



0000041574

NEW APPLICATION

Original

W-01698A-01-0323

Sun Valley Utilities
P.O. Box 4054
Sun Valley, AZ 86029

RECEIVED
AZ CORP COMMISSION

APR 16 12 30 PM '01

DOCUMENT CONTROL

Docket Control
Arizona Corporation Commission
1200 w. Washington St.
Phoenix, Arizona

Attached is an application by Sun Valley Utilities for an extension of certificate of convenience. The purpose of this application is to expand our certificate of convenience to include section 11 township 18 north range 21 east. We have been supplying water to this area since 1974 and it is a mile outside our area and Sun Valley Utilities would like to include this section in our area. At the time the original service line was put in there was only one customer and now there is another customer moving into the area, Sun Valley Utilities feels it should include this section into their certificate of convenience This area is not included in anyone else's area.

Jack Vicars
President
Sun valley Utilities

ARIZONA CORPORATION COMMISSION

**APPLICATION FOR AN EXTENSION OF CERTIFICATE OF CONVENIENCE AND
NECESSITY**

WATER AND/OR SEWER

A. The name, address and telephone number of the Applicant is:

SUN VALLEY UTILITIES INC. 520-524-3515
BOX 4054 SUN VALLEY AZ 86029

B. The name, address and telephone number of management contact is:

JACK VICARS - 520-524-3515
BOX 4112
SUN VALLEY AZ 86029

C. List the name, address and telephone number of the operator certified by the Arizona Department of Environmental Quality:

RON EISELE 520-524-2630
BOX 883
HOLBROOK AZ 86025

D. List the name, address and telephone number of the attorney for the Applicant:

NA

E. Attach the following documents that apply to you:

1. Certificate of Good Standing (if corporation)

2. Corporate Resolution Authorizing this application (if required by the corporation's Articles of Incorporation)

F. Attach a legal description of the area requested by either **CADASTRAL** (quarter section description) or **Metes and Bounds** survey. References to parcels and docket numbers will not be accepted.

G. Attach a detailed map using the form provided as attachment B. Shade and outline the area requested. Also indicate the present certificated area by using different colors.

H. Attach a current balance sheet and profit and loss statement.

I. Provide the following information:

1. Indicate the estimated number of customers, by class, to be served in the new area in each of the next five years:

Residential:

First Year 0 Second Year 0 Third Year 0 Fourth Year 0
Fifth Year 0

Commercial:

First Year 2 Second Year 2 Third Year 2 Fourth Year 2
Fifth Year 2

Industrial:

First Year 0 Second Year 0 Third Year 0 Fourth Year 0
Fifth Year 0

Irrigation:

First Year 0 Second Year 0 Third Year 0 Fourth Year 0
Fifth Year 0

Other: (specify)

First Year 0 Second Year 0 Third Year 0 Fourth Year 0
Fifth Year 0

2. **(WATER ONLY)** Indicate the projected annual water consumption, in gallons, for each of the customer classes in the new area for each of the next five years:

Residential:

First Year 0 Second Year 0 Third Year 0
Fourth Year 0 Fifth Year 0

Commercial:

First Year _____ Second Year _____ Third Year _____
Fourth Year _____ Fifth Year _____

Industrial:

First Year 0 Second Year 0 Third Year 0
Fourth Year 0 Fifth Year 0

Irrigation:

First Year 0 Second Year 0 Third Year 0
Fourth Year 0 Fifth Year 0

3. Indicate the total estimated annual operating revenue from the new area for each of the next five years:

First Year \$ 24,000⁰⁰ Second Year \$ 24,000⁰⁰ Third Year 24,000⁰⁰
Fourth Year \$ 24,000⁰⁰ Fifth Year \$ 24,000⁰⁰

- Complete Attachment "D" (Water Use Data Sheet) for the past 13 months

4. Indicate the total estimated annual operating expenses attributable to the new area for each of the next five years:

First Year \$ 15000⁰⁰ Second Year \$ 15000⁰⁰ Third Year \$ 15000⁰⁰
Fourth Year \$ 15000⁰⁰ Fifth Year \$ 15000⁰⁰

J. Total estimated cost to construct utility facilities to serve customers in the requested area:

utility facilities already exist

K. Explain method of financing utility facilities (see paragraph 8 of instructions)

N/A

L. Estimated starting and completion date of construction of utility facilities:

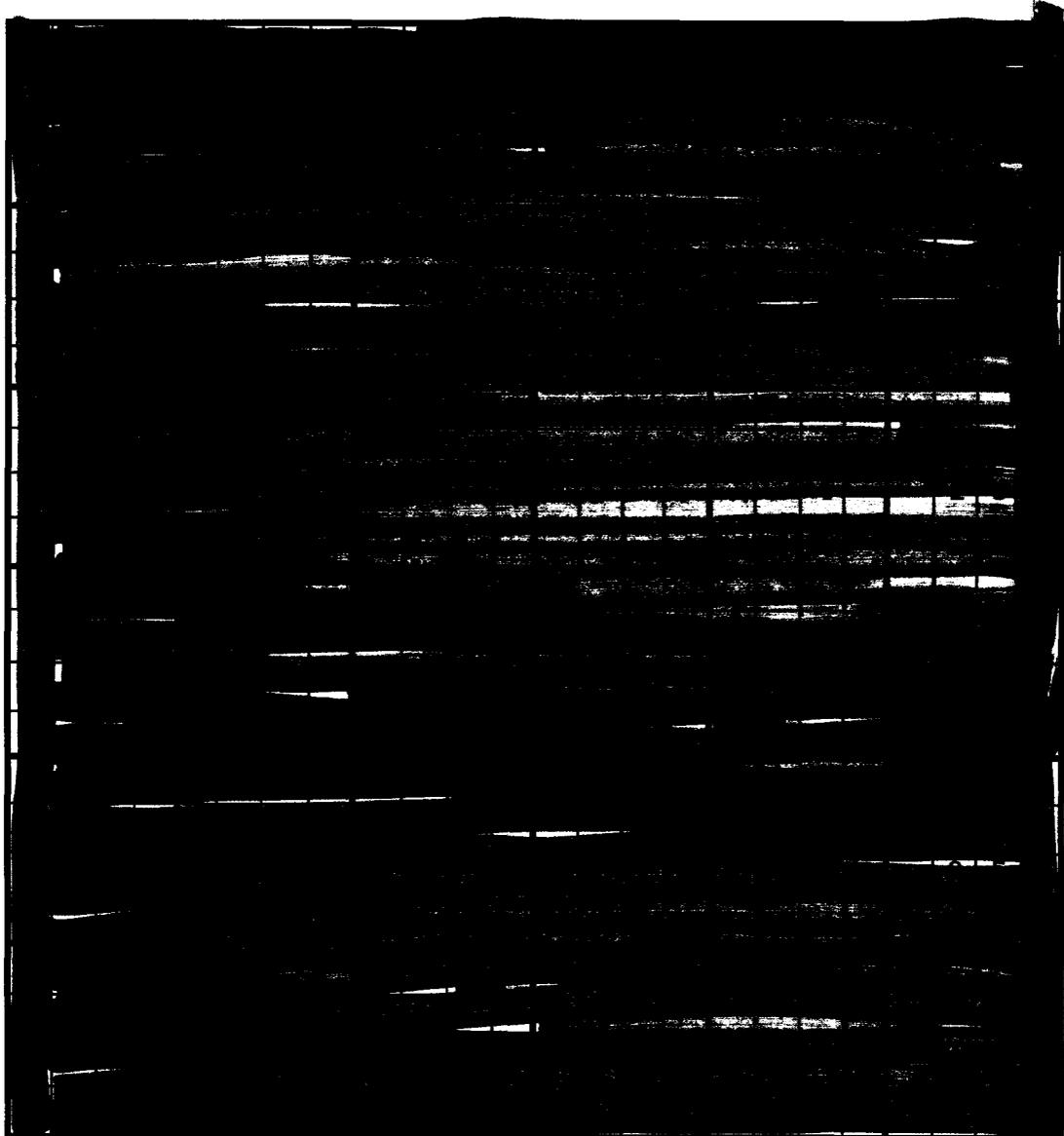
Starting date N/A Completion date N/A

M. Attach the following permits:

1. Franchise from either the City or County for the area requested.
2. Arizona Department of Environmental Quality or designee's approval to construct facilities.
3. Arizona State Land Department approval. (If you are including any State land in your requested area this approval is needed.)
4. U.S. Forest Service approval. (If you are including any U.S. Forest Service land in your requested area this approval is needed.)
5. **(WATER ONLY)** If the area requested is within an Active Management Area, attach a copy of, either the utility's Designation of an Assured Water Supply, or the developer's Certificate of 100 Year Assured Water Supply issued by the Arizona Department of Water Resources.
 - If the area requested is outside an Active Management Area, attach the developer's Adequacy Statement issued by the Arizona Department of Water Resources if applied for by the developer.

ATTACHMENT "B"

NAVAJO	11	18 NORTH	21 EAST
COUNTY	SECTION	TOWNSHIP	RANGE



Type or Print Description Here:

ALL OF SECTION 11 TOWNSHIP 18 NORTH RANGE 21 EAST

ATTACHMENT "D"

WATER USE DATA SHEET

NAME OF COMPANY _____	<u>SUN VALLEY UTILITIES</u>
ADEQ Public Water System No. _____	<u>09001</u>

MONTH/YEAR (Last 13 Months)	<u>NUMBER OF CUSTOMERS</u>	GALLONS SOLD (Thousands)
01-01-2000	79	2651627
02-01-2000	79	2762224
03-01-2000	79	2831572
04-01-2000	79	2583764
05-01-2000	79	2850776
06-01-2000	79	3292374
07-01-2000	79	3274242
08-01-2000	79	3347215
09-01-2000	79	4077310
10-01-2000	79	3960243
11-01-2000	79	3240606
12-01-2000	79	3133838
01-01-2001	79	3004264

STORAGE TANK CAPACITY (Gallons)	NUMBER OF EACH	ARIZONA DEPT. OF WATER RESOURCES WELL I.D. NUMBER	WELL PRODUCTION (Gallons per Minute)
50000	1	DWR 55-524778	90
28000	1	DWR 55-800251	65
5000	1		
2000	1		

Other Water Sources in Gallons per Minute →	<u>GPM</u> NA
Fire Hydrants on System →	<input checked="" type="radio"/> Yes <input type="radio"/> No
Total Water Pumped Last 13 Months (Gallons in Thousands) →	41010055

STATE OF ARIZONA



Office of the
CORPORATION COMMISSION

To all to whom these presents shall come, greeting:

I, Brian C. McNeil, Executive Secretary of the Arizona Corporation Commission, do hereby certify that

*****SUN VALLEY UTILITIES, INC.*****

a domestic corporation organized under the laws of the state of Arizona, did incorporate on April 14, 1988.

I further certify that this corporation has filed all affidavits and annual reports and paid all filing fees required to date and, therefore, is in good standing in this state.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Arizona Corporation Commission. Done at Phoenix, the Capitol, this 26th day of March, 2001, A. D.



[Signature]
Executive Secretary

BY: *[Signature]*

CORPORATIONS DIVISION
RECORDS SECTION
1300 West Washington
Phoenix, Arizona 85007-2929

User Id: SYLVIAA
Invoice No.: 1018487

Check Batch:
Invoice Date: 03/26/2001
Date Received: 03/26/2001
Customer No.:

ATTN:
(CASH CUSTOMER)

Quantity	Description	Amount
1	CERTIFICATE OF GS -0204384-2 SUN VALLEY UTILITIES, INC.	\$10.00
	Total Documents: \$	10.00
	PAYMENT CHECK 2607	\$10.00
	Balance Due: \$	0.00

District I
PERCY DEAL
P.O. Box 365
Oraibi, AZ 86039
Phone: 725-3460/3121

District II
JESSE THOMPSON
P.O. Box 504
Kykotsmovi, AZ 86039
Phone 524-4053

District III
J.R. DESPAIN
P.O. Box 291
Holbrook, AZ 86025
Phone 524-3597

District IV
LEWIS TENNEY
P.O. Box 219
Heber, AZ 85928
Phone 535-4453

District V
JERRY BROWNLOW
P.O. Box 129
Pinetop, AZ 85935
Phone 367-3516

NAVAJO COUNTY BOARD OF SUPERVISORS

Governmental Complex - NC #18

P.O. Box 668 - 100 E. Carter Drive
Holbrook, AZ 86025

PHONE (520) 524-4053 FAX (520) 524-4239

E-Mail: ncbos@co.navajo.az.us

EDWARD J. KOURY
County Manager

JUDY JONES
Clerk of the Board

PUBLIC HEARING NAVAJO COUNTY BOARD OF SUPERVISORS AGENDA MONDAY, APRIL 9, 2001

Pursuant to ARS § 38-431.02, notice is hereby given to the members of the Board of Supervisors of Navajo County and to the General Public that the Board will hold a meeting open to the public on **Monday, April 9, 2001**, in the Supervisors' Chambers, Navajo County Governmental Center, Holbrook, Arizona. As indicated in the following agenda, the Board may vote to go into executive session, which will not be open to the public to discuss certain matters.

Pursuant to the Americans with Disabilities Act (ADA) the Navajo County Board of Supervisors endeavors to ensure the accessibility of its meetings to all persons with disabilities. If you need an accommodation for a meeting, please contact the Board of Supervisors' Office at (520) 524-4053, TDD# (520) 524-4294 at least 48 hours prior to the meeting so that an accommodation can be arranged.

- 9:00 **CALL TO THE PUBLIC:** Individuals may address the board on any issue within the jurisdiction of the board. At the conclusion of the call to the public, individual members may respond if any criticism is made by those who have addressed the board, may ask staff to review a matter or may ask that a matter be placed on a future agenda. The board cannot otherwise discuss or take legal action on matters raised during the call to the public. Individuals are limited to 5 minutes for presentation.
- 9:05 **CONSENT AGENDA** items are considered by the Board of Supervisors to be routine or administrative in nature and will be enacted by one motion approving the items in the form listed below. (There will be no separate discussion of these items; if discussion of a particular item is requested, the item will be removed from the Consent Agenda and considered separately.)
- 1) Board of Supervisors Meeting Minutes: April 2, 2001
 - 2) Voucher List for Payment
 - 3) **Resolution** in Support of Forest Bio-Mass Energy Proposal (EECO)
- 9:10 **HOLBROOK HIGH SCHOOL:** Paul Demuth, Guidance Counselor and Daniel Pecotte, Student
Discussion and possible board action re: Request funding from District III Special Project Funds to assist with costs for a student to attend the National Summit of Young Technology Leaders
- 9:15 **TREASURER'S OFFICE:** Sandra Heward, Chief Deputy
Discussion and possible board action re: Authorization to reissue Treasurer's checks #890 and #308 per ARS §11-644 (Failure to present county check or warrant for payment; notice; claim)
- 9:20 **ADMINISTRATION:** Eddie Koury, County Manager
Discussion and possible board action re: Splitting Forest Fees between the Eleven School Districts and the Road Fund

Application for Franchise

Exhibit A

Applicant: Sun Valley Utilities

By: David Singer

Title: Board Member, Sun Valley Utilities

We are petitioning the Navajo County Board of Supervisors for the following renewals, addition, and deletions of franchise:

Renewals: Sections 12, 13, 24, 25 of Township 18 North, Range 21 East, Sections 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 29, 30 of Township 18 North, Range 22 East, Gila and Salt River Base & Meridian, Navajo County, Arizona.

Addition: Section 11 of Township 18 North, Range 21 East, G&SRB&M, Navajo County, Arizona.

This is the area of I-40 / Route 77 interchange, exit 292. Location of Holbrook Truck Plaza and other businesses requesting water service from Sun Valley Utilities.

Deletions: Sections 18, 19, 20, 21, 29, 30, 31, 32, 33 of Township 19 North, Range 22 East, G&SRB&M, Navajo County, Arizona.

No development of water service has occurred during previous franchise periods. We do not anticipate any development in the foreseeable future. Therefore we would like to forfeit these sections of franchise.

Affidavit of Publication

State of Arizona,)
)ss.
County of Navajo,)

I, Francie Payne, being duly sworn, depose and say: I am

General Manager of THE HOLBROOK TRIBUNE-NEWS, a newspaper of general circulation published at Holbrook, County of Navajo and State of Arizona; that the Legal #4838 Public Notice of an Application for an Extension of its Certificate of Convenience and Necessity by Sun Valley Utilities, Inc.

attached hereto, was published in said newspaper, THE HOLBROOK TRIBUNE-NEWS, for 1 issues, and said notice was published in the regular and entire issue of every number of the paper during the period of the time of publication and was published in the newspaper proper and not in a supplement, the first

publication being dated March 2, ~~19x2001~~ and the last

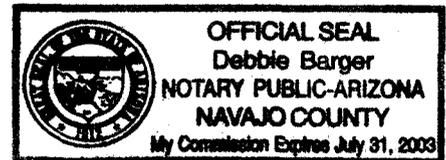
publication being dated March 2, ~~19x2001~~

Publication Dates: 3/2

Francie Payne

SUBSCRIBED AND SWORN TO before me this 2nd day of

March, ~~19x2001~~



Debbie Barger

NOTARY PUBLIC

My commission expires July 31, 2003

PUBLIC NOTICE OF AN APPLICATION FOR AN EXTENSION OF ITS CERTIFICATE OF CONVENIENCE AND NECESSITY BY SUN VALLEY UTILITIES, INC.

Sun Valley Utilities has filed with the Arizona Corporation Commission ("Commission") an application for authority for an extension of its Certificate of Convenience and Necessity to provide water service. Our records indicate that you are either currently a customer of Sun Valley Utilities or are a property owner in the proposed extension area. If the application is granted, Sun Valley Utilities would be the exclusive provider of water service to the proposed area. Sun Valley Utilities will be required by the Commission to provide this service under the rates and charges and terms and conditions established by the Commission. The granting of the application would not necessarily prohibit an individual from providing service to themselves from individually owned facilities on their property. The application is available for inspection during regular business hours at the office of the Commission in (Phoenix at 1200 West Washington Street/Tucson at 400 West Congress, North Building, Room 218), and at [Sun Valley Utilities, P.O. Box 4054, Sun Valley, Arizona 86029].

The Commission will hold a hearing on this matter. As a property owner, or customer, you may be entitled to intervene in the proceeding. If you do not want to intervene, you may appear at the hearing and make a statement on your behalf. You may contact the Commission at the address and telephone number listed below for the date and time of the hearing and for more information on intervention. You may not receive any further notice of the proceeding unless requested by you.

If you have any questions or concerns about this application or have any objections to its approval, or wish to make a statement in support of it, you may contact the Consumer Services Section of the Commission at [1200 West Washington Street, Phoenix, Arizona 85007 or call 1-800-222-7000/400 West Congress, North Building, Room 218, Tucson, Arizona 85701 or call 1-800-535-0148].

T3/2 4838

ARIZONA CORPORATION COMMISSION
UTILITIES DIVISION

ANNUAL REPORT MAILING LABEL - MAKE CHANGES AS NECESSARY

W-01698A WATER
SUN VALLEY UTILITIES, INC.
PO BOX 4054
SUN VALLEY AZ 86029-0000

ANNUAL REPORT

FOR YEAR ENDING

12	31	2000
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FOR COMMISSION USE

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COMPANY NAME

Sun Valley Utilities, Inc.

BALANCE SHEET

Acct. No.		BALANCE AT BEGINNING OF YEAR	BALANCE AT END OF YEAR
	ASSETS		
	CURRENT AND ACCRUED ASSETS		
131	Cash	\$	\$ 450
134	Working Funds	13,800	15,767
135	Temporary Cash Investments	51,521	54,571
141	Customer Accounts Receivable		
146	Notes/Receivables from Associated Companies		
151	Plant Material and Supplies		
162	Prepayments		2,291
174	Miscellaneous Current and Accrued Assets		
	TOTAL CURRENT AND ACCRUED ASSETS	\$ 65,321	\$ 73,059
	FIXED ASSETS		
101	Utility Plant in Service	\$ 216,571	\$ 216,571
103	Property Held for Future Use	2,372	2,372
105	Construction Work in Progress		
108	Accumulated Depreciation – Utility Plant		
121	Non-Utility Property		
122	Accumulated Depreciation – Non Utility		
	TOTAL FIXED ASSETS	\$ 218,943	\$ 218,943
	TOTAL ASSETS	\$ 284,264	\$ 292,002

NOTE: The Assets on this page should be equal to **Total Liabilities and Capital** on the following page.

BALANCE SHEET (CONTINUED)

Acct. No.		BALANCE AT BEGINNING OF YEAR	BALANCE AT END OF YEAR
LIABILITIES			
CURRENT LIABILITES			
231	Accounts Payable	\$	\$
232	Notes Payable (Current Portion)		
234	Notes/Accounts Payable to Associated Companies		
235	Customer Deposits		
236	Accrued Taxes	440	529
237	Accrued Interest		
241	Miscellaneous Current and Accrued Liabilities		
	TOTAL CURRENT LIABILITIES	\$ 440	\$ 529
LONG-TERM DEBT (Over 12 Months)			
224	Long-Term Notes and Bonds	\$ 0	\$ 0
DEFERRED CREDITS			
251	Unamortized Premium on Debt	\$	\$
252	Advances in Aid of Construction		
255	Accumulated Deferred Investment Tax Credits		
271	Contributions in Aid of Construction		
272	Less: Amortization of Contributions		
281	Accumulated Deferred Income Tax		
	TOTAL DEFERRED CREDITS	\$ 0	\$ 0
	TOTAL LIABILITIES	\$ 0	\$ 0
CAPITAL ACCOUNTS			
201	Common Stock Issued	\$	\$
211	Paid in Capital in Excess of Par Value		
215	Retained Earnings / Unrestricted Assets	283,824	291,473
218	Proprietary Capital (Sole Props and Partnerships)		
	TOTAL CAPITAL	\$	\$
	TOTAL LIABILITIES AND CAPITAL	\$ 284,264	\$ 292,002

COMPANY NAME

Sun Valley Utilities, Inc.

COMPARATIVE STATEMENT OF INCOME AND EXPENSE

Acct. No.	OPERATING REVENUES	PRIOR YEAR	CURRENT YEAR
461	Metered Water Revenue	\$ 43,263	\$ 42,206
460	Unmetered Water Revenue		
474	Other Water Revenues		
	TOTAL REVENUES	\$ 43,263	\$ 42,206
	OPERATING EXPENSES		
601	Salaries and Wages	\$ 11,016	\$ 11,016
610	Purchased Water		
615	Purchased Power	8,351	8,746
618	Chemicals	2,625	1,578
620	Repairs and Maintenance	2,609	429
621	Office Supplies and Expense	1,819	1,035
630	Outside Services	2,760	1,185
635	Water Testing		
641	Rents		
650	Transportation Expenses		
657	Insurance - General Liability		
659	Insurance - Health and Life		
666	Regulatory Commission Expense - Rate Case		
675	Miscellaneous Expense	2,994	5,080
403	Depreciation Expense		
408	Taxes Other Than Income	3,883	974
408.11	Property Taxes	0	5,296
409	Income Tax		
	TOTAL OPERATING EXPENSES	\$ 36,057	\$ 35,339
	OTHER INCOME/EXPENSE		
419	Interest and Dividend Income	\$ 1,483	\$ 3,116
421	Non-Utility Income		
426	Miscellaneous Non-Utility Expenses		
427	Interest Expense	1,483	3,116
	TOTAL OTHER INCOME/EXP	\$	\$
	NET INCOME/(LOSS)	\$ 8,689	\$ 9,983

- If the area requested is outside an Active Management Area and the developer does not obtain an Adequacy Statement, provide sufficient detailed information to prove that adequate water exists to provide water to the area requested.

Jack Vicars

(Signature of Authorized Representative)

JACK VICARS

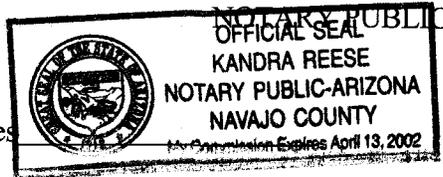
(Print or Type Name Here)

President - San Geronimo Utilities

(Title)

SUBSCRIBED AND SWORN to before me this 12 day of April, 2001

Kandra Reese



My Commission Expires

EXHIBIT
SET
admitted

MEMORANDUM

RECEIVED

2001 JUL 16 A 11:27

TO: Docket Control
Arizona Corporation Commission

AZ CORP COMMISSION
DOCUMENT CONTROL

FROM: Deborah R. Scott
Director
for Utilities Division

RECEIVED

JUL 16 2001

Date: July 11, 2001

LEGAL DIV.
ARIZ. CORPORATION COMMISSION

RE: SUN VALLEY UTILITIES, INC. (DOCKET NO. W-01698A-01-0323)
APPLICATION FOR APPROVAL OF AN EXTENSION OF THE
CERTIFICATE OF CONVENIENCE AND NECESSITY.

Attached is the Staff Report for the above referenced applications. Staff is recommending approval of the application following a hearing.

Originator: Jim Fisher

Attachment: Original and Eleven Copies

STAFF REPORT
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

SUN VALLEY UTILITIES, INC.- APPLICATION FOR APPROVAL OF AN
EXTENSION OF THE CERTIFICATE OF CONVENIENCE AND NECESSITY.

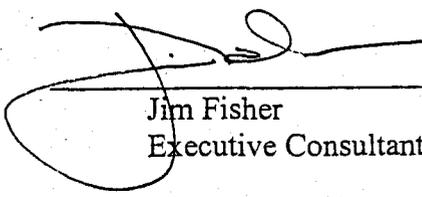
DOCKET NO. W-01698A-01-0323

JULY 2001

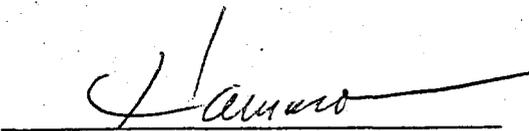
STAFF ACKNOWLEDGEMENT

The Staff members designated below contributed elements of this Staff Report.

Contributing Staff:



Jim Fisher
Executive Consultant II



Lyndon Hammon
Utilities Engineer

Introduction

On April 16, 2001, Sun Valley Utilities, Inc., ("Sun Valley") filed with the Arizona Corporation Commission ("ACC") an application for an extension of their certificate of convenience and necessity ("CC&N") to provide water service in portions of Navajo, County, Arizona.

Background

Sun Valley provides service to 79 customers in Navajo, County. By this application Sun Valley seeks to extend their certificated area to include the Holbrook Truck Plaza, a customer location the company has been serving since 1974.

The company is specifically seeking an extension into Section 11, Township 18, North Range 21 East. This area is near the Interstate 40 and Route 77 interchange, location of the Holbrook Truck Plaza. The area is approximately one mile from the current Sun Valley certificated service territory.

On April 30, 2001, Sun Valley received a non-exclusive franchise from the Navajo County Board of Supervisors, which includes the extension area.

All property taxes have been paid in full and in a timely manner.

Capacity

The CC&N extension would add a demand of about 20,000 gallons per month. This would leave capacity for the Company to add about 50 residential customers to its present service base of 79 customers. The Company has experienced little or no growth in the past 5 years.

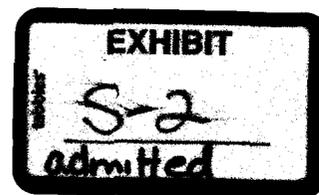
DEQ Compliance

DEQ reported total compliance with the state drinking water rules. DEQ certified that the water system is delivering water that does not exceed any maximum contaminant level and meets the water quality standards of the Safe Drinking Water Act.

Recommendations

Staff recommends that the Commission grant approval of Sun Valley Utilities, Inc.'s application to extend the Certificate of Convenience and Necessity consistent with this report.

Staff further recommends that Sun Valley Utilities, Inc. be ordered to charge its existing rates and charges in the extension area.



STAFF EXHIBIT A

Calculation Of Extra Capacity For

Sun Valley Utilities

Total well production is 155 gallons per minute, or (1440 minutes per day)x(155)
= 223,200 gallons per day.

Peak month use was 4,077,310 gallons in September, or

$$\frac{(4,077,310 \text{ gallons})(\text{month})}{(\text{month}) \quad (30 \text{ days})} = 135,910 \frac{\text{gallons}}{\text{day}} \text{ (average daily use during September)}$$

Assume ratio of peak month day to average monthly day is 1.25. Therefore demand on peak day in peak month is:

$$\frac{(135,910 \text{ gallons}) (1.25 \text{ peaking})}{(\text{day})} = 169,887 \frac{\text{gallons}}{\text{day}} \text{ (peak day, peak month)}$$

Therefore, extra capacity is:

$$\frac{223,200 \text{ gallons}}{\text{day}} - \frac{169,887 \text{ gallons}}{\text{day}} = \frac{53,313 \text{ gallons}}{\text{day}}$$

SUMMARY OF CASE

UTILITIES DIVISION

DOCKET NO. W-01698A-01-0323 TYPE OF CASE CC4N Application

APPLICANT
RESPONDENT
COMPLAINANT Sun Valley Utilities, Inc.

APPLICATION SUBMITTED BY _____

PLACE 1200 W. Washington, Phx, AZ DATE August 14, 2001

BEFORE: Chairman _____

Commissioner _____

Commissioner _____

Hearing Officer ALJ Marc E. Stern

APPEARANCES: (For Applicants) Mr. Jack Vicars, Sun Valley Utilities

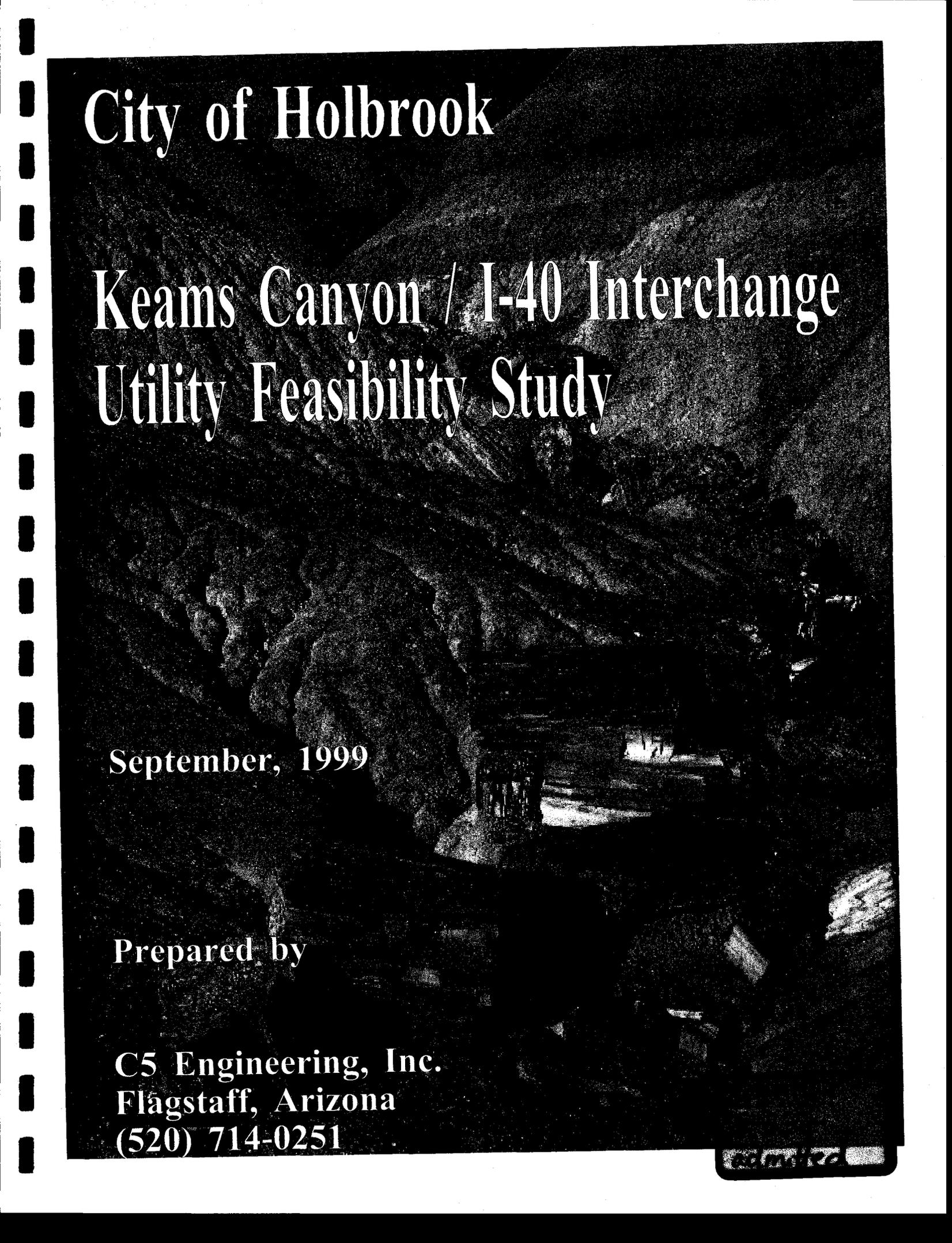
APPEARANCES: (In Opposition) Intervenors Gary & Lillian Darling
by Hammond & Tobler, P.C.
Mr. Doug Tobler

APPEARANCES: (Staff) Arizona Corporation Commission, Legal
Division by Mr. Jason Gelman

DISPOSITION OF CASE Taken under advisement

Nancy P. Bledsoe
Official Reporter

COMMISSION REMARKS: _____



City of Holbrook

**Keams Canyon / I-40 Interchange
Utility Feasibility Study**

September, 1999

Prepared by

**C5 Engineering, Inc.
Flagstaff, Arizona
(520) 714-0251**

C5 Engineering, Inc.

Water and Wastewater Engineering

7580 North Rain Valley Road
Flagstaff, Arizona 86004
(520) 714-0251 Business
(520) 714-0243 Fax

September 6, 1999

Mr. Roy Hunt
City Manager
465 1st Avenue
P.O. Box 70
Holbrook, Arizona 86025

Subject: Keams Canyon / I-40 Interchange
Utility Feasibility Study

Dear Roy:

It is with great pleasure that I submit this final version of the Keams Canyon / I-40 Interchange Utility Feasibility Study. For your ease of use I have furnished an Executive Summary just before the following report sections:

- ▶ Section 1 - Scope of Work
- ▶ Section 2 - Existing Businesses and Existing Infrastructure
- ▶ Section 3 - Current and Future Water Flow Projections
- ▶ Section 4 - Conceptual Future Water Facilities
- ▶ Section 5 - Current and Future Wastewater Flow Projections
- ▶ Section 6 - Conceptual Future Wastewater Facilities
- ▶ Section 7 - Conceptual Construction Cost Estimates

After you have read this final version, should you wish, I would be happy to present a summarized version of this report to the City Council.

As always, thank you very much for allowing C5 Engineering to be such an integral part of the City's planning process and engineering efforts.

Sincerely,

James H. Christian, P.E.
Executive Vice President

xc: Mr. Ron Eisele

1	Scope of Work
2	Existing Businesses and Existing Infrastructure
3	Current and Future Water Flow Projections
4	Conceptual Future Water Facilities
5	Current and Future Wastewater Flow Projections
6	Conceptual Future Wastewater Facilities
7	Conceptual Construction Cost Estimates
8	Appendices

Executive Summary

The Keams Canyon Interchange, approximately 4 miles east on Interstate 40 from the City of Holbrook (City) city limits, has very limited potable water and sewer service. This area would have a very strong potential for growth if additional water and sewer services were extended from the City.

Currently the Shipley-Phillips Truck Terminal is the single largest user of potable water in this area and the single largest producer of sewage. Shipley-Phillips gets their water from the Sun Valley Water District, and, in turn, Shipley-Phillips is Sun Valley's largest water customer. Should Shipley-Phillips acquire their water from another source other than Sun Valley, Sun Valley would most likely desire to have Sun Valley's water supplied from that same source (i.e., the City of Holbrook in this case).

Shipley-Phillips uses two City sewer pumping stations to pump their sewage from their terminal to the City's sewer collection system via a 4-inch sewer forcemain. However, it is becoming a more common occurrence to have the sewage pumping station nearly over flow due to its' two limited wet well sizes.

Another user of water and producer of sewage is the International Petrified Forest (IPF). Currently IPF hauls their water to their facility and disposes of their sewage via a septic tank and leach field. Should the City extend services out to their facility, IPF would be very interested in using the City's services.

Beyond these two main uses, several other land and potential business owners were interviewed as to what they would build if water and sewerage were not an issue. Table 3-1 is a summary of those potential future businesses and services.

After evaluating these water needs found in Table 3-1, a phased approach was developed to estimated how much and when these water needs would come about. Table 3-6 below summarizes these phased water needs.

Table 3-6, Summary of Phased Water Needs

Flow Rate	Existing Flows	Phase 1 Flows (0 to 5 Years)	Phase 2 Flows (5 to 10 Years)	Phase 3 Flows (10 to 15 Years)
Gallons Per Day (GPD)	34,333	108,616	146,916	197,956
Gallons Per Minute (GPM)	72	210	267	367

After establishing the above water needs, several computer models were developed to determine the water pipeline sizes, requirements for a booster pumping station, and other elements required to have a functional water system extending from the City's current water system out to the Keams Canyon Interchange. It was determined that a booster pumping station is required at the base of the existing elevated water storage tank. The pipeline will need to be 8-inches in diameter from the booster pumping station to the Keams Canyon interchange.

Table 3-1, Summary of Total Existing and Projected Water Needs

Area No. on Map	Information Source	Location	Main Description	Estimated Unit Flow		Estimated Total Area Flow	
				GPD	GPM	GPD	GPM
1	City / Bill Jeffers	North Side of I-40 by Airport	(30) 1 Ac Commercial Lots	24,000	40.00	24,000	40.00
2	Bill Jeffers	North Side of I-40 by Airport	(10) 5 Ac Ranches	8,000	13.33	8,000	13.33
3	Marvin Hatch	North Side of I-40	(10) 5 Ac Ranches	8,000	11.11	8,000	11.11
4	Dale Phillips	Keams Canyon - North Side	Existing Truck Stop Existing Water Consumption Additional Water Needs Now	33,333 33,333	69.44 69.44	66,666	138.89
5	Gary Darling	Keams Canyon - North Side	Opposite of existing truck stop 100 Room Motel 100 Person Sit-down Restaurant C Store with Gas & Fast Food 50 Space RV Park for Passenger Cars Small Park w/ Restroom & Grass Area Big Rig RV Park 100 Spaces, Showers, Restrooms Laundry Facility	5,600 5,000 3,300 5,800 1,000	11.67 4.63 3.06 12.08 16.67	35,050	78.00
6	Gary Scaram (Hatch)	Keams Canyon - South Side	International Petrified Forest Existing Use Hydroponics Planting 140 Room Motel 125 Person Sit-down Restaurant Fast Food Restaurant	1,000 3,000 7,840 6,250 2,250	2.08 2.08 16.33 5.79 2.08	20,340	28.37
7	Gary Scaram (Hatch)	Exit 289 - South Side	(16) 5 Ac Ranches	12,800	17.78	12,800	17.78
8	Gary Scaram (Hatch)	Exit 289 - South Side	Truck Stop Gas Station Truck Wash 125 Person Sit-down Restaurant 50 Space RV Park	1,050 10,000 6,250 5,800	0.97 20.83 5.79 12.08	23,100	39.68
Total Flows				197,956	367.15	197,956	367.15

Minimal fire protection can be obtained out at the Keams Canyon interchange by installing the City's two existing 25,000 gallon water tanks coupled with installing one new electric 1000 gpm fire pump. This configuration will result in a fire flow of 1000 gpm for approximately one hour.

Analyzing the water flows developed above, it was determined that the following four options should be analyzed to transport potable water out to the Keams Canyon Interchange area:

Water Option 1 - New 8-inch Water Pipeline without Fire Protection and without Bladder Tanks

Construct a new booster pumping station and an 8-inch water pipeline to transport potable water from the City out to the Keams Canyon Interchange. The general pipeline alignment is as shown on Drawing 4-1 and Drawing 4-2, Future Water System.

Water Option 2 - New 8-inch Water Pipeline without Fire Protection and with Bladder Tanks

Construct a new booster pumping station and an 8-inch water pipeline to transport potable water from the City out to the Keams Canyon Interchange. Out at the Keams Canyon interchange install two buried 500 gallon bladder tanks to minimize pump on/off cycles during low flow situations. The general pipeline alignment is as shown on Drawing 4-1 and Drawing 4-2, Future Water System.

Water Option 3 - New 8-inch Water Pipeline with Fire Protection and without Bladder Tanks

Construct a new booster pumping station and an 8-inch water pipeline to transport potable water from the City out to the Keams Canyon Interchange. Out at the Keams Canyon interchange install the City's two existing 25,000 gallon above ground, steel, potable water tanks along with a new 1000 gpm fire pump. This arrangement will furnish a 1000 gpm fire flow for approximately one hour. The general pipeline alignment is as shown on Drawing 4-1 and Drawing 4-2, Future Water System.

Water Option 4 - New 8-inch Water Pipeline with Fire Protection and with Bladder Tanks

Construct a new booster pumping station and an 8-inch water pipeline to transport potable water from the City out to the Keams Canyon Interchange. Out at the Keams Canyon interchange install the City's two existing 25,000 gallon above ground, steel, potable water tanks along with a new 1000 gpm fire pump. This arrangement will furnish a 1000 gpm fire flow for approximately one hour. In addition, out at the Keams Canyon interchange install two buried 500 gallon bladder tanks to minimize pump on/off cycles during low flow situations. The general pipeline alignment is as shown on Drawing 4-1 and Drawing 4-2, Future Water System.

Wastewater flows were then evaluated based upon the potable water needs and flow rates. Specific areas that would contribute wastewater flows that could either flow into a new sewer interceptor, into a reuse water treatment plant, or into an upgraded sewer forcemain system include (please refer to Drawing 3-2 for area number locations):

- Area 3, North side of I-40 just west of the Keams Canyon Interchange

- Area 4, the existing truck stop at the Keams Canyon Interchange
- Area 5, the area due east of the existing truck stop at the Keams Canyon Interchange
- Area 6, the International Petrified Forest area

A summary of these flows are as shown in Table 5-1 below.

Table 5 -1, Phased Wastewater Flows for Keams Canyon Interchange				
Flow Rate	Existing Flows	Phase 1 Flows (0 to 5 Yrs)	Phase 2 Flows (5 to 10 Yrs)	Phase 3 Flows (10 to 15 Yrs)
Gallons Per Day (GPD)	30,000	71,000	88,300	117,100
Gallons Per Minute (GPM)	62	142	161	231

Analyzing the wastewater flows developed above, it was determined that the following six options should be analyzed to either process and reuse or transport the sewage produced at the Keams Canyon Interchange area:

Wastewater Option 1, 2, and 3 - New Sewer Interceptor (only services north side of freeway)

Construct a new 6-inch, 8-inch or 10-inch PVC sewer interceptor to transport the sewage from the Keams Canyon Interchange to the City's existing collection system. The general interceptor alignment is as shown on Drawing 6-1 and Drawing 6-2, Proposed New Sewer Interceptor.

Wastewater Option 4 - New Water Reclamation Facility (services both sides of freeway)

Construct a new 150,000 GPD water reclamation plant on the south side of I-40 for the purposes of treating and reusing the wastewater as a source of irrigation water. This concept would then require hauling the sludge generated at the plant to the Painted Mesa Water Reclamation Facility for final processing and disposal. The general water reclamation plant is as shown on Drawing 6-3, Proposed New Water Reclamation Facility.

Wastewater Option 5 - Modify the Existing Sewer Pumping Stations and Forcemain System (only services north side of freeway)

Upgrade the two existing sewer pumping stations by constructing new, larger wet wells at each station and adding one more pump at each station for a total of three pumps per station. The existing 4-inch forcemain would be used as-is. The general existing forcemain alignment and pumping stations are as shown on Drawing 6-4 and Drawing 6-5, Upgraded Sewer Forcemain System.

Wastewater Option 6 - Modify the Existing Sewer Pumping Stations and Forcemain System and Add Service to the South Side of the Freeway (services both sides of freeway)

This is the same as Option 5 above plus adding a new sewer lift station at the International Petrified Forest and a forcemain connecting that lift station to the Shipley-Phillips Lift Station #1.

The final section of this report outlines the conceptual construction costs for the proposed water and wastewater system options. The following table summarizes these costs.

Table 7-1, Conceptual Construction Material and Engineering Cost Estimate Summary		
Option Number	Description	Total Conceptual Construction Material and Engineering Costs
Water Option 1	New 8-inch Water Pipeline without Fire Protection and without Bladder Tanks	\$303,887
Water Option 2	New 8-inch Water Pipeline without Fire Protection and with Bladder Tanks	\$309,487
Water Option 3	New 8-inch Water Pipeline with Fire Protection and without Bladder Tanks	\$341,632
Water Option 4	New 8-inch Water Pipeline with Fire Protection and with Bladder Tanks	\$347,232
Wastewater Option 1	New 6-inch Sewer Interceptor	\$149,818
Wastewater Option 2	New 8-inch Sewer Interceptor	\$180,022
Wastewater Option 3	New 10-inch Sewer Interceptor	\$224,010
Wastewater Option 4	New Water Reclamation Facility	\$745,086
Wastewater Option 5	Modify the Existing Sewer Pumping Stations and Forcemain System	\$45,537
Wastewater Option 6	Modify the Existing Sewer Pumping Stations and Forcemain System and Add Service to the South Side of the Freeway (services both sides of freeway)	\$140,155

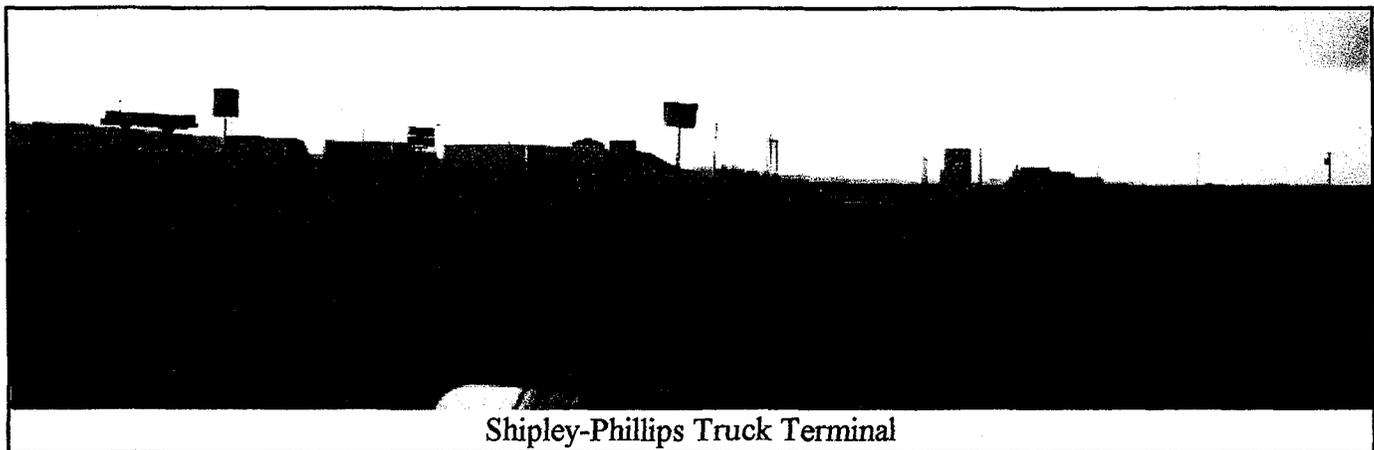
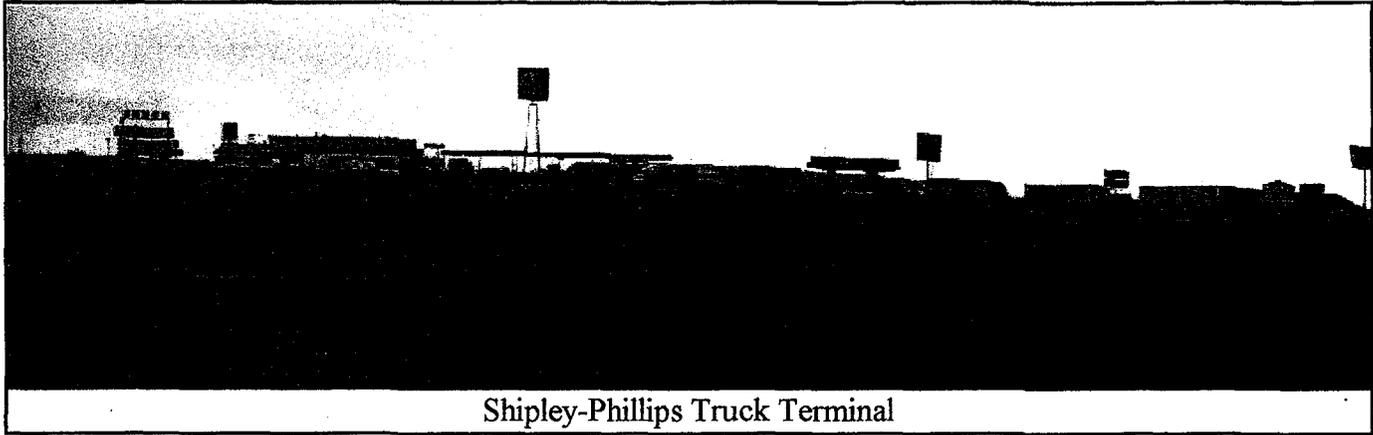
Section 1 - Scope of Work

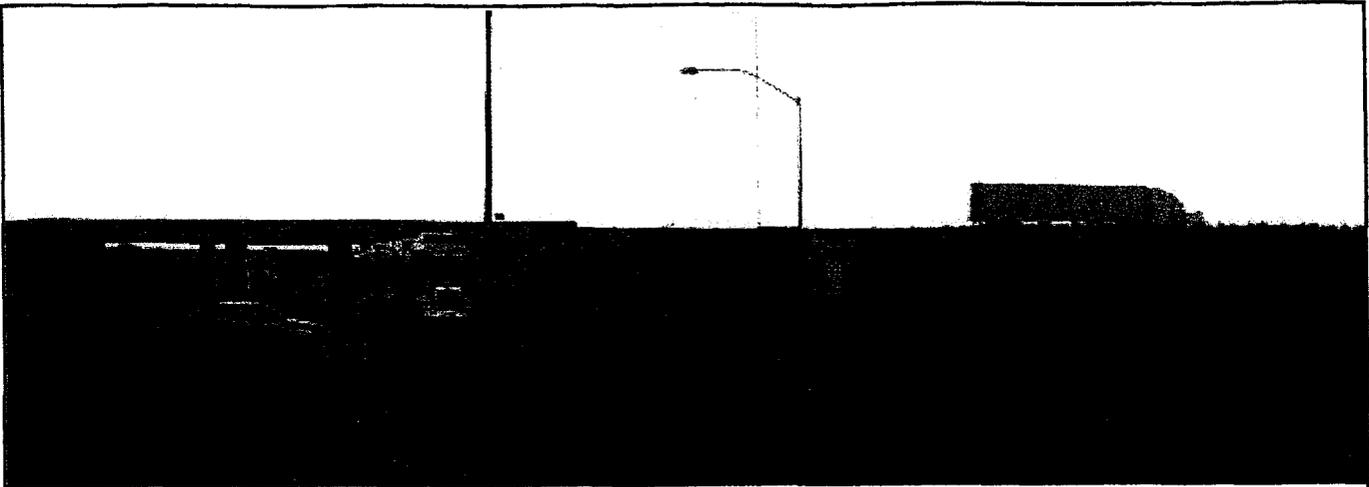
This utility feasibility study will be an extension of C5 Engineering's original City wide feasibility study developed in November, 1997. However this study will more closely examine the Shipley-Phillips Interchange (Interchange) and how water and wastewater services can be best delivered to that general area. Items that will be considered in the study will include:

1. Developing current, 5, 10, and 15 year flow projections for water and wastewater for the Interchange area. Consideration will also be given to that area along the water pipeline route (i.e., that area between the current City limits and the Interchange along the proposed water pipeline route). Issues to be taken into consideration will be how the current Interchange area businesses will expand and how future businesses may develop in this same area. City staff will be used to help project this potential growth.
2. Using the above flow information, determine the most cost effective approach to supply water to the Interchange area. Conceptual computer water modeling will be used to develop a pipeline size and pumping station (if required).
3. Using the above flow information, determine the most cost effective approach to dispose of the sewage generated at the Interchange area. Items to be considered will include:
 - a. Determine the maximum flow that the existing 4-inch forcemain can carry that extends from the Interchange area to the City's collection system.
 - b. Develop a conceptual design for upgrading the two existing sewer pumping stations and the existing sewer forcemain extending from the Interchange area to the City's collection system.
 - c. Develop a conceptual design for a new gravity sewer extending from the Interchange area to the City's collection system.
 - d. Develop a conceptual design to treat the sewage at the Interchange area and apply the reuse water to that area for irrigation / green belt areas and to transport the sludge to the Painted Mesa Water Reclamation Facility for final treatment.
4. Develop conceptual construction costs and construction schedules for the water and wastewater projects.
5. Summarize the above information in a brief letter report and provide two copies to the City.
6. As normal, as the study is developed C5 Engineering will closely coordinate with City staff to ensure that the City's needs and wants are fully incorporated into the feasibility study.
7. Under the direction of Mr. Roy Hunt, if desired, C5 Engineering will summarize and present the findings of the study to the City Council.

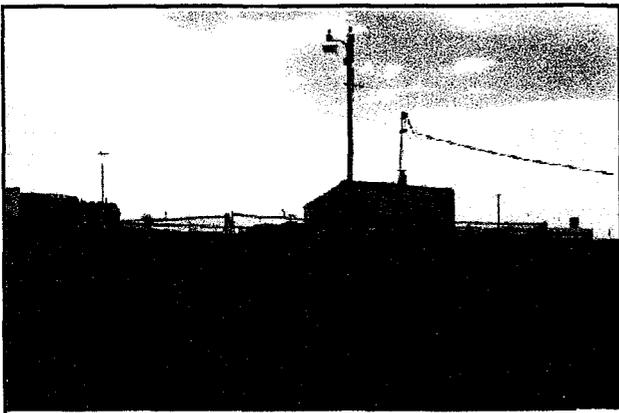
Section 2 - Existing Businesses and Existing Infrastructure

The following is a photo tour of the existing businesses and existing infrastructure that services the Keams Canyon Interchange area.





Keams Canyon Interchange Looking South-West



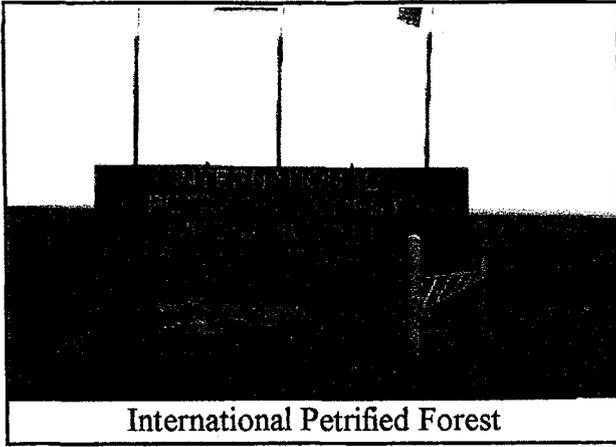
Shipley-Phillips Sewer Lift Station #1



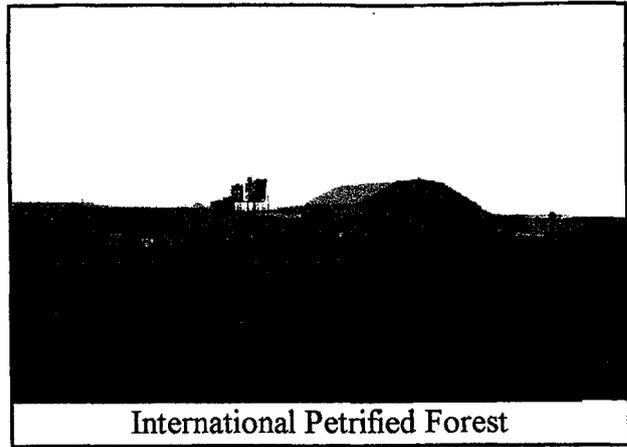
Shipley-Phillips Fuel Storage Tanks



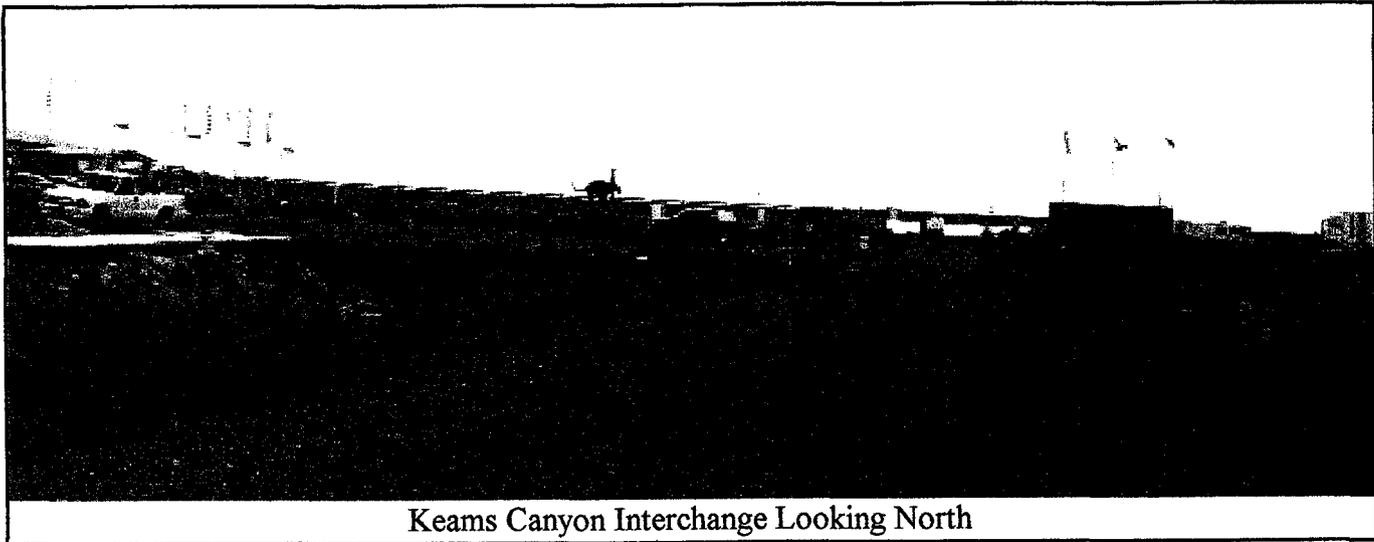
Shipley-Phillips Sewer Lift Station #2



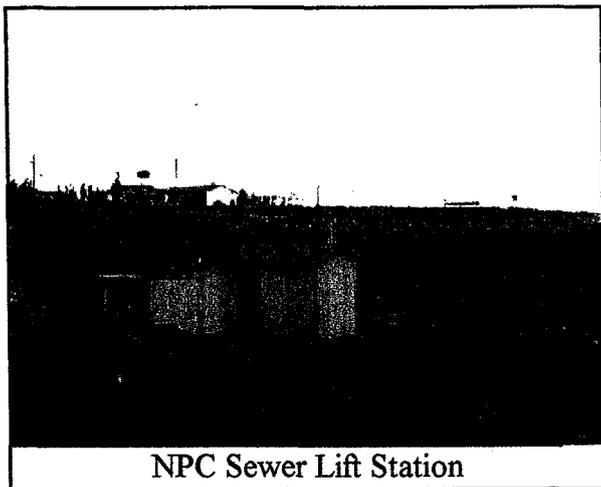
International Petrified Forest



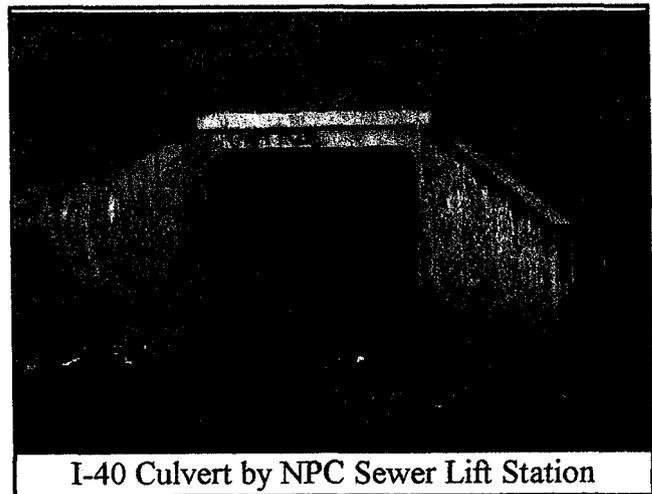
International Petrified Forest



Keams Canyon Interchange Looking North



NPC Sewer Lift Station



I-40 Culvert by NPC Sewer Lift Station

Section 3 - Current and Future Water Flow Projections

Through several weeks of interviewing the current land and business owners extending from the eastern City limits out to the Keams Canyon interchange, a listing of current and potential future water needs was developed. These total water needs are shown on Table 3-1, Summary of Total Existing and Projected Water Needs.

These water needs were then grouped into general areas and are shown on Drawing 3-1 and Drawing 3-2, Area Number Map.

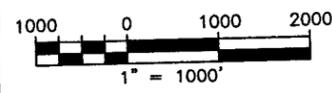
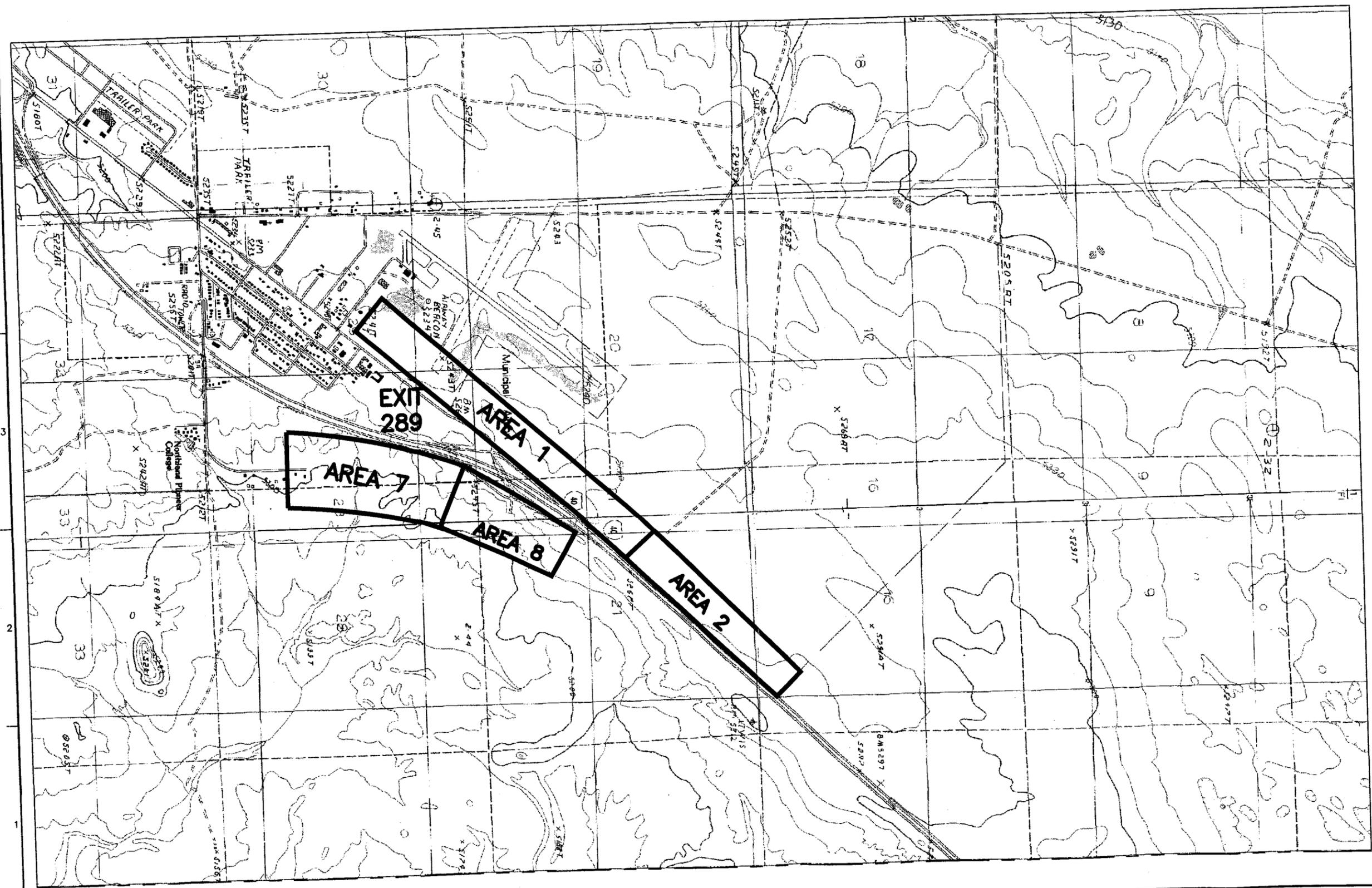
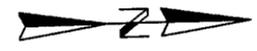
These water needs were then broken down into existing water needs, projected water needs in 5 years, projected water needs in 10 years, and projected water needs in 15 years. These water needs are broken down by area and are shown on the following tables which follow this page:

- ▶ Table 3-2, Summary of Existing Water Needs
- ▶ Table 3-3, Summary of Phase 1 Water Needs (0 to 5 Years)
- ▶ Table 3-4, Summary of Phase 2 Water Needs (5 to 10 Years)
- ▶ Table 3-5, Summary of Phase 3 Water Needs (10 to 15 Years)

Table 3-1, Summary of Total Existing and Projected Water Needs

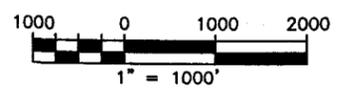
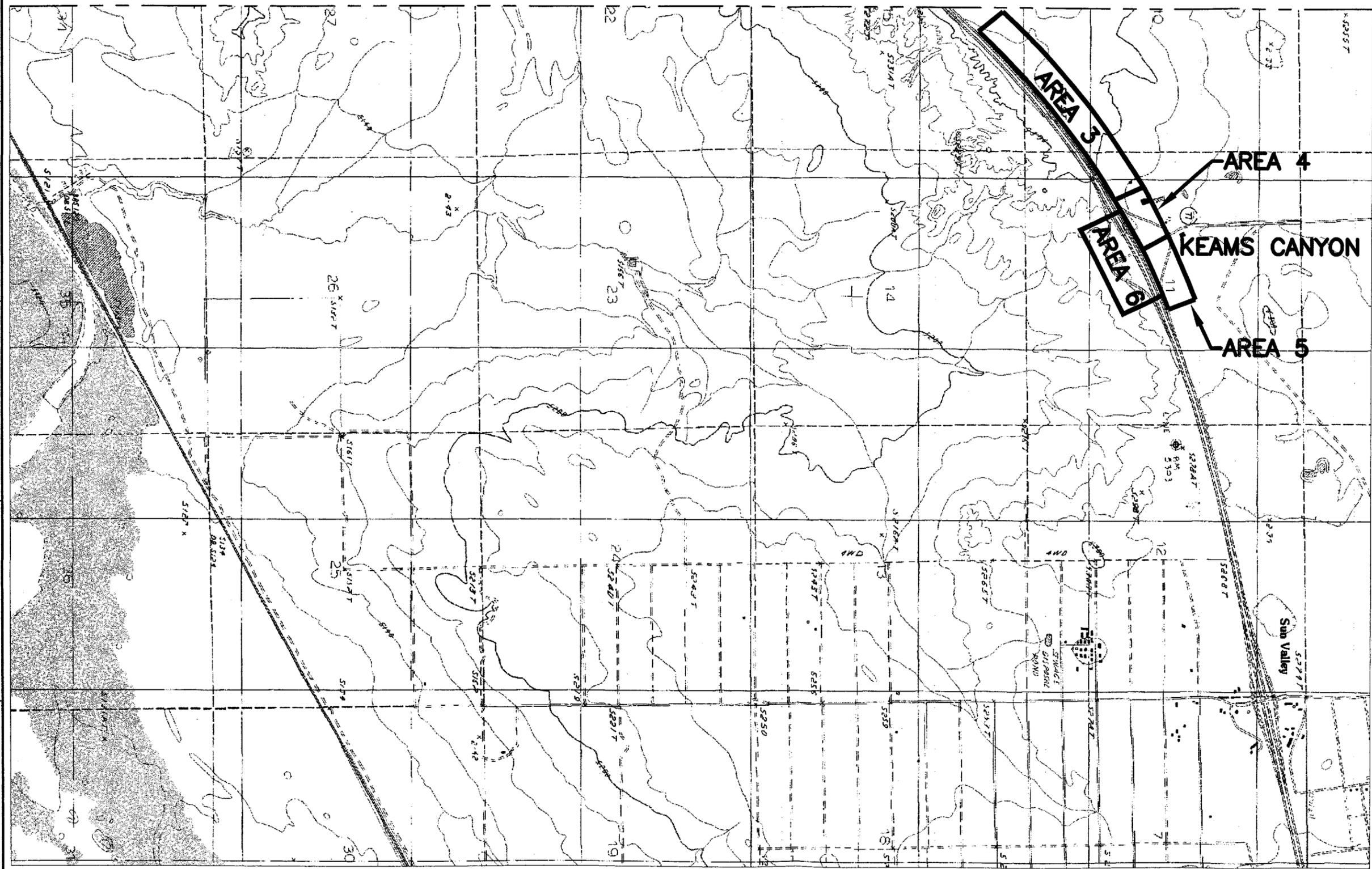
Area No. on Map	Information Source	Location	Main Description	Estimated Unit Flow		Estimated Total Area Flow		Estimated Total Area Flow	
				GPD	GPM	GPD	GPM	GPD	GPM
1	City / Bill Jeffers	North Side of I-40 by Airport	(30) 1 Ac Commercial Lots	24,000	40.00	24,000	40.00	24,000	40.00
2	Bill Jeffers	North Side of I-40 by Airport	(10) 5 Ac Ranches	8,000	13.33	8,000	13.33	8,000	13.33
3	Marvin Hatch	North Side of I-40	(10) 5 Ac Ranches	8,000	11.11	8,000	11.11	8,000	11.11
4	Dale Phillips	Kearns Canyon - North Side	Existing Truck Stop Existing Water Consumption Additional Water Needs Now	33,333 33,333	69.44 69.44	33,333 33,333	69.44 69.44	66,666	138.89
5	Gary Darling	Kearns Canyon - North Side	Opposite of existing truck stop 100 Room Motel 100 Person Sit-down Restaurant C Store with Gas & Fast Food 50 Space RV Park for Passenger Cars Small Park w/ Restroom & Grass Area Big Rig RV Park 100 Spaces, Showers, Restrooms Laundry Facility	5,600 5,000 3,300 5,800 1,000	11.67 4.63 3.06 12.08 16.67	5,600 5,000 3,300 5,800 1,000	11.67 4.63 3.06 12.08 16.67	35,050	78.00
6	Gary Scaram (Hatch)	Kearns Canyon - South Side	International Petrified Forest Existing Use Hydroponics Planting 140 Room Motel 125 Person Sit-down Restaurant Fast Food Restaurant	1,000 3,000 7,840 6,250 2,250	2.08 2.08 16.33 5.79 2.08	1,000 3,000 7,840 6,250 2,250	2.08 2.08 16.33 5.79 2.08	20,340	28.37
7	Gary Scaram (Hatch)	Exit 289 - South Side	(16) 5 Ac Ranches	12,800	17.78	12,800	17.78	12,800	17.78
8	Gary Scaram (Hatch)	Exit 289 - South Side	Truck Stop Gas Station Truck Wash 125 Person Sit-down Restaurant 50 Space RV Park	1,050 10,000 6,250 5,800	0.97 20.83 5.79 12.08	1,050 10,000 6,250 5,800	0.97 20.83 5.79 12.08	23,100	39.68
Total Flows				197,956	367.15	197,956	367.15	197,956	367.15

ZONE		REVISED	
REV	DESCRIPTION	DATE	APVD



<p>C5 Engineering, Inc. NORTH SALT LAKE, UTAH (801) 296-1562 FLAGSTAFF, ARIZONA (520) 714-0251</p>	<table border="0"> <tr> <td>DESIGNED <u>JHC</u></td> <td>APPROVED <u>HOLBROOK</u></td> <td>DATE _____</td> </tr> <tr> <td>CHECKED <u>DJD</u></td> <td>APPROVED <u>CS ENGINEERING</u></td> <td>DATE _____</td> </tr> <tr> <td>DRAWN BY <u>SOS</u></td> <td>APPROVED _____</td> <td>DATE _____</td> </tr> </table>	DESIGNED <u>JHC</u>	APPROVED <u>HOLBROOK</u>	DATE _____	CHECKED <u>DJD</u>	APPROVED <u>CS ENGINEERING</u>	DATE _____	DRAWN BY <u>SOS</u>	APPROVED _____	DATE _____	JOB No. <u>1035</u> DATE <u>SEP 4, 1999</u>	<p>CITY OF HOLBROOK SHIPLEY-PHILLIPS INTERCHANGE UTILITY FEASIBILITY STUDY</p>	<p>AREA NUMBER MAP</p>	DRAWING NUMBER 3-1 SHEET
DESIGNED <u>JHC</u>	APPROVED <u>HOLBROOK</u>	DATE _____												
CHECKED <u>DJD</u>	APPROVED <u>CS ENGINEERING</u>	DATE _____												
DRAWN BY <u>SOS</u>	APPROVED _____	DATE _____												

ZONE		REVISIONS		
REV	DESCRIPTION	DATE	APVD	



C5 Engineering, Inc.
 NORTH SALT LAKE, UTAH (801) 296-1562
 FLAGSTAFF, ARIZONA (520) 714-0251

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CHECKED <u>DJD</u>	APPROVED <u>CS ENGINEERING</u>	DATE _____
DRAWN BY <u>SOS</u>	APPROVED _____	DATE _____

JOB No. HB 1030
 DATE SEP 4, 1999

CITY OF HOLBROOK
 SHIPLEY-PHILLIPS INTERCHANGE UTILITY FEASIBILITY STUDY

AREA NUMBER MAP

DRAWING NUMBER **3-2**
 SHEET

Table 3-2, Summary of Existing Water Needs

Area No. on Map	Information Source	Location	Main Description	Existing Estimated Total GPD	Existing Estimated Total GPM
1	City / Bill Jeffers	North Side of I-40 by Airport	(30) 1 Ac Commercial Lots		
2	Bill Jeffers	North Side of I-40 by Airport	(10) 5 Ac Ranches		
3	Marvin Hatch	North Side of I-40	(10) 5 Ac Ranches	33,333	69.44
4	Dale Phillips	Keams Canyon - North Side	Existing Truck Stop		
5	Gary Darling	Keams Canyon - North Side	Opposite of existing truck stop		
6	Gary Scaram (Hatch)	Keams Canyon - South Side	International Petrified Forest	1,000	2.08
7	Gary Scaram (Hatch)	Exit 289 - South Side	(16) 5 Ac Ranches		
8	Gary Scaram (Hatch)	Exit 289 - South Side	Truck Stop		
Total Flows				34,333	71.53

Table 3-3, Summary of Phase 1 Water Needs (0 to 5 Years)

Area No. on Map	Information Source	Location	Main Description	0 to 5 Yrs Estimated Total GPD	0 to 5 Yrs Estimated Total GPM
1	City / Bill Jeffers	North Side of I-40 by Airport	(30) 1 Ac Commercial Lots	24,000	40,000
2	Bill Jeffers	North Side of I-40 by Airport	(10) 5 Ac Ranches		
3	Marvin Hatch	North Side of I-40	(10) 5 Ac Ranches		
4	Dale Phillips	Kearns Canyon - North Side	Existing Truck Stop	66,666	138,890
5	Gary Darling	Kearns Canyon - North Side	Opposite of existing truck stop	8,900	14,720
6	Gary Scaram (Hatch)	Kearns Canyon - South Side	International Petrified Forest	3,250	4,170
7	Gary Scaram (Hatch)	Exit 289 - South Side	(16) 5 Ac Ranches		
8	Gary Scaram (Hatch)	Exit 289 - South Side	Truck Stop	5,800	12,080
Total Flows				108,616	209,860

Table 3-4, Summary of Phase 2 Water Needs (5 to 10 Years)

Area No. on Map	Information Source	Location	Main Description	5 to 10 Yrs	5 to 10 Yrs
				Estimated Total GPD	Estimated Total GPM
1	City / Bill Jeffers	North Side of I-40 by Airport	(30) 1 Ac Commercial Lots	24,000	40.00
2	Bill Jeffers	North Side of I-40 by Airport	(10) 5 Ac Ranches	8,000	13.33
3	Marvin Hatch	North Side of I-40	(10) 5 Ac Ranches	8,000	11.11
4	Dale Phillips	Keams Canyon - North Side	Existing Truck Stop	66,666	138.89
5	Gary Darling	Keams Canyon - North Side	Opposite of existing truck stop	13,900	19.35
6	Gary Scaram (Hatch)	Keams Canyon - South Side	International Petrified Forest	9,500	9.95
7	Gary Scaram (Hatch)	Exit 289 - South Side	(16) 5 Ac Ranches	16,850	33.89
8	Gary Scaram (Hatch)	Exit 289 - South Side	Truck Stop	16,850	33.89
Total Flows				146,916	266.53

Table 3-5, Summary of Phase 3 Water Needs (10 to 15 Years)

Area No. on Map	Information Source	Location	Main Description	10 to 15 Yrs	10 to 15 Yrs
				Estimated Total GPD	Estimated Total GPM
1	City / Bill Jeffers	North Side of I-40 by Airport	(30) 1 Ac Commercial Lots	24,000	40.00
2	Bill Jeffers	North Side of I-40 by Airport	(10) 5 Ac Ranches	8,000	13.33
3	Marvin Hatch	North Side of I-40	(10) 5 Ac Ranches	8,000	11.11
4	Dale Phillips	Keams Canyon - North Side	Existing Truck Stop	66,666	138.89
5	Gary Darling	Keams Canyon - North Side	Opposite of existing truck stop	35,050	78.00
6	Gary Scaram (Hatch)	Keams Canyon - South Side	International Petrified Forest	20,340	28.37
7	Gary Scaram (Hatch)	Exit 289 - South Side	(16) 5 Ac Ranches	12,800	17.78
8	Gary Scaram (Hatch)	Exit 289 - South Side	Truck Stop	23,100	39.68
Total Flows				197,956	367.15

The following table summarizes the water needs of the previous tables by yearly phases:

Table 3-6, Summary of Phased Water Needs				
Flow Rate	Existing Flows	Phase 1 Flows (0 to 5 Years)	Phase 2 Flows (5 to 10 Years)	Phase 3 Flows (10 to 15 Years)
Gallons Per Day (GPD)	34,333	108,616	146,916	197,956
Gallons Per Minute (GPM)	72	210	267	367

Section 4 - Conceptual Future Water Facilities

To determine the required pipe sizes, required booster pumping stations, bladder tanks, etc. the proposed water system was computer modeled using the flows developed in Section 3. A summary of the system flows (GPM) and pressures (PSI) for gravity and normal consumption flows is summarized in the following tables:

Table 4-1, Gravity Flows From Existing Elevated Water Tank

Flow Condition	Demand @ Airport	Demand @ High Point (Hill)	Demand @ Keams Canyon Interchange
GPM	64	0	303
PSI	49	9	27

Table 4-2, Gravity Flows From Existing Elevated Water Tank

Flow Condition	Demand @ Airport	Demand @ High Point (Hill)	Demand @ Keams Canyon Interchange
GPM	5	0	25
PSI	54	22	43

Table 4-3, Normal Flows with New Booster Pumping Station

Flow Condition	Demand @ Airport	Demand @ High Point (Hill)	Demand @ Keams Canyon Interchange
GPM	64	0	303
PSI	87	47	65

From the above tables it is shown that a booster pumping station is required to maintain the City required 65 psi water pressure out at Keams Canyon.

Analyzing the water flows developed above, it was determined that the following four options should be analyzed to transport potable water out to the Keams Canyon Interchange area:

Water Option 1 - New 8-inch Water Pipeline without Fire Protection and without Bladder Tanks

Construct a new booster pumping station and an 8-inch water pipeline to transport potable water from the

City out to the Keams Canyon Interchange. The general pipeline alignment is as shown on Drawing 4-1 and Drawing 4-2, Future Water System.

Water Option 2 - New 8-inch Water Pipeline without Fire Protection and with Bladder Tanks

Construct a new booster pumping station and an 8-inch water pipeline to transport potable water from the City out to the Keams Canyon Interchange. Out at the Keams Canyon interchange install two buried 500 gallon bladder tanks to minimize pump on/off cycles during low flow situations. The general pipeline alignment is as shown on Drawing 4-1 and Drawing 4-2, Future Water System.

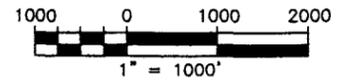
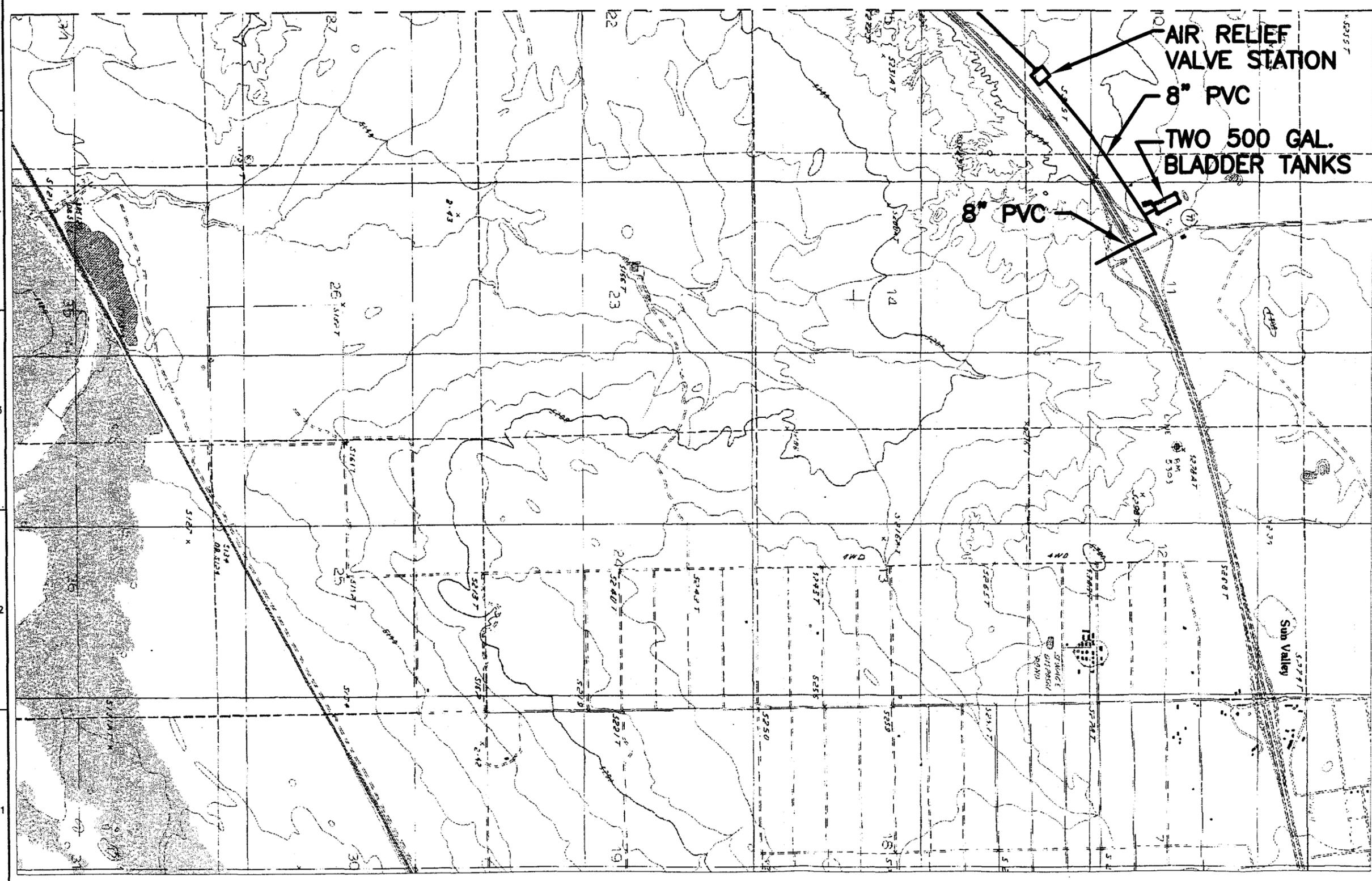
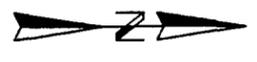
Water Option 3 - New 8-inch Water Pipeline with Fire Protection and without Bladder Tanks

Construct a new booster pumping station and an 8-inch water pipeline to transport potable water from the City out to the Keams Canyon Interchange. Out at the Keams Canyon interchange install the City's two existing 25,000 gallon above ground, steel, potable water tanks along with a new 1000 gpm fire pump. This arrangement will furnish a 1000 gpm fire flow for approximately one hour. The general pipeline alignment is as shown on Drawing 4-1 and Drawing 4-2, Future Water System.

Water Option 4 - New 8-inch Water Pipeline with Fire Protection and with Bladder Tanks

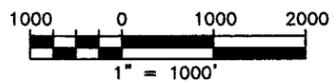
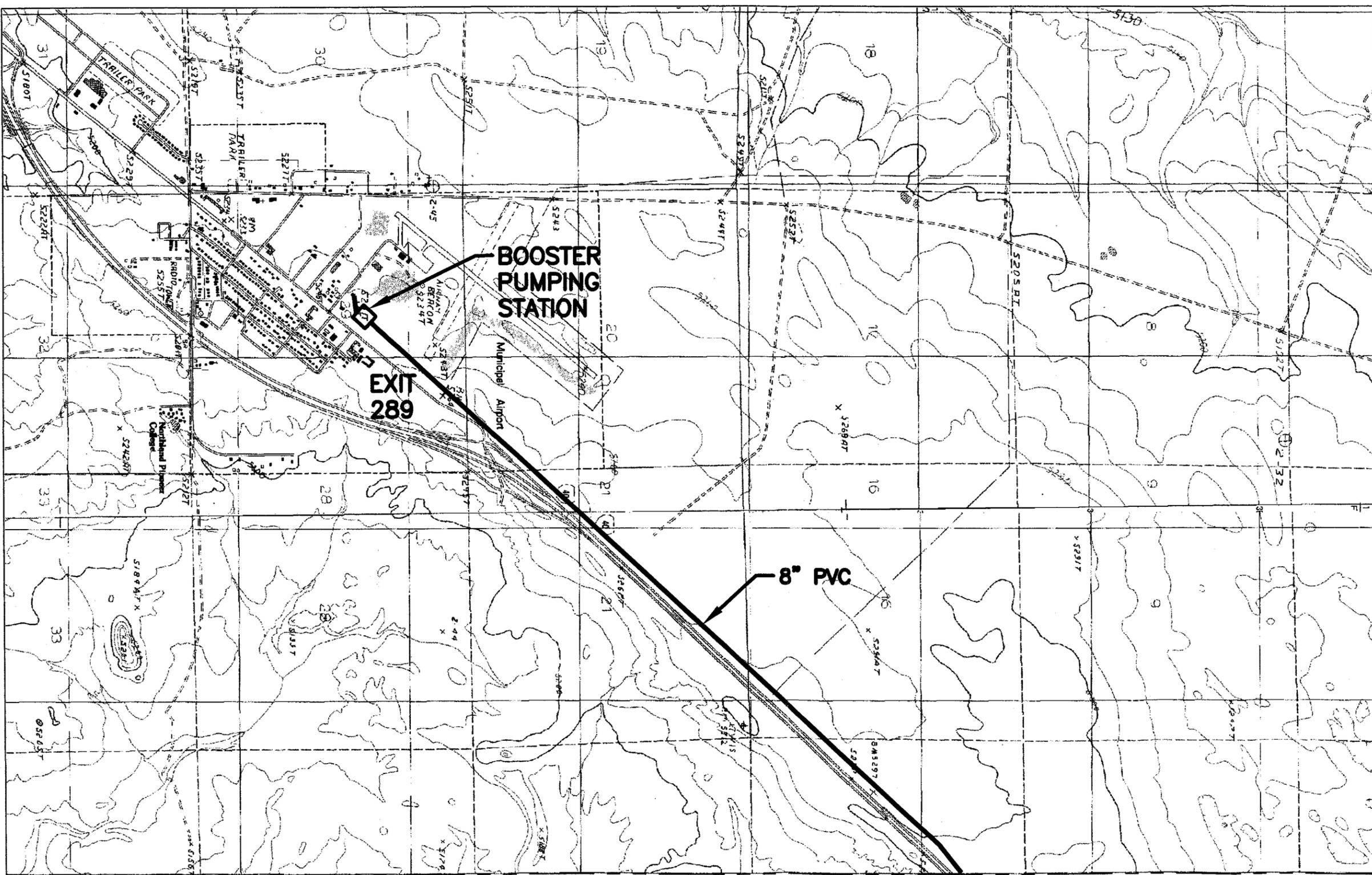
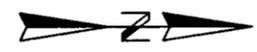
Construct a new booster pumping station and an 8-inch water pipeline to transport potable water from the City out to the Keams Canyon Interchange. Out at the Keams Canyon interchange install the City's two existing 25,000 gallon above ground, steel, potable water tanks along with a new 1000 gpm fire pump. This arrangement will furnish a 1000 gpm fire flow for approximately one hour. In addition, out at the Keams Canyon interchange install two buried 500 gallon bladder tanks to minimize pump on/off cycles during low flow situations. The general pipeline alignment is as shown on Drawing 4-1 and Drawing 4-2, Future Water System.

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APVD



C5 Engineering, Inc. NORTH SALT LAKE, UTAH (801) 296-1562	DESIGNED <u>JHC</u> CHECKED <u>DJD</u> DRAWN BY <u>SOS</u>	APPROVED _____ DATE _____ APPROVED _____ DATE _____ APPROVED _____ DATE _____	JOB No. <u>HB 1030</u> DATE <u>SEP 4, 1999</u>	CITY OF HOLBROOK SHIPLEY-PHILLIPS INTERCHANGE UTILITY FEASIBILITY STUDY	FUTURE WATER SYSTEM	DRAWING NUMBER 4-2 SHEET
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	CHECKED <u>DJD</u>	APPROVED <u>CS ENGINEERING</u>	DATE _____			
	DRAWN BY <u>SOS</u>	APPROVED _____	DATE <u>SEP 4, 1999</u>			

Section 5 - Current and Future Wastewater Flow Projections

The City keeps track of the wastewater flows generated by the Keams Canyon truck terminal. Over a one year time period this facility generated approximately 10,745,000 gallons and did so at a fairly consistent rate. Using this yearly wastewater production rate, an average daily wastewater production flow rate of 29,500 gallons was calculated. Using this daily wastewater production flow rate (29,500 GPD) and dividing by the daily average water consumption flow rate (33,333 GPD) leads to a water to wastewater ratio of 0.89 or approximately 90% of the water consumed is converted into wastewater. Using this water to wastewater conversion factor, the wastewater production rates can now be calculated for the Keams Canyon Interchange area using the water consumption rates.

Specific areas that would contribute wastewater flows that could either flow into a new sewer interceptor or into a reuse water treatment plant include (please refer to Drawing 3-2 for area number locations):

- Area 3, North side of I-40 just west of the Keams Canyon Interchange
- Area 4, the existing truck stop at the Keams Canyon Interchange
- Area 5, the area due east of the existing truck stop at the Keams Canyon Interchange
- Area 6, the International Petrified Forest area

Table 5 -1, Phased Wastewater Flows for Keams Canyon Interchange

Flow Rate	Existing Flows	Phase 1 Flows (0 to 5 Yrs)	Phase 2 Flows (5 to 10 Yrs)	Phase 3 Flows (10 to 15 Yrs)
Gallons Per Day (GPD)	30,000	71,000	88,300	117,100
Gallons Per Minute (GPM)	62	142	161	231

Section 6 - Conceptual Future Wastewater Facilities

Analyzing the wastewater flows developed in Section 5, it was determined that the following three options should be analyzed to either process and reuse or transport the sewage produced at the Keams Canyon Interchange area:

Option 1, 2, and 3 - New Sewer Interceptor (only services north side of freeway)

Construct a new 6-inch, 8-inch or 10-inch PVC sewer interceptor to transport the sewage from the Keams Canyon Interchange to the City's existing collection system. The general interceptor alignment is as shown on Drawing 6-1 and Drawing 6-2, Proposed New Sewer Interceptor.

Option 4 - New Water Reclamation Facility (services both sides of freeway)

Construct a new 150,000 GPD water reclamation plant on the south side of I-40 for the purposes of treating and reusing the wastewater as a source of irrigation water. This concept would then require hauling the sludge generated at the plant to the Painted Mesa Water Reclamation Facility for final processing and disposal. The general water reclamation plant is as shown on Drawing 6-3, Proposed New Water Reclamation Facility.

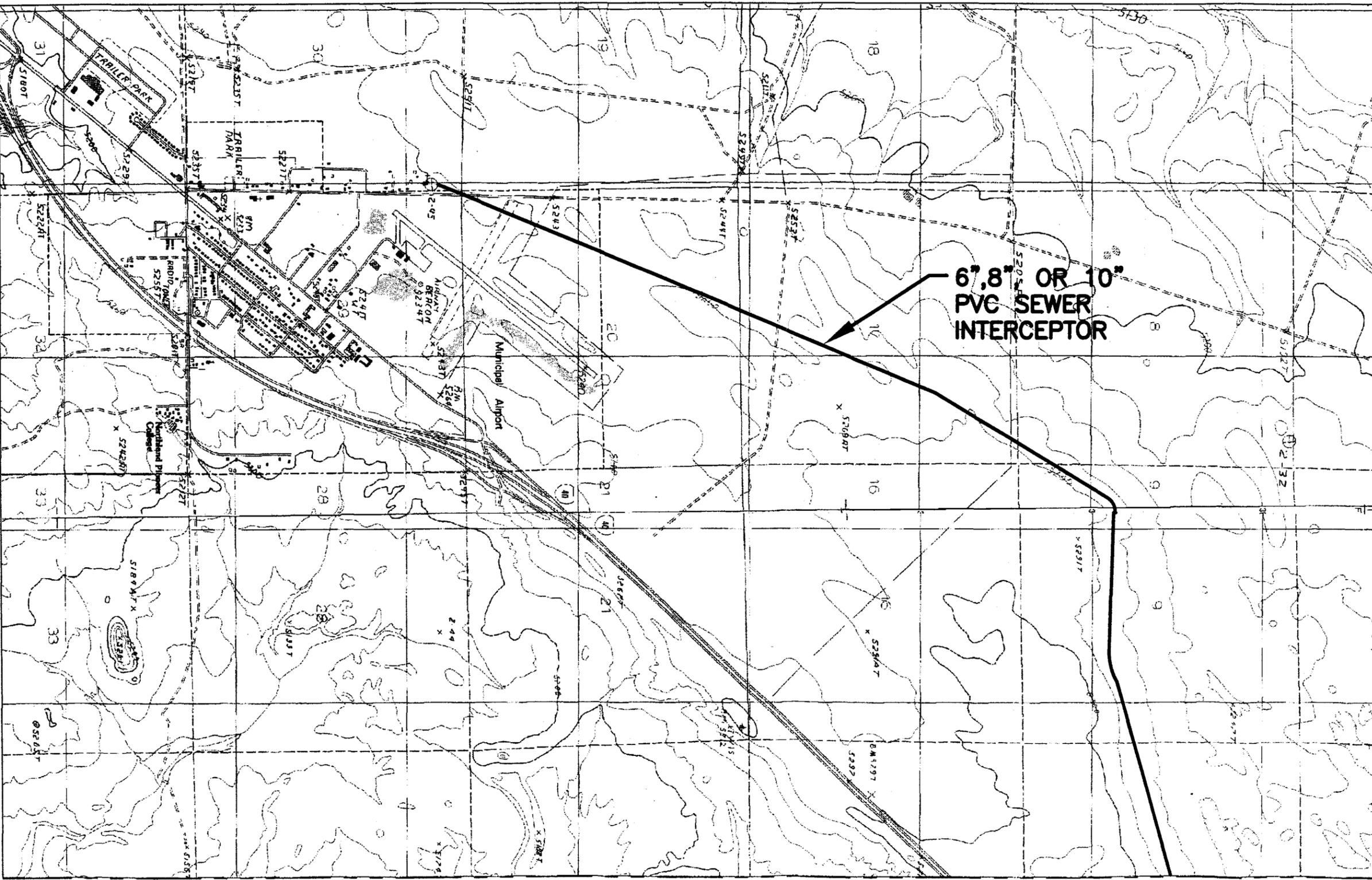
Option 5 - Modify the Existing Sewer Pumping Stations and Forcemain System

Upgrade the two existing sewer pumping stations by constructing new, larger wet wells at each station and adding one more pump at each station for a total of three pumps per station. The existing 4-inch forcemain would be used as-is. The general existing forcemain alignment and pumping stations are as shown on Drawing 6-4 and Drawing 6-5, Upgraded Sewer Forcemain System.

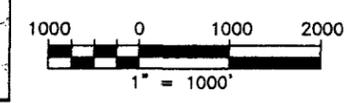
Option 6 - Modify the Existing Sewer Pumping Stations and Forcemain System and Add Service to the South Side of the Freeway

This is the same as Option 5 above plus adding a new sewer lift station at the International Petrified Forest and a forcemain connecting that lift station to the Shipley-Phillips Lift Station #1.

REVISED		REVISIONS	DATE	APVD
ZONE	REV	DESCRIPTION		

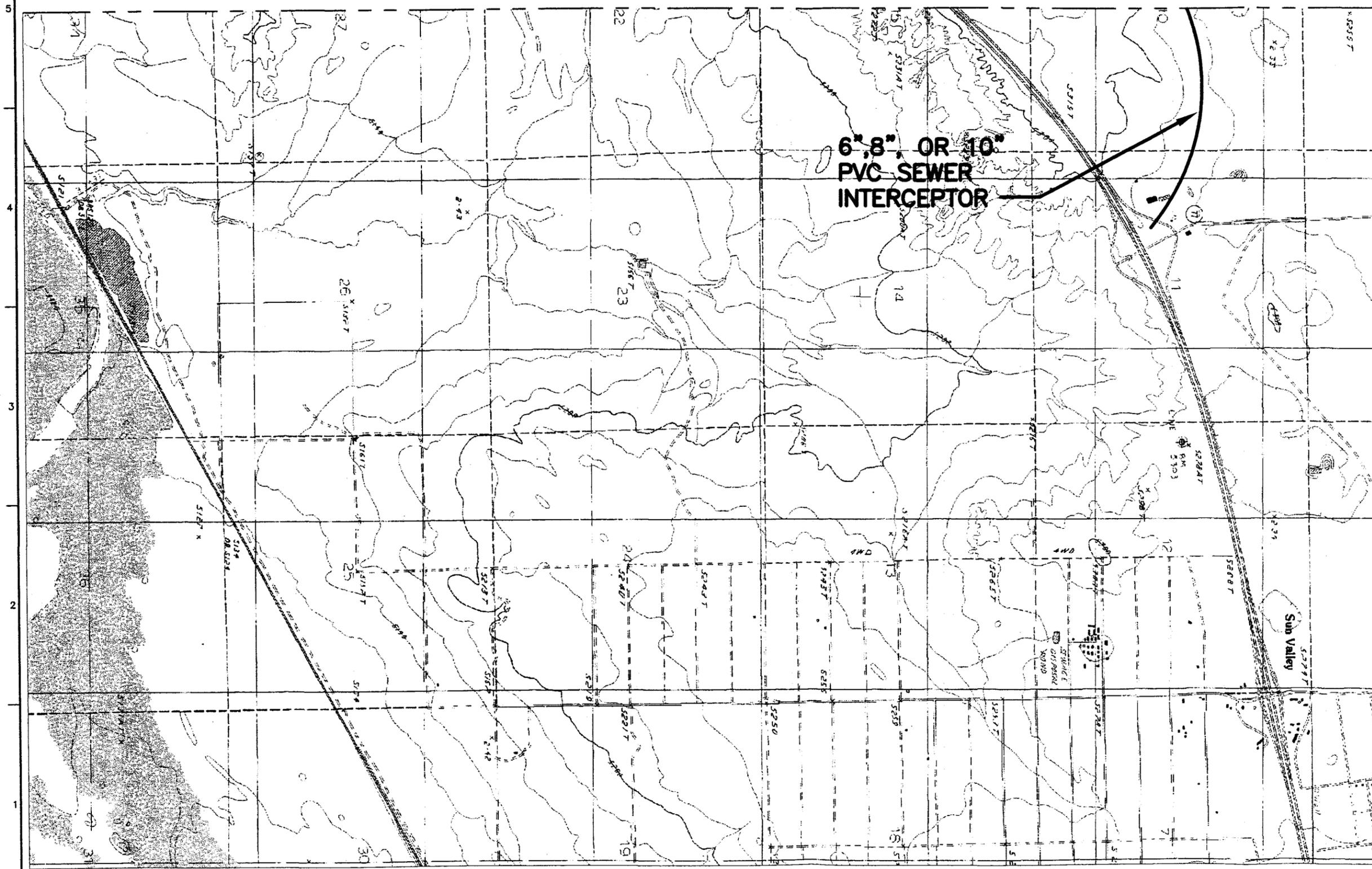
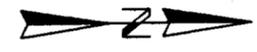


**67.8" OR 10"
PVC SEWER
INTERCEPTOR**



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	CHECKED <u>DD</u>	APPROVED <u>CL</u> DATE _____		
	DRAWN BY <u>SCS</u>	APPROVED _____ DATE _____		
FLAGSTAFF, ARIZONA (520) 714-0251	NEW SEWER INTERCEPTOR			

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 NORTH SALT LAKE, UTAH (801) 296-1562
 FLAGSTAFF, ARIZONA (520) 714-0251

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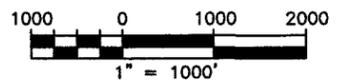
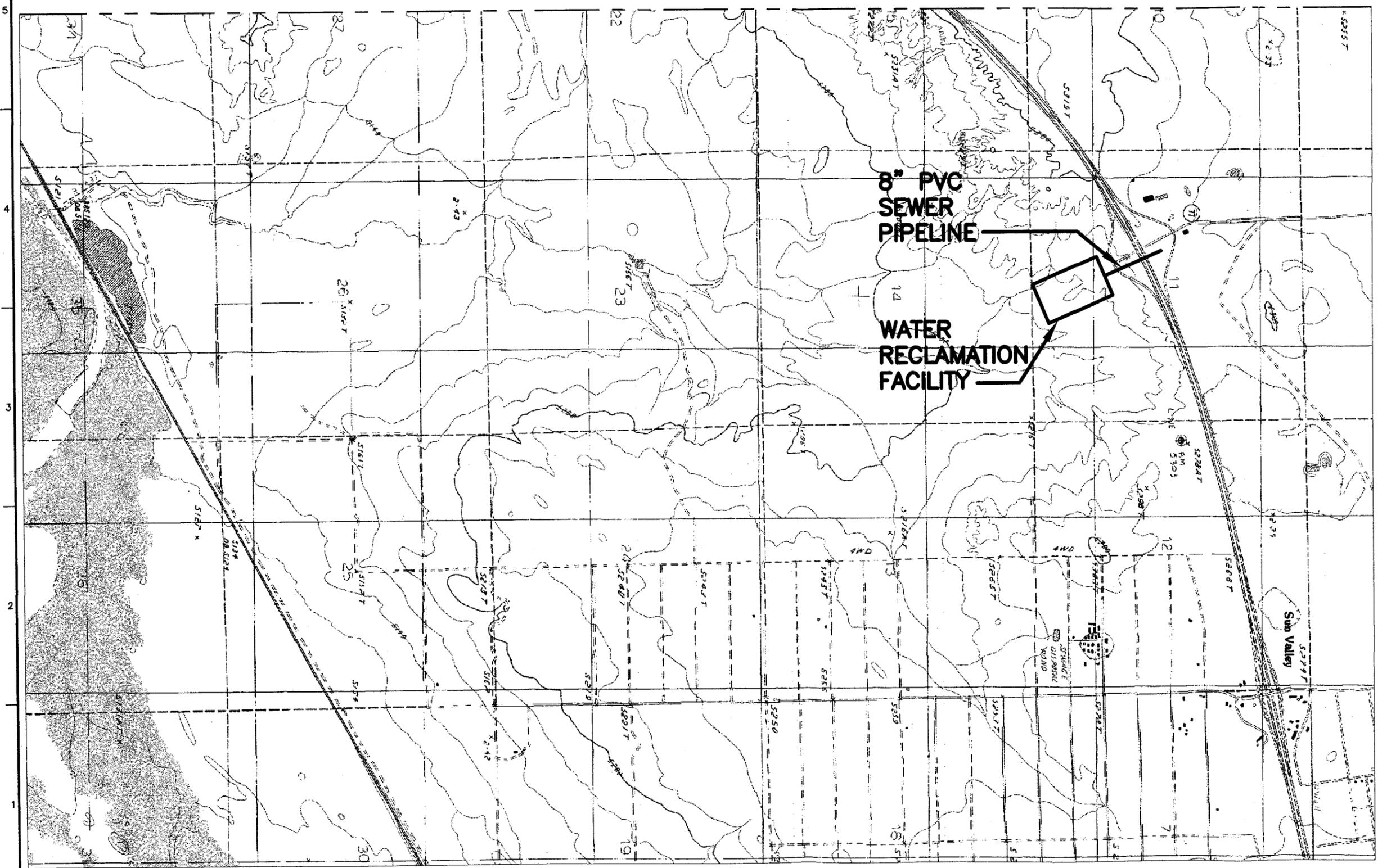
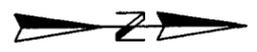
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 DATE SEP. 4, 1999

CITY OF HOLBROOK
 SHIPLEY-PHILLIPS INTERCHANGE UTILITY FEASIBILITY STUDY

NEW SEWER INTERCEPTOR

DRAWING NUMBER **6-2**
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CHECKED <u>DND</u>	APPROVED <u>CS ENGINEERING</u>	DATE _____
DRAWN BY <u>SOS</u>	APPROVED _____	DATE _____

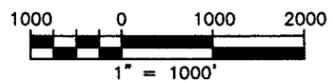
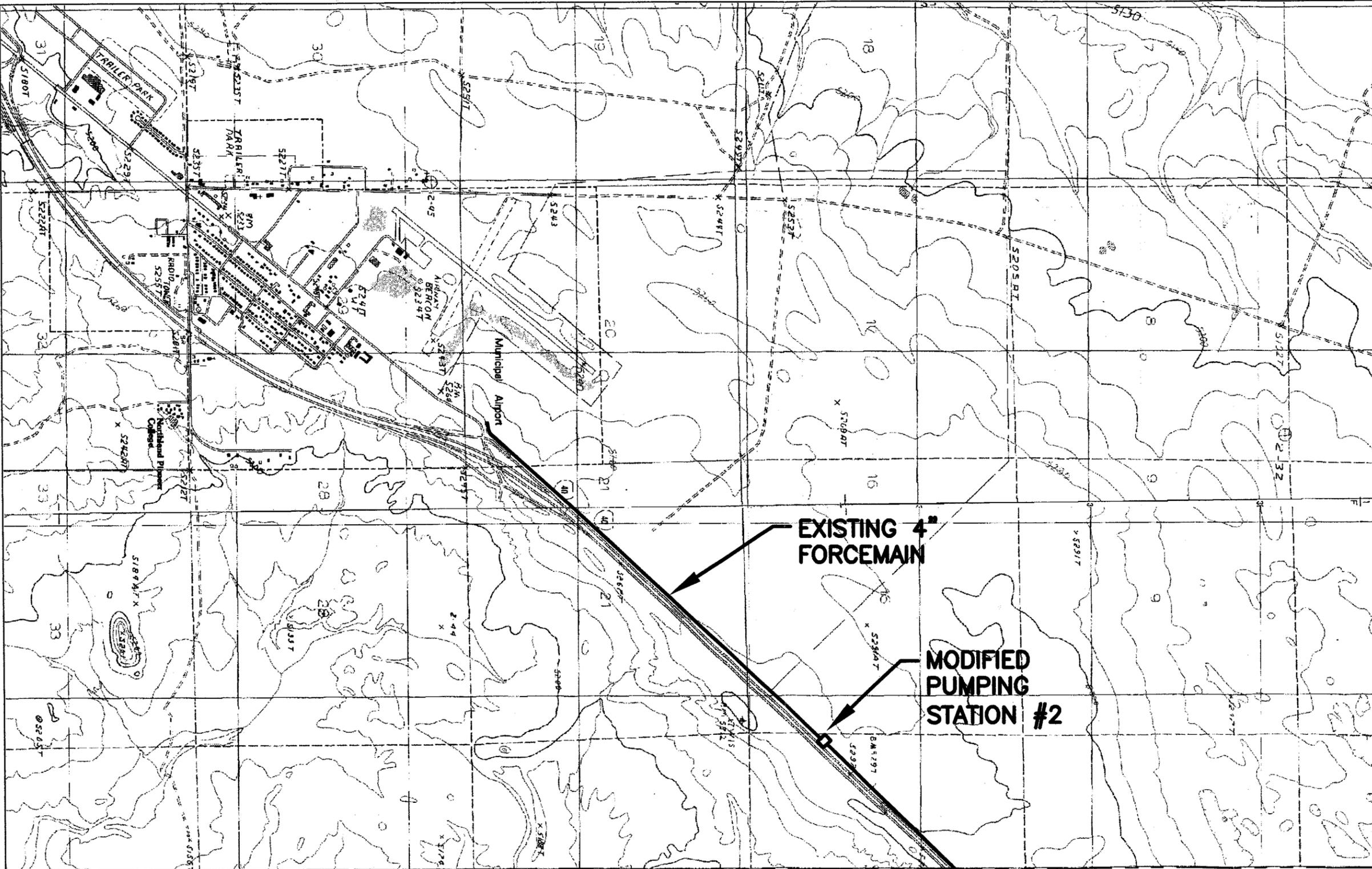
JOB No. HB 1035
 DATE SEP 4, 1999

CITY OF HOLBROOK
 SHIPLEY-PHILLIPS INTERCHANGE UTILITY FEASIBILITY STUDY

NEW WATER RECLAMATION FACILITY

DRAWING NUMBER **6-3**
 SHEET

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APVD



C5 Engineering, Inc.
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DESIGNED JHC APPROVED HOLBROOK DATE _____
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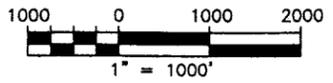
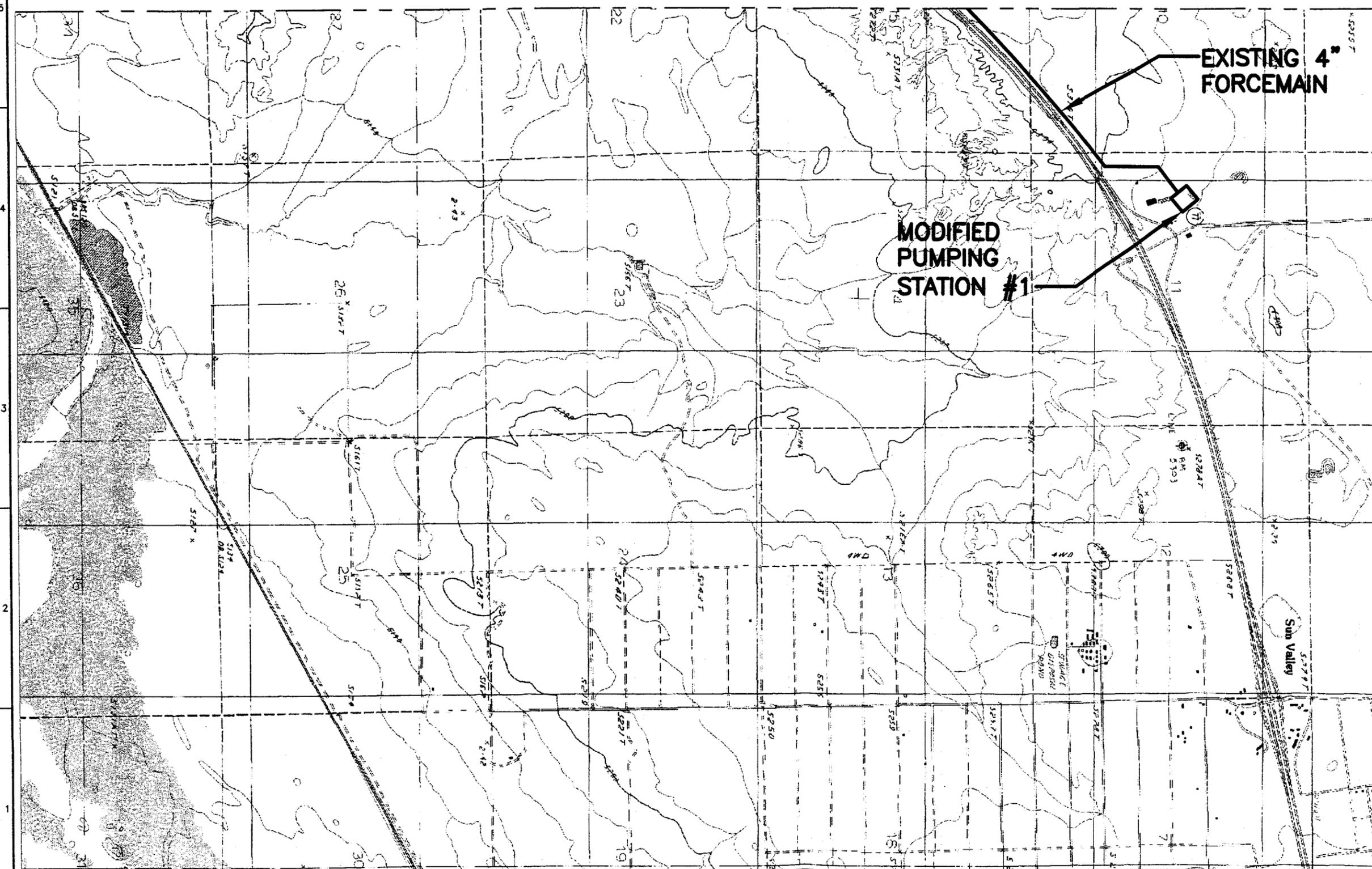
JOB No. 1035
 DATE SEP 4, 1999

CITY OF HOLBROOK
 SHIPLEY-PHILLIPS INTERCHANGE UTILITY FEASIBILITY STUDY

UPGRADED SEWER FORCEMAIN SYSTEM

DRAWING NUMBER **6-4**
 SHEET

REVISIONS		DATE	APVD
ZONE	REV	DESCRIPTION	



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CHECKED <u>DJD</u>	APPROVED <u>CS</u>	DATE _____
DRAWN BY <u>SOS</u>	APPROVED _____	DATE _____

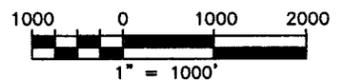
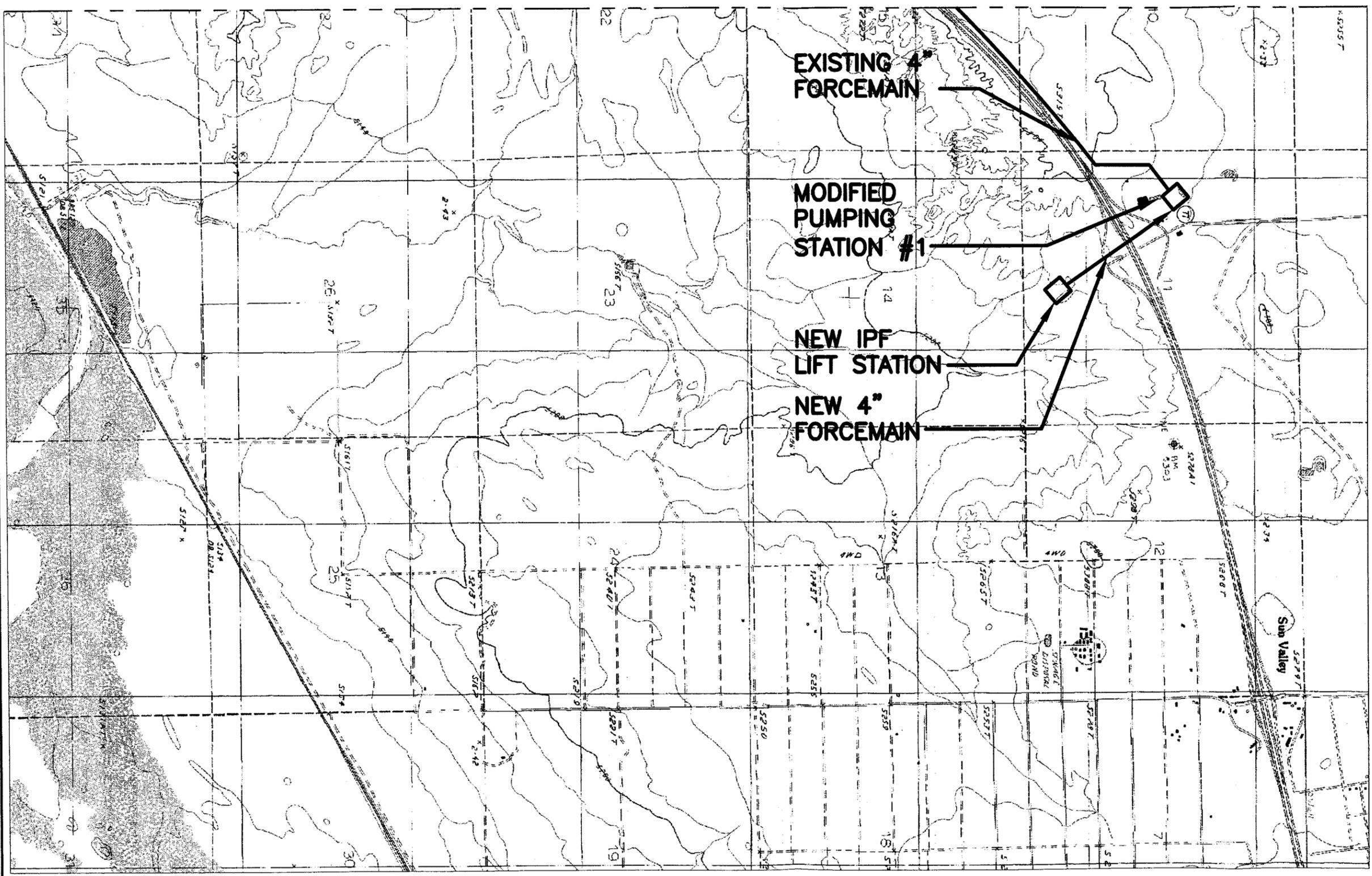
JOB No. HB 1030
 DATE SEP 4, 1999

CITY OF HOLBROOK
 SHIPLEY-PHILLIPS INTERCHANGE UTILITY FEASIBILITY STUDY

UPGRADED SEWER FORCEMAIN SYSTEM

DRAWING NUMBER **6-5**
 SHEET

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APVD



C5 Engineering, Inc.
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 FLAGSTAFF, ARIZONA (520) 714-0251

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CHECKED	DJD	APPROVED	C5 ENGINEERING	DATE	
DRAWN BY	SOS	APPROVED		DATE	

JOB No. HB 1030
 DATE SEP 6, 1999

CITY OF HOLBROOK
 SHIPLEY-PHILLIPS INTERCHANGE UTILITY FEASIBILITY STUDY

UPGRADED SEWER FORCEMAIN SYSTEM

DRAWING NUMBER **6-6**
 SHEET

Section 7 - Conceptual Construction Cost Estimates

The final section of this report outlines the conceptual construction costs for the proposed water and wastewater system options. The following table summarizes these costs.

Table 7-1, Conceptual Construction Material and Engineering Cost Estimate Summary		
Option Number	Description	Total Conceptual Construction Material and Engineering Costs
Water Option 1	New 8-inch Water Pipeline without Fire Protection and without Bladder Tanks	\$303,887
Water Option 2	New 8-inch Water Pipeline without Fire Protection and with Bladder Tanks	\$309,487
Water Option 3	New 8-inch Water Pipeline with Fire Protection and without Bladder Tanks	\$341,632
Water Option 4	New 8-inch Water Pipeline with Fire Protection and with Bladder Tanks	\$347,232
Wastewater Option 1	New 6-inch Sewer Interceptor	\$149,818
Wastewater Option 2	New 8-inch Sewer Interceptor	\$180,022
Wastewater Option 3	New 10-inch Sewer Interceptor	\$224,010
Wastewater Option 4	New Water Reclamation Facility	\$745,086
Wastewater Option 5	Modify the Existing Sewer Pumping Stations and Forcemain System	\$45,537
Wastewater Option 6	Modify the Existing Sewer Pumping Stations and Forcemain System and Add Service to the South Side of the Freeway (services both sides of freeway)	\$140,155

The following tables outline the water and wastewater system options and the conceptual construction and engineering costs for the proposed water and wastewater system options. For a detailed breakdown of these costs please see the pages following this section.

Water Option #1
New 8-inch Water Pipeline without Fire Protection and without Bladder Tanks

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$262,557	\$41,330	\$303,887

22,000 feet of 8-inch PVC water pipe buried at an average depth of four feet.

Pipe jacking and casing under freeway.

A booster pumping station near the base of the existing elevated water storage tank.

Miscellaneous valves and fittings.

Miscellaneous electrical.

Two air relief stations to vent high points in the pipeline.

Three fire hydrants (one each for the NW, NE, and SE freeway and Keams intersections).

Includes 15-percent contingency.

Servives both sides of the freeway.

Water Option #2
New 8-inch Water Pipeline without Fire Protection and with Bladder Tanks

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$267,157	\$42,330	\$309,487

22,000 feet of 8-inch PVC water pipe buried at an average depth of four feet.

Pipe jacking and casing under freeway.

A booster pumping station near the base of the existing elevated water storage tank.

Miscellaneous valves and fittings.

Miscellaneous electrical.

Two 500 gallon bladder tanks for low flow situations (to minimize pump on/off cycles).

Two air relief stations to vent high points in the pipeline.

Three fire hydrants (one each for the NW, NE, and SE freeway and Keams intersections).

Includes 15-percent contingency.

Services both sides of the freeway.

Water Option #3
New 8-inch Water Pipeline with Fire Protection and without Bladder Tanks

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$292,802	\$48,830	\$341,632

22,000 feet of 8-inch PVC water pipe buried at an average depth of four feet.

Pipe jacking and casing under freeway.

A booster pumping station near the base of the existing elevated water storage tank.

Miscellaneous valves and fittings.

Miscellaneous electrical.

Minimal fire protection = Install City's two existing 25,000 gallon water tanks on new concrete pads, install one new 75 HP electric 1000 gpm fire pump on a new concrete pad in a new small enclosure and heat trace the piping and valves (if desired to supply 1000 gpm fire flow for approximately one hour). This will be installed at Keams Canyon.

Two air relief stations to vent high points in the pipeline.

Three fire hydrants (one each for the NW, NE, and SE freeway and Keams intersections).

Includes 15-percent contingency.

Services both sides of the freeway.

Water Option #4
New 8-inch Water Pipeline with Fire Protection and with Bladder Tanks

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$297,402	\$49,830	\$347,232

22,000 feet of 8-inch PVC water pipe buried at an average depth of four feet.

Pipe jacking and casing under freeway.

A booster pumping station near the base of the existing elevated water storage tank.

Miscellaneous valves and fittings.

Miscellaneous electrical.

Minimal fire protection = Install City's two existing 25,000 gallon water tanks on new concrete pads, install one new 75 HP electric 1000 gpm fire pump on a new concrete pad in a new small enclosure and heat trace the piping and valves (if desired to supply 1000 gpm fire flow for approximately one hour). This will be installed at Keams Canyon.

Two 500 gallon bladder tanks for low flow situations (to minimize pump on/off cycles).

Two air relief stations to vent high points in the pipeline.

Three fire hydrants (one each for the NW, NE, and SE freeway and Keams intersections).

Includes 15-percent contingency.

Services both sides of the freeway.

**Wastewater Option #1
New 6-inch Gravity Sewer Interceptor**

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$115,242	\$34,576	\$149,818

25,500 feet of 6-inch PVC gravity sewer pipeline buried at an average depth of 4-feet.

64 sewer manholes spaced every 400 feet.

Includes 15-percent contingency.

Only services the north side of the freeway.

**Wastewater Option #2
New 8-inch Gravity Sewer Interceptor**

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$145,446	\$34,576	\$180,022

25,500 feet of 8-inch PVC gravity sewer pipeline buried at an average depth of 4-feet.

64 sewer manholes spaced every 400 feet.

Includes 15-percent contingency.

Only services the north side of the freeway.

**Wastewater Option #3
New 10-inch Gravity Sewer Interceptor**

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$189,434	\$34,576	\$224,010

25,500 feet of 10-inch PVC gravity sewer pipeline buried at an average depth of 4-feet.

64 sewer manholes spaced every 400 feet.

Includes 15-percent contingency.

Only services the north side of the freeway.

**Wastewater Option #4
New Water Reclamation Facility**

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$626,123	\$118,963	\$745,086

8-inch PVC sewer pipeline from the north side of I-40 to the treatment plant.

Pipe jacking and casing under freeway.

4 sewer manholes.

150,000 GPD package water reclamation plant that denitrifies.

12 million gallon unlined reuse storage pond.

8-inch PVC reuse distribution piping.

Miscellaneous electrical.

Includes 15-percent contingency.

Services both sides of the freeway.

**Wastewater Option #5
Upgrade Existing Forcemain Pumping Stations**

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$33,037	\$12,500	\$45,537

New wet wells, supporting members and grating

One new, additional pump per pumping station

Miscellaneous valves and fittings.

Simple wood enclosures for pumping stations.

Concrete pad for wood enclosures.

Miscellaneous electrical.

Includes 15-percent contingency.

Only services the north side of the freeway.

Wastewater Option #6

Upgrade Existing Forcemain Pumping Stations and Add Service to South Side of Freeway

Conceptual Construction Material Cost	Conceptual Engineering Cost	Conceptual Total Project Cost
\$117,355	\$22,800	\$140,155

New wet wells, supporting members and grating

One new, additional pump per pumping station

Miscellaneous valves and fittings.

Simple wood enclosures for pumping stations.

Concrete pad for wood enclosures.

Miscellaneous electrical.

Add new sewer lift station on south side of freeway.

Pipe jacking and casing under freeway.

4-inch PVC forcemain from the south side of the freeway to the new (refurbished) Shipley-Phillips Lift Station #1.

Includes 15-percent contingency.

Services both sides of the freeway.

City of Holbrook
 Keams Canyon / I-40 Interchange Utility Feasibility Study
 Water Option #1
 Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
8-inch PVC C900	22,000	LF	5.76	\$126,720
Pipe Jacking and Casing Under Freeway	300	LF	200.00	\$60,000
Booster Pumping Station				
Duplex 25 HP Pumps with Controls	1	LS	23,890.00	\$23,890
Concrete Pad	1	LS	600.00	\$600
Misc. Piping and Valves	1	LS	1,000.00	\$1,000
Simple 8' x 8' Wood Enclosure	1	LS	2,000.00	\$2,000
Electrical	1	LS	1,000.00	\$1,000
Misc. Valves and Fittings	1	LS	1,000.00	\$1,000
Air Relief Station	2	LS	3,800.00	\$7,600
Fire Hydrant	3	LS	1,500.00	\$4,500
Subtotal				\$228,310
15-Percent Contingency				\$34,247
Grand Total				\$262,557

City of Holbrook
 Keams Canyon / I-40 Interchange Utility Feasibility Study
 Water Option #2
 Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
8-inch PVC C900	22,000	LF	5.76	\$126,720
Pipe Jacking and Casing Under Freeway	300	LF	200.00	\$60,000
Booster Pumping Station				
Duplex 25 HP Pumps with Controls	1	LS	23,890.00	\$23,890
Concrete Pad	1	LS	600.00	\$600
Misc. Piping and Valves	1	LS	1,000.00	\$1,000
Simple 8' x 8' Wood Enclosure	1	LS	2,000.00	\$2,000
Electrical	1	LS	1,000.00	\$1,000
Misc. Valves and Fittings	1	LS	1,000.00	\$1,000
500 Gallon Bladder Tank (Direct Buried)	2	LS	2,000.00	\$4,000
Air Relief Station	2	LS	3,800.00	\$7,600
Fire Hydrant	3	LS	1,500.00	\$4,500
Subtotal				\$232,310
15-Percent Contingency				\$34,847
Grand Total				\$267,157

City of Holbrook
 Keams Canyon / I-40 Interchange Utility Feasibility Study
 Water Option #3
 Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
8-inch PVC C900	22,000	LF	5.76	\$126,720
Pipe Jacking and Casing Under Freeway	300	LF	200.00	\$60,000
Booster Pumping Station				
Duplex 25 HP Pumps with Controls	1	LS	23,890.00	\$23,890
Concrete Pad	1	LS	600.00	\$600
Misc. Piping and Valves	1	LS	1,000.00	\$1,000
Simple 8' x 8' Wood Enclosure	1	LS	2,000.00	\$2,000
Electrical	1	LS	1,000.00	\$1,000
Misc. Valves and Fittings	1	LS	1,000.00	\$1,000
Fire Flow System				
75 hp Fire Pump (TEFC Motor)	1	LS	19,900.00	\$19,900
Install two 25,000 Existing Wtr Tanks	1	LS	1,200.00	\$1,200
Concrete Tank Pads	1	LS	600.00	\$600
Misc. Piping	1	LS	1,000.00	\$1,000
Simple Wood Enclosure	1	LS	1,000.00	\$1,000
Electrical and Controls	1	LS	2,000.00	\$2,000
Concrete Pump Pad	1	LS	600.00	\$600
Air Relief Station	2	LS	3,800.00	\$7,600
Fire Hydrant	3	LS	1,500.00	\$4,500
Subtotal				\$254,610
15-Percent Contingency				\$38,192
Grand Total				\$292,802

City of Holbrook
 Keams Canyon / I-40 Interchange Utility Feasibility Study
 Water Option #4
 Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
8-inch PVC C900	22,000	LF	5.76	\$126,720
Pipe Jacking and Casing Under Freeway	300	LF	200.00	\$60,000
Booster Pumping Station				
Duplex 25 HP Pumps with Controls	1	LS	23,890.00	\$23,890
Concrete Pad	1	LS	600.00	\$600
Misc. Piping and Valves	1	LS	1,000.00	\$1,000
Simple 8' x 8' Wood Enclosure	1	LS	2,000.00	\$2,000
Electrical	1	LS	1,000.00	\$1,000
Misc. Valves and Fittings	1	LS	1,000.00	\$1,000
Fire Flow System				
75 hp Fire Pump (TEFC Motor)	1	LS	19,900.00	\$19,900
Install two 25,000 Existing Wtr Tanks	1	LS	1,200.00	\$1,200
Concrete Tank Pads	1	LS	600.00	\$600
Misc. Piping	1	LS	1,000.00	\$1,000
Simple Wood Enclosure	1	LS	1,000.00	\$1,000
Electrical and Controls	1	LS	2,000.00	\$2,000
Concrete Pump Pad	1	LS	600.00	\$600
500 Gallon Bladder Tank (Direct Buried)	2	LS	2,000.00	\$4,000
Air Relief Station	2	LS	3,800.00	\$7,600
Fire Hydrant	3	LS	1,500.00	\$4,500
Subtotal				\$258,610
15-Percent Contingency				\$38,792
Grand Total				\$297,402

City of Holbrook
Keams Canyon / I-40 Interchange Utility Feasibility Study
Wastewater Option #1
Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
6-inch PVC SDR35	25,500	LF	1.42	\$36,210
Manhole	64	EA.	1,000.00	\$64,000
Subtotal				\$100,210
15-Percent Contingency				\$15,032
Grand Total				\$115,242

Note: Only services the north side of the freeway.

City of Holbrook
Keams Canyon / I-40 Interchange Utility Feasibility Study
Wastewater Option #2
Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
8-inch PVC SDR35	25,500	LF	2.45	\$62,475
Manhole	64	EA.	1,000.00	\$64,000
Subtotal				\$126,475
15-Percent Contingency				\$18,971
Grand Total				\$145,446

Note: Only services the north side of the freeway.

City of Holbrook
Keams Canyon / I-40 Interchange Utility Feasibility Study
Wastewater Option #3
Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
10-inch PVC SDR35	25,500	LF	3.95	\$100,725
Manhole	64	EA.	1,000.00	\$64,000
Subtotal				\$164,725
15-Percent Contingency				\$24,709
Grand Total				\$189,434

Note: Only services the north side of the freeway.

City of Holbrook
 Keams Canyon / I-40 Interchange Utility Feasibility Study
 Wastewater Option #4
 Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
8-inch PVC SDR35 (gravity sewer)	1,500	LF	2.49	\$3,735
Pipe Jacking and Casing Under Freeway	300	LF	200.00	\$60,000
Manhole	4	EA.	1,000.00	\$4,000
150,000 GPD Denitrifying Package Water Reclamation Plant	1	EA.	310,000.00	\$310,000
Unlined Reuse Storage Pond	1	EA.	150,000.00	\$150,000
8-inch PVC SDR21 (reuse distribution piping)	1,500	LF	4.48	\$6,720
Electrical	1	LS	10,000.00	\$10,000
Subtotal				\$544,455
15-Percent Contingency				\$81,668
Grand Total				\$626,123

Note: Services both sides of the freeway.

City of Holbrook
 Keams Canyon / I-40 Interchange Utility Feasibility Study
 Wastewater Option #5
 Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
New Wet Well Concrete for Two New Pumping Stations	14.4	CY	250.00	\$3,600
Supporting Members and Grating for New Pumping Station	2	LS	2,464.00	\$4,928
One New Additional Pump per Pumping Station	2	EA.	6,500.00	\$13,000
Misc. Piping and Valves for New Pumping Station	2	LS	1,000.00	\$2,000
Simple Wood Enclosure for New Pumping Station	2	LS	1,000.00	\$2,000
Concrete Pad for Wood Enclosure	2	LS	600.00	\$1,200
Miscellaneous Electrical	2	LS	1,000.00	\$2,000
Subtotal				\$28,728
15-Percent Contingency				\$4,309
Grand Total				\$33,037

Note: Only services the north side of the freeway.

City of Holbrook
 Keams Canyon / I-40 Interchange Utility Feasibility Study
 Wastewater Option #6
 Revised September 5, 1999

Description	Qty	Unit	Budget Unit \$ 1999	Total
New Wet Well Concrete for Two New Pumping Stations	14.4	CY	250.00	\$3,600
Supporting Members and Grating for New Pumping Station	2	LS	2,464.00	\$4,928
One New Additional Pump per Pumping Station	2	EA.	6,500.00	\$13,000
Misc. Piping and Valves for New Pumping Station	2	LS	1,000.00	\$2,000
Simple Wood Enclosure for New Pumping Station	2	LS	1,000.00	\$2,000
Concrete Pad for Wood Enclosure	2	LS	600.00	\$1,200
Miscellaneous Electrical	2	LS	1,000.00	\$2,000
IPF Lift Station	1	LS	12,000.00	\$12,000
4-inch PVC SDR21 Forcemain Pipeline	1,000	LF	1.32	\$1,320
Pipe Jacking and Casing Under Freeway	300	LF	200.00	\$60,000
Subtotal				\$102,048
15-Percent Contingency				\$15,307
Grand Total				\$117,355

Note: Services both sides of the freeway.

MEMORANDUM

This is a new application.

R14-2-406
Engineering
Sufficient

To: Managers

From: Docket Control Date Routed: 4/18 Initials: SAD

Please list staff assignments, if any.

Initial & date by your name & pass the folder to the next manager on the list.

Please note: We need a 24 hour turn around per manager.

This folder should be returned to Docket Control by 4/25

No Water or Sewer

Kalleberg Initial _____ Date _____

Shand Initial _____ Date _____

Assigned Staff: _____

Initial *MA* Date 4/23/01

Williams Initial _____ Date _____

DiNunzio Initial _____ Date _____

Fisher Initial _____ Date _____

Assigned Staff: N/A

Kennedy Initial _____ Date _____

Bostwick Initial *BB* Date 4/23/01

Assigned Staff: *Mr. Featherst*
Ann Fisher

Olea Initial _____ Date _____

Wells Initial _____ Date _____

D. Smith Initial _____ Date _____

Assigned Staff: _____

DOCKET: W-01698A-01-0323

COMPANY: Sun Valley Utilities, Inc.

CASE TYPE: E

DESC: Extension of Territory

DO NOT REMOVE THE COPY FROM THE FOLDER! IF YOU NEED A COPY, PLEASE MAKE ONE. THANK YOU!!

MEMORANDUM

This is a new application.

Docket

To: Managers

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No Water or Sewer

Kalleberg Initial _____ Date _____

Shand Initial _____ Date _____

Assigned Staff: _____

Initial SA Date 4/23/01

Initial AW Date 4/23/01

Williams

DiNunzio

Fisher

Assigned Staff: _____

Assigned Staff: N/A

Initial HSE Date 4-23-01

Initial SPD Date 4-24

Initial AB Date 4/23/01

Wells

D. Smith

Assigned Staff: _____

Assigned Staff: Jim Featherback

Initial DS Date 4/23

Assigned Staff: WINDY HARRISON

DOCKET: **W-01698A-01-0323**

COMPANY: **Sun Valley Utilities, Inc.**

CASE TYPE: **E**

DESC: **Extension of Territory**

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