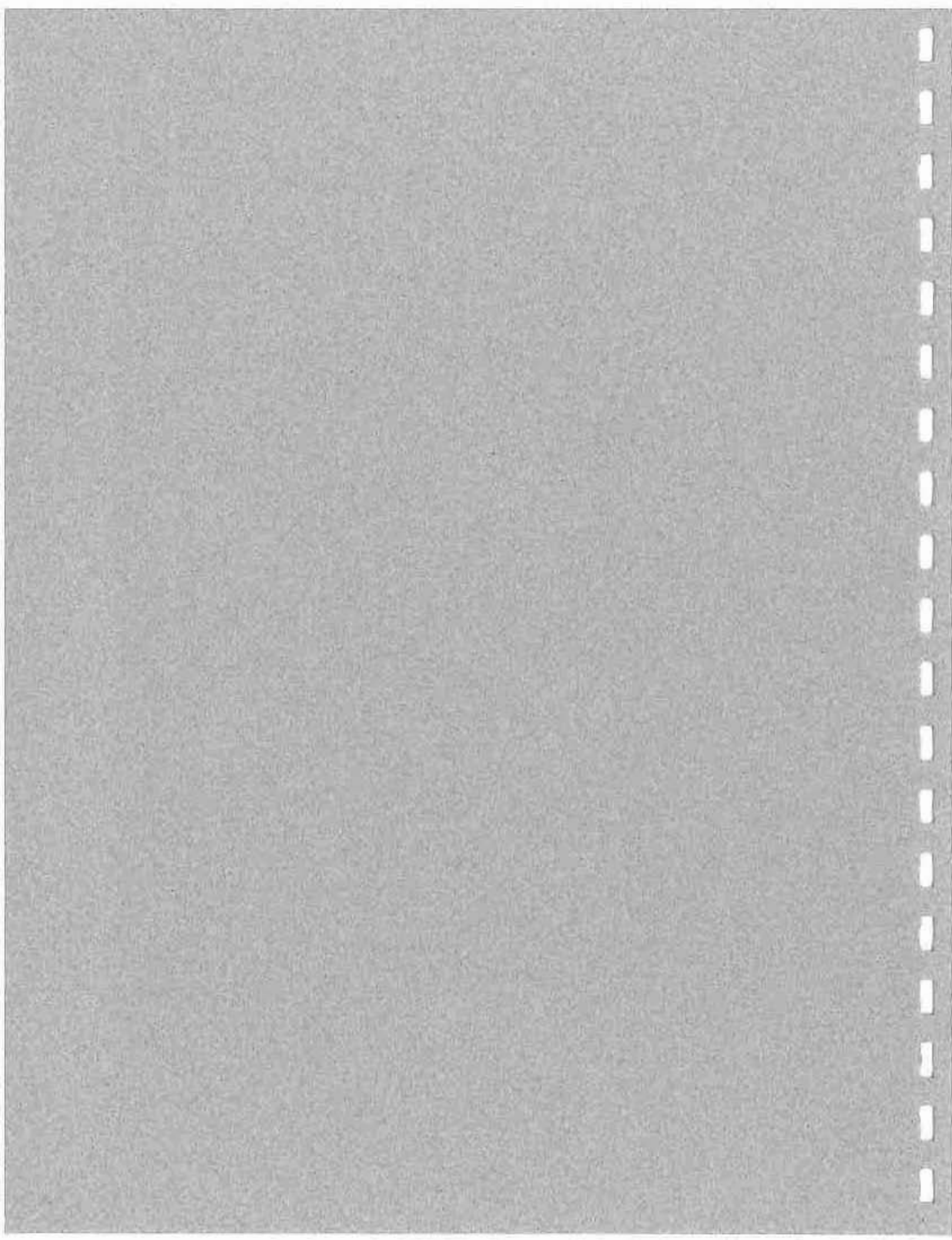


## **Appendix A. Water Supply Options**



**PREFACE**

The information in this appendix was developed by Del Webb and its consultants at the request of the U.S. Bureau of Reclamation. Reclamation staff have independently reviewed the information (including technical review of cost estimates and engineering feasibility) and have sought additional review of this appendix from the Arizona Department of Water Resources (ADWR) and the general public (see letters of comment in Appendix H). In addition, Reclamation solicited the views of the city of Phoenix and had follow-up telephone conversations with city staff (Garcia pers. comm.) regarding the accuracy of the information presented in the appendix. Based upon this review, Reclamation has determined that it is reasonable to conclude that Del Webb would be able to obtain alternative water supplies in the absence of the Ak-Chin leased water. Reclamation is not relying on Option 4 as the basis for this conclusion (see Appendix H, response to comment 25-1.) Del Webb has provided supplemental information and relevant correspondence related to the water supply options which are found in Attachment 1 to this Appendix.

**INTRODUCTION****WATER SUPPLY OPTIONS**

This appendix describes the non-federal water supply sources that Del Webb Corporation (Del Webb) could secure to provide water to The Villages at Desert Hills (The Villages) in order to illustrate what would happen in the development area in the absence of the proposed action. None of the water supply options described below requires the approval of the Bureau of Reclamation (Reclamation) or any other federal entity.

Four alternative sources were examined:

- ▶ City of Phoenix service provided by extending the City's existing water distribution system north from Deer Valley Road to The Villages;
- ▶ City of Phoenix service using CAP water conveyed through a separate system taking water from the CAP system;
- ▶ Extension of existing City of Peoria system north to The Villages; and
- ▶ Enrollment of The Villages in Central Arizona Groundwater Replenishment District (CAGR) and provision of replenished groundwater from wells located offsite. Service would be provided by a newly-formed water company.

Each of the options was evaluated to determine whether:

- (1) There was an adequate supply to meet the projected demand;

- (2) The water was legally available;
- (3) The supply would be considered an assured water supply (AWS) pursuant to the Groundwater Management Act (GMA);
- (4) It was economically feasible to develop and deliver to The Villages; and
- (5) It was technically feasible to construct facilities to deliver the water to The Villages.

Each of the above options is described in more detail in this appendix.

## REGULATORY AND LAND USE CONSIDERATIONS

Discussed below are the most pertinent regulatory and land use considerations that apply to water supply sources for The Villages.

### GROUNDWATER MANAGEMENT

The Villages is located in the Phoenix Active Management Area (AMA) which was established in 1980 with the enactment of the Groundwater Management Act (GMA). All groundwater and its uses are, therefore, subject to the various laws and administrative rules which control groundwater use in the AMA. The Arizona Department of Water Resources (ADWR) is the regulatory agency charged with enforcing the GMA. Following are the provisions of the GMA that affect the development and use of water supplies that might be secured for The Villages.

#### Assured Water Supply

ARS Section 45-576 requires that before a subdivision in an AMA is approved by the local jurisdictional authority and by the State Real Estate Commissioner, the subdivider must obtain a certificate of AWS or the subdivision must receive service from a water provider designated as having an AWS. ADWR has adopted rules to guide the administration of the AWS program.

In general, water supplies for an AWS must be renewable. Development cannot occur based on mined groundwater. A CAP supply delivered pursuant to a municipal and industrial subcontract is considered to be a renewable supply. Except for a small allotment for existing providers, groundwater may not be used as a source for an AWS unless it is supported by natural recharge, a permitted groundwater recharge project, or membership in CAGR. D.

#### Service Area Rules

Groundwater use regulations apply to providers' water service areas and not to other boundaries of jurisdiction, such as city limits. In general, the service area is that area actually being served water by the providers' system, i.e., the area inside the pipeline system which distributes water. Service areas may be expanded to serve additional areas as they develop. However, they may not be expanded for the purpose of incorporating a well field for a water supply.

## Water Management Plans

ADWR is required to prepare and adopt groundwater management plans for each AMA for identified periods. The Second Management Plan is now in effect. It will be replaced by the Third Management Plan in the year 2000. Each plan establishes water conservation requirements for all groundwater users for the management period. Each plan also includes criteria for ADWR to follow for permitting uses and the general plan to achieve the established goals of the groundwater management program.

## CITY LIMITS AND PLANNING AREAS

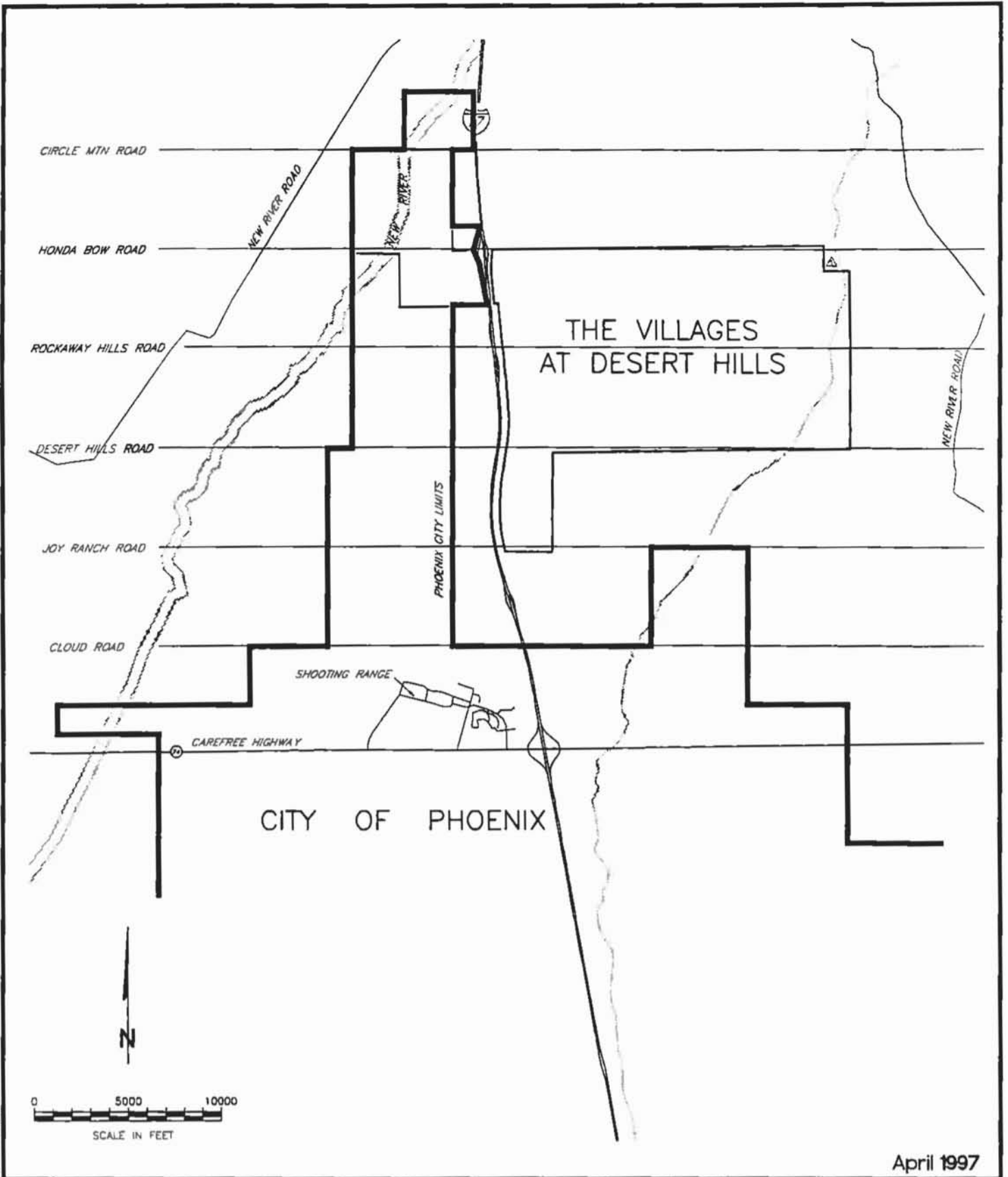
Figure A-1 depicts City of Phoenix limit boundaries in the vicinity of The Villages as of December 1, 1996. Most of the area to be developed as The Villages is currently not within an incorporated city; however, the City of Phoenix has annexed the Factory Outlet Stores immediately adjacent to The Villages and the portion of The Villages that is west of Interstate 17 (I-17). There are no immediate plans for incorporation of the rest of the area to be occupied by The Villages into any municipality.

The City of Phoenix plans to serve water to the area, including The Villages, in the future. The Phoenix Water Resources Plan, approved by the City Council in November 1995, indicates a Water Service Planning Area extending north to the Tonto National Forest boundary. Figure A-2 shows the Water Service Planning Area.

## DEVELOPMENT MASTER PLAN STIPULATION

A Development Master Plan Stipulation with Maricopa County restricts the amount of groundwater that may be used at The Villages. The stipulation provides:

*"The developer shall not use groundwater for golf course irrigation, residential, industrial or commercial uses. The only time the developer may use groundwater is on an interim basis early in construction and on an interim basis for County and public uses (such as the fire station, Sheriff's substation and utility yard, trailheads and potential school sites), until the permanent water system is completed and hook-up is available to these facilities. Except for water needed for construction of the main water delivery pipeline and of the water and wastewater treatment facilities, the interim pumping of construction groundwater referenced above shall in all events not exceed a maximum construction period of 18 months nor a maximum amount of 150 acre-feet (af). All interim pumping of groundwater shall comply with ADWR's regulations providing for protection of existing groundwater users in the area. At a minimum this interim supply of groundwater shall be recharged into the aquifer as soon as the recharge facility described in the DMP has been fully permitted and constructed."*

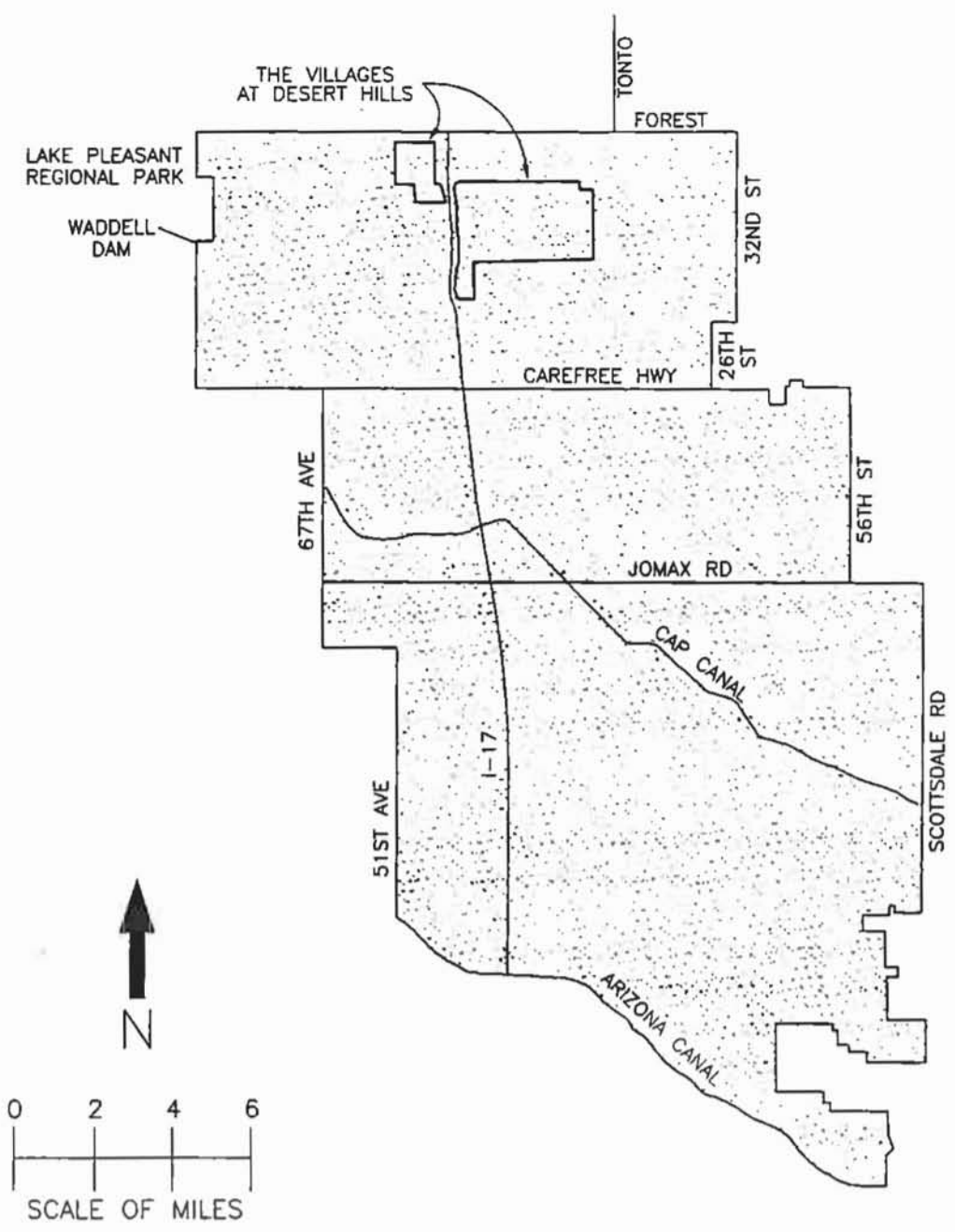


April 1997

Bookman-Edmonston  
Engineering, Inc.

Phoenix City Limits  
In Vicinity of The Villages  
at Desert Hills

FIGURE A-1



From: *Phoenix Water Resources Plan*  
 City of Phoenix Water Services  
 Department, November 1995

May 1997

BOOKMAN-EDMONSTON  
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CITY OF PHOENIX  
 NORTHERN AREA  
 OFF-PROJECT WATER SERVICE PLANNING AREA

FIGURE A-2

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## **CURRENT AND PLANNED WATER FACILITIES**

Groundwater is currently the only source of water for the area surrounding The Villages. Individual wells make up most of the water service. The Desert Hills Water Company, located to the south, and Sabrosa Water Company, located to the north of the proposed new development, are the only providers in the immediate vicinity. The Desert Hills Water Company operates two wells and serves 540 customers (1995 Annual Report) and the Sabrosa Water Company operates three wells and serves 72 customers (1994 Annual Report).

City of Phoenix water delivery facilities extend north near the Dynamite Boulevard alignment close to where the CAP Aqueduct crosses I-17. Water delivery facilities extend north to Happy Valley Road with main trunk lines along Deer Valley Road.

The City of Phoenix has proposed to construct a 320 mgd treatment plant near Lake Pleasant that will use CAP water from Waddell Canal. The plant will be constructed in stages with full capacity several years away. Operation of the new plant is scheduled to begin about year 2005. The treatment plant will supply water to the areas south and north of the Carefree Highway. A 78-inch trunk line will be constructed from the treatment plant along Carefree Highway.

The City of Peoria distribution system currently extends only as far north as Beardsley Road. Peoria water service is from groundwater at this time.

The City of Peoria currently has plans for construction of a City-owned treatment plant near Greenway Road and the Arizona Canal to treat both CAP and SRP water supplies. The City also has agreed to purchase a share of the City of Glendale's new Pyramid Water Treatment Plant which will treat CAP water supplies.

## **ARIZONA STATE LAND DEPARTMENT PLANS**

The Arizona State Land Department (ASLD) owns most of the public land surrounding and to the west of The Villages. The land will be managed pursuant to the Urban Land Act which provides that ASLD develop plans for its development and disposal. At this time, there are no plans adopted for the land's development.



**NON-FEDERAL WATER SUPPLY OPTIONS****OPTION 1 - SERVICE FROM EXISTING CITY OF PHOENIX SYSTEM**

Under this option, the City of Phoenix would provide water service to The Villages from the City's existing water supply system through a series of line extension agreements. The City's distribution system and service area would be extended to include The Villages. The extension of Phoenix' water supply system to include The Villages' property is reflected in the Phoenix Water Resources Plan approved by the Phoenix City Council in November 1995.

Phoenix has already annexed the 900 acres of The Villages lying west of I-17. In a June 11, 1996, letter to Bruce Ellis of Reclamation, Frank Fairbanks, Phoenix City Manager, confirmed that the City could be a water supplier to The Villages based on the City's plans to serve the area with CAP water from its proposed Lake Pleasant Water Treatment Plant.

A letter was also received from the City of Phoenix's City Manager's Office indicating that the City has reviewed the two Phoenix water supply options addressed in the draft EA and that the City staff "generally agree with the description of the water supply situation in the draft report..." The City indicated that "design and timing of delivery facilities would be determined with the City of Phoenix in accordance with their Master Plans and the needs of development in the North Phoenix area" (Garcia pers. comm.). Additionally, Del Webb has also presented considerable evidence about discussions to provide City of Phoenix water to The Villages development, including past correspondence with City officials (see Attachment 1 to this appendix). Reclamation staff also independently contacted City staff on September 15, 1997, to confirm the accuracy of the information contained in Attachment 1 and to further discuss the City of Phoenix options.

No part of this water service agreement would require the approval of Reclamation or any other federal entity, and no part of it would affect groundwater levels in The Villages area or use unreplenished groundwater.

**Water Supply**

The City of Phoenix currently has adequate existing and planned water supplies to serve The Villages. In November 1995, the Phoenix City Council approved a revised Phoenix Water Resources Plan that identifies an available water supply of 227,704 af per year for "off-Project" areas, including The Villages.<sup>1</sup> The water demand for off-Project lands in 1995 was 175,300 af per year, leaving 52,404 af per year available to serve new development. The projected demand for The Villages is 7,900 acre-feet per year at full build-out.

---

<sup>1</sup>Certain lands within the City of Phoenix are within Salt River Project (SRP) and have surface water supplies that are not available to lands outside of SRP. The Phoenix Water Resources Plan analyzes the "off-Project" areas separately, because the supply of water for SRP land is considered adequate only to meet future needs in the SRP area.

The City of Phoenix projects that water demand in the off-Project area may slightly exceed available supplies by the year 2045. Additional supply opportunities have been identified by the City, but definite plans for their development have not been completed. If The Villages is served by the City of Phoenix, it may result in the use of portions of existing water supplies with other later development being served from other planned supplies. Nevertheless, it is clear that the City of Phoenix currently has adequate water supplies available to serve The Villages.

City of Phoenix Off-Project and Non-Member Projected Water Supplies and Demands (1,000 Acre-feet)								
	1995	2000	2005	2010	2015	2025	2035	2045
CAP Allocation	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9
Gateway	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Reclaimed Wastewater for Turf	1.6	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Groundwater	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Roosevelt Cons. Space		32.3	32.3	32.3	32.3	32.3	32.3	32.3
RID EXCH. SRPMIC	14.2	8.5	28.5	28.1	28.1	24.7	4.7	8,137
Fort McDowell Settlement	0	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Hohokam ID Buyout	62.0	2.4	43.7	34.6	25.6	16.0	6.0	6.0
Total Average Year Off-Project Supplies	228	271	262	253	244	231	221	214
Hot Weather Demand	149	162	177	193	210	233	257	281
Surplus (Deficit)	79	109	85	60	34	(2)	(36)	(67)

Source: Phoenix Water Resources Plan, City of Phoenix Water Service Department, November 1995.

As can be seen from the above projection, the City has an adequate supply to meet all demands until about the year 2025. Development of additional supply opportunities will assure a full supply well beyond this time. Additional supply opportunities include reallocated CAP, State Land allocated CAP, recharge and recovery of reclaimed water, and water from McMullen Valley. As discussed above, the projected City demand includes estimates for The Villages area. Service to The Villages by the City would not increase the demand significantly, if any, over that already projected.

Pursuant to ARS 45-576.E, the City of Phoenix is deemed to have an AWS until January 1, 1998. Because Phoenix is a deemed provider, The Villages could obtain service from Phoenix and, by doing so, satisfy the assured water supply requirements. The City of Phoenix has applied to ADWR to be designated as having an AWS for the period following January 1, 1998, and is expected to receive such a designation. Receipt of water service from Phoenix as a designated AWS provider will satisfy the AWS requirements for The Villages.

## **Delivery Facilities**

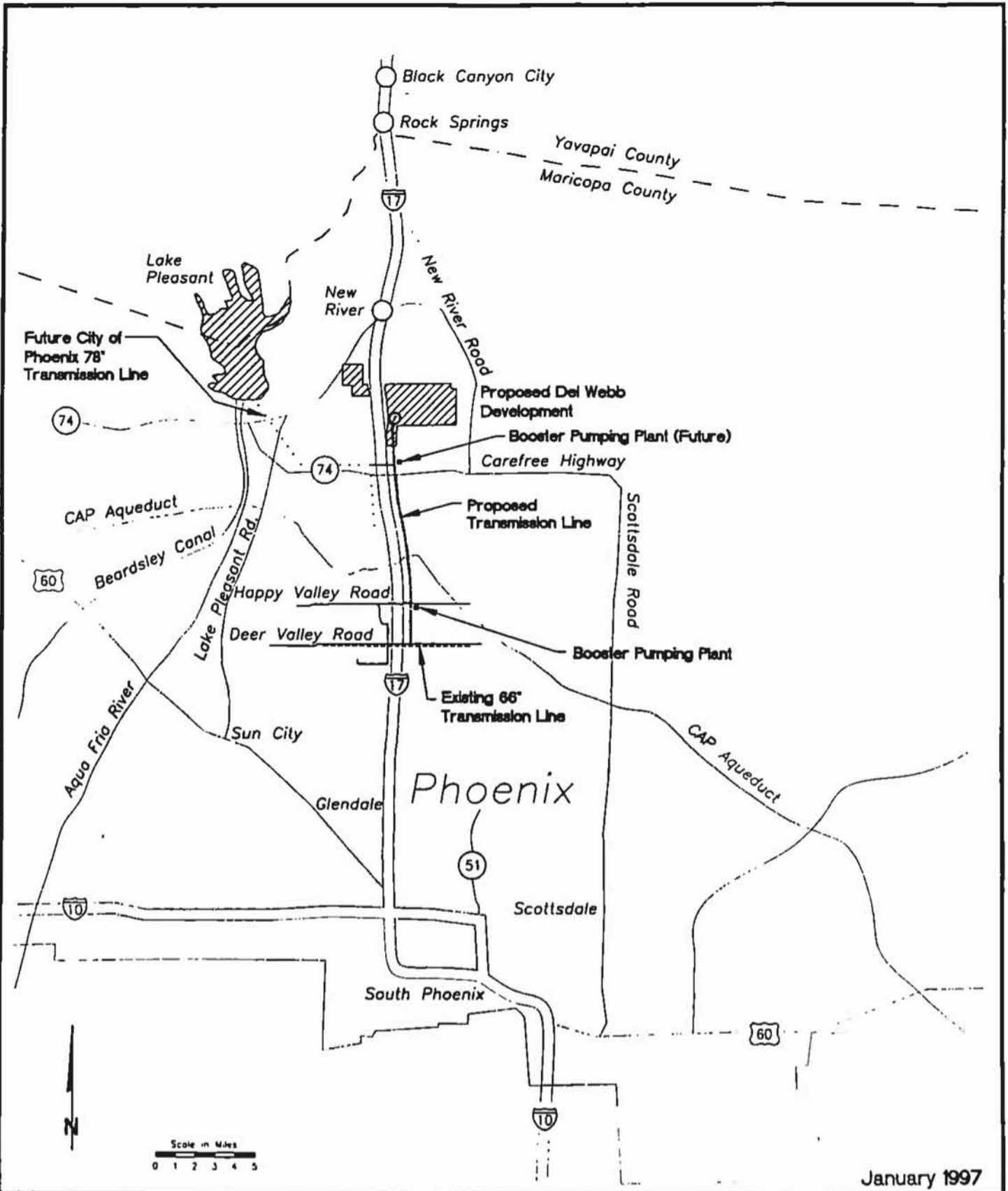
The most likely candidate for connecting the proposed Villages transmission line would be the 66-inch transmission line adjacent to Deer Valley Road that delivers treated Phoenix system water from to areas west of 35th Avenue. The connection point would be just east of I-17 at Deer Valley Road, approximately five miles west of the Union Hills Water Treatment plant. The Union Hills Water Treatment Plant is used to treat CAP water.

The total length of the proposed pipeline would be approximately 63,000 feet (12 miles). The alignment would be parallel and adjacent to the east right-of-way (ROW) of I-17, as shown in Figure A-3. The alignment would cross Skunk Creek, Deadman Wash, several minor intermittent streams, the CAP Canal, Carefree Highway, and other minor roadways.

The Villages' transmission line configuration would consist of a 24-inch diameter pipeline from the Deer Valley Road connection point to the Carefree Highway (43,000 linear feet), and a 36-inch diameter pipeline from Carefree Highway to The Villages development (20,000 linear feet). Because the City of Phoenix plans to build the 320-mgd Lake Pleasant Water Treatment Plant and a 78-inch line along Carefree Highway before the full demand is realized at The Villages, the pipeline south of Carefree Highway could be sized smaller (24-inch) to meet this intermediate level demand and tap into the Phoenix 78-inch line when it is available (currently planned for the year 2005). Design and timing of The Villages' transmission line would be coordinated with the City of Phoenix in accordance with its Master Plans and the needs of development in the North Phoenix area.

A booster pumping plant located south of Happy Valley Road would be necessary to deliver the treated water from the Deer Valley Road connection point to The Villages. The pumping plant would be sized to meet the intermediate demand noted above. Once the planned City of Phoenix 78-inch transmission line is operational, the connection could be made at Carefree Highway, and this booster pumping plant would no longer be necessary. The transmission line segment from Deer Valley Road to Carefree Highway would continue to be integrated with the City of Phoenix distribution system. A booster pumping plant would, however, be necessary north of Carefree Highway (on The Villages 36-inch transmission line) to deliver treated water from the new connection point to The Villages. Figure A-3 shows the conceptual layout for this alternative. Additional facilities and connections to the City of Phoenix water distribution system may be required.

An alternative configuration that does not include a connection to the future 78-inch line would consist of a 36-inch diameter transmission line the entire 12-mile distance from Deer Valley Road to The Villages and one booster pumping plant sized for the maximum day Villages' demand.



January 1997

Bookman-Edmonston  
Engineering

Option 1  
Service from Existing  
City of Phoenix System

FIGURE A-3

Because this system would be delivering treated water, a water treatment plant at The Villages would not be necessary, and the terminal configuration at The Villages development would be different. The pipeline would most likely terminate at a storage facility with the storage facility sized and located with respect to distribution system requirements (rather than treatment plant requirements).

**System Operation and Maintenance**

Because this would be an extension of service by the City of Phoenix, the system would be operated and maintained by the City. Users would be customers of the City of Phoenix Water Department. Water rates for customers would be established by the City based on policy for service to similar areas on the outskirts of the distribution system.

**Estimated Costs**

A pre-feasibility-level cost estimate is presented in the table below. Costs include construction costs for the pumping plants and transmission line, and rights-of-way, legal, engineering, construction management, administration, and contingency costs. The total estimated cost for Option 1 is \$12.7 million.

Estimate of Cost to Provide Treated Water from the Existing City of Phoenix Water Supply System (Option 1)	
Item Description	Cost
Pumping Plants	
Happy Valley Road	\$ 1,000,000
Carefree Highway (future)	800,000
<b>Subtotal, Pumping Plants</b>	<b>\$ 1,800,000</b>
Transmission Pipeline (20,000 linear feet, 36-inch diameter and 43,000 linear feet, 24-inch diameter)	\$ 6,428,000
Rights-of-Way	\$ 610,000
<b>Subtotal</b>	<b>\$ 8,838,000</b>
Legal, Engineering, Construction Management and Administration (15%)	\$ 1,326,000
Contingencies (25%)	\$ 2,541,000
<b>TOTAL ESTIMATED COST</b>	<b>\$12,705,000</b>

The source of funding for construction could be negotiated between Del Webb and the City. A number of variations of up-front funding and development fee structures is possible.

Pursuant to State statute, ARS 45-576.E, the City of Peoria is deemed to have an assured water supply until January 1, 1998. Under this status, The Villages could obtain water service from the City of Peoria and meet the state's AWS requirements. In order to continue its AWS status after January 1, 1998, the City filed an application to be recognized as having an AWS designation. In its AWS application, Peoria anticipates pledging approximately 60,000 acre-feet of water per year from three supply sources: 18,709 acre-feet of CAP water; 18,508 acre-feet of excess groundwater; and 23,103 acre-feet of SRP water.

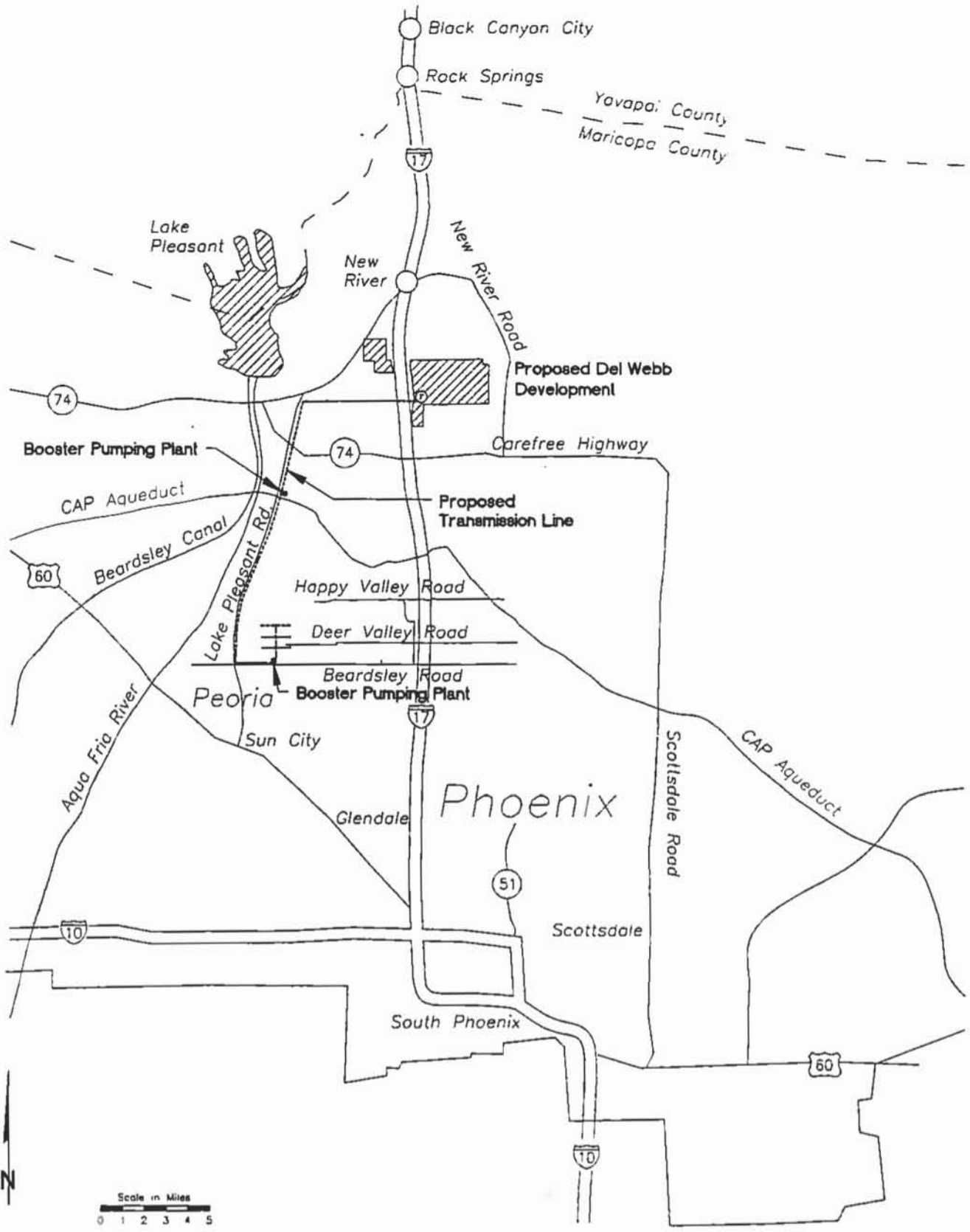
Supplies which Peoria can pledge for assured water supply purposes are currently limited by treatment capacity. Peoria anticipates pledging nearly 50,000 acre-feet per year of capacity in treatment facilities including 24,600 af/yr of well capacity that would be used to pump excess groundwater pursuant to the City's membership in CAGR. Such groundwater would be replenished by CAGR with surface water supplies. Given infrastructure constraints and certain supply constraints, however, Peoria anticipates pledging approximately 43,000 acre-feet per year.

If Peoria does not become a designated AWS provider, or later loses such designation, The Villages could continue to receive water service from Peoria. In order to satisfy AWS requirements for any remaining development, Del Webb could enroll the remainder of The Villages' property as member lands of the CAGR and obtain a certificate of Assured Water Supply for those lands. Any groundwater pumped from existing Peoria well fields by Peoria to serve those lands would be replenished with surface water by the CAGR. This service arrangement would not require the approval of Reclamation, nor would it impact groundwater levels in The Villages area or use unreplenished groundwater.

The estimated impacts of groundwater production to supply The Villages from the Peoria system were evaluated with respect to the requirements for a 100-year AWS. In order to demonstrate a 100-year water supply, the depth to water at the end of 100 years needs to be less than 1,000 feet.

In performing this analysis, it was assumed that 8,000 acre-feet per year would be obtained from nine wells located in Sections 16 and 21 in Township 4 North, Range 1 East, as shown in Figure A-5.

The analysis shows that the maximum drawdown at the end of 100 years would be about 185 feet indicating that the supply would meet the criterion for a 100-year AWS. The drawdown over time at the well field is shown graphically in Figure A-6. Because of the development of the well field, the drawdown at the closest City of Peoria well (located in section 21) is estimated to be 115 feet after 100 years.



May 1997

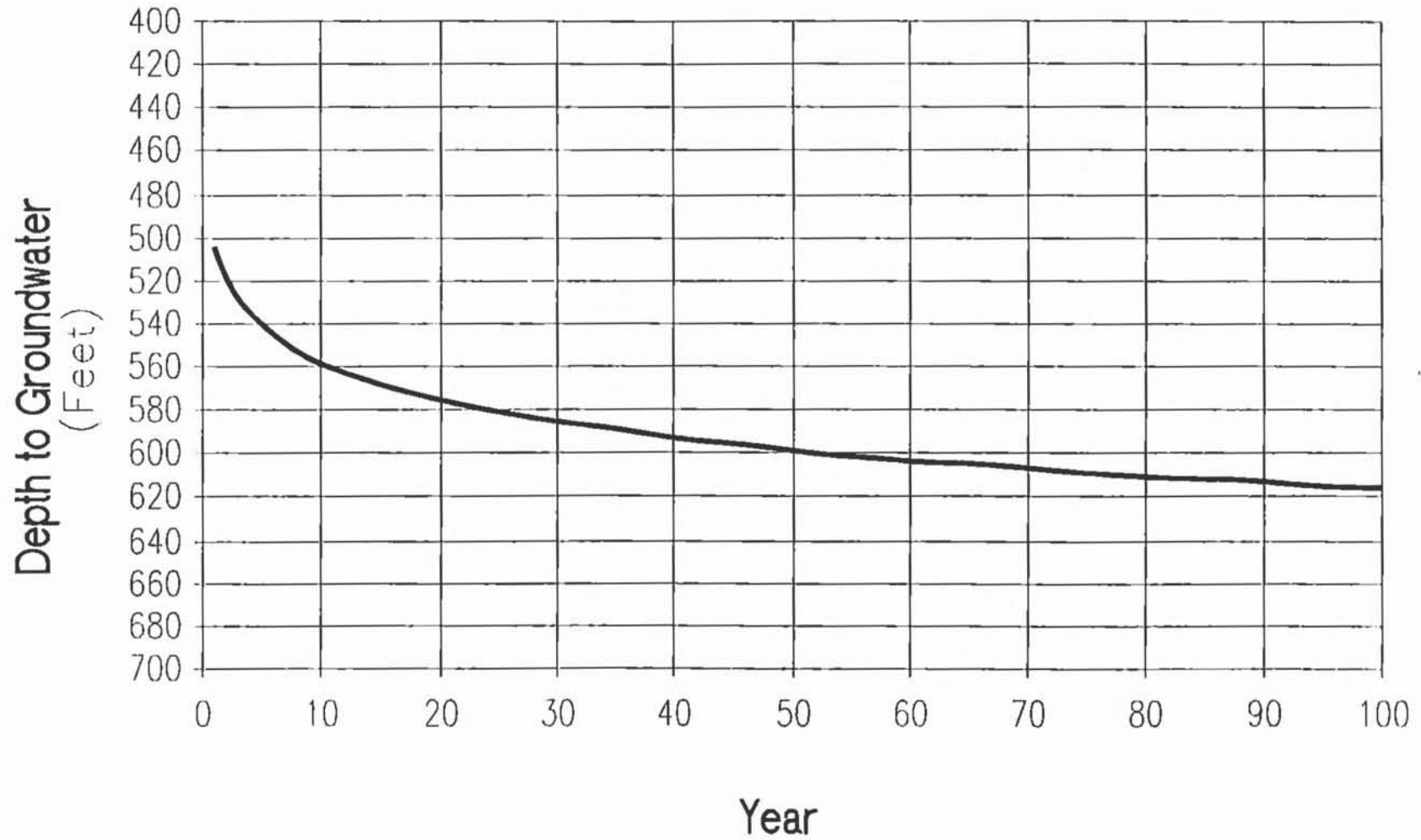
BOOKMAN-EDMONSTON  
ENGINEERING

Option 3  
Service from Existing  
City of Peoria System

FIGURE A-5

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8-18



Offsite Wellfield for The Villages

April 1997

Bookman-Edmonston  
Engineering

Drawdown Effects of New Wells  
In City of Peoria System for Option 3

FIGURE A-6

11/22/97 11:50 AM D:\WORK\PEORIA\FIGURE A-6.DWG



### **Delivery Facilities**

The required facilities would include a connection to the existing City of Peoria water distribution system, a well field, a booster pumping plant, and a transmission pipeline. An estimated nine wells would need to be drilled to a depth of approximately 1,600 feet. Each well would require a 400-horsepower pump. The wells would be connected to the existing City of Peoria water distribution system in the vicinity of Beardsley Road and 91st Avenue. The City of Peoria operates a 16-inch diameter water distribution pipeline at this location.

A booster pumping plant and a transmission line would need to be constructed to deliver water to The Villages. A 36-inch diameter transmission line would head west from the booster pumping plant parallel and adjacent to the northern Beardsley Road ROW, as shown in Figure A-5. At the Lake Pleasant Road, the transmission line would parallel and be adjacent to the southern ROW of the Lake Pleasant Road heading north. The transmission line would head due east along the section line starting at the southern boundary of Section 23, Township 6 North, Range 1 East to The Villages. It is estimated that approximately 19 miles of 36-inch diameter pipeline would be required.

### **System Operation and Maintenance**

Because this would be an extension of service by the City of Peoria, the system would be operated and maintained by the City. Users would be customers of the City of Peoria Water Department. Water rates for customers would be established by the City, based on policy for service to similar areas on the outskirts of the distribution system.

### **Costs**

A pre-feasibility-level cost estimate is presented in the table below which shows construction costs for the well field, pumping plant, and transmission line, and costs for rights-of-way, legal, engineering, construction management, administration, and contingencies. The total estimated cost for Option 3 is \$27.9 million.

<b>Estimate of Cost to Provide Service from Existing City of Peoria System (Option 3)</b>	
<b>Item Description</b>	<b>Cost</b>
Well field (9 wells, 1,300 feet deep)	\$ 2,860,000
Pumping Plant	\$ 3,200,000
Transmission Pipeline (102,000 linear feet, 36-inch diameter)	\$12,342,000
Rights-of-Way	\$ 981,000
Subtotal	\$19,383,000
Legal, Engineering, Construction Management and Administration (15%)	\$ 2,907,000
Contingencies (25%)	\$ 5,573,000
<b>TOTAL ESTIMATED COST</b>	<b>\$27,863,000</b>

#### **OPTION 4 - CAGR D MEMBERSHIP; SERVICE BY PRIVATE WATER COMPANY**

Under this option, the physical water supply for The Villages would be provided from well sites leased or purchased by the water company in the Phoenix AMA where it is determined that pumping over the next 100 years will not cause the water level in the aquifer to decline to more than 1,000 feet below ground surface. The water company's service area would be established through the use of Type 2 non-irrigation grandfathered rights with water for the development being withdrawn from the off-development well sites and piped to The Villages.

As with Option 3, groundwater pumped at these off-development well sites would be replenished by surface water supplies provided by the CAGR D as a result of the enrollment of The Villages' lands in the CAGR D.

This option allows Del Webb to obtain water service for The Villages and an AWS under Arizona law using an arrangement that does not require the approval of Reclamation or any other federal entity and would not impact groundwater levels in The Villages area and would not use unreplenished groundwater.

#### **Water Supply**

The estimated impacts of groundwater production to supply The Villages under Option 4 were evaluated with respect to the requirements for a 100-year AWS. In order to demonstrate a 100-year water supply, the depth to water at the end of 100 years needs to be less than 1,000 feet.

In performing this analysis, it was assumed that 8,000 acre-feet per year would be obtained from nine wells, located in Township 5 North, Range 4 East, as shown in Figure A-7.

The analysis shows that the drawdown at the end of 100 years would be about 155 feet. As shown in Figure A-8, the depth to groundwater at the well field would be about 730 feet at the end of 100 years of pumping, which indicates that the supply would meet the criterion for a 100-year AWS.

The analysis used to assess the long-term impacts on groundwater assumes that the 8,000 acre-foot per year demand can be met by wells pumping at a constant rate of about 11 cfs or about 5,000 gpm over the year. However, in fact, the demands will vary during the year, with the demand for the peak day being about 28 cfs, or about 12,700 gpm. The estimated costs are based on the number of wells needed to provide the peak capacity.

#### **Delivery Facilities**

The required facilities would include a well field, a booster pumping plant, and a transmission pipeline. An estimated nine wells would need to be drilled to a depth of approximately 1,600 feet. Each well would require a 400-horsepower pump. The wells would be connected to a common booster pumping plant, which would pressurize the water for transmission to The Villages. A 36-inch diameter transmission line would head northeast from the booster pumping plant to the existing power lines, as shown in Figure A-7. The transmission line would then parallel and be adjacent to the southern ROW for the power lines. At the Carefree Highway, the transmission line would parallel and be adjacent to the southern ROW of the Carefree Highway heading west. At Interstate 17, the transmission line would parallel and be adjacent to the eastern ROW of Interstate 17 and would head north to The Villages. It is estimated that approximately 14 miles of 36-inch diameter pipeline would be required.

#### **System Operation and Maintenance**

The delivery facilities would be owned and operated by the water company established to serve The Villages.



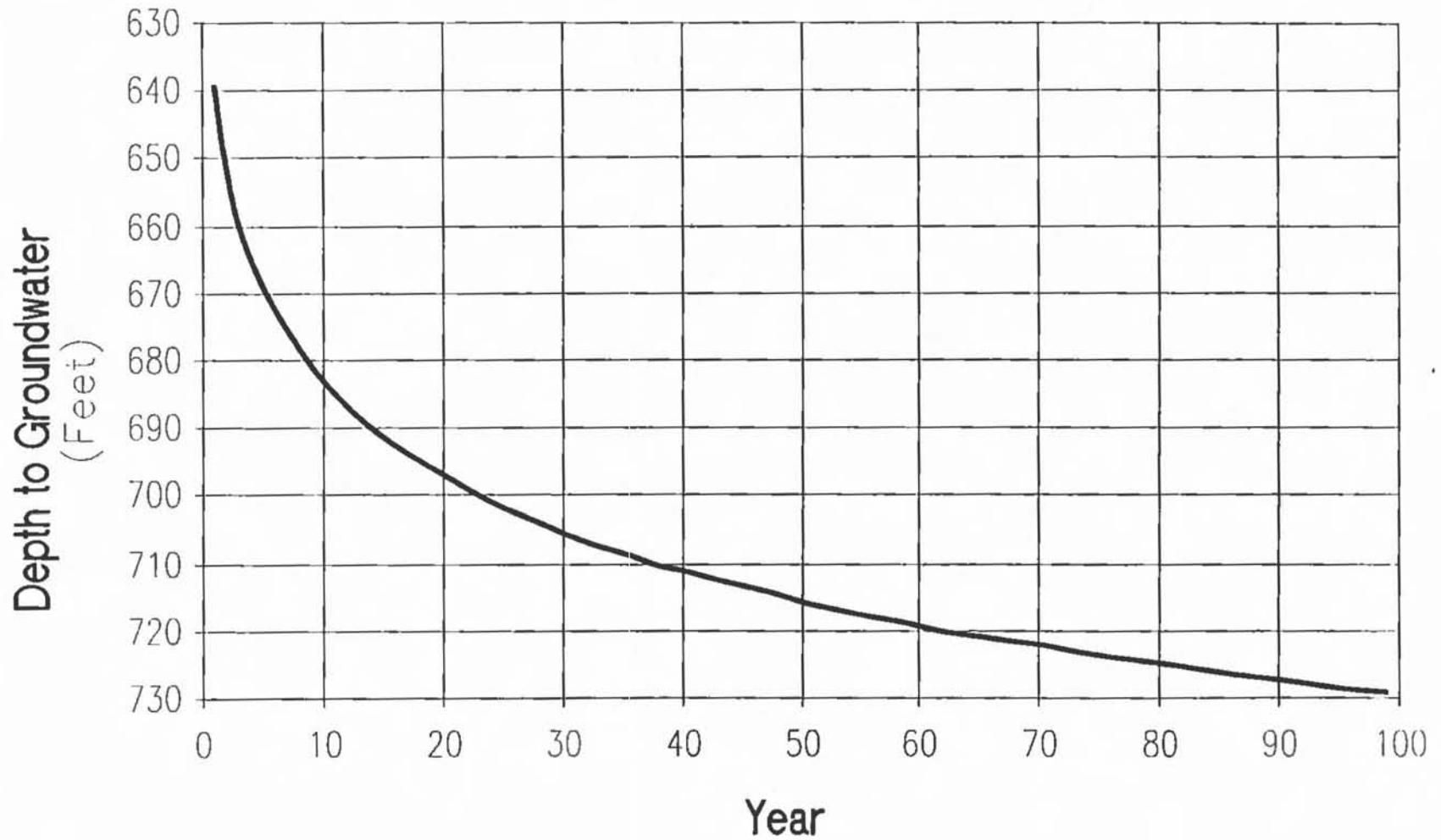
May 1997

BOOKMAN-EDMONSTON  
ENGINEERING

Option 4  
CAGR Membership  
Service by Private Water Company

FIGURE A-7

A-23



Offsite Wellfield for The Villages

April 1997

Bookman-Edmonston  
Engineering

Drawdown Effects of New Well  
Field for Option 4

FIGURE A-8

18/12/97  
DWG: A-23/02/97/18/12/97/18/12/97

### Estimated Costs

A pre-feasibility-level cost estimate is presented in the table below which shows construction costs for the well field, pumping plants, and transmission line, and costs for rights-of-way, legal, engineering, construction management, administration, and contingencies. The total estimated cost for Option 4 is \$19.2 million.

<b>Estimate of Cost to Provide Phoenix AMA Groundwater Through CAGR Membership (Option 4)</b>	
<b>Item Description</b>	<b>Cost</b>
Well field (9 wells, 1,600 feet deep)	\$ 2,794,000
Pumping Plant	\$ 1,000,000
Transmission Pipeline (74,000 linear feet, 36-inch diameter)	\$ 8,847,000
Rights-of-Way	\$ 713,000
<b>Subtotal</b>	<b>\$13,354,000</b>
Legal, Engineering, Construction Management and Administration (15%)	\$ 2,003,000
Contingencies (25%)	\$ 3,839,000
<b>TOTAL ESTIMATED COST</b>	<b>\$19,196,000</b>

**MEMORANDUM**  
**City of Phoenix Water Supply Alternatives**

**Purpose:**

The purpose of this memorandum is to summarize the current status of the activities the City of Phoenix has been undertaking to provide water service to the private land owners along I-17. This service could be delivered to The Villages.

**Prior Correspondence Which Has Been Delivered to the Bureau of Reclamation:**

Previously, Del Webb has provided copies of a letter from Frank Fairbanks to Bruce Ellis dated June 11, 1996, outlining the ability of the City of Phoenix to serve The Villages with potable water supply. During the time frame in which Mr. Fairbanks wrote this letter, the plans which the City of Phoenix had in place were the overall plans for the City of Phoenix to provide water service to this area, pursuant to their acquisition of a water campus from the State Land Department, with the anticipated delivery of the service in the year 2004.

In February 1997, David Garcia sent a letter to Tom Lucas further outlining the City's commitment and ability to provide water services. Copies of both letters have been provided to BOR and are attached.

**Subsequent Discussions:**

In early 1997, Communities Southwest, a local real estate developer, opened escrow to purchase the 1150-acre site located at Carefree Highway and I-17 from the Opry Land Publishing Company (OPUBCO). Critical to the development of this property was obtaining water from the City of Phoenix. While the OPUBCO has a Development Agreement which would allow the drilling of wells, the groundwater underneath that property is not sufficient to support the density of development desired by the buyer. Therefore, the buyer began discussions with the City of Phoenix to provide a water supply on an expedited basis in advance of the schedule in the City's Regional Service Plan (then scheduled for 2004).

Around March, 1997, the City approached Del Webb about having Del Webb and Communities Southwest enter into an agreement with the City to provide for the City's acquisition of the easement for the Del Webb pipeline (in its current location), with Del Webb and Communities Southwest agreeing to have water services by the City of Phoenix. As part of that plan, Del Webb and Communities Southwest would build the first phase of the water treatment plant for the City's ultimate master plan for the delivery of water to the property owners along I-17. After careful deliberation regarding the cost and benefits of that alternative, while feasible, Del Webb passed on the proposal in the interest of continuing to pursue the Ak-Chin water supply. Thereafter, Communities Southwest worked with the City of Phoenix to devise an alternate water supply plan. The results of that effort are attached in a letter dated April 8, 1997, from Mark A. Voigt, whereby Communities Southwest proposes either a deal utilizing the phased water treatment facility on the City's future plan site or the extension of services from south of the CAP.

As a result of this letter and discussions between Communities Southwest and the City of Phoenix, the City of Phoenix Water Services Staff held a meeting with private property owners along I-17 which occurred June 24th, 1997. The strategy and agenda, as well as a list of the participants, is attached.

At that meeting, the City outlined its plan for bringing a 54" water line from Deer Valley and 35th Avenue up I-17 to serve the OPUBCO site, with all other property owners having the ability to tie into the line. A 54" line is significantly more than is needed by the OPUBCO site, and it is designed with over-capacity to allow the other property owners to tie in, as well as to allow extension to The Villages to serve the Del Webb project. The estimated cost of this line to Carefree Highway was \$22 million, with Communities Southwest pledging to advance \$6 million. The City was pledging to contribute \$5 million and was looking for the balance of the funding to come from a combination of Del Webb and the remaining private property owners.

**Comparison of the Cost of the Ak-Chin Water and Pipeline to the City of Phoenix Alternatives in the Environmental Assessment:**

In the draft EA, the Option #1, Service from the Existing City of Phoenix System, showed a cost of the system at \$12,705,000. Option #2, which was Service from the City of Phoenix through Constructed Facility, showed an alternative of \$10,203,000.

The selected alternative for the Ak-Chin water supply pipeline was Alternative C-1 at a cost of \$11,360,952. One of the commentators raised the question about the viability of the City of Phoenix alternative if Del Webb was choosing an alternative which was more expensive.

The cost to construct the facility is only one part of the analysis. There are additional costs which would be required in utilizing the City of Phoenix option which are not detailed in a draft Environmental Assessment. These would involve the cost of having the water service delivered by the City of Phoenix in the form of Development Impact Fees which every home builder would pay to connect to the City of Phoenix. Currently, the Impact Fee for Areas C&D (the closest Development Impact Fee area to The Villages) is \$5,056 per unit for the Desert View Tri-Villages West. This Impact Fee assumes use of the City of Phoenix water system with a private sewer system (as would be the case with The Villages). A copy of the City of Phoenix Development Impact Fees, effective August 1, 1997, through January 31, 1998, is attached. While the City of Phoenix Impact Fees do allow credit for the cost of offsite infrastructure (i.e. the pipeline), the overall cost of the City of Phoenix alternative is still more expensive than developing in the County. While the City of Phoenix alternative would not be cost prohibitive, cost is a factor in determining whether to proceed with utilizing the Ak-Chin water through the proposed pipeline, versus entering into an agreement with the City of Phoenix and paying their Development Impact Fee.

TELucas/cb - 8/22/97





**City of Phoenix**  
OFFICE OF THE CITY MANAGER

June 11, 1996

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HARRIS	
6-21-1	

Winner of the  
Carl Bertelsmann  
Prize



Mr. Bruce Ellis  
Bureau of Reclamation  
23636 North Seventh Street  
Phoenix, Arizona 85024

Dear Mr. Ellis:

Re: Del Webb Corporation - The Villages at Desert Hills

Del Webb Corporation has asked the City to write to you concerning whether the City of Phoenix would feasibly provide water service to The Villages at Desert Hills. We understand that the Bureau of Reclamation has requested this information as part of the NEPA Compliance Process. The Phoenix Water Services Department prepared this letter to provide you the necessary information.

Our understanding at this time is that The Villages will be self-sufficient as to water and wastewater treatment services. The Villages, except for a small portion on the west side of I-10, is not in the City of Phoenix and has not requested services from Phoenix. Given this, no details of service by Phoenix have been explored, at this time.

North Phoenix will ultimately be served water by the City's proposed Lake Pleasant Water Treatment Plant, which is currently included in its water services master plans. The planned long-term service area for this water treatment plant, which will treat and distribute Central Arizona Project (CAP) water from Lake Pleasant, includes the area encompassed by The Villages. Although the master plans to date do not assume water service to The Villages, the plans could be updated through the appropriate City procedures to reflect such service and to include an allocation of water resources for that development from existing and future water resources identified in the Phoenix Water Resources Plan that become available to the City of Phoenix.

There are two alternative ways in which Phoenix could serve The Villages area, if a decision was made in the future to do so. First, it could be served as part of the Phoenix water system, assuming that at some future point The Villages became part of the City of Phoenix. Or second, if the area does not become part of the City of Phoenix, a contractual agreement for treatment and delivery of The Villages water supply could be developed. We currently have such an agreement with the City of Tolleson and we are exploring additional such agreement with westside cities. The City of Phoenix has not formally explored these alternatives with Del Webb Corporation, but we would be willing to do so.

Mr. Bruce Ellis  
Page 2  
June 11, 1996

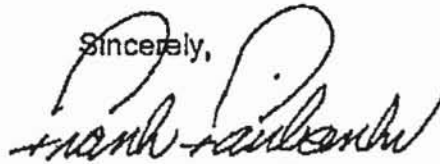
The Villages' current infrastructure plans should be examined jointly with Phoenix to assure that the water system being installed by The Villages is compatible with future service by Phoenix, and the economies of scale are maximized and duplication is minimized. The Villages has pledged to engage in a joint planning exercise with Phoenix to establish possible guidelines to achieve these objectives.

In summary, based upon the above, Phoenix could be a water supplier to The Villages. Appropriate planning and institutional procedures, including Council approval, would have to be implemented before actual service could be provided.

This letter is not intended to be a commitment by the City of Phoenix to provide water service to The Villages at Desert Hills nor a binding commitment of any kind by the City of Phoenix.

I hope this letter answers questions you might have concerning the possibility of Phoenix providing water service to The Villages. Should you have other questions or need more information, please contact Mr. Michael Gritzuk, Phoenix Water Services Director.

Sincerely,



Frank Fairbanks  
City Manager

c: David R. Garcia  
Michael Gritzuk  
Jesse Sears



**City of Phoenix**  
OFFICE OF THE CITY MANAGER

February 4, 1997

Winner of the  
Carl Barabakman  
Prize



Mr. Thomas E. Lucas  
Vice President  
Del Webb Corporation  
6001 North 24th Street  
Phoenix, Arizona 85016

Re: City of Phoenix Comments on Draft Water Supply Alternative for Villages at Desert Hills

Dear Mr. Lucas:

This letter responds to a request made by Bookman Edmonston Engineering, Inc., dated December 18, 1996, for City of Phoenix comment on draft water supply alternatives for the Villages at Desert Hills proposed by the Del Webb Corporation. We understand you propose this draft for inclusion in the environmental Assessment (EA) for Del Webb's proposed pipeline to deliver Ak-Chin Indian Community water from Lake Pleasant to the Village.

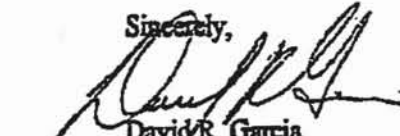
City Staff has reviewed the two alternatives involving water delivery from the City of Phoenix water system. Since its annexation several months ago, a portion of the Villages (900 acres) is within the boundaries of the City of Phoenix. The balance of the Villages is in the county and would require the approval of the City Council to serve the area.

We generally agree with the description of the water supply situation in the draft report, which is the main purpose of the EA.

The timing of delivery facilities described in the report has not been finalized by the City. For the purposes of this document, we suggest a statement to the effect that "design and timing of delivery facilities would be determined with the City of Phoenix in accordance with their Master Plans and the needs of development in the North Phoenix area." We will support this statement.

We hope this provides you with sufficient review comments to meet your needs and the requirements of the Bureau of Reclamation Environmental Assessment for your proposed Lake Pleasant pipeline and Water Treatment Plant at the Villages at Desert Hills. Please feel free to contact me should you have any questions.

Sincerely,



David R. Garcia  
Deputy City Manager

TSDATA\ANR\TILLUCAS.WPS



April 8, 1997

Mr. Frank Fairbanks  
City Manager  
City of Phoenix  
200 West Washington  
Phoenix, Arizona 85003-1611

RE: Water Service North of CAP Along the I-17 Corridor

Dear Frank:

The purpose of this letter is to outline several potential policy issues relating to expanding the City of Phoenix water service area into the North I-17 corridor north of the Central Arizona Project Canal.

There are several key facts that will help set a foundation for these discussions:

- Communities Southwest is in the process of purchasing 1,125± acres at the northeast corner of the I-17 and Carefree Highway (the "Property").
- This property is presently within the City of Phoenix (the "City") and has a Development Agreement with the City (City Contract No. 75917) outlining parameters for providing infrastructure to the Property.
- Over the past several weeks, Communities Southwest has had ongoing discussions with the Water and Wastewater Department staff on several alternatives available to us in providing permanent water service to the Property.
- With exception of the purchase of land for the ultimate "Lake Pleasant" Water Treatment Plant, the City does not plan to construct a plant or line improvements until the year 2005.

**arizona**  
1010 North 16th Street  
Suite 400  
Phoenix, Arizona 85016  
602.530.1000  
Fax 602.530.7740

**california**  
1010 North 16th Street  
Suite 400  
Irvine, California 92611  
714.530.1401  
Fax 714.530.3671

- **Communities Southwest would like to proceed with development of the Property as quickly as possible. Pending final PCD approval, we would like to undertake development as early as mid-1998.**
- **In our discussions with the Planning Department staff and other City staff, we appreciate the potential economic impact benefits to the City by opening up the I-17 Corridor to commercial and residential development.**
- **We realize that development of this area must pay for its own way. I believe the City staff also understands that the first development or developments can not afford to build the ultimate planned City facilities (i.e., 40 - 320 MGD water plant or 78" transmission mains).**

**I would suggest that the specific policy question to seek feedback or guidance from the City Council Utilities Subcommittee is the following:**

- **Should the City expend staff time and resources to negotiate an initial phase of a water service agreement that allows our development (as well as other interested developments) to install phased water service facilities that allow development to occur before permanent regional water services are installed by the City in 2005?**

**Several general alternatives have emerged during our preliminary discussions with City staff:**

- 1. Construct a phased water facility to serve the Property and be permitted to use the future City plant site and water line locations. Our initial phases of water services could be expanded with financial participation from other property owners or developers within the City along the I-17 Corridor north of the CAP. This facility would operate until the year 2005.**
- 2. Extend water services from south of the CAP (Union Hills and Deems Reservoir System) to serve the area north until the year 2005. This alternative may also include other developers/owners in the subject area. In discussing with staff, we understand there are current concerns and questions of "borrowing" or limiting the capacity to this system. However, if capacity is present and can be used in the interim, there could be benefits to the City.**

**There are many other alternatives or even a combination of alternatives that need to be examined. The Development Agreement contemplates other alternatives such as wells. However, we do agree with the staff that an initial phased system, that is based on the parameters of an ultimate system, makes sense to be examined at this time.**

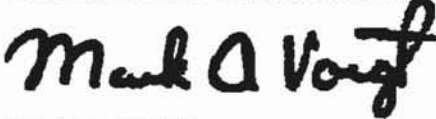
Mr. Frank Fairbanks  
April 7, 1997  
Page 3

We appreciate the time and cooperation that both the Planning and Water and Wastewater staffs have spent to date. Presently, our feasibility studies of the Property point to the establishment of an economically phased water delivery system as a critical component to the success of this proposed planned community. We would like to establish this water delivery potential before pursuing a PCD district designation. In other words, we need a decision quickly.

We look forward to the Subcommittee Meeting on April 16, 1997.

Yours very truly,

COMMUNITIES SOUTHWEST, L.L.C.



Mark A. Voigt  
President, Arizona Division

cc: Mr. Ray Elsdine  
Mr. David Garcia  
Mr. David Richert  
Mr. Michael Gritzek  
Mr. Mario Saldamando  
Mr. Ray Quay  
Mr. Carlos Padilla  
Mr. Keith Larsen



**City of Phoenix**  
-PLANNING DEPARTMENT

July 17, 1997

Winner of the  
Carl Bertelsmann  
Prize



Dear Interested Party:

You are invited to attend a meeting held to inform interested persons of the possible initiation of a Specific Plan for infrastructure financing. The area to be included in the plan is bounded by Carefree Highway on the south, 15th Avenue on the east, New River on the west and on the north by the ridge line of hills running northwest from 15th Avenue and Carefree Highway to 59th Avenue and Desert Hill Road alignment and then on the Desert Hill Road alignment to New River.

Infrastructure Financing Plans are used by the City of Phoenix to calculate fees necessary to pay for capital facilities needed to serve development in a part of the City. These fees are assessed at the time a building permit is requested from the City of Phoenix. These fees are not assessed in unincorporated areas. Unincorporated areas are included to help in preparing infrastructure plans for the area.

The meeting will be held at 7:00 p.m. on August 14, 1997, in the Main Lecture Hall at Barry Goldwater High School, 2820 W. Rose Garden Lane, Phoenix, Arizona. This meeting will be conducted as part of the first meeting of a Village Planning Committee charged with developing plans for this area and areas further north and south.

This letter is being sent to the mailing addresses of property owners of record in the area to be included. Letters are also sent to other interested parties of which the Planning Department is aware. Please inform others you think maybe interested in this meeting.

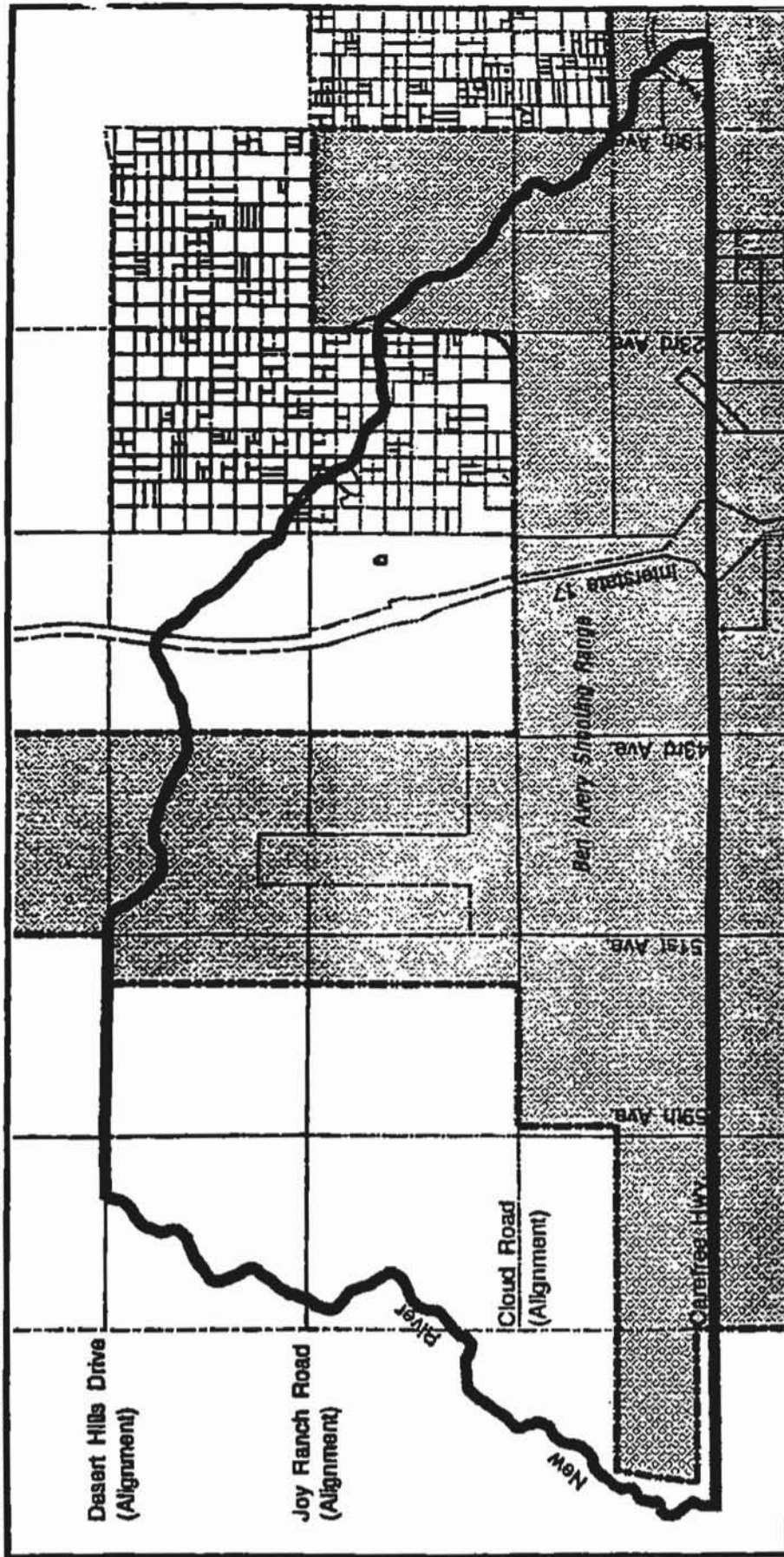
If you need more information please contact Bill Mee at 262-6946.

Sincerely,




David E. Richert  
Planning Director

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DISTRIBUTED BY CITY OF PHOENIX



# Proposed New Development Impact Fee Area

-  Proposed Area
-  Phoenix City Limits
-  City of Phoenix



Prepared by: City of Phoenix, Planning Department - July 16, 1997

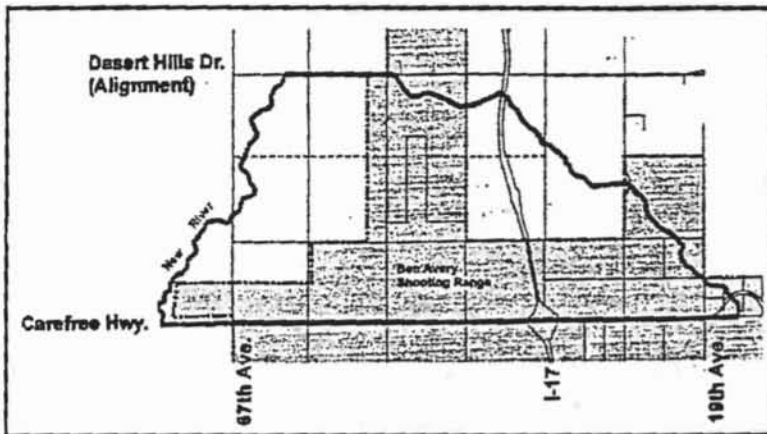


# PLANNING & ZONING

## NOTICE OF MEETING ON A NEW INFRASTRUCTURE FINANCING PLAN

Interested parties are invited to attend a meeting on August 14, at 7 p.m. at Barry Goldwater High School, Main Lecture Hall, 2820 W. Rose Lane, Phoenix, Arizona.

This meeting is being held to inform the public of the possible initiation of a Specific Plan for infrastructure financing. The area to be included in the plan is bounded by Carefree Highway on the south, 15th Avenue on the east, New River on the west and on the north by the ridge line of hills running northwest from 15th Avenue and Carefree Highway to the 59th Avenue and Desert Hill Road alignment and then on the Desert Hill Road alignment to New River. The Desert Hill Road alignment is three miles north of Carefree Highway.



Infrastructure Financing Plans are used by the City of Phoenix to calculate fees necessary to pay for capital facilities needed to serve development in a part of the City. These fees are assessed at the time a building permit is requested from the City of Phoenix. These fees are not assessed in unincorporated areas. Unincorporated areas are included to help in preparing infrastructure plans for the area.

This meeting will be conducted as part of the first meeting of a Village Planning Committee charged with developing plans for this area and areas further north and south.

At the hearing, citizens will have an opportunity to express their views concerning the proposal.

For ADA information, call the Planning Department, Theresa Damiani, at 262-6368 (voice) or 495-3793 (fax) or City TDD Relay 534-5500.

David E. Richert, Planning Director  
Frank Fairbanks, City Manager



For more information, alternative format/reasonable accommodations, contact the specific departments. The City of Phoenix TTY/TDD is ☎ 534-5500.

**North Black Canyon/I-17 Corridor Proposed Strategies  
Meeting with property owners June 24, 1997**

**Vision:** The North Black Canyon/I-17 Corridor will be a premier employment corridor in the valley. The urban design of the corridor will be distinctive in balancing the sensitive desert preserve lands with development and for achieving transportation sustainability. Skunk Creek Wash will become a linear park with a segment anchoring a central public place. Individual commercial, industrial, and residential developments will be both innovative and of high design quality.

**Proposed Strategies:**

- 1. Jobs and housing need to be balanced in the I-17 corridor to promote a sustainable transportation system.**
  - a. The corridor will expand the city's high end employment base. Retail and residential areas will be built to support the employment base.
  - b. The corridor will be the center of a new commute shed in the north, independent of the region's central employment commute shed. Care must be exercised in using the existing capacity on I-17.
  - c. The urban form should be oriented to transit service to maximize development opportunities.
- 2. Unique desert lands such as Skunk Creek Wash and mountain ranges will be part of the North Sonoran preserve and will guide the urban form of the corridor.**
  - a. Development of land in the corridor will be coordinated with the Army Corps of Engineers with the objective to preserve major natural drainages.
  - b. Desert preserve features are amenities that will attract high quality development.
- 3. Infrastructure will be built based on masterplans for water service delivery to come from Lake Pleasant in the north and sewer service to come from the wastewater treatment plant in the south near Skunk Creek. All water and sewer lines must be built to their ultimate size.**
  - a. Developers are working on an agreement among property owners to build the main north-south water line. The City will contribute toward sizing the line to its ultimate size.
  - b. An infrastructure growth line will be established along the I-17 corridor so that the development makes efficient use of the water line and payback opportunities are enhanced. Rights to develop land within the infrastructure growth line will be allocated in phases through the zoning process.
  - c. The City will build a wastewater treatment plant in the south near Skunk Creek. Developers will build the sewer and reclaimed water distribution lines from the plant north to Carefree Highway with some city contribution.

**PARTICIPANTS IN THE  
NORTH BLACK CANYON/I-17 CORRIDOR  
MEETING  
JUNE 24, 1997**

NAME	COMPANY	ADDRESS	PHONE	FAX	E-MAIL
Brian Burch	<i>Metropolitan Land Company</i>	4647 N. 32nd St. #235 Phoenix, AZ 85018	957-0604		
John W. Graham	<i>Sunbelt Holdings, Inc.</i>	426 N. 44th St. Ste. 375 Phoenix, AZ 85008	244-1440	267-9114	
William J. Graham	<i>Vector Realty Advisors</i>	6534 N. 46th St. Paradise Valley, AZ 85253	228-9700	840-6252	
Neil Irwin	<i>Strech Lang (OPUBCO)</i>	2 N. Central Phoenix, AZ 85004	229-5614	229-5690	
Thomas E. Lucas	<i>The Village at Desert Hills</i>	14901 N. Scottsdale Rd. Ste. 200 Scottsdale, AZ 85254	596-6000	596-6053	lucast@delwebb.com
Richard Mallery	<i>Snell &amp; Wilmer</i>	One Arizona Center Phoenix, AZ 85004-0001	382-6232	382-6070	mallery@swlaw.com
Harrison Merrill	<i>Vanguard Properties</i>	3232 Cobb Parkway #315 Atlanta, GA 30339	(404) 874-1128		
Charles Parker	<i>MacEwen Trust</i>	2425 E. Camelback Rd. Ste. 900 Phoenix, AZ 85016	954-6277		
Christine Sheehy	<i>The Village at Desert Hills</i>	14901 N. Scottsdale Rd. Ste. 200 Scottsdale, AZ 85254	596-6063	596-6053	sheehyc@delwebb.com
Mark Voight	<i>Communities Southwest</i>	5343 N. 16th St. Ste. 460 Phoenix, AZ 85016	265-1952	265-7740	



**City of Phoenix**  
DEVELOPMENT SERVICES DEPARTMENT

Winner of the  
Carl Bertelsmar  
Prize for



## PHOENIX DEVELOPMENT IMPACT FEE ORDINANCE

The City of Phoenix has experienced extraordinary growth both in population and in geographic size. As in most communities, Phoenix traditionally relied on bond financing approved by its citizens to pay for capital facilities such as sewer lines, water lines, and major streets which are needed to accommodate growth and new development. These bond funds have come from bond issues paid by taxpayers and ratepayers at large.

Competition for bond funds has intensified as the City invests in the revitalization of targeted areas, as facilities are planned to enhance the City's quality of life, and as Phoenix matures and begins to experience capital facility replacement demands. Additionally, citizens have exerted increasing pressure for new development to pay its proportionate share of infrastructure costs.

In response to these factors, in July 1987, City Council adopted the Development Impact Fee Ordinance also known as Fiscal Impact Fees.

This Fee Ordinance provides for builders and developers to pay their proportionate share of capital facilities needed to serve their projects. Capital facility needs are based on population and nonresidential space projections derived from the adopted General Plan for a planning area. The capital facility categories included in the Development Impact Fee Program are: equipment repair, fire, libraries, major streets, parks, police, solid waste, storm drainage, wastewater, and water.

Currently, Development Impact Fees are assessed in the Desert View Tri-Village-East, Central, and West, (formerly Area C/D) and in the Ahwatukee Foothills Village-Area B. (See attached map.)

The methodology included in the Ordinance allocates the costs for required capital facilities in a planning area to equivalent dwelling units (EDUs). The EDUs calculated for a specific development project are used to determine the impact fees for the project. Additional costs are assessed for projects that are remote from existing capital facilities or for projects requiring specialized capital facilities.

The Impact Fees are paid at the time building permits are issued. The fees are then earmarked for use on specified capital facility categories in the designated planning area.

For additional information on how this program may affect your project, please call Michael Gorecki at 495-5290.

### Attachments

TBAr01mpct897.1a  
7/12/97

200 West Washington Street, Phoenix, Arizona 85003

Recycled Paper



# City of Phoenix

## DEVELOPMENT IMPACT FEES

*Fees Effective August 1, 1997 through January 31, 1998*

(Fees will be adjusted every six months according to the Specific Infrastructure Financing Plan Phasing Schedule)

### RESIDENTIAL IMPACT FEES

	Ahwatukee Foothills Village (Area B)		DESERT VIEW TRI-VILLAGES					
	Impact Fee	Admin. Charge	West		Central		East	
			Impact Fee	Admin. Charge	Impact Fee	Admin. Charge	Impact Fee	Admin. Charge
Single Family Using City Water and City Sewer System Paying \$600 Water & \$600 Sewer Dev. Occ. Fees	\$922	\$35	\$4,239	\$217	\$4,751	\$233	\$4,470	\$224
Single Family Using City Water System (Private Sewer) Paying \$600 Water Dev. Occ. Fee	\$922	\$35	\$4,839	\$217	\$5,351	\$233	\$5,070	\$224
Single Family Using Private Water and Private Sewer Not Paying Water/Sewer Dev. Occ. Fees	\$922	\$35	\$5,439	\$217	\$5,951	\$233	\$5,670	\$224

**NOTE:** *If a developer makes capital facility improvements and the improvements are identified in the specific infrastructure financing plan, the developer will receive credit based on the cost shown in the specific infrastructure financing plan. This is why some developments pay a lower fee than stated in the above chart.*

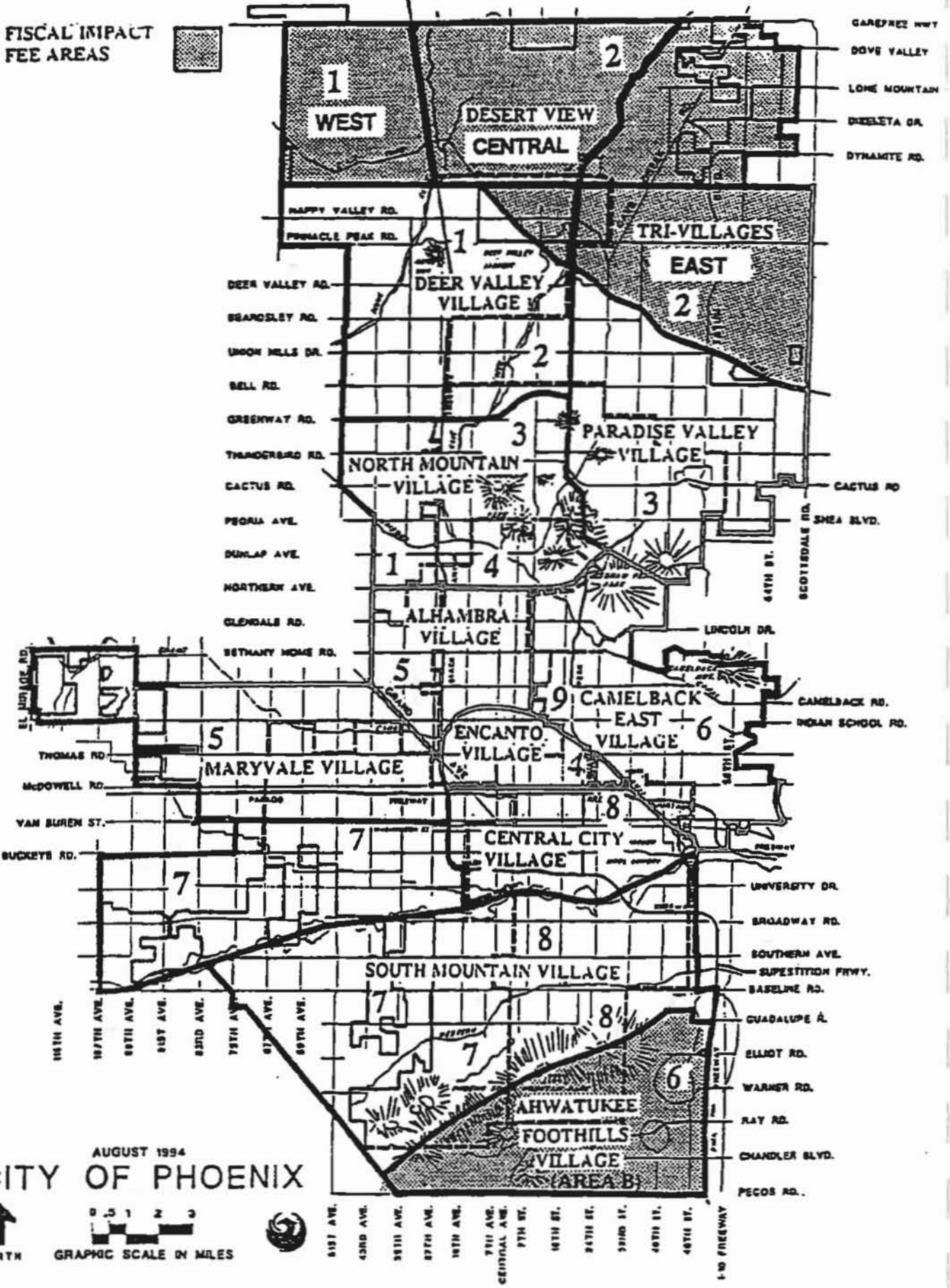
### COMMERCIAL IMPACT FEES

The Development Impact Fee for a commercial project is based on the square footage of the building and the use of the building. If the commercial project makes capital facility improvements and the improvements are identified in the specific infrastructure financing plan, the developer will receive credit based on the cost shown in the specific infrastructure financing plan. Commercial projects should be referred to Michael Gorecki (495-5290) of the Development Services Department for fee calculation.

***The Development Impact Fee is collected by the Development Services Department when the building permit is issued.***

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 33000 N  
 31400 N  
 29800 N  
 28200 N  
 26600 N  
 25000 N  
 23400 N  
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 20200 N  
 18600 N  
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 17200 S

FISCAL IMPACT  
 FEE AREAS

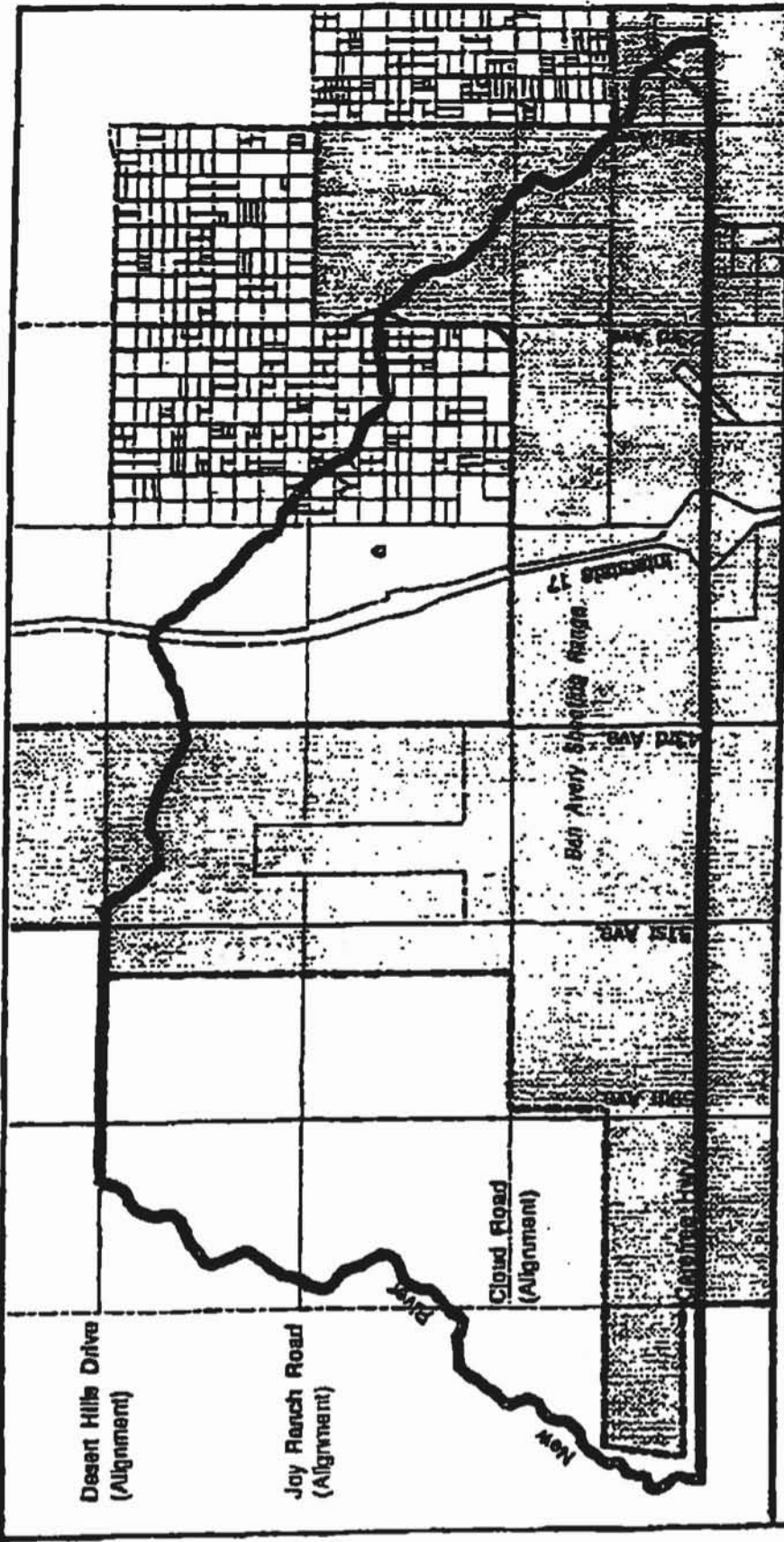


AUGUST 1994  
 CITY OF PHOENIX



51ST AVE.  
 43RD AVE.  
 35TH AVE.  
 27TH AVE.  
 19TH AVE.  
 11TH AVE.  
 CENTRAL AVE.  
 7TH ST.  
 16TH ST.  
 24TH ST.  
 32ND ST.  
 40TH ST.  
 48TH ST.  
 I-10 FREEWAY

DISTRIBUTED BY CITY OF PHOENIX



# Proposed New Development Impact Fee Area

- Proposed Area
- Phoenix City Limits
- City of Phoenix



Prepared by: City of Phoenix, Planning Department - July 16, 1987

