Plants 4-5

4-5 Secondary M&I Deliveries Historical Annual Distribution Pattern 4-8
4-6 Hydraulic Capacity and Pipe Size Spanish Fork – Santaquin Pipeline 4-8
4-7 Hydraulic Capacity and Pipe Size Mapleton – Springville Lateral Pipeline..... 4-10
4-8 Hydraulic Capacity and Pipe Size Spanish Fork – Provo Reservoir Canal Pipeline 4-12
4-9 Summary of Power Generation Plants and Transmission Lines 4-14
4-10 Summary of Hydraulic Analysis ULS System 4-16
4-11 Summary of Hydroelectric Power Plants Hydraulic Analysis 4-18
4-12 Turbinable Flows 4-20
4-13 Parasitic Load 4-21
4-14 Net Energy Generated 4-21

5-1 Bonneville Unit Facilities and Corresponding O&M Center Locations 5-2
5-2 Typical O&M Activities 5-4

6-1 Bonneville Unit Features Operational in 2002 6-2
6-2 Bonneville Unit OM&R (Year 2002 – Actual Costs Incurred by the District)... 6-3
6-3 Year 2002 – Non-Bonneville Unit OM&R Irrigation and M&I Deliveries 6-3
6-4 Calculation of OM&R for 44,000 AF and Fish/Wildlife and Flood Control 6-4
6-5 Determination of Bonneville Unit OM&R for Project Water (Irrigation and M&I) 6-5
6-6 Project and Non-Project Water (Year 2002-Costs for Each Service Area)..... 6-5
6-7 CUCPA Features Projected Bonneville Unit OM&R 6-7
6-8 Estimation of Future OM&R for Irrigation and M&I Water Users..... 6-8
6-9 Power Required From Colorado Storage Project and Power Interference Costs 6-10
6-10 CUPCA Projected Bonneville Unit OM&R 6-11
6-11 OM&R 6-12
6-12 Estimated Annual OM&R Costs Bonneville Unit Recreational Facilities..... 6-13
6-13 Estimated Per Acre Cost of Wildlife Mitigation Land OM&R 6-14
6-14 Estimated Annual OM&R Costs Mitigation Features 6-15
6-15 Estimated Annual Bonneville Unit OM&R Costs 6-16

7-1 Opinion of Probable Construction Cost Utah Lake Drainage Basin Water Water Delivery System 7-2
7-2 Non-Construction Cost Components and Percentages 7-5
7-3 Easement Acquisition Costs (without markups)..... 7-6
7-4 Utah Lake Drainage Basin Water Delivery System Cost Estimate Spanish Fork Canyon Pipeline 7-7
7-5 Utah Lake Drainage Basin Water Delivery System Cost Estimate Spanish Fork – Santaquin Pipeline 7-8
7-6 Utah Lake Drainage Basin Water Delivery System Cost Estimate Santaquin – Mona Reservoir Pipeline 7-9
7-7 Utah Lake Drainage Basin Water Delivery System Cost Estimate Mapleton – Springville Lateral Pipeline 7-10

7-8 Utah Lake Drainage Basin Water Delivery System Cost Estimate Spanish Fork – Provo River Canal Pipeline 7-11
7-9 Utah Lake Drainage Basin Water Delivery System Cost Estimate Sixth Water Power Plant 7-12
7-10 Utah Lake Drainage Basin Water Delivery System Cost Estimate Upper Diamond Fork Power Plant 7-13

8-1 Spanish Fork Canyon Pipeline Rights-of-Way 8-3
8-2 Spanish Fork – Santaquin Pipeline Rights-of-Way 8-4
8-3 Mapleton – Springville Lateral Pipeline Rights-of-Way 8-6
8-4 Spanish Fork – Provo Reservoir Canal Pipeline Rights-of-Way 8-7
8-5 Highway and Interstate Pipeline Crossings 8-14
8-6 Railroad Crossings 8-15
8-7 Stream, River and Canal Pipeline Crossings 8-15
8-8 Schematics Related to ULS Construction 8-19

List of Figures

8-1 Upgraded Power Poles for the Sixth Water Transmission Line 8-20
8-2 Typical Cross Section of Air Release and Vacuum Relief Vault 8-21
8-3 Typical Cross Section of Blowoff Drain Vault 8-22
8-4 Typical Cross Section of Pipeline Turnout with Meter 8-23
8-5 Schematic Drawing of Typical Pipeline Construction Procedures 8-24
8-6 Schematic Drawing of Typical Pipe Trench Cross Section 8-25
8-7 Schematic of Pipeline Construction in Highway Shoulder 8-26
8-8 Typical Slurry Microtunneling Procedures 8-27
8-9 Typical Bore and Jack Procedures 8-28
8-10 Cross Section of 1-15 Bore and Jack Crossing 8-29
8-11 Cross Section of Microtunnel Crossing of Spanish Fork – Provo Reservoir Canal Pipeline Under the Provo River 8-30
8-12 Typical Pipeline Construction Work Area 8-31
8-13 Restricted Pipeline Construction Work Area 8-32

List of Maps

1-1 Central Utah Project Units 1-5

2-1 Map Features of the Bonneville Unit Systems 2-3

3-1 Features of the Diamond Fork System 3-2

4-1 Proposed Pipelines 4-2
4-2 Hydroelectric Power Stations and Transmission Lines 4-3

Central Utah Project Completion Program

Chapter 1

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

The Bonneville Unit of the Central Utah Project provides water for irrigation, municipal and industrial (M&I) use, and instream flows in the Uinta and Bonneville basins of northeastern and central Utah. Additional purposes of the Bonneville Unit include – flood control, recreation, power, and fish and wildlife enhancement.

Water for the project has been developed by diverting and storing the excess flows of several streams (primarily the Provo River and tributaries of the Duchesne River) and acquisition by the U.S. Department of Interior (DOI) of a portion of the Central Utah Water Conservancy District's (District) water rights in Utah Lake. In addition, non-federal entities will capture and recycle project return flows in Salt Lake County for M&I use in secondary water systems.

This Designs and Estimates (D&E) Appendix is a supporting document to the 2004 Supplement to the 1988 Bonneville Unit Definite Plan Report. The purpose of this D&E Appendix is to present the feasibility level designs and cost estimates for the Utah Lake Drainage Basin Water Delivery System (ULS), provide a brief description of recently completed Diamond Fork System facilities, and to summarize all the facilities of the Bonneville Unit that have been completed.

The subject of the various chapters and attachments of this D&E Appendix are:

- Chapter 1 – Introduction
- Chapter 2 – Bonneville Unit Features and Water Supply
- Chapter 3 – Diamond Fork System
- Chapter 4 - Utah Lake Drainage Basin Water Delivery System
- Chapter 5 – Bonneville Unit Operation and Maintenance Responsibilities
- Chapter 6 – Bonneville Unit OM&R Costs
- Chapter 7 – ULS System Cost Estimates
- Chapter 8 – Construction Aspects of the ULS System
- Attachment A – Hydraulic Plan and Profile Sheets
- Attachment B – Letters and Agreements on OM&R
- Attachment C – USBR Construction Cost Index
- Attachment D – USBR Cost Update on Form PF-2B

OVERVIEW OF THE BONNEVILLE UNIT

The CUP was authorized for construction as a participating project under the Colorado River Storage Project Act of 1956 (43 United States Code [USC] 620). The CUP authorized the following individual units: the Vernal Unit, completed in 1962; the Jensen Unit, completed in 1980; the Upalco and Uintah Units have not been completed and were addressed in Public Law 107-366, which states "The Secretary is authorized to utilize all unexpended budget authority for units of the Central Utah Project... the balance of such budget authority is ... de-authorized."; the Ute Indian Unit, de-authorized by Central Utah Project Completion Act of 1992 (CUPCA); and the Bonneville Unit, which has been under construction since 1965.

The Bonneville Unit of the CUP is located in central and northeastern Utah. The unit includes facilities to develop and more fully utilize waters tributary to the Duchesne River in the Uinta Basin of Utah, to facilitate a trans-basin diversion from the Colorado River Basin to the Bonneville Basin, and to develop and distribute project water in the Bonneville Basin. For planning and coordination purposes the Bonneville Unit was initially divided into six systems according to location and function. These systems are 1) the Starvation Collection System, 2) the Strawberry Aqueduct and Collection System, 3) the Ute Indian Tribal Development, 4) the Diamond Fork Power System, re-authorized by CUPCA as the Diamond Fork System, 5) the Municipal and Industrial System (M&I System), and 6) the Irrigation and Drainage System (I&D System). The I&D System was re-authorized by CUPCA and replaced by the Spanish Fork Canyon-Nephi Irrigation System (SFN System) in 1995 when the lower Sevier River Basin counties chose to opt out of the District and the counties were then removed from the Bonneville Unit irrigation water service area. Planning on the SFN System was discontinued in 1998. Pursuant to Section 202(a)(1) of CUPCA, as amended, a new planning process was initiated in 2000 on the ULS whose features are described in Chapter 4. The ULS is a replacement system for the I&D System. Although they are not considered systems under the Bonneville Unit, the Section 203(a) Uinta Basin Replacement Project, the Wasatch County Water Efficiency Project and Daniel Replacement Project were authorized by CUPCA as part of the Bonneville Unit of the CUP.

CUPCA AMENDMENTS

The CUPCA (Public Law 102-575) authorized construction of the Irrigation and Drainage System consisting of a pipeline as the water conveyance system from Spanish Fork Canyon to Sevier Bridge Reservoir for the purpose of supplying new and supplemental irrigation water supplies to Utah, Juab, Millard, Sanpete, Sevier, Garfield, and Piute Counties. CUPCA included a provision to construct alternate features to deliver irrigation water to lands in the Utah Lake drainage basin in the event the plan to deliver water to the Sevier River basin was not viable. Millard and Sevier Counties withdrew from participation in the Central Utah Project after CUPCA was enacted, which rendered the plan to deliver water to the Sevier River basin no longer viable. The alternative plan under CUPCA was activated. The initial planning process focused on an irrigation project named the Spanish Fork Canyon-Nephi Irrigation System (SFN System). When insurmountable issues associated with the SFN project were raised in 1998, the joint-lead agencies discontinued planning on the SFN System and they announced a new planning process for the ULS.

CUPCA was amended in December 2002 by Public Law 107-366 (PL 107-366). The CUPCA authorization to construct features to deliver irrigation water to lands in the Utah Lake drainage basin was amended specifically by adding "and municipal and industrial water" features and authorized funding of power development on units of the CUP. In addition, PL-107-366 allowed the reallocation of existing funding for implementing water conservation measures to include water recycling of return flows from wastewater treatment plants and the use of reverse osmosis membrane technology, which is a key to using Utah Lake waters for M&I use.

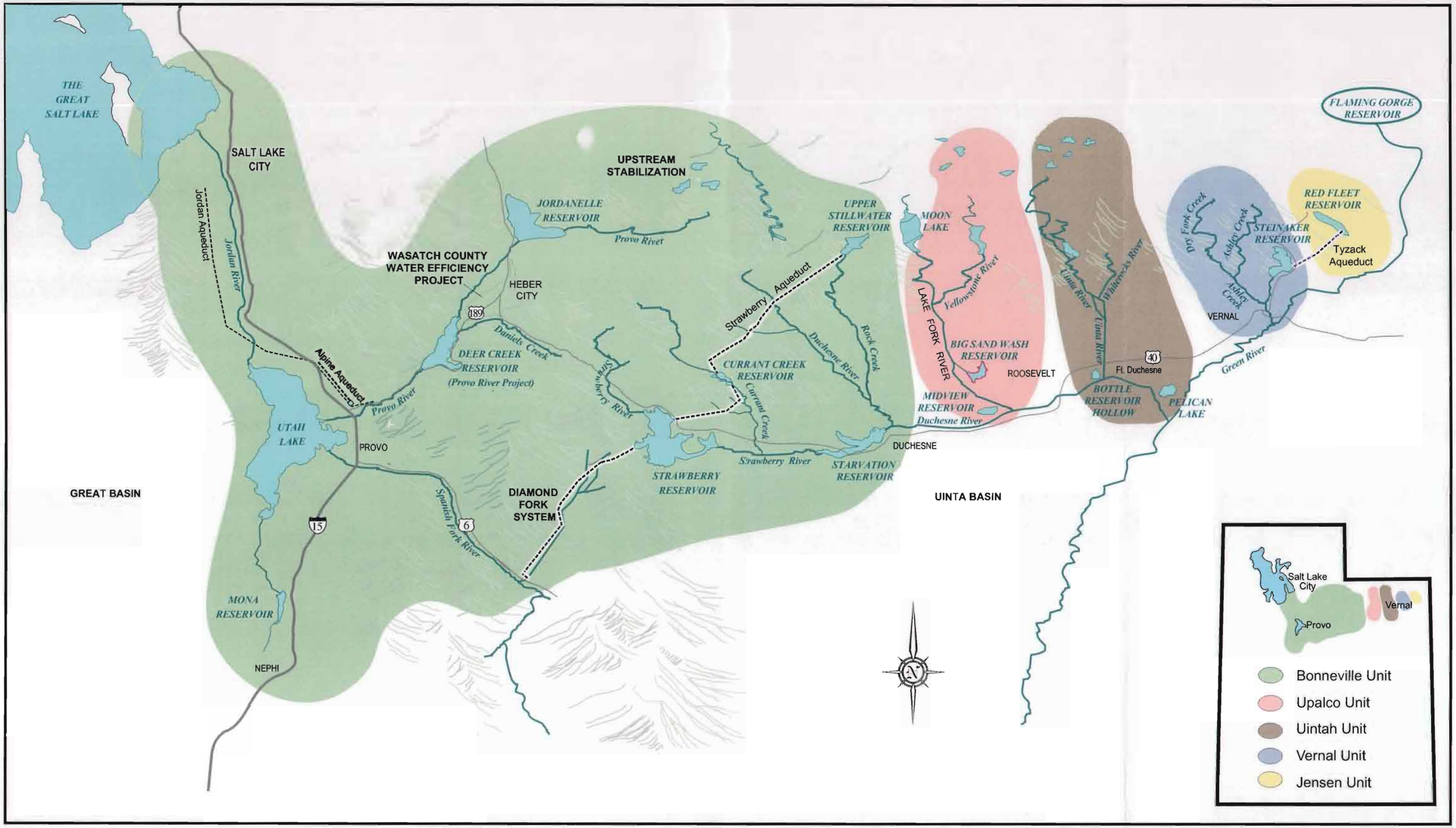
Map 1-1 on page 1-6 shows the CUP units in relation to each other. The status of the construction of the projects is shown in Table 1-1 for the Uinta Basin portion of the Bonneville Unit and in Table 1-2 for the Bonneville Basin or basically Wasatch Front portion of the Bonneville Unit.

TABLE 1-1
Bonneville Unit Features
Bonneville Basin (Uinta Basin) Features

Bonneville Unit System and Features	Status of USBR Features	Status of CUPCA Features
Uinta Basin Features		
(1) Strawberry Aqueduct and Collection System		
Upper Stillwater Dam & Reservoir	Completed	
Currant Creek Dam & Reservoir	Completed	
Soldier Creek Dam (Strawberry Enlargement)	Completed	
Strawberry Aqueduct	Completed	
(2) Ute Indian Tribal Development		
Bottle Hollow Dam & Reservoir	Completed	
Midview Reservoir Exchange	Completed	
Lower Duchesne River Mitigation	Completed	
Indian Water Right Settlement		Work is on-going
(3) Starvation Collection System		
Knight Diversion Dam	Completed	
Starvation Feeder Conduit	Completed	
Taylor Canal Area Drains	Completed	
Duchesne River Area Canal Rehabilitation	Completed	
Starvation Dam & Reservoir	Completed	
(4) Uinta Basin Replacement Project		
Big Sand Wash Feeder Pipeline	Completed	
Big Sand Wash Reservoir Enlargement		Construction start in 2004
Big Sand Wash Feeder Diversion Structure		Construction start in 2004
Big Sand Wash-Roosevelt Pipeline		Construction start in 2005
Stabilization of 13 High Uinta Mountain Lakes		Stabilization start in 2007

TABLE 1-2
Bonneville Unit Features
Bonneville Basin (Wasatch Front) Features

Bonneville Unit System and Features	Status of USBR Features	Status of CUPCA Features
Bonneville Basin (Wasatch Front)		
(1) Municipal and Industrial System		
Jordanelle Dam & Reservoir	Completed	
Alpine Aqueduct	Completed	
Jordan Aqueduct	Completed	
Upper Provo River Reservoirs' Stabilization	Completed	
Olmsted	Completed	
(2) Wasatch Co. Water Efficiency Project and Daniel Replacement Pipeline	Completed	
(3) Diamond Fork System		
Syar Tunnel and Inlet Portal	Completed	
Sixth Water Aqueduct (pipeline & shaft)	Completed	
Sixth Water Connection to Tanner Ridge Tunnel	Completed	
Tanner Ridge Tunnel		Completed
Upper Diamond Fork Pipeline		Completed
Upper Diamond Fork Flow Control Structure		Completed
Diamond Fork Vortex Shafts		Completed
Aeration Chamber and Connection to Upper Diamond Fork Tunnel		Completed
Upper Diamond Fork Tunnel		Completed
Monks Hollow Overflow Structure		Completed
Diamond Fork Creek Outlet		Completed
Diamond Fork Pipeline Extension		Completed
Diamond Fork Pipeline		Completed
(4) Utah Lake Drainage Basin Water Delivery System		
Spanish Fork River Flow Control Structure	Completed	
Spanish Fork – Provo Reservoir Canal Pipeline		Construction start after 2007
Sixth Water Power Plant & Transmission Line		Construction start after 2007
Upper Diamond Fork Power Plant		Construction start after 2007
Spanish Fork Canyon Pipeline		Construction start after 2007
Spanish Fork – Santaquin Pipeline		Construction start after 2007
Mapleton-Springville Lateral Pipeline		Construction start after 2007
Santaquin – Mona Reservoir Pipeline		Construction start after 2007
North Utah County Section 207 Projects		Construction start after 2007



Map 1-1
Central Utah Project Units

Central Utah Project Completion Program

Chapter 2

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

The Bonneville Unit is a multipurpose unit. Nearly completed, it serves a variety of water-related purposes. Bonneville Unit water purposes include: irrigation, M&I, fishery needs, power, flood control, wildlife enhancement, wetlands, enhanced recreation opportunities, incidental highway improvements, and water quality improvements in Utah Lake, the Provo River, and Diamond Fork Creek.

WATER SUPPLY

The Bonneville Unit will annually provide a total water supply of 240,613 acre-feet. Table 2-1 summarizes the irrigation and M&I water provided by the Bonneville Unit. Water for fishery flows in the Uinta Basin is included in the Table to complete the summary. Other instream flows provided through Bonneville Unit operation are not included in Table 2-1 since they do not provide an exclusive water supply, but are an adaptation of the Bonneville Unit operation. The two most notable examples are flows in Hobble Creek for the June sucker and flows in the lower Provo River for the June sucker and improved fishery. Water conserved by the Bonneville Unit's Water Conservation Credit Program (WCCP) is not included in Table 2-1, but is accounted for separately in the financial and economic appendix.

TABLE 2-1
Total Bonneville Unit Water Supply

Purpose	Acre-Feet
Irrigation Water	41,463
M&I Water	157,750[1]
Uinta Basin Instream Flow	44,400
Total	**240,613**

[1]Includes the temporary irrigation supply of 20,000 acre-feet in southern Utah County.

IRRIGATION WATER

The Bonneville Unit will deliver an annual average of 41,463 acre-feet of irrigation water to agricultural areas in several counties. The locations and respective amounts delivered are shown in Table 2-2. All lands to be served have been certified as arable by the Secretary of Interior.

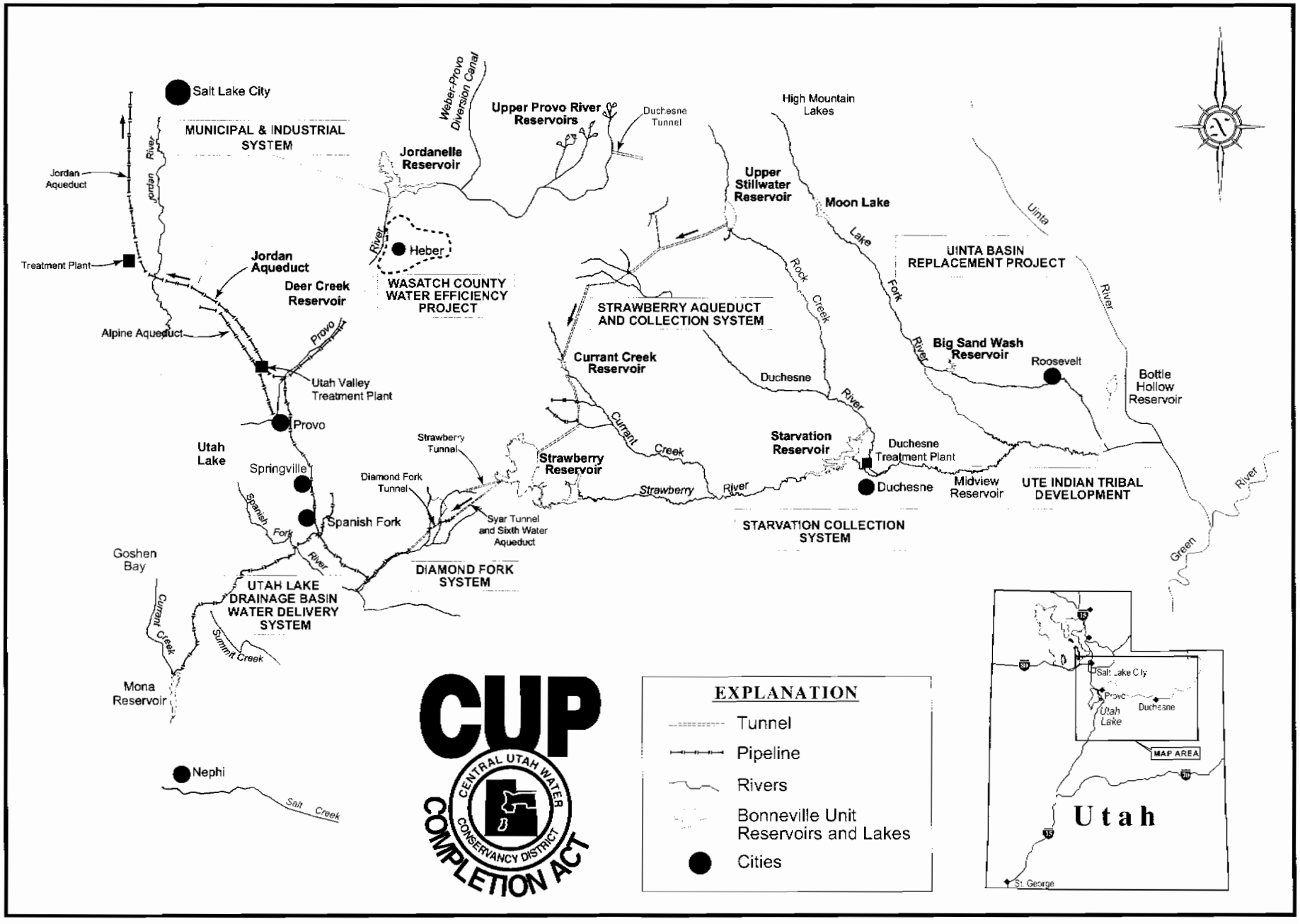
TABLE 2-2 Irrigation Water Provided by Bonneville Unit	
Purpose	**Acre-Feet**
Wasatch & Summit Counties	15,100
Duchesne County	
Starvation Reservoir	24,400
UBRP	1,963
Total	**41,463**

MUNICIPAL AND INDUSTRIAL WATER

The Bonneville Unit will deliver an average of 157,750 acre-feet of M&I water annually to urbanized areas in several counties. Table 2-3 shows the locations and respective amounts delivered.

TABLE 2-3 M&I Water Provided by Bonneville Unit	
Purpose	**Acre-Feet**
Duchesne County	3,500
Wasatch County	2,400
Northern Utah County	20,000
Southern Utah County	31,590
Salt Lake County	100,000
Strawberry Valley	260
Total	**157,750**

The relative locations and major features of each of the Bonneville Unit systems are shown on Map 2-1. The physical facilities to be constructed for the various systems and other components of the Bonneville Unit are presented in Table 2-4, together with a brief description of the purposes they serve. A summary description of each system is presented in the following sections.



Map 2-1
Map Features of the Bonneville Unit Systems

TABLE 2-4
Summary of Bonneville Unit Features

System/Feature	Purpose-Description
Starvation Collection System	
Knight Diversion Dam	Diverts water from the Duchesne River to the Starvation Feeder Conduit. *(Diversion capacity: 300 cubic-feet per second (cfs))*
Starvation Feeder Conduit	Conveys water by pipeline and tunnel from Knight Diversion to Starvation Reservoir. *(Length: 1.7miles; capacity: 300 cfs)*
Taylor Canal Area Drains	Drainage system for Myton Bench in the Duchesne area. Part of the system was constructed, but the remainder is not needed because sprinkler irrigation has alleviated drainage problems.
Duchesne River Area Canal Rehabilitation Program	Prevents significant water shortages by reducing or eliminating canal seepage losses. The program includes either replacing canals with pipeline or lining canals with clay or concrete. *Length: 40.9 miles; conserved water: 14,000 acre-feet per year.*
Starvation Reservoir	Develops irrigation and M&I water by capturing winter and springtime surplus flows of the Strawberry and Duchesne Rivers; located on the Strawberry River. *Total capacity: 167,310 acre-feet; active capacity: 152,330 acre-feet*
Strawberry Aqueduct and Collection System	
Upper Stillwater Reservoir	Provides short-term storage on Rock Creek to supply water for Strawberry Aqueduct and fisheries enhancement through reservoir fishers and instream flow below the dam. *Total capacity: 32,009 acre-feet; active capacity: 29,884 acre-feet*
Currant Creek Reservoir	Diverts unregulated flows of Currant Creek and five of its smaller tributary streams to the Strawberry Aqueduct. The reservoir serves as a regulating reservoir for the Strawberry Aqueduct flows that flow through the reservoir. The reservoir has very little active storage capacity as the water level only fluctuates 4 feet. *Total capacity: 15,671 acre-feet; active capacity: 1,118 acre-feet; and 14,553 acre-feet (inactive capacity); diversion capacity to Strawberry Aqueduct: 620 cfs*
Strawberry Reservoir and Soldier Creek Dam	Provides long-term storage for the Bonneville Unit. The reservoir is located on the Strawberry River and receives water from Strawberry Aqueduct, Strawberry River, and other tributaries. *Total capacity: 1,106,500 acre-feet; active capacity: 951,360 acre-feet.*
Strawberry Aqueduct	Receives water from the West Fork of the Duchesne River and Rock, South Fork Rock, Hades, Wolf, Currant, Layout, and Water Hollow Creeks. Conveys an average of 105,500 acre-feet per year to Strawberry Reservoir. *(Length: 36.8 miles; capacity: 285 to 620 cfs)*
Municipal and Industrial (M&I) System	
Jordanelle Reservoir	Provides M&I water for Salt Lake, Utah, and Wasatch Counties; located on the Provo River above Heber City. Contributes to instream flow needs on the Provo River and for the June sucker Recovery Implementation Program. *Total capacity: 363,354 acre-feet; active capacity: 314,006 acre-feet, (49,348 acre-feet of exclusive flood control capacity)*

TABLE 2-4 (continued)
Summary of Bonneville Unit Features

System/Feature	Purpose-Description
Alpine Aqueduct	Conveys water from the Provo River to northern Utah County metropolitan areas. *Length: 14 miles; capacity: 270 to 80 cfs*
Jordan Aqueduct	Conveys water from the Provo River to Salt Lake County. *Length: 38 miles; diameter: 78" to 48"*
Upper Provo River Reserv. Modification	Restores 15 small reservoirs in the Provo River headwaters (3 for water supply storage and 12 for wildlife and recreation values).
Olmsted Diversion and Flowline	Consists of the rehabilitation of diversion dam, intake screen, pipeline and tunnel. 1. *Diversion Dam and intake structure* - Capacity = 450 cfs; 2. *Pipeline* – 4.5 miles in length, diameter 10.5 feet to 8.5 feet with a capacity of 450 cfs; 3. *Tunnel* – 0.94 miles, diameter of 10.5 feet, flow capacity of 450 cfs.
Ute Indian Tribal Development	
Bottle Hollow Reservoir	Constructed on Indian lands near Fort Duchesne to help compensate the Ute Tribe for economic, fishing, and recreation losses on Rock Creek. The reservoir is used for fishing, wildlife, and recreational purposes and receives water from the Uintah River through the Indian Bench Canal. Capacity: 11,100 acre-feet; surface area: 420 acres
Midview Reservoir Exchange	As part of mitigation for the losses of tribal resources caused by the Bonneville Unit,the operation and maintenance of the recreational, fishery, and wildlife resources of Midview Reservoir were transferred to the Ute IndianTribe in 1968 along with storage rights in the reservoir sufficient to maintain a 1,500 acre-foot minimum conservation pool for fisheries.
Duchesne River Wetlands Mitigation Project	The project would create, restore and otherwise enhance riparian wetlands habitat on approximately 7,790 acres of land along the Duchesne River corridor. The project would involve a variety of restoration measures including re-watering oxbows, connecting oxbows to form contiguous systems, enlarging oxbows, enhancing water quality in oxbows filling drainage ditches to create marsh complexes, replanting riparian areas with native woody trees and shrubs, removing non-native invasive species and changing management areas adjacent to wetlands to benefit wildlife.
Ute Indian Water Right Settlement	Under Title V of CUPCA, the Department of Interior has an on-going work effort to reach a settlement with the Tribe on their water right claims.
Diamond Fork System	
Syar Tunnel and Inlet Portal	Conveys water from Strawberry Reservoir to Sixth Water Aqueduct. The inlet portal extends 2,435 feet into Strawberry Reservoir. Tunnel dimensions are - Length: 30,100 feet; capacity: 800 to 660 cfs, depending upon Strawberry Reservoir water levels.

TABLE 2-4 (continued)
Summary of Bonneville Unit Features

System/Feature	Purpose-Description
Sixth Water Aqueduct (pipeline, shaft and flow control structure)	The aqueduct connects Syar Tunnel to a pipeline leading to the Sixth Water Flow Control Structure. The pipeline is 4,224 feet in length with a diameter of 96 inches and a capacity of 800 cfs. The Sixth Water Shaft is 575 feet in length; a diameter of 102 inches and a capacity of 800 cfs
Sixth Water Connection to Tanner Ridge Tunnel	This connection conveys water by gravity flow from the existing Sixth Water Flow Control structure at the end of Sixth Water Aqueduct to the Tanner Ridge Tunnel. *Length & Diameter:100 ft box culvert 12 ft wide and a 50 ft shaft of 240 in. diameter: Capacity of connection: 660 cfs*
Tanner Ridge Tunnel	The tunnel conveys water through Tanner Ridge, which lies between Sixth Water Canyon and Diamond Fork Canyon. *Length: 5,234 feet; Diameter: 126 inches; Capacity: 660 cfs*
Upper Diamond Fork Pipeline	This pipeline connects the Tanner Ridge Tunnel with the Upper Diamond Fork Flow Control Structure. *Length: 5,485 feet: Diameter: 96 inches: Capacity: 660 cfs*
Upper Diamond Fork Flow Control Struct.	This structure consists of 2 sleeve valves and associated piping. *Length: 100 feet: Diameter: Two – 54 inch:; Capacity 660 cfs,*
Diamond Fork Vortex Shafts	The Diamond Fork Shafts consist of three vertical shafts – each 187.5 feet deep and 78 inches in diameter. One shaft is for venting and two for conveying a combined flow of 660 cfs.
Aeration Chamber and Connection to Upper Diamond Fork Tunnel	The chamber extends from the bottom of the Diamond Fork Shafts to the Upper Diamond Fork Tunnel. Length: 148 feet; The initial cross section is 16' x 16' transitioning to 10.5' x 10.5'. It connects to the Upper Diamond Fork Tunnel via a 126 inch diameter tunnel segment with a capacity of 660 cfs.
Upper Diamond Fork Tunnel	This tunnel conveys water from the Upper Diamond Fork Flow Control Structure to the Monks Hollow Overflow Structure, *Length: 13,114 feet; Diameter: 126 inches; Capacity; 660 cfs*
Monks Hollow Overflow Structure	This structure is located at the Upper Diamond Fork Tunnel outlet portal and connects to the Diamond Fork Creek Outlet. *Length: 40 feet; Diameter: 96 inches; Capacity: 660 cfs*
Diamond Fork Creek Outlet	Diamond Fork Creek Outlet consists of a concrete pipeline from the Monks Hollow Overflow Structure to an energy dissipation structure discharging to a 350-foot long open channel tributary to Diamond Fork Creek. *Length: 1,500 feet; Diameter: 84 inches; Capacity: 660 cfs.*
Diamond Fork Pipeline Extension	This pipeline extension connects the Upper Diamond Fork Tunnel to the upstream end of the Diamond Fork Pipeline. *Length: 6,364 feet: Diameter: 96 inches; Capacity: 560 cfs*
Diamond Fork Pipeline	Conveys Bonneville Unit water from the end of the Diamond Fork Pipeline Extension to the Spanish Fork River Flow Control Structure where it will connect to the Spanish Fork Canyon Pipeline of the ULS. Water conveyed in the pipeline reduces the flow in Diamond Fork Creek, providing an opportunity for restoration of aquatic and riparian habitat along Diamond Fork Creek. *Length: 35,643 feet; diameter: 96 inches; capacity: 560 cfs*

TABLE 2-4 (continued)
Summary of Bonneville Unit Features

System/Feature	Purpose-Description
Utah Lake Drainage Basin Water Delivery System	
Sixth Water Power Plant	Will produce commercial power for sale by Western Area Power Administration. The plant will have an installed capacity of 45 megawatts with a 138 KV underground transmission line of 12.9 miles.
Upper Diamond Fork Power Plant	Will produce commercial power for sale by Western Area Power Admin. The plant will have an installed capacity of 5 megawatts with an existing 25 KV transmission line of 1.6 miles in length.
Spanish Fork River Flow Control Structure	Main elements include: (1) an extension of the Diamond Fork Pipeline of approximately 1200 feet of 96-inch diameter steel pipe; (2) a reinforced concrete flow control structure, consisting of the valve operator vault, control building, and sleeve valve vault; (3) associated piping and appurtenances, including two 42-inch sleeve valves, two 48-inch spherical valves, two flow meters, and two stainless steel vault liners; and (4) discharge weir structure to convey 560 cfs maximum flow into Diamond Fork Creek. This structure spans approximately 65 feet.
Spanish Fork Canyon Pipeline	Will convey Bonneville Unit water from the outlet of the Diamond Fork Pipeline (located at the mouth of Diamond Fork Canyon) to the mouth of Spanish Fork Canyon. The pipeline length is 7.0 miles with a capacity of 365 cfs.
Spanish Fork – Santaquin Pipeline	Will convey Bonneville Unit water from the terminus of the Spanish Fork Canyon pipeline at the mouth of Spanish Fork Canyon to the city of Santaquin in southern Utah County. The pipeline will be 17.5 miles in length and have a capacity of 120 to 50 cfs.
Santaquin – Mona Reservoir Pipeline	Will convey water from the terminus of the Spanish Fork – Santquin Pipeline to Mona Reservoir located in Juab County. The pipeline is 7.5 miles in length and diameter of 24 inches with a capacity of 20 cfs.
Mapleton – Springville Lateral Pipeline	Will convey Bonneville Unit water from the terminus of the Spanish Fork Canyon Pipeline (located at the mouth of Spanish Fork Canyon) to Hobble Creek Canyon. The pipeline is 5.7 miles in length and has a capacity of 125 cfs.
Spanish Fork – Provo Reservoir Canal Pipeline	Will convey Bonneville Unit water from a turnout at the terminus of the Spanish Fork Canyon pipeline to a point near the head of the Provo Reservoir Canal at the mouth of Provo Canyon. The pipeline will be 19.7 miles in length and will have a capacity of 120 to 90 cfs.
North Utah County Section 207 Projects	Features that could potentially be constructed under Section 207 funding include the Provo Reservoir Canal Enclosure and numerous other smaller Section 207 projects. The cost for the Mapleton-Springville Lateral Pipeline described above is presented as part of the ULS System cost estimate. The Provo Reservoir Canal Enclosure is not a part of the ULS System but under a cost sharing arrangement the Federal government could contribute up to 65 percent of the construction of the project with this cost being reflected in the financial and economic analyses along with the other remaining Section 207 projects.

STARVATION COLLECTION SYSTEM

The Starvation Collection system was completed in 1970. The system provides water for irrigation and M&I use, flood control, recreation, and fish and wildlife benefits in the Duchesne area of the Uinta Basin. Water storage is provided by the 167,310 acre-foot Starvation Reservoir, located on the Strawberry River just above its confluence with the Duchesne River. Starvation Reservoir is filled by winter and spring flows of the Duchesne and Strawberry Rivers. Duchesne River water is diverted by Knight Diversion Dam and conveyed to the reservoir through the Starvation Feeder Conduit.

Starvation Reservoir provides a benefit to irrigators along the Duchesne River in the form of water delivery in the late summer and fall when streamflows typically decline below the levels needed for irrigation diversion. Water stored in Starvation Reservoir provides 24,400 acre-feet of irrigation water and 500 acre-feet of M&I water for use in the Uinta Basin. Starvation Reservoir provides an average of approximately 43,000 acre-feet of water annually to irrigators to replace water diverted in the Strawberry Collection System to Strawberry Reservoir. The reservoir provides fishery benefits and public recreation.

STRAWBERRY AQUEDUCT AND COLLECTION SYSTEM

The Strawberry Aqueduct Collection System (SACS), completed in the late 1980s, diverts part of the flows of Rock Creek and eight other tributaries of the Duchesne River and conveys the diverted flows through the 36.8-mile-long Strawberry Aqueduct to Strawberry Reservoir. Upper Stillwater Reservoir, with a capacity of 32,009 acre-feet, serves as a regulating reservoir at the head of the Strawberry Aqueduct to provide temporary storage during the high runoff period for later diversion to the aqueduct and storage in Strawberry Reservoir. Currant Creek Reservoir, with a total capacity of 15,671 acre-feet, diverts Currant Creek and five tributaries into the Strawberry Aqueduct. The SACS provides 44,400 acre-feet of in-stream flows for fishery mitigation purposes annually.

The capacity of Strawberry Reservoir was enlarged from 273,000 acre-feet to 1,106,500 acre-feet by the construction of Soldier Creek Dam on the Strawberry River. Some of the water stored in the reservoir is released to the Strawberry River to provide fishery flows, but most of the stored water is for transbasin diversion to the Bonneville Basin. In addition to water supply, the SACS provides flood control, recreation, and fish and wildlife benefits.

UTE INDIAN TRIBAL DEVELOPMENT PROJECT

The purpose of the Ute Indian Tribal Development Project is to mitigate stream-related fish and wildlife losses on Indian lands and other specific fish and wildlife losses associated with the Bonneville Unit. Bottle Hollow Reservoir was constructed to compensate the Ute Indian Tribe for economic losses associated with stream fishing on the portion of Rock Creek located on the Uintah and Ouray Indian Reservation. With a

surface area of 420 acres, this reservoir provides fishing opportunities, wildlife habitat, and a basis for recreation-oriented enterprises to provide additional employment and income for tribal members. The Lower Duchesne River Wetlands Mitigation Project, currently being planned by the Mitigation Commission, DOI and the Ute Indian Tribe, will create, restore and otherwise enhance riparian wetland habitats along the Duchesne River, Utah, as partial mitigation for the Bonneville Unit, Central Utah Project. This project has been planned in conjunction with the Ute Indian Tribe of the Uintah and Ouray Agency and is intended to fulfill long-standing commitments to mitigate for impacts on Ute Indian tribal and non-tribal wetland-wildlife habitats arising from construction and operation of the Bonneville Unit, and to provide additional wetland/wildlife benefits to the Ute Indian Tribe. Originally proposed in 1965, this project has undergone recent planning revisions and a Draft EIS was issued in November 2003. Section 505(f) of CUPCA authorizes $10 million to be appropriated for the development of fishing and hunting facilities in lieu of the construction of Lower Stillwater Dam, a feature specified in the 1965 Deferral Agreement. In addition, Section 201(a)(1) of CUPCA authorized the appropriation of funds to implement this project and these measures.

DIAMOND FORK SYSTEM

The Diamond Fork System will allow for the transbasin diversion of Bonneville Unit water from Strawberry Reservoir in the Colorado River drainage basin to Spanish Fork Canyon in the Bonneville Basin. The Diamond Fork System will protect the Diamond Fork Creek and Sixth Water Creek riparian areas from damaging high flows. The Diamond Fork System has been constructed in three primary phases. The U.S. Bureau of Reclamation (Reclamation) constructed the first phase; the District constructed the second and third phases under the CUPCA. The first phase included the Syar Tunnel Inlet, Syar Tunnel, Sixth Water Aqueduct, and Sixth Water Flow Control Structure, which together form a continuous 7.3-mile conduit from Strawberry Reservoir to Sixth Water Creek and currently discharges water into Sixth Water Creek. The second phase included the Diamond Fork Pipeline from Monks Hollow downstream to the mouth of Diamond Fork Creek. The third phase recently completed, consists of a tunnel connection to the Sixth Water Shaft and Flow Control Structure, Tanner Ridge Tunnel, Upper Diamond Fork Pipeline, Upper Diamond Fork Flow Control Structure, connection to Upper Diamond Fork Tunnel, Diamond Fork Tunnel, and connection to the Diamond Fork Pipeline. Flow control structures are located at Sixth Water Creek, Upper Diamond Fork Creek, and near the confluence of Diamond Fork Creek and Spanish Fork River. The 19.8-mile-long conduit will convey Bonneville Unit water and Strawberry Valley Project (SVP) water to the mouth of Diamond Fork Canyon. The Diamond Fork System will remove a portion of the SVP irrigation flows that were historically conveyed down Sixth Water Creek and Diamond Fork Creek. In-stream flows specified in CUPCA will be released into Sixth Water Creek and lower Diamond Fork Creek as part of an effort to enhance fisheries in these streams. DOI has completed modifications to Strawberry Tunnel gates and Syar Tunnel gates to provide continuous release of flows to Sixth Water Creek, even when Syar Tunnel is shut down for system maintenance or repair.

MUNICIPAL AND INDUSTRIAL SYSTEM (M&I SYSTEM)

The Bonneville Unit M&I System provides M&I water to Salt Lake, Utah, and Wasatch Counties and supplemental irrigation water to Wasatch and Summit Counties. The system provides flood control, recreation, and fish and wildlife benefits. Jordanelle Dam is the major feature of the M&I System. The 300-foot-high dam located on the Provo River about 6 miles north of Heber City was completed in April 1994. The reservoir has an active capacity of 310,980 acre-feet. Provo River flow that historically flowed into Utah Lake is stored in Jordanelle Reservoir and in Deer Creek Reservoir. Utah Lake water originating from the Provo River would be replaced by Bonneville Unit return flows to the lake, water rights previously acquired by the District in Utah Lake, direct releases of water from Strawberry Reservoir to Utah Lake, and flows that are surplus to Utah Lake rights. The M&I water for northern Utah County (20,000 acre-feet per year) and Salt Lake County (70,000 acre-feet per year) is released from Jordanelle Reservoir or diverted under direct flow water rights and then re-diverted from the Provo River into the Olmsted Flowline. From this diversion, the water is conveyed to the Salt Lake County area by the 38-mile-long Jordan Aqueduct and to northern Utah County through the 14-mile-long Alpine Aqueduct. Water for use in Wasatch County is released from Jordanelle Reservoir for delivery through local irrigation canals, current secondary M&I systems, and a future M&I treated water system. Water for use in Summit County is provided from Washington, Trial, and Lost lakes in the headwaters of the Provo River or directly from the Provo River, both facilitated through an exchange with storage in Jordanelle Reservoir.

OTHER CUPCA PROGRAM COMPONENTS

In addition to providing direction for the completion of the six systems of the Bonneville Unit (in some cases with additional features), CUPCA authorized the following eight additional projects or program components listed below. Table 2-5 summarizes the following additional components, along with the six original systems of the Bonneville Unit.

- Wasatch County Water Efficiency Project and Daniel Replacement Project
- Conjunctive Use of Surface Water and Groundwater
- Additional Studies of Utah Lake Salinity and Provo River Water Supply
- Water Management Improvement
- Local Development
- Fish, Wildlife, and Recreation Mitigation and Enhancement
- Ute Indian Water Rights Settlement
- Uinta Basin Replacement Project

Descriptions of each component are provided in the following subsections.

TABLE 2-5
Bonneville Unit Components

Original Systems						New Components Authorized by CUPCA & Amendments								
						TITLE II							TITLE III	TITLE V
STARVATION COLLECTION SYSTEM	STRAWBERRY COLLECTION SYSTEM	M&I SYSTEM	UTE INDIAN TRIBAL DEVELOPMENT	DIAMOND FORK POWER SYSTEM	I&D SYSTEM	SECTION 202 DIAMOND FORK SYSTEM	SECTION 202 ULS SYSTEM[1]	SECTION 202 WCWEP And DRP	SECTION 202 CONJUNCTIVE USE OF SURFACE & GROUNDWATER	SECTION 202 ADDITIONAL STUDIES	SECTION 203 UINTA BASIN REPLACEMENT PROJECT	SECTION 207 WATER MANAGEMENT IMPROVEMENT	FISH, WILDLIFE, & RECREATION MITIGATION & CONSERVATION	UTE INDIAN TRIBE WATER RIGHT SETTLEMENT
• Knight Diversion Dam • Starvation Feeder Conduit • Starvation Reservoir • Duchesne River Canals	• Soldier Creek Dam and enlarged Strawberry Reservoir • Upper Stillwater Reservoir • Currant Creek Reservoir • Strawberry Aqueduct	• Jordanelle Reservoir • Jordan Aqueduct • Alpine Aqueduct • Stabilization of High Mountain Lakes (Trial, Lost, & Washington)	• Bottle Hollow Reservoir • Wildlife Habitat Development • Midview Reservoir Exchange • Lower Duchesne Wetland Mitigation Project	• Syar Tunnel • Sixth Water Aqueduct • Last Chance Powerplant • Monks Hollow Reservoir • Monks Hollow Powerplant • Diamond Fork Pipeline • Diamond Fork Powerplant	• Wasatch Aqueduct (tunnels and pipelines) • Mona-Nephi Canal • Mona, West Mona, and Nephi Pumping Plants • Nephi-Sevier Canal • Mosida area canals and pumping plants	• Sixth Water Connection to Tanner Ridge Tunnel • Tanner Ridge Tunnel • Upper Diamond Fork Pipeline • Upper Diamond Fork Flow Control Structure • Diamond Fork VortexShafts • Aeration Chamber and Connection to Upper Diamond Fork Tunnel • Diamond Fork Tunnel • Monks Hollow Overflow Structure • Diamond Fork Creek Outlet • Diamond Fork Pipeline Extension ▪ Diamond Fork Pipeline	• Power generation at Sixth Water and Upper Diamond Fork • Spanish Fork Canyon Pipeline • Spanish Fork to Provo Reservoir Canal Pipeline • Spanish Fork-Santaquin Pipeline • Santaquin-Mona Reservoir Pipeline • Mapleton-Springville Lateral Pipeline • Spanish Fork River Flow Control Structure	• Pump stations • River diversions • Lateral Piping • Pipeline to Daniel Irrigation Company • Wasatch Canal Rehabilitation • Timpanogos Canal Rehabilitation • Restoration of stream flows in upper Strawberry tributaries	• Sec. 202(a)(2) – Study and Development by Utah Division of Water Resources, in Salt Lake, Utah, Davis, Wasatch, and Weber Counties	• Sec. 202(a)(4) – Study of Utah Lake Salinity Control • Sec. 202(a)(5) – Study of Provo River augmentation (i.e. Strawberry-Provo Conveyance Study)	• Big Sand Wash Reservoir Enlargement • Big Sand Wash Diversion Dam • Big Sand Wash Feeder Pipeline • Big Sand Wash Roosevelt Pipeline • High Mountain Lakes Stabilization • Moon Lake Dam Modification	• Sec. 207(b) – Water Management Improvement Plan • Sec. 207(b)(5) – Water Conservation Credit Program • Sec. 207(c) - Water Conservation Pricing Study • Sec. 207(d) – Study of Coordinated Operations • Sec. 207(f) – Utah Water Conservation Advisory Board • Section 206 – Local development in Sanpete, Garfield and Piute Counties	• Diamond Fork Creek • Provo River and Utah Lake • Duchesne and Strawberry • Statewide Fish, Wildlife, and Recreation Enhancement • Fish, Wildlife, and Conservation	• Ute Indian Water Rights Settlement (an on-going effort)

Note:
[1]Alternate system to the I&D System. Authorized in CUPCA, Section 202(a)(1)(B).

Wasatch County Water Efficiency Project and Daniel Replacement Project

The Wasatch County Water Efficiency Project and Daniel Replacement Project improves water use efficiency in Heber Valley by delivering pressurized irrigation water and making it possible for farmers to convert from flood to sprinkler irrigation. Water conserved by the project is used to supplement flows of Heber Valley streams. The project provides the Daniel Irrigation Company with replacement water after its diversion from the upper Strawberry River basin was terminated as provided in Section 303 of CUPCA. Water conserved by the project from CUP agricultural supply is used to provide the replacement water. This project is described in the *Final Environmental Impact Statement–Wasatch County Water Efficiency Project and Daniel Replacement Project* (CUWCD 1996a), and the *Wasatch County Water Efficiency Project Feasibility Study* (CUWCD 1997a). The Mitigation Commission signed its Record of Decision on March 12, 1997, and the Department of the Interior signed its Record of Decision on March 21, 1997, both selecting the Proposed Action for implementation. Construction has been completed and the projects are operational. During the 2002 irrigation season, the Wasatch County Water Efficiency Project reported water conservation savings of 24,492 acre-feet.

The termination of the Daniel Creek Irrigation Company's transbasin diversion in 2001 and restoration of summer flow in the Strawberry River and its tributaries upstream of Strawberry Reservoir fulfilled a long-standing commitment as partial mitigation for the adverse effects of construction and operation of the SACS on riverine resources. The Wasatch County Water Efficiency Project and Daniel Replacement Project FEIS provided for restoring the natural flows in the upstream tributaries and increasing the water supply of Strawberry Reservoir by an average of 2,900 acre-feet. The Mitigation Commission is considering delivery of the 2,900 acre-feet from Strawberry Reservoir into: the Strawberry River below Soldier Creek Dam for in-stream flows; and/or delivery by exchange into tributaries below the SACS. In accordance with section 303 of CUPCA, a separate evaluation and NEPA compliance will be conducted by the Mitigation Commission regarding the designation of the 2,900 acre-feet.

Conjunctive Use of Surface Water and Groundwater

Conjunctive use of surface water and groundwater consists of the planning and development of systems to allow groundwater recharge, management, and conjunctive use of surface water and groundwater. Section 202(a)(2) of CUPCA authorizes the Utah Division of Water Resources to conduct this program in Salt Lake, Utah, Davis, Wasatch, and Weber counties and authorized federal funding for that purpose. This program has the following objectives: to provide greater efficiency in the use of water for federally-funded facilities as well as local sources, to prevent the further degradation of useable groundwater into aquifers of poor quality water, to reduce groundwater pumping costs, to conserve Utah's water resources, and to facilitate maintenance of year-round streamflows for fish, wildlife, and water quality valued in streams such as the Provo River. The program is intended to build upon studies and demonstration projects that have been undertaken by local entities in those counties. This program contributed toward the

construction of the Salt Lake County High Runoff Treatment and Storage Project developed and operated by the Jordan Valley Water Conservancy District.

Additional Studies of Utah Lake Salinity and Provo River Water Supply

Section 202 of CUPCA authorized several studies involving water management in the Bonneville Unit. One feasibility study documented several potential alternative plans for reducing salinity levels of Utah Lake. Two other studies involved water supplies of the Provo River. The first consisted of an operations study including development of a model to simulate river system operation (CUWCD 1998). A report on the computer model development for the Provo River was completed in January 1998. A final report on the second study, direct delivery of Colorado River Basin water from Strawberry Reservoir to the Provo River Basin, was completed in June 1997 (CUWCD 1997).

Water Management Improvement

Section 207 of CUPCA authorized a comprehensive program to improve water management within the CUP service area, including the establishment of water conservation goals to be achieved by year 2010. Specific purposes are to encourage water conservation and wise use, reduce the probability and duration of extraordinary water shortages, reduce water use and system costs, prevent unnecessary depletions that adversely affect environmental values or other public purposes, make effective use of available supplies before importation of water from the Bear River, and provide an objective basis for measuring achievements under this program. To achieve these purposes, the District has developed a Water Management Improvement Plan and is using its Water Conservation Credit Program to assist local agencies in funding measures. The Utah Water Conservation Advisory Board was established to assist the District in identifying criteria and priorities for water conservation projects. This Board was disbanded in 1995 and its function is now provided by the State Board of Water Resources. The District's water conservation goal was originally established at 39,294 acre-feet of savings per year. However, strong local support has indicated that a greater potential exists, and the District has increased its goal to 62,100 acre-feet of water savings per year after 2016. The District has funded approximately 30 CUPCA Section 207 projects with water savings in excess of the target water conservation goal. Water has been developed for operating the Provo River for a favorable spring spawning regime for June sucker in the lower Provo River.

Local Development

Section 206 of CUPCA authorized the development of projects for counties electing not to participate in the CUP. Funding for the projects are provided from federal appropriations and a rebate of ad valorem tax contributions previously paid by an eligible county to the District. Counties eligible for local development include Sanpete, Garfield, and Piute counties. Projects have been implemented in Sanpete and Garfield counties.

Fish, Wildlife, and Recreation Mitigation and Enhancement

Under Title III of CUPCA, the Mitigation Commission was established to develop plans and administer the mitigation and conservation program authorized by Congress. It is a joint lead agency for the preparation of the ULS EIS with the District and DOI. CUPCA established the Utah Reclamation Mitigation and Conservation Account, which has been funded by the federal government, the State of Utah, the District, and other project beneficiaries. The Mitigation Commission is charged with administration of this account and implementation of the mitigation measures enumerated in CUPCA, and for future fish and wildlife mitigation measures associated with the ULS.

Ute Indian Water Rights Settlement

Title V of CUPCA, administered by DOI, contains a variety of provisions for the benefit of the Ute Indian Tribe that, together with earlier agreements, form the Ute Indian Water Rights Settlement. The associated provisions are intended to put the Tribe in the economic position envisioned at the initiation of the CUP, by quantifying the Tribe's reserved water rights, allowing increased beneficial use of such water, and providing funds for economic development through agriculture and other enterprises that would put the Tribe in the same economic position it would have enjoyed had the 1965 Deferral Agreement been fully implemented.

Section 203(a) Uinta Basin Replacement Project

The Section 203(a) Uinta Basin Replacement Project was authorized through the following features in Section 203(a) of CUPCA: 1) Pigeon Water Dam and Reservoir with an enclosed pipeline conveyance system; 2) McGuire Draw Dam and Reservoir; 3) Clay Basin Dam and Reservoir; and 4) Farnsworth Canal rehabilitation. Project replacement features were developed from the authorized features in the Section 203 legislation. These replacement features were included and evaluated in the alternatives formulation and development process described in the Final Environmental Assessment/Finding of No Significant Impact for the Section 203(a) Uinta Basin Replacement Project dated October 2001. Feasibility of a Section 203 project was discussed and evaluated in the Uinta Basin Replacement Project Final Feasibility Study dated October 2001. The Section 203(a) Uinta Basin Replacement Project provides variations of those replacement features and alternatives to meet project needs to manage the water resources within the project area to provide early- and late-season irrigation water, M&I water supplies, water conservation, and to enhance facilities for environmental purposes. Under the October 2001 plan, the Section 203(a) Uinta Basin Replacement Project includes enlargement of Big Sand Wash Reservoir (12,000 acre-feet increased capacity), the new Big Sand Wash Feeder Diversion Structure, a new Big Sand Wash Feeder Pipeline, a new Big Sand Wash-Roosevelt Pipeline to deliver 3,000 acre-feet of M&I water to the city of Roosevelt, Utah, modification of the Moon Lake Dam outlet works to allow for winter operation to release minimum in-stream flows, and stabilization of thirteen high Uinta Mountain lakes

Central Utah Project Completion Program

Chapter 3

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

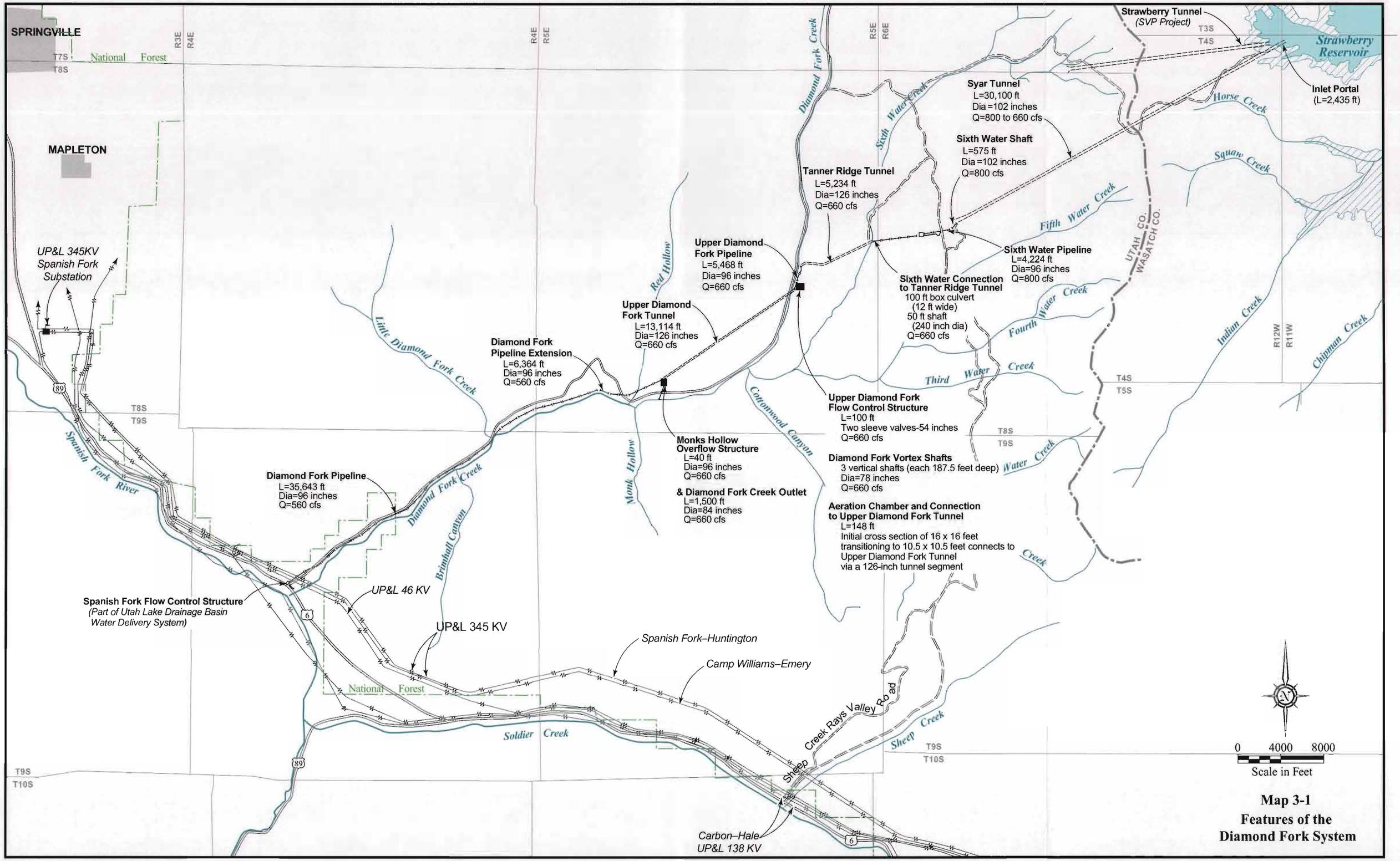
Chapter 3

The Diamond Fork System is the link between Strawberry Reservoir and features of the proposed Utah Lake Drainage Basin Water Delivery System (ULS System). The Diamond Fork System conveys water from Strawberry Reservoir through tunnels located near the crest of the Wasatch Mountain range into the Sixth Water Creek drainage basin located in Rays Valley. From there the water flows through a series of tunnels, pipelines and siphons down Diamond Fork Canyon to the confluence of Diamond Fork Creek and Spanish Fork River where it would be connected to the ULS System's Spanish Fork Canyon Pipeline at the Spanish Fork River Flow Control Structure.

The following features comprise the Diamond Fork System:

- Syar Tunnel and Inlet Portal;
- Sixth Water Aqueduct consisting of a pipeline, shaft and flow control structure;
- Sixth Water Connection to Tanner Ridge tunnel;
- Tanner Ridge Tunnel;
- Upper Diamond Fork Pipeline;
- Upper Diamond Fork Flow Control Structure;
- Diamond Fork Vortex Shafts;
- Aeration Chamber and Connection to Upper Diamond Fork Tunnel;
- Upper Diamond Fork Tunnel;
- Monks Hollow Overflow Structure;
- Diamond Fork Creek Outlet;
- Diamond Fork Pipeline Extension; and
- Diamond Fork Pipeline

Map 3-1 shows the location of these features. Additional maps are contained in Diamond Fork System Final Supplement of the Final Environmental Impact Statement of July 1999, amended 2001 and 2002.



Map 3-1
Features of the
Diamond Fork System

WATER DELIVERY

Syar Tunnel and Sixth Water Aqueduct would convey about 145,900 acre-feet of Strawberry Reservoir water per year (see Table 3-1). The maximum flow capacity of these features is 800 cfs when Strawberry Reservoir is full and 660 cfs when the reservoir level is at its operational minimum.

Strawberry Tunnel would release about 17,000 acre-feet of Strawberry Reservoir water and 3,600 acre-feet of tunnel seepage per year.

TABLE 3-1
Distribution of Transbasin Diversion From Strawberry Reservoir

Component	Average Acre-Feet per Year
Distribution of Transbasin Diversion Between the Tunnels	
Syar Tunnel release volume	145,900
Strawberry Tunnel release volume	17,000
Total	**162,900**
Distribution of Transbasin Diversion in Diamond Fork Creek and Diamond Fork Pipeline	
Diamond Fork Creek conveyance volume[1]	29,500
Diamond Fork Pipeline conveyance volume	133,400
Total	**162,900**

[1] In addition to this Strawberry Reservoir water, 29,400 acre-feet of natural flow and about 3,600 acre-feet of seepage from Strawberry Tunnel would be conveyed in Diamond Fork Creek as measured below the Upper Diamond Fork Flow Control Structure.

The District would operate and maintain the Diamond Fork System to provide minimum flows in Sixth Water and Diamond Fork creeks. Delivery of water to maintain minimum stream flows in Sixth Water Creek (from Strawberry Tunnel to Sixth Water Aqueduct) and Diamond Fork Creek below Diamond Fork Creek Outlet would receive priority and would govern release of water to the creek. Most of the time the water needed for SVP irrigation demand and M&I exchange would flow through the Diamond Fork Pipeline until it is operating at maximum capacity of 560 cfs.

Strawberry Reservoir water would be released as necessary to maintain minimum stream flows for Sixth Water Creek as specified in Section 303(c) of CUPCA. These minimum flows are not less than 32 cfs from May through October and not less than 25 cfs from November through April for Sixth Water Creek in the 6-mile stretch between the outlet of Strawberry Tunnel and the outlet of the Sixth Water Aqueduct.

Minimum flows in Diamond Fork Creek, from Diamond Fork Creek Overflow Structure near Red Hollow to the Spanish Fork River, would be not less than 80 cfs from May through September and not less than 60 cfs from October through April. Average annual releases from Strawberry Tunnel (about 17,000 acre-feet) and Diamond Fork Creek Outlet (12,500 acre-feet) would be combined with the average annual natural flow of Diamond Fork Creek (about 29,400 acre-feet) to maintain required minimum flows in Diamond Fork Creek downstream from Diamond Fork Creek Overflow Structure.

Syar Tunnel and Inlet Portal

Syar Tunnel begins at the west bank of Strawberry Reservoir. The tunnel, about 30,100 feet long, is a pressure type tunnel, 8.5 feet in diameter, with a capacity of 1,000 cfs when Strawberry Reservoir is full and 660 cfs when the reservoir level is at its operational minimum. The outlet portal is located at the western border of Strawberry Ridge in Rays Valley.

The completed Syar tunnel includes a 2,435-foot long inlet portal that was completed as part of the Strawberry Tunnel inlet rehabilitation. The principal features of the inlet rehabilitation are the inlet structure, the new tunnel, the connecting tunnel to the existing Strawberry Tunnel, and the control structure with the gate shaft and two 8 feet 6 inch by 10 feet slide gates. The inlet structure is reinforced concrete and consists of a trash rack structure, a seat for the inlet bulkhead gate, and a square-to-round transition to the new tunnel. The gate chamber contains two 8 feet 6 inch by 10 feet 6 inch hydraulically operated outlet gates with steel frames to control the flow from Strawberry Reservoir into the new inlet tunnel. The new inlet tunnel is a 10-foot 9-inch diameter, reinforced concrete, pressure tunnel.

Sixth Water Aqueduct (Pipeline, Shaft and Flow Control Structure)

The Sixth Water Aqueduct is located in the vicinity of Rays Valley and Fifth Water Ridge. The aqueduct connects Syar Tunnel to a pipeline leading to the Tanner Ridge Tunnel and consists of – a pipeline, shaft and flow control structure. The pipeline is 4,224 feet in length with a diameter of 96 inches and a capacity of 800 cfs. The Sixth Water Shaft is 575 feet in length with a diameter of 102 inches and a capacity of 800 cfs

Sixth Water Connection to Tanner Ridge Tunnel

This structure conveys water from the existing outlet structure at the end of Sixth Water Aqueduct to the Tanner Ridge Tunnel inlet portal on the opposite side of Sixth Water Creek. An inlet box is constructed adjacent to the existing weir, which is part of the existing flow-control facility, with an overflow weir that allows a discharge of water from Sixth Water Aqueduct to Sixth Water Creek.

The existing Sixth Water Aqueduct outlet bifurcation will accommodate hydroelectric generating plants of the ULS System. The 108-inch-diameter pipeline is about 100 feet

long with a capacity of 660 cfs and connects the inlet box to the Tanner Ridge Tunnel inlet portal. The mortar-lined steel pipe is encased in concrete beneath the natural grade of Sixth Water Creek. The connection structure includes a 36-inch outlet pipe and valve capable of discharging 60 to 80 cfs to Sixth Water Creek. This outlet provides emergency release of the minimum streamflows if the Tanner Ridge or Upper Diamond Fork tunnels have to be shut down for maintenance. In addition, it provides flexibility for any future Sixth Water Creek restoration plans. A 32-foot-wide pad has been constructed for crane access to maintain the connection and Tanner Ridge Tunnel.

Tanner Ridge Tunnel

Tanner Ridge Tunnel will convey water through Tanner Ridge, which lies between Sixth Water Canyon and Diamond Fork Canyon. The concrete-lined, 660 cfs tunnel is about 5,234 feet long with a finished diameter of 126 inches. The tunnel inlet portal is at nearly the same elevation as the outlet of Sixth Water Connection at the bottom of Sixth Water Canyon. Tunnel access is through the connection inlet box on the east side of Sixth Water Creek. The outlet portal is located in Diamond Fork Canyon, 2.3 miles upstream of Three Forks. It is set back horizontally 2,250 feet from the creek, about 385 feet higher than Diamond Fork Creek. A permanent, 30-inch-diameter, limited-access portal provides access for maintenance personnel.

Upper Diamond Fork Pipeline

The pipeline is 96-inches in diameter and about 5,485 feet long with a capacity of 660 cfs. The pipeline connects Tanner Ridge Tunnel to the Upper Diamond Fork Flow Control Structure.

Upper Diamond Fork Flow Control Structure

The Upper Diamond Fork Flow Control Structure consists of a 0.4 acre filled building pad, a buried pipeline bifurcation, a 45-foot wide by 80 foot underground vault housing sleeve valves with the roof slab at ground level, a 20-foot by 25-foot concrete-masonry control building, a vinyl-covered fence surrounding the building pad and a 110-foot long access road and 20-foot long box culvert bridge across Diamond Fork Creek.

The pipeline bifurcation splits the 660-cfs flow into two 54-inch diameter pipes that conveys the water to two sleeve valves, dissipating the pressure in the water before it enters the Diamond Fork Shaft.

Diamond Fork Vortex Shafts

The Diamond Fork Vortex Shafts consists of three vertical shafts, including two vortex shafts for conveying water down to the aeration chamber and Upper Diamond Fork Tunnel, and one vent shaft. The 78-inch diameter vortex shafts, dissipates most of the energy as the water is forced through the shafts in a vortex motion. The 78-inch diameter

vent shaft connects to the aeration chamber at the bottom of the shafts and provides maintenance access. Each shaft is 187.5 feet deep. The two vortex shafts have a combined capacity of 660 cfs.

Aeration Chamber and Connection to Upper Diamond Fork Tunnel

The aeration chamber and connection to the Upper Diamond Fork Tunnel is approximately 148 feet long from the bottom of the Diamond Fork Vortex Shafts to the existing Upper Diamond Fork Tunnel. The initial dimensions of the aeration chamber is 16' x 16' transitioning to 10.5' x 10.5' connecting the Upper Diamond Fork Tunnel via a 126-inch diameter curved tunnel segment lined with reinforced concrete and steel. The aeration chamber and connection structure has a capacity of 660-cfs.

Upper Diamond Fork Tunnel

Upper Diamond Fork Tunnel conveys water through Red Mountain (which lies between Diamond Fork Canyon and Red Hollow) connecting the Upper Diamond Fork and Diamond Fork pipelines. The steel and concrete-lined, 660-cfs tunnel is about 13,114 feet long, with a finished diameter of 126 inches.

Upper Diamond Fork Tunnel is a gravity tunnel that conveys water from the Upper Diamond Fork Flow Control Structure to the Monks Hollow Overflow Structure. The tunnel is constructed primarily in siltstone and conglomerate rock at a slope of 0.003 to 0.005 feet per foot. The tunnel is lined with concrete and with fiber optic cables in conduit attached to the ceiling throughout its length.

The tunnel outlet portal is located upstream of Monks Hollow and Red Hollow on the hillside north of Diamond Fork Creek, with an invert elevation of about 5,550 feet Mean Sea Level (MSL). The outlet portal is constructed at the toe of a southwest-facing hillside, and the existing slope and ground surface has been restored to approximate original contour following construction.

Monks Hollow Overflow Structure and Diamond Fork Creek Outlet

Monks Hollow Overflow Structure is a concrete structure approximately 90-by-20-foot located at the Upper Diamond Fork Tunnel outlet portal. The concrete structure contains two chambers mostly buried in the portal yard, with only the top of the structure visible at the portal yard surface. The first 30 feet of the structure includes a roof access hatch for tunnel inspection and maintenance and a floor culvert with a hand-operated slide gate to collect water to make up the amount necessary to meet minimum streamflows in Diamond Fork Creek below the Diamond Fork Creek Outlet. The first chamber receives flow from the pipeline exiting the tunnel and connects to the 96-inch diameter Diamond Fork Pipeline Extension, with a capacity of 560 cfs. This chamber has an internal overflow weir at 5,555 feet MSL matching the existing design head for the Diamond Fork Pipeline. The overflow weir discharges into the second chamber connected to the 96-

inch-diameter emergency overflow and bypass pipeline to Diamond Fork Creek Outlet. The second chamber is connected to the floor culvert and slide gate by a concrete channel to receive the bypass flows. The emergency overflow and bypass pipeline has a capacity of 660 cfs, terminating at the Diamond Fork Creek Outlet. Water that would flow over the weir at 5,555 feet MSL is released only in the event of an emergency overflow or requirement for bypass of the Diamond Fork Pipeline. The overflow structure and tunnel portal yard is fenced with a 6-foot-high chain-link fence to prevent public access.

The Overflow Structure is necessary to be sure that maximum head on the Diamond Fork Pipeline of 5,555 is not exceeded.

Diamond Fork Pipeline Extension

Diamond Fork Pipeline Extension, with a length of 6,364 feet and a capacity of 560 cfs, connects Monks Hollow Overflow Structure to the upstream end of the existing Diamond Fork Pipeline. The mortar-lined steel pipeline is installed underground following the ground surface, with a minimum 3-foot cover over the pipeline. It has air release and air vacuum valves, and vaults incorporating manway access at various points along its length, with the same design and surface features as the existing Diamond Fork Pipeline. The location of these appurtenances were determined as part of the design process. All vent structures are screened with vegetation, rocks and/or soil mounds and colored using appropriate earth-tone colors.

Diamond Fork Pipeline

The Diamond Fork Pipeline receives water from the Upper Diamond Fork Tunnel and Overflow Structure and conveys water outside the Diamond Fork stream channel to the junction of Diamond Fork Creek with the Spanish Fork River, thereby reducing erosion and providing considerable enhancement to the fishery in Diamond Fork. The buried pipeline has a diameter of 96 inches and a capacity of 560 cfs. The pipeline has a length of 35,643 feet.

Central Utah Project Completion Program

Chapter 4

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

Chapter 4

The purpose of the ULS System is to distribute a portion of the water developed by the other parts of the Bonneville Unit to areas along the Wasatch Front. The ULS System provides physical means of linking the operation of the other systems to make the overall management of the Bonneville Unit more efficient in meeting projected water needs. The system conveys water received from the Diamond Fork System to points of use in southern Utah County and to the Provo Reservoir Canal in northern Utah County for eventual M&I use in Salt Lake County.

DISTRICT WATER RIGHTS

The District owns primary and secondary water rights in Utah Lake. Under the ULS System Proposed Action, the DOI would acquire all of the District's secondary rights. These rights would amount to approximately 57,000 acre-feet and would yield at least 34,540 acre-feet. The acquired water rights would be used to convert or exchange water to Jordanelle Reservoir under approved water rights used in conjunction with the State Engineer's Utah Lake Distribution Plan.

CONSERVED WATER (SECTION 207 FUNDING)

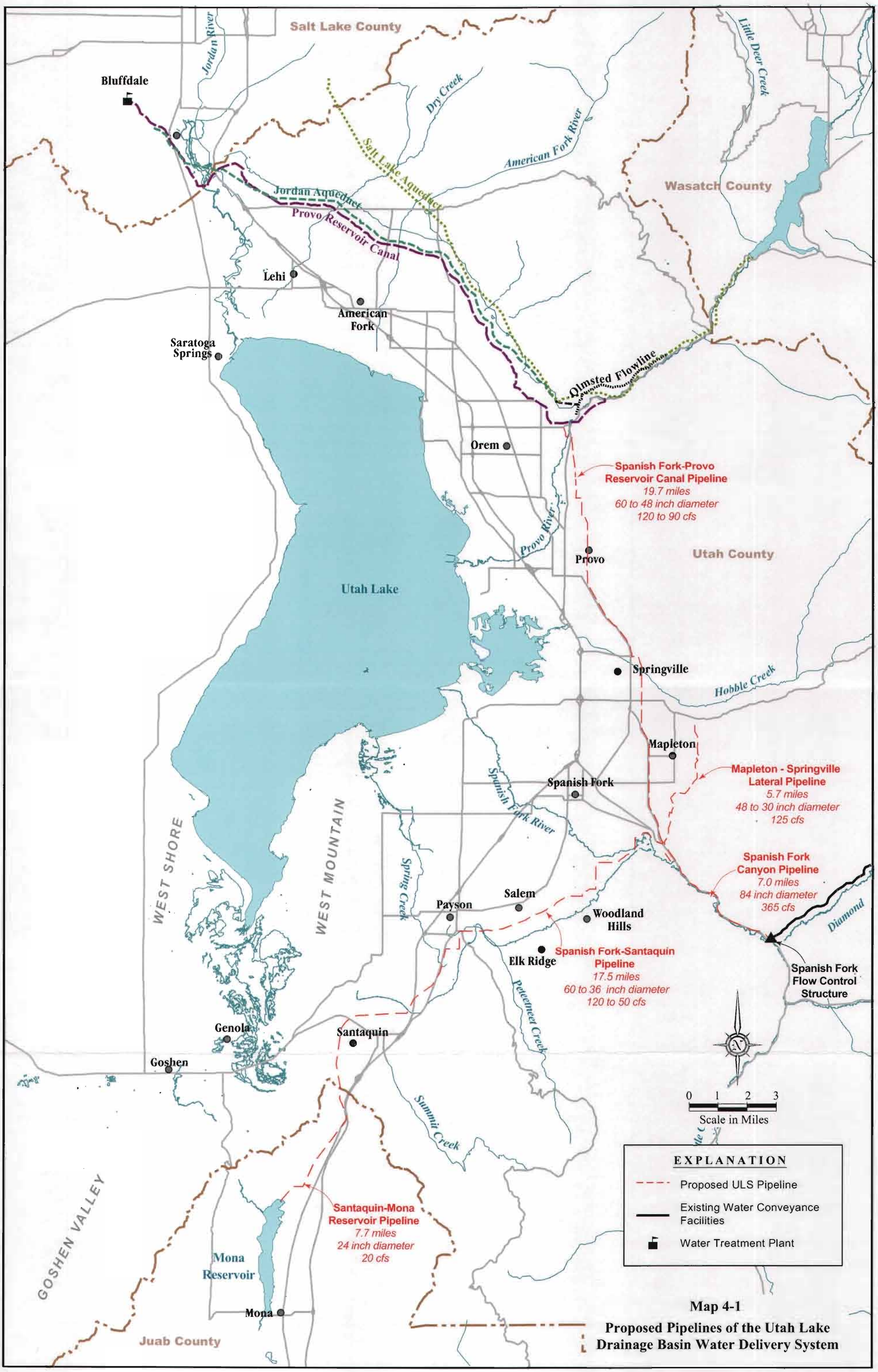
Features that could potentially be constructed under Section 207 funding include the Provo Reservoir Canal Enclosure, Mapleton-Springville Lateral Piping and numerous other smaller Section 207 projects. The cost for the Mapleton-Springville Lateral Pipeline is presented as part of the ULS System cost estimate. The Provo Reservoir Canal Enclosure is not a part of the ULS System but under a cost sharing arrangement the Federal government could contribute up to 65 percent of the construction of the project with this cost being reflected in the financial and economic analyses along with the other remaining Section 207 projects.

STRUCTURAL FEATURES OF THE ULS SYSTEM

Structural features of the ULS System include:

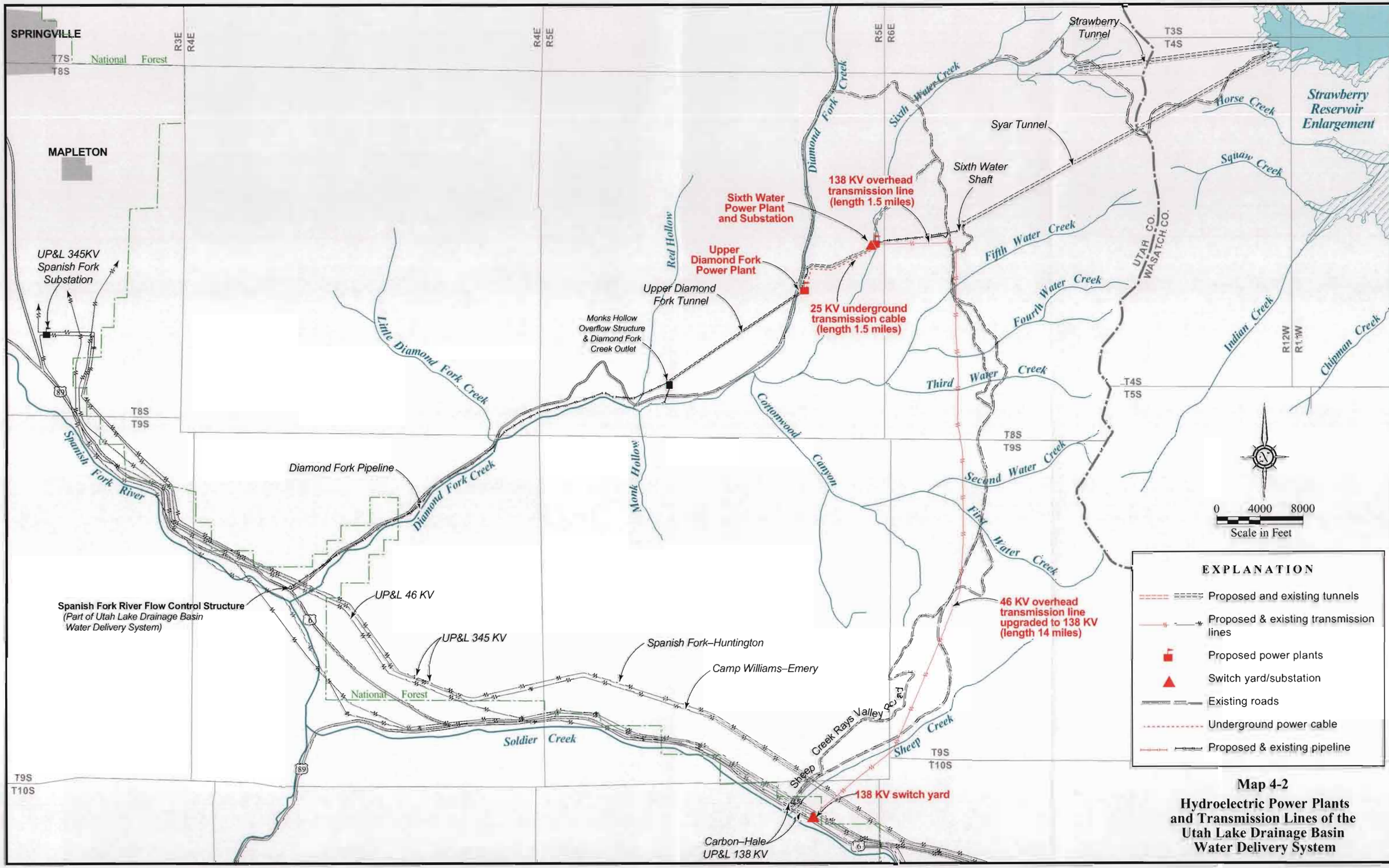
- Spanish Fork River Flow Control Structure (completed)
- Sixth Water Power Plant and Transmission Lines;
- Upper Diamond Fork Power Plant and Underground Transmission Cable;
- Spanish Fork Canyon Pipeline;
- Spanish Fork-Santaquin Pipeline;
- Santaquin-Mona Reservoir Pipeline;
- Spanish Fork-Provo Reservoir Canal Pipeline;
- Mapleton – Springville Lateral Pipeline; and
- North Utah County Section 207 Projects

The primary features of the ULS System are shown on Map 4-1 and Map 4-2.



Map 4-1

Proposed Pipelines of the Utah Lake Drainage Basin Water Delivery System



Map 4-2
Hydroelectric Power Plants and Transmission Lines of the Utah Lake Drainage Basin Water Delivery System

Table 4-1 contains a summary of information on the transmission lines.

TABLE 4-1
Summary of Generation Stations and Transmission Lines

Feature Name	Transmission Line Length (miles)	Capacity
Sixth Water Power Plant	N/A	45 MW
Sixth Water Transmission Line	12.9 (overhead type)	138 kV
Upper Diamond Fork Power Plant	N/A	5 MW
Upper Diamond Fork Underground Transmission Cable	1.6 (existing underground)	25 kV

Table 4-2 below is a summary of the pipeline lengths, diameters and capacity for the various pipelines that would be constructed as part of the ULS System.

TABLE 4-2
Summary of Pipeline Dimensions

	Length (miles)	Diameter (inches)	Capacity (cfs)
Spanish Fork Canyon Pipeline	7.0	84	365
Spanish Fork-Santaquin Pipeline	17.5	60 to 36	120 to 50
Santaquin-Mona Reservoir Pipeline	7.7	24	20
Mapleton – Springville Lateral Pipeline	5.7	48	125
Spanish Fork-Provo Reservoir Canal Pipeline	19.7	60 to 48	120 to 90

PEAK DESIGN FLOW IN PIPELINES

The ULS System has a transbasin diversion of 101,900 acre-feet which consists of a delivery of – 30,000 acre-feet of M&I water to southern Utah County; 1,590 acre-feet previously contracted to southern Utah County; 30,000 acre-feet of M&I water to Salt Lake County; and 40,310 acre-feet of M&I water to Utah Lake for exchange to Jordanelle Reservoir. Of the 40,310 acre-feet, about 16,273 acre-feet would be released down the Spanish Fork River, an average of 16,000 acre-feet would be conveyed through the Spanish Fork-Provo Reservoir Canal Pipeline and 8,037 acre-feet would be conveyed through the Mapleton-Springville Lateral Pipeline.

The peak projected operating flows through the ULS System pipeline facilities were obtained from the Water Supply Appendix (October 2004), and are summarized in Table 4-3.

TABLE 4-3 Peak Design Flows for Pipelines		
Pipeline	**Station Limits**	**Peak Flow (cfs)**
Spanish Fork Canyon Pipeline	Station 100+00 to 468+08	365
Spanish Fork-Santaquin Pipeline	Station 13+21 to 354+54 Station 354+54 to 393+25 Station 393+25 to 523+59 Station 523+59 to 790+80 Station 790+80 to 875+95 Station 875+95 to 938+26	120 110 105 70 60 50
Santaquin – Mona Reservoir Pipeline	Station 12+28 to 419+10	20
Mapleton – Springville Lateral Pipeline	Station 10+00 to 310+41	125
Spanish Fork – Provo Reservoir Canal Pipeline	Station 53+38 to 1011+00 Station 1011+00 to 1092+41	120 90

FLOWS THROUGH POWER GENERATION PLANTS

Flows used to size and analyze the power generation plants were compiled from the Water Supply Appendix (October 2004). At both the Sixth Water and the Upper Diamond Fork Power Generation Plants, approximately 35% of the average monthly flows are SVP water with the remaining 65% of the flow being Bonneville Unit water. Table 4-4 below summarizes the total (SVP and Bonneville Unit) average, minimum and maximum flows through both power generation plants. (Refer to the Power Appendix that accompanies the 2004 Supplement to the 1988 Definite Plan Report for the Bonneville Unit (October 2004) for monthly flows from 1950 through 1999.

TABLE 4-4 Projected Flows Through ULS Power Plants (Flows in cfs)												
Sixth Water and Upper Diamond Fork Power Plants												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Average	100	70	71	65	60	51	98	227	398	491	483	289
Maximum	222	190	182	147	138	135	181	460	570	649	622	423
Minimum	38	25	30	25	25	20	43	102	159	353	275	183

SPANISH FORK CANYON PIPELINE

The Spanish Fork Canyon Pipeline would connect to the existing 96-inch welded steel pipe bypass adjacent to the existing Spanish Fork River Flow Control Structure at the mouth of Diamond Fork Canyon and follow the U.S. Highway 6 alignment to the mouth of Spanish Fork Canyon near the intersection with U.S. Highway 89. The Spanish Fork Canyon Pipeline would cross the Wasatch Fault in Spanish Fork Canyon and would incorporate seismic design measures to minimize the risk of pipeline rupture.

The Spanish Fork Canyon Pipeline would be constructed in the northeast shoulder of U.S. Highway 6 and 0.8 miles of U.S. Highway 89. The steel pipeline would descend about 300 feet in elevation from the Spanish Fork River Flow Control Structure to the mouth of Spanish Fork Canyon. The pipeline would have about 15 air release valves; about 6 vacuum relief valves and about 6 drain valves and pipes located along its alignment. Valves would be located in concrete vaults offset from the pipeline alignment. The Spanish Fork Canyon Pipeline would connect with three ULS System pipelines near the Highway 6 and 89 junction:

- Mapleton – Springville Lateral Pipeline;
- Spanish Fork – Santaquin Pipeline; and
- Spanish Fork – Provo Reservoir Canal Pipeline.

The Spanish Fork Canyon Pipeline would generally parallel the north side of U.S. Highway 6 for approximately 6.2 miles and U.S. Highway 89 for approximately 0.8 miles. However there are several tight spots along the canyon where rock outcrops and talus slopes pinch the roadway against the river, resulting in little or no space to the north of the highway to place the pipeline. In these locations it will be necessary to either cut into the slope, extend the road shoulder, tunnel through the hillside, or place the pipeline in the road.

The hydraulic profile and plan view of the Spanish Fork Canyon alignment are located in Attachment A at the end of this appendix. The alignment was selected to incur minimum environmental impact, as well as for access and ease of construction.

Flows in the pipeline would be controlled by demands in the Mapleton – Springville Lateral, Spanish Fork-Santaquin-Mona Reservoir, and Spanish Fork-Provo Reservoir Canal pipelines. The 84-inch diameter pipeline would be designed with a capacity of 365 cfs, which reflects the combined capacity of these pipelines. In addition, the 84-inch pipeline could carry up to 10,200 acre-feet annually of SVP irrigation water acquired by the cities in southern Utah County on a space-available basis. Hydraulic profiles for the pipeline and alignment are contained in Attachment A of this Designs and Estimates Appendix.

SPANISH FORK -SANTAQUIN PIPELINE

The Spanish Fork -Santaquin Pipeline would connect to the Spanish Fork Canyon Pipeline about 0.8 miles northwest of the Highway 6/Highway 89 junction, and traverse approximately 17.5 miles in southern Utah County terminating just west of the Union Pacific Railroad tracks near Summit Creek Reservoir. Wherever possible, the alignment would be installed adjacent to existing roads and Union Pacific Railroad rights-of-way, as well as farmed or open areas to minimize environmental impacts and to accommodate construction access. Four pipeline segments totaling approximately 5.1 miles would be buried in non-road, farmed or open areas. This includes:

- About 0.3 miles from Highway 89 to 2400 east at Sutro,
- 0.4 miles along the western border of the Spanish Fork Golf Course,
- 0.7 miles from Salem Canal Road to 700 South in Payson,
- Approximately 3.7 miles from I-15 to the end of the pipeline

Other factors influencing the alignment include hydraulic grade line, desired turnout locations and individual community preferences for minimum turnout pressures. The hydraulic profile and plan view of the Spanish Fork – Santaquin Pipeline alignment are located in Attachment A at the end of this appendix.

Based on the ULS surface water hydrology results, this pipeline would be designed to accommodate a maximum flow of 120 cfs. Hydraulic capacity along the full length of the pipeline would range from 120-50 cfs. The pipe size would range from 60-inch diameter at the connection to the Spanish Fork Canyon Pipeline to 36-inch diameter past the Santaquin turnout. The pipeline would also accommodate on a space-available basis SVP irrigation water acquired by the cities.

Design of the Spanish Fork – Santaquin Pipeline would include turnouts to eight SUVMWA member communities in southern Utah County. The size and capacity of each turnout would vary depending on the off-peak demand for each turnout, which would be higher than the capacity dedicated to each turnout during peak operation. For example, suppose peak operating flows occur in the pipeline from 10 p.m. until 6 a.m. Santaquin, with an installed turnout capacity of 50 cfs and a dedicated capacity of 45 cfs, could only call 45 cfs during this peak period. However, once the peak demand was over, Santaquin could call up to their full 50 cfs to refill depleted storage tanks.

Dedicated turnout capacities were determined by combining historical and projected SVP irrigation water owned by cities and CUP secondary M&I deliveries for each city and then applying the historical annual distribution pattern for those deliveries to allocate the water throughout the year. An additional 5-10 cfs was added to each turnout to provide adequate capacity for peaking. Tables 4-5 and 4-6 summarize the annual distribution pattern as well as the dedicated and installed turnout capacity for each of the eight communities requesting turnouts. Hydraulic profiles for the pipeline and alignment are contained in Attachment A of this Designs and Estimates Appendix.

TABLE 4-5
Secondary M&I Deliveries Historical Annual Distribution Pattern
(% of annual volume)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
0%	0%	0%	2%	12%	18%	22%	25%	20%	0%	0%	0%

TABLE 4-6
Hydraulic Capacity and Pipe Size
Spanish Fork-Santaquin Pipeline

Turnout	Pipe Diameter (inches)	Pipeline Capacity (cfs)	Dedicated Turnout Capacity (cfs)	Installed Turnout Capacity (cfs)
Spanish Fork	60	120	15	25
Woodland Hills	54	120	5	10
Salem	54	120	25	25
Elk Ridge	48	110	5	10
Payson	48	105	25	40
West Payson	48	70	10	20
Genola	42	60	5	20
Santaquin	36	50	25	50
Mona Reservoir Turnout	30	20	5	35

SANTAQUIN – MONA RESERVOIR PIPELINE

The Santaquin – Mona Reservoir Pipeline would begin at Station 12+28 and connect to the Spanish Fork – Santaquin Pipeline immediately after the Union Pacific railroad track crossing. The alignment traverses approximately 7.7 miles to Mona Reservoir. The 24-inch diameter pipe would have a capacity of 20 cfs. Pipeline design would include a pressure reducing valve, weir box and a rip-rap lined outfall to minimize scouring and erosion at the turnout location. Hydraulic profiles for the pipeline and alignment are contained in Attachment A of this Designs and Estimates Appendix.

MAPLETON – SPRINGVILLE LATERAL PIPELINE

The Mapleton - Springville Lateral Pipeline with a design capacity of 125 cfs would begin at station 422+00 of the Spanish Fork Canyon Pipeline. The flow would enter a pressure reducing station where the pressure carried from the Diamond Fork System would be regulated to produce a beginning hydraulic grade line of 5,155 feet. Approximately 5.7 miles of the 48-inch diameter pipe would be installed within and thus replace the Mapleton Lateral Canal. The last mile of the existing lateral would be reconstructed and retained to convey the Maple Creek flows to Hobble Creek. The

remaining one mile of 48-inch pipeline would be constructed parallel to the retained canal to convey water to the existing Hobble Creek siphon for the Springville Irrigation District and to Hobble Creek for June sucker spawning and rearing flows and to provide other fish and wildlife benefits.

The alignment described above was selected to continue service to existing turnout locations, as well as the ability to utilize the Canal right-of way wherever possible to minimize impacts to the environment and to provide for construction access. The hydraulic profile and plan view of the Mapleton – Springville Lateral alignment are located in Attachment A of this document.

Strawberry Valley Project (SVP) water historically carried through the lateral would be conveyed through the Mapleton - Springville Lateral Pipeline, as well as an annual average of 11,037 ac-ft of ULS water to Hobble Creek to provide attraction flows for the endangered June sucker and to be exchanged to Jordanelle Reservoir.

Eleven valved turnouts would be installed along the Mapleton - Springville Lateral Pipeline to continue service to existing irrigation turnouts. Nine of these will be 7-cfs turnouts and, two will be 14-cfs turnouts. Water delivered to the Fingerhut property at the mouth of Spanish Fork Canyon would be by exchange with Spanish Fork City. In addition, a 90 cfs turnout at Maple Creek, and a stubbed 36 cfs turnout to the Springville Irrigation District would be installed. Table 4-7 summarizes the design capacity, pipe sizes and turnout capacity for the Mapleton – Springville Lateral Pipeline.

TABLE 4-7
Hydraulic Capacity and Pipe Size
Mapleton – Springville Lateral Pipeline

Turnout	Pipe Diameter (inches)	Pipeline Capacity (cfs)	Dedicated Capacity (cfs)	Installed Capacity (cfs)	Turnout Diameter (inches)
Turnout #2A (1)	n/a	n/a	2	n/a	n/a
Turnout #4	48	125	7	7	18
Turnout #5	48	125	7	7	18
Turnout #6	48	125	7	7	18
Turnout #7	48	125	7	7	18
Turnout #9	48	125	7	7	18
Turnout #10	48	125	7	7	18
Turnout #10A	48	125	7	7	18
Turnout #11	48	125	7	7	18
Maple Creek	48	125	90	125	48
Hopla Turnout	48	125	7	7	18
Mendenhall Turnout	48	125	14	14	24
Fulmer Turnout	48	125	14	14	24
Springville Irrigation District	48	125	36	36	36

(1) Water to be delivered by exchange with Spanish Fork City Secondary Water System.

SPANISH FORK-PROVO RESERVOIR CANAL PIPELINE

The Spanish Fork – Provo Reservoir Canal Pipeline would be constructed from the Spanish Fork Canyon Pipeline along U.S. Highway 89 through Mapleton, 400 East in Springville, then back to Highway 89 en route to Provo, and through residential streets in Provo, discharging to the Provo River, the Provo Reservoir Canal at 800 North in Orem, or the Jordan Aqueduct, a distance of 18 miles. The Provo Reservoir Canal would convey ULS water to Salt Lake County water treatment plants. Past the Provo Reservoir Canal turnout, the Spanish Fork – Provo Reservoir Canal Pipeline would continue to parallel the Provo Reservoir Canal for about another 1.5 miles, connecting to the Jordan Aqueduct near the Utah Valley Water Treatment Plant. This extended pipeline segment would allow conveyance of ULS water to Salt Lake County water treatment plants through the Jordan Aqueduct during the winter months (November – March), when the Provo Reservoir Canal is non-operational.

The pipeline alignment was selected to minimize impacts to the environment as well as traffic as it traverses through Mapleton, Springville and Provo, and generally follows existing roadways through those towns. Six pipeline segments would be buried in non-road, open or farmed areas as follows:

- 0.5 mile across State Hospital land near Seven Peaks Center in Provo;
- 0.5 mile across a semi-wooded area in Provo that is planned to be cleared for the extension of Seven Peaks Boulevard;
- 0.3 mile across Rock Canyon Park in Provo;
- 0.9 mile from 4525 North at Canyon Road across a field and hillside to U.S. Highway 189 in Provo;
- 0.3 mile from Heritage Road in Provo to State Route 52 (800 North) in Orem; and
- 1.5 miles along the Provo Reservoir Canal to the Jordan Aqueduct in Orem.

The hydraulic profile and plan view of the Spanish Fork – Provo Reservoir Canal Pipeline alignment are presented in Attachment A of this Designs and Estimates Appendix.

The Spanish Fork – Provo Reservoir Canal Pipeline would be designed with a capacity of 90 to 120 cfs. The pipe size would range from a 60-inch diameter pipe at the connection to the Spanish Fork Canyon Pipeline to a 48-inch diameter pipe at the Jordan Aqueduct.

The pipeline would be designed with three turnouts. The first turnout out would be for discharging water to the lower Provo River to assist in the maintenance of instream flows, and would be located at the crossing site near Heritage Park. An isolation valve and a pressure-reducing valve would be installed in a concrete vault that would discharge water to the river over a weir. A maximum turnout capacity of 75 cfs would be installed at this location. The second turnout would be approximately one half mile past the Provo River turnout at the Provo Reservoir Canal. Dissipation valves to relieve excess pressure would be required at the discharge point into the Provo Reservoir Canal. Pressure reducing valves would be installed in a concrete vault to dissipate the excess energy. Up to 120 cfs would flow into a weir structure and discharge into the Provo Reservoir Canal. The pipeline would continue past the Provo Reservoir Canal approximately another 1.5 miles to another overflow weir structure at the Jordan Aqueduct, near the Utah Valley Water Treatment Plant. The turnout would be designed with a capacity of 90 cfs. Table 4-8 summarizes hydraulic capacity, pipe sizes and turnout capacity for the Spanish Fork - Provo Reservoir Canal Pipeline.

TABLE 4-8 Hydraulic Capacity and Pipe Size Spanish Fork-Provo Reservoir Canal Pipeline				
Turnout	**Pipe Diameter (In)**	**Pipeline Capacity (cfs)**	**Installed Turnout Capacity (cfs)**	**Turnout Diameter (In)**
None	60	120	N/A	N/A
Provo River	54	120	75	48
Provo Reservoir Canal	54	120	120	54
Jordan Aqueduct	48	90	90	48

HYDROELECTRIC POWER PLANTS

Two hydroelectric power plants will be located in Diamond Fork Canyon. The site selections for the Sixth Water and Upper Diamond Fork Hydroelectric Power Plants were dictated by the location of the following flow control structures:

- Sixth Water Flow Control Structure
- Upper Diamond Fork Flow Control Structure

Flow releases through the Diamond Fork System and the ULS System aqueducts and pipelines would be dictated by CUP and SVP water needs and would be used for electric energy generation generate project power at the hydroelectric power plants. Furthermore, the supply of water to meet downstream demands would be maintained at all times even when the hydroelectric power plants would be out of service due to scheduled and unscheduled outages.

The hydroelectric power plants would be located adjacent to the flow control structures. In addition, the turbine(s) at each hydroelectric power plant would be linked to the associated flow control valve(s) of the pressure breakers in order to provide an uninterrupted flow in the water conveyance system (pipeline or aqueduct), should the plants be out of service.

See the Power Appendix for a more in-depth discussion on the hydropower plants.

Sixth Water Hydroelectric Power Plant

The hydroelectric power plant would be adjacent to the existing Sixth Water Flow Control Structure and the centerline of the unit(s) would be at an elevation of approximately 6,330 ft. Under normal operations, the Sixth Water Aqueduct draws water from the Strawberry Reservoir and discharges it into the Tanner Ridge Tunnel, but discharging to Sixth Water Creek is possible. The Sixth Water Aqueduct is approximately 33,800 ft long and includes the Syar tunnel, and the Sixth Water pipeline, shaft, and tunnel. The water level in the Strawberry Reservoir varies between elevations

7,604 ft and 7,560 ft, which are the normal maximum and minimum reservoir operating water levels, respectively. Therefore, the gross head in the hydroelectric power plant would vary between 1,289 ft and 1,245 ft.

Upper Diamond Fork Hydroelectric Power Plant

The Upper Diamond Fork hydroelectric power plant would be located in the upper reach of the Diamond Fork Canyon in the mountains of Central Utah. The plant would be located adjacent to the Upper Diamond Fork Flow Control Structure and the centerline of the unit(s) would be at an elevation of approximately 5,765 ft.

Substations and Transmission Lines

Sixth Water. The Sixth Water hydroelectric power plant would be comprised of a powerhouse in the vicinity of the existing Sixth Water Flow Control Structure, an associated 25/138 KV substation and a 15.5 mile long, 138 kV transmission line connecting the plant with the electrical grid at the existing UP&L 138 KV transmission line that runs along Highway 6. The powerhouse would contain a single, vertical shaft, generating unit. Power to operate the flow control valves is currently supplied by a 1.5 mile long, 7.2 kV line running from a trailer mounted 46/7.2 kV step-down transformer located approximately 1/4 mile south of the outlet of the Syar Tunnel. However, the plant output is expected to largely exceed the line capacity. A 45 MW installed capacity was selected for the Sixth Water hydroelectric power plant. Transmission voltage of 138 kV would be required to maintain the voltage drop and transmission losses within acceptable limits. In addition, a new 138 kV switchyard would likely be required by UP&L to provide operational flexibility to their transmission system.

Upper Diamond Fork. The Upper Diamond Fork power plant would be comprised of a surface powerhouse in the vicinity of the Upper Diamond Fork Flow Control Structure. It would connect to the electrical grid via the substation associated with the Sixth Water power plant. The power plant would have a rated installed capacity of 5 MW at the generator terminals. A 1.5-mile long, 25 kV transmission line currently exists between the Sixth Water and Upper Diamond Fork Flow Control Structure. The line consists of a 4/0 cable installed in the concrete lining of the Tanner Ridge Tunnel (1.05 miles) and in a trench (0.45 miles), and would connect the generator with the step up transformer in the Sixth Water substation. The operating voltage would be 13.8 kV, which would preclude the need for a transformer at Upper Diamond Fork hydroelectric power plant.

Table 4-9 summarizes the interconnection point to the grid and transmission line length and voltage selected for the various hydroelectric power plants.

TABLE 4-9
Summary of Power Generation Plants and Transmission Lines

Power Plants	Interconnection to Grid		Transmission Voltage (kV)	Transmission Line Length (miles)		
	Point of Intersection	Owner		Overhead	Buried	Total
Sixth Water	Transmission Line	UP&L	138	15.5	-	15.5
Upper Diamond Fork	Substation [1]	-	25	-	1.5[2]	1.5

[1]The Upper Diamond Fork hydroelectric power plant would interconnect to the substation of the Sixth Water hydroelectric power plant.
[2]The line from Upper Diamond Fork hydroelectric power plant to Sixth Water substation is an existing line and consists of a 4/0 cable installed in the concrete lining of the Tanner Tunnel (1.05 miles) and in a trench (0.45 miles).

GENERAL ENGINEERING CONSIDERATIONS

Pipelines – Hydraulic Analyses

Hydraulic analyses were performed using WaterCAD Modeling Software version 1.0. The WaterCad Software uses the Hazen-Williams equation, which is most frequently used in the design and analysis of water distribution systems. The Hazen Williams equation calculates hydraulic headloss using the following formula:

$$h_f = \frac{4.73LQ^{1.852}}{C^{1.85}D^{4.87}}$$

h_f = Headloss due to friction in the pipe
Q = Flow rate (cfs)
L = Length of pipe (ft)
C = Hazen-Williams roughness coefficient*
D = Internal pipe diameter (ft)

*The value of the Hazen-Williams roughness coefficient *C*, is based upon the type and condition of pipe material. A common approximate value of $C = 140$ is often chosen for initial calculations for new water pipes. An approximate *C* value of 100 is more appropriate for water pipes that have been in service for several years.

Hydraulic parameters established for the pipeline design included maximum and minimum velocity and pressure. In addition, the Hazen-Williams equation includes a roughness factor, C, which is constant over a wide range of (turbulent) flows. For all of the models in this study a C value of 130, which is appropriate for cement mortar lined steel pipe, while providing some conservancy, was used. Velocity in all pipes was targeted at approximately 8-10 fps. Maximum velocity of 12 fps was established to

minimize adverse effects to and erosion of the cement mortar lining that can be expected to occur at higher velocities.

Maximum working pressure was targeted at 300 psi, with an absolute upper range of 450 psi. Power generation plant would reduce excessive pressure developed as a result of the steep descent through Diamond Fork Canyon.

The beginning hydraulic gradeline for the Spanish Fork Canyon Pipeline is controlled by the existing Monks Hollow Flow Control Structure at the head of the Diamond Fork Pipeline. Based on the hydraulic analysis performed for the Spanish Fork – Nephi Irrigation System (see the D&E Appendix for the SFN), the hydraulic gradeline at this point would be "set to an elevation of no more than 5,545 feet". This elevation represents the weir overflow elevation of 5,555 feet minus ten feet to account for minor losses. Given this starting elevation, the minimum beginning hydraulic gradeline for the Spanish Fork Canyon Pipeline would be 5,442 feet, and a static hydraulic gradeline of 5,555 feet.

The minimum hydraulic gradeline and turnout pressure for all other pipelines were based on peak-projected flows for each pipeline obtained from the Water Supply Appendix (October 2004). Maximum turnout pressures reflect the static pressure head in the system. Table 4-10 summarizes the results of the hydraulic analysis for the ULS System facilities and pipelines.

TABLE 4-10
Summary of Hydraulic Analysis ULS System

Station	Length (ft)	Pipe Dia. (in)	Turnout	Capacity (cfs)	Min. Hydraulic Grade Line (ft)	Static Pressure (psi)	Min. Turnout Pressure (psi)
Spanish Fork Canyon Pipeline							
100+00		84	Beginning of Pipeline	365	5,442	218	N/A
422+00	32,200	84	Springville-Mapleton Lateral Pipeline	365	5,364	305	227
468+08	4,608	84	Flow Control Structure	240	5,359	305	224
Spanish Fork – Santaquin Pipeline							
13+21			Beginning of Pipeline	120	5,359	305	N/A
80+00	6,679	60	Spanish Fork	120	5,348	383	297
312+22	23,222	54	Woodland Hills	120	5,286	372	260
354+54	4,232	54	Salem	120	5,274	372	255
393+25	3,871	48	Elk Ridge	110	5,259	370	246
523+59	13,034	48	Payson	110	5,210	344	199
790+80	26,721	48	West Payson	105	5,163	331	166
875+95	8,515	42	Genola	70	5,142	288	113
932+75	5,680	36	East Santaquin	60	5,131	262	83
934+70	195	36	West Santaquin	50	5,131	268	89
938+26	356	36	Mona Reservoir Turnout	50	5,129	268	88
Mona Reservoir Pipeline							
12+28		24	Beginning of Pipeline	20	5,129	268	N/A
419+10	40,682	24	Mona Reservoir	20	4,884	3	2
Mapleton - Springville Lateral Pipeline							
10+07		48	Beginning of Pipeline PRV	125	5,364/5155	317/139	N/A
72+87	6,287	48	Turnout #5	125	5,123	139	125
87+70	1,483	48	Turnout #6	125	5,115	141	127
115+83	2,813	48	Turnout #7	125	5,101	147	124
163+32	4,749	48	Turnout #9	125	5,077	147	113
179+22	1,590	48	Turnout #10	125	5,068	149	112
180+84	162	48	Turnout #10	125	5,068	149	112

TABLE 4-10 (continued)
Summary of Hydraulic Analysis ULS System

Station	Length (ft)	Pipe Dia. (in)	Turnout	Capacity (cfs)	Min. Hydraulic Grade Line (ft)	Static Pressure (psi)	Min. Turnout Pressure (psi)
199+15	1,831	48	Turnout #10A	125	5,058	14	105
214+79	1,564	48	Turnout #11	125	5,050	149	104
259+80	4,501	48	Turnout (Hopla)	125	5,027	152	96
Canal		Canal	Hobble Creek	125	N/A	N/A	N/A
284+16	2,436	48	Mendenall Turnout	125	5,015	156	95
299+90	1,574	48	FulmerTurnout	125	5,007	156	92
305+20	530	48	Hobble Creek Turnout	125	5,004	156	89
310+41	521	48	Hobble Creek Structure	125	5,001	N/A	N/A
Spanish Fork-Provo Reservoir Canal Pipeline Operation with Provo Reservoir Canal							
53+38		60	Beginning of Pipeline	120	5,359	342	257
320+00	26,662	60	None	120	5,316	422	319
850+00	53,000	54	None	120	5,174	190	26
987+90	13,190	48	Provo River & Provo Reservoir Canal	120	5,108/4861	331/31	31
1011+00	2,310	48	Provo Reservoir Canal	120	4,853	5	4
Operation with Jordan Aqueduct							
53+38		60	Beginning of Pipeline	90	5,428	342	287
320+00	26,662	60	None	90	5,403	422	356
850+00	53,000	54	None	90	5,319	190	88
987+90	13,190	48	Provo River and Provo Reservoir Canal	90	5,281/5,200	331/173	173
1092+41	10,451	48	Jordan Aqueduct	90	5,184	7	5

As part of the Hydraulic analyses, the power plants were modeled as pressure reducing valves, and analyses were performed to determine the effects of the two power plants on the system as a whole. Table 4-11 summarizes the results of the hydraulic analysis.

TABLE 4-11
Summary of Hydroelectric Power Plants Hydraulic Analysis

Location / Name	Size (MW)	Hydraulic Grade Line (ft)		Pressure (psi)	
		Upstream	Downstream	Upstream	Downstream
Sixth Water	45	7,518	6,313	539	0
Upper Diamond Fork	5	6,313	5,755	241	0

In addition, detailed hydraulic analyses were performed on the power generation plants separately. Information on the design and analysis of the hydroelectric power plants is located in the Power Appendix to the 2004 Supplement to the 1988 Definite Plan Report.

POWER GENERATION CAPABILITIES

The energy generation estimated for the power plants is the net energy at the assumed metering point (assumed point of interconnection to the grid) and consists of the gross energy at the high voltage side of the transformer minus the following losses:

- Parasitic load (internal consumption);
- Scheduled maintenance and unscheduled outages; and
- Transmission losses.

GROSS ENERGY

An Excel spreadsheet energy simulation model was developed to estimate the power and energy capabilities of the proposed power plants. The model uses the monthly average water releases from the Strawberry Reservoir estimated for the period from 1950 to 1999 and assumes that the flows are constant and uniform throughout each day of the month.

For each month of the period of analysis (1950 to 1999), the model determines the following parameters as a function of both the flow release for that month and the plant rated flow:

- Hydraulic headlosses;
- Net head;
- Turbine efficiency;
- Overall plant efficiency (turbine, generator, and transformer); and
- Monthly power and energy at the high voltage side of the transformers.

Input data to the model consisted of estimated monthly average water releases, plant characteristics, and operating criteria. Hydraulic headlosses were estimated for each power plant using the following formula (Darcy-Weisbach):

$$h_f \equiv f \frac{LV^2}{2Dg}$$

where:

h_f = hydraulic friction headloss (in pipeline, tunnel, etc);
f = Darcy-Weisbach friction factor (see formula below);
V = water velocity (in pipeline, tunnel, etc.);
D = Internal diameter (pipeline, tunnel, etc.); and
g = acceleration of gravity (assumed at 31.174 ft/sec^2).

The Darcy-Weisbach friction factor (f) was calculated using the following formula:

$$f = \frac{1.325}{\ln\left[\frac{\frac{\varepsilon}{D}}{3.7} + \frac{5.74}{(\mathrm{Re})^{.9}}\right]^2}$$

where:

f = Darcy-Weisbach friction factor;
ε = wall roughness (pipeline, tunnel, etc.);
D = internal diameter (pipeline, tunnel, etc.); and
Re: = Reynolds number (see formula below).

$$\mathrm{Re} := \frac{VD}{\nu}$$

where:

Re = Reynolds number;
V = water velocity (pipeline, tunnel, etc.);
D = internal diameter (pipeline, tunnel, etc.); and
ν = water viscosity (at 50° F – 1.41 x 10^{-5} ft^2/sec)

The following criteria, parameters, and assumptions were used in estimating friction headlosses:

- Wall roughness (ε) for use in the Darcy-Weisbach formula:
  - Sixth Water concrete lined tunnel - 0.0787"
  - Sixth Water steel liner and pipeline - 0.0039"
  - Upper Diamond Fork concrete lined tunnel & shaft - 0.0787"
  - Upper Diamond Fork steel pipeline - 0.0039"

- Internal Diameter
  - Sixth Water Aqueduct - as constructed
  - Upper Diamond Fork Aqueduct - as constructed

- Length of water conveyance
  - Sixth Water (includes Syar tunnel) - 33,821 ft
  - Upper Diamond Fork - 11,183 ft

Other miscellaneous form losses resulting from water intakes, bends, transitions, bifurcations, valves, etc., were also estimated and included in the analyses.

Hydraulic headlosses were estimated for both power plants for the range of flows indicated in Table 4-12. A best-fit polynomial equation relating headloss with flow was derived and input into the model. The Power Appendix includes the characteristics of the water conveyance system considered for each power plant, the friction and form losses for the range of flows indicated above, and the best-fit polynomial equation relating headloss with flow.

TABLE 4-12
Turbinable Flows

Power Plant	Flow Range (cfs)
Sixth Water	0 to 600
Upper Diamond Fork	0 to 130

Equipment efficiency curves were defined for the turbines and generators. A turbine efficiency curve was defined for each installed capacity considered for the power plants. Turbine efficiency curves provide the relationship between flow and turbine efficiency and were defined using the computer program TURBNPRO, which is commercial software for sizing hydraulic turbines. Each point in the turbine efficiency curve was derived using the CrossPlot function of TURBNPRO by inputing the net head corresponding to the flow within the operating range of the turbine and reading the efficiency corresponding to the turbinable flow. The maximum flow through the turbine was limited to the plant rated flow. The Power Appendix includes the turbine efficiency curves for the selected optimum installed capacities for each power plant. The generator efficiency curves defined for the power plants provide the relationship between turbine output and generator efficiency and are presented in the Power Appendix.

PARASITIC LOAD

Generator excitation and other power plant service consumption losses such as pumping for cooling of bearings, heating, cooling, ventilation, lighting, etc. are drawn from the energy generated by the plant and are generally known as parasitic load. Table 4-13 summarizes the criteria used in estimating the parasitic load for the various plants:

TABLE 4-13 Parasitic Load			
Installed Capacity	Parasitic Load (% Installed Capacity)	Minimum Parasitic Load (kW)	
		Plant in Operation	Plant Out of Service
Up to 20 MW	0.7	30	10
Above 20 MW	0.5	90	20

The energy required for auxiliary systems and lighting when the plants are out of service will be purchased from the electric grid.

NET ENERGY GENERATED

The net energy generated (gross energy minus transmission losses) is shown in Table 4-14.

TABLE 4-14 Net Energy Generated (Kilowatt-hours)		
	Sixth Water (45 MW Plant)	Upper Diamond Fork (5 MW Plant)
October	See footnote[1]	887,668
November	6,764,660	2,897,593
December	3,740,125	1,841,050
January	5,630,533	2,272,205
February	5,865,647	2,289,426
March	4,940,069	2,169,365
April	4,972,873	2,143,837
May	8,807,533	2,882,354
June	14,800,265	3,375,009
July	23,678,890	3,435,885
August	27,897,696	3,396,971
September	27,186,007	3,282,314
TOTAL	**134,269,417**	**30,873,677**

[1] The Powerplant would not be operated for generation of electricity when flows through the Powerplant reach a value that is less than 10% of the rated flow for the Powerplant. This condition is described as the parasitic load and is discussed more thoroughly in Attachment A of the Power Appendix.

Central Utah Project Completion Program

Chapter 5

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

Pursuant to its repayment contract with the United States, the District will be responsible for the operation and maintenance of the Bonneville Unit. Oversight would continue to be provided by the Department of Interior (DOI).

Recreation, fish and wildlife facilities constructed, developed or included as part of the Bonneville Unit would be administered by the District, federal and State agencies in accordance with contracts and memoranda of understanding with the Mitigation Commission or DOI.

PROJECT HEADQUARTERS

Bonneville Unit facilities will be operated primarily from the District headquarters in Orem, Utah. The administrative staff will be located there, along with the Operation and Maintenance (O&M) Coordinator, and operators of the District's Supervisory Control and Data Acquisition System (SCADA system).

Facilities will be operated and maintained from three O&M centers, located in Orem, Duchesne, and Heber. Bonneville Unit features and their corresponding O&M centers are listed in Table 5-1.

Each O&M center will be staffed and equipped to carry out the majority of operations and maintenance functions for its assigned facilities, although overall coordination will come from Orem, and some personnel and pieces of heavy equipment will be shared between O&M centers.

STAFF ORGANIZATION

The District was organized under the laws of the State of Utah in 1964. An 18-member Board of Trustees' sets policy for the Districts' OM&R cost recovery. The board is comprised of representatives from the counties served by the CUP. The Governor of the State of Utah, following nomination by their respective county commissioners, appoints the board members. A general manager is appointed by the Board of Trustees to manage the daily operations of the District.

The operation of the Bonneville Unit facilities will be performed by the District, under the direction of the O&M Manager. The O&M staff is comprised of approximately 25 members that will increase to about 30 staff members with the ULS System.

Examples of disciplines required to administer the daily O&M functions of the District are:

- O&M Manager
- O&M Superintendent
- Secretaries
- Reclamation Reform Act (RRA) Clerk
- Dam Operators
- Powerplant Operators
- Electricians
- Heavy Equipment Operators
- Maintenance Workers
- Laborers
- Data Collectors/Monitors

TABLE 5-1
Bonneville Unit Facilities and Corresponding O&M Center Locations

O&M Center	Facility
Duchesne, Utah	1. Upper Stillwater Dam and Reservoir 2. Strawberry Aqueduct and Collection System 3. Currant Creek Dam and Reservoir 4. Soldier Creek Dam and enlarged Strawberry Reservoir 5. Starvation Collection System
Orem, Utah	Municipal and Industrial System 1. Jordanelle Dam and Reservoir 2. Jordan and Alpine Aqueducts 3. Olmsted Flowline 4. Upper Provo River Reservoirs Diamond Fork System 5. Syar Tunnel and Inlet Portal 6. Sixth Water Aqueduct 7. Sixth Water Connection to Tanner Ridge Tunnel 8. Tanner Ridge Tunnel 9. Upper Diamond Fork Pipeline 10. Upper Diamond Fork Flow Control Structure 11. Diamond Fork Vortex shafts 12. Aeration Chamber and Connection to Upper Diamond Fork Tunnel 13. Upper Diamond Fork Tunnel 14. Monks Hollow Overflow Structure 15. Diamond Fork Creek Outlet 16. Diamond Fork Pipeline Extension 17. Diamond Fork Pipeline Utah Lake Drainage Basin Water Delivery System 18. Spanish Fork River Flow Control Structure 19. Sixth Water Power Plant 20. Upper Diamond Fork Power Plant 21. Spanish Fork Canyon Pipeline 22. Spanish Fork – Santaquin Pipeline 23. Spanish Fork – Provo Reservoir Canal Pipeline 24. Mapleton-Springville Lateral Pipeline 25. Santaquin – Mona Reservoir Pipeline 26. North Utah County Section 207 Projects
Heber	Wasatch County Water Efficiency Project and Daniels Replacement Pipeline 27. Lateral Piping 28. Pipeline to Daniel Irrigation Company 29. Wasatch Canal Rehabilitation 30. Timpanogos Canal Rehabilitation 31. Restoration of Strawberry Flows in Upper Strawberry Tributaries

DUTIES OF O&M STAFF

Following is an example of the tasks that would be completed by the O&M staff. In some cases, one staff member may work on two or more tasks.

- Coordination of operations between the District and other agencies;
- Record-keeping, correspondence, and office management. In dispatcher role, takes daily orders for water from water users;
- Record-keeping and reporting requirements of the Reclamation Reform Act;
- O&M at dams including daily inspections, changes in gate settings, monitoring of water levels, inflows and discharges;
- O&M at power plants;
- Maintenance and repair of electrical, control, and alarm systems at dams, pumping plants, automatic valves and gates, and other project features;
- Operate heavy equipment and drive trucks. Assist with maintenance and repair of heavy equipment;
- Routine field work such as welding, surveying, carpentry, and other specialized tasks;
- General laborers to assist maintenance workers and operators as needed - to be hired on a temporary or seasonal basis; and
- Data collection and monitoring such as groundwater levels, irrigation return flows, instream flows, water quality, and other information as required to verify proper system operation and fulfillment of operating agreements.

PROJECT FACILITIES AUTOMATION AND MONITORING

To improve system efficiency, much of the Bonneville Unit of the CUP will be automated through a Supervisory Control and Data Acquisition System (SCADA). The SCADA system would consist of remote telemetry units (RTUs) linked to the operations centers at Duchesne, Heber, and Orem. The three O&M centers are equipped with the capability to monitor the operation of many Bonneville Unit features. Pumping plants, gates, turnouts, and other features will all be operable from the respective O&M centers and by local automation equipment installed at individual dams, pumping plants, and valves. In addition, the Diamond Fork System and the ULS System will be automated.

SCHEDULED MAINTENANCE

Maintenance scheduling and implementation will be a critical element in the operation of the Bonneville Unit since much of the project will require year-round operation with short periods available for shutdown for repairs. Prevention maintenance on pumping plants and transmission facilities will need to be scheduled so that it will not interfere with project delivery requirements. An annual review of O&M will be conducted to be sure that critical maintenance is not neglected. The District has established three reserve accounts (discussed in Chapter 6) to which funds are being accumulated to provide for the major replacements associated with pumping plants, automation systems, and other project features with a short economic life.

Frequency of maintenance may be –

- Daily;
- Every two weeks;
- Twice annually;
- Annually; or
- Some other interval as required

Some typical schedule maintenance activities are listed in Table 5-2.

TABLE 5-2
Typical O&M Activities

Dams and Reservoirs	Diversion Dams
1. General inspection 2. Weed control 3. Rodent control 4. Repair of erosion damage 5. Inspection and repair of fencing 6. Embankment and access road grading 7. Inspection and repair of riprap 8. Metal surface repainting 9. Piezometer monitoring 10. Drain monitoring	1. General inspection 2. Weed control 3. Rodent control 4. Repair of erosion damage 5. Inspection and repair of fencing 6. Embankment and access road grading 7. Inspection and repair of riprap 8. Metal surface repainting 9. Inspection and repair of turnout structures 10. Sediment removal
Pumping Plants	**Pipelines**
1. General inspection 2. Inspect, clean, and calibrate control equipment 3. Lubricate bearings 4. Inspect all incoming lines, insulators, and transformers for defects or damage 5. Vacuum and wipe clean interiors of motor control and other electrical panels 6. Inspect, clean, and calibrate flow measuring 7. Inspect and clean air and vacuum valve assemblies and surge protection facilities 8. Repaint metal surfaces 9. Clear sediment and debris from sumps and forebays 10. Winterize pumps	1. Inspect turnouts and flowmeters 2. Exercise isolation valves 3. Inspect and clean air and vacuum valves 4. Inspect tank interiors and exteriors 5. Monitor cathodic protection 6. Weed control 7. Repair of erosion damage to right-of-way 8. Inspect and repair pipe lining 9. Monitor pipeline crossing construction 10. Monitor right-of-way encroachment

TABLE 5-2 (continued)
Typical O&M Activities

Turnouts	Power Plants
1. General inspection 2. Weed control 3. Rodent control 4. Repair of erosion damage 5. Inspection and repair of fencing 6. Inspection and repair of inlet, outlet, and spillway structures 7. Embankment and access road grading 8. Inspection and repair of rip-rap 9. Silt removal 10. Metal surface repainting	1. General inspection of all buildings and structures 2. Monitor status of all mechanical and electrical systems for changes, noise or vibration. 3. Seasonal housekeeping in and around structures 4. Routine cleaning and lubrication of all mechanical equipment per manufacturer recommendation 5. Cleaning and inspecting electrical controls, equipment and wiring 6. Routine testing of valves normally open or normally closed for proper functioning 7. Routine testing of mechanical equipment, for proper functioning especially during long periods of non-use 8. Grounds keeping 9. Interior and exterior surface repainting 10. Monitor head and tail water levels for change

RECREATION FACILITIES

General Description

Recreational developments at the Bonneville Unit facilities accommodate the increasing recreational demands resulting from the rapidly growing population of the area and the increasing popularity of outdoor recreation. Recreational facilities include boat launching ramps, vehicle and trailer parking areas, campgrounds, picnic areas, rest rooms, and potable water supplies. Septic waste at the recreation sites is disposed of in State-approved septic systems. Power lines have been installed and access roads constructed to serve the recreation areas.

Most of the proposed recreational facilities are located in or near the Wasatch Front, where the demand for outdoor recreational opportunities is greatest. Strawberry Reservoir, Jordanelle Reservoir, and recreational facilities in Diamond Fork have the

greatest potential for satisfying recreational needs. Upper Stillwater and Currant Creek Reservoirs would satisfy recreational needs in the Uinta Basin area and for Wasatch Front individuals wanting a high mountain recreational experience. Dispersed recreational opportunities are provided at the 15 upper Provo River reservoirs. Twelve of the lakes have been stabilized and three have been rebuilt with campgrounds installed at the three rebuilt dams. Operational changes at Utah Lake would result in a net increase in recreational opportunity and use; however, no new recreation facilities are planned for this area.

Fishing is expected to constitute one of the most important uses of the reservoirs, along with sightseeing, camping, water skiing, boating, and picnicking. In addition, significant fisheries exist in the streams below the reservoirs.

Administering Agencies

Recreation, fish and wildlife facilities developed or acquired, as part of the Bonneville Unit would be administered by federal and State agencies in accordance with contracts and memoranda of understanding with U.S. Bureau of Reclamation. The Ashley National Forest administers Upper Stillwater recreational facilities. The Uinta National Forest administers Currant Creek Reservoir, Strawberry Reservoir, and Diamond Fork recreational facilities. The Wasatch-Cache National Forest administers recreational facilities at the 12 stabilized upper Provo River reservoirs.

The Utah Division of Parks and Recreation administer Jordanelle Reservoir and associated access on the Provo River. The Utah Division of Wildlife Resources and the Forest Service administer wildlife lands, reservoir fisheries, and stream fisheries. Recreation at Utah Lake will continue to be managed by the Utah Division of Parks and Recreation.

Upper Stillwater Reservoir Recreation

Recreational facilities have a limited land base at Upper Stillwater Reservoir and, as a result, most of the recreational facilities are located along the river below the dam. These facilities have vault toilets, potable water, paved roads, and parking.

Starvation Reservoir Recreation

Starvation Reservoir recreation has been managed by the Utah Division of Parks and Recreation since 1970. The reservoir became a popular brown trout fishery during its first few years. During the past few years, however, it has been more difficult to catch these trout. Walleye were added to the reservoir to appeal to a broader range of fishermen interests. The slowdown of the fishing has focused attention on other water-oriented activities. Swimming and sunbathing along the large beach area at the State park has become more popular, and water skiing is replacing much of the fishing.

Currant Creek Reservoir Recreation

The Currant Creek recreational area was completed in the fall of 1983 to accommodate the increased recreational opportunity resulting from the new reservoir. The recreation area is located adjacent to Currant Creek Reservoir on the west side. The recreation area has paved roads and parking areas as well as flush toilets and potable water.

Strawberry Reservoir Recreation

The Strawberry Reservoir recreation plan provided for development of two major camps at Soldier Creek and Strawberry Bay, several fisherman access points around the reservoir, and a visitor center/administrative area. The major developments and the visitor center/administrative area are equipped with flush toilets, paved roads and parking, fish cleaning facilities, RV sewage dump stations, and potable water. The remaining facilities have paved roads and parking, as well as vault rest rooms.

Jordanelle Reservoir Recreation

Facilities at Jordanelle Reservoir provide for increased recreational opportunity from the new reservoir. Recreational facilities include Hailstone Campground on the western side of the reservoir and at the Rock Cliff Campground on the east arm of the reservoir. Both recreation areas have camping and picnic units, fish cleaning stations, rest rooms, and potable water. In addition to these facilities, Hailstone has boat launching ramps and vehicle and trailer parking.

Stabilized Upper Provo River Reservoirs Recreation

Facilities at the stabilized upper Provo River reservoirs will provide for increased recreation opportunity and enhanced recreation resulting from the stabilization. Recreation facilities include campgrounds at Washington, Trial and Lost Lakes and a trailhead at Crystal Lake.

Central Utah Project Completion Program

Chapter 6

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

This chapter presents the annual reimbursable and non-reimbursable operation, maintenance, and replacement (OM&R) costs for the entire Bonneville Unit. The OM&R costs apply to water supply, recreation, electrical generating plants, power for project pumping, loss of power at existing generating plants, mitigation features, flood control, and fish and wildlife facilities.

The presentation of OM&R costs is structured in a manner that is representative of how the District routinely cares for the facilities of the Bonneville Unit and the recovery of yearly expenses in the exercise of these duties.

The display of information is complicated by the fact that Bonneville Unit features were completed under both the U.S. Bureau of Reclamation and CUCPA. In addition some costs are reimbursable from irrigation and municipal and industrial (M&I) water users while others or not reimbursable. Expenditures are divided into sub-categories, which stem from Sections 5 and 8 of the Colorado River Storage Project (CRSPA) Act of 1956 (P.L. 485) under which construction of the Central Utah Project was authorized. Section 5 costs are multi-purpose costs. Section 8 costs are for specific recreation and fish and wildlife facilities, and can be for either enhancement or mitigation. Section 5 and Section 8 are discussed more appropriately in the Financial and Economic Appendix.

OM&R FOR IRRIGATION AND M&I

The primary focus of this the sub-section is on the costs that are reimbursable from irrigation and M&I water users. As described in the following subsections the OM&R costs for irrigation and M&I uses includes:

- OM&R for water supply facilities
- OM&R Reserve Funds

In estimating annual OM&R costs, the availability of data on OM&R from previous reports was relied upon to the greatest extent possible. Where previous estimates did not exist such as for the ULS System, the District's OM&R expenses during year 2002 was used as a basis in projecting the future OM&R. The District's OM&R year runs from November 1st through October 31st of each year.

Historical OM&R – Year 2002

The OM&R costs for water delivery facilities is determined on a yearly basis by the District in a step-wise process presented below. *(Note: This step-wise process is subject to change as circumstances warrant).* The historical OM&R using the most recent years of operation of 2002 is used as a basis for estimating what the future OM&R is expected to be with both current operation and the future operation of the Diamond Fork System and the ULS System.

- Step 1 - Yearly OM&R is recorded by the District's OM&R staff for each water delivery feature during the OM&R year of operation as expenses and labor occur.
- Step 2 - Determine yearly OM&R for delivery of non-Bonneville Unit water (irrigation and municipal and industrial).
- Step 3 - Calculate the portion of OM&R allocated to fish/wildlife and flood control and to the Instream Flow Agreement (Uinta Basin) of 44,400 acre-feet.
- Step 4 - Compute Bonneville Unit OM&R costs in dollars per acre-foot for irrigation and M&I water deliveries.
- Step 5 - Bonneville Unit OM&R is allocated to each project water user for irrigation and M&I water based on the unit OM&R costs computed in Step 4.
- Step 6 - Invoicing for previous years OM&R expenses

The OM&R costs presented include expenditures for labor, materials, supplies and services necessary to operate and maintain facilities of the Bonneville Unit and to provide for replacement of facilities during the economic life of the project.

Step 1 – Year 2002 OM&R Expense for Each Water Delivery Feature

Operationally, the Bonneville Unit of the Central Utah Project (CUP) is comprised of five systems: the Strawberry Aqueduct and Collection System (SACS), the Starvation Collection System, the Municipal and Industrial System (M&I System), the Diamond Fork System, and the ULS System. Although each system performs a unique function, they are all interdependent. The Bonneville Unit system not related operationally is the Ute Indian Tribal Development.

Features operational in year 2002 and other elements that are related to the delivery of water are summarized in Table 6-1. Table 6-2 summarizes the District's OM&R expenses for Years 2002.

TABLE 6-1
Bonneville Unit Features Operational in 2002

Wasatch Element	Uinta Element	Other Elements
Alpine Aqueduct	Currant Creek	Jordanelle Operating Agreements
Olmsted Flowline & Intake	Soldier Creek	Gaging Stations & District Assessment
Syar Inlet & Tunnel	Starvation	Reclamation Reform Act
Sixth Water Aqueduct	Upper Stillwater	Project Water – Wasatch County
SCADA System	(SACS)	Project Water – Summit County
	SCADA Uinta	Project Water – southern Utah County

TABLE 6-2 Bonneville Unit OM&R (Year 2002 – Actual Costs Incurred by the District)	
Element	**Total OM&R**
Bonneville (Wasatch) Element	$494,633
Uinta Element	$922,238
Other Elements	$340,487
Total OM&R forYear 2002	**$ 1,757,358**

Step 2 - Determine yearly OM&R for delivery of non-Bonneville Unit water (irrigation and municipal and industrial.

Charges for OM&R on delivery of non-Bonneville Unit water is computed separately for each water user group. During 2002 charges for OM&R associated with irrigation and M&I water deliveries amounted to $93,243 dollars and $96,787 dollars respectively for a total of $190,030.

Table 6-3 shows the entities to which non-Bonneville Unit water deliveries were made in 2002 and the OM&R costs allocated to these entities.

TABLE 6-3 Year 2002 – Non-Bonneville Unit OM&R Irrigation and M&I Deliveries			
Irrigation Entity	**Year 2002 – OM&R**	**M&I Entity**	**Year 2002 – OM&R**
SWUA	$79,318	Orem	$21,940
Provo Reservoir Canal	$6,135	Provo	$7,360
Wasatch Canal	$2,129	JVWCD	$17,510
Timpanogos Canal	$3,188	MWDSLS	$5,957
Extension Canal	$595	Lindon	$3,547
Provo	$502	Highland	$3.026
Provo (late)	$156	Pleasant Grove	$2,030
Washington Canal	$1,220	USBR (non-project fish)	$0
		UP&L	$31,640
		Replacement Water	$550
		Duchesne	$2,801
		East Duchesne	$427
Total	**$93,243**		**$96,787**

Step 3 - Calculate the portion of OM&R allocated to fish/wildlife and flood control and to the 1980 Stream Flow Agreement (Uinta Basin) of 44,400 acre-feet.

Under a Interim Memorandum of Agreement (MOA) dated February 23, 1999 between the U.S. Bureau of Reclamation and the District a method was agreed too for payment of non-reimbursable OM&R expenses for the Stream Flow Agreement dated February 27, 1980 and amended September 13, 1990. *(Note: This MOA is to continue until a final cost allocation has been approved for the Bonneville Unit.)* In addition, the MOA provided a method to calculate OM&R for fish/wildlife and flood control for the Bonneville Unit.

Table 6-4 displays the results of calculations using the procedures in the MOA. Future OM&R would likely be different depending on the final Bonneville Unit Cost Allocation that is being made as part of the ULS System planning effort and is documented in the Financial & Economic Appendix.

TABLE 6-4
Calculation of OM&R
For 44,4000 AF and Fish/Wildlife and Flood Control

Year 2002 OM&R	$ 1,757,358
Minus 7% of year 2002 OM&R	**- $123,015**[1]
Minus non-project irrigation water	- $93,243
Minus non-project M&I water	- $96,787
Adjusted OM&R	$1,444,313
Multiply adjusted OM&R by ratio of 44,400 divided by 261,360 (ratio = 0.16988)	0.16988
Annual OM&R for 44,400 AF	**$ 245,361**

[1] This amount is the annual OM&R for fish and wildlife and flood control computed using procedures set forth in the MOA.

Step 4 - Bonneville Unit OM&R in dollars per acre-foot is computed for irrigation and M&I water deliveries.

The next step in the process is to determine the unit cost of the OM&R water deliveries. The OM&R for fish/wildlife, non-project water, and for the Uinta Basin instream flow of 44,400 acre-feet was subtracted from the total year OM&R of $1,757,378 to arrive at the OM&R of $1,198,952. This number is divided by the planned water deliveries of 219,960 acre-feet (the amount prior to ULS planning efforts) for both irrigation and M&I to arrive at the unit rate for OM&R of $5.45. *(Note: With the ULS System the planned combined Bonneville Unit water deliveries for irrigation and M&I would be 196,213 acre-feet).* Table 6-5 displays this arithmetic sequence. This $5.45 is used to determine the charges to be applied to the major water users.

TABLE 6-5 Determination of Bonneville Unit OM&R For Project Water (Irrigation and M&I)	
Year 2002 OM&R	$ 1,757,358
Minus F&WL & Flood Control	- $ 123,015
Minus 44,400 instream flow	- $ 245,361
Minus Non-Project Irrigation water	- $93,243
Minus Non-Project M&I water	- $96,787
Adjusted OM&R	$ 1,198,952
Planned Water Deliveries As of Year 2002	219,960 ac-ft
Unit Rate for Bonneville Unit OM&R for 2002	**$ 5.45 per ac-ft[1]**
[1] Does not include the reserve account funds.	

Step 5 - Bonneville Unit OM&R is allocated to each project water user based on the OM&R and the unit OM&R computed in Steps 2, 3 and 4 above.

Table 6-6 shows the amount of annual OM&R charges to the major uses of water. During Year 2002 the major categories for billing purposes are: irrigation (allocated and unallocated water and temporary irrigation), municipal and industrial (allocated and unallocated water), non-Bonneville Unit irrigation and M&I water, flood control, fish and wildlife, and 1980 Stream Flow Agreement of 44,400 acre-feet for the Uinta Mountain streams.

TABLE 6-6 Project and Non-project Water (Year 2002 – Costs for Each Service Area)	
Bonneville Unit Water	**Year 2002 – OM&R**
Project Irrigation Water @ Unit Rate of $5.45 per ac-ft	
(1) Allocated Project Water of 34,794 acre-feet	$189,627
(2) Unallocated Project Irrigation Water Supply of 77,806 acre-feet	$424,043
Subtotal Irrigation	**$ 613,670**
Project M&I Water @ Unit Rate of $5.45 per acre-foot	
(1) Allocated M&I Water Supply of 44,673 acre-feet	$243,468
(2) Unallocated M&I Water Supply of 62,687 acre-feet	$341,644
Subtotal M&I	**$585,112**
Project Water for F&WL, Flood Control, & 44,400 acre-feet	
(1) USBR - F&WL and Flood Control	$ 123,015
(2) USBR – 44,400 acre-feet for Uintah Basin Instream Flow	$ 245,361
Subtotal for F&WL, Flood Control & Instream Flow	**$ 368,376**

TABLE 6-6 (continued) Project and Non-project Water (Year 2002 – Costs for Each Service Area)	
Non-Bonneville Unit Water Delivery OM&R charges	
(1) Non-Project Irrigation Water	$ 93,243
(2) Non-Project M&I Water	$ 96,787
Total OM&R for Year 2002	**$1,757,188**
Rounding Error	$170

Step 6 – Invoicing for OM&R expenses

In December of the year following the previous years' OM&R expenses, the District invoices each water user to recover the OM&R costs including an amount for the reserve accounts. For example, in December 2003, the District invoiced the various water users for the OM&R expenses incurred during OM&R year 2003 plus an amount for the reserve accounts. There are three reserve accounts. Two are required by repayment agreements with the DOI and one has been established by the District to meet expenses beyond what the other two accounts would cover. During 2002 the amount for the District's reserve account was $0.60 per acre-foot and this would increase at a rate of $0.10 per acre-foot each year until it reaches $1.20 per acre-foot.

Projected OM&R on New Features

District O&M staff, based upon their historical O&M experience of completed facilities of the Bonneville Unit, estimated that the additional O&M expenses for the new Diamond Fork facilities and the ULS features would be about $260,000 for the Diamond Fork System and $180,000 for the ULS System for a combined total of $440,000. The OM&R of $2,166,000 for power generation plants and transmission lines would be the responsibility of Western Area Power Administration. This amount (see Table 6-7) was then apportioned to the various features based upon anticipated OM&R for each facility.

TABLE 6-7
CUCPA Features
Projected Bonneville Unit OM&R

System and Features	Projected OM&R
Utah Lake Drainage Basin Water Delivery System	
(1) ULS - Power Plants	
Sixth Water Power Plant and Transmission Line	$ 1,850,000[1]
Upper Diamond Fork Power Plant and Transmission Line	$ 316,000[1]
Subtotal for Power	**$ 2,166,000**
(2) ULS - Water Delivery Facilities	
Spanish Fork Canyon Pipeline	$ 20,000
Spanish Fork – Santaquin Pipeline	$ 40,000
Santaquin – Mona Pipeline	$ 10,000
Mapleton-Springville Lateral Pipeline	$ 10,000
Spanish Fork – Provo Reservoir Canal Pipeline	$ 70,000
Spanish Fork Flow Control Structure & Appurtenances	$ 30,000
Subtotal for Pipelines	**$180,000**
Diamond Fork System	
Sixth Water Connection to Tanner Ridge Tunnel	$ 20,000
Tanner Ridge Tunnel	$ 20,000
Upper Diamond Fork Pipeline	$ 50,000
Upper Diamond Fork Flow Control Structure	$ 30,000
Diamond Fork Vortex Shafts	$ 20,000
Aeration Chamber and Connection to Upper Diamond Fork Tunnel	$ 20,000
Upper Diamond Fork Tunnel	$ 20,000
Monks Hollow Overflow Structure	$ 30,000
Diamond Fork Creek Outlet	$ 10,000
Diamond Fork Pipeline Extension	$ 10,000
Diamond Fork Pipeline	$ 30,000
Subtotal for Diamond Fork System	**$260,000**
TOTAL CUPCA	**$ 2,608,000**

[1] The OM&R for the power plants has been rounded to be consistent with estimated OM&R for the other facilities presented in this table. In the Power Appendix the OM&R for Sixth Water Powerplant is presented as $1,850,087 and for Upper Diamond Fork Powerplant the OM&R is $315,821. The OM&R was estimated based on a comparison to the Crystal Powerplant and the Lower Molina Power Plant. Crystal Powerplant is a part of the Bureau of Reclamation's Colorado River Storage Project and Lower Molina Powerplant is a part of the Bureau of Reclamation's Collbran Project.

Projected Bonneville Unit OM&R For Irrigation and M&I

The District and DOI need to plan for the future to be sure that adequate funds are available for the District to properly operate and maintain the Bonneville Unit. With the completion of both the Diamond Fork System and the ULS System, the OM&R costs will increase but the planned water deliveries of 219,960 acre-feet for irrigation and M&I would be reduced to 199,213 acre-feet. With the increase in cost and decrease in water supply the unit OM&R in dollars per acre-foot that each water user would be responsible for would increase from the historical OM&R.

As shown in Table 6-8, the unit OM&R would increase from the year 2002 unit rate of $5.45 per acre-foot to possibly $8.05 under future operation. The apportionment by the District of the OM&R among the irrigation water users and M&I water users will be based upon reasonableness and ability to pay. *(Note: It is likely that irrigators will pay an amount less than $8.05 per acre-foot and M&I water users would pay an amount higher than the $8.05 per acre-foot because of the ability of the latter to repay at a higher rate).* Interestingly, the OM&R computed by the U.S. Bureau of Reclamation and presented in the 1988 Bonneville Unit Financial and Economic Appendix was $7.70 for the Duchesne area and $7.80 for the Heber-Francis area.

TABLE 6-8
Estimation of Future OM&R
For Irrigation and M&I Water Users

Adjusted OM&R for year 2002 (from Table 6-4)	$ 1,198,952
Projected Additional OM&R with ULS & Diamond Fork (from Table 6-6) (without powerplant OM&R)	+ $ 440,000
Minus OM&R for June sucker in Hobble Creek(from Table 6-10)	- $ 8,480
Minus OM&R for deliveries to lower Provo River (from Table 6-10)	- $27,450
Adjusted Estimate of future OM&R for irrigation and M&I	$ 1,603,022
Irrigation and M&I Water Supply with Diamond Fork and ULS	199,213 ac-ft
Projected Future Unit OM&R	$ 8.05 per ac-ft[1]

[1] To this would be added an amount to be paid into the OM&R reserve fund. It should be noted that the OM&R computed in Financial and Economic Appendix of $7.21 per acre-foot is a refinement of the $8.05 number and the $7.41 is considered to be more accurate and is the number contained in repayment contracts with local water petitioners.

OM&R Reserve Fund

As provided for in the repayment contract between the United States Government and the District signed December 28, 1965, (Contract No. 14-06-400-4286) as described in

Articles 15(c) and 16 (c), a replacement reserve fund and a emergency reserve fund for operation and maintenance shall be maintained by the District. These reserve funds are to cover the unexpected and extraordinary costs for repair or reconstruction resulting from special stresses to the system, such as will be caused by flood or severe storm damage. These accounts have been established in accordance with paragraphs 15 and 16 of the District's repayment contract with the United States as well as in accordance with a letter from the U.S. Bureau of Reclamation to the District dated March 29,1985. (see Attachment B for a copy of the letters)

The District drew on these funds in 2002 in order to replace a portion of Alpine Aqueduct Reach 1, which experienced premature failure due to ground movement after fifteen years of service. This drew the reserve accounts down to zero.

To fund the reserve accounts as required by the DOI, the District is re-establishing the OM&R replacement reserves at the rate of $200,000 per account per year until an amount equal to $1,000,000 has been deposited in each of the accounts. The combined amount of $2,000,000 that will be realized in 5 years is approximately equal to one year's estimated OM&R costs for the District. The funds will be required from both the water users that are currently taking delivery of project and non-project water as well as from the District's ad valorem taxes. In addition the District has an additional reserve account that is being paid into at the rate of $0.60 per acre-foot that increases by ($0.10) each year until the District accumulates sufficient funds to be able to replace facilities that will need replacement.

ELECTRICAL POWER ENERGY

Electrical power is needed for project pumping and to replace reductions in power generation at existing hydropower plants caused by operation of the Bonneville Unit. The power will be obtained from the Colorado River Storage Project (CRSP) and wheeled by Utah Power and Light. The CRSP power or reimbursement for power interference is needed for the following components of the Bonneville Unit:

- Starvation Collection System
- M&I System (CRSP power replacement)
- WCWEP and DRP (CRSP power for pumping)
- Conjunctive Use, Water Recycling and Reverse Osmosis
- Minimum Flows in Provo River Below Deer Creek

A more detailed description of the needs for CRSP pumping energy is contained in the Power Appendix to the 2004 Supplement to the 1988 Definite Plan Report for the Bonneville Unit (October 2004). Table 6-9 presents the power requirements and their estimated costs at a combined unit cost of $ 20.72 mills per kilowatt-hour (kWh), The current cost (year 2004) of SLCA/IP power.

TABLE 6-9
Power Required from Colorado Storage Project And Power Interference Costs
(Source of Information: Power Appendix to the 2004 Supplement to the 1988 Definite Plan Report for the Bonneville Unit.)

	Energy Required from CRSP		
	Capacity Needed (kilowatts)	**Energy Needed (kilowatt-hours)**	**Annual Energy Cost ($ dollars)**
Starvation Collection System			
Delivery of Project Water to Duchesne Facilities	240	900,000	$18,648
M&I System			
Deer Creek Power Plant Replacement Power	1,800	2,100,000	$ 43,512
WCWEP and DRP			
Pumping Plants (irrigation)	3,000	3,000,000	$62,160
Water Conservation, Water Recycling and Conjunctive Use			
Conjunctive Use (northern Utah County)	7,000	5,138,000	$106,459
Water Recycling/Reverse Osmosis	2,500	5,000,000	$103,600
Minimum Flows In Provo River Below Deer Creek Dam			
Pumping to Salt Lake Aqueduct	672	1,048,000	$21,715
CRSP Power Requirements	**15,212**	**17,186,000**	**$356,094**

CUPCA OM&R COSTS

The CUPCA added several additional components to the Bonneville Unit to improve water use efficiency and deliver water. The following components comprise the CUPCA Section 5 features.

- Wasatch County Water Efficiency Project and Daniels Replacement Pipeline
- Section 203 (a) Uinta Basin Replacement Project

Table 6-10 contains the projected OM&R associated with new CUPCA Section 5 features.

Wasatch County Water Efficiency Project and Daniels Replacement Pipeline

The WCWEP and DRP is being operated by local entities in the Heber Valley, rather than the District. The OM&R activities and costs for the WCWEP and DRP are presented in the *Wasatch County Water Efficiency Project Feasibility Study* (CUWCD, 1997).

Section 203(a) Uintah Basin Replacement Project (UBRP)

The UBRP facilities would be operated by local water companies in the Uinta Basin. The OM&R activities and costs for the UBRP are presented in the *Section 203 (a) Uinta Basin Replacement Project Feasibility Study* (CUWCD, October 2001).

TABLE 6-10
CUPCA
Projected Bonneville Unit OM&R

Features	Projected OM&R
Section 203 (a) Unita Basin Replacement Project (UBRP)	
Big Sand Wash Reservoir	$ 20,000
Big Sand Wash Feeder Pipeline	$ 10,000
Big Sand Wash – Roosevelt Pipeline	$ 10,000
Big Sand Wash Feeder Pipeline Diversion Structure	$ 7,000
Projected Subtotal for UBRP	$ 47,000
Wasatch County Water Efficiency Project/Daniels Pipeline	$ 359,000

OTHER CUCPA OM&R COSTS

The projected OM&R was estimated by the "use of facilities" method described in the Financial and Economic Appendix. This method distributes or allocates costs in proportion to the amount that each purpose makes of the facility. A portion of the fish and wildlife Bonneville Unit OM&R will be apportioned to the June sucker and the lower Provo River when the District computes its yearly OM&R expenses under ULS operation. Table 6-10 shows what would be a representative value of the yearly OM&R. It should be noted that the actual OM&R varies from year-to-year.

June Sucker Flows in Hobble Creek

The June sucker deliveries of 12,037 acre-feet requires 11.9% of the space in the Spanish Fork Canyon Pipeline and 61 % of space in the Mapleton-Springville Lateral pipeline.

Flows in Lower Provo River

Same procedure as used in estimating OM&R for the June sucker will be used for flows in lower Provo River. The delivery of flows to the lower Provo requires 15.8% of the space in the Spanish Fork Canyon Pipeline and 34.7% of the space in the Spanish Fork-Provo Reservoir Canal Pipeline. This would result in an OM&R of approximately $27,450.

Daniels Replacement Pipeline (CUPCA Section 303)

An OM&R of $104,000 was estimated in the 1998 SFN System Designs and Estimates Appendix and that value is used here.

TABLE 6-11
OM&R

	Spanish Fork Canyon Pipeline (OM&R $20,000)		Mapleton-Springville Lateral Pipeline (OM&R $10,000)		Spanish Fork – Provo Reservoir Canal Pipeline (OM&R $70,000)		Total OM&R
	% of volume	Apportioned OM&R	% of volume	Apportioned OM&R	% of volume	Apportioned OM&R	
June sucker	11.9%	$2,380	61%	$6,100	0	0	$ 8,480
Lower Provo	15.8%	$3,160	0	0	34.7%	$24,290	$27,450
Daniels Replacement Pipeline Mitigation ($94,000 used in 1998 SFN D&E Appendix)							$104,000
						TOTAL	$139,930

RECREATION OM&R COST ESTIMATES

Annual OM&R costs for recreation facilities were estimated in the *Bonneville Unit Draft Supplement to the 1964 DPR* (USBR 1988). The development of these costs is explained below. In 1998, these costs were revised to reflect inflation between 1987 and 1997 by applying the change in the Consumer Price Index over that period. For this update to year 2004, the construction cost index was used with the justification described in subsequent paragraphs. The rationale for using the construction cost index was that it was thought to be a better indicator of the increase in cost versus the consumer price index. In terms of overall effect, however, it turns out to have little impact whether the consumer price index or the construction cost index was used. The indexing factor from 1988 to 2003 was 1.6 for the consumer price index and 1.5 for the construction price index.

In 1998 the operation costs for recreation were updated based on $0.14 ($0.10 in 1987) per recreation day for projected recreational use estimates. Annual maintenance estimates were based on 3 percent of the total cost of the facility less the cost of the land. Replacement of recreational facilities is averaged at 25 years and based on the sinking fund factor for this time period at 3.125 percent interest less the cost of the land. The annual cost breakdown for OM&R was based on 50 percent for full-time and part-time labor costs; 10 percent for supplies; 10 percent for equipment and vehicle expenses; 10 percent for contract work; and 20 percent for overhead expenses. To repeat this analytical process would be a time consuming exercise and the accuracy gained would not be appreciably different then that of indexing the data in the tables from the 1998 SFN System Designs and Estimates Appendix. The accuracy would be within that required for this analysis of recreation OM&R.

A summary is presented in Table 6-12 of the OM&R estimated costs for Bonneville Unit recreational facilities as computed in 1997 and adjusted to July 2004 costs by multiplying by a factor of 1.216. This factor was determined from the construction cost index factor of 265 in July 2004 divided by the construction cost index factor of 218 in October 1997, which yields the 1.216 value.

TABLE 6-12
Estimated Annual OM&R Costs
Bonneville Unit Recreational Facilities

Feature	1997 Costs	Costs Adjusted to 2004
Upper Stillwater Reservoir Recreation	$ 171,000	$ 208,000
Starvation Reservoir Recreation	$ 196,000	$ 238,000
Currant Creek Reservoir Recreation	$ 280,000	$ 341,000
Strawberry Reservoir Recreation	$ 2,453,000	$ 2,983,000
Jordanelle Reservoir Recreation	$ 1,416,000	$ 1,722,000
Upper Provo River Reservoir Recreation (stabilization)	$ 85,000	$103,000
Diamond Fork Recreation	$ 230,000	$ 280,000
Total	$4,831,000	**$5,875,000**

WILDLIFE MITIGATION FACILITIES

This section presents the costs of operating and maintaining the physical features that are included in the Bonneville Unit Systems to mitigate the impacts of construction on wildlife.

The OM&R costs for the wildlife mitigation features of the Bonneville Unit were previously estimated by the Utah Division of Wildlife Resources for reports completed in 1998 on the SFN System. Those costs have been increased for inflation and presented below in Table 6-13 and 6-14. Table 6-13 lists the typical activities involved in operating and maintaining the land that has been dedicated to wildlife mitigation, and their per-acre cost. Table 6-14 presents the complete cost estimate adjusted to year 2004 prices using a factor of 1.216 computed as described in the section under recreation facilities. The "lump sum" items were increased in a similar manner.

TABLE 6-13
Estimated Per Acre Cost
of Wildlife Mitigation Land OM&R

Item	1988 Estimated Annual Cost Per Acre	1997 Estimated Annual Cost per Acre	Costs per Acre Adjusted To 2004
Payment in lieu of taxes	$0.50	$0.72	$0.88
Fence repair	$0.10	$0.14	$0.17
Road repair	$0.25	$0.36	$0.47
Law enforcement	$0.10	$0.14	$0.17
Range and game surveys	$0.20	$0.29	$0.35
Weed control	$0.50	$0.72	$0.88
Water management	$0.10	$0.14	$0.17
Range improvement and management	$0.50	$0.72	$0.88
Administration	$0.20	$0.29	$0.35
Total	$2.45	$3.52	$4.32

*Costs were increased by 44.4 percent from 1987 (the date of estimates in the 1988 DPR Supplement) to 1997. The Consumer Price Index was used to update the cost.

TABLE 6-14
Estimated Annual OM&R Costs Mitigation Features

	1997 Costs	Costs Adjusted To 2004 (Factor of 1.216)
Bottle Hollow Dam and Reservoir	$57,760	$70,240
Starvation Collection System	$5,843	$7,100
Starvation Reservoir game land	$3,133	$3,810
Myton Property	$8,976	$10,920
Diamond Fork System	$19,075	$23,200
Strawberry Collection System	$224,823	$273,390
M&I System	$21,430	$26,060
Duchesne River Area Canals	$704	$860
Ute waterfowl development	$23,232	$70,000[1]
Total	$364,976	$485,580
Total Rounded		**$ 486,000**

1. The index factor of 1.216 was not used. The Ute waterfowl development plan has changed significantly since 1997 with a much higher acreage resulting in a higher OM&R costs. The $70,000 is the estimate provided by the DOI via personal communication based on the plan presented in the Lower Duchesne River Wetland Mitigation Project, Draft Environmental Impact Statement, dated November 2003,by the Utah Reclamation Mitigation and Conservation Commission.

SUMMARY OF BONNEVILLE UNIT OM&R COSTS

In summary, the allocation of OM&R costs is an ongoing operation and will be done annually to reflect each years expense in operating and maintaining its OM&R responsibilities to the project. The District will maintain records of OM&R as they pertain to multi-purpose and distribution facilities and will send to each user group, both project and non-project, an accounting of their financial responsibility toward maintaining and operating these facilities annually.

A representative estimate of what the OM&R could be is presented in Table 6-15.

TABLE 6-15
Estimated Annual Bonneville Unit (BU) OM&R Costs

Section	Projected Annual OM&R Costs (Year 2004 Dollars)	Responsible for Reimbursement
Reimbursable Irrigation and M&I		
USBR Facilities	$1,198,952	District & water users
CUPCA Facilities	$440,000	District & water users
CUPCA Title II		
Uinta Basin Replacement Project (UBRP)	$47,000	Local water districts
Wasatch County Water Efficiency Project	$359,000	District & water users
F&WL, Flood Control, & Instream Flow Agreement		
USBR - F&WL and Flood Control	$123,015	USBR
USBR – 44,400 acre-feet for Uinta Basin Instream Flow	$245,361	USBR
CRSP Pumping Energy Requirements	$356,094	WAPA
Reserve Accounts		
Districts Reserve Accounts	$200,000	
Reserve Accounts (required by DOI)	$400,000	District & water users
CUPCA		
Daniels Replacement Project	$104,000	District
June sucker (Hobble Creek) [1]	$ 8,480	JSRIP Program
Flows in Lower Provo River [1]	$27,450	USBR
USBR		
Recreation Facilities	$5,875,000	State and Federal agencies operating the facilities
Fish and Wildlife Mitigation Facilities	$486,000	
ULS System Power Plants/Transmission Lines	$2,166,000	Western Area Power
Non-Project Deliveries	$190,003	
TOTAL	**$12,217,931**	

[1] These two numbers are not included in the total because they are part of the $440,000 above.

Central Utah Project Completion Program

Chapter 7

October 2004

UTAH RECLAMATION
MITIGATION
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This chapter presents a summary of the estimated costs for the ULS system components consisting of pipelines, and power generation/transmission facilities. The estimated costs for the entire Bonneville Unit are part of the financial and economic (F&E) analyses and therefore are included in the F&E Appendix.

Additional details on cost estimates for the pipelines are contained in Volume 2 of this Designs and Estimates Appendix.

As discussed in Chapter 4, under the ULS System Proposed Plan the DOI would acquire the District's Utah Lake secondary water rights. In addition, in northern Utah County there are features that could potentially be partially funded and constructed utilizing CUPCA Section 207 funding.

LEVEL OF DETAIL FOR COST ESTIMATE

The estimating effort completed for the Proposed Action is classified as a concept screening level estimate, or Class 5 estimate as defined by the Association for the Advancement of Cost Engineering International (AACEI). This class of estimate is typically prepared based on engineering design from 0% to 10% complete, and often with only the proposed type of system, location, and capacity known. The expected accuracy range is +/- 25% for this type of estimate. However, for the ULS Proposed Action the District and the U.S. Department of Interior assembled a blue-ribbon team to review the cost estimate. From this review, revisions were made to the cost estimate that would provide an estimate with an accuracy significantly better than the +/- 25%.

SUMMARY OF ULS CONSTRUCTION COSTS

Table 7-1 summarizes the estimated construction cost for the entire ULS System. Tables 7-4 through 7-10 summarize the estimated cost for each pipeline and power plant facility independently. The estimated costs presented herein are for the purposes of budgeting and planning and should be considered accurate only at the feasibility level. The estimated costs assume a traditional project consisting of design-bid-build delivery system.

TABLE 7-1
Opinion of Probable Construction Cost
Utah Lake Drainage Basin Water Delivery System

Features (Pipelines & Power Plants)	Sub-Costs	Overall Costs
Spanish Fork Flow Control Structure		**$6,250,000**
Spanish Fork Canyon Pipeline		**$72,620,338**
Engineering (7.5% of Construction Cost)	$4,736,109	
Construction Field Costs	$62,685,820	
Land Acquisition	$462,300	
Construction Management (7.5% of Construction Cost)	$4,736,109	
Spanish Fork-Provo Reservoir Canal Pipeline		**$139,905,179**
Engineering (7.5% of Construction Cost)	$9,124,251	
Construction Field Costs	$121,081,613	
Land Acquisition	$575,064	
Construction Management (7.5% of Construction Cost)	$9,124,251	
Spanish Fork-Santaquin Pipeline		**$99,380,507**
Engineering (7.5% of Construction Cost)	$6,481,337	
Construction Field Costs	$84,673,865	
Land Acquisition	$1,743,968	
Construction Management (7.5% of Construction Cost)	$6,481,337	
Mapleton-Springville Lateral Pipeline		**$28,179,804**
Engineering (7.5% of Construction Cost)	$1,837,813	
Construction Field Costs	$24,188,314	
Land Acquisition	$315,864	
Construction Management (7.5% of Construction Cost)	$1,837,813	
Santaquin- Mona Reservoir Pipeline		**$18,077,632**
Engineering (7.5% of Construction Cost)	$1,178,976	
Construction Field Costs	$15,157,164	
Land Acquisition	$562,516	
Construction Management (7.5% of Construction Cost)	$1,178,976	
North Utah County 207 Projects		**$60,000,000**
	Pipeline Totals	**$424,413,460**
Sixth Water Power Plant & Transmission Line		**$33,830,454**
Engineering (7.5% of Construction Cost)	$2,206,334	
Construction Field Costs	$29,417,786	
Land Acquisition	$0	
Construction Management (7.5% of Construction Cost)	$2,206,334	
Upper Diamond Fork Power Plant		**$6,793,073**
Engineering (7.5% of Construction Cost)	$443,026	
Construction Field Costs	$5,907,020	
Land Acquisition	$0	
Construction Management (7.5% of Construction Cost)	$443,027	
	Power Facilities Total	**$40,623527**
	ULS System Total Costs	**$465,036,987**

SOURCES OF COST DATA, GENERAL AND FACILITY-SPECIFIC ASSUMPTIONS USED TO DEVELOP COST BASIS

Wage rates for estimating construction labor costs were based on Utah Occupational Wages obtained from the Utah Department of Labor website. Takeoff quantities and pipe sizes, and pricing were developed using the data listed below.

- Preliminary plan and profile drawings placed on topographical maps;
- Spreadsheets and preliminary hydraulic analysis identifying pipe sizes and length; and
- Budget quotes from pipe manufacturers.

GENERAL ASSUMPTIONS

Based on the level of detail provided by these instruments, additional assumptions were required to form the cost basis for each pipeline. General assumptions applied to all five pipelines are summarized below:

- All pipelines would be constructed of mortar coated and lined carbon steel;
- Four feet of cover would be required above all pipelines;
- Pipe bedding material would be obtained from nearby sources; and
- General conditions would be based on installation of 100 linear feet of pipe per day, running one shift per day, six days per week.

FACILITY-SPECIFIC ASSUMPTIONS

Spanish Fork Canyon Pipeline

All pipe was assumed to be either pressure class 250 psi or 350 psi. For purposes of estimating pipe trench excavation costs, 50% of the alignment was assumed to occur in silt-clay-loam type soil and the other 50% was assumed to occur in rock, which would require drilling and blasting. Erosion control was estimated to be required along the full length of the alignment, and dewatering the pipe trench was assumed to be required along 50% of the alignment length. Landscaping restoration would be required over an area 22-feet wide along the entire length of the alignment; and replacement of road base and asphalt was also estimated to be required along the entire alignment.

Spanish Fork – Santaquin Pipeline

All pipe in this pipeline was assumed to be either pressure class 250 psi or 350 psi. For purposes of estimating pipe trench excavation costs, 90% of the alignment was assumed to occur in silt-clay-loam type soil and the other 10% was assumed to occur in rock, which would require drilling and blasting. Erosion control was estimated to be required along 50% of the alignment, and dewatering the pipe trench was assumed to be required along 70% of the alignment length. Only intermittent landscaping restoration would be

required, and replacement of road base and asphalt was also estimated to be required along 50% of the alignment.

Santaquin – Mona Reservoir Pipeline

All pipe in this pipeline was assumed to be pressure class 250 psi. For purposes of estimating pipe trench excavation costs, 90% of the alignment was assumed to occur in silt-clay-loam type soil and the other 10% was assumed to occur in rock, which would require drilling and blasting. Erosion control was estimated to be required along 80% of the alignment, and dewatering the pipe trench was assumed to be required along 50% of the alignment length. An area 22-feet wide would require landscaping restoration over the entire alignment length; and replacement of road base and asphalt was also estimated to be required along 30% of the alignment. Traffic control would be required for approximately the first 30% of the alignment.

Spanish Fork – Provo Reservoir Canal Pipeline

All pipe in this pipeline was assumed to be pressure class 250 psi, 350 psi or 450 psi. For purposes of estimating pipe trench excavation costs, 90% of the alignment was assumed to occur in silt-clay-loam type soil and the other 10% was assumed to occur in rock, which would require drilling and blasting. Erosion control was estimated to be required along 50% of the alignment, and dewatering the pipe trench was assumed to be required along 50% of the alignment length. Intermittent landscaping restoration would be required. Replacement of curbs, gutters and driveways, and video inspection would be required through the cities of Springville and Provo. A minimum of 10-feet of cover would be required on all pipes in the cities of Springville and Provo as well. Traffic control, asphalt replacement and road base replacement would be required along the entire alignment.

Mapleton – Springville Lateral Pipeline

All pipe in this pipeline was assumed to be pressure class 350 psi. For purposes of estimating pipe trench excavation costs, 90% of the alignment was assumed to occur in silt-clay-loam type soil and the other 10% was assumed to occur in rock, which would require drilling and blasting. Erosion control was estimated to be required along 40% of the alignment, and dewatering the pipe trench was assumed to be required along 20% of the alignment length. An area 22-feet wide would require landscaping restoration over the entire alignment length. Asphalt and road base replacement would be required at eight road crossings and along approximately 10% of the alignment length. Traffic control would be required for approximately 30% of the alignment.

North Utah County 207 Projects

Section 207 Water Conservation Projects in north Utah County could include the Provo Reservoir Canal Enclosure or other yet to be determined projects.

Power Generation Plants and Transmission Lines

Refer to the Power Appendix for procedures used in cost estimating for power plants and transmission lines.

PRICE AND UNIT COST

The primary cost components for the construction of the pipelines included:

- General Conditions - project supervisory and administrative staff, field office trailer, office equipment, furniture and utilities, temporary toilet facilities, survey and traffic control crews, miscellaneous field testing and inspection, mobilization and demobilization
- Sitework - all costs related to excavation of the pipe trench (including rock blasting and boring), trench dewatering, removal of excess excavated material, restoration of wetlands, asphalt, road base and landscaping; erosion control, backfill and compaction.
- Materials - purchase price, fabrication and installation of mortar-coated and lined carbon steel pipe (quoted by Northwest Pipe Company) and appurtenances (quoted by Singer and DeZurik). Labor wage rates were obtained from the Utah Department of Labor website.
- Cathodic Protection – cost of subcontract to complete cathodic protection where required.

Additional "non-construction" costs were added to the construction costs to complete the cost estimate for the ULS System, and are summarized in Table 7-2 below.

TABLE 7-2
Non-Construction Cost Components and Percentages

General Conditions labor burden	32% of General Conditions labor cost
Construction labor burden	28% of Construction labor cost
Sales Tax	7.5% of Material cost
Sub-Contractor bond	2% of Sub-contract cost
Rental equipment markup	24% of rental equipment cost for O&M and markup
Overhead	2.43% of Construction direct cost
Profit	5% of Construction direct cost
Insurance	.811% of Construction direct cost, profit & overhead
Bonds	Based on most current Lockton Bond Rate Schedule

RIGHT-OF-WAY COSTS

General right of way cost data were compiled from county tax records, various licensed Realtors and the Spanish Fork Canyon-Nephi Irrigation System (SFN) Design and Estimates Appendix (CUWCD, March 1998). Land acquisition costs for permanent easements were calculated at full market value and temporary construction easements were calculated at 25% of the full market value.

Costs for property appraisals and negotiation between the District and the property owners were calculated at $2,500 per individual property owner. Table 7-3 summarizes easement acquisition costs for the ULS System.

TABLE 7-3
Easement Acquisition Costs
(without markups)

Feature Name	Property Costs Temporary Easements	Property Costs Permanent Easements	Appraisals and Negotiation	Total
Spanish Fork Canyon Pipeline	$223,500	$81,000	$7,500	$312,000
Spanish Fork-Santaquin Pipeline	$151,050	$ 663,900	$342,500	$1,157,450
Santaquin-Mona Reservoir Pipeline	$39,200	$266,100	$62,500	$367,800
Mapleton-Springville Lateral Pipeline	**$99,050**	$33,850	$75,000	$207,900
Spanish Fork-Provo Reservoir Canal Pipeline	$27,550	$282,150	$75,000	$384,700
Total Project Easement Costs	**$540,350**	**$1,327,000**	**$562,500**	**$2,429,850**

FIELD CONSTRUCTION COSTS

Cost for Pipelines

Tables 7-4 through 7-10 summarize field construction costs for each individual pipeline and power plant. To arrive at the costs shown previously in Table 7-1, one would need to add an appropriate amount for engineering, construction management and land acquisition. Engineering and construction management would each equal about 7.5% of field construction costs and right-of-way acquisition costs were estimated and presented in Table 7-3.

TABLE 7-4
Utah Lake Drainage Basin Water Delivery System Cost Estimate
Spanish Fork Canyon Pipeline

Description	%	Labor	Material	Sub Contractor	Equipment Rental	Other Costs	Totals
Construction Cost		9,756,891	22,623,741	6,724,771	3,112,911	399,500	42,617,814
General Conditions Labor		1,393,250					
Construction Labor		8,363,641					
General Conditions Labor Burden	32.00%	445,840					$ 445,840
Construction Labor Burden	28.00%	2,341,819					$ 2,341,819
Sales Tax	7.50%		1,696,781				$ 1,696,781
Sub-Contractor Bond	2.00%			134,495			$ 134,495
Equipment Rental Mark-up	24.00%				747,099		$ 747,099
Other Mark-up	7.00%					27,965	$ 27,965
Gross Cost							$ 48,011,813
			CONTINGENCY*			20%	$ 9,602,363
			Total Project (w/o insurance and profit)				**$57,614,176**
			Insurance				
			Builders Risk*			0.311%	$196,391
			General Liability			0.500%	$315,741
			Performance Bond				$329,907
			Total Project (w/o profit)				**$58,456,215**
			Overhead & Profit			7.43%	$4,691,905
			Total Project Costs				**$63,148,120**

*These cost items are based on Total Field Construction Costs

TABLE 7-5
Utah Lake Drainage Basin Water Delivery System Cost Estimate
Spanish Fork – Santaquin Pipeline

Description	%	Labor	Material	Sub Contractor	Equipment Rental	Other Costs	Totals
Construction Cost		17,037,312	28,425,450	5,936,769	4,657,480	1,297,450	$57,354,461
General Conditions Labor		3,082,320					
Construction Labor		13,954,992					
General Conditions Labor Burden	32.00%	986,342					$986,342
Construction Labor Burden	28.00%	3,907,398					$3,907,398
Sales Tax	7.50%		2,131,909				$2,131,909
Sub-Contractor Bond	2.00%			118,735			$118,735
Equipment Rental Mark-up	24.00%				1,117,795		$1,117,795
Other Mark-up	7.00%					90,822	$90,822
Gross Cost							$65,707,462
			CONTINGENCY*			20%	$13,141,492
			Total Project (w/o insurance and profit)				**$78,848,954**
			Insurance				
			Builders Risk*			0.311%	$268,759
*These cost items are based on Total Field Construction Costs			General Liability			0.500%	$432,089
			Performance Bond				$447,186
			Total Project (w/o profit)				**$79,996,988**
			Overhead & Profit			7.43%	$6,420,845
			Total Project Costs				**$86,417,833**

TABLE 7-6
Utah Lake Drainage Basin Water Delivery System Cost Estimate
Santaquin – Mona Reservoir Pipeline

Description	%	Labor	Material	Sub Contractor	Equipment Rental	Other Costs	Totals
Construction Cost		3,449,073	4,288,656	886,509	1,201,236	452,800	$10,278,274
General Conditions Labor		1,026,900					
Construction Labor		2,422,173					
General Conditions Labor Burden	32.00%	328,608					$328,608
Construction Labor Burden	28.00%	678,208					$678,208
Sales Tax	7.50%		321,649,				$321,649
Sub-Contractor Bond	2.00%			17,730			$17,730
Equipment Rental Mark-up	24.00%				288,297		$288,297
Other Mark-up	7.00%					31,696	$31,696
Gross Cost							$11,944,462
			CONTINGENCY*			20%	$2,388,893
			Total Project (w/o insurance and profit)				**$14,333,355**
			Insurance				
			Builders Risk*			0.311%	$48,888
*These cost items are based on Total Field Construction Costs			General Liability			0.500%	$78,598
			Performance Bond				$90,867
			Total Project (w/o profit)				**$14,551,708**
			Overhead & Profit			7.43%	$1,167,972
			Total Project Costs				**$15,719,680**

TABLE 7-7
Utah Lake Drainage Basin Water Delivery System Cost Estimate
Mapleton – Springville Lateral Pipeline

Description	%	Labor	Material	Sub Contractor	Equipment Rental	Other Costs	Totals
Construction Cost		5,125,109	8,598,689	681,991	1,434,833	287,900	$16,128,522
General Conditions Labor		952,480					
Construction Labor		4,172,629					
General Conditions Labor Burden	32.00%	304,794					$304,794
Construction Labor Burden	28.00%	1,168,336					$1,168,336
Sales Tax	7.50%		644,902				$644,902
Sub-Contractor Bond	2.00%			13,640			$13,640
Equipment Rental Mark-up	24.00%				344,360		$344,360
Other Mark-up	7.00%					20,153	$20,153
Gross Cost							$16,624,707
			CONTINGENCY*			20%	$3,724,941
			Total Project (w/o insurance and profit)				**$22,349,648**
			Insurance				
			Builders Risk*			0.311%	$76,208
*These cost items are based on Total Field Construction Costs			General Liability			0.500%	$122,521
			Performance Bond				$135,141
			Total Project (w/o profit)				**$22,683,518**
			Overhead & Profit			7.43%	$1,820,660
			Total Project Costs				**$24,504,178**

TABLE 7-8
Utah Lake Drainage Basin Water Delivery System Cost Estimate
Spanish Fork – Provo River Canal Pipeline

Description	%	Labor	Material	Sub Contractor	Equipment Rental	Other Costs	Totals
Construction Cost		22,905,370	37,453,746	14,735,585	5,948,122	539,700	$81,384,523
General Conditions Labor		3,549,000					
Construction Labor		19,356,370					
General Conditions Labor Burden	32.00%	1,135,968					$1,135,968
Construction Labor Burden	28.00%	5,419,532					$5,419,532
Sales Tax	7.50%		2,809,031				$2,809,031
Sub-Contractor Bond	2.00%			290,752			$290,752
Equipment Rental Mark-up	24.00%				1,427,549		$1,427,549
Other Mark-up	7.00%					37,779	$37,779
Gross Cost							$92,505,134
			CONTINGENCY*			20%	$18,501,027
			Total Project (w/o insurance and profit)				**$111,006,161**
			Insurance				
			Builders Risk*			0.311%	$378,352
*These cost items are based on Total Field Construction Costs			General Liability			0.500%	$608,283
			Performance Bond				$624,790
			Total Project (w/o profit)				**$112,617,586**
			Overhead & Profit			7.43%	$9,039,091
			Total Project Costs				**$121,656,677**

TABLE 7-9
Utah Lake Drainage Basin Water Delivery System Cost Estimate
Sixth Water Power Plant

Description	%	Labor	Material	Sub Contractor	Equipment Rental	Other Costs	Totals
Construction Cost		2,182,287	2,696,450	15,952,890	179,404	131,980	$21,143,011
General Conditions Labor		841,530					
Construction Labor		1,340,757					
General Conditions Labor Burden	32.00%	269,290					$269,290
Construction Labor Burden	28.00%	375,412					$375,412
Sales Tax	7.50%		202,234				$202,234
Sub-Contractor Bond	2.00%			319,058			$319,058
Equipment Rental Mark-up	24.00%				43,057		$43,057
Other Mark-up	7.00%					9,239	$9,239
Gross Cost							$22,361,301
			CONTINGENCY*			20%	$4,472,260
			Total Project (w/o insurance and profit)				**$26,833,561**
			Insurance				
			Builders Risk*			0.311%	$91,489
*These cost items are based on Total Field Construction Costs			General Liability			0.500%	$147,089
			Performance Bond				$159,906
			Total Project (w/o profit)				**$27,232,045**
			Overhead & Profit			7.43%	$2,185,741
			Total Project Costs				**$29,417,786**

TABLE 7-10
Utah Lake Drainage Basin Water Delivery System Cost Estimate
Upper Diamond Fork Power Plant

Description	%	Labor	Material	Sub Contractor	Equipment Rental	Other Costs	Totals
Construction Cost		357,593	97,825	3,661,725	105,154	39,490	$4,261,787
General Conditions Labor		318,320					
Construction Labor		39,273					
General Conditions Labor Burden	32.00%	101,862					$101,862
Construction Labor Burden	28.00%	10,996					$10,996
Sales Tax	7.50%		7,337				$7,337
Sub-Contractor Bond	2.00%			73,235			$73,235
Equipment Rental Mark-up	24.00%				25,237		$25,237
Other Mark-up	7.00%					2,764	$2,764
Gross Cost							$4,483,218
			CONTINGENCY*			20%	$896,644
			Total Project (w/o insurance and profit)				**$5,379,862**
			Insurance				
			Builders Risk*			0.311%	$18,371
			General Liability			0.500%	$29,535
			Performance Bond				$40,360
			Total Project (w/o profit)				**$5,468,128**
			Overhead & Profit			7.43%	$438,892
			Total Project Costs				**$5,907,020**

*These cost items are based on Total Field Construction Costs

SIZING METHODOLOGY AND COST ESIMATES FOR POWER PLANTS

Refer to the Power Appendix for an in-depth presentation of the sizing methodology and cost estimating procedures for the power plants.

Power benefits would be generated from two power plants located in the Diamond Fork drainage of the project and will be documented in the updated Financial and Economic (F&E) Appendix for the 2004 Supplement to the 1988 Definite Plan Report for the Bonneville Unit. The Sixth Water power plant would have an installed capacity of 45 megawatts and would be located between the Sixth water Aqueduct and the Tanner Ridge Tunnel. The Diamond Fork Power Plant would have an installed capacity of 5 megawatts and will be located between the upper Diamond Fork Pipeline and the Upper Diamond Fork Tunnel. Long term average annual net energy for the two power plants is estimated at 165,343,094 KWH.

Power benefits have been developed for project power plants by the economics group of the US Bureau of Reclamation located in Denver, Colorado. Power values are detailed in a memorandum dated November 7, 2003 from the U.S. Bureau of Reclamation and is included as an attachment to the F&E Appendix and the Power Appendix.

Central Utah Project Completion Program

Chapter 8

October 2004

UTAH RECLAMATION
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Chapter 8

This chapter presents information on the ULS System construction aspects relating to:

- Construction schedule
- Right-of-Way
- Crossings
- Geo-technical conditions
- Pipeline construction considerations
- Power generation construction considerations

CONSTRUCTION SCHEDULE

Construction would start after the federal fiscal year of 2007. The length of time for construction of the features is highly dependent on appropriations from congress and the amount of federal funding that becomes available with year federal fiscal year.

RIGHTS-OF-WAY AND EASEMENTS

The land required for construction and operation of conveyance facilities under the various alternatives would include a mix of lands under federal, state and local jurisdiction, and would include private land. Permanent rights-of-way would be required for facilities, and temporary rights-of-way would be required during construction to provide space for equipment operation and staging areas.

Rights-of-Way

Most of the areas that would be encumbered by the pipeline alignments would be located within federal, state, county or city roadways. These roadways lie within permanent rights-of-way and are also used for the location of utilities such as potable and non-potable water, sewer, and storm drain pipelines, natural gas, telephone, fiber optic, and cable television conduit, street signals and lights, and both underground and overhead powerlines. The right-of-way width for individual roadways are usually determined by the amount of traffic the roadway carries or is expected to carry in the future. Roadway widths are determined by the appropriate federal, state, county or city agencies and usually conform to the following guidelines:

- Interstate Highways - 200 feet
- State highways and arterials - 100 feet
- Major collectors - 80 feet
- Minor collectors - 60 feet
- Rural roads - 30 to 50 feet

Easements

General. Typically, pipeline easements provide guidelines to maintain access along the easement and for maintenance or replacement of the pipeline. The legal instrument for acquisition of the easement will contain language defining the rights of utility agency.

The easement document would also specify what types of vegetation may or may not be allowed within the right of way and how the vegetation may be removed. Some agencies only allow shallow rooted plants to be planted directly above the pipeline. Lists of permitted plants are generally defined. Maintenance and removal standards can be incorporated to minimize erosion or to minimize negative environmental factors. For example certain types of herbicides or pesticides may be limited to reduce impact to sensitive areas.

Installation of other utilities may be restricted from being installed parallel to the pipeline. Man-made structures, equipment or storage of materials is typically restricted from placement within the limits of the easement.

Permanent Easements. The minimum required permanent easement depends largely on pipe diameter and is generally described as 50 to 60 feet for the operation and maintenance of the pipeline. A minimum easement width of 50 feet is required for pipe diameters less than or equal to 60 inches. A minimum easement width of 60 feet is required for pipe diameters greater than 60 inches.

Permanent easements will be required at entrance and receiving pits for jack and bore operations and turnout locations. The permanent easement area will depend on the required depth of bury and pipe diameter under the existing structure or feature for the pits and the size of the turnout structure at turnout locations.

Temporary Easements. Temporary construction easements supplement the permanent easement to facilitate construction of the pipeline features, and are normally abandoned upon completion of the work. The minimum width of temporary easements shall be 40 feet in locations where it is necessary to keep at least one lane of traffic open during construction, or where structures or features do not allow a larger width.

Temporary easements would be required at entrance and receiving pits for jack and bore operations and turnout locations to allow for storage of materials or equipment. The size of temporary easement will depend on the required depth of bury and pipe diameter under the existing structure or feature for the pits and the size of the turnout structure at turnout locations.

FACILITY SPECIFIC RIGHTS-OF-WAY AND EASEMENTS

Spanish Fork Canyon Pipeline

The majority of the Spanish Fork Canyon Pipeline would be constructed within the existing right-of-way for Highway 6. At the time this document was drafted, the Utah Department of Transportation was in the process of evaluating options to modify the Highway 6 road alignment at Moark Junction and to replace the existing bridge crossing of the Union Pacific Railroad. With the final road configuration unavailable, the decision was made to continue the Spanish Fork Canyon pipeline alignment along the east shoulder of Highway 89 at Moark Junction to 7600 South to avoid conflicts. Such a modification will have minimal effect upon the pipeline since the off ramp will likely to follow the existing right-of-way of Highway 89.

Except for two short segments, the existing road right-of-way would be sufficient to accommodate construction of the pipeline. These segments allow for the crossing of a spur track at the Ensign Bickford property. Additional temporary and permanent easements required in those two segments are summarized in Table 8-1.

TABLE 8-1
Spanish Fork Canyon Pipeline
Rights–of–Way

Station	Length (Ft)	Type of Easement	Width (Ft)
397+13 to 399+00	187	Temporary	40
398+30 to 399+00	70	Permanent	60
399+00 to 406+00	700	Temporary Permanent	40 60

Spanish Fork- Santaquin and Santaquin-Mona Reservoir Pipelines

The Spanish Fork – Santaquin Pipeline would begin approximately 4000 feet north of the Highway 6 and Highway 89 intersection at Moark Junction, which should be sufficiently north of the proposed Highway 6 alignment modification to avoid any potential conflicts. The majority of the pipeline would be constructed within the existing roadways of city, county, and state jurisdictions, as the alignment traverses through the cities of Spanish Fork, Salem, Payson and Santaquin. In locations where existing permanent easements would be required in locations where the total existing right-of-way is less than 50 feet wide. In locations where the total existing right-of-way and permanent easement width is less than 80 feet, temporary easements would also be required. Table 8-2 below summarizes sections of the alignment where acquisition of additional permanent or temporary easements would be required.

TABLE 8-2
Spanish Fork – Santaquin Pipeline
Rights–of–Way

Station	Length (Ft)	Type of Easement	Width (Ft)
13+21 to 30+93	1772	Temporary Permanent	30 50
30+93 to 40+00	907	Temporary Permanent	30 50
52+08 to 80+00	2792	Temporary	20
80+00 to 103+81	2381	Temporary Permanent	30 50
103+81 to154+08	5027	Temporary	20
154+08 to 192+11	3803	Temporary	20
192+11 to 240+90	4879	Temporary Permanent	30 28
240+90 to 245+35	445	Temporary Permanent	30 50
245+35 to 273+64	2,829	Permanent	17
273+64 to 284+00	1,036	Permanent	20
284+00 to 313+14	2,914	Temporary Permanent	20 17
483+54 to 518+00	3,446	Temporary Permanent	40 60
710+15 to 736+00	2,585	Temporary Permanent	30 17
736+00 to 742+00	600	Temporary Permanent	30 17
743+00 to 838+00	9,500	Temporary Permanent	30 50
838+00 to 839+00	100	Temporary Permanent	30 40
839+00 to 876+00	3,700	Temporary Permanent	30 50
876+50 to 877+00	50	Temporary Permanent	60 40
877+00 to 877+50	50	Temporary Permanent	20 40
877+50 to 877+90	40	Temporary Permanent	20 80

TABLE 8-2 (continued) Spanish Fork – Santaquin Pipeline Rights–of–Way			
Station	**Length (Ft)**	**Type of Easement**	**Width (Ft)**
877+90 to 878+90	100	Temporary Permanent	20 40
878+90 to 879+40	50	Temporary Permanent	20 120
879+40 to 879+70	30	Temporary Permanent	90 50
879+70 to 938+26	5,856	Temporary Permanent	30 50
Santaquin – Mona Reservoir Pipeline			
Station	**Length (Ft)**	**Type of Easement**	**Width (Ft)**
12+28 to 165+23	15,295	Temporary Permanent	30 50
165+23 to 179+44	1,421	Temporary Permanent	30 115
179+44 to 322+50	14,306	Temporary Permanent	30 50
322+50 to 368+50	4,600	Temporary	20
368+50 to 418+50	5,000	Temporary Permanent	30 50
418+50 to 419+10	60	Permanent	60

Mapleton – Springville Lateral Pipeline

Permanent easements would be required along the Mapleton – Springville Lateral pipeline in locations where the total existing right-of-way is less than 50 feet wide. Two such locations occur along the pipeline. In locations where the total existing right-of-way and permanent easement width is less than 80 feet, temporary easements will be required. The temporary easement width shall be set equal to the difference between 80 feet and the sum of the existing right-of-way and permanent easement. Table 8-3 below summarizes the locations where acquisition of permanent and temporary easements would be required along the Mapleton – Springville Lateral Pipeline alignment.

TABLE 8-3
Mapleton – Springville Lateral Pipeline
Rights–of–Way

Station	Length (Ft)	Type of Easement	Width (Ft)
29+45 to 72+55	4,310	Temporary	30
162+11 to180+00	1,789	Permanent	10*
197+50 to 210+00	1,250	Temporary	30
244+50 to 293+00	4,850	Temporary	30
300+37 to 305+71	534	Temporary Permanent	60 20
305+71 to 310+38	467	Temporary Permanent	60 20

*Development encroachment makes it impractical to acquire additional temporary easements along this stretch.

Additional permanent and temporary easements may be needed between approximate pipeline station 305+00 (where the alignment leaves the canal bed and runs parallel to the existing canal), and the end of the alignment. Current Utah County plat maps show a right-of-way for the existing Mapleton Lateral only and do not show right-of-way for the existing piping system that begins at the end of the Mapleton Lateral that delivers water to Hobble Creek and East Bench Canal.

Spanish Fork – Provo Reservoir Canal Pipeline

The majority of the Spanish Fork - Provo Reservoir Canal Pipeline alignment would be within existing state and local road rights-of-way. Sections of the pipeline in these rights-of-way would not require acquisition of additional temporary or permanent easements, except where the existing right-of-way is inadequate for construction or maintenance access. Portions of the alignment not within public rights-of-way or within inadequate rights-of-way requiring acquisition of additional permanent or temporary easements are summarized in Table 8-4.

TABLE 8-4
Spanish Fork – Provo Reservoir Canal Pipeline
Rights–of–Way

Station	Length (Ft)	Type of Easement	Width (Ft)
675+00 to 704+36	2,936	Permanent*	60
764+36 to 779+36	1,500	Temporary Permanent	20 60
817+36 to 820+86	350	Permanent*	30
820+86 to 821+86	100	Permanent*	60
899+36 to 910+56	1,120	Permanent*	20
981+36 to 987+36	600	Temporary	20
987+36 to 988+86	150	Permanent	60
988+86 to 993+36	450	Permanent	60
1007+36 to 1013+36	600	Temporary Permanent	20 50
1072+36 to 1091+91	1,955	Temporary Permanent	20 60
1091+91 to 1092+91	100	Temporary Permanent	20 100

*Provo City expected to extend roadway along this portion of the alignment

GEOTECHNICAL CONDITIONS

The facilities that would comprise the ULS System would be located in the Wasatch Front geomorphologic setting. The base of the mountains is located in alluvial fan deposits overlying lacustrine sediments of the paleo Lake Bonneville. The principal geologic hazards to the facilities are expected to be surface rupture and liquefaction resulting from a nearby earthquake, stability of natural slopes as well as excavation cuts, potentially expansive or compressible soils, and soil chemistry with regard to potential corrosivity to pipe materials.

SEISMIC CONSIDERATIONS

The project would be situated near the center of the Intermountain Seismic Belt (ISB), a zone of concentrated earthquake activity extending from Arizona to northern Montana, and historically one of the most seismically active areas in the continental United States.

In Utah, the ISB is characterized by a broad band of northerly trending normal faults, typically down faulted to the west called the Wasatch fault zone. Geologic and geomorphic evidence shows that repeated, normal-slip surface faulting has occurred in

the Salt Lake Valley through late Pleistocene to Holocene time. The fault zone extends a distance of about 240 miles. Studies of the fault zone suggest that it is composed of 10 discrete segments, each of which may rupture independently during a major earthquake. Earthquakes between magnitudes of about M 6.5 and M 7.5 are expected in the region and are generally associated with identifiable faults, such as the Salt Lake or Provo segment of the Wasatch fault zone that show evidence of recent seismic activity. The Salt Lake, Provo and Nephi segments are the closest portions of the Wasatch fault zone to the project area.

The Wasatch fault zone is characterized by long periods of inactivity and periodic major earthquakes. Since Lake Bonneville drained about 12,000 years ago, earthquakes and offsets along the Wasatch fault zone have disrupted the Bonneville deposits a number of times. The most recent earthquake dated in trenches excavated across the Provo segment is about 600 years old.

Sixth Water Hydroelectric Power Plant

The Sixth Water Hydroelectric Power Plant would be located at the downstream end of the Sixth Water Aqueduct. Civil construction will require additional excavation east of the connection shaft and may require rock excavation.

Upper Diamond Fork Hydroelectric Power Plant

Excavation for the Upper Diamond Fork Hydroelectric Power Plant located at the downstream end of the Upper Diamond Fork Pipeline and upstream of the vortex structure. It is expected that the excavation would be in conglomerate, sandstone, and siltstone of the North Horn Formation.

Spanish Fork Canyon Pipeline

At the mouth of Diamond Fork Canyon, open trench excavation for the Spanish Fork Canyon Pipeline is expected to be in Triassic Thynes Limestone and Woodside Shale as exposed in nearby canyon walls and in road cuts. Residual soil resulting from weathering of these rocks is typically silt to silty clay, but coarse, angular fragments of sound rock occur in talus slopes that feed from these formations.

The pipeline alignment would pass through a complex series of normal faults. As a result of these faults, older rocks are exposed to the west at the lower end of the canyon at lower elevations than younger rocks higher in the canyon.

Down the Spanish Fork Canyon, west of the Triassic rocks are a series of older Permian limestones, siltstones, and sandstones of the Park City, Diamond Creek, and Kirkman Formations. The Kirkman limestone includes a conglomeratic member near the base of

the formation that is exposed in the canyon and weathers to cobbles in a silty sand or sandy silt matrix in the canyon floor.

Further downstream, Oquirrh Formation is exposed from east of the Cold Springs area to the mouth of the Spanish Fork Canyon.

In general, the pipeline would be located on the north side of the existing U.S. Highway 6. However there are several tight spots along the canyon where rock outcrops and talus slopes pinch the roadway against the river, resulting in little or no space to the north of the highway in which to place the pipeline. In these locations it would be necessary to either cut into the slope, extend the road shoulder or place the pipeline in the road.

A thin mantle of alluvial deposits covers most of the canyon floor from Diamond Creek to the mouth of Spanish Fork Canyon. The pipeline would be buried primarily in this alluvium consisting of silt, sand and gravelly silt and sand; however excavation in residual soil derived from weathering of the parent bedrock is anticipated. Rock excavation by blasting may be necessary in some locations.

The pipeline alignment would cross several normal faults from Diamond Fork to the mouth of Spanish Fork Canyon. The most important faults are the Little Diamond Creek Fault, just west of Diamond Fork, and the main group of faults associated with the Wasatch fault zone, which extends north and south along the west margin of Utah Valley. The Little Diamond Creek Fault and the Wasatch Fault Zone are believed to be potentially active. The estimated slip rate along the Little Diamond Creek Fault is less than 1 mm/yr.

Spanish Fork Canyon - Santaquin Pipeline

The Spanish Fork-Santaquin pipeline alignment crosses through Pleistocene and Holocene terrace gravels south of the mouth of Spanish Fork Canyon, then passes through several miles of silt, silty sand, sand, gravel, and cobbles associated with Lake Bonneville shoreline deposits. Along the pipeline alignment further from the mountains, the soils in the valley become typically silts, silty clays, or clays of low plasticity.

Rocky Ridge is a faulted complex of Pennsylvanian/Permian limestone and/or quartzite of the Oquirrh Formation that protrudes westward into the Utah Valley near Payson. Lake Bonneville terrace deposits of sand and gravel flank the ridge. Soil may be relatively thinner at this location because of its close proximity to the ridge.

The Wasatch Fault zone extends southward along the eastern side of Utah Valley to Rocky Ridge, and continues south into northern Juab County. The Spanish Fork-Santaquin pipeline alignment would cross this fault at Rocky Ridge and then continue southward, roughly parallel to but west of the fault zone. The estimated fault slip rate of the Wasatch Fault zone at Rocky Ridge and south into Juab County is less than 1 mm/yr.

Santaquin - Mona Reservoir Pipeline

The Santaquin – Mona Reservoir Pipeline alignment continues south from the end of the Spanish Fork Canyon – Santaquin Pipeline parallel to the Union Pacific Railroad to the existing Mona Reservoir, through several miles of Pleistocene and Holocene through several miles of silt, silty sand, sand, gravel, and cobbles associated with Lake Bonneville shoreline deposits.

Spanish Fork Canyon – Provo Reservoir Canal Pipeline

The Spanish Fork Canyon – Provo Reservoir Canal Pipeline alignment skirts the base of the Wasatch Mountains, and crosses the Provo River before connecting to the Provo Reservoir Canal. Soils are predominantly alluvial fan deposits of coarse sand and gravel originating from adjacent canyons in the Wasatch Mountains, which overlie lacustrine deposits, consisting of primarily of silt, sand and gravel associated with Lake Bonneville. Relatively deep sequences of alluvial fan material have accumulated at the mouth of Spanish Fork River and the Provo River canyons. The pipeline alignment does not cross any of the known active faults located north of the mouth of Spanish Fork Canyon. The potential for liquefaction of sediments in Utah Valley in the event of a major earthquake has been assessed to be low to moderate.

Mapleton – Springville Lateral Pipeline

Geotechnical conditions along the Mapleton – Springville Lateral Pipeline which would be within the existing Mapleton Lateral Canal, would be similar to the Spanish Fork Canyon – Provo Lake Canal Pipeline as previously described. Soils encountered and used in the construction of the Mapleton Lateral Canal were predominantly silt.

PIPELINE CONSTRUCTION CONSIDERATIONS

The following subsections describe the pipeline construction procedures that would be used to construct each pipeline.

The following sequence would be used to construct pipelines:

- Clear and grade pipeline alignments
- Excavate trench for pipe installation
- Haul pipe to construction sites
- Place pipe along trenches
- Place pipe in trenches and connect pipe
- Backfill trenches and grade surface
- Clean up and restore areas disturbed by construction

Clearing and Grading

Clearing would be performed in accordance with the permits and conditions contained in easement agreements with public land managers and private landowners. Vegetation and obstacles would be cleared as necessary to allow safe and efficient use of construction equipment. Large woody vegetation would be chipped and/or shredded and placed in topsoil areas. Debris from right-of-way preparation would be disposed in accordance with any applicable regulations, permits or agreements. Right-of-way grading would be limited to that necessary to provide safe and efficient machinery movement and operation. Topsoil would be stripped where possible and stockpiled for use in site revegetation. Temporary bridges or culverts across creeks on the right-of-way may need to be constructed to provide vehicle safety and to reduce harmful environmental effects. Rights-of-way would be graded to minimize effects on drainage and slope stability. Steep terrain, where the right-of-way must be terraced to provide a level temporary work area, would be restored after construction to approximate original contours. Signs and markers along roads would be temporarily removed during construction and replaced following construction. Cross street and driveway pavements would be cut and temporarily covered during pipeline construction to maintain access.

Pipe Trench Excavation

The open trench method would be used for most of the pipeline construction. Trenches would accommodate steel pressure pipelines ranging from 24- to 84-inches in diameter with cover ranging from 3- to 7-feet. The pipeline trenches would be excavated with crawler-tracked excavators and sloped or shored to meet U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) standards to protect workers from cave-ins. Trench-boxes would be used in areas where trenches could not be sloped or where soils may be unstable for standard excavation techniques. The excavated material would be used for pipe backfill where suitable. Any unsuitable or excess material would be hauled away for disposal in local gravel pits and other existing material disposal sites. Much of the pipeline trench excavation would occur in road and highway shoulders, except in cities where the pipeline trench would be excavated in paved streets and in farmland where the pipeline trench would be excavated in soil. Trenches would be excavated deeper in cities where the pipelines would cross under existing utilities to minimize service disruptions. The maximum length of open pipeline trench would be 500 feet. Open trenches would be covered with steel plates during periods when no active construction is occurring.

Rippers, jackhammers, blasting or other specialized equipment may be required to excavate rock. Mechanical rippers would be used to excavate rock where appropriate, supplemented by jackhammers. Blasting would be used only in areas away from homes, schools, and businesses. If blasting were required, all blasting operations, including transportation, storage and handling of explosives and blasting materials, would comply with county, state and federal regulations. Blasting permits and authorizations would be

obtained from regulatory agencies including the U.S. Bureau of Alcohol, Tobacco and Firearms and OSHA.

Groundwater encountered in excavated pipeline trenches would be collected and pumped into temporary land application systems or routed to appropriate storm drains. No turbid water would be discharged into streams or storm drains connected to streams without removing the turbidity to achieve water quality standards. Any water required to be discharged to natural streams would be performed under a Utah Pollution Discharge Elimination System (UPDES) permit.

Pipe Installation

The steel, concrete-coated and mortar-lined pipe would be shipped from the manufacturer by truck in lengths up to 40 feet and unloaded by crane along the construction work area and within the temporary construction easements, or in the nearest designated construction staging area for temporary storage. Pipe would transported from the staging area to the work site by flatbed truck and unloaded by crane.

Pipe would be installed in lengths up to 40 feet. Pipe bedding and special backfill material would be imported from existing commercial sources. Suitable topsoil and native earth stockpiled from the trench excavation would be retained on site for surface restoration.

Pipe would be placed in the excavated trench by crane and connected to previously laid sections by pushing it into place on temporary supports for alignment and welding the pipes together. Protective coating would be applied to each weld after it is inspected. Cathodic protection consisting of test stations, anode beds, rectifiers, or impressed current facilities would be installed to further protect the pipeline from corrosive soil conditions. After the pipe sections are connected, a soil cement slurry would be carefully placed around the pipe and allowed to cure to form a secure bed for the pipe. Imported pipe backfill material would be placed around the remainder of the pipeline to a depth of 1 foot over the top of the pipe. The remainder of the trench will be backfilled with native soils obtained in required trench excavation. All backfill materials would be compacted to 90 percent in undeveloped areas and 95 percent in developed areas subject to traffic and other human uses. The pipe backfill would be mechanically compacted with a vibratory compactor. Mechanical compaction would be used near the ground surface along roadways.

Following pipeline installation, the contractor would remove all debris. Excess backfill material would be removed and disposed of in an approved site. Stockpiled topsoil would be spread evenly over the work area and revegetated if the work area was previously vegetated.

CROSSINGS

The ULS System pipeline alignments would cross numerous special features including roads, interstate highways, natural waterways, canals, power lines, and railroads. This section provides a summary of the existing features to be crossed and construction procedures that would be used to make the crossings. Some of the crossings could be accomplished through an open trench, while others would require special trenchless construction techniques. Both open trench and trenchless construction methods are described in the following subsections.

Open Trench Crossings

The Open Trench excavation technique would be used for all crossings where open trench crossing is an appropriate construction method.

Micro-tunneling and Jack/Bore Crossings

Micro-tunneling and jack/bore construction techniques involve excavating underground from a jacking pit to a receiving pit to avoid disturbing surface features between the two pits. Micro-tunneling would be performed for distances up to 750 feet; jack/bore operations would be performed up to 300 feet. Both techniques would require shored and braced pits on each side of the area to be excavated underground. Pit shoring systems would consist of sheet piles with internal bracing or circular steel ribs with liner plates and internal bracing. Each jacking pit would be about 15-feet wide and 50-feet long; receiving pits would be about 10-feet wide and 20-feet long.

Micro-tunneling would be performed using a slurry process involving a micro-tunneling boring machine, pipe-jacking frame set on a thrust block, slurry tanks and pumps, water cooling/jetting tanks and pumps, bentonite lubrication system, and operator station. The laser-guided tunneling system would be operated from the ground surface and require adequate space for the operator station, slurry tanks, water tanks, bentonite lubrication units, a crane, generators and pipe storage. As the micro-tunneling progresses, 40-foot-long carrier pipes would be lowered into the jacking pit and jacked into the tunneled area following the machine. Water pipes would be installed inside of the carrier pipes.

Jack/bore operations would be performed using a jacking shield, steel casing, jacking station, hydraulic jacks pushing against steel pressure plates set in a concrete thrust wall. The ground would be excavated at the jacking shield face using power-tunneling equipment; excavated muck would be transported to the jacking pit and removed for off-site disposal. This tunneling technique would require adequate surface space for generators and equipment to operate the hydraulic jacks, a crane, and access for trucks to haul excavated muck and pipe storage. As the tunneling progresses, 40-foot-long carrier pipes would be lowered into the jacking pit and hydraulically jacked into place following the jacking equipment.

Groundwater may be encountered using micro-tunneling and jack/bore techniques. Dewatering would be an important design consideration and could involve portable pumps to extract groundwater, cut-offs to isolate groundwater from the construction areas, ground freezing to temporarily immobilize the water, or other groundwater management measures. All groundwater would be disposed in compliance with regulatory requirements. Any groundwater discharges to natural streams would be performed under a UPDES permit.

Road, Highway and Interstate Crossings

The open trench excavation technique would be used at all local road crossings encountered along the pipeline alignment during construction. Pipe backfill would be heavily compacted all the way to the ground surface or pavement invert at road crossings to prevent the road surface from subsiding under repeated traffic loads during and after construction. Pavement at each road crossing would be restored to a condition better than or equal to existing conditions.

Pipeline crossings of state and federal roads and highways may require jack/bore construction techniques. Each pipeline crossing would be scheduled and coordinated with UDOT. Pipeline casings under the highways and interstate would be extended as appropriate to meet UDOT requirements outlined in the construction permit and easement conditions. Table 8-5 presents the highway and interstate crossings.

TABLE 8 - 5
Highway and Interstate Pipeline Crossings

Feature Name	Approximate Pipeline Station	Highway or Interstate	Crossing Technique
Spanish Fork – Santaquin Pipeline	13+21	US Highway 89	Jack/bore
Spanish Fork – Santaquin Pipeline	38+00	U.S. Highway 6	Jack/bore
Spanish Fork – Santaquin Pipeline	710+00	U.S. Highway 6/State Route 198	Jack/bore
Spanish Fork – Santaquin Pipeline	742+00	Interstate 15	Jack/bore
Spanish Fork – Santaquin Pipeline	882+00	U.S. Highway 6	Jack/bore
Spanish Fork – Provo Reservoir Canal Pipeline	944+00	U.S. Highway 189	Jack/bore
Spanish Fork – Provo Reservoir Canal Pipeline	1013+00	State Route 52	Jack/bore

Railroad Crossings

Pipeline crossings of railroad tracks would be achieved by jack/bore construction techniques. Each pipeline crossing would be scheduled and coordinated with Union Pacific Railroad. Pipeline casings under railroad tracks would be extended as appropriate to meet easement conditions and regulatory agency requirements in the construction permit. Table 8-6 below summarizes the required railroad crossings.

TABLE 8-6
Railroad Crossings

Pipeline	Approximate Pipeline Station	Crossing Technique
Spanish Fork – Santaquin Pipeline	14+00	Jack/bore
Spanish Fork – Santaquin Pipeline	38+00	Jack/bore
Spanish Fork – Santaquin Pipeline	938+00	Jack/bore
Spanish Fork Canyon Pipeline	397+00	Jack/bore

Stream, River and Canal Crossings

Pipeline crossings of streams and rivers would be achieved by micro-tunneling and jack/bore construction technique. Each pipeline crossing would be scheduled and coordinated with appropriate regulatory agencies. Pipeline casings under streams and rivers would be extended as appropriate to meet easement conditions and regulatory agency requirements in the construction permit. Table 8-7 summarizes the stream and river crossings.

TABLE 8-7
Stream, River and Canal Pipeline Crossings

Pipeline Name	Approximate Pipeline Station	Water Feature	Crossing Technique
Spanish Fork Canyon Pipeline	130+00	Creek	Jack/bore
Spanish Fork Canyon Pipeline	139+10	Creek	Jack/bore
Spanish Fork Canyon Pipeline	164+40	Creek	Jack/bore
Spanish Fork Canyon Pipeline	188+50	Creek	Jack/bore
Spanish Fork Canyon Pipeline	202+00	Creek	Jack/bore

TABLE 8-7 (continued)
Stream, River and Canal Pipeline Crossings

Pipeline Name	Approximate Pipeline Station	Water Feature	Crossing Technique
Spanish Fork Canyon Pipeline	223+00	Creek	Jack/bore
Spanish Fork Canyon Pipeline	265+00	Creek	Jack/bore
Spanish Fork Canyon Pipeline	283+75	Creek	Jack/bore
Spanish Fork Canyon Pipeline	306+70	Creek	Jack/bore
Spanish Fork Canyon Pipeline	325+50	Creek	Jack/bore
Spanish Fork Canyon Pipeline	368+00	Creek	Jack/bore
Spanish Fork Canyon Pipeline	383+97	Creek	Jack/bore
Spanish Fork Canyon Pipeline	422+00	Mapleton Lateral Canal	
Spanish Fork – Santaquin Pipeline	98+00	Mill Race Canal	Jack/bore or Micro-tunnel
Spanish Fork – Santaquin Pipeline	100+00	Spanish Fork River	Jack/bore or Micro-tunnel
Spanish Fork – Santaquin Pipeline	103+00	South Field Canal	Jack/bore
Spanish Fork – Santaquin Pipeline	143+00	Salem Canal	Jack/bore
Spanish Fork – Santaquin Pipeline	242+00	Salem Canal	Jack/bore
Spanish Fork – Santaquin Pipeline	501+00	Strawberry Highline Canal	Jack/bore
Spanish Fork – Santaquin Pipeline	516+00	Strawberry Highline Canal	Jack/bore
Spanish Fork – Santaquin Pipeline	578+00	Irrigation Canal	open cut
Spanish Fork – Santaquin Pipeline	592+00	Irrigation Canal	open cut
Spanish Fork – Santaquin Pipeline	627+00	Irrigation Canal	open cut
Spanish Fork – Santaquin Pipeline	630+00	Irrigation Canal	open cut
Spanish Fork – Santaquin Pipeline	686+00	Irrigation Canal	open cut
Spanish Fork – Santaquin Pipeline	691+00	Spring Creek	Jack/bore
Spanish Fork – Santaquin Pipeline	800+00	Strawberry Highline Canal	Jack/bore
Spanish Fork – Santaquin Pipeline	880+00	drainage channel	open cut
Santaquin – Mona Reservoir Pipeline	344+00	Inlet to Mona Reservoir	Jack/bore
Spanish Fork – Provo Reservoir Canal/Pipeline	313+00	Hobble Creek	Jack/bore

TABLE 8-7 (continued)
Stream, River and Canal Pipeline Crossings

Pipeline Name	Approximate Pipeline Station	Water Feature	Crossing Technique
Spanish Fork – Provo Reservoir Canal/Pipeline	357+00	Spring Creek	Jack/bore
Spanish Fork – Provo Reservoir Canal/Pipeline	678+00	Upper Union Canal	Open cut
Spanish Fork – Provo Reservoir Canal/Pipeline	768+00	Rock Canyon	Open cut
Spanish Fork – Provo Reservoir Canal/Pipeline	941+00	Timpanogos Canal	Jack/bore
Spanish Fork – Provo Reservoir Canal/Pipeline	988+00	Provo River	Micro-tunnel
Spanish Fork – Provo Reservoir Canal/Pipeline	992+00	Union Canal	Jack/bore
Spanish Fork – Provo Reservoir Canal/Pipeline	1010+00	Bench Canal	Jack/bore
Spanish Fork – Provo Reservoir Canal/Pipeline	1013+00	Provo Reservoir Canal	Jack/bore

Utility Crossings

The Central Utah Project water pipelines will cross several utilities potable water lines, sewer lines, storm water lines, irrigation water lines, buried and overhead electric power lines, buried and overhead telephone lines, buried and overhead cable television lines, fiber optic communication lines, and gas lines. In general, the project pipelines would be located beneath existing utilities, unless the existing utilities are extremely deep (greater than 10 feet), such as a deep gravity sewer pipe. The crossing of gravity or pressure wastewater pipelines will conform to the State of Utah Health Services Department requirements for separation of the potable water system. At the time of this study, horizontal separation of ten feet and a vertical separation of at least one and one-half feet were required. The pipeline design will also allow a minimum vertical clearance of one foot from existing utilities at open-cut crossings. Special details for utility crossings will be provided in the design to show the requirements for backfilling existing utilities and for supporting them so that they are not deflected when the supporting soils are removed for the CUP pipeline installation. Ideally, existing utility lines will remain intact and in service while the CUP pipeline is being installed. Complete descriptions of all utility crossings are located in Technical Memorandum III-D of the ULS Alternatives Feasibility Study of May 2004.

HYDROELECTRIC POWER PLANT CONSTRUCTION PROCEDURES

The following subsection describes a typical construction sequence that would be followed to construct the hydroelectric power plants in Diamond Fork Canyon. Detailed construction procedures, drawings, specifications and renderings are located in the ULS Alternatives Feasibility Study Technical Memorandums of May 2004.

- Clear and grade the power plant site and access road
- Excavate foot print of powerhouse down to foundation level
- Excavate the trench for the steel pipe connecting the municipal and industrial pipeline to the powerhouse;
- Excavate foot print of tailrace chamber down to the foundation level
- Construct powerhouse building and tailrace chamber;
- Install steel pipe in trench
- Install electrical and mechanical equipment in powerhouse
- Make electrical connections
- Backfill, grade and pave
- Clean up and restore areas disturbed by construction

ELECTRIC TRANSMISSION LINE CONSTRUCTION PROCEDURES

The following subsections describe a typical construction sequence that would be followed to install the buried and overhead transmission lines proposed in this alternative. Detailed construction procedures and alignments for transmission lines are located in the ULS System Alternatives Feasibility Study (Technical Memorandum V-C) of May 2004.

Buried Transmission Lines

The construction sequence for installation of the buried portions of the transmission cable would be:

- Locating the cable route
- Digging the trench
- Installing the cables
- Backfilling the trench
- Restoring the Site

Overhead Transmission Lines

The construction sequence for installation of the overhead portions of the transmission line would be:

- Locating and Stacking the Line
- Clearing Right of Way and Road Access
- Installing Pole Footings

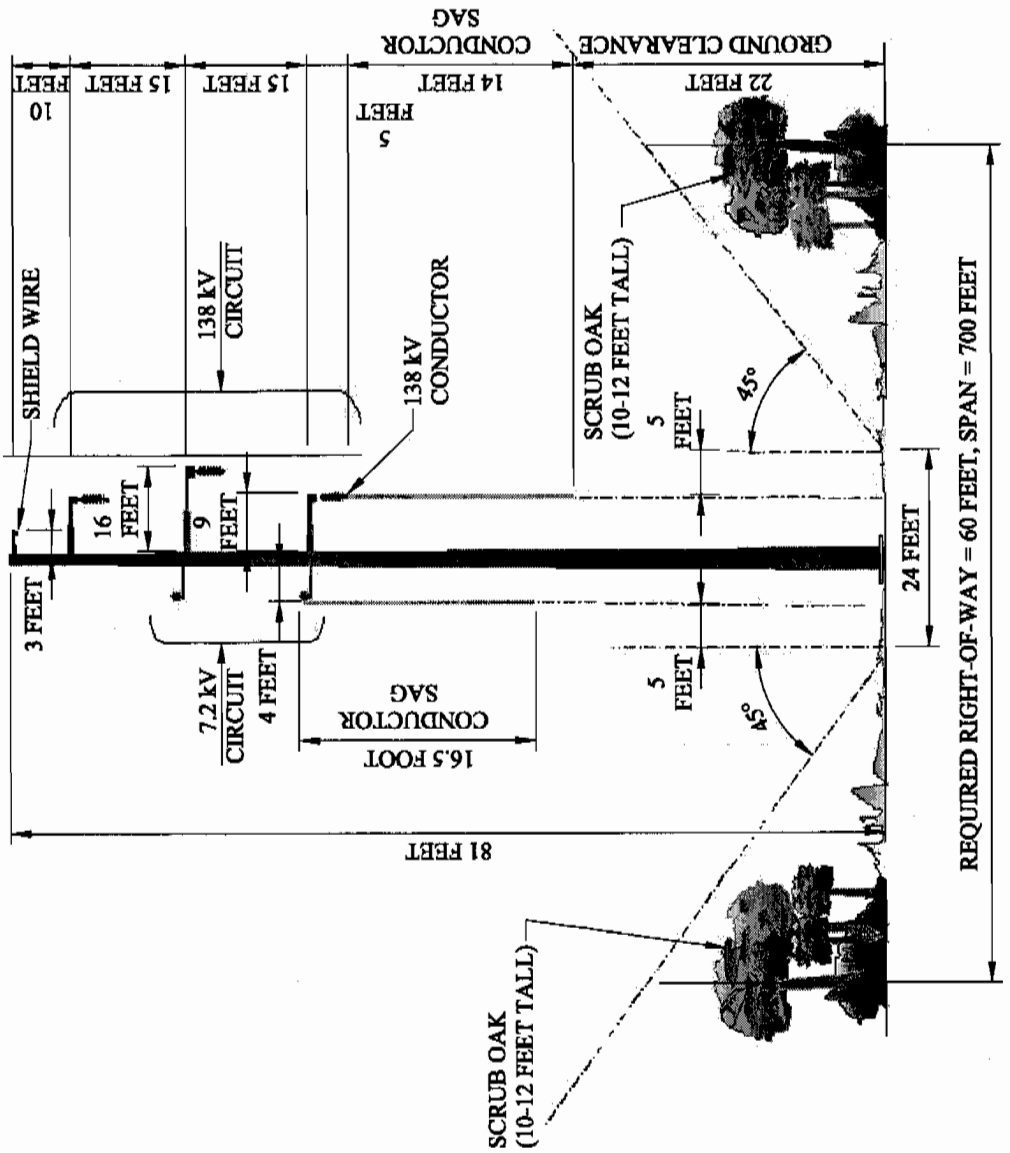
- Erecting Transmission Poles
- Stringing and Sagging Line Conductors
- Clipping In the Conductors
- Restoration of the Site

GENERAL SCHEMATICS RELATED TO ULS CONSTRUCTION

During the preparation of the Environmental Impact Statement for the ULS System, a number of schematics were provided to the EIS team members for their impact evaluation. Some of those drawings are provided here in Table 8-8 and shown schematically on the following pages for information purposes and for future reference.

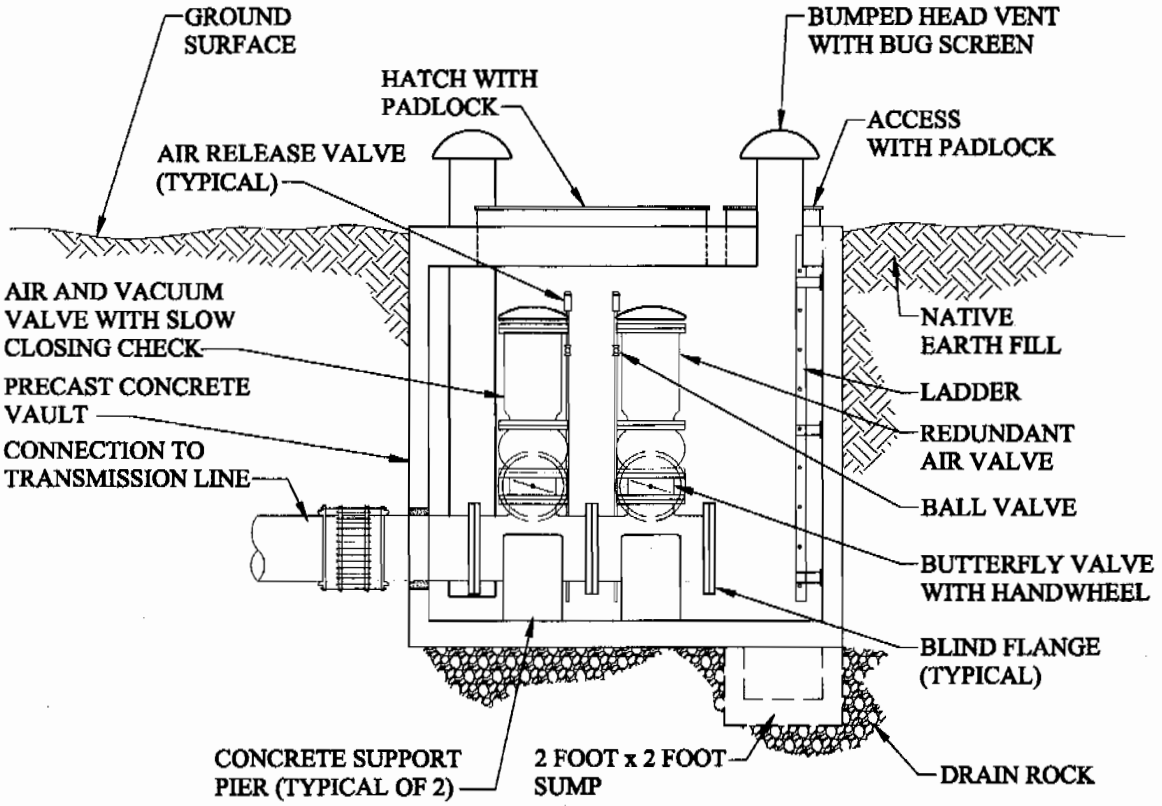
TABLE 8-8
Schematics Related to ULS Construction

Figure No.	Subject of Schematic
Figure 8-1	Upgraded power poles for the Sixth Water transmission line
Figure 8-2	Typical cross section of air release and vacuum relief vault. (Along US-6 and roadways, air vents may need to be moved into the hillside in spots to minimize safety issues.)
Figure 8-3	Typical cross section of blowoff drain valve
Figure 8-4	Typical cross section of pipeline turnout with meter
Figure 8-5	Schematic drawing of typical pipeline construction procedures
Figure 8-6	Schematic drawing of typical pipe trench cross section
Figure 8-7	Schematic of pipeline construction in highway shoulder
Figure 8-8	Typical slurry micro-tunneling procedures
Figure 8-9	Typical bore and jack procedures
Figure 8-10	Cross section of Interstate 15 bore and jack crossing.
Figure 8-11	Cross section of micro-tunneling under the Provo River
Figure 8-12	Typical pipeline construction work area
Figure 8-13	Restricted pipeline construction work area



NOT TO SCALE

Figure 8-1
Upgraded Power Poles for the Sixth Water Transmission Line



NOT TO SCALE

Figure 8-2
Typical Cross Section of Air Release and Vacuum Relief Vault

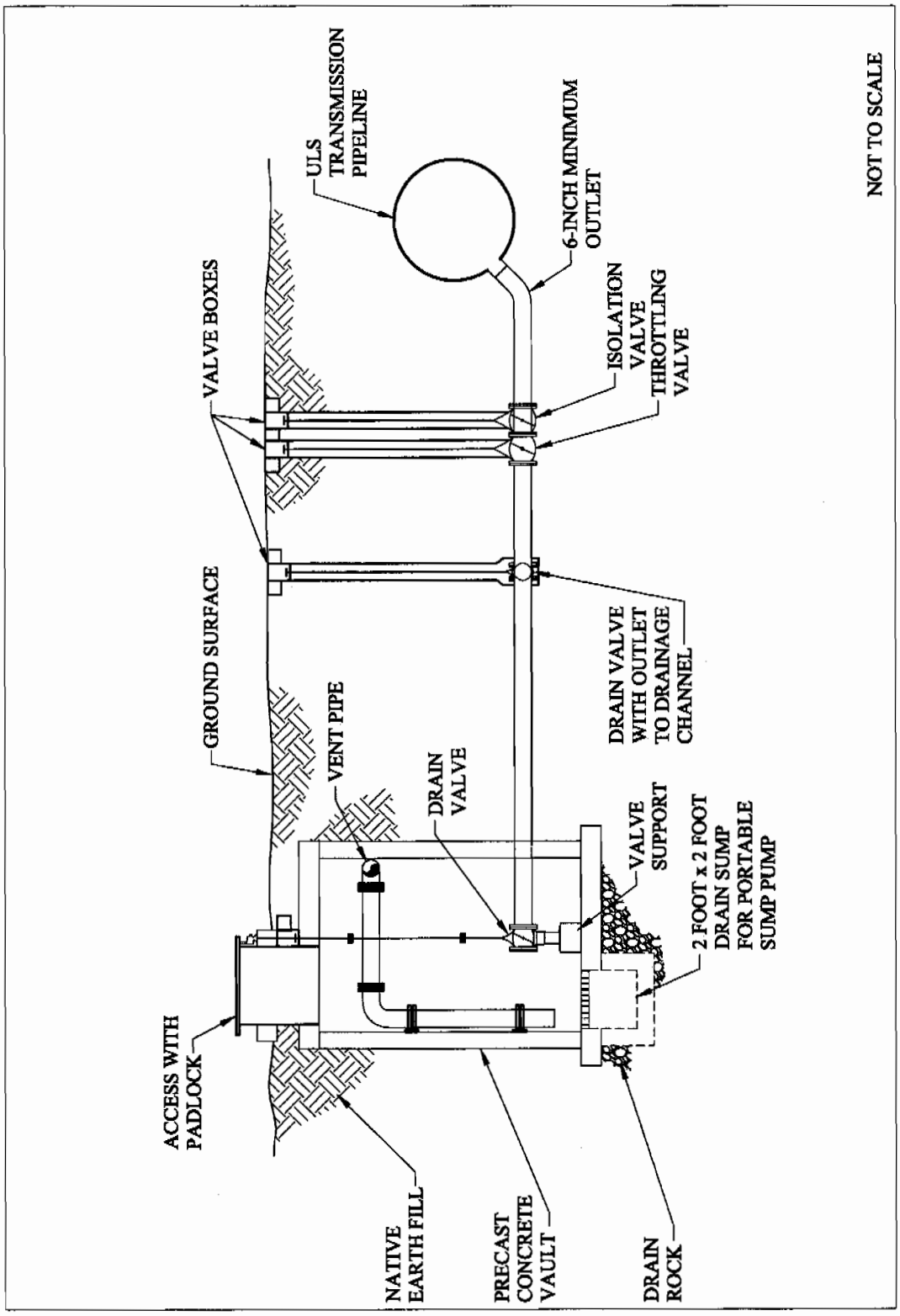


Figure 8-3
Typical Cross Section of Blowoff Drain Vault

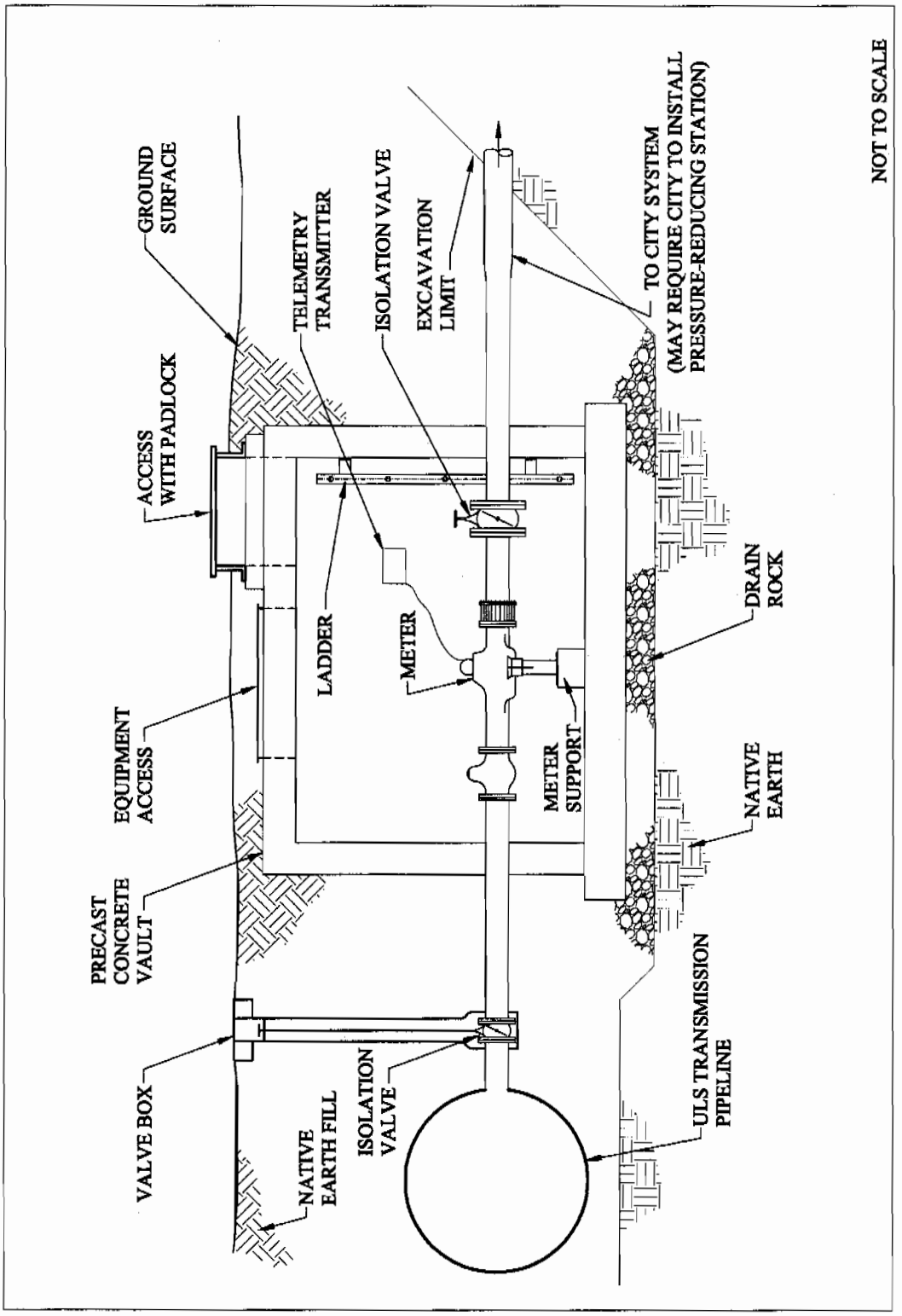


Figure 8-4
Typical Cross Section of Pipeline Turnout with Meter

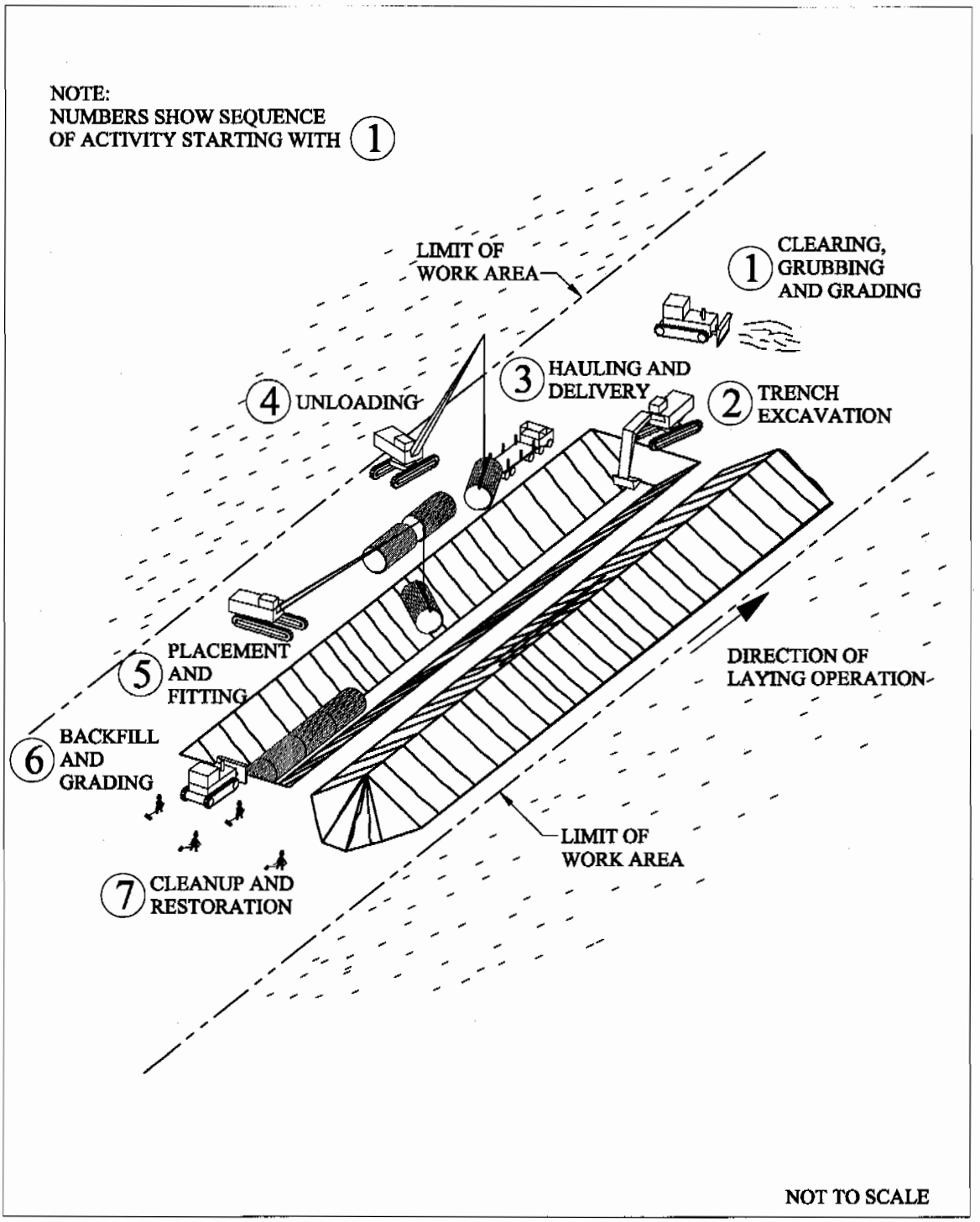


Figure 8-5
Schematic Drawing of Typical Pipeline Construction Procedures

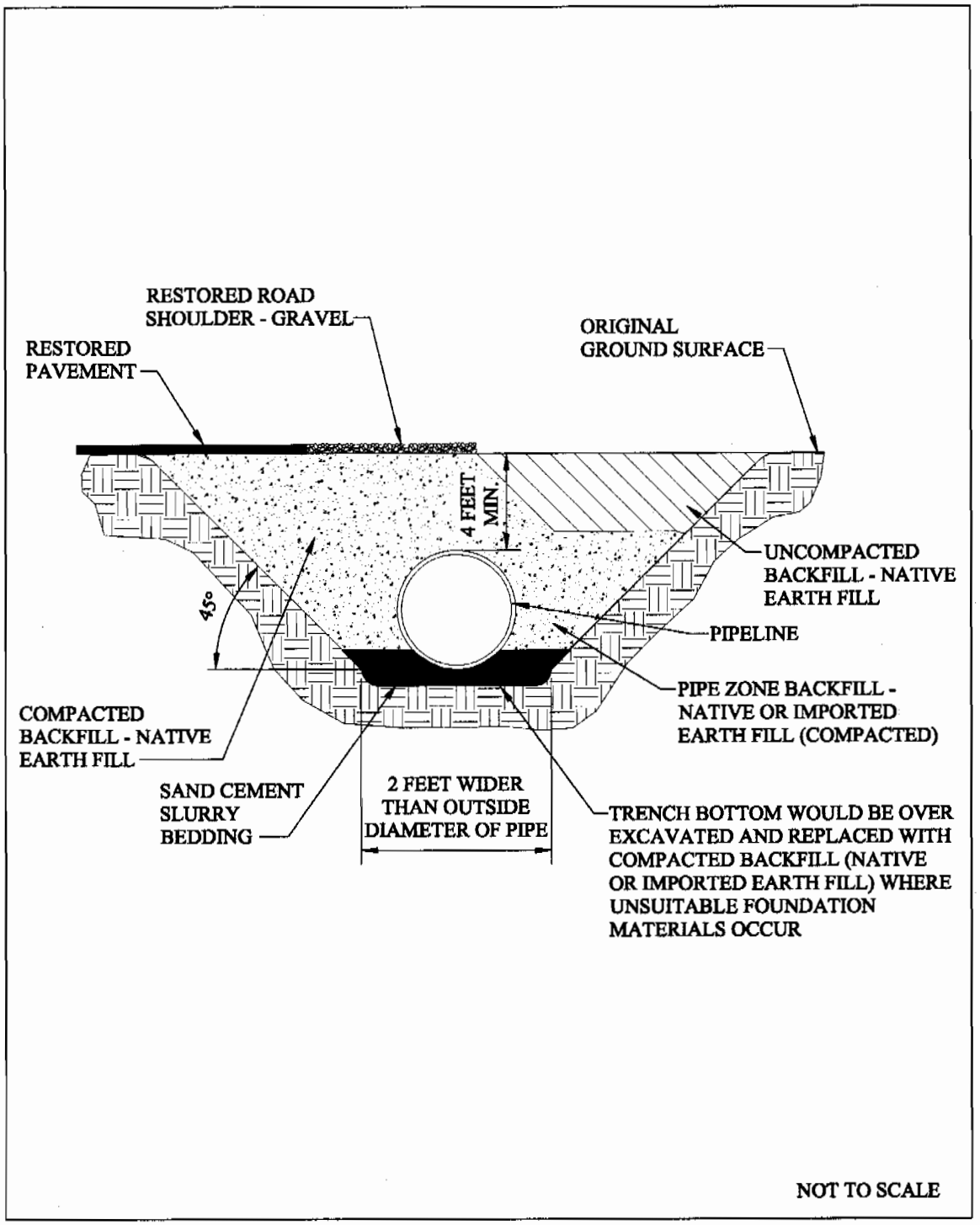


Figure 8-6

Schematic Drawing of Typical Pipe Trench Cross Section

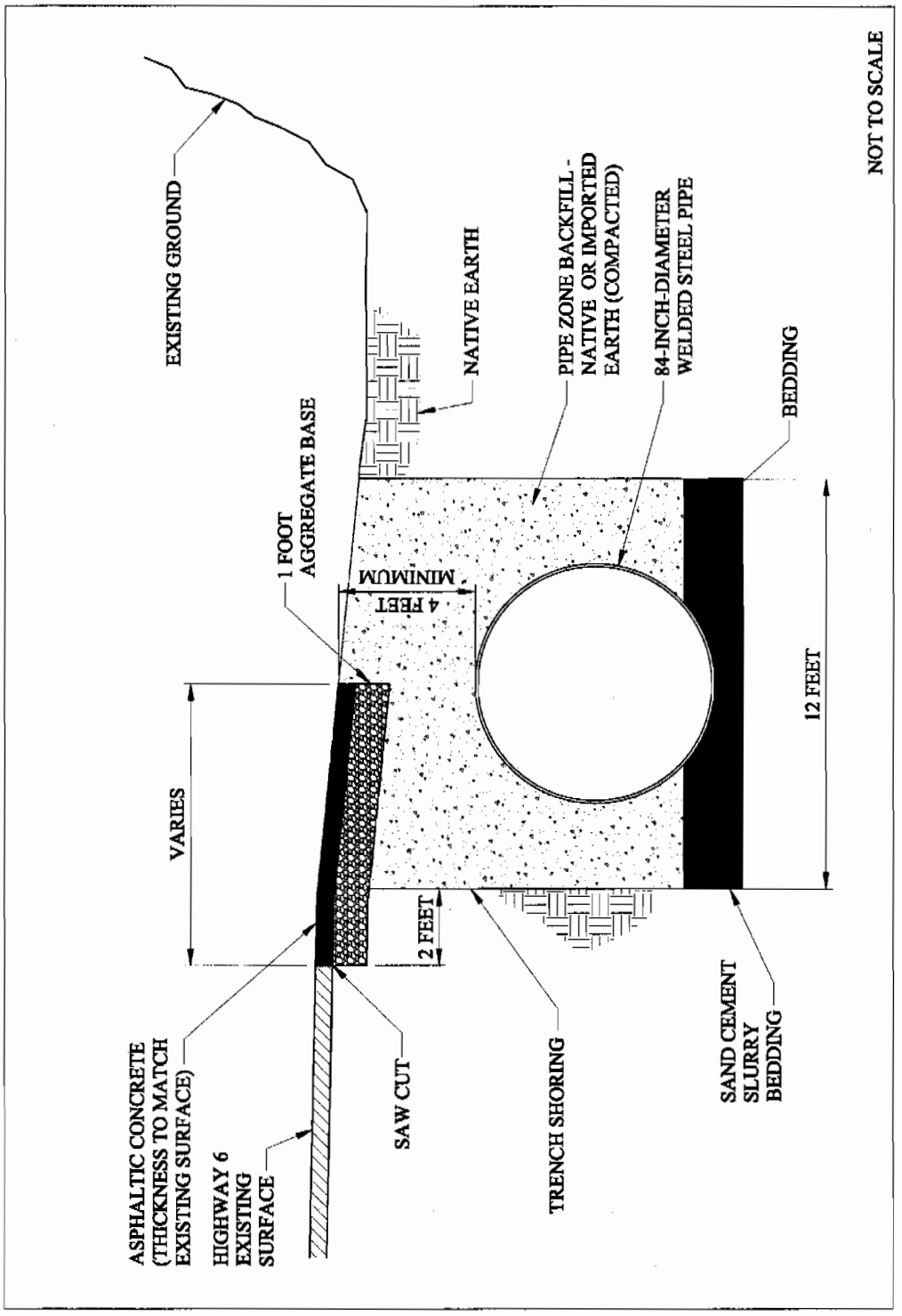


Figure 8-7
Schematic of Pipeline Construction in U.S. Highway 6 Shoulder

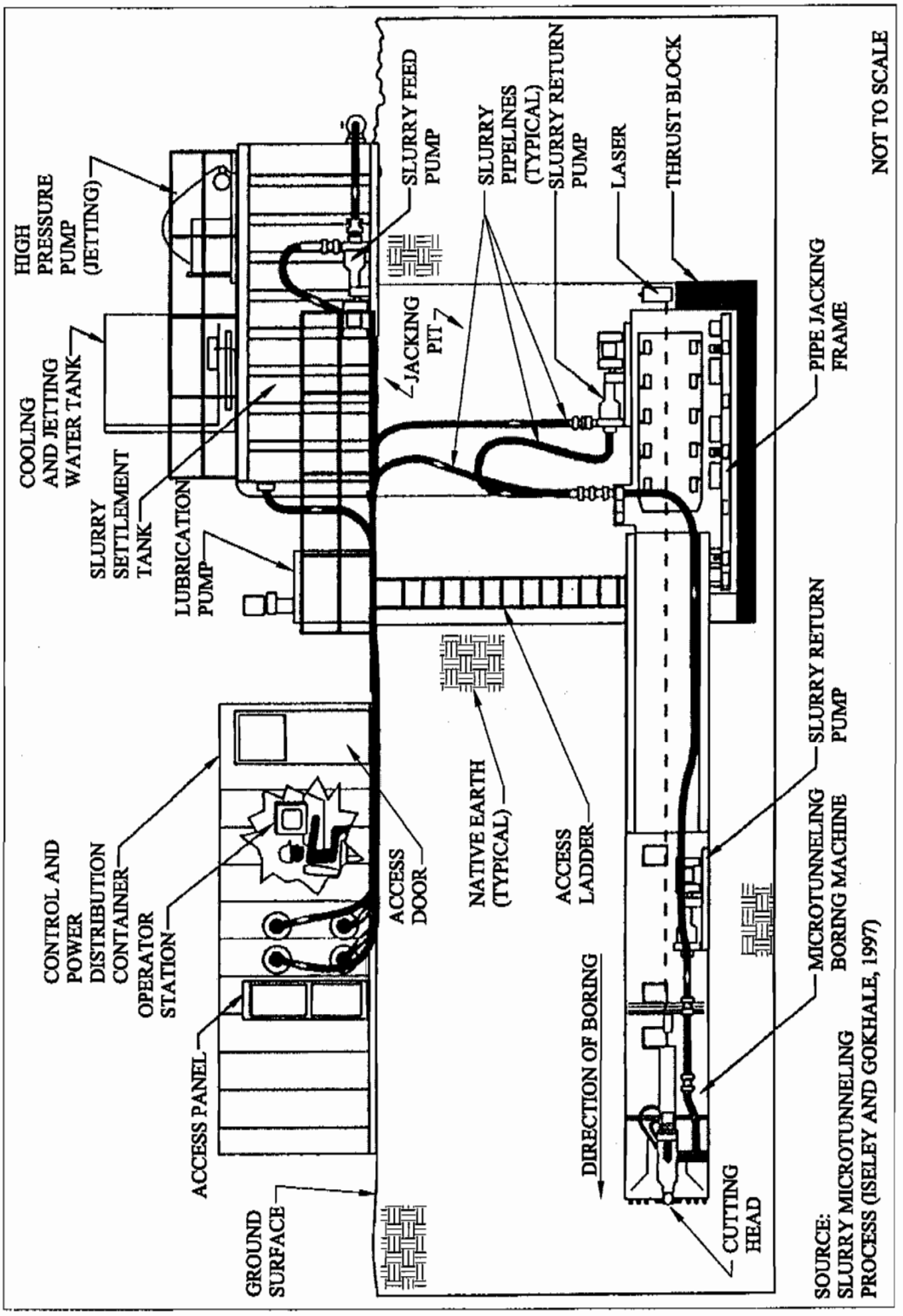
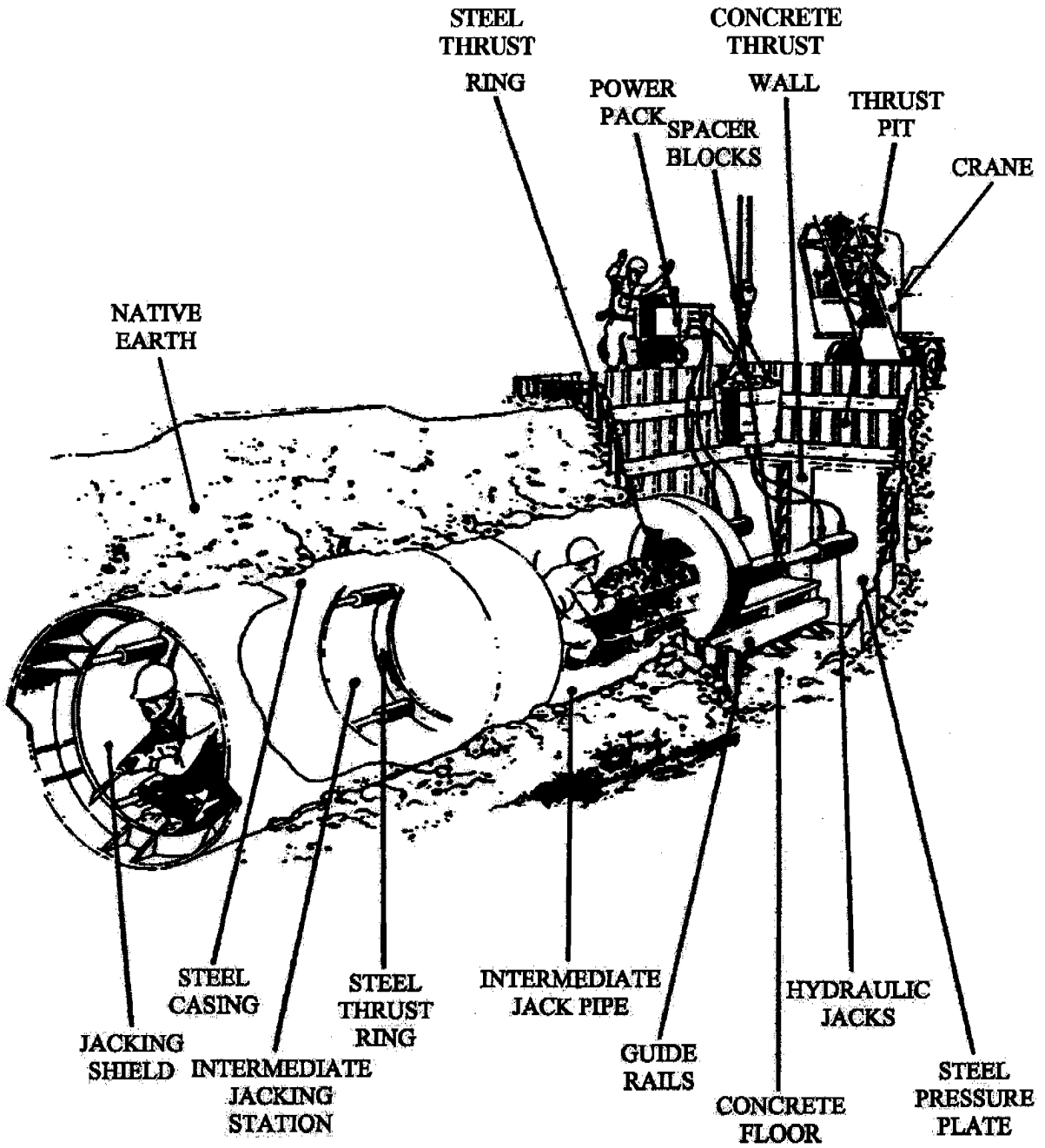


Figure 8-8
Typical Slurry Microtunneling Procedures



(COURTESY OF U.K. PIPE JACKING ASSOCIATION)

NOT TO SCALE

Figure 8-9

Typical Bore and Jack Procedures

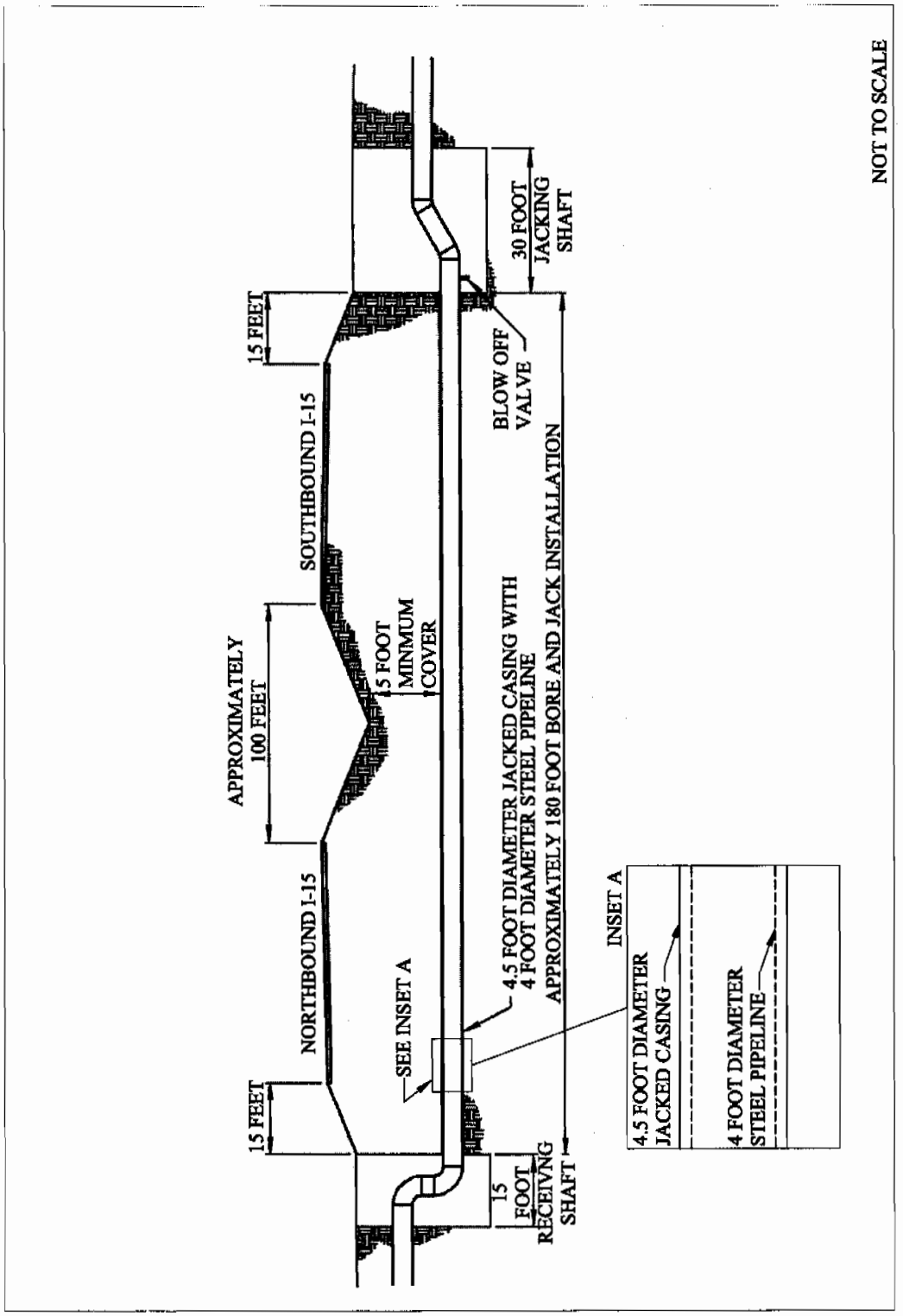


Figure 8-10
Cross Section of I-15 Bore and Jack Crossing

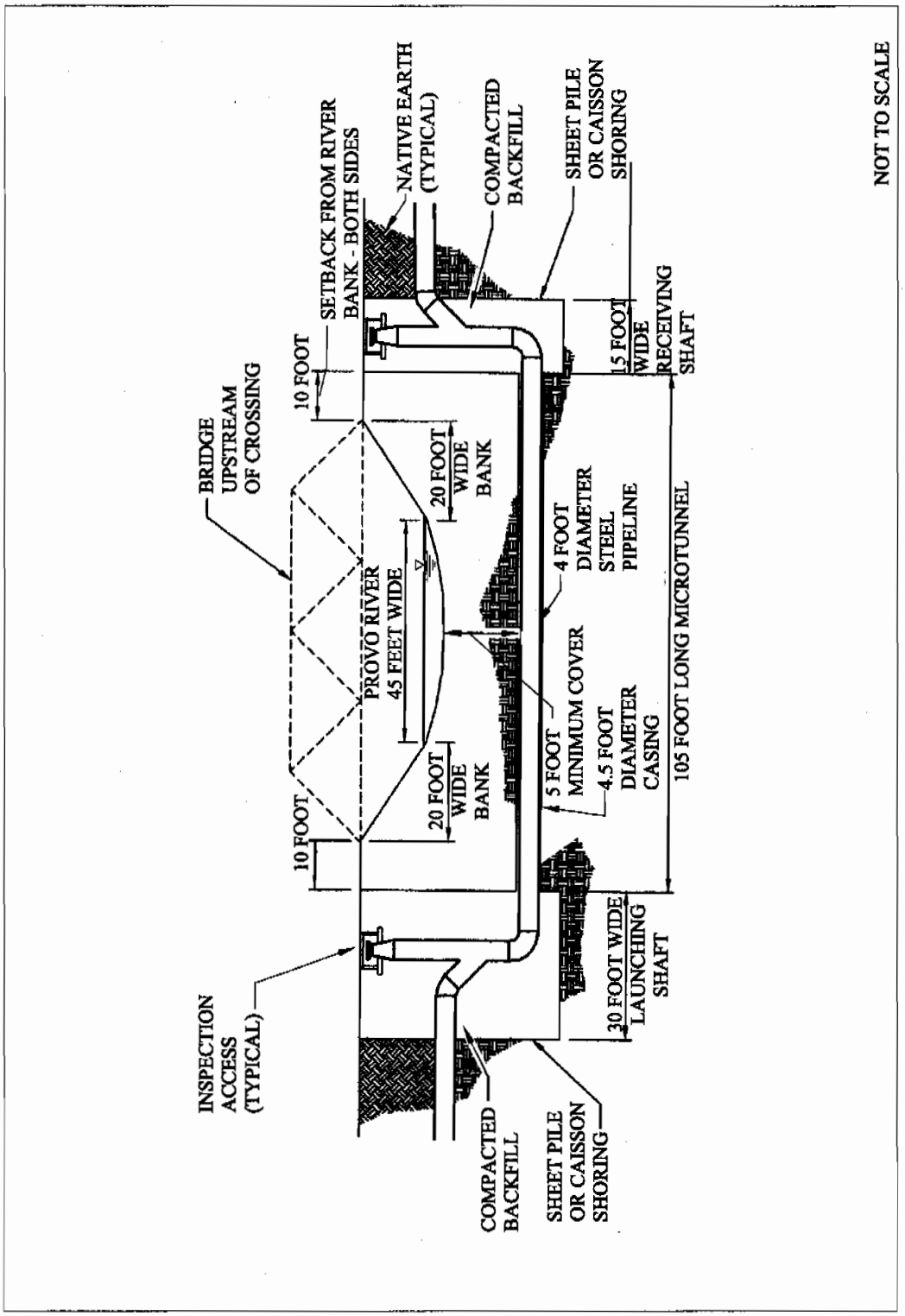


Figure 8-11

Cross Section of Microtunnel Crossing of Spanish Fork - Provo Reservoir Canal Pipeline Under the Provo River

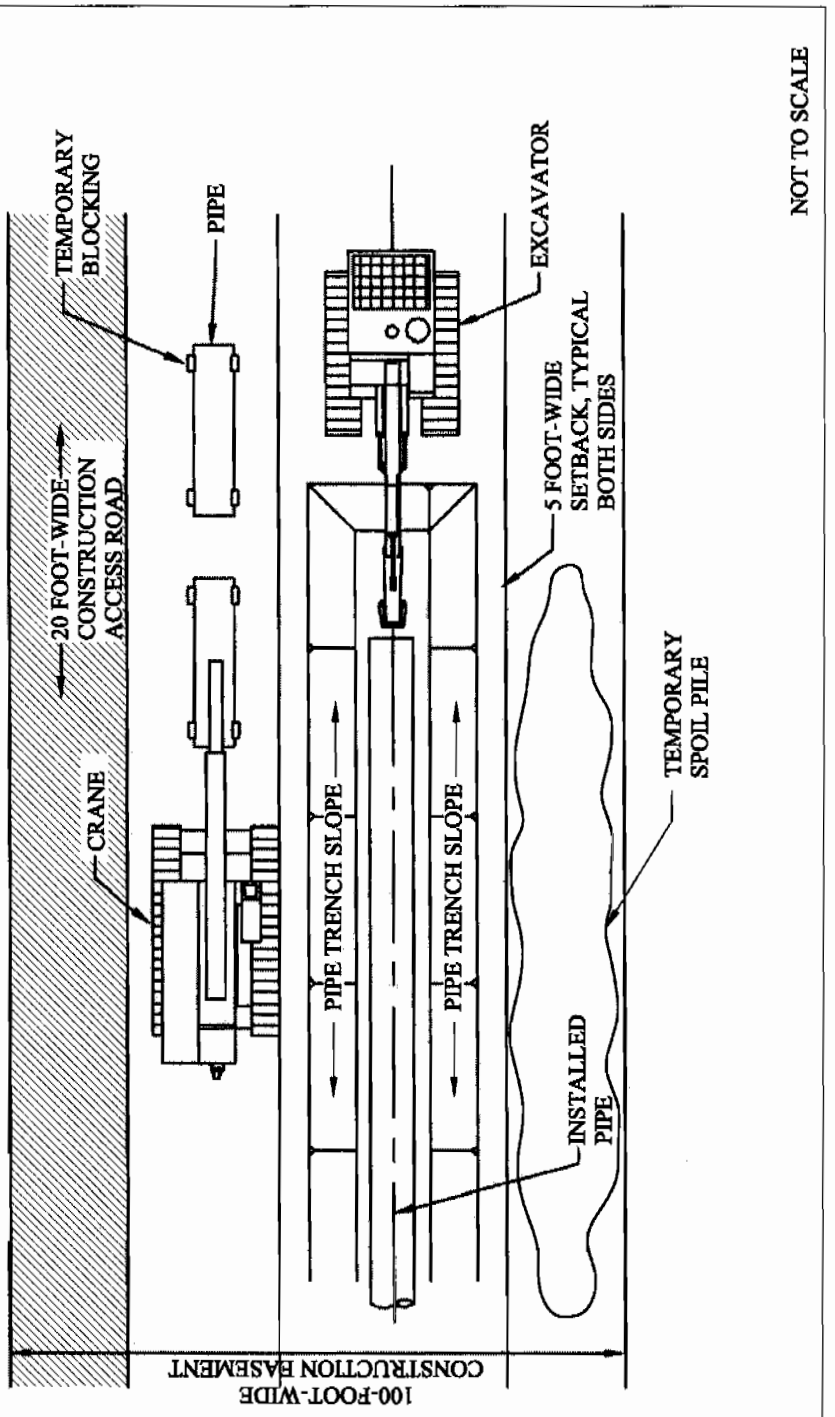


Figure 8-12
Plan View of Typical Pipeline Construction Work Area with 100-Foot Construction Easement

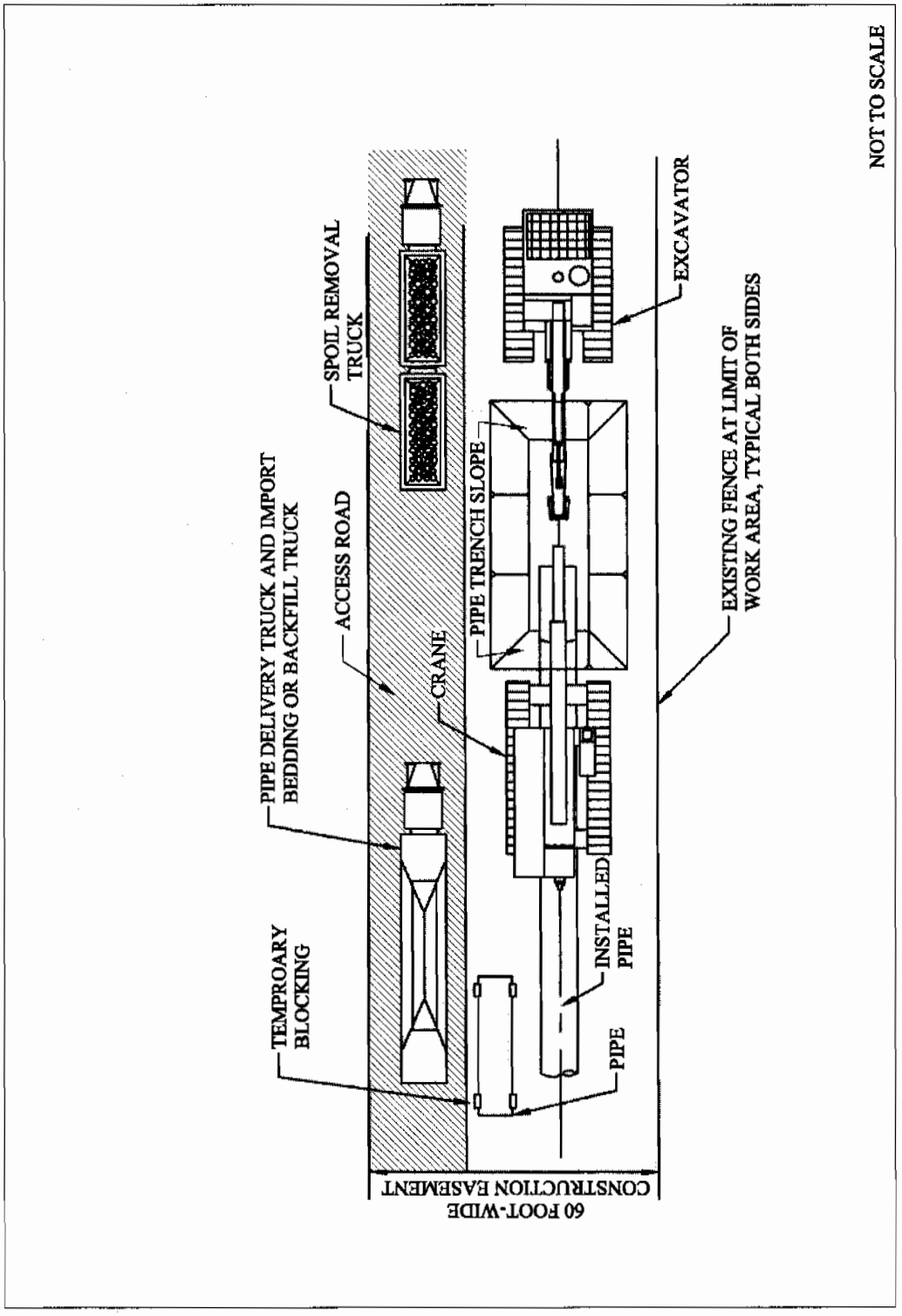


Figure 8-13
Plan View of Restricted Pipeline Construction Work Area with 60-Foot Construction Easement

Central Utah Project Completion Program

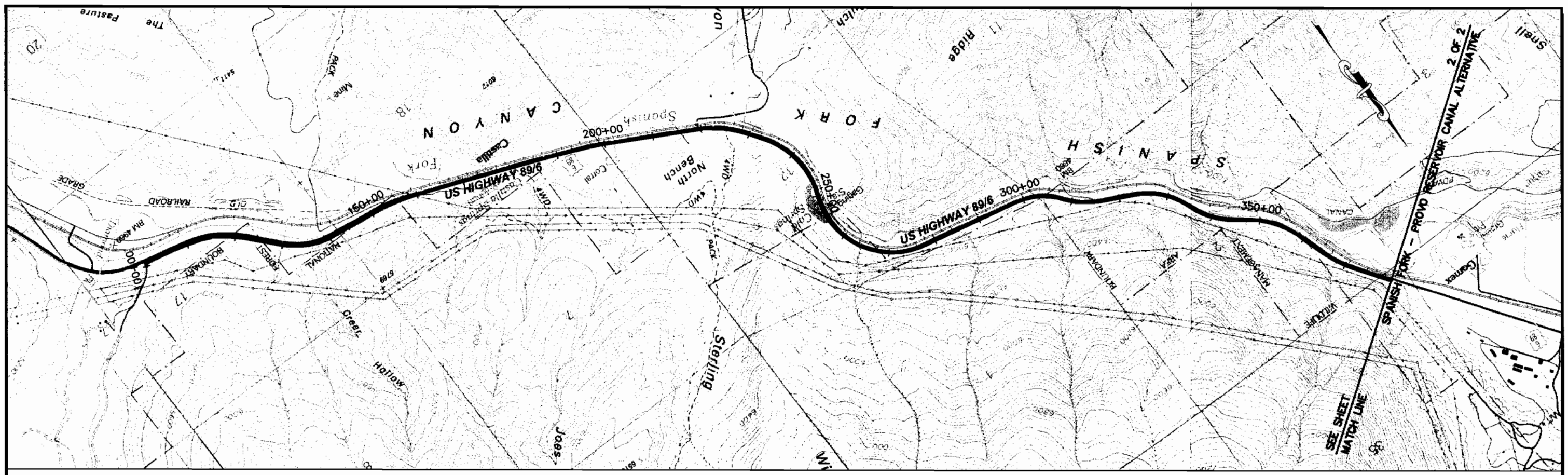
Attachment A

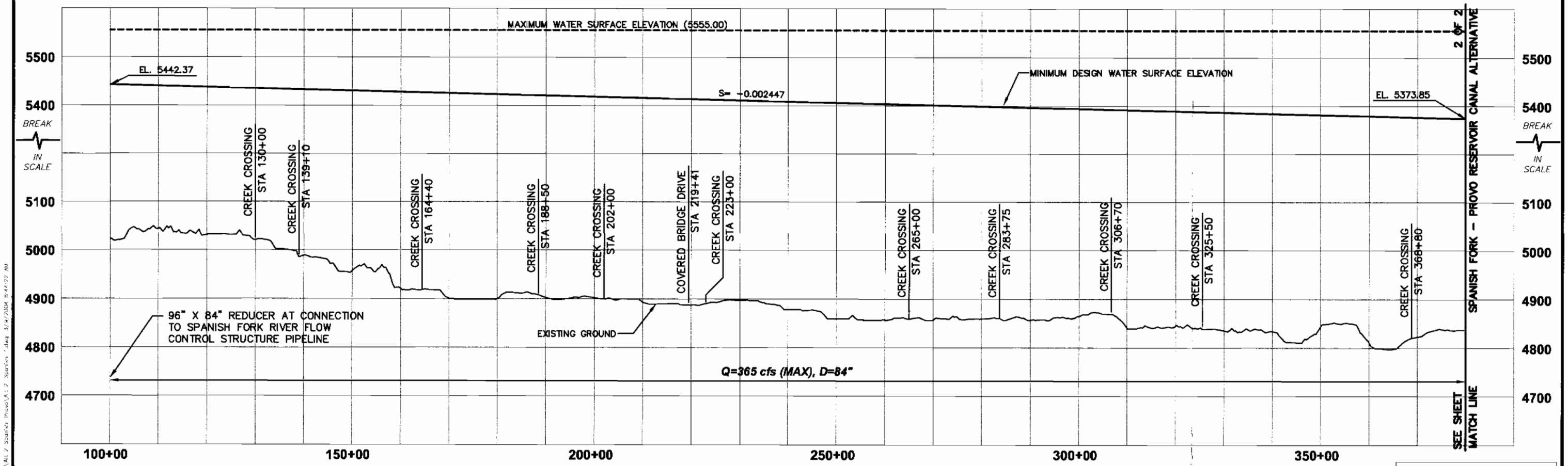
October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

Attachment A

PLAN AND PROFILE





NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: HORZ: 1" = 1000' VERT. 1" = 100'

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED ____ DRAWN ____ CHECKED ____

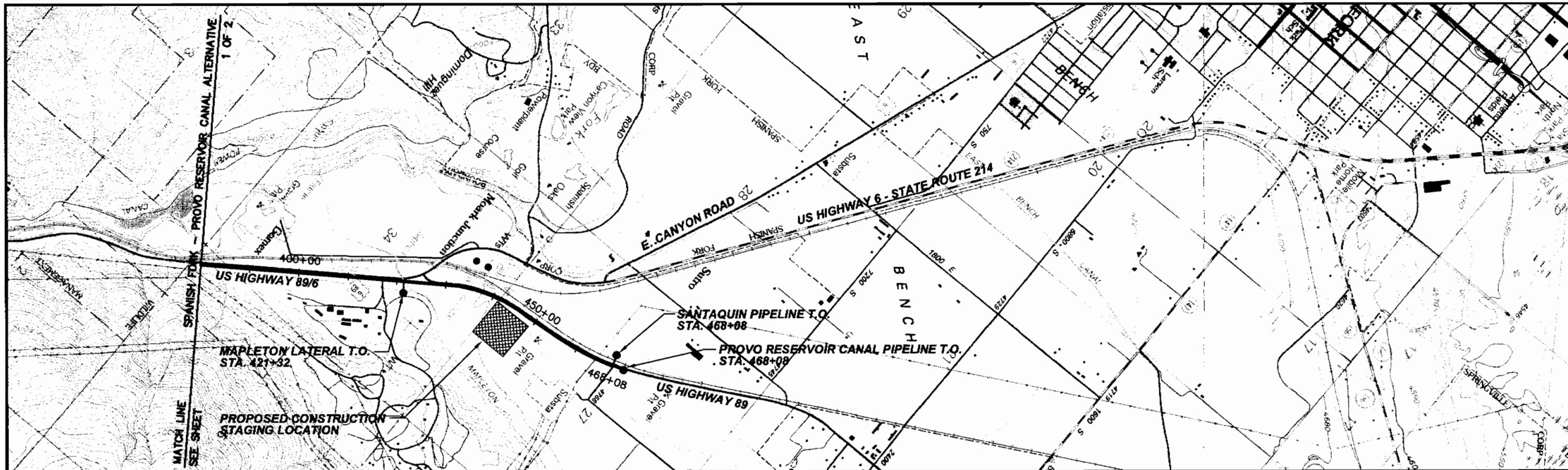
SUBMITTED
(PROJECT MANAGER'S NAME) R. C. E. NO. DATE
(COMPANY OFFICER'S NAME) R. C. E. NO. DATE

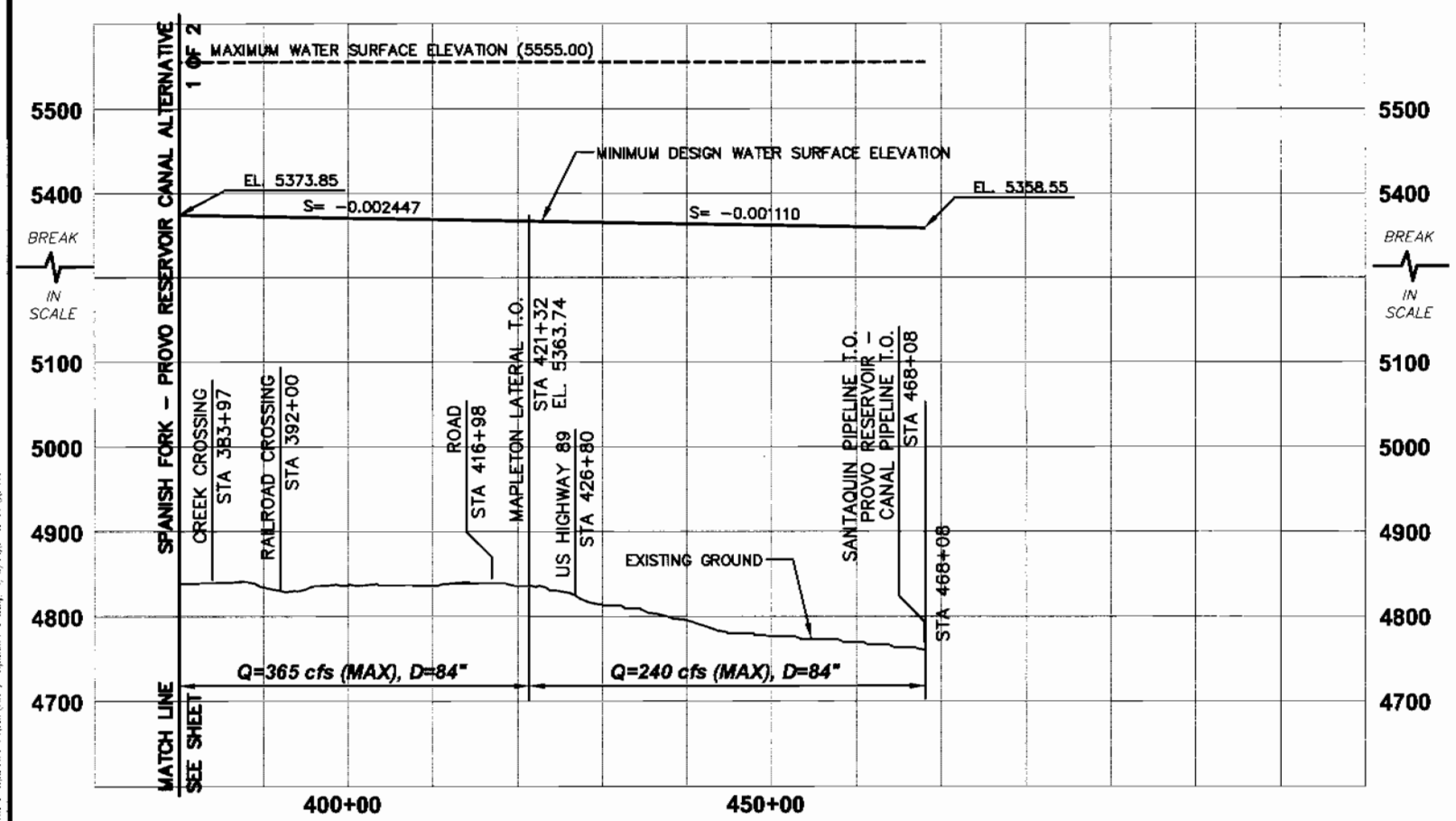
MWH MONTGOMERY WATSON HARZA

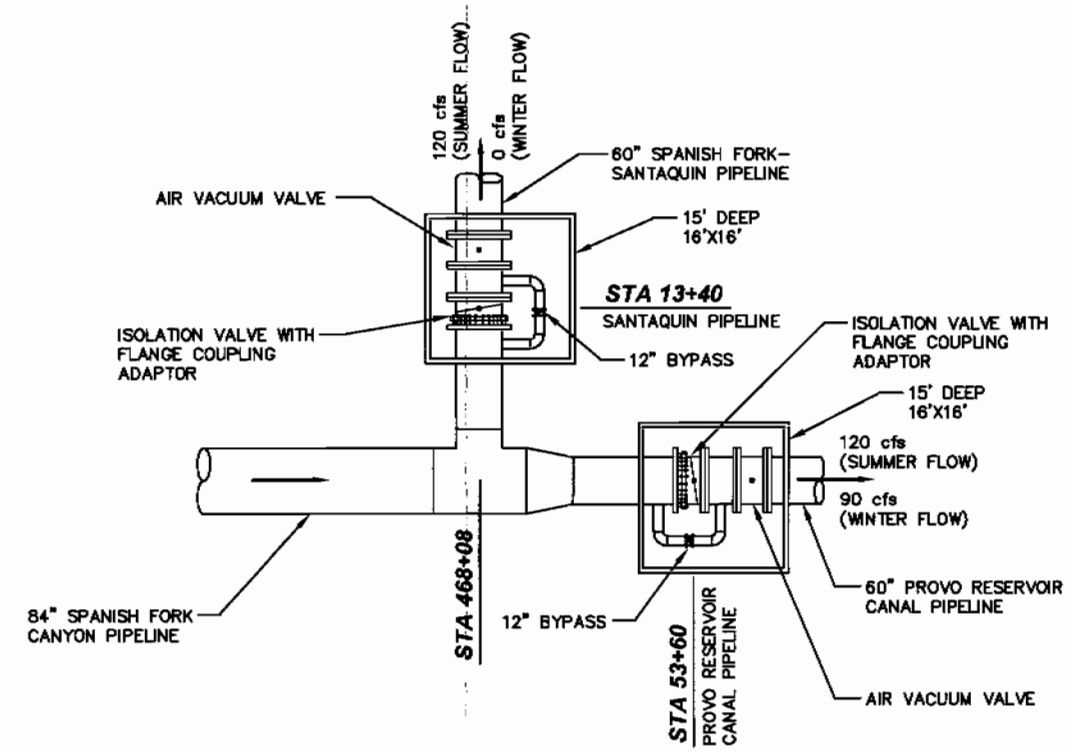
CUP

CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNAITVE
SPANISH FORK CANYON PIPELINE PLAN AND PROFILE
STA 100+00 TO STA 380+00

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2-SPANISH-1
SHEET NO. 1 of 2







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MWH MONTGOMERY WATSON HARZA

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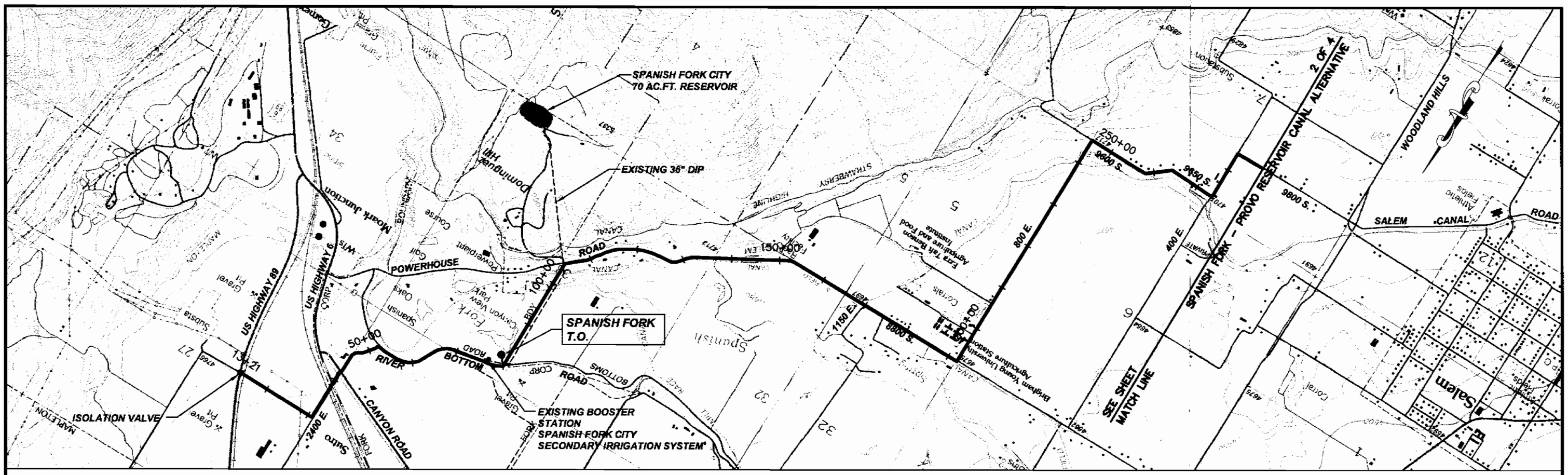
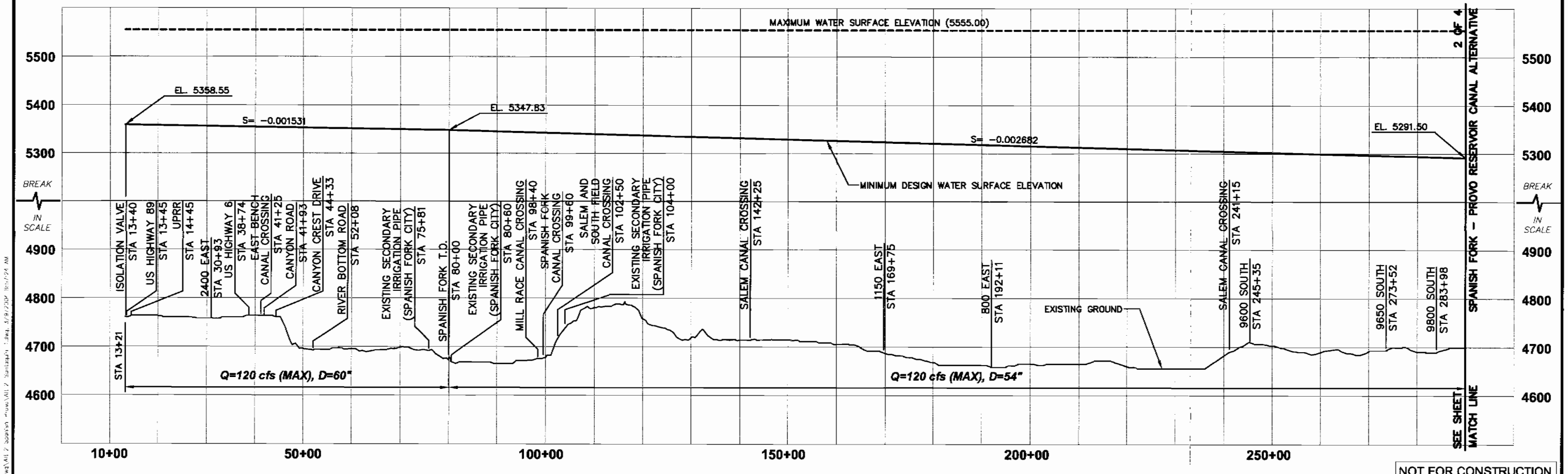
CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
SPANISH FORK CANYON PIPELINE PLAN AND PROFILE
STA 380+00 TO STA 468+08

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2–SPAN S-1–2
SHEET NO. 2 of 2





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VERT. 1" = 100'

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(COMPANY OFFICER'S NAME) R. C. E. NO. DATE

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SPANISH FORK - PROVO RESERVOIR CANAL ALTERNATIVE
SPANISH FORK - SANTAQUIN PIPELINE PLAN AND PROFILE
STA 13+21 TO STA 290+00

CONTRACT NO. X
DATE FEBRUARY 2004
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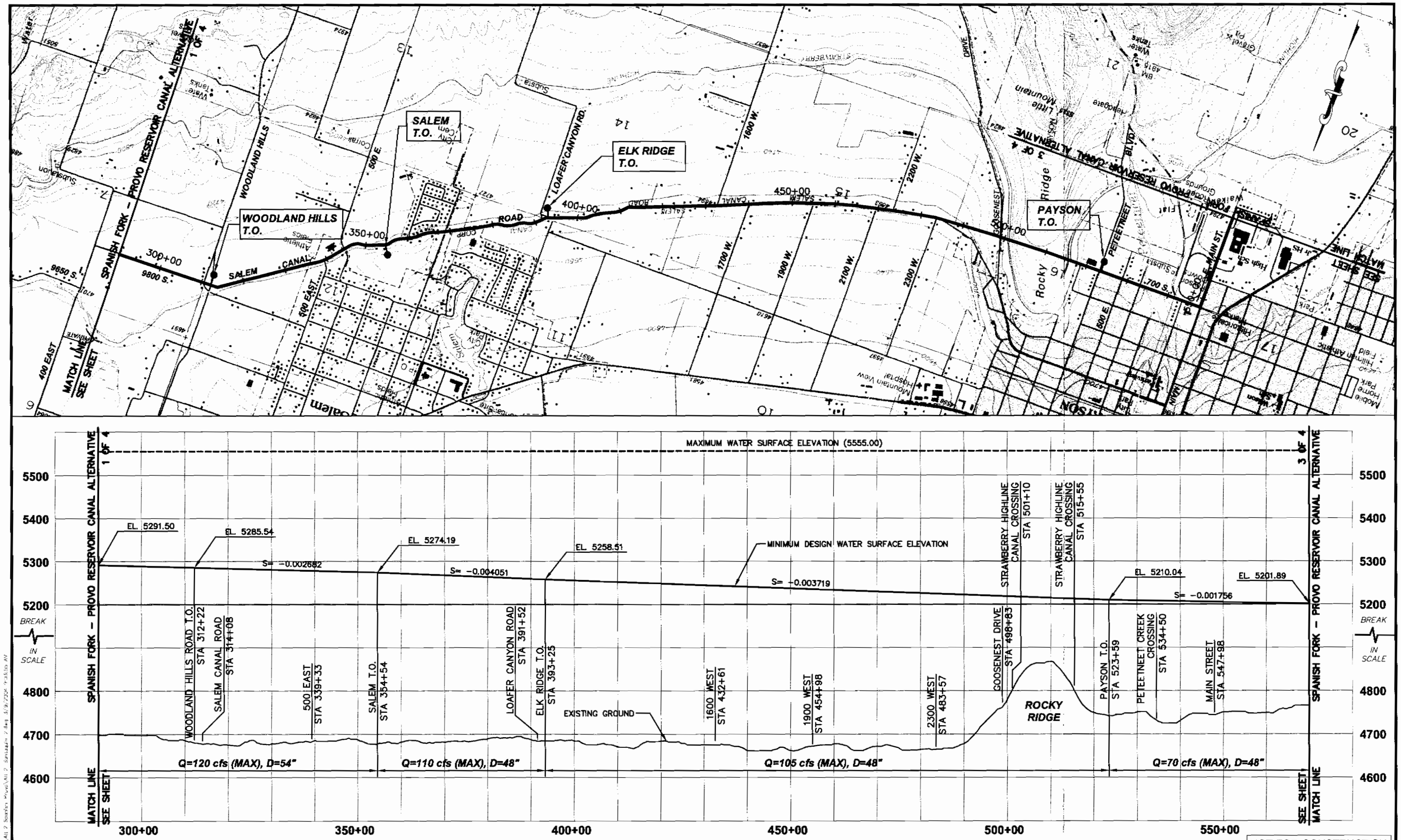
SHEET NO. 1 of 4



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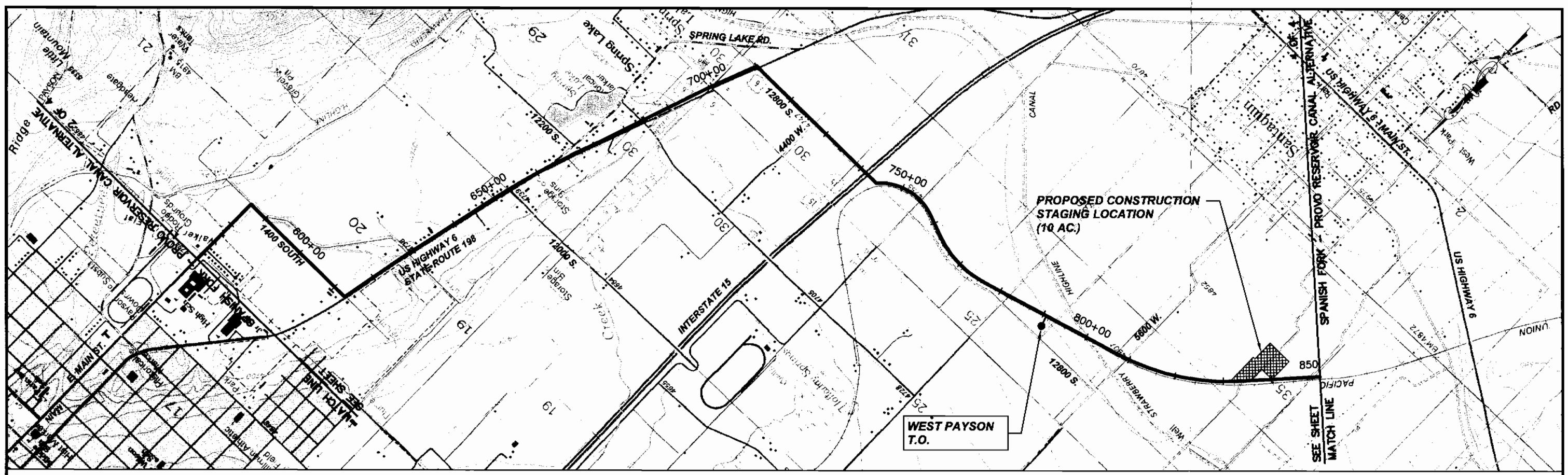
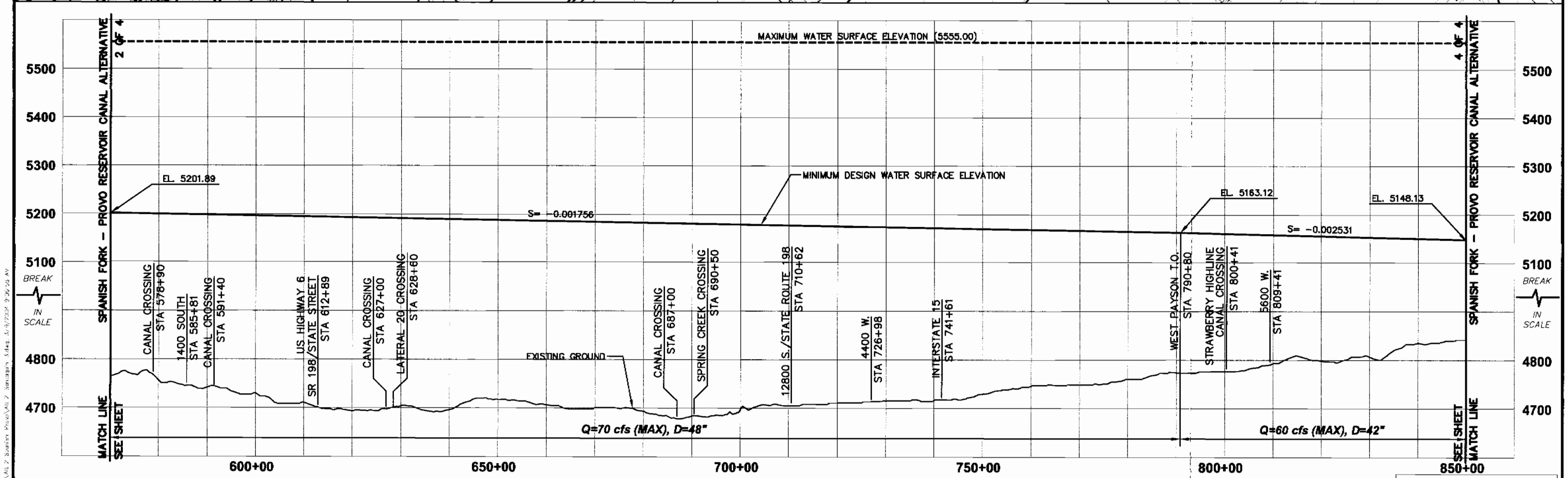
CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
SPANISH FORK – SANTAQUIN PIPELINE PLAN AND PROFILE
STA 290+00 TO STA 570+00

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. AL-2-SANTAQUIN-2
SHEET NO. 2 of 4





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REV	DATE	BY	DESCRIPTION

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SUBMITTED
(PROJECT MANAGER'S NAME) R. C. E. NO. DATE
(COMPANY OFFICER'S NAME) R. C. E. NO. DATE

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MONTGOMERY WATSON HARZA

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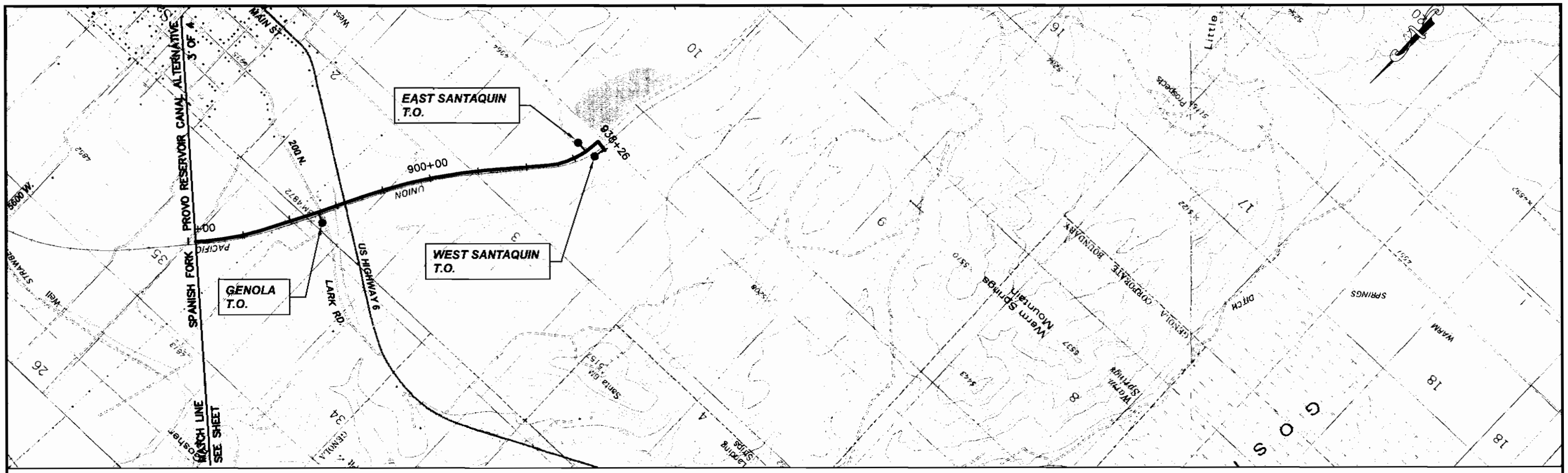
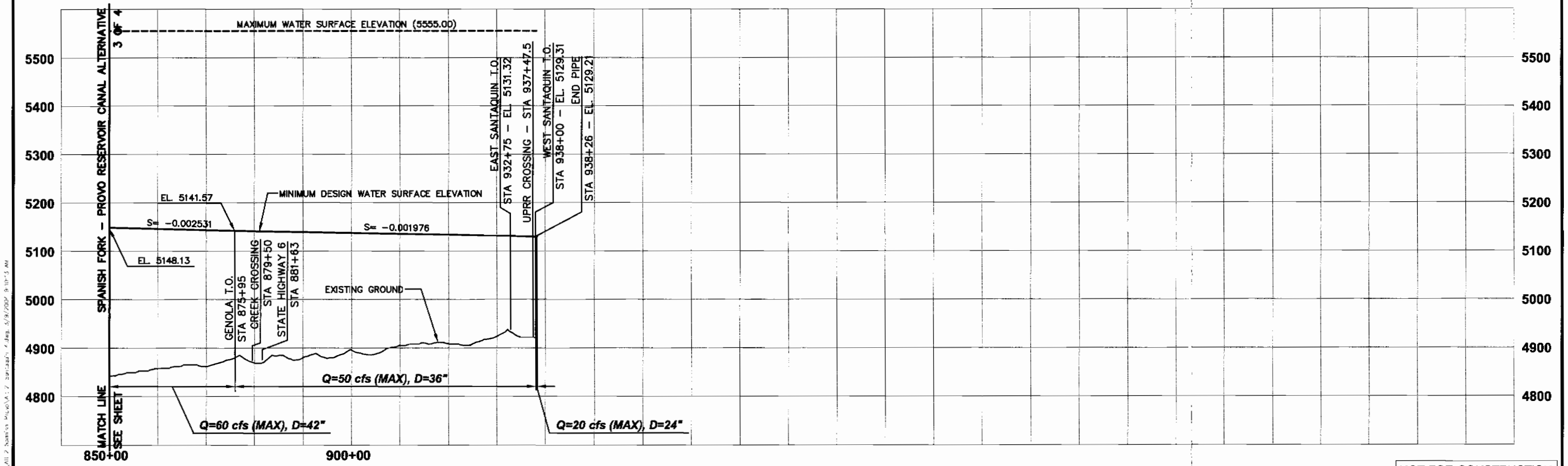
CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
SPANISH FORK – SANTAQUIN PIPELINE PLAN AND PROFILE
STA 570+00 TO STA 850+00

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2-SANTAQUIN-3
SHEET NO. 3 of 4





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REV	DATE	BY	DESCRIPTION

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SUBMITTED (PROJECT MANAGER'S NAME) R. C. E. NO. DATE (COMPANY OFFICER'S NAME) R. C. E. NO. DATE

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CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
SPANISH FORK – SANTAQUIN PIPELINE PLAN AND PROFILE
STA 850+00 TO STA 938+26

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2-SANTAQUIN-4
SHEET NO. 4 of 4

REV	DATE	BY	DESCRIPTION

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CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK - PROVO RESERVOIR CANAL ALTERNATIVE
SANTAQUIN - MONA RESERVOIR PIPELINE PLAN AND PROFILE
ALT 2-MONA RES-1
SHEET NO. 1 of 2

CONTRACT NO. X
DATE FEBRUARY 2004

STA 12+28 TO STA 290+00

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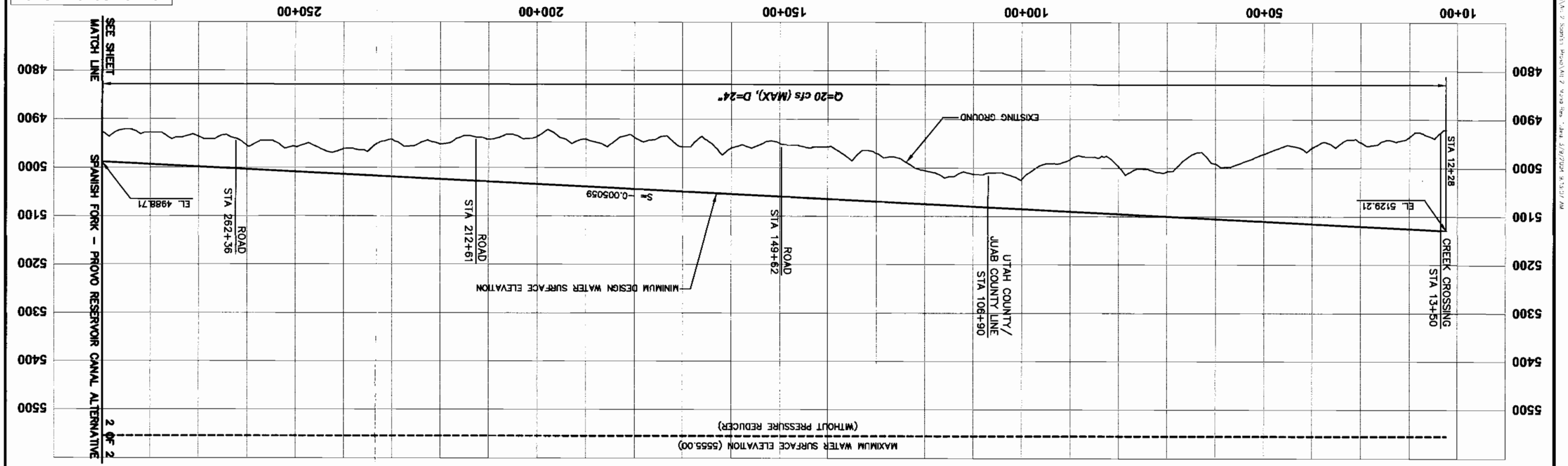

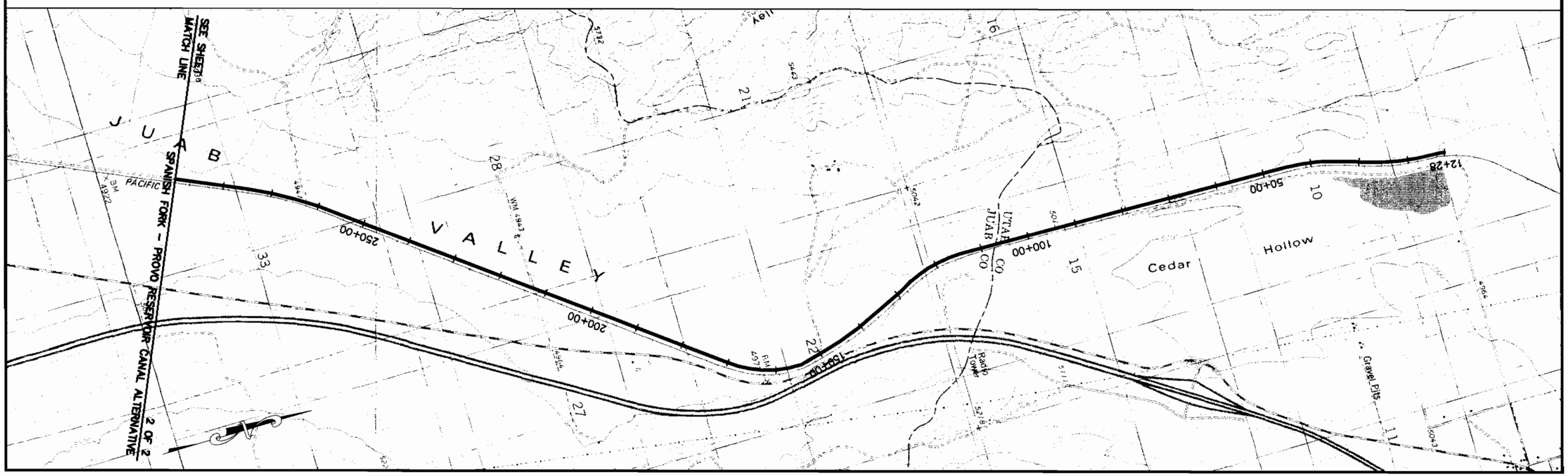

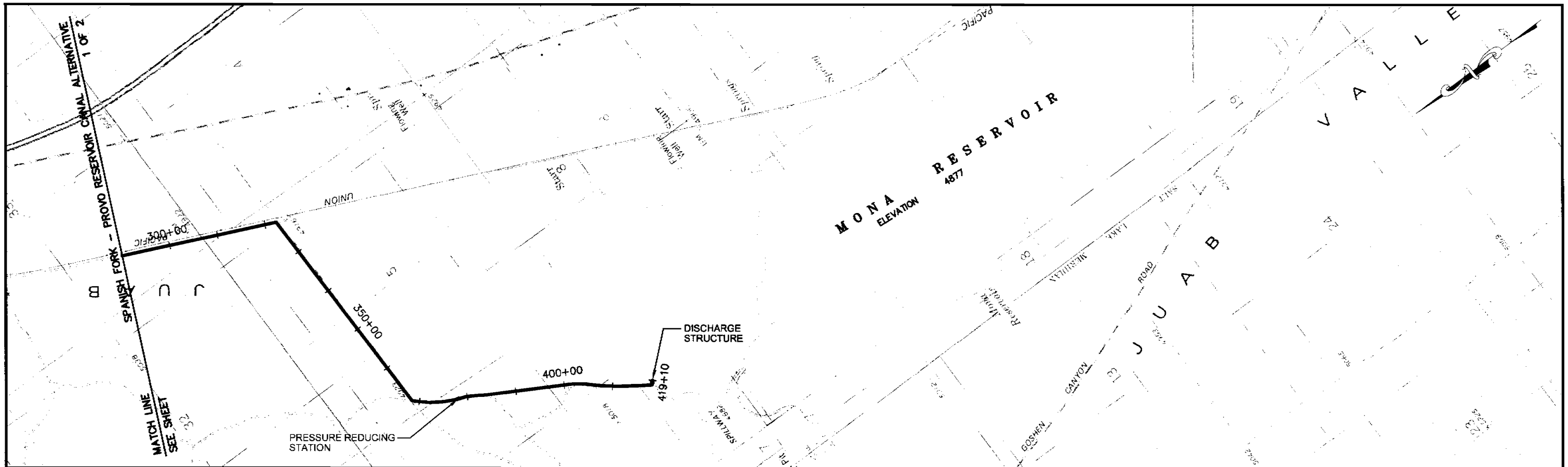

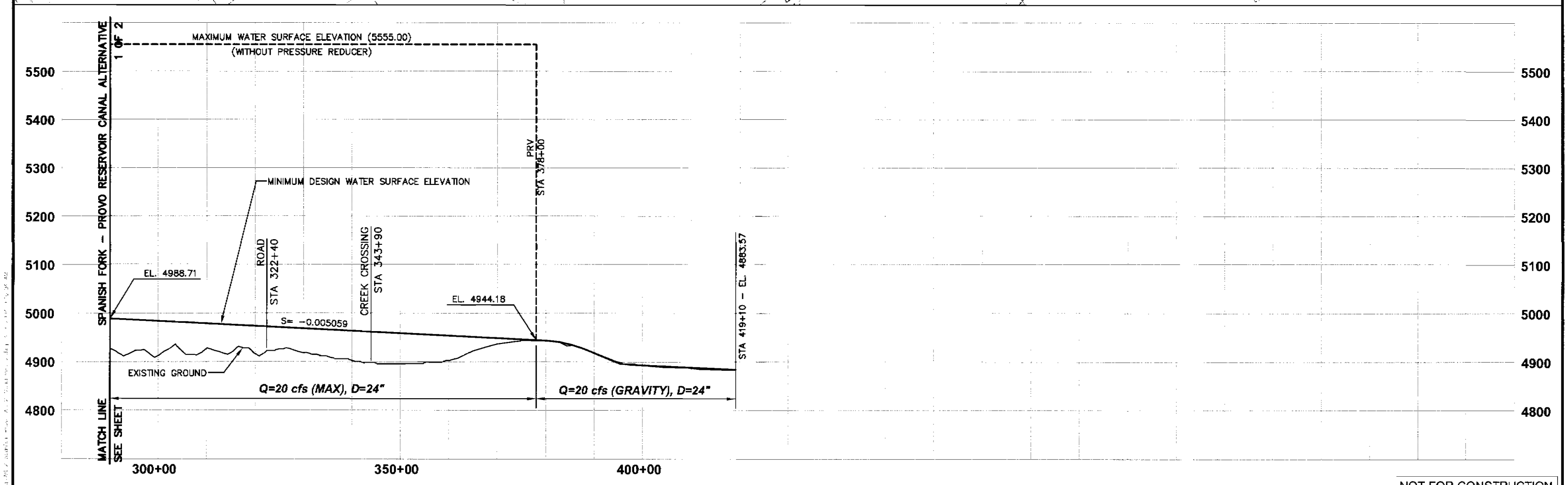

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(COMPANY OFFICER'S NAME) R. C. E. NO. DATE

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MONTGOMERY WATSON HARZA

CUP ACT COMPLETION

CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
SANTAQUIN – MONA RESERVOIR PIPELINE PLAN AND PROFILE
STA 290+00 TO STA 419+10

CONTRACT NO. X
DATE FEBRUARY 2004
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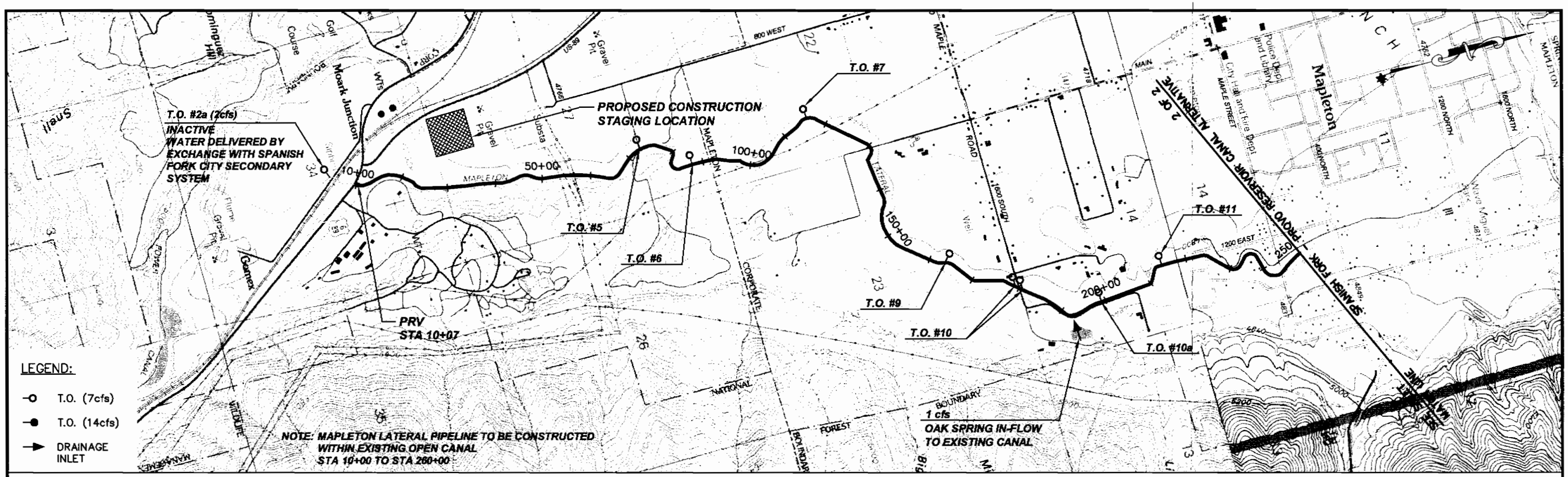
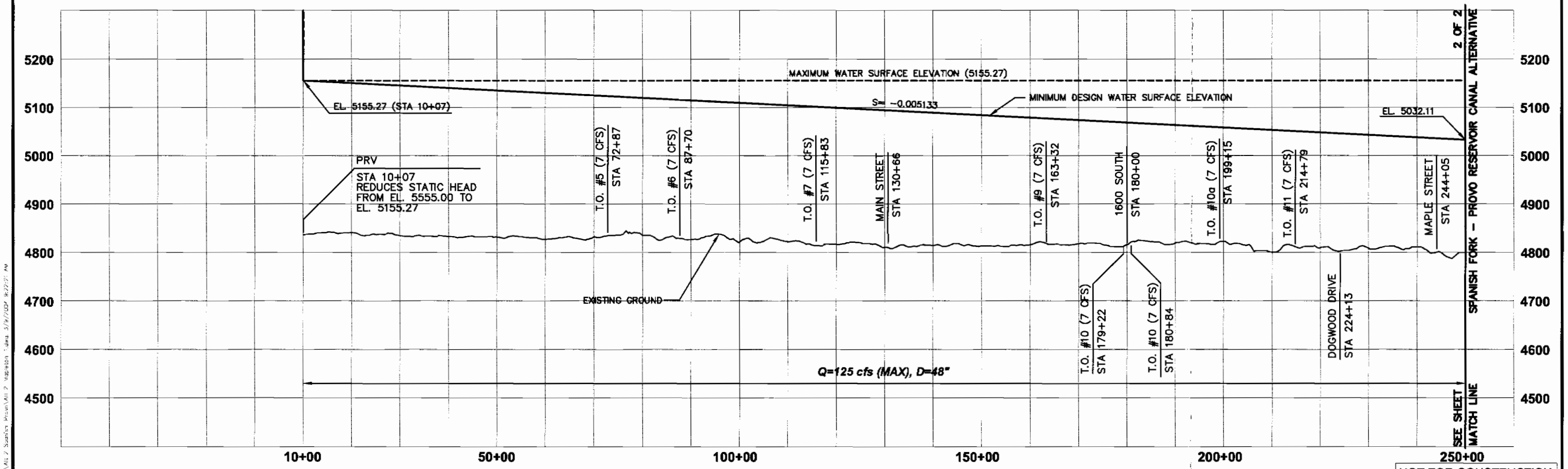
SHEET NO. 2 of 2





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REV	DATE	BY	DESCRIPTION

SCALE: HORZ: 1" = 1000' VERT. 1" = 100'

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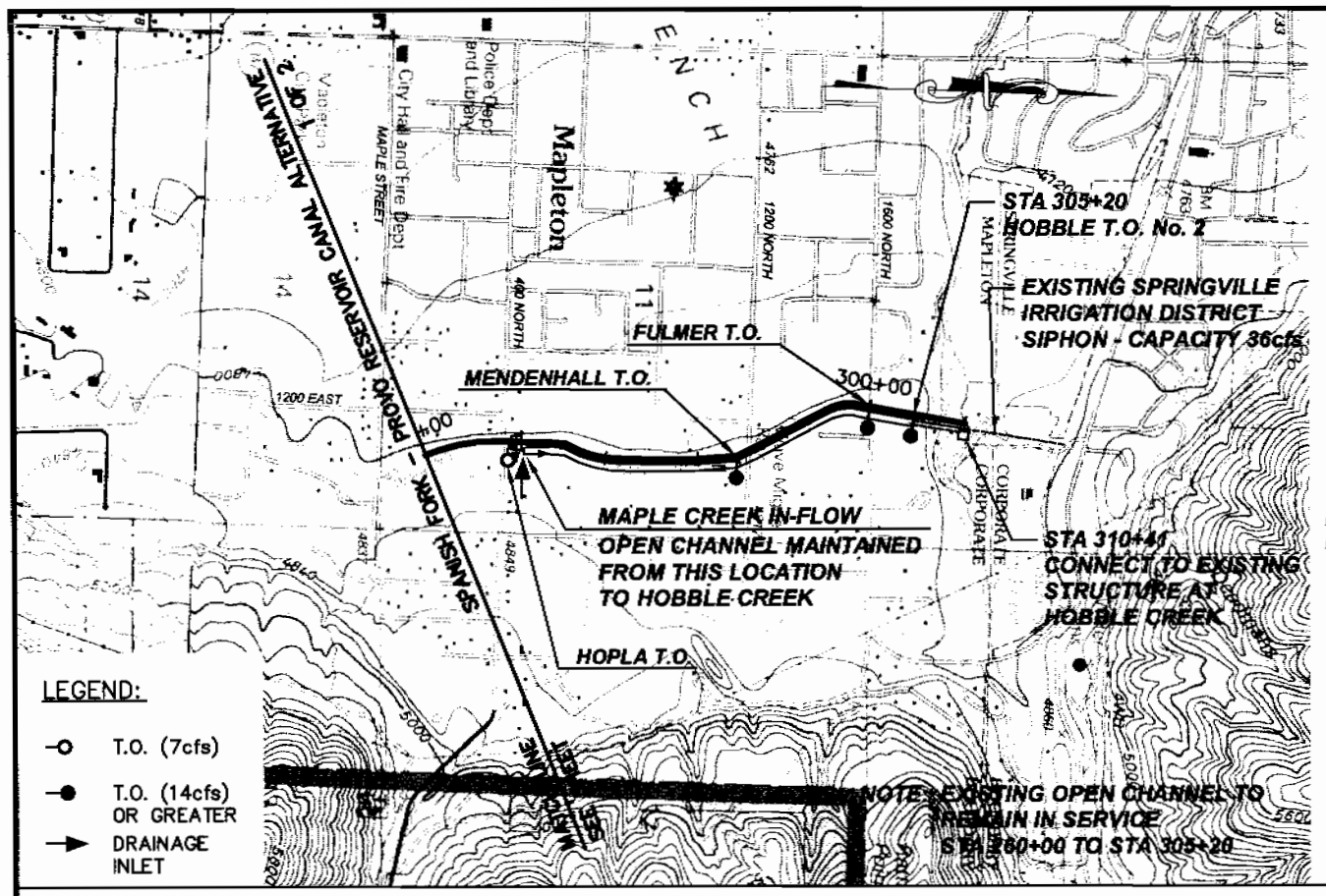
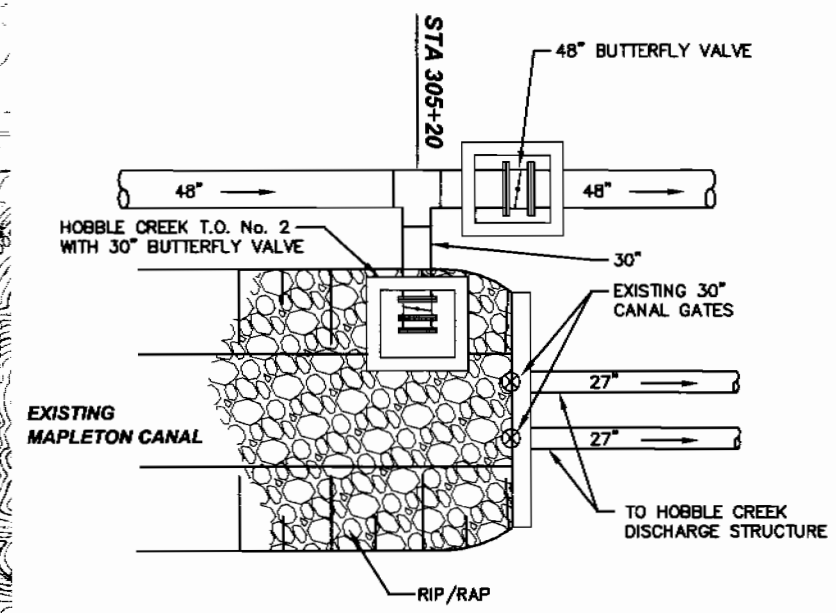
(PROJECT MANAGER'S NAME) R. C. E. NO. DATE
(COMPANY OFFICER'S NAME) R. C. E. NO. DATE

MWH MONTGOMERY WATSON HARZA

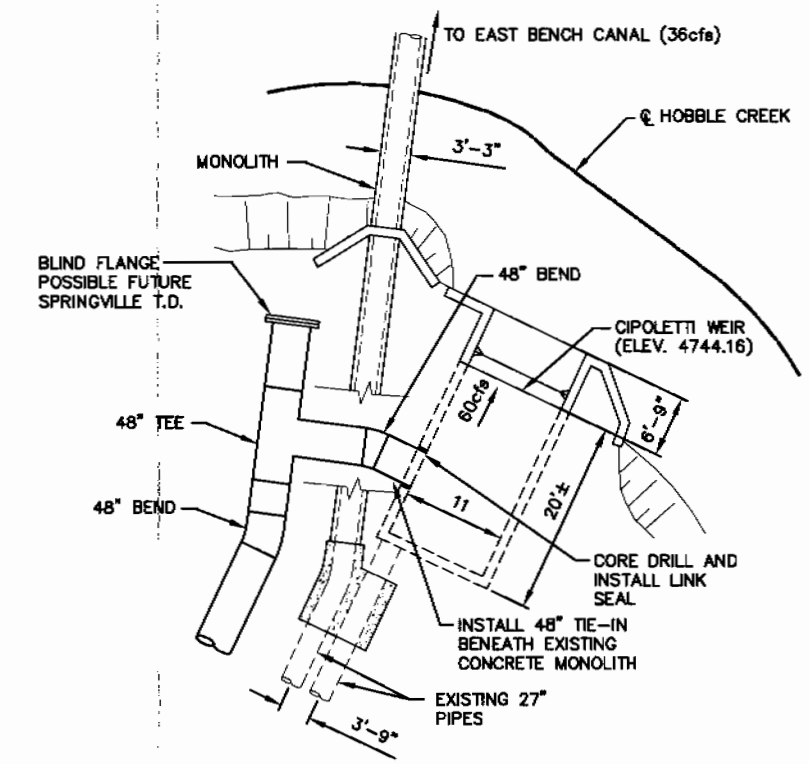
CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
MAPLETON SPRINGVILLE LATERAL PIPELINE PLAN AND PROFILE
STA 10+00 TO STA 250+00

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2-MAPLETON-1
SHEET NO. 1 of 2

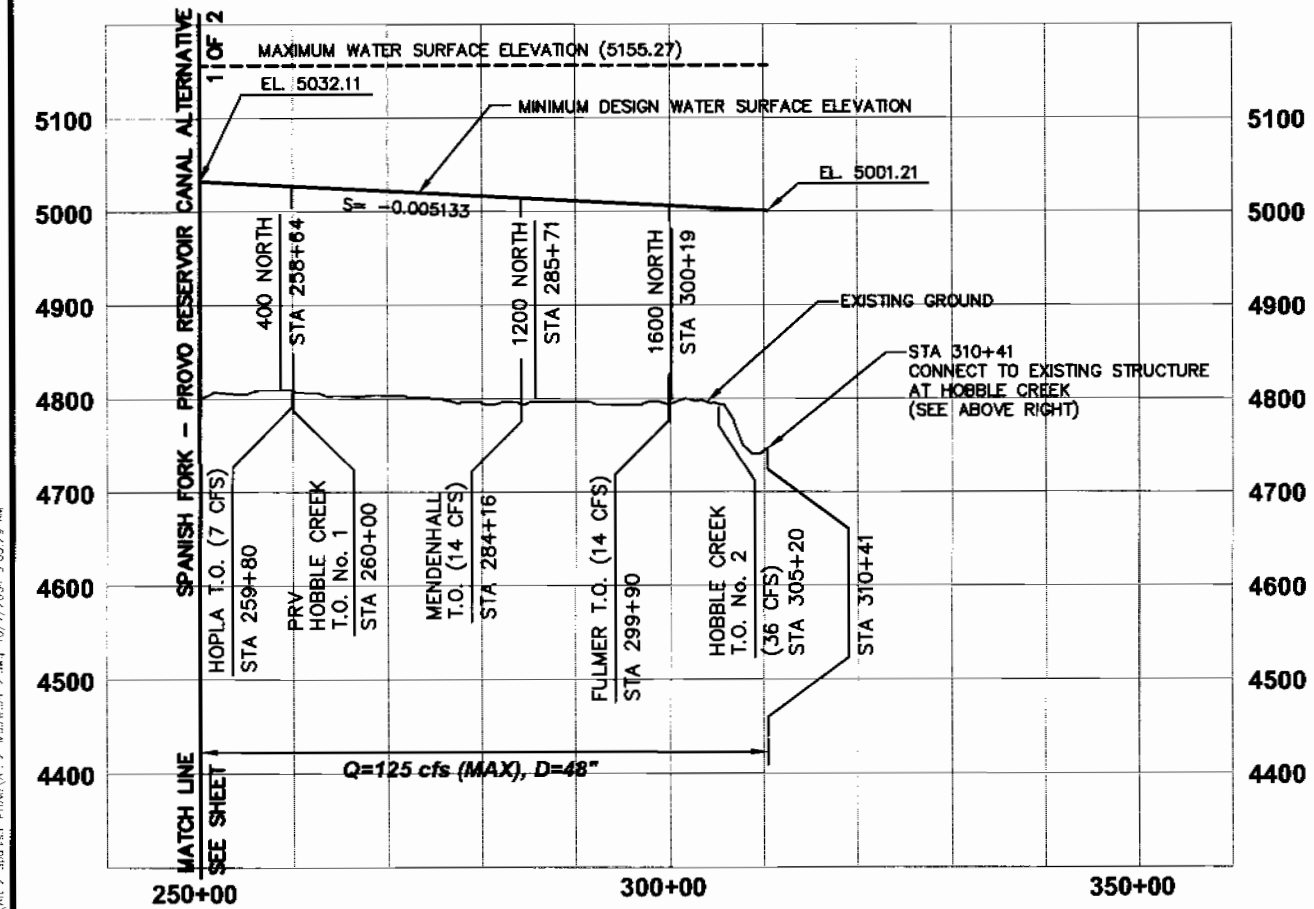


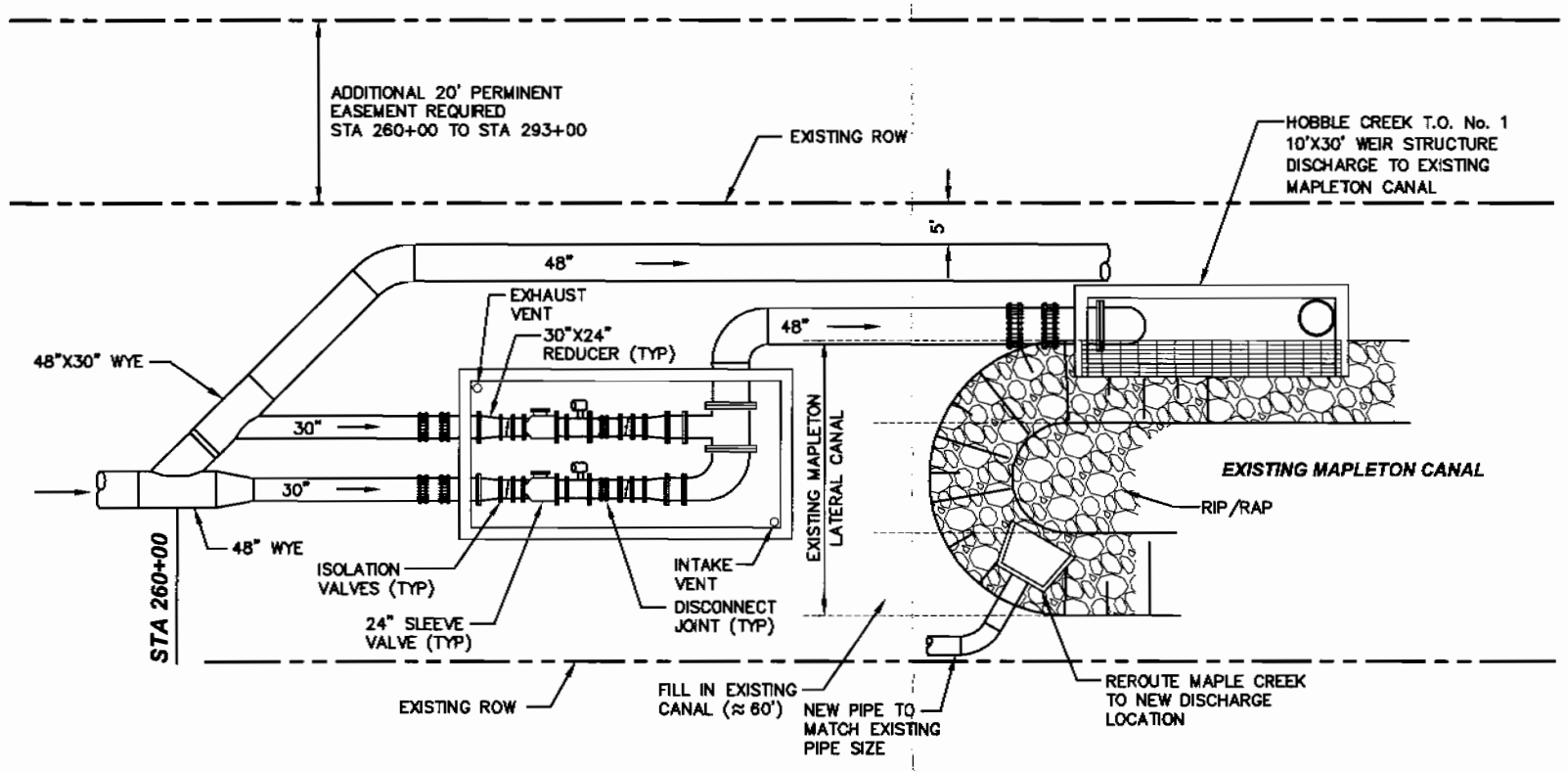


DETAIL - MAPLETON - SPRINGVILLE LATERAL
HOBBLE CREEK T.O. No. 2



DETAIL - MODIFICATION OF EXISTING STRUCTURE AT HOBBLE CREEK





DETAIL - MAPLETON - SPRINGVILLE LATERAL
PRV AND PIPELINE DISCHARGE STRUCTURE (HOBBLE CREEK T.O. No. 1)

NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: HORZ: 1" = 1000' VERT. 1" = 100'

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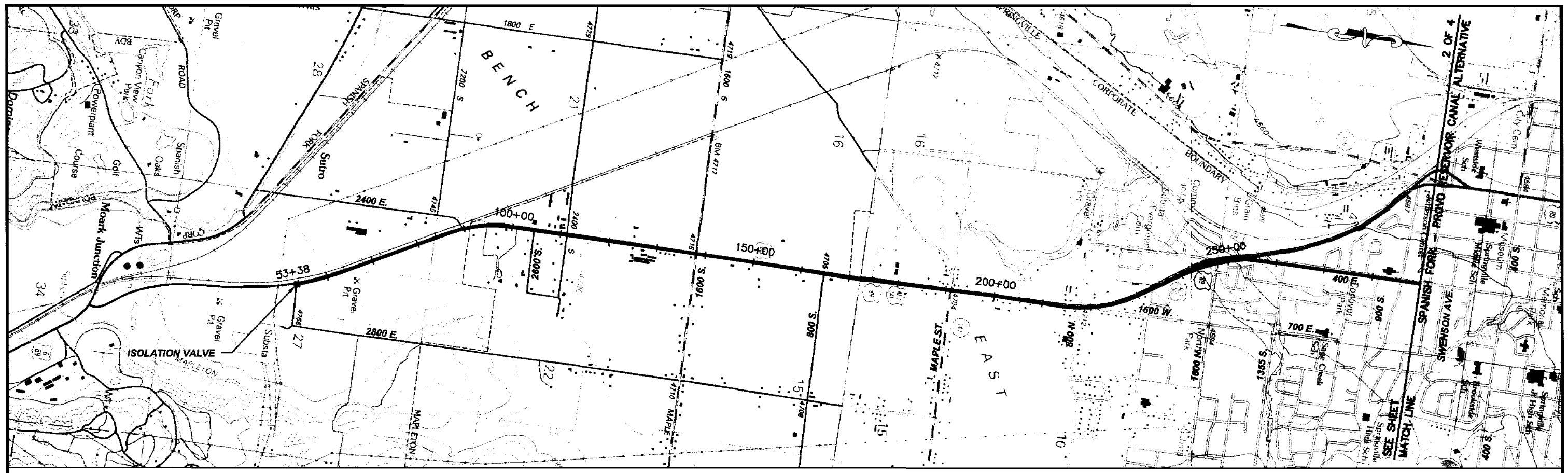
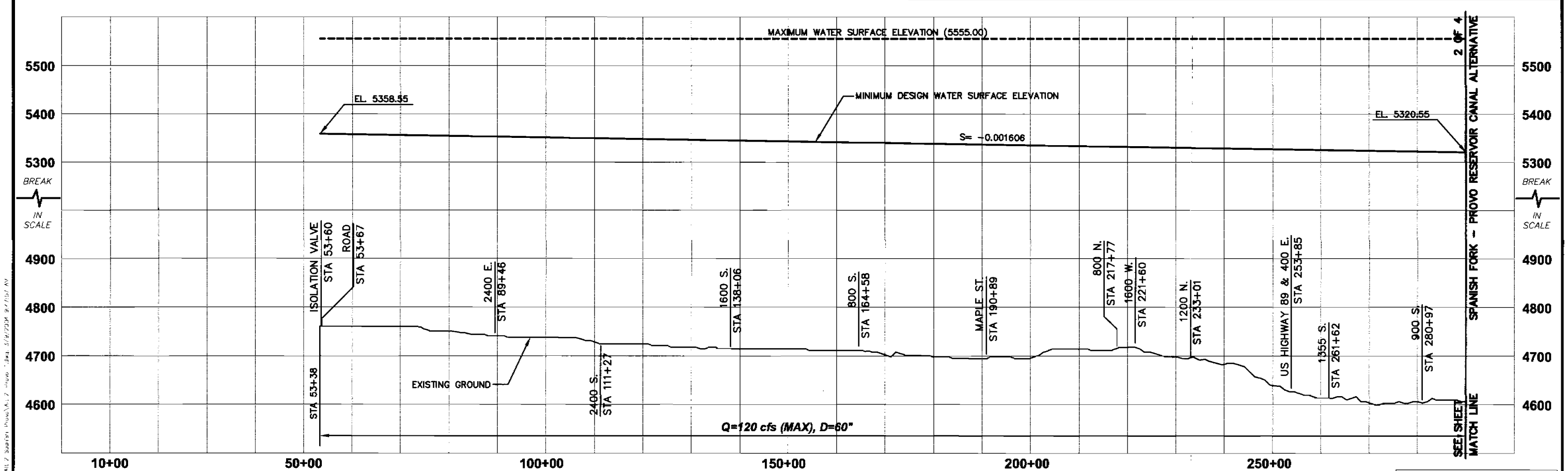
MWH MONTGOMERY WATSON HARZA

CUP

CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK - PROVO RESERVOIR CANAL ALTERNATIVE
MAPLETON SPRINGVILLE LATERAL PIPELINE PLAN AND PROFILE
STA 250+00 TO STA 310+41

CONTRACT NO. X
DATE OCTOBER 2004
DRAWING NO. ALT 2-MAPLETON-2
SHEET NO. 2 of 2





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REV	DATE	BY	DESCRIPTION

SCALE: HORZ: 1" = 1000' VERT. 1" = 100'

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SUBMITTED (PROJECT MANAGER'S NAME) R. C. E. NO. DATE (COMPANY OFFICER'S NAME) R. C. E. NO. DATE

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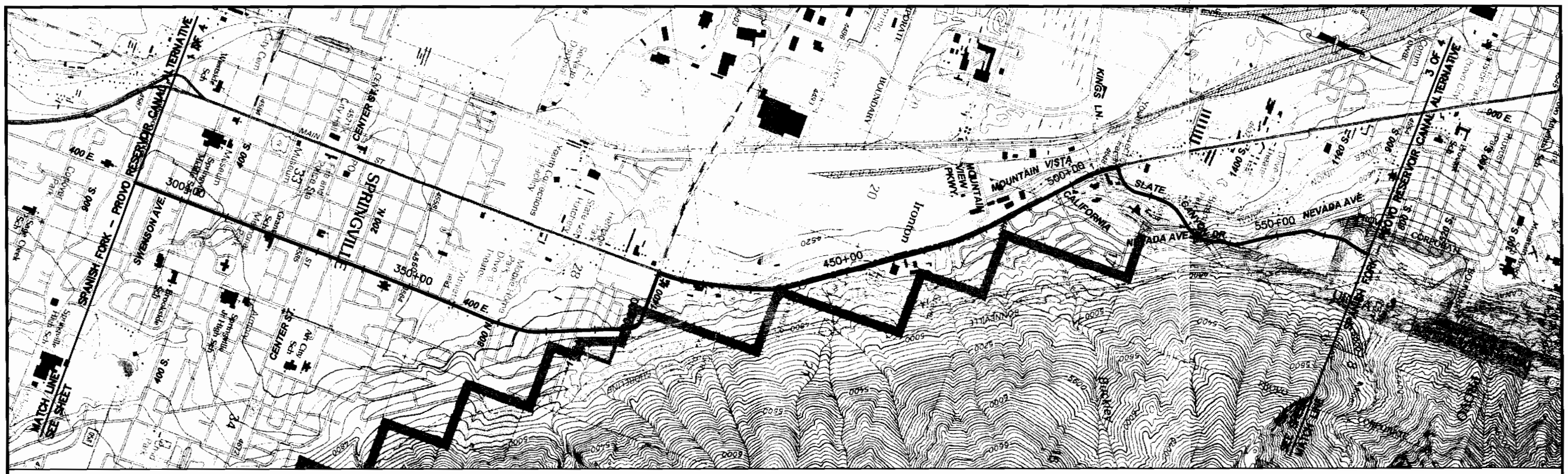
CENTRAL UTAH WATER CONSERVANCY DISTRICT

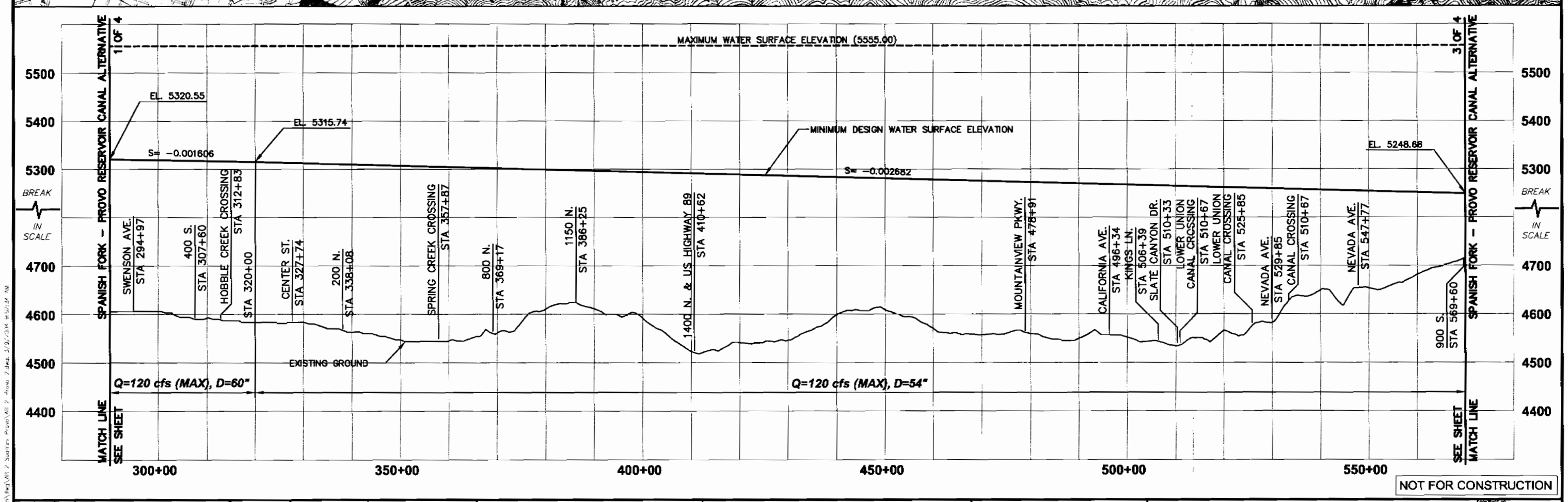
SPANSIH FORK – PROVO RESERVOIR CANAL ALTERNATIVE

SPANISH FORK – PROVO RESERVOIR CANAL PIPELINE PLAN AND PROFILE

STA 53+38 TO STA 290+00

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2-PROVO-1
SHEET NO. 1 of 4





NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: HORZ: 1" = 1000' VERT. 1" = 100'

WARNING 0 1/2 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED ____ DRAWN ____ CHECKED ____

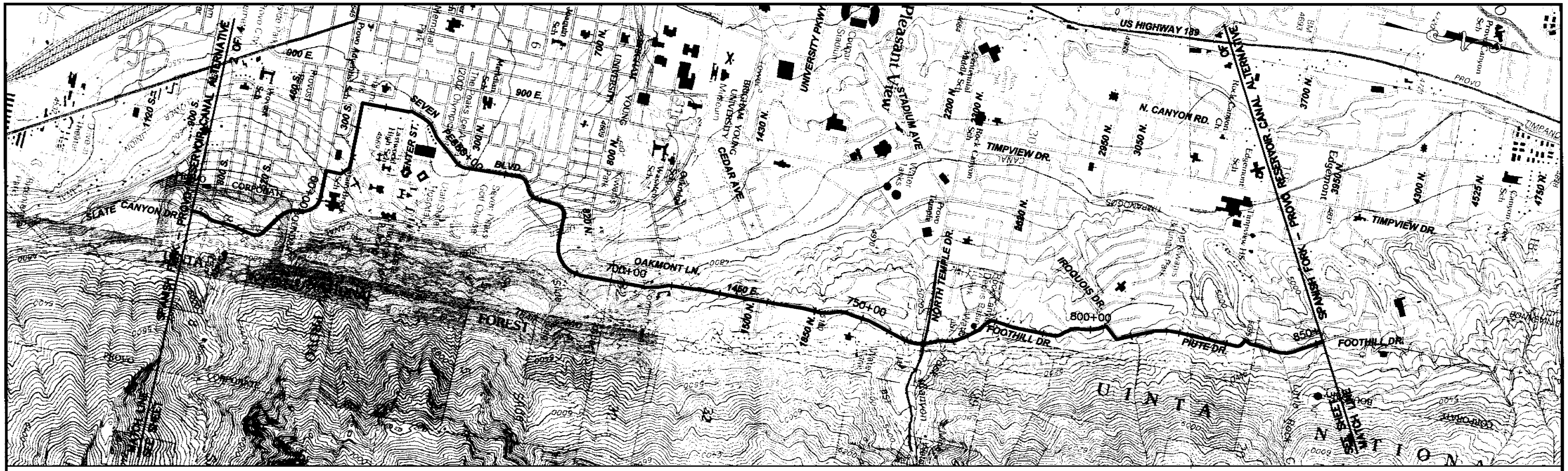
SUBMITTED
(PROJECT MANAGER'S NAME) R. C. E. NO. DATE
(COMPANY OFFICER'S NAME) R. C. E. NO. DATE

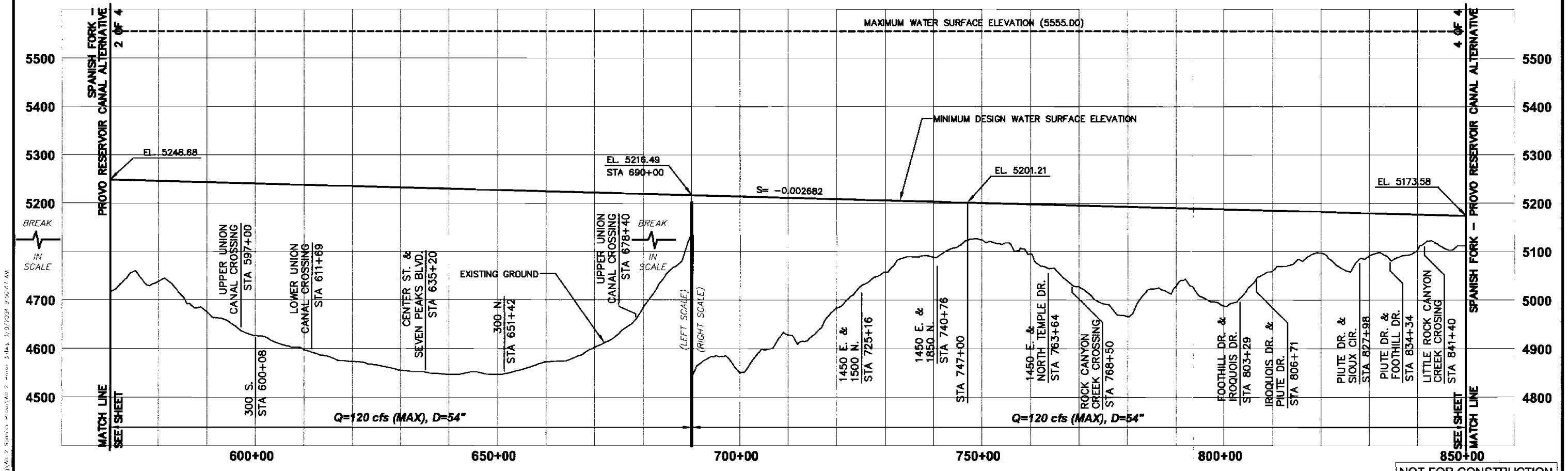
MWH MONTGOMERY WATSON HARZA

CUP

CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
SPANISH FORK – PROVO RESERVOIR CANAL PIPELINE PLAN AND PROFILE
STA 290+00 TO STA 570+00

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2-PROVO-2
SHEET NO. 2 of 4





NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE:
HORZ: 1" = 1000'
VERT. 1" = 100'

WARNING
0 1/2 1
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DESIGNED
DRAWN
CHECKED

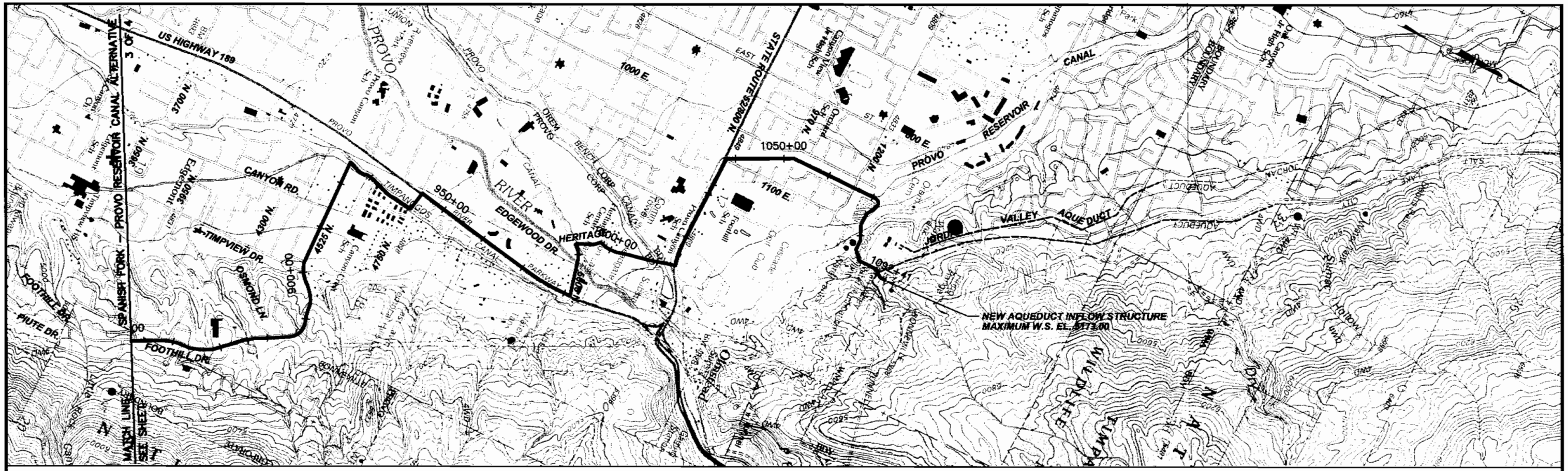
SUBMITTED
(PROJECT MANAGER'S NAME) R. C. E. NO. DATE
(COMPANY OFFICER'S NAME) R. C. E. NO. DATE

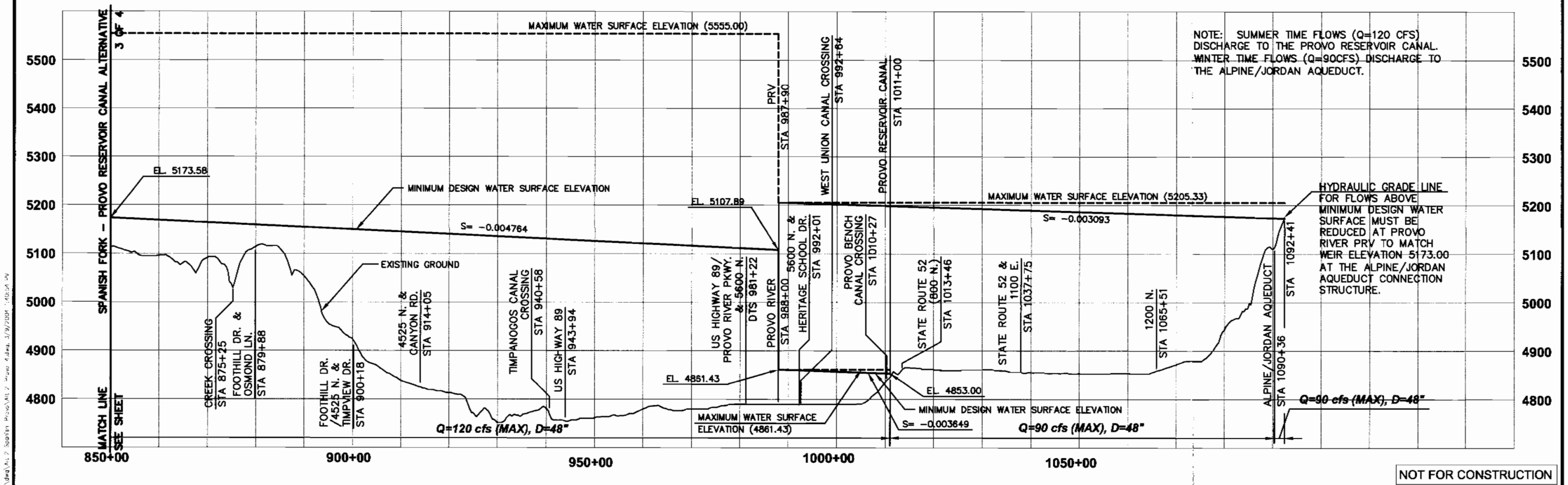
MWH
MONTGOMERY WATSON HARZA

CUP

CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
SPANISH FORK – PROVO RESERVOIR CANAL PIPELINE PLAN AND PROFILE
STA 570+00 TO STA 850+00

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2-PROVO-3
SHEET NO. 3 of 4





NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: HORZ: 1" = 1000' VERT. 1" = 100'

WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

DESIGNED ____ DRAWN ____ CHECKED ____

SUBMITTED
(PROJECT MANAGER'S NAME) R. C. E. NO. DATE
(COMPANY OFFICER'S NAME) R. C. E. NO. DATE

MWH
MONTGOMERY WATSON HARZA

CUP

CENTRAL UTAH WATER CONSERVANCY DISTRICT
SPANISH FORK – PROVO RESERVOIR CANAL ALTERNATIVE
SPANISH FORK – PROVO RESERVOIR CANAL PIPELINE PLAN AND PROFILE
STA 850+00 TO STA 1092+41

CONTRACT NO. X
DATE FEBRUARY 2004
DRAWING NO. ALT 2-PROVO-4
SHEET NO. 4 of 4

Central Utah Project Completion Program

Attachment B

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

Attachment B

Attachment B

LETTERS AND AGREEMENTS ON OM&R

Rich

COPY

Central Utah Water Conservancy District

355 WEST UNIVERSITY PARKWAY OREM, UTAH 84058
TELEPHONE (801) 226-7100

Don A. Christiansen, General Manager
Secretary/Treasurer

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Claude R. Hicken, President
Robert F. Weyher, Jr. Vice President

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W. Howard Riley
James J. Smedley
Stanley R. Smith
John L. West
Robert F. Weyher, Jr.
Boyd Workman

March 5, 1999

Mr. Bruce C. Barrett, Area Manager
Attn: PRO-440
U.S. Bureau of Reclamation
Provo Area Office
302 East 1860 South
Provo, UT 84606-7317

Subject: Extension of Interim for Payment of Non-Reimbursable Operation and Maintenance Expenses - Contract No. 94-07-40-R1670 - Central Utah Water Conservancy District - Bonneville Unit - Central Utah Project, Utah

Dear Bruce:

Enclosed is Reclamation's duplicate original of the fully executed "Memorandum of Agreement Between the Bureau of Reclamation and the Central Utah Water Conservancy District for Payment of Non-Reimbursable Operation and Maintenance Expenses." The District has indicated its concurrence with the two pen and ink changes identified on page 4, paragraph 3 of the contract by initialing the changes.

We appreciate Wayne Pullan's help on this contract as well as that of Kib Jacobson from the Regional Office.

If you have any questions, please call me.

Sincerely yours,

Richard L. Tullis, P.E.
O&M Manager

RLT:dv

Enclosure

Extension No. 1 to
Contract No. 94-07-40-R1670

MEMORANDUM OF AGREEMENT
BETWEEN
THE BUREAU OF RECLAMATION
AND
THE CENTRAL UTAH WATER CONSERVANCY DISTRICT
FOR
PAYMENT OF NON-REIMBURSABLE OPERATION AND MAINTENANCE EXPENSES

BONNEVILLE UNIT
CENTRAL UTAH PROJECT

This Interim Contract is entered into the 23rd day of February, 1998, between the Central Utah Water Conservancy District (District) and the Bureau of Reclamation (Reclamation).

Purpose

The purpose of this Interim Contract is to define the method for payment of operation, maintenance, and replacement (OM&R) costs associated with non-reimbursable cost provisions of the District's repayment contract with the United States until a cost allocation is completed for the project that will determine OM&R payment responsibilities of the parities. Non-reimbursable costs include expenses associated with the Instream Flow Agreement dated February 27, 1980 (Agreement), as amended September 13, 1990 (Amended Agreement).

Background

Article 7 of the Agreement calls for a new project cost allocation to be completed, if necessary, in accordance with Federal Reclamation Law. A cost allocation for the Bonneville Unit has not been performed since the 1988 Definite Plan Report (DPR), and it is anticipated that a new one will not be completed in the next few years. The 1988 DPR was in accordance with the Agreement. It outlined the intent of the Agreement regarding payment of OM&R expenses

associated with instream flows. That intent was expressed in a footnote on page 154 of the Supplement to the Definite Plan Report, May 1988, Designs and Estimate Volume 1 Appendix:

> "Under the terms of the instream flow Agreement the District will provide 15,800 acre-feet (of the 44,400 acre-feet total) either from the project and/or from conservation and purchase. The portion of the OM&R costs associated with the 15,800 acre-feet will be the responsibility of the District. The remaining O&M will be paid by an appropriate managing agency."

Also, on page S-8 of the same Volume I Appendix, footnote 2 of the summary states:

> "Of the $3,640,000 for stream fisheries mitigation, $3,355,000.00 is for the instream flow Agreement. Under the terms of the Agreement, the Central Utah Water Conservancy District (CUWCD) will provide 15,800 acre-feet of the 44,400 acre-feet total from the project and/or from conservation and purchases. The portion of the OM&R costs associated with 15,800 acre-feet will be the responsibility of the CUWCD."

It was clear how the Agreement anticipated payment for the water and who was responsible for what portion of the OM&R costs if the District furnished only the 15,800 acre-feet and the 6,500 acre-feet of water for stream maintenance. Although the Amended Agreement does not allocate OM&R costs for minimum stream flows, the Agreement does state in Article 7 that:

> "...If the District discharges its obligation to provide water for minimum stream flows, in whole or in part, with project water from the original 313,000 acre-feet, the project facilities will necessarily be used to provide the water, and the costs allocated to the water will be reallocated by the United States in accordance with Federal Reclamation Law. <u>In this regard, it is recognized that project water developed for minimum stream flows and fisheries is nonreimbursable and the District shall not be required to reimburse the United States for moneys expended therefore."</u> (Emphasis added).

The parties acknowledge that the full 44,400 acre-feet of minimum stream flow water is being provided by the District from Project Water and through the use of Project Facilities.

Since there is no suballocation of OM&R costs to water for instream flows identified in the DPR, OM&R costs cannot be allocated to instream flows as non-reimbursable costs under

Section 5 of the Colorado River Storage Project Act pursuant to the Repayment Contract No. 14-06-400-4286 and Supplemental Repayment Contract between the District and Reclamation. Until a new project cost allocation is completed which will determine the OM&R responsibilities for instream flows, Reclamation agrees to reimburse the District for all OM&R costs incurred by District for delivery of the 44,400 acre-feet of Project water for instream flow purposes.

OM&R costs reimbursed to the District from Reclamation for expenses incurred during years 1992 through 1997 have been done so in accordance with Contract No. 94-07-40-R1670, an interim contract that has now expired. The parties agree that the amounts reimbursed to the District under Contract No. 94-07-40-R1670 have been appropriate. Contract No. 94-07-40-R1670 states that, "If a cost allocation is not completed by 1997, this Interim Contract may be extended or amended as the parties deem appropriate." This agreement extends the Interim Contract on the terms described herein.

Term

This Interim Contract will allow for reimbursement of OM&R costs by Reclamation to District from and including water year 1998 through the water year 2002 or until a cost allocation has been approved for the Bonneville Unit, whichever is first to occur. If a cost allocation has not been completed by 2002, this Interim Contract may be extended or amended as the parties deem appropriate.

Reimbursement

Article 12(b) of Repayment Contract No. 14-06-400-4286, states: "These costs will be determined by the Contracting Officer after consultation with the District." The District will provide to Reclamation by December 1 of each year, the total amount of OM&R costs to be considered by the Contracting Officer to be reimbursed to the District for non-reimbursable

OM&R costs including costs associated with the delivery of 44,400 acre-feet of Project water for instream flow purposes in the Uinta Basin. Reclamation will reimburse the District the amount the Contracting Officer determines to be reimbursable.

The District will compute the amount to be considered by the Contracting Officer for reimbursement to the District in the following manner during the term of this Interim Contract:

1. Total OM&R costs will be identified for each individual feature and totaled. These costs will include all OM&R costs including indirect and administrative OM&R costs that will be distributed into the costs associated with each feature.

2. The costs obtained from step (1) will be multiplied by seven percent. The amount computed from this step will comprise that portion of the OM&R costs to be reimbursed to the District for costs associated with fish, wildlife, and flood control. The seven percent percentage value was obtained by analysis of past years reimbursements using a combination of separable and joint costs.

3. The amount obtained from step (1) will then be reduced by the OM&R reimbursements the District receives from non-project users and further reduced by the amount calculated from step (2). The resulting value is then multiplied by the ratio of 44,400 acre-feet to 261,360 acre-feet. The value obtained from this step will comprise that portion of the OM&R costs to be reimbursed to the District for costs associated with delivery of 44,400 acre-feet of water under the Agreement and Amended Agreement. The ~~44,400~~ 261,360 acre-feet is ~~that portion of~~ the total current planned water supply for the Bonneville Unit of the Central Utah Project.

4. Additional amounts to be reimbursed to the District under separate agreements such as the Deer Creek Reservoir / Jordanelle Reservoir Operating Agreement will be reimbursed to the District in accordance with those agreements.

After review, Reclamation will reimburse the District for the costs as calculated in steps (2), (3), and (4) as provided for in Article 12 (b) of Repayment Contract No. 14-06-400-4286.

Review of Payments

The parties agree that payments made under the Interim Contract were appropriate, given the information that was available regarding cost allocation during the years 1992 through 1997. When a cost allocation is completed, or additional information is available, the parties reserve the right to review and/or adjust payments made under this Memorandum of Agreement for their appropriateness.

IN WITNESS WHEREOF, the parties have signed this Interim Contract the date first above written.

UNITED STATES BUREAU OF RECLAMATION

APPROVED

Christopher B Rich
Field Solicitor's Office

By: Charles A Collier
Regional Director

Attest:

CENTRAL UTAH WATER CONSERVANCY DISTRICT

By: Alan A Christiansen
Secretary

By: Claude R Hickey
President

Central Utah Water Conservancy District

355 WEST UNIVERSITY PARKWAY, OREM, UTAH 84058-7303
TELEPHONE (801) 226-7100, FAX (801) 226-7107
TOLL FREE 1-800-281-7103
WEBSITE www.cuwcd.com

OFFICERS
E. Tim Doxey, President
R. Roscoe Garrett, Vice President

Don A. Christiansen, General Manag
Secretary/Treasurer

June 7, 2002

COPY

Mr. Ronald Johnston, Program Director
U.S. Department of the Interior
CUP Completion Act Office
302 East 1860 South
Provo, UT 84606-7317

Subject: Use of Repayment Contract OM&R Reserves

Dear Ron:

The purpose of this letter is to inform you that the District will need to expend the funds currently available in its repayment contract OM&R replacement and emergency reserve accounts. These accounts have been established in accordance with paragraphs 15 and 16 of the District's repayment contract with the United States as well and in accordance with the attached letter from Reclamation to the District dated March 29, 1985. The accounts currently contain $870,801 each for a total of $1,741,602.

The funds are required in order to replace of a portion of Alpine Aqueduct Reach 1. As you are aware, Alpine Aqueduct Reach 1 has experienced premature failure due to ground movement after fifteen years of service. There is a significant risk of aqueduct breaching while the system is in operation unless the pipe is replaced. Replacement is underway at this time. The total estimated cost for replacement of the failed portion is $1.8 million dollars.

The repayment contracts requires the District to obtain approval of the Contracting Officer prior to expending the $870,801 available from replacement reserve account. The repayment contract requires the District to advise the contracting officer of the amount and purpose of funds that will be expended from the emergency reserve account.

As use of the funds will draw the two accounts down to zero dollars, we propose to re-establish the OM&R replacement reserves at the rate of $200,000 each per year until an amount equal to $1,000,000 has been deposited in each of the accounts. The combined amount of $2,000,000 is approximately equal to one year's estimated OM&R costs of the Bonneville Unit that will be realized in five years. The funds will be acquired from both the water users that are currently taking delivery of project water as well as from the District's ad valorem taxes.

BOARD OF TRUSTEES

Afton G. Blood
Leo L. Brady
Brent Brotherson
Evans Tim Doxey
R. Roscoe Garrett
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Roger W. Hicken
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Patricia A. O'Rorke
Gary D. Palmer
David R. Rasmussen
W. Howard Riley
James J. Smedley
Stanley R. Smith
John L. West
Boyd Workman

We request your prompt consideration in this matter. The District will need to move the funds from the reserve accounts into the appropriate operating accounts prior to June 30, 2002. If you have any questions, please contact Rich Tullis.

Sincerely yours,

Don A. Christiansen
General Manager

DAC/RLT:dv

United States Department of the Interior

BUREAU OF RECLAMATION
UPPER COLORADO REGIONAL OFFICE
P.O. BOX 11568
SALT LAKE CITY, UTAH 84147

IN REPLY REFER TO: UC-440
832.

MAR 29 1985

Central Utah Water
Conservancy District
P.O. Box 427
355 West 1300 South
Orem, Utah 84057

Gentlemen:

As provided for in the repayment contract between the United States Government and the Central Utah Water Conservancy District signed December 28, 1965, (Contract No. 14-06-400-4286) as described in Articles 15(c) and 16(c), the Replacement Reserve Fund and the Emergency Reserve Fund for Operation and Maintenance may be reconsidered and changed by mutual written agreement of both parties. As presently outlined, each fund would accumulate at the rate of not less than $0.10 per acre-foot of water apportioned under each development block.

It is hereby proposed that the amount to be accumulated for both the Replacement Reserve Fund and the Emergency Reserve Fund for Operation and Maintenance be an amount equal to one year's project operation, maintenance, and replacement expense estimated to be $500,000 by 1992. The combined reserve fund shall be accumulated by the Contractor with annual deposits of $60,000, starting in 1986, and accumulate until it totals $500,000, including interest earned. Thereafter, the annual deposit may be discontinued. The interest earnings shall continue to accumulate and be retained as part of an expanding reserve fund.

All other provisions will remain the same as agreed to in the 1965 Repayment Contract as amended and supplemented.

If you accept this proposed change, please sign one copy of this letter and return to me, Attention 441.

Sincerely yours,

W. J. Hirsohi
Clifford I. Barrett
Regional Director

Central Utah Project Completion Program

Attachment C

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

Attachment C

Attachment C

USBR CONSTRUCTION COST INDEX

CONSTRUCTION COST TRENDS COMPUTATIONS
Bureau of Reclamation - Technical Services Center

The Bureau of Reclamation's *Construction Cost Trends [CCT]* were developed to track construction relevant to the primary types of projects being constructed by the organization. All the various cost indexes consist of two elements, contractor labor and equipment costs, and contractor supplied materials and equipment.

When the indexes were originally developed, the substantial amount of construction work being performed by the Bureau provided a large data reference for the 35 construction categories. Actual field cost data were used to develop the costs baselines and their respective incremental increases over time.

Since the early to mid 1980's, the number and magnitude of construction projects being performed by the Bureau has declined. There are fewer construction projects in general and no new large dam or hydroelectric projects. The number of data references from our own construction has therefore declined as well.

Despite this reduction in the construction program, the *Construction Cost Trends* is still considered a valuable asset used by many within Reclamation as well as numerous clients in other government entities and the private sector. In order to perpetuate the *CCT* in as a meaningful and professional manner as possible, cost models consisting of appropriate labor, equipment, and materials types are now used as the principal costs reference in lieu of actual field data. Data for the models are primarily extracted from

Producer Price Indexes [PPI], US Department of Labor, Bureau of Labor Statistics
Price Trends for Federal-Aid Highway Construction, US Department of Transportation
Engineering News-Record, weekly publication of McGraw-Hill

Actual field data, when available, is used to confirm the reasonableness of the models. Engineering judgment may also be used to adjust the results.

Bureau of Reclamation Construction Cost Trends

(Base: 1977 = 100 For Indexing Field Costs Only)

	1984				1985				1986				1987			
	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
Construction Indexes																
Earth dams	139	138	139	139	139	139	139	140	140	140	140	141	141	141	142	142
Dam structure	131	131	130	129	129	129	128	128	128	128	128	128	127	128	129	130
Spillway	144	144	145	145	145	146	147	148	150	149	150	151	151	150	151	151
Outlet works	153	153	155	155	155	155	157	158	159	159	160	161	161	161	162	162
Concrete dams	154	154	155	156	155	156	157	158	159	159	160	160	160	160	161	161
Diversion dams	153	153	155	155	156	156	157	157	158	158	158	159	159	159	160	161
Pumping plants	154	154	156	157	157	157	158	159	160	160	160	161	161	161	162	163
Structures and improvements	148	149	150	151	152	152	153	154	154	154	154	154	154	154	155	156
Equipment	160	161	163	163	164	164	166	166	166	167	168	170	169	169	170	171
Pumps and prime movers	161	162	163	163	164	164	166	166	167	168	169	170	169	169	169	170
Accessory elect + misc. equip.	161	161	164	164	165	165	166	166	166	167	168	170	170	171	172	174
Powerplants	157	158	159	160	160	161	162	162	163	164	164	166	166	167	168	170
Structures and improvements	149	149	150	151	152	152	153	154	154	154	154	155	155	154	155	156
Equipment	161	162	164	164	164	164	166	166	168	169	169	171	172	173	175	176
Turbines and generators	163	163	165	165	166	166	167	168	169	170	171	173	174	175	178	179
Accessory elect + misc. equip.	156	156	158	158	159	159	160	160	160	161	161	163	163	163	164	166
Steel pipelines	161	161	163	162	163	162	163	162	163	163	164	165	165	165	166	167
Concrete pipelines	157	157	158	159	159	160	161	161	162	162	163	164	164	164	165	166
Canals	144	145	146	146	147	148	149	149	150	150	150	150	150	150	151	152
Canal earthwork	143	144	144	145	146	146	147	147	148	148	149	149	149	150	151	152
Canal structures	149	149	150	151	151	152	153	153	154	153	154	154	154	154	155	156
Tunnels	161	161	162	163	164	165	166	167	167	168	168	169	170	170	171	173
Laterals and drains	143	143	144	145	146	146	147	148	148	148	148	148	148	149	149	150
Lateral earthwork	141	142	143	143	144	145	145	146	147	147	148	148	148	149	149	150
Lateral structures	145	145	146	147	147	148	149	150	150	150	149	150	149	150	150	151
Distribution pipelines	155	155	156	157	157	158	158	159	160	160	160	162	162	162	163	164
Switchyards and substations	154	154	156	156	156	156	157	157	158	158	158	159	160	160	161	163
Wood pole transmission lines	146	146	148	149	148	147	148	150	148	146	145	146	147	145	146	148
Poles and fixtures	136	136	137	137	136	134	136	138	136	134	132	134	136	134	134	135
Overhead conductors and devices	159	161	164	164	164	163	164	165	163	162	161	163	162	161	162	164
Steel tower transmission lines	163	164	166	166	168	168	169	170	170	170	170	170	170	170	171	173
Primary roads	155	154	156	156	157	157	159	160	161	161	162	163	163	163	164	166
Secondary roads	160	160	161	161	162	164	165	168	171	174	175	178	181	182	186	189
Bridges	154	155	156	157	158	158	159	160	161	162	162	164	164	165	166	168
General property	155	155	158	158	158	159	159	159	159	159	160	161	162	161	162	164
Land Indexes																
Arizona	132	132	136	136	140	141	142	143	144	145	146	147	148	149	150	151
California	225	225	223	223	223	223	218	212	206	205	203	201	201	201	201	203
Colorado	160	160	166	166	166	166	140	138	136	136	136	136	136	137	138	139
Idaho	139	139	140	140	140	140	136	132	130	129	128	127	126	125	124	123
Kansas	125	125	122	122	122	122	115	110	105	100	96	96	96	96	98	100
Montana	145	145	149	149	147	145	143	141	139	137	135	133	131	129	127	127
Nebraska	128	128	114	114	113	112	111	107	103	99	96	95	95	95	97	100
Nevada	132	132	136	136	136	136	136	136	138	138	140	142	144	146	148	150
New Mexico	132	132	136	136	136	136	132	130	127	124	124	124	131	138	145	152
North Dakota	141	141	142	142	142	132	125	120	118	116	114	112	111	111	111	112
Oklahoma	155	155	156	156	156	152	146	135	133	131	129	127	125	122	121	121
Oregon	137	137	137	137	133	129	125	125	125	125	125	125	125	125	125	125
South Dakota	139	139	136	136	135	133	130	126	124	122	121	121	121	122	124	126
Texas	192	192	208	208	212	220	229	229	226	221	216	211	200	188	183	182
Utah	130	130	133	133	133	133	133	133	132	132	130	129	130	131	132	133
Washington	152	152	157	157	157	157	156	155	153	151	149	147	145	143	141	139
Wyoming	132	132	136	136	136	135	134	133	132	131	131	131	130	130	129	129
Other Indicators																
Composite trend	153	153	155	155	156	156	157	158	158	158	159	160	160	160	161	162
Machinery and equipment (BLS)	166	168	168	168	169	169	170	170	171	172	172	172	174	175	176	176
Federal salary	147	147	147	147	152	152	152	152	152	152	152	152	157	157	157	157

Inquiries to: D-8170 Fax: (303) 445-6475 or rbaumgarten@do.usbr.gov or lpedde@do.usbr.gov

NOTE: The land indexes have been reinstated as part of the Construction Cost Trends. Because of a newly located source of land values from the U.S. Department of Agriculture, it was apparent that our previously published land index values lagged actual values significantly. Because of this it was necessary to recompute our values from 1985 forward.

Bureau of Reclamation Construction Cost Trends

(Base: 1977 = 100 For Indexing Field Costs Only)

	1992				1993				1994				1995			
	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
Construction Indexes																
Earth dams	162	160	161	162	164	165	165	166	168	163	167	168	173	175	178	178
Dam structure	147	145	146	148	150	151	152	152	154	145	155	156	162	163	165	163
Spillway	175	171	171	172	174	175	175	176	178	176	173	175	180	182	187	188
Outlet works	189	185	186	188	189	190	191	192	194	194	191	193	196	198	202	204
Concrete dams	186	184	184	186	188	189	189	190	193	192	188	190	193	196	199	201
Diversion dams	183	182	183	185	186	187	188	189	191	191	191	193	195	198	201	202
Pumping plants	185	185	187	188	189	190	191	192	193	195	195	197	200	202	204	206
Structures and improvements	172	171	173	174	175	176	177	178	181	183	182	184	188	191	194	197
Equipment	201	201	203	204	205	206	207	208	208	209	211	213	213	215	217	218
Pumps and prime movers	204	205	206	208	209	210	211	211	210	213	214	215	217	219	220	221
Accessory elect + misc. equip.	195	196	197	199	199	200	201	203	204	204	206	208	209	210	211	213
Powerplants	197	198	199	201	202	203	204	205	207	207	208	209	212	213	215	216
Structures and improvements	173	172	173	175	176	176	178	179	182	183	183	185	189	191	194	197
Equipment	212	213	215	217	218	219	220	221	222	222	223	224	226	227	228	228
Turbines and generators	216	217	218	220	221	222	223	224	226	225	225	227	228	229	230	231
Accessory elect + misc. equip.	191	191	192	194	195	195	197	198	199	200	202	204	205	206	207	208
Steel pipelines	195	195	196	198	199	200	201	202	203	204	204	206	209	211	212	213
Concrete pipelines	178	178	179	181	181	182	183	184	184	185	185	186	188	189	191	191
Canals	167	166	167	169	170	171	172	172	174	176	176	178	182	184	187	189
Canal earthwork	167	166	168	170	172	172	173	173	174	175	176	177	181	182	185	181
Canal structures	172	171	172	174	174	175	176	178	180	183	182	183	188	191	194	198
Tunnels	196	195	196	198	200	200	202	203	205	205	206	208	210	212	216	220
Laterals and drains	167	165	166	169	170	171	175	176	178	180	180	182	188	190	192	190
Lateral earthwork	167	166	167	170	171	172	173	173	174	175	176	177	181	181	185	182
Lateral structures	168	166	168	170	171	172	178	179	181	184	184	186	192	196	197	196
Distribution pipelines	178	178	179	181	181	182	183	184	184	185	185	187	188	190	192	193
Switchyards and substations	189	188	188	190	190	191	192	194	194	196	195	197	198	202	203	204
Wood pole transmission lines	172	171	173	175	177	180	185	198	195	201	208	210	209	217	214	214
Poles and fixtures	157	158	163	166	171	176	186	208	208	220	229	230	221	218	209	208
Overhead conductors and devices	191	188	187	186	185	185	184	186	180	179	182	185	195	218	222	222
Steel tower transmission lines	197	196	195	196	196	196	197	198	196	196	198	201	205	215	218	219
Primary roads	188	185	185	186	188	188	191	196	196	200	197	199	201	204	206	208
Secondary roads	216	211	209	210	212	209	214	215	217	211	216	217	224	229	230	231
Bridges	189	188	188	190	191	191	194	194	196	196	198	199	204	207	208	212
General property	185	185	187	189	190	191	194	198	201	203	205	208	208	209	209	210
Land Indexes																
Arizona	182	185	188	191	194	197	200	203	206	209	212	215	221	227	233	239
California	271	275	279	283	287	289	291	291	291	291	291	291	291	291	292	295
Colorado	162	164	166	168	168	168	171	174	178	182	186	190	194	198	202	206
Idaho	145	146	147	148	149	150	151	155	159	163	167	171	175	179	183	187
Kansas	113	114	115	116	118	120	122	124	126	128	130	132	134	136	137	138
Montana	139	139	139	142	145	148	151	154	157	160	163	166	169	172	175	178
Nebraska	123	123	123	123	123	123	124	126	128	130	134	136	138	140	142	144
Nevada	210	214	218	222	226	230	234	238	242	247	252	257	262	267	272	277
New Mexico	205	205	204	203	200	199	198	202	206	210	214	218	222	226	232	238
North Dakota	118	118	119	120	121	122	123	124	125	126	127	129	131	133	135	137
Oklahoma	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138
Oregon	151	155	159	163	168	173	178	183	188	193	200	207	214	221	228	235
South Dakota	148	146	144	144	143	143	144	145	146	148	150	152	153	154	155	156
Texas	165	164	163	163	163	163	164	167	169	171	173	176	178	181	183	185
Utah	160	163	165	169	173	176	180	185	190	195	200	207	212	219	225	233
Washington	166	166	166	166	167	168	169	176	183	190	197	198	199	200	201	202
Wyoming	140	142	143	145	147	149	151	153	155	160	164	168	171	173	175	178
Other Indicators																
Composite trend	186	185	186	188	189	190	190	194	195	196	197	199	201	204	206	207
Machinery and equipment (BLS)	204	206	207	209	211	214	213	213	214	215	215	216	216	218	219	220
Federal salary	187	187	187	187	194	194	194	194	200	200	200	200	202	202	202	202

Inquiries to: D-8170 Fax: (303) 445-6475 or rbaumgarten@do.usbr.gov or lpedde@do.usbr.gov

NOTE: The land indexes have been reinstated as part of the Construction Cost Trends. Because of a newly located source of land values from the U.S. Department of Agriculture, it was apparent that our previously published land index values lagged actual values significantly. Because of this it was necessary to recompute our values from 1985 forward.

Bureau of Reclamation Construction Cost Trends

(Base: 1977 = 100 for Indexing Field Costs Only)

[Contains index numbers previously published (Apr 97 - Apr 99) that have been revised] *

Item	1996 Jan	1996 Apr	1996 Jul	1996 Oct	1997 Jan	1997 Apr	1997 Jul	1997 Oct	1998 Jan	1998 Apr	1998 Jul	1998 Oct	1999 Jan	1999 Apr	1999 Jul	1999 Oct
Construction Indexes						*	*	*	*	*	*	*	*	*		
Earth dams	175	180	174	176	177	179	181	180	180	181	183	183	184	185	188	191
Dam structure	160	167	157	159	162	164	165	164	164	163	163	163	162	162	168	172
Spillway	186	189	187	186	187	188	191	191	190	192	198	198	200	203	204	206
Outlet works	203	205	205	206	206	207	211	211	211	212	218	219	221	224	224	226
Concrete dams	200	202	202	203	200	205	208	208	209	210	216	217	219	222	223	225
Diversion dams	202	205	205	207	204	209	211	212	212	214	216	217	218	219	221	222
Pumping plants	207	211	213	215	214	216	217	219	219	220	221	222	222	223	225	226
Structures and improvements	195	202	205	209	205	208	210	211	211	212	213	213	214	215	218	218
Equipment	221	222	222	223	224	226	227	228	229	230	232	233	233	234	235	236
Pumps and prime movers	225	227	227	228	230	231	232	233	234	235	237	237	237	239	240	241
Accessory elect. & misc. equip.	213	214	214	216	216	217	220	221	221	222	225	226	226	227	228	229
Powerplants	215	216	217	219	217	220	223	224	225	225	226	227	227	229	231	231
Structures and improvements	196	202	205	209	205	208	210	211	211	212	213	214	214	215	218	219
Equipment	226	226	227	228	226	229	231	233	233	233	235	236	236	238	239	240
Turbines and accessories	228	229	230	231	228	230	233	235	235	236	238	238	239	241	241	242
Accessory elect. & misc. equip.	210	207	207	209	209	215	216	218	218	219	221	222	222	223	225	226
Steel pipelines	214	217	219	222	229	229	231	232	233	233	236	237	238	239	241	243
Concrete pipelines	191	194	193	196	197	200	202	203	205	206	209	211	212	213	215	216
Canals	186	196	194	199	198	200	201	201	201	201	202	202	203	203	207	210
Canal earthwork	178	189	177	181	185	187	188	187	186	186	185	185	184	184	190	195
Canal structures	197	203	208	213	209	211	213	215	215	216	218	219	219	221	223	224
Tunnels	221	224	223	226	226	231	233	234	235	236	239	240	241	242	243	245
Laterals and drains	186	195	197	202	214	216	218	219	219	219	220	220	220	220	224	226
Lateral earthwork	177	184	174	178	182	183	185	184	183	183	183	182	182	182	188	192
Lateral structures	193	203	209	215	231	234	237	238	238	239	241	240	240	240	243	24[illegible]
Distribution pipelines	193	195	195	198	198	201	203	204	206	207	210	211	212	213	215	21[illegible]
Switchyards and substations	204	186	188	190	189	211	212	213	213	215	216	218	218	220	223	226
Wood pole transmission lines	216	213	220	234	234	233	230	226	218	211	198	205	191	196	208	210
Poles and fixtures	217	217	231	255	262	254	245	238	224	212	192	209	186	198	216	217
Overhead conductors and devices	215	209	207	207	200	208	212	212	212	210	205	200	199	196	199	204
Steel tower transmission lines	218	216	216	217	214	219	221	222	222	223	224	222	222	222	223	225
Primary roads	208	209	214	219	217	222	224	224	223	219	221	225	224	226	229	231
Secondary roads	227	230	230	237	240	247	256	258	257	237	243	247	254	253	252	262
Bridges	211	218	221	226	224	227	231	232	233	229	232	233	236	237	239	242
General property	211	210	212	217	219	220	221	222	220	219	219	222	219	221	225	226
Composite trend	207	208	209	212	213	217	219	219	219	219	220	221	220	222	225	227
Land Indexes [No changes]																
Arizona	245	251	257	263	270	277	284	291	298	303	310	315	322	329	334	338
California	301	307	313	319	325	331	335	339	343	346	350	355	359	359	359	359
Colorado	210	214	218	222	225	228	231	234	236	237	242	245	247	248	250	252
Idaho	190	193	196	199	202	205	208	211	214	216	220	224	227	230	233	236
Kansas	139	140	141	142	143	144	145	146	147	148	150	150	151	150	149	149
Montana	181	184	187	190	193	195	197	199	201	202	204	205	202	198	194	192
Nebraska	146	148	150	153	156	159	162	165	167	168	172	174	167	167	165	163
Nevada	282	287	292	297	302	307	312	317	322	325	330	335	340	346	350	354
New Mexico	244	250	256	262	267	272	277	282	287	290	292	295	296	298	296	294
North Dakota	139	141	143	145	147	149	151	153	155	156	156	156	154	152	150	148
Oklahoma	139	140	141	142	143	144	145	146	147	148	150	152	153	152	154	154
Oregon	242	249	256	263	270	277	284	291	298	301	304	307	306	303	300	297
South Dakota	157	158	160	162	164	166	168	170	171	171	174	178	183	183	184	185
Texas	187	190	193	195	199	202	204	206	207	208	213	217	213	208	204	202
Utah	240	247	255	260	266	272	278	280	282	283	285	288	290	290	292	294
Washington	204	206	209	212	217	223	229	235	241	244	250	255	250	246	242	238
Wyoming	181	183	185	188	192	195	198	200	203	205	207	208	206	204	203	202
Other Indicators [No changes]																
Machinery and equipment (BLS)	221	221	225	225	226	227	229	230	231	232	234	234	235	237	239	239
Federal salary	207	207	207	207	212	212	212	212	217	217	217	217	225	225	225	225

Bureau of Reclamation Construction Cost Trends

(Base: 1977 = 100 for Indexing Field Costs Only)

Item	2000 Jan	2000 Apr	2000 Jul	2000 Oct	2001 Jan	2001 Apr	2001 Jul	2001 Oct	2002 Jan	2002 Apr	2002 Jul	2002 Oct	2003 Jan	2003 Apr	2003 Jul	2003 Oct
Construction Indexes																
Earth dams	191	197	198	201	203	200	200	201	198	198	203	207	209	214	213	214
Dam structure	174	179	180	183	185	183	184	184	180	180	185	188	190	198	194	195
Spillway	202	211	211	214	215	212	211	212	209	210	215	220	221	226	225	228
Outlet works	223	229	230	232	233	232	232	233	232	233	238	242	242	246	247	250
Concrete dams	222	227	228	230	231	229	229	229	228	228	232	236	237	240	241	243
Diversion dams	223	225	226	228	229	229	229	231	231	231	234	236	237	241	242	243
Pumping plants	227	229	230	231	232	233	234	235	236	237	239	241	242	244	246	247
Structures and improvements	220	222	223	224	225	225	226	228	228	229	231	233	235	238	239	240
Equipment	237	238	240	242	243	244	245	247	249	250	253	253	254	256	257	258
Pumps and prime movers	242	243	245	247	248	249	250	252	254	255	257	257	258	259	261	261
Accessory elect. & misc. equip.	230	231	233	235	236	236	238	240	242	242	246	247	248	250	253	254
Powerplants	232	234	234	236	237	237	239	240	241	242	245	246	247	249	250	252
Structures and improvements	220	222	223	224	225	225	226	228	228	229	231	233	235	238	239	240
Equipment	240	243	242	244	245	245	247	249	250	251	254	255	255	257	258	260
Turbines and accessories	242	245	245	247	248	248	250	252	253	254	257	258	258	260	261	263
Accessory elect. & misc. equip.	227	229	230	232	233	233	235	236	238	239	242	243	243	245	247	248
Steel pipelines	245	246	248	250	252	253	255	257	258	259	262	264	266	268	270	271
Concrete pipelines	217	220	221	223	226	227	230	231	232	233	236	237	238	242	243	244
Canals	212	216	217	220	222	221	222	224	222	223	226	229	232	237	236	238
Canal earthwork	197	204	205	208	211	209	209	209	205	205	210	213	216	225	220	222
Canal structures	226	227	228	230	231	232	233	235	236	236	239	241	243	246	247	249
Tunnels	246	249	250	251	252	253	254	256	256	257	260	261	262	265	266	268
Laterals and drains	229	234	236	238	241	240	241	243	242	243	246	251	255	261	260	262
Lateral earthwork	194	200	201	204	207	205	205	206	203	203	207	211	213	221	217	219
Lateral structures	249	253	256	258	260	260	261	263	264	265	268	274	278	284	285	287
Distribution pipelines	217	220	221	224	226	227	230	232	232	234	237	238	239	242	244	245
Switchyards and substations	228	230	229	232	232	231	233	235	235	236	239	240	241	241	243	244
Wood pole transmission lines	214	213	204	203	200	200	203	203	201	205	205	205	205	204	206	210
Poles and fixtures	218	211	197	194	189	190	196	197	194	201	200	201	199	197	201	206
Overhead conductors and devices	211	216	214	217	216	214	214	213	212	212	213	212	214	215	216	217
Steel tower transmission lines	230	233	233	234	233	233	233	233	233	233	234	234	234	235	236	236
Primary roads	231	231	228	230	229	228	232	233	231	230	233	235	237	240	241	241
Secondary roads	262	263	254	258	258	260	273	273	264	255	262	264	269	279	280	278
Bridges	244	247	246	248	250	251	255	257	257	255	259	261	264	269	270	271
General property	227	228	227	228	228	228	230	231	233	234	237	238	238	240	243	246
Composite trend	228	231	231	233	234	234	235	236	236	237	240	242	244	247	248	250
Land Indexes																
Arizona	342	346	350	354	358	362	366	372	378	384	390	406	422	438	454	470
California	360	366	370	374	378	384	388	390	392	394	396	400	404	408	412	415
Colorado	254	255	256	257	258	261	262	265	268	271	274	276	278	280	282	284
Idaho	239	245	251	257	261	264	270	271	272	273	274	275	276	277	278	280
Kansas	148	149	150	151	152	153	154	155	155	156	157	157	157	157	157	157
Montana	190	191	192	193	194	195	196	201	206	211	216	221	226	231	236	241
Nebraska	162	163	166	168	170	171	172	173	174	175	176	177	178	179	180	183
Nevada	358	362	366	370	374	376	378	380	382	384	386	388	390	392	394	400
New Mexico	292	290	288	286	285	285	283	286	289	292	295	294	293	292	291	295
North Dakota	146	148	150	152	154	156	157	158	158	158	159	160	161	162	163	165
Oklahoma	155	157	159	161	163	164	165	166	166	166	166	169	172	175	178	181
Oregon	294	300	306	312	316	318	320	322	322	322	322	323	324	325	326	330
South Dakota	186	190	196	201	202	202	204	206	208	210	212	216	220	224	228	232
Texas	201	205	209	213	216	217	218	218	218	218	218	222	226	230	234	238
Utah	296	299	302	305	308	310	312	316	320	324	328	336	344	352	360	368
Washington	234	231	222	216	216	216	215	217	219	221	223	223	223	223	223	227
Wyoming	201	205	209	213	215	217	219	222	225	228	231	238	245	252	259	263
Other Indicators																
Machinery and equipment (BLS)	239	240	240	240	240	240	240	240	240	240	242	243	243	245	247	247
Federal salary	236	236	236	236	245	245	245	245	257	257	257	257	268	268	268	268

Inquiries to: D-8170, Fax: (303) 445-6475

Bureau of Reclamation Construction Cost Trends

(Base: 1977 = 100 for Indexing Field Costs Only)

Item	2004 Jan	2004 Apr	2004 Jul	2004 Oct	2005 Jan	2005 Apr	2005 Jul	2005 Oct	2006 Jan	2006 Apr	2006 Jul	2006 Oct	2007 Jan	2007 Apr	2007 Jul	2007 Oct
Construction Indexes																
Earth dams	217	222	226													
Dam structure	196	200	204													
Spillway	231	238	242													
Outlet works	253	259	264													
Concrete dams	245	248	251													
Diversion dams	244	250	254													
Pumping plants	248	253	257													
Structures and improvements	241	249	254													
Equipment	260	262	264													
Pumps and prime movers	262	265	267													
Accessory elect. & misc. equip.	256	259	261													
Powerplants	253	257	260													
Structures and improvements	242	249	254													
Equipment	261	263	265													
Turbines and accessories	264	266	267													
Accessory elect. & misc. equip.	250	254	257													
Steel pipelines	273	275	277													
Concrete pipelines	244	248	251													
Canals	239	246	251													
Canal earthwork	223	228	233													
Canal structures	250	257	261													
Tunnels	269	275	280													
Laterals and drains	263	277	288													
Lateral earthwork	220	225	229													
Lateral structures	289	307	323													
Distribution pipelines	246	250	253													
Switchyards and substations	246	251	256													
Wood pole transmission lines	211	222	231													
Poles and fixtures	207	219	232													
Overhead conductors and devices	220	227	232													
Steel tower transmission lines	238	247	254													
Primary roads	242	248	252													
Secondary roads	280	282	284													
Bridges	273	278	281													
General property	247	256	261													
Composite trend	252	259	265													
Land Indexes																
Arizona	486	502	518													
California	418	421	424													
Colorado	286	288	290													
Idaho	282	284	286													
Kansas	157	157	157													
Montana	246	251	256													
Nebraska	186	189	192													
Nevada	406	412	418													
New Mexico	299	303	307													
North Dakota	167	169	171													
Oklahoma	184	187	190													
Oregon	334	338	342													
South Dakota	236	240	244													
Texas	242	246	250													
Utah	376	384	392													
Washington	231	235	239													
Wyoming	267	271	275													
Other Indicators																
Machinery and equipment (BLS)	247	250	252													
Federal salary	280	280	280													

Inquiries to: D-8170, Fax: (303) 445-6475

Central Utah Project Completion Program

Attachment D

October 2004

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

Attachment D

Attachment D

USBR COST UPDATE ON FORM PF-2B (October 2004)

PROCESSED 04/08/30 PROGRAM AND BUDGET SYSTEM - SUPPORTING SCHEDULES REPORT BASED ON LEVEL P

THE FOLLOWING SUBSETS WERE SELECTED--
INCLUDES THE FOLLOWING PROJECTS
N066 CUP, BONNEVILLE UNIT (CRSPP)
THE FOLLOWING DATABASE FILES WERE USED--
DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347
FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	CONSTRUCTION PREREQUISITES													
2	DEFINITE PLAN REPORT													
3	APPROVAL BY COMMISSIONER-REC			AAAA				08/18/80	COMPLETED					
4	REC INCLUDED/REGULAR PROJECT.			SAAC				11/01/65	COMPLETED					
5	F/WL INCLUDED/REGULAR PROJECT.			XAAC				11/01/65	COMPLETED					
6	REPAYMENT CONTRACTS													
7	REC INCLUDED/REGULAR PROJECT.			SAAA				12/01/65	COMPLETED					
8	F/WL INCLUDED/REGULAR PROJECT.			XAAA				12/01/65	COMPLETED					
9	LAND CLASSIFY CERTIFICATE													
10	CERTIFICATION BY SECRETARY-REC			AADD				01/19/82	COMPLETED					
11	F/WL INCLUDED/REGULAR PROJECT.			SAAB				12/01/65	COMPLETED					
12	F/WL INCLUDED/REGUALR PROJECT.			XAAB				12/01/65	COMPLETED					
13	STATUS OF NEPA COMPLIANCE													
14	PROJECT-WIDE FINAL EIS-RECREAT			AAEE				07/01/80	COMPLETED					
15	REC INCLUDED/REGULAR PROJECT.			SAAD				08/01/73	COMPLETED					
16	SUPPLEMENT TO FINAL RECREAT.			SAAE				08/01/78	COMPLETED					
17	F/WL INCLUDED/REGULAR PROJECT.			XAAD				08/01/73	COMPLETED					
18	F/WL INCLUDED/REGULAR PROJECT.			XAAE				08/01/78	COMPLETED					
19	* WATER/RELATED RESOURCES CRSP-8													
20	** LAND MANAGEMENT AND DEVELOPMNT													
21	*** RECREATION C20													
22	**** STARVATION RESERVOIR RECREATIN													
23	***** COMPLETED CONTRACTS													
24	ROADS FROM NATIONAL PARK SERV U S NATIONAL PARKS SERVICE	A		RBCC	10/ 1/71	370,000	370,000							
25	RECREATION FACILITIES U S NATIONAL PARKS SERVICE	A		RBCE	10/ 1/71	341,233	341,233							
26	BOAT RAMP	A		RBCF 4000000 DO40	5/ 5/72	9,159	9,159							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	LAND FOR STARVATION RESERVOIR	A		RBCD	10/90	16,000	16,000							
2	WELL DRILLING UTAH DIV OF PARKS AND REC	A		RBBB 4100000 DO40	12/ 3/90 4010200	92,000	92,000							
3	***** COMPLETED CONTRACTS					828,392	828,392							
4	***** CONTRACTS													
5	RABBIT GULCH CAMPGROUND (C/A) UTAH DIV OF PARKS AND REC	A		RBAA 4100000 DO40	1/ 2/91 4010300	1,371,358	1,371,358							
6	***** NONCONTRACTS													
7	NC FISHING AREA STARVATION	A		RBAC	10/81	45,634	45,634							
8	NC RABBIT GULCH CAMPGROUND	A		RBAH	8/88	58,599	58,599							
9	***** NONCONTRACTS					104,233	104,233							
10	**** STARVATION RESERVOIR RECREATIN					2,303,983	2,303,983							
11	**** STRAWBERRY RESERVOIR													
12	***** COMPLETED CONTRACTS													
13	OTHER STRUCTURES	A		RCXP 4B00000 DO40	6/ 5/75 400C561	8,624	8,624							
14	PRELIMINARY FACILITIES	A		RCXF 4B00000 DO40	6/30/75 400C562	47,203	47,203							
15	GOVT MATERIALS,SUPPLIES,LABOR	A		RCXB 4B00000 DO40	10/ 1/75	346,367	346,367							
16	DRILL WATER WELL	A		RCXH 4B00000 DO40	11/ 4/75 400C579	13,642	13,642							
17	SOLDIER CREEK LAND AND RIGHTS	A		RCAA 4000000 DO40	7/12/76	290,590	290,590							
18	YACC SUPPLIES, MATERIALS	A		RCXG 4000000 DO40	7/12/76	242,168	242,168							
19	HAWS POINT REC TWO FISH ACCESS	A		RCXZ	10/ 1/76	998,998	998,998							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	DRILL WATER WELL	A		RCXI 4B00000 DO40	9/16/77 40C0623	13,306	13,306							
2	DRILL WATER WELL	A		RCXK 4B00000 DO40	6/ 3/78 40C0635	27,697	27,697							
3	RECREATION ROADS W W CLYDE AND COMPANY	A		RCXA 4B00000 DO40	1/ 5/79 40C0662	1,159,963	1,159,963							
4	WATER SUPPLY SYSTEM VAN STAVEREN CONSTRUCTION CO	A		RCXJ 4B00000 DO40	4/ 5/79 40C0677	55,894	55,894							
5	DRILL WATER WELLS CLAIR A STEPHENSON DRILLING CO	A		RCXL 4B00000 DO40	5/ 5/79 40C0681	25,440	25,440							
6	RELOCATE 14.4 KV LINE AT SOLDR	A		RCXQ 4B00000 DO40	7/16/79 40L1198	730	730							
7	UTIL RDS BLDG MARINA SOLD CRK W W CLYDE AND COMPANY	A		RCXO 4B00000 DO40	9/27/79 40C0692	2,806,887	2,806,887							
8	STRAWBERRY BAY ACCESS ROAD W W CLYDE AND COMPANY	A		RCXR 4B00000 DO40	12/ 7/79 40C0696	1,107,773	1,107,773							
9	ELECT FAC AND SERV ASP GRV S C MOON LAKE ELEC ASSOCIATION	A		RCXS 4024000 DO40	6/ 9/80 40S1414	322,915	322,915							
10	SEWAGE LAGOON STEPHEN L CORNWALL COMPANY	A		RCXE 4B00000 DO40	7/ 5/80 40C0714	473,812	473,812							
11	EXCESS CONTRACT EARNINGS	A		RCXC 4000000 DO40	10/11/80	7,067	7,067							
12	UTIL-RDS-BLDG-MARINA STRAW B WESTERN UTILITY CONTRACTORS	A		RCXT 4B00000 DO40	9/21/81 40C0747	4,730,180	4,730,180							
13	FENCE STRAWBERRY BAY WEST U S FOREST SERVICE	A		RCXU 4B00000 DO40	8/12/82 40L3312	7,398	7,398							
14	SEWAGE LAGOON REPAIR HAJCO CONSTRUCTION INC	A		RCXM 4B00000 DO40	9/16/82 40C0824	16,744	16,744							
15	MC INSTALL FAC SOLDIER CREEK	A		RCCA	10/82	9,154	9,154							
16	WATER WELL ADMIN SITE	A		RCXV 4B00000 DO40	10/ 1/82 40C0822	8,455	8,455							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN

DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357
FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016

REVISED DATE 12/19/03 AT FOR LEVEL P

CUP, BONNEVILLE UNIT (CRSPP)
UPPER COLORADO REGION
CRSP,SEC8-WATER/RELATED RES

PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION)

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	INSTALL FAC SOLD CREEK RALPH L WADSWORTH CNST CO, INC	A		RCXW 4B00000 DO40	10/19/82 40C0816	644,741	644,741							
2	FAB INSTALL FAC STRAWBRY BAY	A		RCXY	9/83	1,468,651	1,468,651							
3	SITE PREP FOR ADMIN/O AND M BD ORMAND CONSTRUCTION, INC	A		RCYA 4B00000 DO40	9/29/83 4001280	484,261	484,261							
4	STRAWBERRY BAY BOATRAMP REPAIR --UNIDENTIFIED CONTRACTOR--	A		RCYB 4B00000 DO40	11/ 1/83 4001490	33,736	33,736							
5	COURTESY BOATDOCKS	A		RCYC 4B00000 DO40	3/27/84 4001440	35,476	35,476							
6	TELEPHONES FOR STRAWBERRY BAY MOUNTAIN BELL	A		RCXN 4B00000 DO40	7/17/84 4100610	17,440	17,440							
7	MC HAWS POINT	A		RCCB	8/84	38,006	38,006							
8	LAND FOR OPERATION BUILDING	A		RCAB	2/85	66,526	66,526							
9	ELECT FAC STRAWBERRY BAY	A		RCXX 4050000 DO40	2/ 1/85	116,009	116,009							
10	MC STRAWBERRY RES O AND M	A		RCCC	5/85	9,310	9,310							
11	MC ADMINISTRATION BUILDING	A		RCCD	6/85	37,168	37,168							
12	CHICKEN CREEK ROAD SURFACING NED MITCHELL	A		RCYD 4B00000 DO40	6/28/85 4002920	586,349	586,349							
13	MC UPGRADE FACILITIES AT STRWB U S FOREST SERVICE	A		RCCE 4000000 DO40	4/17/86 4003940	11,680	11,680							
14	STRAWBERRY RES O AND M BLDGS TAYCO CONSTRUCTION CO	A		RCYE 4B00000 DO40	5/29/86 4003540	544,308	544,308							
15	ADMIN COMPLEX AT STRAWBERRY SARGEANT CONSTRUCTION COMPANY	A		RCYF 4B00000 DO80	7/ 9/86 4003890	840,918	840,918							
16	CENTER CREEK CANAL LINING	A		RCCP 4B00000 DO40	9/12/88 4006480	15,501	15,501							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 4
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) CRSP,SEC8-WATER/RELATED RES

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** COMPLETED CONTRACTS					17,671,087	17,671,087							
2	***** NONCONTRACTS													
3	NC UTIL RD BLDG MARIN SOLD CRK	A		RCDA	10/ 1/78	826,000	826,000							
4	COMPLETED NC COSTS	A		RCDB	10/79	1,264,793	1,264,793							
5	NC ELECT FAC SERV ASP GRV SC	A		RCDC	10/80	95,000	95,000							
6	NC UTIL RDS BLDGS MARINA SB	A		RCDE	10/80	1,329,575	1,329,575							
7	NC INSTALL FAC SOLDIER CREEK	A		RCDD	10/81	221,357	221,357							
8	NC ELEC FAC STRAWBERRY BAY	A		RCDF	12/82	34,200	34,200							
9	NC HAWS POINT	A		RCDG	10/83	254,606	254,606							
10	NC FAB INSTAL FAC STRAWB BAY	A		RCDH	8/84	518,565	518,565							
11	NC CHICKEN CREEK ACCESS	A		RCDI	10/84	69,000	69,000							
12	NC ADMINISTRATION BUILDING	A		RCDJ	2/85	773,751	773,751							
13	NC BADGER POINT CAMPGROUND	A		RCDK	6/85	445,546	445,546							
14	NC STRAWBERRY RES O AND M SITE	A		RCDL	6/85	330,000	330,000							
15	NC IMPROVEMENTS SOLDIER CREEK	A		RCDM	4/87	97,000	97,000							
16	STRAWBERRY RES RECREATION FACL U S FOREST SERVICE	A		RCBB 4100000 D040	3/ 1/89 4007550	3,892,542	3,892,542							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 5
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) CRSP,SEC8-WATER/RELATED RES

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	NC IMPROVEMENTS STRAWBERRY BAY	A		RCDP	8/89	94,725	94,725							
2	***** NONCONTRACTS					10,246,660	10,246,660							
3	**** STRAWBERRY RESERVOIR					27,917,747	27,917,747							
4	**** CURRANT CREEK RESERVOIR													
5	***** COMPLETED CONTRACTS													
6	CURRANT CREEK DAM S J GROVES AND SONS, INC	A		RDCZ 4D00000 DO80	7/18/74 4DC7038	69,315	69,315							
7	ROADS, PARKING, WATERLINES CARLSON CONSTRUCTION COMPANY	A		RDCG	5/15/76 400C592	491,629	491,629							
8	BUILDING MATERIALS/SUPPLIES	A		RDCH	10/ 1/77	312,928	312,928							
9	FOREST SERVICE TWO AGREEMENTS	A		RDDH 4000000 DO40	10/ 1/77 01C0173	119,818	119,818							
10	RECREATION ROADS W W CLYDE AND COMPANY	A		RDCD	10/10/78 40C0662	279,489	279,489							
11	BUILDING AND UTILITIES CRNT CK F J BURTON CONSTRUCTION CO	A		RDCC	11/ 2/78 40C0661	709,802	709,802							
12	ELECTRIC FACILITIES CURRANT CK MOON LAKE ELEC ASSOCIATION	A		RDAE 4000000	8/ 1/79 40S1094	83,510	83,510							
13	WORK CENTER BUILDING BENECO ENTERPRISES	A		RDCE	8/16/80 40C0705	189,561	189,561							
14	FOREST SERVICE DEVELOPMENT U S FOREST SERVICE (WNF)	A		RDFS 4000000 DO40	8/ 1/82 40L3018	165,985	165,985							
15	CURRANT CK RD AGGREGATE ANDERSON TRANSPORT, INC	A		RDAA 4D00000 DO40	6/15/83 4000560	27,819	27,819							
16	CURRANT CREEK ROAD RESURFACING	A		RDCR 4D00000 DO40	7/ 8/88	3,227	3,227							
17	***** COMPLETED CONTRACTS					2,453,083	2,453,083							
18	***** NONCONTRACTS													
19	NC CURRANT CK FACILITIES	A		RDDE	10/ 1/80	870,471	870,471							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 6
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) CRSP,SEC8-WATER/RELATED RES

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	NC ROAD WORK	A		RDBB	10/81	31,817	31,817							
2	***** NONCONTRACTS					902,288	902,288							
3	**** CURRANT CREEK RESERVOIR					3,355,371	3,355,371							
4	**** UPPER STILLWATER RESERVOIR													
5	***** COMPLETED CONTRACTS													
6	ROCK CREEK RECREATIONAL FACIL U S FOREST SERVICE (ANF)	A		REAA 4050000 DO40	6/ 7/83 4001020	1,526,629	1,526,629							
7	BOATRAMP / WORKCENTER U S FOREST SERVICE	A		READ 4100000 DO40	2/ 7/90 4009060	904,784	904,784							
8	***** COMPLETED CONTRACTS					2,431,413	2,431,413							
9	***** MINOR CONTRACTS													
10	MC ROCK CREEK REC FACILITIES	A		REAB 4000000 DO40	4/ 8/87	8,851	8,851							
11	***** NONCONTRACTS													
12	NC REC FAC UPPR STILLWATER RES	A		REAC	10/82	143,909	143,909							
13	**** UPPER STILLWATER RESERVOIR					2,584,173	2,584,173							
14	**** JORDANELLE RESERVOIR													
15	***** LAND AND RIGHTS													
16	LAND JORDANELLE RECREATION	A		RGAB 4050000 DO40	4/16/90	511,972	511,972							
17	***** COMPLETED CONTRACTS													
18	DESIGN JORDANELLE REC FACILITY UTAH DIV OF PARKS AND REC	A		RGAC 4000000 DO40	1/25/91 4010590	1,240,934	1,240,934							
19	***** CONTRACTS													
20	JORDANELLE REC FACILITY (C/A) UTAH DIV OF PARKS AND REC	A		RGAA 4100000 DO40	6/11/92 2-12530	18,894,735	18,894,735							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357

PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION)

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	SEWER FAC WASATCH COUNTY	A		RG01 4200000	12/ 2/93 4-15510	27,147	27,147							
2	JORDANELLE SEWER	A		RG03 4100000	12/ 9/94 5-16780	825,776	825,776							
3	***** CONTRACTS					19,747,658	19,747,658							
4	***** NONCONTRACTS													
5	NC JORDANELLE RECREATION LAND	A		RGAJ	8/86	123,232	123,232							
6	NC DESIGN REC FAC JORDANELLE	A		RGAE	10/89	186,428	186,428							
7	NC JORDANELLE RECREATION LAND	A		RGAI	10/89	8,659	8,659							
8	NC REC FAC JORDANELLE	A		RGAD	7/91	3,402,526	3,402,526							
9	NC PUBLIC INVOLVEMENT CONTRACT	A		RGPI DO/40	9/91 4011510	166,750	166,750							
10	N/C DESIGN SEWER FACILITIES	A		RG02 4200000	9/93 4-15510	13,441	13,441							
11	***** NONCONTRACTS					3,901,036	3,901,036							
12	**** JORDANELLE RESERVOIR					25,401,600	25,401,600							
13	**** LOWER STILLWATER RESERVOIR													
14	***** NONCONTRACTS													
15	NC REC FAC LOWER STILLWATER	A		RIAC 4000000 DO40	4/86	1,205	1,205							
16	**** LOWER STILLWATER RESERVOIR					1,205	1,205							
17	**** UPPER PROVO RESERVOIR													
18	***** NONCONTRACTS													
19	NC PROVO RIVER FACILITIES	B		RKAD 4050000 DO40	10/94	217	217							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 12/19/03 AT FOR LEVEL P INDEX PAGE 8
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 8
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) CRSP,SEC8-WATER/RELATED RES

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	**** UPPER PROVO RESERVOIR					217	217							
2	**** SERVICE FACIL/DEPREC/SALVG													
3	***** WORK EQUIPEMENT RECREATION													
4	WORK EQUIPMENT	A		RWAA	10/ 1/80	30,330	30,330							
5	***** DEPRECTION RECREATION													
6	DEPRECIATION	A		RWBA	10/10/81	4,452-	4,452-							
7	***** SALVAGE RECREATION													
8	SALVAGE	A		RWCA	10/10/82	25,878-	25,878-							
9	**** SERVICE FACIL/DEPREC/SALVG													
10	*** RECREATION C20					61,564,296	61,564,296							
11	** LAND MANAGEMENT AND DEVELOPMNT					61,564,296	61,564,296							
12	** FWL MANAGEMENT AND DEVELOPMENT													
13	*** FWL MANAGEMENT AND DEVELOPMENT													
14	**** BOTTLE HOLLOW DAM/DIKE/RES													
15	***** NONCONTRACTS													
16	NONCONTRACT COSTS	A		WABG	1/ 1/71	357,375	357,375							
17	TROUT STUDY U S FISH AND WILDLIFE SERVICE	A		WABE 4100000 DO40	2/ 1/71	96,996	96,996							
18	FEASIBILITY STUDY	A		WABF 4100000 DO40	2/ 9/71 4005943	42,307	42,307							
19	RELOCATION	A		WABC 4D00000 DO40	6/ 5/71	19,700	19,700							
20	RESERVOIR CLEARING	A		WABD 4D00000 DO40	7/ 8/71	21,900	21,900							
21	BOTTLE HOLLOW DAM AND RESERVOI W W CLYDE AND COMPANY	A		WABB 4D00000 DO80	8/ 8/71 4DC6700	686,941	686,941							
22	LAND FOR BOTTLE HOLLOW DAM	A		WABA	10/ 1/73	9,356	9,356							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** NONCONTRACTS					1,234,575	1,234,575							
2	**** BOTTLE HOLLOW DAM/DIKE/RES					1,234,575	1,234,575							
3	**** MITIGATION MEASURES													
4	***** LAND AND RIGHTS													
5	COLL. SYS. WL LANDS -UINTAH BA	A		WDAA 4050000 DO40	10/ 1/81	1,795,700	1,795,700							
6	COLLECTION SYSTEM WL LANDS	A		WDAC 4050000 DO40	9/27/85	4,181,709	4,181,709							
7	FISHERY ACCESS COLLECTION SYS	A		WCAU 4050000 DO40	10/ 4/88	1,016,871	1,016,871							
8	L AND R WL AREA JORDANELLE	A		WDCC 4050000 DO40	6/15/89	2,266,309	2,266,309							
9	DUCHESNE CANALS REHB WATERFOWL	A		WFDA 4050000 DO40	5/15/90	485,554	485,554							
10	***** LAND AND RIGHTS					9,746,143	9,746,143							
11	***** COMPLETED CONTRACTS													
12	LAND STARVATION BIG GAME R -UB	A		WBCC	10/ 1/77	160,276	160,276							
13	ROUGH FISH ERADICATION	A		WCCC 4000000 DO40	1/ 1/80	87,231	87,231							
14	ROADS FOR WILDLIFE UTAH DIVISION OF WILDLIFE RES	A		WBDE 4100000 DO40	8/ 1/82 40L3313	45,700	45,700							
15	PILOT STRUCTURES-INSTREAMFL UB U S FOREST SERVICE	A		WDAH 4100000 DO40	6/12/85 4002880	625,400	625,400							
16	DIAMOND FORK RD LAND MITIGATE	A		WBFZ 4100000 DO40	8/ 7/85 1	540,000	540,000							
17	STRAWBERRY RES FISH SLIPPNG CA	A		WDSR 4100000	5/ 1/93 4014670	107,259	107,259							
18	CUWCD PROVO RVR CHAN SINUOSITY	A		WFW2 4200000	5/15/93 3-14230	26,500	26,500							

LEGEND: ACTIVITY BAR --=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 12/19/03 AT FOR LEVEL P INDEX PAGE 10
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 10
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) CRSP,SEC8-WATER/RELATED RES

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	CUWCD PROVO RIVER CHANNEL	A		WFW1 4200000	5/26/93 4014500	378,320	378,320							
2	CUWCD FISH AND WILDLIFE	A		WFWD 4200000 DO40	8/25/93	2,000,000	2,000,000							
3	ENDANGERED SPECIES	A		ES01 4200000	9/25/93 2-12680	30,000	30,000							
4	UTAH LAKE FISH STUDY	A		WCAS 4050000 DO40		14,900	14,900							
5	***** COMPLETED CONTRACTS					4,015,586	4,015,586							
6	***** CONTRACTS													
7	INSTREAM IMPROVEMENTS COLL SYS U S FOREST SERVICE	A		WCAE 4100000 DO40	5/ 4/89 9-06670	2,905,088	2,905,088							
8	DUCH CANAL WATERFOWL REHAB(CA) U S FISH AND WILDLIFE SERVICE	A		WFDB 4100000 DO40	9/16/91 1-11200	191,435	191,435							
9	BIG GAME VEHICLE COLLISION	A		FW02 4100000	9/26/91 1-11660	95,475	95,475							
10	IMPLEMENT RESOURCE MGMT PLAN	A		FW03	1/27/93 3-13850	96,927	96,927							
11	FENCING - WEST HILLS WLDF C/A	A		WDCD 4100000 DO40	6/25/93 3-14360	87,595	87,595							
12	DEER FENCING	A		FW01 4200000	9/29/93 3-14740	812,804	812,804							
13	STRAWBERRY RVR WILDLIFE MGMT	A		FW05	9/30/94 4-16980	13,265	13,265							
14	***** CONTRACTS					4,202,589	4,202,589							
15	***** MINOR CONTRACTS													
16	RED HOLLOW RESOURCE MGMT PLAN UTAH DIVISION OF WILDLIFE RES	A		RHMP 4B00000 DO40	6/90 4008570	65,733	65,733							
17	***** NONCONTRACTS													
18	NC BIG GAME ACQUIS/STARVATION	A		WBCD	10/77 4007410	9,382	9,382							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 11
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) CRSP,SEC8-WATER/RELATED RES

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	DESIGN WISSIUP WLDLFE MNGMT AR	A		WFAD	10/79	87,394	87,394							
2	NC ROUGH FISH ERADICATION	A		WCCD 4000000 DO40	1/80	2,769	2,769							
3	NCDIAMOND FK ROAD MITIGATION	A		WBFY	10/83	123,616	123,616							
4	NC FISHERY FLOW ACQUISITION	A		WCAB	10/83	717,250	717,250							
5	NCC STRAWBERRY WILDLIFE AREA	A		WDAB	10/83	501,670	501,670							
6	NC UTAH LAKE FISH STUDY	A		WCAT 4000000	8/84	5,100	5,100							
7	AERIAL PHOTO RECIRC STOCKMORE	A		WBFV 4100000 DO40	9/28/84 4001870	25,000	25,000							
8	AERIAL PHOTO RECIRCULATION CC	A		WBFW 4100000 DO40	9/28/84 4001870	22,493	22,493							
9	AERIAL PHOTO STRAWBERRY MITIG	A		WBFU 4100000 DO4V	10/ 2/84 4001870	20,000	20,000							
10	NC STRAWBERRY WILDLIFE AREA	A		WDAD	10/85	768,389	768,389							
11	NC DIAMOND FORK MITIGATION	A		WBFT	4/89	37,310	37,310							
12	NC JORDANELLE	A		WDCE	7/89	1,042,598	1,042,598							
13	NCC WILDLIFE MANAG AREA DUCH	A		WFCC	10/89	229,018	229,018							
14	NC FISHING ACCESS PROVO RIVER	A		WCAO	1/90	49,200	49,200							
15	NC L AND R WILDLIFE MANAG AREA	A		WFAC	1/90	23,763	23,763							
16	NC AQUATIC MITIGATION	A		WCAJ	6/90	241,521	241,521							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	NC WL HABITAT DEVELOPMENT	A		WFDC	6/90	74,329	74,329							
2	***** NONCONTRACTS					3,980,802	3,980,802							
3	**** MITIGATION MEASURES					22,010,853	22,010,853							
4	**** LOWER STILLWATER DAM/RESERVOIR													
5	***** COMPLETED CONTRACTS													
6	UTILITY RELOC LOWER STILLWAT	A		WECA 4D00000 DO40	7/ 7/81	22,590	22,590							
7	***** NONCONTRACTS													
8	DESIGN LOWER STILLWATER DAM	A		WEAA	10/83	104,932	104,932							
9	**** LOWER STILLWATER DAM/RESERVOIR					127,522	127,522							
10	*** FWL MANAGEMENT AND DEVELOPMENT					23,372,950	23,372,950							
11	** FWL MANAGEMENT AND DEVELOPMENT					23,372,950	23,372,950							
12	* WATER/RELATED RESOURCES CRSP-8					84,937,246	84,937,246							
13	TOTAL PROGRAM COST					84,937,246	84,937,246							
14	CONSOL EXPEND AND CREDITS	270		RYAA		3,214,537	3,214,537							
15	CONSOL EXPEND AND CREDITS	260		WXAA		77,812-	77,812-							
16	CONSOL EXPEND AND CREDITS	260		WXAC		207,757	207,757							
17	OTHER CONSOL. EXPEND & CREDIT					3,344,482	3,344,482							
18	TOTAL EXPENDITURES					88,281,728	88,281,728							
19	TOTAL FEDERAL EXPENDITURES					88,281,728	88,281,728							
20	TOTAL RECLAMATION EXPENDITURES					88,281,728	88,281,728							
21	TOTAL FUNDED RECLAMATION EXPENDITURE					88,281,728	88,281,728							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 12/19/03 AT FOR LEVEL P INDEX PAGE 13
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 13
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) CRSP,SEC8-WATER/RELATED RES

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	TOTAL FUNDED RECLAMATION OBLIGATIONS					88,281,728	88,281,728							
2	METHOD OF FINANCING													
3	RECLAMATION													
4	ADDITIONAL FUNDS REQUIRED													

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 12/19/03 AT FOR LEVEL P INDEX PAGE 14
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 14
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/08/30 AT 1347 FUND732 WORKING P/F TABLE UPDATED 04/08/30 AT 1016 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/08/27 AT 1357 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) CRSP,SEC8-WATER/RELATED RES

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	MEMORANDUM COSTS													
2	LAND AND RIGHTS COSTS					12,073,398	12,073,398							
3	CONTRACT COSTS					54,545,054	54,545,054							
4	MINOR CONTRACTS					249,655	249,655							
5	TOTAL NONCONTRACT COSTS					18,099,469	18,099,469							
6	OPERATING OFFICE ACTIVITIES					18,099,469	18,099,469							

PROCESSED 04/10/14 PROGRAM AND BUDGET SYSTEM - SUPPORTING SCHEDULES REPORT BASED ON LEVEL P

THE FOLLOWING SUBSETS WERE SELECTED--
INCLUDES THE FOLLOWING FUNDS
B1?
INCLUDES THE FOLLOWING PROJECTS
0066 CUP, BONNEVILLE UNIT (CRSPP)
THE FOLLOWING DATABASE FILES WERE USED--
DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414
FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	CONSTRUCTION PREREQUISITES													
2	DEFINITE PLAN REPORT													
3	ORIGINAL DPR			BABA				11/05/65	COMPLETED					
4	DRAFT-SUPPLEMENT TO 1964 DPR			BABB				06/30/83	COMPLETED					
5	FINAL-SUPPLEMENT TO 1964 DPR			BABC				10/23/84	COMPLETED					
6	DIAMOND FORK SEGMENT APPROVAL			BABD				10/23/84	COMPLETED					
7	REPAYMENT CONTRACTS													
8	EXECUTION/CENTRAL UTAH W.C.D.			BACA				12/28/65	COMPLETED					
9	VALIDATION			BADA				02/17/66	COMPLETED					
10	REPAYMENT CONTRACT AMENDMENT			BADC				04/15/66	COMPLETED					
11	SUPPLEMENT CONTRACT EXECUTN			BAEA				11/26/85	COMPLETED					
12	SUPPLEMENTAL CONTRACT VALIDTN			BAEC				02/10/86	COMPLETED					
13	MET WTR DIST/SL CO. CONS DIST			BAED				05/16/86	COMPLETED					
14	LAND CLASSIFY CERTIFICATE													
15	LAND CERTIFICATION			BAFA				12/28/65	COMPLETED					
16	STATUS OF NEPA COMPLIANCE													
17	PROJECT COLLECTION SYSTM FINAL			BAGA				08/02/73	FINAL REPORT APPROVED					
18	MUNICIPAL INDUSTRL SYSTM FINAL			BAGD				10/25/79	FINAL REPORT APPROVED					
19	DIAMOND FORK SYSTEM DRAFT EIS			BAHA				06/17/83	FINAL REPORT APPROVED					
20	DIAMOND FORK SYSTEM DES			BAHB				04/26/89	COMPLETED					
21	DIAMOND FORK SYSTEM FINAL EIS			BAHD				10/04/84	FINAL REPORT APPROVED					
22	DIAMOND FORK SYSTEM FES			BAHE				02/22/90	COMPLETED					
23	M/I SUPPLEMENT TO FES			BAIB				03/16/87	COMPLETED					
24	DUCHESNE RIVER CANAL SYSTEM EA			BAKA				05/21/84	COMPLETED					
25	* WATER AND RELATED RES UCRBF		01											
26			02											
27			03											
28			04											
29	** WATER/ENERGY MGMT AND DEVELOP													
30	*** UTILIZATION DEVELOPMNT B1U													
31	**** STARVATION DAM AND RESERVOIR													

LEGEND: ACTIVITY BAR --PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 1
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 1
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** COMPLETED CONTRACTS													
2	RELOCATE HIGHWAY 40 UTAH DEPT OF TRANSPORTATION	A		AALB 4D00000 DO40	9/16/65 4004081	41,644	41,644							
3	LAND FOR STARVATION DAM	A		AALA 4000000 DO40	10/ 1/65	664,071	664,071							
4	RELOC TELEPHONE LINES MOUNTAIN STATES TEL AND TEL CO	A		AALC 4D00000 DO40	2/ 6/67 4004613	23,800	23,800							
5	STARVATION DAM AND RESERVOIR GOODFELLOW BROTHERS, INC	A		AALD 4D00000 DO80	3/16/67 4DC6488	9,933,205	9,933,205							
6	STARVATION FEEDER CONDUITS W W CLYDE AND COMPANY	A		AALE 4D00000 DO80	3/19/67 4DC6489	1,305,487	1,305,487							
7	KNIGHT DIVERSION DAM AND ROAD UNITED STRUCTURES	A		AALF 4D00000 DO80	3/24/67 4DC6492	568,624	568,624							
8	RELOC POWER LINES AT STARVATN MOON LAKE ELEC ASSOCIATION	A		AALG 4D00000 DO40	4/14/67 4004698	69,337	69,337							
9	RELOCATE HIGHWAY 40 UTAH DEPT OF TRANSPORTATION	A		AALH 4D00000 DO40	6/15/67 4004686	44,352	44,352							
10	GATE VALVE FOR OUTLET WORKS NISSHO-IWAI AMERICAN CORP	A		AALI 4D00000 DO80	7/13/67 4DS6529	69,713	69,713							
11	OTHER WORK	A		AALJ 4D00000 DO40	9/ 2/67	486,143	486,143							
12	RELOC HWY 40 TO BYPASS STARVTN UTAH DEPT OF TRANSPORTATION	A		AALK 4D00000 DO80	6/12/68 4004921	2,579,600	2,579,600							
13	ELEVATOR FOR STARVATION DAM KIMBALL ELEVATOR	A		AALL 4D00000 DO80	5/19/69 4DS6744	16,811	16,811							
14	CLEAR STARVATION RESERVOIR H R WAGSTAFF	A		AALM 4D00000 DO80	6/16/69 400C408	78,800	78,800							
15	RELOC STRAWBERRY RIVER ROAD WHITING AND HAMMOND CONSTR CO	A		AALN 4000000 DO40	7/23/69 4DC6760	335,059	335,059							
16	WIRE FENCE ON DAM CREST ROAD MAX B RASMUSSEN	A		AALP 4D00000 DO40	2/19/71 400C469	16,153	16,153							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	HOLLOW JET VALVE AND CONTROL STEWARD MACHINE COMPANY, INC	A		AALR 4D00000 DO40	11/23/71 D85019A	21,355	21,355							
2	MODIFY KNIGHT DIVERSION DAM JOHN W LLOYD	A		AALS 4D00000 DO80	12/26/72 400C516	60,044	60,044							
3	NC STARVATION DAM	A		AALT 4000000 DO40	10/76	5,060,356	5,060,356							
4	GROUT STARV DAM ABUTMENTS LAYNE NEW YORK COMPANY, INC	A		AXSD 4D00000 DO80	4/13/81 4DC7456	664,183	664,183							
5	***** COMPLETED CONTRACTS					22,038,737	22,038,737							
6	***** NONCONTRACT COSTS													
7	E AND RC DESIGN COSTS	A		AXSE	10/79	307,554	307,554							
8	STARVATION DAM INSTRUMENTATION	A		AXSK 4D00000 DO40	10/ 1/80	110,947	110,947							
9	NC STARV DAM SUPPLEMENTAL	A		AXSC	10/82	14,132	14,132							
10	NC MODIFY KNIGHT DIVERSION DAM	A		AXSI	10/83	65,135	65,135							
11	***** NONCONTRACT COSTS					497,768	497,768							
12	**** STARVATION DAM AND RESERVOIR					22,536,505	22,536,505							
13	**** UPPER STILLWATER DAM AND RES													
14	***** COMPLETED CONTRACTS													
15	RELOCATE ELECTRIC FACILITIES MOON LAKE ELEC ASSOCIATION	A		ABBU 4D00000 DO40	10/23/75 0100098	16,225	16,225							
16	RELOCATE TELEPHONE FACILITIES UINTAH BASIN TELEPHONE CO	A		ABBV 4D00000 DO40	5/ 4/76 0100125	10,158	10,158							
17	RELOCATE ROCK CREEK TRAIL U S FOREST SERVICE (ANF)	A		ABCA 4000000	5/18/78 40L0750	174,703	174,703							
18	ROCK CREEK TRANSFER CAMP LAMAR D/SONS CONSTRUCTION, INC	A		ABCD 4000000 DO40	7/13/79 40C0685	80,994	80,994							
19	ROCK CREEK ROAD SCHOCKER CONSTRUCTION CO	A		ABCC 4000000 DO40	7/30/80 400C587	2,787,165	2,787,165							

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1	MOUNTAIN HOME ROAD - DUCHESNE	A		ABCS 4000000 DO40	8/ 8/80 4006222	45,000	45,000							
2	TEST SECT UPPER STILLWATER DAM W W CLYDE AND COMPANY	A		ABAO 4D00000 DO80	9/17/80 40C0723	559,777	559,777							
3	LAND UPPER STILLWATER DAM MAT	A		ABAA 4000000 DO40	10/ 1/80	948,433	948,433							
4	FENCING RESERVOIR U S FOREST SERVICE (ANF)	A		ABCB 4D00000 DO40	7/ 2/81 40L2006	25,500	25,500							
5	CATTLEGUARD	A		ABCT 4000000 DO40	7/15/81 4D03990	7,500	7,500							
6	PAVE ROCK CREEK ROAD H - K CONTRACTORS, INC	A		ABBF 4D00000 DO40	9/15/81 40C0745	3,349,271	3,349,271							
7	FOUNDATION UPPER STILL DAM TUTOR - SALIBA - MITTRY	A		ABAE 4D00000 DO80	11/ 4/81 4DC7478	8,861,194	8,861,194							
8	TELEPHONE CABLE INSTALLATION UINTAH BASIN TELEPHONE CO	A		ABBT 4B00000 DO40	4/10/82 40S3012	84,391	84,391							
9	AGGREGATE PROCESSING UP STLWTR	A		ABAH	9/27/82 40C0809	3,392,901	3,392,901							
10	MC AGGREGATE PROCES UP STLWTR	A		ABAI	10/82	16,150	16,150							
11	MC UPPER STILLWATER DAM	A		ABAL	10/82	23,157	23,157							
12	UPPER STILLWATER DAM TYGER CONSTRUCTION	A		ABAK 4D00000 DO80	12/19/83 4000910	107,064,081	107,064,081							
13	REPAIR BLIND CREEK ROAD U S FOREST SERVICE	A		ABEL 4D00000 DO40	5/26/84 4002030	40,000	40,000							
14	SUPPLEMENTAL AGGREGATE	A		ABAP 4D00000 DO40	7/ 4/84 400218A	193,492	193,492							
15	AGREEMENT WITH FOREST SERVICE U S FOREST SERVICE	A		ABBA 4000000 DO40	3/12/85 4002730	12,339	12,339							
16	RESTRIPING ROCK CREEK ROAD	A		ABAX 4D00000 DO40	4/17/85 1	12,100	12,100							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 4
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	SAND PRODUCTION-STILLWATER DAM FISHER SAND AND GRAVEL CO	A		ABAC 4D00000 DO80	4/29/85 4002840	4,000,738	4,000,738							
2	DOCS DIVERSION AND FEEDER PIPE WESTERN UTILITY CONTRACTORS	A		ABAR 4D00000 DO80	7/21/86 4004050	1,531,633	1,531,633							
3	REHABILITATE SANDPILES	A		ABBE 4D00000 DO40	4/14/87	5,800	5,800							
4	FORCE ACCT LABOR AND MATERIALS	A		ABAF 4D00000 DO40	10/87	46,857	46,857							
5	PHONE LINES	A		ABAN 4D00000 DO40	10/87	21,129	21,129							
6	COUNTY ROAD REPAIRS, MNTN HOME DUCHESNE COUNTY	A		ABAY 4D00000 DO40	5/ 2/88 4006380	145,433	145,433							
7	CHIP AND SEAL ROCK CREEK ROAD DUCHESNE COUNTY	A		ABBG 4D00000 DO40	5/ 2/88 4006390	210,622	210,622							
8	ROWLEY'S PIT RESTORATION	A		ABCL 4D00000 DO40	6/ 8/88	16,000	16,000							
9	POWERLINE TO O M FIELD STATION U S FOREST SERVICE (ANF)	A		ABBW 4024000 DO40	6/28/88 4006470	48,766	48,766							
10	FENCING WORK	A		ABAV 4D00000 DO40	7/ 3/88 4005600	24,400	24,400							
11	WASTE PILE STABILIZATION TORNO AMERICA, INC	A		ABAS 4D00000 DO40	8/26/88 4006780	2,045,487	2,045,487							
12	M/C	A		ABBC	10/88	24,736	24,736							
13	REMEDIAL GROUTING MC CAB BROTHERS, INC	A		ABBJ 4D00000 DO80	10/ 4/88 4006990	720,451	720,451							
14	RELOC UPPER STLLWTR CAMPGROUND U S FOREST SERVICE (ANF)	A		ABBB 4100000 DO40	3/ 1/89 407490	591,613	591,613							
15	PAVE LEFT ABUTMENT USD ACCS RD U S FOREST SERVICE	A		ABAQ 4100000 DO40	2/ 7/90 4009060	92,000	92,000							
16	LOWER STILLWATER RESTORE C/A U S FOREST SERVICE	A		ABCM 4B00000 DO40	9/ 7/90 0-10060	512,238	512,238							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	DAM CORRECTION (GROUT CURTAIN) MC CAB BROTHERS, INC	A		AAAA 4200000 DO40	2/21/92 4011480	3,976,913	3,976,913							
2	***** COMPLETED CONTRACTS					141,719,347	141,719,347							
3	***** CONTRACTS													
4	UPPER STILLWATER CRACK REPAIR	B		CCC1 4200000	10/02 03-8009	14,724,275	150,000	5,770,000	4,604,275	4,200,000				
5	UPPER STILLWATER CM CONCRETE	B		CCC2 4200000	10/02 03-8004	793,193	/ 1,350,000/ 538,059	150,009	105,125					
6	UPPER STILLWTR AGGREGATE CLAIM	C		CCCC 4200000	10/08	40,033,130	/ 150,009/						40,033,130 ACCCCCCCCCCC	
7	***** CONTRACTS					55,550,598	688,059	5,920,009	4,709,400	4,200,000			40,033,130	
8	***** NONCONTRACTS													
9	TOPOGRAPHIC MAPPING U S FOREST SERVICE (ANF)	A		ABCF 4000000 DO40	9/11/67 4005725	47,225	47,225							
10	TOPOGRAPHIC MAP ROCK CREEK U S FOREST SERVICE (ANF)	A		ABCE 4000000 DO40	8/26/69 4005262	26,081	26,081							
11	RECREATION DEVELOPMENT U S FOREST SERVICE (ANF)	A		ABCG 4000000 DO40	4/14/76 LETTER1	13,086	13,086							
12	EXPLORATORY DRILLING ROLLINS, BROWN AND GUNNEL, INC	A		ABCH 4000000 DO40	9/17/76 400C606	135,370	135,370							
13	DESIGN UPPER STILLWATER DAM	A		ABAD 4000000	10/76	6,481,250	6,481,250							
14	GEOGRAPHIC SURVEYS U S SMALL BUSINESS ADMIN	A		ABCI 4000000 DO40	9/23/77 40V0633	14,346	14,346							
15	EXPLORATORY DRILLING UP STLWTR CONTINENTAL DRILLING, INC	A		ABAZ 4000000 DO40	5/ 8/80 40C0695	266,715	266,715							
16	NC LAND UP STILLWATER DAM MAT	A		ABAB	10/80	234,000	234,000							
17	NC AGGREGATE PROCES UP STLWTR	A		ABAJ	7/82 40C809	1,361,000	1,361,000							
18	BITUMINOUS TESTING UTAH DEPT OF TRANSPORTATION	A		ABCJ 4D00000 DO40	8/ 6/82 40S3189	31,793	31,793							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	ROCK CREEK GUARD PROTECTION	A		ABCK 4D00000 DO40	8/ 6/82 40X3350	23,075	23,075							
2	NC FOUNDATION UPPER STILL DAM	A		ABAG	10/82	2,074,000	2,074,000							
3	NC PAVE ROCK CREEK ROAD	A		ABBN	10/82	874,836	874,836							
4	NC UPPER STILLWATER DAM	A		ABAM	7/83	33,017,918	33,017,918							
5	RESISTIVITY STUDY-DOCSDIV A/E	A		ABAU 4D00000 DO4V	7/ 9/85	5,000	5,000							
6	NC DOCS DIV DAM FEED PIPELINE	A		ABAT	4/86	600,000	600,000							
7	DESIGN OF ROCK CREEK ROAD	A		ABBI 4000000 DO40	10/86	30,001	30,001							
8	NC FILL UPPER STILLWATER DAM	A		ABAW	5/88	245,895	245,895							
9	NC RELOC UPPR STLWTR CMPGROUND	A		ABBD	10/88	129,000	129,000							
10	MARSHALL CLAIM	B		MC01	10/98	667,661	667,613 / 48/	48						
11	UPPER STILLWATER CRACK REPAIR	B		US01	10/01	3,805,679	647,487 / 87,593/	2,498,592	659,600					
12	***** NONCONTRACTS					50,083,931	46,925,691	2,498,640	659,600					
13	**** UPPER STILLWATER DAM AND RES					247,353,876	189,333,097	8,418,649 **********	5,369,000 **********	4,200,000 **********	**********	**********	40,033,130 *XXXXXXXXXX	
14	**** CURRANT CREEK DAM AND RES													
15	***** COMPLETED CONTRACTS													
16	WATER HOLLOW ACCESS ROAD STRONG COMPANY	A		ACAD 4000000 DO40	1/28/69 4DC6577	303,171	303,171							
17	LAND AND RIGHTS CURRANT CREEK	A		ACAA 4050000	10/ 1/70	11,215	11,215							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	CURRANT CREEK DAM S J GROVES AND SONS, INC	A		ACAC 4000000 DO80	7/18/74 4DC7566	19,267,870	19,267,870							
2	MISCELLANEOUS SUPPLIES	A		ACCS 4000000 DO40	10/ 7/75	29,343	29,343							
3	YACC SUPPLIES	A		ACCU 4000000 DO40	10/ 7/77	13,548	13,548							
4	POWER SUPPLY AND BUILDING GRONEMAN CONSTRUCTION COMPANY	A		ACCC 4000000 DO40	5/ 2/79 4DC7366	73,718	73,718							
5	INSTRUMENT CURRANT CK DAM APPLIED RES AND DEVELOP CO INC	A		ACCD 4000000 DO40	6/28/79 40C0679	58,464	58,464							
6	CURRANT CREEK ROAD WASATCH COUNTY COMMISSION	A		ACCE 4000000 DO40	1/26/82 4010001	88,441	88,441							
7	CURRANT CK ROAD GRAVEL SOURCE ANDERSON TRANSPORT, INC	A		ACBA 4D00000 DO40	7/28/83 4000560	319,920	319,920							
8	MC RAISE CREST OF CURRANT CK	A		ACCM	7/85	23,752	23,752							
9	CURRANT CREEK RD MAINTENANCE	A		ACCR 4B00000 DO40	7/ 2/85	158,212	158,212							
10	CURRANT CRK DAM ELECTRICAL REP	A		ACCV 4D00000 DO40	11/ 7/86 4004700	98,128	98,128							
11	FORCE ACCOUNT LABOR ON DAM	A		ACAB 4D00000 DO40	6/17/87	29,500	29,500							
12	RESURFACE CURRANT CREEK ROAD WASATCH COUNTY COMMISSION	A		ACBM 4D00000 DO40	5/ 5/88 4006370	364,540	364,540							
13	***** COMPLETED CONTRACTS					20,839,822	20,839,822							
14	***** NONCONTRACTS													
15	TEST PIT INVESTIGATIONS	A		ACCF 4000000 DO40	5/20/68 0418-29	16,562	16,562							
16	ELECTRICAL FACILITIES MOON LAKE ELEC ASSOCIATION	A		ACAF 4D00000 DO40	8/20/68 4004992	85,000	85,000							
17	RELOCATE FENCES U S FOREST SERVICE (ANF)	A		ACAG 4D00000 DO40	6/18/70 4005168	16,307	16,307							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	ELECTRICAL FACILITIES MOON LAKE ELEC ASSOCIATION	A		ACCG 4000000 DO40	12/ 1/76 40S0249	12,482	12,482							
2	IMPROVEMENT OF COUNTY ROAD WASATCH COUNTY COMMISSION	A		ACCH 4000000 DO40	12/19/80 40L1730	8,500	8,500							
3	NC CURRANT CREEK DAM	A		ACAE	10/82	3,180,269	3,180,269							
4	NC INSTR CURRANT CREEK DAM	A		ACBG	10/82	16,000	16,000							
5	NC CURRANT CK RD GRAVEL SOURCE	A		ACBC	4/83	392,000	392,000							
6	FORCE ACCOUNT AND DRILL CREW	A		ACCT 4D00000 DO40	4/ 4/83	711,808	711,808							
7	NC RESURF CURRANT CRK RD	A		ACBK	10/83	171,494	171,494							
8	NC RAISE CREST OF CURRANT CK	A		ACCN	10/83	1,904,467	1,904,467							
9	DESIGN WORK ON CURRANT CREEK	A		ACAH 4000000 DO40	10/85	703,328	703,328							
10	DESIGN COSTS FOR DAM	A		ACAI 4000000 DO80	10/85	2,137,500	2,137,500							
11	CURRENT CREEK ROAD MAINTENANCE	A		ACCW 4B00000 DO40	6/91	108,389	108,389							
12	***** NONCONTRACTS					9,464,106	9,464,106							
13	**** CURRANT CREEK DAM AND RES					30,303,928	30,303,928							
14	**** SOLDIER CRK DAM/COLLECT SYS													
15	***** COMPLETED CONTRACTS													
16	WATER HOLLOW ACCESS ROAD STRONG COMPANY	A		ADXL 4000000 DO40	4/ 2/68 4DC6577	137,141	137,141							
17	WATER HOLLOW TUNNEL BOYLES BROS, GIBBONS AND REED	A		ADXR 4000000 DO80	5/ 1/68 4DC6575	9,191,078	9,191,078							

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REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 9
REPORT PAGE 9

DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707

CUP, BONNEVILLE UNIT (CRSPP)
UPPER COLORADO REGION
UCRBF-WTR/ENERGY MGMT/DEVELOP

PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION)

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	BYPASS STRAWBERRY RESERVOIR UTAH DEPT OF TRANSPORTATION	A		ADXN 4000000 DO40	6/12/68 4004921	266,751	266,751							
2	FENCING AND RELOC ROCK CK TRAL U S FOREST SERVICE (ANF)	A		ADXU 4000000 DO40	9/26/69 4005168	22,415	22,415							
3	RELOCATE HWY 40 AROUND RES UTAH DEPT OF TRANSPORTATION	A		ADXC 4000000 DO80	6/ 4/70 4005287	1,165,110	1,165,110							
4	GOVERNMENT MATERIALS	A		ADXY 4D00000 DO40	7/ 7/70 4000000	97,041	97,041							
5	SOLDIER CK DAM AND EAST SIDE BURGESS CONSTRUCTION CO	A		ADXD 4000000 DO80	10/19/70 4DC6854	11,062,485	11,062,485							
6	CURRANT AND LAYOUT TUNNELS S A HEALY COMPANY	A		ADXA 4000000 DO80	11/19/70 4DC6855	11,777,458	11,777,458							
7	STLLWTR TNNL OUTLET ACCESS RD JERICO CONSTRUCTION CO	A		ADXM 4000000 DO40	2/ 8/71 400C470	306,152	306,152							
8	ELEC FAC FOR STILLWATER TNNL MOON LAKE ELEC ASSOCIATION	A		ADPM 4000000 DO40	6/28/72 4005857	142,200	142,200							
9	OPEN CHANNEL LINING E ARTHUR HIGGINS	A		ADXS 4000000 DO40	8/20/73 400C526	66,846	66,846							
10	CLEAR STRAWBERRY RESERVOIR HIGHLAND CONSTRUCTION CO	A		ADXH 4000000 DO40	9/18/73 400C530	88,000	88,000							
11	CURRENT CREEK PIPELINE S J GROVES AND SONS, INC	A		ADCS 4D00000 DO80	7/18/74 DC7038	8,769,649	8,769,649							
12	VAT TUNNEL J F SHEA COMPANY, INC	A		ADCG 4D00000 DO80	11/15/75 DC7150	54,268,390	54,268,390							
13	LAND SOLDIER CREEK AND SYSTEM	A		ADAA	10/ 1/76	1,142,463	1,142,463							
14	WEST FORK DUCHESNE RIVER ROAD JOHN W LLOYD	A		ADXE 4000000 DO40	11/ 8/76 400C607	136,725	136,725							
15	NORTH FORK DUCHESNE RIVER ROAD HIGHLAND CONSTRUCTION CO	A		ADXF 4000000 DO40	12/ 7/76 400C588	350,426	350,426							
16	STILLWATER TUNNEL HARRISON WESTERN / COWPER CO	A		ADEG 4D00000 DO80	1/ 6/77 4DC7246	19,552,550	19,552,550							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING F/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	CASTLE CK CG AND COW HOLLOW	A		ADXG 4000000 DO40	10/ 1/77 40S1276	6,708	6,708							
2	FENCING	A		ADXI 4000000 DO40	10/ 1/77 40OC515	8,748	8,748							
3	ADD RIPRAP TO SOLDIER CK DAM VAN STAVEREN CONSTRUCTION CO	A		ADXQ 4000000 DO40	7/27/78 40C0651	1,188,429	1,188,429							
4	WEST SIDE ROAD W W CLYDE AND COMPANY	A		ADAM 4D00000 DO40	11/10/78 4DC0662	3,033,123	3,033,123							
5	WEST FORK PIPELINE VAT DIV DAM W W CLYDE AND COMPANY	A		ADCM 4D00000 DO80	4/30/79 4DC7361	13,669,149	13,669,149							
6	INSTRUMENT SOLDIER CK DAM APPLIED RES AND DEVELOP CO INC	A		ADXP 4000000 DO40	6/28/79 40C0679	140,100	140,100							
7	WOLF CK,VAT DIV DAM ELECTRICAL MOON LAKE ELEC ASSOCIATION	A		ADXZ 4D00000 DO40	7/27/79 40S1047	205,427	205,427							
8	STRAWBERRY BAY, EAST SIDE RDS W W CLYDE AND COMPANY	A		ADBG 4B00000 DO40	12/ 7/79 40C0696	698,305	698,305							
9	RHODES-HADES TUNNEL COMPLEX HARRISON WESTERN CORPORATION	A		ADDG 4D00000 DO80	7/21/80 DC7421	35,417,530	35,417,530							
10	EQUIPMENT FOR STILLWATER TNL HARRISON WESTERN CORPORATION	A		ADXV 4000000 DO40	8/12/80 40S7439	2,839,384	2,839,384							
11	ACCELEROGRAPH ENCLOSURES BENECO ENTERPRISES	A		ADXX 4000000 DO40	9/30/80 40C0704	10,930	10,930							
12	WATER HOLLOW BRIDGE TOMA CORPORATION	A		ADXJ 4000000 DO40	11/25/80 40C0728	80,137	80,137							
13	GROUT STILLWATER TUNNEL MOLE CONSTRUCTION COMPANY	A		ADEP 4D00000 DO80	2/ 6/81 4DC7452	936,225	936,225							
14	RELOCATE CASTLE CRK CAMPGROUND U S FOREST SERVICE (ANF)	A		ADFA 4100000 DO40	8/19/81 40L2064	81,606	81,606							
15	STILLWATER TUNNEL INLET REPAIR JONES CONSTRUCTION	A		ADEV 4D00000 DO40	9/20/81 4DC0755	23,926	23,926							
16	STRAWBERRY TUNNEL INLET REHAB OHBAYASHI - GUMI, LTD	A		ADHB 4B00000 DO80	11/18/81 4DC7479	11,692,888	11,692,888							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	STILLWATER TUNNEL COMPLETION TRAYLOR BROS/FRUIN-COLNON CONT	A		ADEM 4D00000 DO80	2/23/82 40C2035	39,427,728	39,427,728							
2	COMPENSATION OF GRAZING LOSSES STRAWBERRY VALLEY WATER USERS	A		ADJW 4B00000 DO40	5/12/82 40L0480	16,200	16,200							
3	SEWAGE LAGOON REPAIR HAJCO CONSTRUCTION INC	A		ADYX 4D00000 DO40	9/15/82 40C0824	15,720	15,720							
4	AGGREGATE FOR STLWTR TUNNEL MARSHALL ASSOC, INC	A		ADIA 4D00000 DO40	9/27/82 40C0809	321,542	321,542							
5	REPLACE BLDGS AND FACILITIES STRAWBERRY VALLEY WATER USERS	A		ADJU 4B00000 DO40	11/ 3/82 40L0470	25,540	25,540							
6	SOLDIER CREEK REMEDIAL WRK LT LAMAR D/SONS CONSTRUCTION, INC	A		ADFM 4D00000 DO40	11/17/82 4000170	1,015,868	1,015,868							
7	EAST SIDE-ASPEN RDS CHIP-SEAL WILKINSON CONSTRUCTION CO,INC	A		ADJA 4B00000 DO40	7/ 9/83 4000720	116,732	116,732							
8	WEST SIDE ROAD REPAIRS WILKINSON CONSTRUCTION CO,INC	A		ADJD 4B00000 DO40	8/ 9/83 4000860	259,039	259,039							
9	SOLD CREEK REMED WRK RT OHIO ATLAS CONSTRUCTION CO	A		ADFJ 4D00000 DO80	10/19/83 4000380	1,797,440	1,797,440							
10	NORTH FORK FENCING U S FOREST SERVICE	A		ADDX 4D00000 DO40	6/19/84 4001830	16,802	16,802							
11	MC NORTH FORK SIPHON	A		ADDT	7/84	38,548	38,548							
12	CLEAR STRAWBERRY RESERVOIR TAYCO CONSTRUCTION CO	A		ADGG 4B00000 DO40	7/ 2/84 4002140	270,390	270,390							
13	NORTH FORK SIPHON HARRISON WESTERN CORPORATION	A		ADDS 4D00000 DO80	7/17/84 4001230	8,282,870	8,282,870							
14	TELEPHONE SERVICE STRAWBRY TUN	A		ADXO 4B00000 DO40	10/10/84 4100610	5,780	5,780							
15	REPLACE CORRALS/VACATE CABIN STRAWBERRY VALLEY WATER USERS	A		ADBH 4B00000 DO40	11/ 8/84 40L0430	88,326	88,326							
16	EQUALIZE RESERVOIRS	A		ADXT 4B00000 DO40	11/12/84	32,454	32,454							

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1	RELOCATE OFFICE/HOUSING BLDGS STRAWBERRY VALLEY WATER USERS	A		ADBI 4B00000 DO40	12/11/84 40L0440	372,478	372,478							
2	BREACH STRAWBERRY DAM BECHO, INC	A		ADGA 4D00000 DO80	4/19/85 4002660	466,000	466,000							
3	MC AUTOMATIC-REMOTE CONTROL	A		ADGE	1/86	64,468	64,468							
4	EXCESS PIPE	A		ADXW 4000000 DO40	2/ 4/86	193,600-	193,600-							
5	GRAZING AND RECREATION LOSSES	A		ADAC 4050000 DO40	4/23/86 40L1410	2,883,800	2,883,800							
6	HADES CRK STREAM INLET, FP, AR OSBERG CONSTRUCTION CO	A		ADEA 4D00000 DO80	6/20/86 4003920	4,215,299	4,215,299							
7	RHODES DIV DAM,WIN,STREAM INL WESTERN UTILITY CONTRACTORS	A		ADED 4D00000 DO80	9/ 1/86 4004280	1,387,914	1,387,914							
8	O AND M CONTRACT WITH CUWCD CENTRAL UTAH WATER CONSRV DIST	A		ADOM 4000000 DO40	12/29/86 40R0400	5,086,763	5,086,763							
9	NORTH FORK RIVER CANYON RESTOR U S FOREST SERVICE (ANF)	A		ADDR 4D00000 DO40	2/29/88 4005540	98,933	98,933							
10	MISC TO O M FOR DISTRICT	A		ADMC 4B00000 DO40	6/ 6/88	20,000	20,000							
11	WEST SIDE ROAD SURFACING J M SUMISON AND SONS	A		ADJG 4B00000 DO40	6/21/88 4006360	1,344,812	1,344,812							
12	WEST SIDE RD CHIP/SEAL 1 OF 3 ASPHALT PAVING	A		ADJJ 4B00000 DO40	8/28/89 4008160	193,729	193,729							
13	STRAWBERRY AQU.(CA60)	A		ADDP 4B00000 DO40	6/90	488,867	488,867							
14	SUPERVISORY CONTROLS CUWCD	A		ADGD 4100000 DO80	9/94 3-14410	4,547,805	4,547,805							
15	***** COMPLETED CONTRACTS					261,283,742	261,283,742							
16	***** NONCONTRACTS													
17	TEST PIT SOLDIER CREEK	A		ADLD 4000000 DO40	8/26/68 0418-31	13,320	13,320							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	EXPLORATORY DRILLING VAT TUNEL HINES DRILLING COMPANY, INC	A		ADLA 4000000 DO40	7/14/70 400C453	15,700	15,700							
2	COMPL WORK NC SOLD CREEK SYST	A		ADXB	10/70	8,348,933	8,348,933							
3	CURRANT TUNNEL ELECTRICAL FAC MOON LAKE ELEC ASSOCIATION	A		ADLE 4D00000 DO40	11/ 1/70 4005431	16,300	16,300							
4	EXPLORATORY DRILLING ROLLINS, BROWN AND GUNNEL, INC	A		ADLB 4000000 DO40	8/ 9/72 400C502	23,180	23,180							
5	DRILLING HADES AND RHODES JENSEN CONSTR AND DRILLING CO	A		ADLC 4000000 DO40	10/10/74 400C552	76,188	76,188							
6	WATER QUALITY TESTING EYRING RESEARCH INSTITUTE	A		ADLF 4000000 DO40	6/12/76 0100085	24,870	24,870							
7	DUCHESNE RIVER RD CONSTRUC SUP U S FOREST SERVICE (ANF)	A		ADLG 4D00000 DO40	7/ 7/76 4000173	69,076	69,076							
8	NC LAND COSTS	A		ADAB	10/76	151,000	151,000							
9	DESIGN OF VAT TUNNEL	A		ADBF 4D00000 DO80	10/76	303,194	303,194							
10	DESIGN SOLDIER CREEK REMEDIAL	A		ADBN 4D00000 DO80	10/76	505,175	505,175							
11	HISTORICAL SURVEYS-ARCHEOLOGY U S NATIONAL PARKS SERVICE	A		ADLH 4000000 DO40	2/ 2/77 40L0275	131,123	131,123							
12	DAM SAFETY REVIEW-SOLDIER CK USBR WASHINGTON OFFICE	A		ADLI 4000000 DO40	4/13/77 171-201	47,000	47,000							
13	DESIGN OFSTILLWATER TUNNEL	A		ADBJ 4D00000 DO80	10/77	1,309,943	1,309,943							
14	DESIGN SOLDIER CRK MISCELLANE	A		ADBM 4D00000 DO80	10/77	1,000,144	1,000,144							
15	DESIGN HADES TO RHODES	A		ADBP 4D00000 DO80	10/77	1,328,383	1,328,383							
16	FISH AND TERRESTRIAL WL A/E UTAH DIVISION OF WILDLIFE RES	A		ADJY 4000000 DO40	5/ 1/78 40S0634	579,579	579,579							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
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LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	PLAN AND DESIGN REC FACILITIES U S FOREST SERVICE (ANF)	A		ADLJ 4000000 DO40	6/15/78 40L0699	327,571	327,571							
2	DESIGN OF LAYOUT AND CURRANT	A		ADBD 4D00000 DO80	10/78	186,414	186,414							
3	DESIGN WATERHOLLOW SUPPLEMENT	A		ADBL 4D00000 DO80	10/78	152,684	152,684							
4	DESIGN NORTH FORK SIPHON, HADE	A		ADBR 4D00000 DO80	10/78	1,018,273	1,018,273							
5	DESIGN OF CURRANT CRK PIPELINE	A		ADBE 4D00000 DO80	10/79	51,995	51,995							
6	DESIGN RHODES TO VAT TUNNEL	A		ADBK 4D00000 DO80	10/79	491,147	491,147							
7	DESIGN STRAWBERRY TUNNEL INLET	A		ADBS 4D00000 DO80	10/79	886,374	886,374							
8	CULTURAL RESOURCE WORK DATA CORPORATION	A		ADJZ 4000000 DO40	7/ 1/80 40S1068	7,686	7,686							
9	DESIGN OF SOLDIER CREEK DAM	A		ADBC 4D00000 DO80	10/80	608,966	608,966							
10	NC CURRANT CREEK PIPELINE	A		ADCU	10/80	725,000	725,000							
11	NC GROUT STILLWATER TUNNEL	A		ADER	10/80	184,000	184,000							
12	NC WEST SIDE ROAD	A		ADAO	10/10/80	510,000	510,000							
13	OPERATE,MAINTAIN EAST SIDE RD WASATCH COUNTY COMMISSION	A		ADJX 4000000 DO40	1/23/81 40L0847	78,438	78,438							
14	CULTURAL RESOURCE WORK MINORITY ENTERP SERVICE ASSOC	A		ADLK 4000000 DO40	3/19/81 40S1728	142,480	142,480							
15	NC RELOC CASTLE CRK CAMP	A		ADFC	4/81	18,000	18,000							
16	NC STILLWTR TUNNEL COMPLETION	A		ADEO	8/81	8,912,697	8,912,697							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	NC STILLWATER TUN INLET REPAIR	A		ADEX	9/81	5,000	5,000							
2	NC STRAWBERRY TUNNEL INLET REH	A		ADHD	11/81	1,100,000	1,100,000							
3	MNGMNT OF STRAWBERRY LANDS U S FOREST SERVICE (ANF)	A		ADLL 4000000 DO40	2/ 2/82 40L3016	214,500	214,500							
4	MACROINVERTEBRATE SAMPLES UINTEX CORPORATION	A		ADJS 4000000 DO40	7/21/82 40S2085	15,336	15,336							
5	NC AGGREGATE FOR STLWTR TUNNEL	A		ADIB	9/82	66,000	66,000							
6	NC VAT TUNNEL	A		ADCI	10/82	5,678,120	5,678,120							
7	NC WEST FK PIPELINE, VAT DD	A		ADCO	10/82	3,507,000	3,507,000							
8	NC RHODES-HADES TUNNEL COMPLEX	A		ADDI	10/82	4,901,082	4,901,082							
9	NC SOLDIER CREEK REMED WRK LT	A		ADFO	10/82	209,000	209,000							
10	STORAGE SHED RELOCATION STRAWBERRY VALLEY WATER USERS	A		ADJV 4B00000 DO40	3/21/83 40L0880	6,897	6,897							
11	NC WEST SD RD REPAIR,CHIP,SEAL	A		ADJF	7/83	357,000	357,000							
12	MACROINVERTIBRATE ANALYSIS	A		ADJB 4000000 DO40	9/14/83 4001400	21,250	21,250							
13	NC SOLD CREEK REMED WORK RT	A		ADFL	10/83	987,000	987,000							
14	C UPR STLWTR PLN CNTL STRUCT	A		ADKB	12/83	111,000	111,000							
15	NC NORTH FORK SIPHON	A		ADDU	7/84	3,708,714	3,708,714							
16	NC CLEAR STRAWBERRY RESEROVIR	A		ADGI	7/84	102,000	102,000							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 16
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 16
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	DRILLING, BJORKMAN HLLW DM A/E	A		ADLM 4100000 DO40	8/29/84 4002170	55,484	55,484							
2	NC BREACH STRAWBERRY DAM	A		ADGC	4/85	223,000	223,000							
3	NC AUTOMATIC-REMOTE CONTROL	A		ADGF	4/85	4,475,134	4,475,134							
4	NC HADES CREEK STREAM INLET	A		ADEC	8/85	1,149,100	1,149,100							
5	DESIGN OF SUPERVISORY CONTROLS	A		ADBB 4D00000 DO80	10/85	68,480	68,480							
6	NC RHODES DIV DAM,WIN STR INL	A		ADEF	7/86	198,000	198,000							
7	INTERPRETIVE PLAN AT STRAWBRRY	A		ADJC 4100000 DO40	5/87 4004570	20,000	20,000							
8	NC MISCELLANEOUS GENERAL EXP	A		ADBA DO/40	6/87	574,579	574,579							
9	NC SUPERVISORY CONTROLS	A		ADSC	10/94	246,325	246,325							
10	SOLDIER CREEK MONITOR/FILL	A		SC01 4100000	10/96	215,821	215,821							
11	***** NONCONTRACTS					56,460,655	56,460,655							
12	**** SOLDIER CRK DAM/COLLECT SYS					317,744,397	317,744,397							
13	**** REHAB DUCHESNE RVR AREA CNL													
14	***** COMPLETED CONTRACTS													
15	REHAB PIONEER CANAL MIYA BROTHERS CONSTRUCTION CO	A		AEAC 4D00000 DO40	8/20/81 40C0742	1,226,210	1,226,210							
16	DESIGN DUCHESNE CANAL REHABA/E CENTRAL UTAH WATER CONSRV DIST	A		AEAA 4100000 DO4W	10/ 4/84 40-2100	4,611,134	4,611,134							
17	FARM CREEK CANAL AND OTHERS CENTRAL UTAH WATER CONSRV DIST	A		AEAB 4100000 DO40	7/26/85 40-2100	28,755,246	28,755,246							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 17
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	MC DUCHESNE RIVER CANAL REHAB	A		AEAE	10/85	4,835	4,835							
2	PROPERTY RELOCATION	A		AEAT 4D00000 DO40	10/11/85	8,173	8,173							
3	***** COMPLETED CONTRACTS					34,605,598	34,605,598							
4	***** NONCONTRACTS													
5	DATA FOR DUCHESNE RIVER AERO METRIC ENGINEERING	A		AEAF 4000000 DO40	10/12/79 DV00036	89,731	89,731							
6	ELECTRICAL FOR PIONEER CANAL MOON LAKE ELEC ASSOCIATION	A		AEAG 4000000 DO40	7/14/81 40L2026	5,458	5,458							
7	INSTALL PIONEER CANAL PIPELINE UTAH DEPT OF TRANSPORTATION	A		AEAH 4D00000 DO40	6/ 6/82 40L3220	17,463	17,463							
8	DESIGN DUCHESNE RVR CNL REHAB	A		AEAI	10/82	1,811,139	1,811,139							
9	NC PIONEER CANAL REHAB	A		AEAJ	10/82	400,000	400,000							
10	TOPOGRAPHIC MAPPING OF RIVER AERIAL PHOTO SERVICE, INC	A		AEAK 4000000 DO40	2/11/83 40S3067	222,792	222,792							
11	EVALUATION AND DOCUMENTATION U S NATIONAL PARKS SERVICE	A		AEAL 4000000 DO40	6/ 3/83 4000900	12,260	12,260							
12	DESIGN WORK IN REGION	A		AEAM 4000000 DO40	10/84	38,280	38,280							
13	NC FARM CRK CNL REHABILITATION	A		AEAP	10/84	241,789	241,789							
14	NC DUCHESNE RIVER CANAL REHAB	A		AEAR	10/85	439,410	439,410							
15	***** NONCONTRACTS					3,278,322	3,278,322							
16	**** REHAB DUCHESNE RVR AREA CNL					37,883,920	37,883,920							
17	**** TAYLOR CANAL AREA DRAINS													
18	***** CONTRACTS													
19	TAYLOR CANAL DRAINS BLOCKS 1-4 CENTRAL UTAH WATER CONSRV DIST	A		AFAA 4100000 DO40	7/26/88 5-02100	177,142	113,394 / 63,748/	63,748						

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707

CUP, BONNEVILLE UNIT (CRSPP)
UPPER COLORADO REGION
UCRBF-WTR/ENERGY MGMT/DEVELOP

PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION)

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	NC JORDANELLE DAM	A		AHAH	10/80	29,238,344	29,238,344							
2	SPECIAL DRILLING JORDANELLE GOLD HORIZONS, INC	A		AHBC 4B00000 DO40	2/24/81 40C0730	114,506	114,506							
3	EXPLOR DRILLING JORDANELLE MODOC DRILLING	A		AHBG 4B00000 DO40	2/28/81 40C0733	234,112	234,112							
4	SEISMOGRAPHIC SERVICE TO JD U S GEOLOGICAL SURVEY	A		AHCD 4000000 DO40	4/ 1/81 40X1795	20,000	20,000							
5	SEISMIC MONITORING JRDNLLE A/E UNIVERSITY OF UTAH	A		AHCE 4000000 DO40	10/ 1/81 40S2051	43,213	43,213							
6	EXPLORATORY DRILLING JORDNELLE PM EXPLORATION	A		AHBJ 4B00000 DO40	4/10/82 40S2270	308,513	308,513							
7	HYDROGEOLOGICAL EVELUATION A/E UINTEX CORPORATION	A		AHBK 4B00000 DO40	5/10/82 40S3080	144,610	144,610							
8	CHEMICAL ANALYSIS - WATER A/E UINTEX CORPORATION	A		AHDC 4B00000 DO40	7/ 1/82 40S3088	146,809	146,809							
9	WATER SAMPLE ANALYSIS A/E UTAH DIVISION OF WILDLIFE RES	A		AHDD 4B00000 DO40	7/ 2/82 40S3149	33,520	33,520							
10	WATERSHED MANAGEMENT PLAN	A		AHDF 4000000 DO40	7/12/82 40X3287	129,712	129,712							
11	INCLINOMETER SYSTEM	A		AHDB 4B00000 DO40	8/19/82 40S3072	32,824	32,824							
12	GEOPHYSICAL SURVEYS MEIIJI RESOURCES CONSULTANTS	A		AHDA 4B00000 DO40	8/25/82 40S3147	10,191	10,191							
13	GAS LINES RELOC DESIGNS A/E MOUNTAIN FUEL SUPPLY	A		AHCF 4000000 DO40	9/27/82 40L3425	25,300	25,300							
14	NCC JORDANELLE LAND AND RIGHTS	A		AHAB	10/82	1,936,286	1,936,286							
15	DRILL JORDANELLE RESERVOIR A/E ENERGY DRILLING/DEVELOPMNT CO	A		AHAC 4B00000 DO40	7/29/83 4000880	83,607	83,607							
16	GEOLOGIC MAP JORDANELLE RESA/E	A		AHDE 4B00000 DO40	9/ 8/83 4001080	31,620	31,620							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	PRECON ENG TO RELO POWERLN A/E	A		AHAJ 4024000 DO4V	4/24/84 40D3531	73,525	73,525							
2	DESIGN OF HIGHWAY RELOCATION	A		AHBL 4B00000 DO40	10/84	846,611	846,611							
3	CULTURAL RES. STUDY ON MNTN RS	A		AHAT 4100000 DO40	2/12/85	25,000	25,000							
4	CULTURAL RES. STUDY ON I D LND	A		AHAS 4100000 DO40	6/25/85	19,000	19,000							
5	NC RELOCATE GAS PIPE LINE	A		AHJF	3/86	140,000	140,000							
6	JORDANELLE HISTORICAL STUDY	A		AHAR 4100000 DO40	4/ 1/86	68,000	68,000							
7	NCC JORDANELLE P-LINE SYD RELO	A		AHJI	5/86	220,000	220,000							
8	NCC JORDANELLE TELEPHONE RELOC	A		AHJM	5/86	30,000	30,000							
9	LAND APPRAISAL SERVICES	A		AHAV 4024000 DO40	3/24/87	343,099	343,099							
10	NC STUDY OF OLSEN-NEINART TAIL STICHTING-MAYFLOWER	A		AHBY 4000000 DO40	5/12/87 4005040	255,000	255,000							
11	NC JORDANELLE DAM - STAGE I	A		AHAG	6/87	3,711,109	3,711,109							
12	NCC RELOCATE HWY 40-189	A		AHJC	8/87	344,903	344,903							
13	SEISMIC MONITORING	A		AHXX DO/40	10/87 4004770	93,283	93,283							
14	DESIGN PWRLN RELOC STAGE II UTAH POWER AND LIGHT COMPANY	A		AHJL 4024000 DO4W	4/19/88 4006170	69,758	69,758							
15	NC JORDANELLE DAM - STAGE II	A		AHAN 4B00000	9/88	16,205,083	16,205,083							
16	OLSEN NEIHART	A		AHON DO/40	10/88	1,878,448	1,878,448							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBP-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	A E FOR TAILINGS REMOVAL BLACK AND BEECH	A		AHJR 4024000 DO40	4/ 1/89 400688A	625,230	625,230							
2	OLSEN NEIHART STABILIZE B OF M	A		AHAP 4024000 DO40	4/25/89 4007690	192,263	192,263							
3	DEPT OF JUSTICE SERVICES	A		AHAK 4050000 DO40	6/ 6/89 9-08370	941,814	941,814							
4	UT DEPT/HEALTH OLSN/NHT C/A UTAH DEPARTMENT OF HEALTH	A		AHDO 4024000 DO40	7/ 2/90 4008860	120,000	120,000							
5	DESIGN JRDL WETLAND MITIGATION CH2M HILL CENTRAL, INC	A		WDNC DO/40	8/ 2/90	303,692	303,692							
6	***** NONCONTRACTS					69,651,768	69,651,768							
7	**** JORDANELLE DAM AND RESERVOIR					356,705,956	356,705,956							
8	**** UPPER PROVO RIVER IMPROVEMENTS													
9	***** COMPLETED CONTRACTS													
10	TRIAL LAKE REHABILITATION C/A CENTRAL UTAH WATER CONSRV DIST	A		AHTL 4000000 DO40	2/ 8/90 40R1120	1,690,005	1,690,005							
11	UPPER MTN LAKES	A		AHUM 4200000	9/15/93 3-15340	175,000	175,000							
12	***** COMPLETED CONTRACTS					1,865,005	1,865,005							
13	***** CONTRACTS													
14	REHAB WALL LAKE DAM	A		AHWL	9/98 8-22360	635,000	635,000							
15	UP PROVO RIV FISHING LAKES C/A	A		AHMA 4100000 DO80	9/25/98 4-16650	3,304,485	3,304,485							
16	***** CONTRACTS					3,939,485	3,939,485							
17	***** NONCONTRACTS													
18	NC FISHING LAKES	A		AHMD	10/83	294,436	294,436							
19	NC FISHING LAKES PROVO RIVER	A		AHMC	10/90	1,690,400	1,690,400							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
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PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** NONCONTRACTS					1,984,836	1,984,836							
2	**** UPPER PROVO RIVER IMPROVEMENTS					7,789,326	7,789,326							
3	**** JACOB WELBY WATER RIGHTS													
4	***** NONCONTRACTS		05											
5	INVESTIGATE JACOB WELBY EXCHNG	A		AIAE 4000000 DO40	9/94	66,865	66,865							
6	**** JACOB WELBY WATER RIGHTS					66,865	66,865							
7	**** JORDAN AND ALPINE AQUEDUCTS													
8	***** LAND AND RIGHTS													
9	COMPLETED LAND JORDAN AQUED	A		AIAM	10/ 1/70	681,381	681,381							
10	LAND JORD S-4 ALPINE S-3	A		AIAL 4000000 DO40	9/ 1/80	5,423,089	5,423,089							
11	OLMSTEAD PWRPLNT DEPOSIT	A		AIAN 4050000 DO40	5/15/87	4,669,121	4,669,121							
12	OLMSTEAD POWERPLANT C/A	A		AIOP 4000000 DO40	9/21/90	1,701,000	1,701,000							
13	OLMSTEAD POWERPLT CONTINGENCY	C		AIOO 4200000	10/08	3,934,000	189,222					LL	3,744,778	
14	***** LAND AND RIGHTS					16,408,591	12,663,813						3,744,778	
15	***** COMPLETED CONTRACTS													
16	JORDAN AQUEDUCT REACHES 1,2 S A HEALY COMPANY	A		AIBJ 4B00000 DO80	7/ 1/71 4DC6891	8,838,697	8,838,697							
17	CONSTRUCTION MATERIALS	A		AIBK 4B00000 DO40	10/ 1/77	33,962	33,962							
18	ALPINE AQUEDUCT SECTION I W J LEWIS CORPORATION	A		AIBL 4B00000 DO80	8/28/78 4DC7336	2,948,434	2,948,434							
19	PIPELINE CROSSING HWY 201 UTAH DEPT OF TRANSPORTATION	A		AICA 4000000 DO40	1/ 3/79 40L0858	73,854	73,854							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
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PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	JORDAN AQUEDUCT SEC 3 GRANITE CONSTRUCTION COMPANY	A		AIBA 4B00000 DO80	5/28/80 4DC7412	8,376,738	8,376,738							
2	FLOW CONTROL UNDERGROUND CONSTR CO, INC	A		AIBG 4B00000 DO80	5/ 5/81 4DC7459	3,482,310	3,482,310							
3	MC JORD AQUED S-4 ALPINE S-3	A		AIEB	9/81	85,453	85,453							
4	WADE SPRINGS	A		AIBW 4B00000 DO40	10/10/83 4004680	20,000	20,000							
5	PHONE LINE RELOCATION	A		AIBY 4B00000 DO40	10/10/83	10,600	10,600							
6	JORD AQUED S-4 ALPINE S-3 DIPAOLO/ROSSETTI CONTRACTORS	A		AIEA 4B00000 DO80	11/ 2/83 4001090	25,374,748	25,374,748							
7	OREM WATER LINE RELOCATION	A		AIBX 4B00000 DO40	10/10/84 4000400	50,320	50,320							
8	RELOC POWER LINES FOR J4/A3 UTAH POWER AND LIGHT COMPANY	A		AIED 4B00000 DO40	12/ 7/84 40D3503	301,440	301,440							
9	WATERLINE	A		AIBD 4000000 DO40	9/ 1/85 4107940	9,600	9,600							
10	JORDAN AQUEDUCT III GRANITE CONSTRUCTION COMPANY	A		AIEG 4B00000 DO80	12/18/86 4DC7412	4,095,379	4,095,379							
11	RELOCATE OREM CITY WATER LINE	A		AIEL 4B00000 DO40	10/27/87 40D3512	55,039	55,039							
12	RELOCATE CABLE FOR CUWCD	A		AIEM 4B00000 DO40	10/27/87 4106360	19,667	19,667							
13	ALPINE AQUEDUCT SEC 2 H - K CONTRACTORS, INC	A		AIDA 4B00000 DO40	9/29/88 4006440	3,500,000	3,500,000							
14	REPAIR ROAD TO OREM TREATMENT	A		AIDZ 4B00000 DO40	4/89 4007450	28,300	28,300							
15	***** COMPLETED CONTRACTS					57,304,541	57,304,541							
16	***** CONTRACTS													
17	ALPINE AQUEDUCT REACH 2A	A		AI2A 4100000	9/19/94 4-16210	2,334,657	2,334,657							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 26
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 26
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING F/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** NONCONTRACTS													
2	TOPOGRAPHIC MAPPING OF ALPINE U S FOREST SERVICE (RMR)	A		AIEH 4000000 DO40	6/10/68 4004917	18,895	18,895							
3	COMPLETED WORK NC JORD AQUED	A		AIBM	10/70	3,498,597	3,498,597							
4	CROSSING CITY WATER AND SEWER CITY OF WEST JORDAN, UTAH	A		AIEI 4000000 DO40	5/25/71 4005620	15,581	15,581							
5	ALLIGNMENT OF I-15 UTAH DEPT OF TRANSPORTATION	A		AIEJ 4000000 DO40	6/30/71 4005632	10,000	10,000							
6	NC JORD AQUED S-4 ALPINE S-3	A		AIEC	9/81	7,810,984	7,810,984							
7	NC PIPELINE CROSSING HWY 201	A		AICC	10/10/81	25,000	25,000							
8	ELECTRICAL FAC AND SERV TO JA UTAH POWER AND LIGHT COMPANY	A		AIEK 4000000 DO40	1/22/82 4082253	52,571	52,571							
9	NC LAND JORD AQUED SECT 4	A		AIAP	10/82	1,500,000	1,500,000							
10	NC JORDAN AQUEDUCT SEC 3	A		AIBC	10/82	1,613,783	1,613,783							
11	NC FLOW CONTROL JORDAN AQUED	A		AIBI	10/82	868,000	868,000							
12	NC DESIGN J A 4 / A A 3	A		AIBN	10/82	1,134,812	1,134,812							
13	DESIGN ALPINE REACH 1	A		AIBS	10/82	300,545	300,545							
14	DESIGN JORDAN AQUEDUCT 1AND 2	A		AIBP DO/40	10/83	197,965	197,965							
15	DESIGN JORDAN AQUEDUCT 3	A		AIBR DO/40	10/83	1,242,217	1,242,217							
16	DESIGN ALPINE AQUED SEC 2 A/E CITY OF OREM, UTAH	A		AIDG 4100000 DO4W	10/30/84	100,000	100,000							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 27
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 27
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	APPRAISAL OF OLMSTEAD FLOWLINE	A		AIBZ 4000000 DO40	2/15/85 4002360	201,829	201,829							
2	DESIGN OLMSTEAD REQUIREMENTS	A		AIBT DO/40	10/85	386,816	386,816							
3	DESIGN ALPINE AQUED SECT 2	A		AIDD	9/87	849,594	849,594							
4	NC ALPINE AQUEDUCT SECT 2	A		AIDC	5/88	1,176,625	1,176,625							
5	APPRAISAL SERVICES OLMSTEAD	A		AIEE 4050000 DO40	6/ 6/89 4008370	372,376	372,376							
6	ALPINE AQUEDUCT REACH 2A	A		AIA2	10/93	499,071	499,071							
7	***** NONCONTRACTS					21,875,261	21,875,261							
8	**** JORDAN AND ALPINE AQUEDUCTS					97,923,050	94,178,272						3,744,778	
9	**** MONKS HOLLOW DAM AND RESERVOIR													
10	***** COMPLETED CONTRACTS													
11	MONKS HOLLOW EXPLORATORY ADITS R H GUNN MINE DEVELOPMENT	A		AJAA 4B00000 DO80	5/11/88 4006090	683,418	683,418							
12	***** NONCONTRACTS													
13	EXPLORATORY DRILLING DAMSITE X L DRILLING COMPANY	A		AJAF 4000000 DO40	2/ 5/81 40C0732	118,831	118,831							
14	INVESTIGATE MONKS HOLLOW DAM	A		AJAG	10/81	3,536,944	3,536,944							
15	DRILL MONKS HOLLOW DAM H AND L DIAMOND CORE DRILLING	A		AJAH 4100000 DO40	10/ 1/82 40S0810	19,280	19,280							
16	DRILLING AT MONKS HOLLOW DMA/E JEX AND MILLER DRILLING	A		AJAJ 4B00000 DO40	8/27/84 4002090	177,555	177,555							
17	DESIGN THE ADITS	A		AJAK DO/40	7/85	845,883	845,883							
18	DESIGN THE DAM	A		AJAI DO/40	9/94	2,866,284	2,866,284							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 28
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** NONCONTRACTS					7,564,777	7,564,777							
2	**** MONKS HOLLOW DAM AND RESERVOIR					8,248,195	8,248,195							
3	**** DIAMOND FORK UPPER PIPELINE													
4	***** NONCONTRACTS													
5	INVESTIGATE D.F. PPLN, PWRPLT	A		DFP1	9/83	1,977,230	1,977,230							
6	NC DIAMOND FORK PIPELINE	A		DFP2	1/90	140,085	140,085							
7	***** NONCONTRACTS					2,117,315	2,117,315							
8	**** DIAMOND FORK UPPER PIPELINE					2,117,315	2,117,315							
9	**** SYAR TUNNEL													
10	***** COMPLETED CONTRACTS													
11	LAND - DIAMOND FORK	A		AJGB 4000000 DO40	6/ 3/84	5,000	5,000							
12	SYAR TUNNEL AND ACCESS ROAD MORRISON-KNUDSEN COMPANY, INC	A		AJGE 4B00000 DO80	8/18/88 4006080	47,115,934	47,115,934							
13	***** COMPLETED CONTRACTS					47,120,934	47,120,934							
14	***** CONTRACTS													
15	SHEEP CK/RAYS VALLEY RD BASE MARSHALL ASSOC, INC	A		AJGA 4B00000 DO40	7/29/83 4001040	3,393,588	3,393,588							
16	USFS UNF ROAD OBLITERATION DF U S FOREST SERVICE	A		AJGC 4100000 DO40	6/ 8/84 4002020	28,820	28,820							
17	PAVE SHEEP CRK/RAYS VALLEY RD ASPHALT PAVING	A		AJIA 4B00000 DO40	5/ 9/88 4006180	4,180,257	4,180,257							
18	INSTALL GUARDRAIL	A		AJGD 4B00000 DO40	8/ 8/88	23,236	23,236							
19	CHIP/SEAL SHEEP CRK RD 2 OF 3 ASPHALT PAVING	A		AJIC 4B00000 DO40	8/28/89 4008160	179,649	179,649							
20	SYAR TUNNEL GROUTING	A		AJGX DO/40	5/10/95 5-17540	1,577,686	1,577,686							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 29
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
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PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	SYAR STRAWBERRY TUNNEL TURNOUT	A		AJGY 4200000	8/11/95 5-18180	1,627,333	1,627,333							
2	SYAR TUNNEL CONN/CNTRLS	A		AJGZ	5/97 7-21030	280,022	280,022							
3	FENCING SYAR 6TH WATER	A		FFFF	9/97 7-22320	70,000	70,000							
4	***** CONTRACTS					11,360,591	11,360,591							
5	***** NONCONTRACTS													
6	SURVEYS AND DESIGN DATA DF THOMAS R MANN AND ASSOC, INC	A		AJGG 4100000 DO40	9/28/79 DV00035	52,613	52,613							
7	ACCESS ROADS EXPLORATORY DRILL JONCO CONSTR CO, INC	A		AJGH 4100000 DO40	5/ 8/80 40C0709	2,145	2,145							
8	NC ROAD WORK	A		AJGI DO/40	10/80	683,199	683,199							
9	SURVEY AND DESIGN SHEEP CK RD U S FOREST SERVICE	A		AJGJ 4100000 DO40	8/ 1/81 40S3074	109,800	109,800							
10	AERIAL PHOTOS FOR DF ACCESS RD KOOGLE AND POULS ENGIN, INC	A		AJGK 4100000 DO40	9/18/81 40S2097	90,298	90,298							
11	N/C SYAR TUNNEL DRILLING	A		AJGL	10/82	157,720	157,720							
12	PRECONSTRUCTION ENGINEERING RD U S FOREST SERVICE	A		AJGM 4100000 DO40	6/ 1/83 4001000	124,400	124,400							
13	DRILL SYAR TUNNEL ALIGNMENTA/E JEX AND MILLER DRILLING	A		AJGN 4100000 DO40	7/16/83 4000740	94,410	94,410							
14	NC SYAR TUNNEL	B		AJGP	10/83	6,879,642	6,865,206 / 14,436/	14,436						
15	AERIAL PHOTO - D.F. ROADS A/E VARA SYSTEMS, INC	A		AJGR 4B00000 DO4V	10/ 5/84 400187A	128,016	128,016							
16	NC DESIGN ACCESS RDS-USFS A/E	A		AJGS 4B00000 DO4E	10/17/84	200,000	200,000							
17	DESIGN D.F. SYSTEM ROADS	A		AJGT 4B00000 DO4V	12/84	244,149	244,149							

LEGEND: ACTIVITY BAR --PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 30
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 30
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
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PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	DESIGN OF DIAMOND FORK ROADS U S FOREST SERVICE	A		AJGU 4100000 DO40	5/ 7/85 4002540	89,350	89,350							
2	NC DESIGN SYAR TUNNEL	A		AJGV	10/85	2,095,468	2,095,468							
3	NCC SYAR TUNNEL	A		AJGW	10/86	6,973,061	6,973,061							
4	***** NONCONTRACTS					17,924,271	17,909,835	14,436						
5	**** SYAR TUNNEL					76,405,796	76,391,360	14,436						
6	**** SIXTH WATER AQUEDUCT													
7	***** COMPLETED CONTRACTS													
8	6TH WATER/RAYS VALLEY ACS RD GREENWAY ENTERPRISES, INC	A		AJIB 4B00000 DO40	7/20/90 4009500	2,056,739	2,056,739							
9	SIXTH WATER TUNNEL/AQUEDUCT C R FEDRICK	A		AJID 4B00000 DO80	6/25/92 2-11620	26,344,176	26,344,176							
10	6TH WATER STILLING BASIN	A		AJIN	8/98 8-22300	295,000	295,000							
11	***** COMPLETED CONTRACTS					28,695,915	28,695,915							
12	***** MINOR CONTRACTS													
13	PIPE	A		AJIM 4B00000 DO40	10/87	196,627	196,627							
14	MC 6TH WATER TUNNEL	A		AJIF	9/91	20,029	20,029							
15	***** MINOR CONTRACTS					216,656	216,656							
16	***** NONCONTRACTS													
17	6TH WATER	A		AJIK	10/88	478,051	478,051							
18	NC EXPLORATORY DRILLING 5TH WT	A		AJII	10/89	150,000	150,000							
19	N/C 6TH WATER	A		AJIJ	10/89	6,123,979	6,123,979							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 31
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING F/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
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PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** NONCONTRACTS					6,752,030	6,752,030							
2	**** SIXTH WATER AQUEDUCT					35,664,601	35,664,601							
3	**** LAST CHANCE PWERPLT/SWTCHYD													
4	***** NONCONTRACTS													
5	NC LAST CHANCE POWERPLANT	A		LCPP	10/89	218,077	218,077							
6	**** LAST CHANCE PWERPLT/SWTCHYD					218,077	218,077							
7	**** DIAMOND FORK POWERPLANT													
8	***** NONCONTRACTS													
9	N/C DIAMOND FORK PP	A		DFPP	10/89	1,322,912	1,322,912							
10	N/C DIAMOND FORK SWITCHYARD	A		DFSW	10/89	512	512							
11	N/C MONKS HOLLOW PP	A		MHPP	10/89	101,315	101,315							
12	N/C 46 KV TRANS LINE	A		XVLN	10/90	9	9							
13	***** NONCONTRACTS					1,424,748	1,424,748							
14	**** DIAMOND FORK POWERPLANT					1,424,748	1,424,748							
15	**** MONA DAM AND RESERVOIR													
16	***** CPMTRACTS													
17	MONA DAM - STORAGE	A		ALAA 4100000 DO80	9/23/87	50,000	50,000							
18	***** NONCONTRACTS													
19	INVEST MONA DAM	A		ALAC	10/79	644,817	644,817							
20	DESIGN OF MONA DAM	A		ALAD DO/40	10/83	84,869	84,869							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 32
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 32
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
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PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	NCC MONA RESERVOIR ENLARGEMENT	A		ALAE	4/88	58,294	58,294							
2	***** NONCONTRACTS					787,980	787,980							
3	**** MONA DAM AND RESERVOIR					837,980 X	837,980							
4	**** MONA PUMPING PLANT/SWTCHYD													
5	***** NONCONTRACTS													
6	REGION DESIGN AND E AND RC	A		AMAE DO/40	10/86	1,866	1,866							
7	NCC MONA-NEPHI PPLANT SWTYARD	A		AMAH		375,561	375,561							
8	***** NONCONTRACTS					377,427	377,427							
9	**** MONA PUMPING PLANT/SWTCHYD					377,427 X	377,427							
10	**** NEPHI PUMPING PLANT/SWTCHYD													
11	***** NONCONTRACTS													
12	NC MONA-NEPHI PP SWITCHYARD	A		AMCD	10/83	108,285	108,285							
13	REGION DESIGN AND E AND RC	A		AMCE DO/40	10/86	2,965	2,965							
14	***** NONCONTRACTS					111,250	111,250							
15	**** NEPHI PUMPING PLANT/SWTCHYD					111,250 X	111,250							
16	**** MONA-NEPHI CANAL													
17	***** COMPLETED CONTRACTS													
18	INSTALL SIPHONS BY I-15 UTAH DEPT OF TRANSPORTATION	A		AMEB 4040000 DO40	10/ 1/81 40L1217	158,482	158,482							
19	***** MINOR CONTRACTS													
20	RELOCATE I-15 MONA-NEPHI UTAH DEPT OF TRANSPORTATION	A		AMEE 4000000 DO40	6/ 1/67 4004608	12,500	12,500							
21	SIPHON CROSSING I-15 AT NEPHI UTAH DEPT OF TRANSPORTATION	A		AMEF 4000000 DO40	5/18/72 4005871	96,783	96,783							

LEGEND: ACTIVITY BAR --=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 33
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 33
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** MINOR CONTRACTS					109,283	109,283							
2	***** NONCONTRACTS													
3	INVESTIGATE MONA-NEPHI	A		AMEG	10/79	1,575,052	1,575,052							
4	AERIAL PHOTOS ON MONA CANAL	A		AMEH 4100000 DO40	5/21/86	20,000	20,000							
5	REGION DESIGN AND E AND RC	A		AMEI DO/40	10/86	25,363	25,363							
6	NCC MONA-NEPHI CANAL	A		AMEK	10/91	7,038	7,038							
7	***** NONCONTRACTS					1,627,453	1,627,453							
8	**** MONA-NEPHI CANAL					1,895,218	1,895,218							
9	**** MONA-NEPHI LATERALS													
10	***** NONCONTRACTS													
11	NC MONA-NEPHI LATERALS	A		AMGC	10/83	115,793	115,793							
12	**** MONA-NEPHI LATERALS					115,793	115,793							
13	**** WEST MONA PUMPING PLT/SWTCHYD													
14	***** NONCONTRACTS													
15	NC WEST MONA PUMPING PLANT	A		AMIE	10/86	10,695	10,695							
16	**** WEST MONA PUMPING PLT/SWTCHYD					10,695	10,695							
17	**** MOSIDA LOWER PMP PLTS/SWTCHYD													
18	***** NONCONTRACTS													
19	NC MOSIDA PUMPING PLANTS	A		AOAD	10/83	368,129	368,129							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 34
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 34
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	**** MOSIDA LOWER PMP PLTS/SWTCHYD					368,129	368,129							
2	**** MOSIDA NORTH PMP PLTS/SWTCHYD													
3	***** NONCONTRACTS													
4	NC MOSIDA NORTH PUMPING PLANT	A		AOCD	10/86	21,874	21,874							
5	**** MOSIDA NORTH PMP PLTS/SWTCHYD					21,874	21,874							
6	**** MOSIDA UPPER PMP PLT/WTCHYD													
7	***** NONCONTRACTS													
8	NC MOSIDA UPPER PUMPING PLANT	A		AOKD DO/40	10/86	22,673	22,673							
9	**** MOSIDA UPPER PMP PLT/WTCHYD					22,673	22,673							
10	**** MOSIDA UPPER CANAL													
11	***** NONCONTRACTS													
12	INVESTIGATE MOSIDA	A		AOGD	10/79	312,851	312,851							
13	**** MOSIDA UPPER CANAL					312,851	312,851							
14	**** MOSIDA NORTH CANAL													
15	***** NONCONTRACTS													
16	NC MOSIDA NORTH CANAL	A		AOID DO/40	10/86	19,293	19,293							
17	**** MOSIDA NORTH CANAL					19,293	19,293							
18	**** MOSIDA LOWER CANAL													
19	***** NONCONTRACTS													
20	NC MOSIDA LOWER CANAL	A		AOKD DO/40	10/86	24,356	24,356							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 35
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 35
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	**** MOSIDA LOWER CANAL					24,356 *	24,356							
2	**** MOSIDA AREA LATERALS													
3	***** NONCONTRACTS													
4	NC MOSIDA LATERALS	A		AOMC	10/86	118,666	118,666							
5	**** MOSIDA AREA LATERALS					118,666 *	118,666							
6	**** WASATCH AQUEDUCT													
7	***** NONCONTRACTS													
8	NC INVESTIGATE WASATCH AQUED	A		AKAF	10/79	8,049,753	8,049,753							
9	EXPLORATORY DRILLING WASATCH ROLLINS, BROWN AND GUNNEL, INC	A		AKAT 4000000 DO40	5/29/81 40C0743	62,267	62,267							
10	TERRESTRIAL WILDLIFE STUDIES UTAH DIVISION OF WILDLIFE RES	A		AKBM 4000000 DO40	12/ 2/81 4082096	150,919	150,919							
11	WATER MANAGEMENT,CONSERVATION	A		AKBP 4000000 DO40	7/15/83 4001230	10,000	10,000							
12	MACROINVERTEBRATE ANALYSIS U S FOREST SERVICE	A		AKBN 4000000 DO40	9/ 9/83 4001400	11,250	11,250							
13	NC SPANISH FORK PIPELINE	A		AKAX DO/40	10/85	724,437	724,437							
14	DESIGN SALEM BENCH PIPELINE	A		AKAG DO/40	10/86	54,743	54,743							
15	DESIGN TITHING MOUNTAIN TUNNEL	A		AKAM DO/40	10/86	8,296	8,296							
16	INDEF QUANTITY CULTURAL RESOUR	A		AKAP 4024000 DO40	1/20/89	20,000	20,000							
17	NCC WASATCH AQUEDUCT S-1	A		AKAE	1/91	172,850	172,850							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 36
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 36
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** NONCONTRACTS					9,264,515	9,264,515							
2	**** WASATCH AQUEDUCT					9,264,515	9,264,515							
3	**** SANTAQUIN AREA LATERALS													
4	***** NONCONTRACTS													
5	NC SANTAQUIN LATERALS	A		AKDE	10/83	69,818	69,818							
6	**** SANTAQUIN AREA LATERALS					69,818	69,818							
7	**** BEER CREEK CHANNELIZATION													
8	***** NONCONTRACTS													
9	NC INVESTIGATE BEER CREEK	A		AUAD	10/79	150	150							
10	NC BEER CREEK CANAL	A		AUAE	10/79	15,165	15,165							
11	***** NONCONTRACTS					15,315	15,315							
12	**** BEER CREEK CHANNELIZATION					15,315	15,315							
13	**** ELBERTA CANAL													
14	***** NONCONTRACTS													
15	INVESTIGATE ELBERTA	A		ANAG	10/79	205,613	205,613							
16	**** ELBERTA CANAL					205,613	205,613							
17	**** ELBERTA LATERALS													
18	***** NONCONTRACTS													
19	NC ELBERTA CANAL AND LATERAL	A		ANAH	10/86	80,449	80,449							
20	**** ELBERTA LATERALS					80,449	80,449							
21	**** NEPHI SEVIER CANAL													

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 37
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 37
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** NONCONTRACTS													
2	INVESTIGATE NEPHI-SEVIER CANAL	A		APAG	10/79	915,191	915,191							
3	**** NEPHI SEVIER CANAL					915,191	915,191							
4	**** BEER CRK-SPANISH FK-PETEETNT													
5	***** NONCONTRACTS													
6	INVESTIGATE BONN BAS DRAINS	A		ARBG	10/78	205,807	205,807							
7	DESIGN BEER CREEK DRAINS	A		ARBD 4100000 DO40	10/84	32,186	32,186							
8	***** NONCONTRACTS					237,993	237,993							
9	**** BEER CRK-SPANISH FK-PETEETNT					237,993	237,993							
10	**** BEER CREEK PP													
11	***** NONCONTRACTS													
12	N/C BEER CR PP	A		BEER	10/84	511,488	511,488							
13	BEER CR DIKE	A		DIKE	10/84	281,180	281,180							
14	***** NONCONTRACTS					792,668	792,668							
15	**** BEER CREEK PP					792,668	792,668							
16	**** PROVO BAY PP SWTCHYD													
17	***** NONCONTRACTS													
18	N/C PROVO BAY PP SWTCHYD	A		PBAY	10/84	503	503							
19	**** PROVO BAY PP SWTCHYD					503	503							
20	**** HOBBLE CK DIV DAM													

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 38
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 38
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** NONCONTRACTS													
2	N/C HOBBLE CR DIV DAM SETTLG	A		HOBB	10/84	1,490	1,490							
3	**** HOBBLE CK DIV DAM					1,490 *	1,490							
4	**** SPRINGVILLE PASS													
5	***** NONCONTRACTS													
6	SPRINGVILLE PASS	A		PASS	10/84	665	665							
7	**** SPRINGVILLE PASS					665 *	665							
8	**** WEST MTN CANAL													
9	***** NONCONTRACTS													
10	N/C WEST MTN CANAL	A		WMTN	10/84	76,763	76,763							
11	**** WEST MTN CANAL					76,763 *	76,763							
12	**** WEST MONA CANAL													
13	***** NONCONTRACTS													
14	N/C WEST MONA CANAL	A		WEST	10/84	10,271	10,271							
15	**** WEST MONA CANAL					10,271 *	10,271							
16	**** LINCOLN POINT PP													
17	***** NONCONTRACTS													
18	N/C LINCOLN PINT PP	A		LINC	10/84	11,577	11,577							
19	**** LINCOLN POINT PP					11,577 *	11,577							
20	**** SERVICE FACILITIES/DEPRE/SALVG													

* = $15,919,036

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 39
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 39
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** LAND AND RIGHTS													
2	LAND FOR ANNEX B - TEMP CAMP	A		AWAA	6/10/82	43,560	43,560							
3	***** COMPLETED CONTRACTS													
4	DESIGN RELOCATION HWY 40 UTAH DEPT OF TRANSPORTATION	A		AWWA 4D00000 DO40	2/18/65 4003915	15,005	15,005							
5	NONCONTRACT COSTS	A		AWWB	5/65	278,651	278,651							
6	MOBILE HOMES FOR TEMP CAMP GALACTIA CORPORATION	A		AWWC 4D00000 DO40	11/22/65 4004276	44,700	44,700							
7	MOBILE HOMES FOR TEMP CAMP UTAH MOBILE HOMES, INC	A		AWWD 4D00000 DO40	1/24/66 4004308	134,581	134,581							
8	LAND FOR THE CAMP	A		AWWE DO/40	5/ 5/66	40,660	40,660							
9	STREETS, WATER, SEWAGE MARTENDALE AND BLACKETTE	A		AWWF 4D00000 DO40	5/ 6/66 4DC6404	128,078	128,078							
10	DUCHESNE LAB KNOWLTON H BROWN	A		AWWD 4D00000 DO40	9/12/66 400C328	24,408	24,408							
11	GARAGES AND ROAD SURFACING	A		AWWG 4D00000 DO40	9/15/66 400C327	104,544	104,544							
12	MOBILE HOMES FOR TEMP CAMP MOTORS INVESTMENT CORPORATION	A		AWWH 4D00000 DO40	3/ 5/67 4004619	183,338	183,338							
13	FACILITY INSTALLATION UINTAH POWER AND LIGHT CO	A		AWWI 4D00000 DO40	3/ 6/67 4004450	30,209	30,209							
14	LANDSCAPE DUCHESNE CAMP VAUGHNS LANDSCAPE, INC	A		AWWJ 4D00000 DO40	3/30/67 400C340	19,325	19,325							
15	LANDSCAPE DUCHESNE CAMP VAUGHNS LANDSCAPE, INC	A		AWWK 4D00000 DO40	4/ 4/67 400C340	18,822	18,822							
16	GOVERNMENT MATERIALS	A		AWWL 4D00000 DO40	6/ 6/67	12,086	12,086							
17	MOBILE HOMES FOR TEMP CAMP UTAH MOBILE HOMES, INC	A		AWWM 4D00000 DO40	7/27/67 4004725	141,416	141,416							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 40
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 40
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	GARAGES AND WALKWAYS AT CAMP NED MITCHELL	A		AWWN 4D00000 DO40	8/21/67 400C351	88,420	88,420							
2	SOLDIER CK FIELD STATION PRESTWICH AND DAVIS CONSTR CO	A		AWWK 4D00000 DO40	11/11/67 400C342	44,010	44,010							
3	SEWAGE DISPOSAL PLANT CITY OF DUCHESNE, UTAH	A		AWWP 4D00000 DO40	5/24/68 4004503	74,000	74,000							
4	MOBILE HOMES FOR TEMP CAMP	A		AWWR 4D00000 DO40	6/ 6/68	69,090	69,090							
5	CURRANT CREEK FIELD STATION NED MITCHELL	A		AWML 4D00000 DO40	10/ 1/70 400C457	70,790	70,790							
6	BITUMINOUS SURFACING GARNER GRADING AND PAVING	A		AWWS 4D00000 DO40	7/10/71 400C477	23,168	23,168							
7	MOBILE HOMES FOR TEMP CAMP MOBILE OFFICE MFR AND LEASING	A		AWWT 4D00000 DO40	5/22/72 4005840	66,235	66,235							
8	PREFAB METAL GARAGES JOHNSON CONTRACTING CORP	A		AWWU 4D00000 DO40	7/ 6/72 400C503	23,470	23,470							
9	SEAL COATING ROADS JOHNSON CONTRACTING CORP	A		AWWV 4D00000 DO40	7/ 6/72 400C503	25,676	25,676							
10	SEAL COATING TEMP CAMP STREETS WESTERN STATES PAVING	A		AWWJ 4D00000 DO40	10/ 3/74 400C551	25,676	25,676							
11	GOVERNMENT LABOR AND MATERIALS	A		AWWA 4D00000	10/ 1/77	340,689	340,689							
12	GENERATOR SHED	A		AWWE 4D00000 DO40	10/ 1/77	135,259	135,259							
13	ENCLOSURE FENCE	A		AWWI 4D00000 DO40	10/ 1/77 40C0815	15,434	15,434							
14	ANNEX A ROADWORK	A		AWWB 4D00000 DO40	11/11/77	194,344	194,344							
15	TABIONA F.S. ROADS,WATER WELLS JOHN W LLOYD	A		AWWN 4D00000 DO40	12/21/77 40C0635	14,560	14,560							
16	TABIONA FIELD STATION JOHN W LLOYD	A		AWWM 4D00000 DO40	8/31/78 40C0654	201,192	201,192							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 41
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 41
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	STORAGE BUILDING FOR CAMP ROLLER ENGINEERING, INC	A		AWWW 4D00000 DO40	3/12/79 40C0664	22,200	22,200							
2	STORAGE BUILDING ROLLER ENGINEERING, INC	A		AWMC DO/40	6/22/79 40C0664	22,200	22,200							
3	WATER WELLS UPPR STLWTR FLD ST CLAIR A STEPHENSON DRILLING CO	A		AWMF 4D00000 DO40	9/11/79 40C0681	69,500	69,500							
4	PREFAB METAL GARAGES LAMAR D/SONS CONSTRUCTION, INC	A		AWMH 4D00000 DO40	8/13/80 40C0698	79,949	79,949							
5	LINDON TEMPORARY LAB BENECO ENTERPRISES	A		AWNG 4B00000 DO40	12/17/80 40C0703	76,146	76,146							
6	UPPER STILLWATER LAB STEPHEN L CORNWALL COMPANY	A		AWBE 4D00000 DO40	12/15/81 40C0721	133,726	133,726							
7	EXPAND TEMP CAMP 1	A		AWED 4D00000 DO40	6/25/82	132,272	132,272							
8	MC UTAH PROJ OFFICE COMPLEX	A		AWBQ	7/82	7,490	7,490							
9	UTAH PROJ OFFICE COMPLEX TEKTON, INC	A		AWBP 4B00000 DO40	7/19/82 40C0806	4,638,645	4,638,645							
10	SEWER LIFT STATION	A		AWET 4D00000 DO40	7/22/82 40S3270	12,186	12,186							
11	TRAILERHOUSE REPLACE DUCHESNE CENTRAL HOMES, INC	A		AWEA 4D00000 DO40	9/29/82 40S3279	3,110,091	3,110,091							
12	DUCHESNE CAMP SUPPLEMENTAL	A		AWEU 4D00000 DO40	10/10/82	332,361	332,361							
13	TRAILERHOUSE SKIRTING ENERGY INDUSTRIES	A		AWER 4D00000 DO40	12/17/82 40S3367	33,396	33,396							
14	SANITARY LANDFILL USE PROVO CITY CORPORATION	A		AWDB 4D00000 DO40	1/ 5/83 4000340	61,418	61,418							
15	SANITARY SEWER LINE CITY OF DUCHESNE, UTAH	A		AWDA 4D00000 DO40	2/18/83 4000220	33,000	33,000							
16	DUCHESNE OFFICE BENECO ENTERPRISES	A		AWBM 4D00000 DO40	3/15/83 40C0814	2,850,947	2,850,947							

LEGEND: ACTIVITY BAR --PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 42
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 42
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	EXPAND TEMP CAMP ANNEX B TAYCO CONSTRUCTION CO	A		AWEJ 4D00000 DO40	6/ 2/83 4000630	222,104	222,104							
2	BITUMINOUS SURFACING BURDICK CONTRACTOR, INC	A		AWES 4D00000 DO40	7/15/83 4000480	33,580	33,580							
3	MULTI-PURPOSE BUILDING	A		AWLY 4D00000 DO40	5/30/84	375,000	375,000							
4	GARAGES AT ANNEXB, FIREHOUSE NAKA INDUSTRIES	A		AWEM 4D00000 DO40	4/12/85 4002790	549,127	549,127							
5	SLOPE STABILIZATION	A		AWBN 4D00000 DO40	7/ 2/85	10,166	10,166							
6	LANDSCAPE ANNEXES A AND B CHARLES LEBARON ASSOCIATES	A		AWEG 4D00000 DO40	10/16/85 4002910	44,161	44,161							
7	SNOW CAT AND TRAILER	A		AVAD 4150000 DO4T	10/25/85	49,277	49,277							
8	BACKHOE	A		AVAF 4150000 DO40	5/ 1/86	65,000	65,000							
9	DUMP TRUCK	A		AVAE 4150000 DO4T	8/20/86	85,723	85,723							
10	NC O AND M HOUSING	A		AVBB DO/40	10/86	1,075	1,075							
11	PERMANENT OPERAT FACILITIES	A		AVAA	10/ 1/88	182,561	182,561							
12	***** COMPLETED CONTRACTS					15,821,137	15,821,137							
13	***** MINOR CONTRACTS													
14	WORK EQUIPMENT	A		AWLA	10/ 1/79	2,601,342	2,601,342							
15	UPPER STILLWATER LAB TEST EQIP	A		AWLG 4D00000 DO40	4/ 1/83	98,500	98,500							
16	FLEET VEHICLES - DUCHESNE	A		AWJA 4D00000 DO40	5/10/83	1,076,012	1,076,012							
17	NEW SYSTEM SOFTWARE	A		AWLF 4023000 DO40	5/15/83	70,000	70,000							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 43
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	RADIO SYSTEM - DUCHESNE MOTOROLA C AND E	A		AWLN 4D00000 DO40	7/ 5/83	85,355	85,355							
2	FIRE PROTECTION - DUCHESNE	A		AWLM 4D00000 DO40	7/21/83	30,300	30,300							
3	WORD PROCESSING UPGRADES PROVO	A		AWLE 4023000 DO40	8/ 5/83	10,000	10,000							
4	PLOTTER AND TERMINAL PROVO	A		AWLD 4023000 DO40	8/22/83	15,000	15,000							
5	ADP EQUIPMENT	A		AWLO 4D00000 DO40	8/25/83	16,400	16,400							
6	RADIO SYSTEM - DUCHESNE	A		AWLK 4D00000 DO40	8/26/83	22,800	22,800							
7	GRAPHICS TERM/EQUIP REGION	A		AWLB 4023000 DO40	9/30/83	15,000	15,000							
8	PROVO GRAPHICS TERM/EQUIP	A		AWLC 4023000 DO40	9/30/83	15,000	15,000							
9	GRAPHICS SYSTEM - GEOLOGY	A		AWMS 4D00000 DO40	12/18/83	42,773	42,773							
10	SYSTEMS FURNITURE-DUCHESNE	A		AWNQ 4D00000 DO40	12/19/83 4003270	261,041	261,041							
11	LOW BOY TRAILER	A		AWLH 4D00000 DO40	1/25/84	22,872	22,872							
12	XEROX COPIERS	A		AWLL 4D00000 DO40	2/ 1/84	50,000	50,000							
13	GROUTING MONITOR HARDWARE	A		AWKD 4D00000 DO40	2/15/84	48,092	48,092							
14	DESK ORGANIZERS	A		AWMU 4100000 DO40	2/15/84	23,000	23,000							
15	FOUR WORD PROCESSING STATIONS	A		AWNI 4100000 DO40	2/21/84	45,610	45,610							
16	NEW FURNITURE - PROVO OFFICE	A		AWMV 4100000 DO40	2/23/84	87,390	87,390							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	SURFACE MOISTURE-DENSITY GUAGE	A		AWKF 4D00000 DO40	2/24/84	60,000	60,000							
2	WORD PROCESSING STATION	A		AWMW 4B00000 DO40	3/22/84	8,000	8,000							
3	POWER DISTRIBUTION SYSTEM	A		AWND 4100000 DO40	3/27/84	11,000	11,000							
4	FIRE OPERATION EQUIPMENT	A		AWLW 4D00000 DO40	3/28/84	15,000	15,000							
5	THREE TERMINALS - PROVO	A		AWMP 4B00000 DO40	3/28/84	7,000	7,000							
6	AISLE SAVERS - UTAH PROJECTS	A		AWMZ 4100000 DO40	3/28/84	27,000	27,000							
7	TWO DUMP TRUCKS	A		AWLJ 4D00000 DO40	4/ 2/84	174,200	174,200							
8	INSTALL TRAILERHOUSE CARPETING	A		AWLZ 4D00000 DO40	4/ 3/84	16,000	16,000							
9	AIR CONDITIONED TRAILER	A		AWKE 4D00000 DO40	4/ 4/84	21,546	21,546							
10	REFURBISH TWO FIRE TRUCKS	A		AWLX 4D00000 DO40	4/ 4/84	25,000	25,000							
11	SEVEN TERMINALS - DUCHESNE	A		AWMR 4D00000 DO40	4/ 4/84	12,070	12,070							
12	SOFTWARE PACKAGES	A		AWLT 4D00000 DO40	4/18/84	7,742	7,742							
13	ELECTRONIC SECURITY SYSTEM	A		AWMY 4100000 DO40	4/23/84	10,000	10,000							
14	MICRO 350	A		AWNG 4100000 DO40	4/26/84	7,000	7,000							
15	GEOLOGY GRAPHICS SOFTWARE	A		AWLV 4D00000 DO40	5/30/84	25,000	25,000							
16	FOUR CRT TERMINALS W/2 SL PRT	A		AWNF 4B00000 DO40	5/30/84	12,000	12,000							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 45
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 45
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	GRAPHICS SYSTEM - GEOLOGY	A		AWMO 4B00000 DO40	6/19/84	70,000	70,000							
2	SEVEN TERMINALS - PROVO	A		AWNE 4100000 DO40	6/19/84	15,000	15,000							
3	METERED MAIL	A		AWJU 4D00000 DO40	6/20/84	9,966	9,966							
4	ELECTRIC FILE RETRIEVERS	A		AWJV 4D00000 DO40	6/20/84	24,396	24,396							
5	TWO PRO-350 MICROCOMPUTERS	A		AWKN 4100000 DO40	7/ 2/84	20,000	20,000							
6	GRAPHICS TERMINAL	A		AWKR 4100000 DO40	7/ 2/84	20,000	20,000							
7	VAX 750 AND TERMINALS	A		AWLS 4D00000 DO40	7/ 2/84	180,655	180,655							
8	UPGRADE TO VAX 750	A		AWNH 4100000 DO40	7/ 2/84	180,655	180,655							
9	FORK LIFT	A		AWLI 4D00000 DO40	7/18/84	9,600	9,600							
10	GEOLOGY COMPUTER PLOTTER	A		AWJT 4D00000 DO40	8/15/84	13,003	13,003							
11	A.T.AND T. INFORMATION SYSTEMS	A		AWNV 4100000 DO40	9/13/84	27,509	27,509							
12	VAX INTERFACE	A		AWKP 4D00000 DO40	9/19/84	20,000	20,000							
13	MICOM PROCESSOR	A		AWNB 4100000 DO40	9/19/84	30,000	30,000							
14	UPGRADE GRAPHICS TERMINAL	A		AWKO 4100000 DO40	9/28/84	24,000	24,000							
15	UPGRADE GRAPHICS TERMINAL	A		AWKQ 4D00000 DO40	9/28/84	24,000	24,000							
16	SURVEY EQUIPMENT	A		AWLP 4D00000 DO40	10/21/84 1	64,816	64,816							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 46
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 46
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	MICROFILM PRINTER	A		AWJX 4D00000 DO40	12/11/84 1	32,536	32,536							
2	CRANE KNUCKLE BOOM	A		AWKX 4000000 DO40	1/10/85	31,300	31,300							
3	SURVEY EQUIPMENT FOR BCO	A		AWJE 4B00000 DO40	1/16/85	28,600	28,600							
4	DUCHESNE OFFICE GARAGEDOOR MOD TAYCO CONSTRUCTION CO	A		AWJI 4D00000 DO40	2/12/85 4D01870	8,000	8,000							
5	CEILING MOUNTED FIRE EXTINGUIS	A		AWNX 4100000 DO40	2/20/85	10,000	10,000							
6	MICRO-LOGGER EQUIPMENT	A		AWJF 4100000 DO4G	3/ 5/85	77,000	77,000							
7	RIVER MONITORING EQUIPMENT	A		AWMX 4100000 DO40	4/23/85	99,000	99,000							
8	COLOR GRAPHICS HARDCOPY UNIT	A		AWNJ 4D00000 DO40	5/ 7/85	6,000	6,000							
9	GRAPHIC OUTLOOK	A		AWLU 4D00000 DO40	5/ 8/85	3,000	3,000							
10	CALCOMP DIGITIZER	A		AWJO 4D00000 DO40	5/ 9/85	7,438	7,438							
11	TWO TEK TERMINALS/SOFTWARE	A		AWJW 4D00000 DO40	5/10/85	35,990	35,990							
12	15 TERMINALS/2 PRINTERS	A		AWKY 4D00000 DO4P	5/13/85	28,811	28,811							
13	ONE PLOTTER FOR ADP	A		AWLR 4D00000 DO4P	5/13/85	13,635	13,635							
14	DATA BASE MANAGEMENT SYSTEM	A		AWNL 4D00000 DO40	6/ 5/85	4,000	4,000							
15	NEW RADIOS AND BASE STATION MOTOROLA C AND E	A		AWJM 4040000 DO40	6/ 6/85 40X4300	11,000	11,000							
16	PROVO OFFICE EQUIPMENT	A		AWNW 4100000 DO40	6/ 6/85	150,000	150,000							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	DATATRIEVE	A		AWNM 4100000 DO4P	6/28/85	15,000	15,000							
2	INTERIM CADD SYSTEM	A		AWJB 4100000 DO40	7/ 2/85	45,000	45,000							
3	FIVE DECMATE IIIS	A		AWJC 4100000 DO40	7/ 2/85	10,000	10,000							
4	FOUR OA TERMINALS	A		AWJD 4100000 DO40	7/ 2/85	8,000	8,000							
5	UTILITY UPDATES-VAX MEM	A		AWNN 4D00000 DO40	7/10/85	3,600	3,600							
6	HAYLON SYSTEM	A		AWJY 4100000 DO40	7/16/85	5,000	5,000							
7	SECURITY MODIFICATIONS	A		AWKV 4100000 DO40	7/16/85	7,000	7,000							
8	FIVE DISK DRIVE RA81/INTERFACE	A		AWNY 4010000 DO4P	8/ 2/85	140,000	140,000							
9	PROVO OFFICE EQUIPMENT	A		AWJG 4100000 DO40	8/21/85	20,000	20,000							
10	CABLES AND CONNECTORS	A		AWKH 4100000 DO40	8/26/85	6,000	6,000							
11	DATA BASE MANAGEMENT	A		AWKJ 4100000 DO40	8/28/85	6,000	6,000							
12	WORD PROCESSING EQUIPMENT	A		AWKC 4D00000 DO40	9/17/85	50,000	50,000							
13	GRAPHICS UTILITIES	A		AWKS 4100000 DO40	9/17/85	10,000	10,000							
14	MICRO SPECIAL PURPOSE PKGS	A		AWKT 4100000 DO40	9/17/85	10,000	10,000							
15	DOZER D-6	A		AWJR 4B00000 DO40	10/10/85	109,417	109,417							
16	TRUCK MOUNTED CORE DRILL	A		AWJL 4040000 DO4G	10/29/85	240,000	240,000							

LEGEND: ACTIVITY BAR -=PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 48
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 48
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	COMPUTER UPGRADE - GEOLOGY	A		AWJQ 4B00000 DO40	11/ 6/85	45,000	45,000							
2	TWO TERMINALS WITH PRINTER	A		AWNO 4100000 DO40	12/30/85	10,000	10,000							
3	WORK TRUCKS - REPLACEMENTS	A		AWJJ 4040000 DO4G	1/29/86	72,000	72,000							
4	PORT SELECTOR	A		AWMT 4D00000 DO40	3/ 4/86	4,000	4,000							
5	WORK VAN 5TH WHEEL 40 FEET	A		AWNP 4040000 DO4G	4/ 1/86	4,000	4,000							
6	LOW BOY TRAILOR 40 FEET	A		AWHO 4040000 DO4G	4/21/86	19,000	19,000							
7	RA81 WINCHESTER DISK	A		AWHA 4100000 DO40	5/ 1/86	16,000	16,000							
8	TU81 TAPE DRIVE	A		AWKB 4100000 DO40	5/ 1/86	21,000	21,000							
9	TEKTRONIX-CADD UPGRADE	A		AWHC 4100000 DO40	5/21/86	29,000	29,000							
10	LOWBOY TRAILER FOR DOZER	A		AWJS 4B00000 DO40	6/27/86	22,500	22,500							
11	TWO SLAVE PRINTERS	A		AWHQ 4100000 DO40	9/26/86	6,000	6,000							
12	TRUCK MNTD COREDRILL W/HAMMER	A		AWIZ 4040000 DO4G	9/30/86 400440B	186,000	186,000							
13	TRUCK MNTD COREDRILL W/HAMMER	A		AWNT 4040000 DO4G	9/30/86 400440A	186,000	186,000							
14	TEK 4111 TERMINAL	A		AWHD 4100000 DO40	10/15/86	13,000	13,000							
15	TEN VT240 AND TWO 4205 TEK	A		AWHV 4100000 DO40	3/30/87	30,000	30,000							
16	COMPUTERS-9817H (2) HP	A		AWLQ 4B00000 DO40	6/ 3/87	18,000	18,000							

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FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 49
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	INTERFACES 98629A (2)	A		AWMQ 4B00000 DO40	6/ 3/87	2,000	2,000							
2	MICROCOMP SOFTWARE (GEOMIN)	A		AWIK 4D00000 DO40	7/21/87 4004950	15,000	15,000							
3	COMPUTER TERMINALS (11)	A		AWKW 4B00000 DO40	8/ 5/87	27,000	27,000							
4	INTERFACES 98628A (2)	A		AWNA 4B00000 DO40	8/ 5/87	2,000	2,000							
5	LOCAL MASS STORAGE DEVICES (2)	A		AWNK 4B00000 DO40	8/ 5/87	3,000	3,000							
6	CABLES (9) AND MODEMS (2)	A		AWNU 4B00000 DO40	8/ 5/87	2,000	2,000							
7	AUTOMATIC COMPACTOR	A		AWIY 4B00000 DO40	8/26/87	2,000	2,000							
8	VIBRATORY TABLE	A		AWJN 4B00000 DO40	8/26/87	2,000	2,000							
9	WORK TABLES (2) AND CHAIRS (2)	A		AWKA 4B00000 DO40	8/26/87	1,000	1,000							
10	OTHER EQUIPMENT	A		AWKB 4B00000 DO40	8/26/87	5,000	5,000							
11	TEK 4510 RASTERIZER	A		AWHK 4B00000 DO4P	10/14/87	4,400	4,400							
12	FOUR 4205 TEKTRONICS	A		AWIB 4B00000 DO40	11/ 7/87	9,200	9,200							
13	ONE 4205 TEKTRONIC	A		AWIJ 4100000 DO40	11/ 7/87	8,400	8,400							
14	COMMUNICATIONS EQUIPMENT	A		AWIW 4100000 DO40	11/24/87	6,000	6,000							
15	COMMUNICATIONS EQUIPMENT	A		AWID 4100000 DO40	9/19/88	2,700	2,700							
16	THREE USED HP TABLETS	A		AWIQ 4B00000 DO4P	11/15/88	1,500	1,500							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	VEHICLES FOR BCO	A		AWNP 4B00000 DO40	4/ 1/89	998,478	998,478							
2	TERMINAL SERVERS	A		AWIM 4100000 DO40	4/20/89 4B06900	2,799	2,799							
3	NAT GROUTING EQ/TRAILER	A		AWKK 4B00000 DO4P	5/ 5/89	97,988	97,988							
4	NEW EQUIPMENT WATER QUALITY	A		AWII 4100000 DO40	6/89	16,806	16,806							
5	TEKTRONIX GRAPHICS SOFTWARE	A		AWIL 4B00000 DO40	6/28/89 4B07510	4,730	4,730							
6	REPAIR UPO PARKING LOT ASPHALT PAVING	A		AWIC 4100000 DO40	7/23/90 4009670	222,346	222,346							
7	CHIP/SEAL DUCHESNE PARKING LOT	A		AW99 DO/40	5/92	50,000	50,000							
8	***** MINOR CONTRACTS					9,207,819	9,207,819							
9	***** NONCONTRACTS													
10	DESIGN DUCHESNE CAMP/LABS	A		AWBR DO/40	10/72	97,483	97,483							
11	NC SERVICE FACILITIES	A		AWNC	10/78	498,817	498,817							
12	NC UPPER STILLWATER LAB	A		AWBG	10/80	47,740	47,740							
13	DESIGN UTAH PROJECTS OFFICE	A		AWBT DO/40	10/80	287,187	287,187							
14	DESIGN UTAH PROJECTS OFFICEA/E NIELS E VALENTINER AND ASSOC	A		AWBH 4B00000 DO40	1/19/81 40V0720	411,734	411,734							
15	DESIGN DUCHESNE OFFICE A/E SWENSON - SMITH - CRANE	A		AWBL 4D00000 DO40	9/ 3/81 40V0741	103,270	103,270							
16	DESIGN DUCHESNE OFFICE BLDG	A		AWBU DO/40	10/81	111,320	111,320							
17	NC TRAILER HOUSE REPLACEMENT	A		AWEC	10/81	593,060	593,060							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707

CUP, BONNEVILLE UNIT (CRSPP)
UPPER COLORADO REGION
UCRBF-WTR/ENERGY MGMT/DEVELOP

PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION)

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	NC UTAH PROJ OFFICE COMPLEX	A		AWBS	7/82	645,464	645,464							
2	NC EXP TEMP CAMP 1	A		AWEF	7/82	30,000	30,000							
3	NC DUCHESNE OFFICE	A		AWBO	8/82	117,433	117,433							
4	DESIGN MULTIPURPOSE BLDG	A		AWBV DO/40	10/82	18,181	18,181							
5	NC UTILITY CONNECTIONS,SEWER	A		AWEI	10/82	60,000	60,000							
6	NC EXPAND TEMP CAMP 2	A		AWEL	10/82	49,882	49,882							
7	NC GARAGES,MOTORPOOL,REC	A		AWEO	10/82	40,000	40,000							
8	DENVER ADJUSTEMENTS	B		RECC	10/93	10,211,341-	10,211,341-							
9	RECONCILING ADJUSTMENT	B		REC1	10/93	7,131,384-	7,131,384-							
10	***** NONCONTRACTS					14,231,154-	14,231,154-							
11	***** DEPRECIATION/SALVAGE													
12	DEPRECIATION/SALVAGE	A		AWRA	10/10/77	1,617,222	1,617,222							
13	SALVAGE	A		AWSL	10/10/77	830,090-	830,090-							
14	SALVAGE	A		AWSN	10/10/82	2,958,787-	2,958,787-							
15	TRANSFER MULTIPURPOSE BLDG	A		AWRC 4000000	10/ 1/86	453,148-	453,148-							
16	TRANSFER TO FOREST SERVICE	A		AWFS	6/30/89	77,144-	77,144-							
17	CONTINUED SALVAGE	B		AWSM	10/92	186,304-	186,304-							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	***** DEPRECIATION/SALVAGE					2,888,251-	2,888,251-							
2	**** SERVICE FACILITIES/DEPRE/SALVG					7,953,111	7,953,111							
3	**** UTAH LAKE WATER RIGHTS													
4	***** NONCONTRACTS													
5	NC PURCHASE UTAH LAKE WATER	A		AXHB DO/40	10/86	71,036	71,036							
6	**** UTAH LAKE WATER RIGHTS					71,036	71,036							
7	**** I/D ABANDONED INVESTIGATIONS													
8	***** COMPLETED CONTRACTS													
9	I/D SYS ABANDONED INVESTIGATNS	A		AXIA 4100000 DO40	10/85	6,132,164	6,132,164							
10	**** I/D ABANDONED INVESTIGATIONS					6,132,164	6,132,164							
11	**** DFPS SYSTEM ABANDONED INVESTGN													
12	***** COMPLETED CONTRACTS													
13	DFPS SYS ABANDONED INVESTIGTNS	A		AXJA	10/78	8,535,561	8,535,561							
14	EXPLORATORY DRILLING DF PWRPLT R C TOLMAN CONSTR CO, INC	A		AXJB 4100000 DO40	12/21/78 40C0669	75,022	75,022							
15	DRILLING 5TH WATER POWERPLANT HINES DRILLING COMPANY, INC	A		AXJC 4100000 DO40	5/22/80 40C0707	292,829	292,829							
16	HYDROFRACTURE STUDIES DF U S GEOLOGICAL SURVEY	A		AXJD 4100000 DO40	9/30/80 4081580	25,000	25,000							
17	DESIGNSIXTH WTR DAM/DYNE PWR	A		AXJN	10/80	85,577	85,577							
18	DRILL 5TH WATER DAM X L DRILLING COMPANY	A		AXJE 4D00000 DO40	6/ 4/81 40C0738	55,984	55,984							
19	DRILL 5TH WATER TUNNELS ROLLINS, BROWN AND GUNNEL, INC	A		AXJF 4B00000 DO40	6/15/81 40C0739	79,081	79,081							

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	DESIGN SYAR PWRPLNT/FIFTH WTR	A		AXJM	10/81	1,446,073	1,446,073							
2	EXPLORATORY DRILLING-5TH WATER H AND L DIAMOND CORE DRILLING	A		AXJG 4B00000 DO40	7/30/82 4080810	50,182	50,182							
3	ELECTRICAL RESISTIVITY SURVEYS MEIIJI RESOURCES CONSULTANTS	A		AXJH 4100000 DO40	4/20/83 4000420	27,930	27,930							
4	EXPLORAT DRILLING 5TH WATR A/E H AND L DIAMOND CORE DRILLING	A		AXJI 4B00000 DO40	6/29/83 4000810	152,436	152,436							
5	GEOPHYSICAL ANALYSIS A/E MEIIJI RESOURCES CONSULTANTS	A		AXJJ 4100000 DO40	7/15/83 4000430	11,344	11,344							
6	DRILL 5TH WTR RESERVOIR A/E JEX AND MILLER DRILLING	A		AXJK 4B00000 DO40	9/30/83 4001030	95,668	95,668							
7	DFPS ENVIRONMENTAL IMPACT STAT U S FOREST SERVICE	A		AXJL 4100000 DO40	7/16/84 4001560	20,000	20,000							
8	***** COMPLETED CONTRACTS					10,952,687	10,952,687							
9	**** DFPS SYSTEM ABANDONED INVESTGN					10,952,687	10,952,687							
10	**** LELAND BENCH INVESTIGATIONS													
11	***** COMPLETED CONTRACTS													
12	LELAND BENCH INVESTIGATIONS	A		AXLB	10/77	1,133,125	1,133,125							
13	**** LELAND BENCH INVESTIGATIONS					1,133,125	1,133,125							
14	*** UTILIZATION DEVELOPMNT B1U					1,286,345,986	1,224,502,245	8,496,833	5,369,000	4,200,000			43,777,908	
15	** WATER/ENERGY MGMT AND DEVELOP					1,286,345,986	1,224,502,245	8,496,833	5,369,000	4,200,000			43,777,908	
16	* WATER AND RELATED RES UCRBF					1,286,345,986	1,224,502,245	8,496,833	5,369,000	4,200,000			43,777,908	
17	TOTAL PROGRAM COST					1,286,345,986	1,224,502,245	8,496,833	5,369,000	4,200,000			43,777,908	
18	CONSOL EXPEND AND CREDITS			AYAA		4,696,206	4,696,206							

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DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
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PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	OTHER CONSOL. EXPEND & CREDIT					4,696,206	4,696,206							
2	TOTAL EXPENDITURES					1,291,042,192	1,229,198,451	8,496,833	5,369,000	4,200,000			43,777,908	
3	CONTRIBUTIONS C U W C D FY 83				AZQY	10,067,424-	10,067,424-							
4	CONSTRUCTION REVENUES				AZRV	876,000-	876,000-							
5	NONFEDERAL CASH CONTRIBUTIONS					10,943,424-	10,943,424-							
6	TOTAL FEDERAL EXPENDITURES					1,280,098,768	1,218,255,027	8,496,833	5,369,000	4,200,000			43,777,908	
7	TOTAL RECLAMATION EXPENDITURES					1,280,098,768	1,218,255,027	8,496,833	5,369,000	4,200,000			43,777,908	
8	TOTAL FUNDED RECLAMATION EXPENDITURE					1,280,098,768	1,218,255,027	8,496,833	5,369,000	4,200,000			43,777,908	
9	RECOVERIES				RC04		90,710-	90,710						
10	OLMSTEAD				U117	3,744,778-								3,744,778-
11	MARSHALL CLAIM MC01				U133		48	48-						
12	UPPER STILLWATER CCC2				U134		150,009	150,009-						
13	UPPR STILLWATER CRACK REP CCC2				U135		1,350,000	1,350,000-						
14	NC UPPER STILLWATER US01				U136		87,593	87,593-						
15	TAYLOR CANAL DRAINS AFAA				U137		63,748	63,748-						
16	N/C SYAR TUNNEL AJGP				U138		14,436	14,436-						
17	UNDELIVERED ORDERS					3,744,778-	1,575,124	1,575,124-						3,744,778-
18	TOTAL FUNDED RECLAMATION OBLIGATIONS					1,276,353,990	1,219,830,151	6,921,709	5,369,000	4,200,000			43,777,908	3,744,778-

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PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	METHOD OF FINANCING													
2	RECLAMATION													
3	ALLOTMENT OF FUNDS			2004				6,596,000-						
4	ALLOTMENT OF FUNDS			2005					5,369,000-					
5	ALLOTMENT OF NEW FUNDS							6,596,000	5,369,000					
6	PRIOR YEAR FUNDS FOR FY 2004			PY04				235,000-						
7	RECOVERIES B10			RCC4				90,710-						
8	FUNDS FROM PRIOR YEARS							325,710						
9	--VARIANCE WITH P/F TABLE--							1-	34,181					
10	ADDITIONAL FUNDS REQUIRED							1-		4,200,000			43,777,908	3,744,778-

11 F O O T N O T E S

12 01 ESTIMATED TOTAL PROJECT COST BASED UPON PROJECTED OCTOBER
13 1999 PRICE LEVELS

14 02 THESE COSTS ARE FOR BOTTLE HOLLOW DAM AND RESERVOIR

15 03 PER P L 102-575 19,984,000 OF CEILING IS TO GO TO THE
16 UTAH RECLAMATION MITIGATION AND CONSERVATION COMMISSION

17 04 $3,744,778 HAS BEEN OBLIGATED TO COVER THE ESTIMATED AMOUNT
18 NEEDED TO COMPENSATE UTAH POWER AND LIGHT IN THE EVENT THE
19 CONTRACT IS TERMINATED. IF THE CONTRACT REMAINS IN FORCE FOR
20 THE LIFE OF THE PROJECT, THEN THE OBLIGATION WILL BE
21 RECOVERED FOR THE GOVERNMENT.

22 05 JACOB WELBY TRANSFER TO CUWCD $11,043,601 FY 97

LINE	PROGRAM ACTIVITY (1)	IDENT PROP. FUND LEVEL	NOTES (2)	COUNTY/DIST ITEM CODE ADMIN/DESIGN (3)	QUANTITIES AWRD/NTP DATE SPECIFICATION (4)	ESTIMATED TOTAL (5)	TOTALS THRU SEP 30, 2003 /UNDEL ORDER/ (6)	CURRENT FISCAL YEAR 2004 ONDJFMAMJJAS (7)	BUDGET FISCAL YEAR 2005 ONDJFMAMJJAS (8)	FISCAL YEAR 2006 ONDJFMAMJJAS (9)	FISCAL YEAR 2007 ONDJFMAMJJAS (10)	FISCAL YEAR 2008 ONDJFMAMJJAS (11)	FISCAL YEAR 2009 ONDJFMAMJJAS (12)	BALANCE TO COMPLETE (13)
1	MEMORANDUM COSTS													
2	LAND AND RIGHTS COSTS					57,922,048	54,177,270						3,744,778	
3	CONTRACT COSTS					948,875,734	893,949,447	5,983,757	4,709,400	4,200,000			40,033,130	
4	MINOR CONTRACTS					1,310,267	1,310,267							
5	TOTAL NONCONTRACT COSTS					281,126,188	277,953,512	2,513,076	659,600					
6	OPERATING OFFICE ACTIVITIES					281,126,188	277,953,512	2,513,076	659,600					

LEGEND: ACTIVITY BAR --PRECONSTRUCTION *=BOTH PRECONSTRUCTION AND CONSTRUCTION X=UNDER CONSTRUCTION ONLY REVISED DATE 10/07/04 AT FOR LEVEL P INDEX PAGE 57
FLAGGED ACTIONS D=DATA F=DESIGN S=SPECS B=BID N=NEGOTIATE A=AWARD C=CONSTRUCTION Q=ACQUIRED P=PROCURED U=UNUSED PERIOD L=LAND M=MINOR G=GRANT/LOAN REPORT PAGE 57
DATABASE FILES USED-- DESC732 NATURAL DESCRIPTIONS UPDATED 04/10/08 AT 1414 FUND732 WORKING P/F TABLE UPDATED 04/10/12 AT 1340 CUP, BONNEVILLE UNIT (CRSPP)
PROG732 UC NATURAL PROGFILE UPDATED 04/10/14 AT 0707 UPPER COLORADO REGION
PCUCRR01 U.S. DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION PF-2B SCHEDULES USING ESTIMATED DATES (WORKING VERSION) UCRBF-WTR/ENERGY MGMT/DEVELOP