

FHWA-Az-EIS-71-20-FS

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

AND

ENVIRONMENTAL PLANNING DIVISION

within the

LOCATION SECTION, HIGHWAY DEVELOPMENT GROUP  
ARIZONA HIGHWAY DEPARTMENT

(FINAL)

SUPPLEMENT TO THE FINAL ENVIRONMENTAL STATEMENT

ADMINISTRATIVE ACTION

for

PROJECTS

I-10-2(34)	PERRYVILLE ROAD-BULLARD ROAD
I-IG-10-2(37)	BULLARD ROAD-107TH AVENUE
I-10-2(40)	107TH AVENUE-67TH AVENUE

EHRENBERG-PHOENIX HIGHWAY

in

MARICOPA COUNTY, ARIZONA

THIS HIGHWAY IMPROVEMENT IS PROPOSED FOR FUNDING UNDER TITLE 23, UNITED STATES CODE. THIS STATEMENT FOR THE IMPROVEMENT WAS DEVELOPED IN CONSULTATION WITH THE FEDERAL HIGHWAY ADMINISTRATION AND IS SUBMITTED PURSUANT TO:

42 U.S.C. 4332(2)(C)

October 24, 1972  
Date

*A. L. Chadwick*  
A. L. CHADWICK  
Chief Deputy State Engineer  
ARIZONA HIGHWAY DEPARTMENT

APPROVED AND ADOPTED BY FHWA

11-13-72  
Date

*F. E. Hawley*  
F. E. HAWLEY  
Regional Fed. Hwy. Administrator  
FEDERAL HIGHWAY ADMINISTRATION

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A999.912

SUMMARY

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

FHWA-Az-EIS-71-20FS

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PROJECTS

I-10-2(34)	PERRYVILLE ROAD-BULLARD ROAD
I-IG-10-2(40)	BULLARD ROAD-107TH AVENUE
I-10-2(40)	107TH AVENUE-67TH AVENUE

EHRENBERG-PHOENIX HIGHWAY  
INTERSTATE AND DEFENSE HIGHWAY 10  
MARICOPA COUNTY, ARIZONA

NOTE: For the purpose of this Environmental Impact Statement, the above referenced projects are combined. Therefore, where reference is made herein to "the Project" it shall mean the combination of projects unless otherwise specified.

Final Supplement to the Final Environmental Statement - October 24, 1972  
Administrative Action

1. Alternatives to the Proposed Project

Alternate corridors which were considered in determining the final, approved corridor and alignment location of the Interstate and Defense Highway 10 through the subject project area are discussed in this Supplement.

2. Various Modes of Transportation

An evaluation is made of the past and present modes of transportation of the Phoenix Metropolitan Area.

3. Land-Use Evaluations

Both existing and suggested future land-use is discussed in this Supplement, accompanied by appropriate, descriptive maps.

4. Long Range Planning and Development

Consideration is given to the long range planning and development of the communities and other entities in the study area which is in conformity with the long range planning and development of the various governmental jurisdictions responsible for planning in this area.

5. Air Pollution Considerations

This Supplement contains a discussion and an analysis of air pollution factors and the anticipated impact the proposed highway will affect upon the air quality of the project area.

6. Noise Considerations

The effect noise will have upon the corridor along the proposed highway alignment is evaluated, accompanied by statistical noise tables.

7. Archaeological Values

An analysis and discussion is made of the archaeological values of the proposed highway corridor in the study area.

8. a. Federal, State and Local Agencies From Which Comment on this Supplement to the Final Environmental Impact Statement was Requested

U.S. Environmental Protection Agency  
U.S. Soil Conservation Service  
U.S. Bureau of Land Management  
U.S. Department of Interior  
Luke Air Force Base  
Arizona Game and Fish Department  
Arizona State Department of Health  
Department of Economic Planning and Development  
University of Arizona (Arizona State Museum)  
Maricopa Association of Governments  
Maricopa County Planning and Zoning Department  
Maricopa County Flood Control District  
City of Phoenix, Community Transportation Development  
Phoenix Sky Harbor International Airport  
Litchfield Park Properties  
City of Goodyear  
City of Avondale  
City of Tolleson  
City of Buckeye  
Greyhound Bus Lines  
Southern Pacific Transportation Company  
Phoenix Transit Corporation

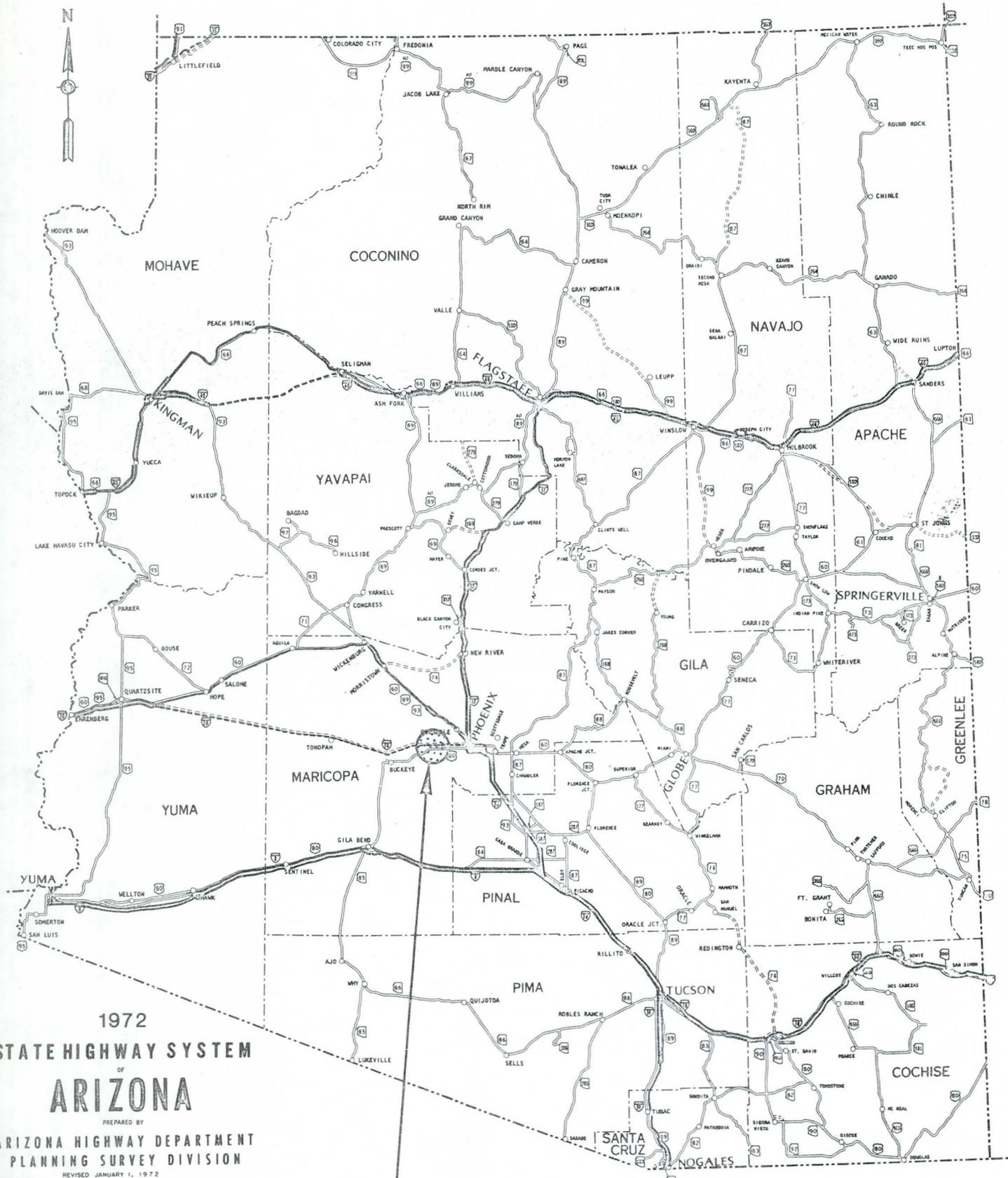
b. Federal, State and Local Agencies and Other Organizations From Which Written Comment has been Received

U.S. Soil Conservation Service	7-17-72
U.S. Bureau of Land Management	7- 5-72
U.S. Department of Interior	8- 7-72
Luke Air Force Base	7- 7-72
Arizona Game and Fish Department	6-23-72
Arizona State Department of Health	7-17-72
Department of Economic Planning and Development	7- 6-72
University of Arizona (Arizona State Museum)	7-14-72
Maricopa County Planning and Zoning Department	7-10-72
Maricopa County Flood Control District	7-12-72

Summary - Supplement  
Projects I-10-2(34)(37)(40)  
October 24, 1972  
Page 3

City of Phoenix, Community Transportation Development	7-17-72
Phoenix Sky Harbor International Airport	6-28-72
Litchfield Park Properties	6-22-72
Southern Pacific Transportation Company	6-22-72

\* \* \*  
\* \*  
\*



1972  
**STATE HIGHWAY SYSTEM**  
 OF  
**ARIZONA**  
 PREPARED BY  
**ARIZONA HIGHWAY DEPARTMENT**  
**PLANNING SURVEY DIVISION**  
 REVISED JANUARY 1, 1972



- PROJECTS
- I-10-2 (34) PERRYVILLE ROAD - BULLARD ROAD
  - I-10-2 (37) BULLARD ROAD - 107th AVENUE
  - I-10-2 (40) 107th AVENUE - 67th AVENUE

INTERSTATE AND DEFENSE HIGHWAY 10  
 EHRENBERG - PHOENIX HIGHWAY

Supplement to the  
Final Environmental Statement  
for  
Ehrenberg-Phoenix Highway  
Interstate and Defense Highway 10

Projects

I-10-2(34)	PERRYVILLE ROAD - BULLARD ROAD
I-IG-10-2(37)	BULLARD ROAD - 107TH AVENUE
I-10-2(40)	107TH AVENUE - 67TH AVENUE

Maricopa County, Arizona

NOTE: For the purpose of this Environmental Impact Statement, the above referenced projects are combined. Therefore, where reference is made herein to "the Project", it shall mean the combination of projects unless otherwise specified.

The Final Environmental Statement for the above project was submitted by the Arizona Highway Department on June 18, 1971; having met all the environmental format requirements in effect at that time, the Final environmental Statement was accepted by the Department of Transportation on July 16, 1971.

Because the subject project has become more controversial in nature since that date, and because new requirements have more recently been set forth by the Department of Transportation relative to the preparation of Environmental Impact Statements, the Arizona Highway Department hereby determined to submit this supplement in the belief that the discussions contained herein represent a proper evaluation of those factors in the new requirements which were not fully discussed in the original statement.

Since this statement is considered to be a supplement, it must be read in conjunction with the original accepted statement and will not necessarily cover those matters fully discussed in that statement, a copy of which is attached and made a part hereof as Appendix A.

1. Alternatives to the Proposed Project

To adequately evaluate alternatives to the proposed projects as they relate to the Interstate and Defense Highway 10 program, certain factors must

be considered.

First of all, the need for a highway system capable of meeting the current and anticipated future requirements of its users had to be established. Such a needs-study was conducted on a nationwide basis in 1939 by the then Bureau of Public Roads of the Federal Government, with the resultant congressional enactment of the Federal Aid Highway Act of 1944 which created the designation of the National System of Interstate and Defense Highways Program. This program promulgated the construction of a series of Interstate and Defense Highway Systems throughout the United States which would serve each individual State with one or more Interstate traffic routes and which would provide an adequate National Defense Highway System throughout the United States.

With the need for and the designation of the National Interstate and Defense Highway network firmly established, the U.S. Congress in 1956 enacted the Federal Aid Highway Act of 1956, which appropriated funds for the beginning of construction of such Interstate and Defense Highway network. The next major step required the coordination of the local State highway program with the Federal Interstate Highway program. The Interstate Highway 10 traversing Arizona is a vital part of the National System of Interstate and Defense Highways network. The projects to which this supplement is referenced are of great significance to the completion of the Interstate and Defense Highway 10 System.

The second factor which must be considered is the purpose of the highway system. It was readily determined by the study group of 1939 that with the anticipated increase in the number of automobiles, the average daily traffic (ADT) on the existing highways across the United States would soon reach a near disastrous stage and that a greatly improved Interstate Highway System must be adopted and constructed to meet the burgeoning needs of the motoring public. Such recommendation was made to Congress and as indicated previously,

the Interstate Highway concept was accepted and authorized. The Interstate Highway concept was also conducive to the rapid movement of military troops and equipment across the nation and would serve as means of evacuation routes from heavily populated communities and areas in the event of National or civil disaster. Hence, the designation of Defense Highway was added to the Interstate Highway designation.

The third factor in the evaluation process is the location and the type of highway facility which would best meet the specific needs of the public. Federal standards and specifications were adopted and set forth for the location, design and construction of the Interstate and Defense Highway network. Selection of the final location alignment was to be determined by the Highway Department within each State, subject to the expressed needs of the public through a location public hearing, and subject to final approval of the appropriate agency of the Federal Government. Design criteria established for the Interstate and Defense Highway System required construction of a divided highway with full access control which would permit nonstop, free-flow movement of high speed vehicular traffic between metropolitan areas and from coast to coast. The State Highway Department would be responsible for designing the Interstate Highway facilities within the State, subject to a public hearing and the final approval of the appropriate agency of the Federal Government.

After considering the factors of need, purpose, location and type of facility as discussed above, proper evaluation was made of the necessary disciplines and controls of the proposed projects in their relation to the Interstate and Defense Highway network, which included the consideration of alternatives to the proposed projects as discussed in the following paragraphs.

A. Do-Nothing Alternate

Because construction of the National System of Interstate and Defense Highways is a mandate of the U.S. Congress, the do-nothing alternate would

not normally be applicable in a case like this where the discussion relates to a considerable segment of an overall coast to coast highway network. Nevertheless the consequences of such an alternative are capable of discussion, study and analysis and will be so evaluated here.

Interstate and Defense Highway 10, if constructed, would be expected to handle the bulk of interstate traffic between central Arizona and the regions of southern California which are located in or near Los Angeles. If this section of I-10 were not constructed, such traffic would be required to use one of the existing highways in the area which does not meet the same high standards as are planned for I-10. Such interstate motorists would primarily use U.S. 80 from Buckeye to Phoenix. Use of U.S. 80 by I-10 through traffic would preclude the possibility of truly doing nothing, insofar as the anticipated traffic volumes would require a responsible highway agency to improve U.S. 80 since the highway is considerably below interstate standards. Currently, this section of U.S. 80 has no more than two lanes in most places. Increasing traffic volumes would necessitate reconstruction of the entire highway U.S. 80 to a facility with four or more traffic lanes. Even if the route was constructed as a divided highway without control of access in accordance with present standards of the Arizona Highway Department, the accident rate would probably be substantially greater than the accident rate for a similar number of cars on a controlled access facility like I-10 (according to data published by the Institute of Traffic Engineers in the Traffic Engineering Handbook).

The most important problems with the do-nothing alternative are that a failure to construct the discussed segment will force drivers coming from the Los Angeles area who have become accustomed to driving on a highway of interstate safety standards for some 400 miles will suddenly be forced to complete this trip to Phoenix on a narrow, two lane highway with conventional access

and lesser safety situations. Further some 60 miles of the Brenda Cut-off (I-10) west of the terminus of this segment has already been built in reliance upon a completion of the whole route from the Los Angeles area to Phoenix. This accomplished investment in time, material and cost will be partially wasted if the whole route is not completed as planned and now over 60 percent completed.

For the above mentioned reasons, the do-nothing alternate must be considered as an undesirable and inappropriate alternative.

#### B. Alternate Route Locations

During the early stages of location planning, several alternate route locations were considered for the Interstate Highway 10 System which would traverse from the Colorado River on the California border at or near Blythe, California, through central Arizona, to the New Mexico border adjoining southeastern Arizona. After a public hearing, which was conducted on July 22, 1958, in Quartzsite, Arizona, the location for the highway alignment from the Colorado River at Ehrenberg, east to Milepost 30.5 near Brenda, Arizona, a distance of 30.5 miles, was officially determined.

At a public hearing conducted on February 24, 1960, at the Phoenix Women's Club, 302 West Earll Drive, Phoenix, Arizona, the following route proposals "A" through "F" were presented by the Arizona Highway Department for that segment of the proposed highway system between Brenda, Arizona, and the City of Phoenix, a variable distance of 112.9 miles to 143.2 miles. (An Alternate Route map is included on the following page for route identification purposes.)

##### Route A Proposal

This route parallels existing U.S. Routes 60 and 89 from Grand and Seventh Avenues in downtown Phoenix, progressing northwesterly to Wickenburg, Arizona, westerly to Aguilla, and then southwesterly to the termination point at Brenda (at Milepost 30.5). The length of Route A is 132.5 miles.

##### Route B Proposal

Route B begins at the intersection of State Route 69 and U.S. Highway 80 in south central Phoenix and progresses southwesterly to a point

on 59th Avenue about one-fourth mile south of Broadway Road from where the alignment proceeds west and northwest to Brenda. The length of Route B is 112.9 miles.

Route C Proposal

Route C begins on Arizona 69 Highway approximately one-half mile north of Olive Avenue and gently curves northwest to a point near the intersection of Bell Road and 83rd Avenue from whence the route progresses west to the community of Beardsley where Route B swings northwesterly, paralleling U.S. Routes 60 and 89 to Wickenburg. From this point west to Brenda, Route C and Route A are identical. The length of Route C is 136.4 miles.

Route D Proposal

Route D begins on Arizona 69 approximately 15 miles north of Phoenix and progresses westerly and then northwesterly to the Town of Wickenburg. From this point west to Brenda, Route D is identical to Routes A and C. The length of Route D is 143.8 miles.

Route E Proposal

Route E originates from the same point and follows the same alignment as Route B, progressing west to about one-half mile west of Kimball Road where Route E turns directly north to a connecting point with U.S. Highways 60 and 89. From this point, Route E follows the same alignment as that of Route A which continues northwest through Wickenburg and then westerly to Brenda. The length of Route E is 143.2 miles.

Route F Proposal

Route F originates at the same point as Routes B and E and progresses southwestward in a common alignment to 43rd Avenue at which point Route F separates from B and E and continues west to a sweeping right hand curve where the alignment continues north, paralleling midway between 75th and 83rd Avenues to a point of intersection with U.S. Highways 60 and 89. From this point, Route F follows the same alignment as that of Routes A and E which continue northwest through Wickenburg and then westerly to Brenda. The length of Route F is 137.4 miles.

Summary of Routes "A" through "F"

<u>Route</u>	<u>Miles</u>	<u>Cost</u>	<u>Ratio</u>
A	132.5	\$54,991,000	5.34:1
B	112.9	34,477,000	11.53:1
C	136.4	45,946,000	4.35:1
D	143.8	44,967,000	3.52:1
E	143.2	56,803,000	3.53:1
F	137.4	56,746,000	4.21:1

C. Selection of Route B Proposal

In November of 1961, after a thorough evaluation of all pertinent factors

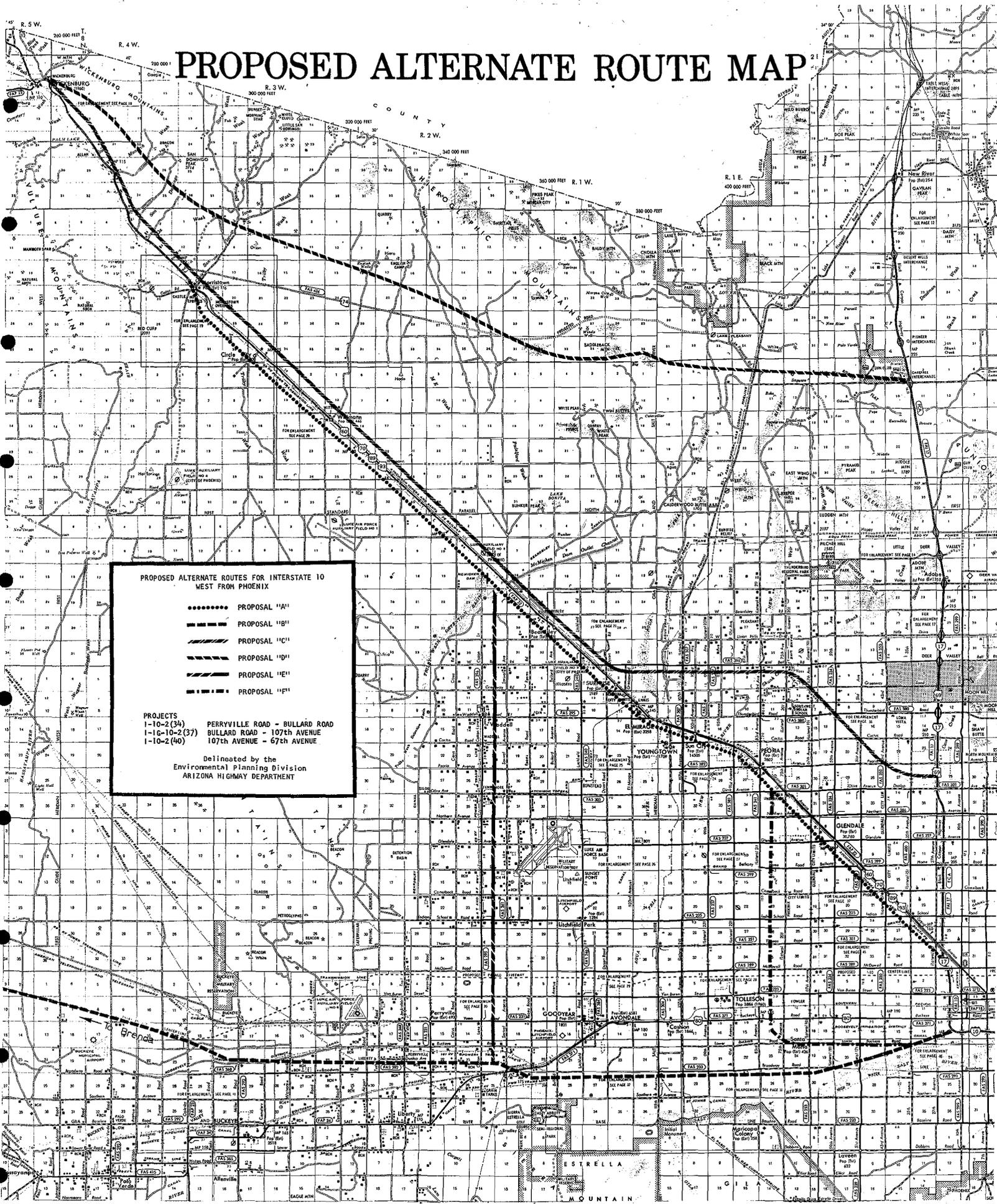
# PROPOSED ALTERNATE ROUTE MAP

**PROPOSED ALTERNATE ROUTES FOR INTERSTATE 10 WEST FROM PHOENIX**

- ..... PROPOSAL "A"
- PROPOSAL "B"
- ==== PROPOSAL "C"
- ==== PROPOSAL "D"
- ==== PROPOSAL "E"
- ==== PROPOSAL "F"

**PROJECTS**  
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 1-10-2(37) BULLARD ROAD - 107th AVENUE  
 1-10-2(40) 107th AVENUE - 67th AVENUE

Delimited by the  
 Environmental Planning Division  
 ARIZONA HIGHWAY DEPARTMENT



had been made, Route B was selected as that route alignment which would best satisfy the requirements and purpose of the National System of Interstate and Defense Highway program. Approval for Route B was granted on December 7, 1961, by the Bureau of Public Roads of the U.S. Department of Commerce with the qualification that the alignment be made as direct as topographic and other physical features permitted between the two terminal points and that the route be designed and constructed in compliance with standards of the Interstate and Defense Highway Program.

D. Route Refinement (Refer to Map, Figure 1, attached)

One major purpose of the National System of Interstate and Defense Highways Program was to, through careful local planning, provide an interface of urban and Interstate traffic facilities for the metropolitan areas across the country which would result in the free-flow movement of traffic on the Interstate and Defense highway where such facility traversed around or through the densely populated centers, and which would serve to improve and enhance the traffic patterns of the urban and rural facilities of such metropolitan centers.

Metropolitan Phoenix and its suburban communities has for many years been one of the fastest growing areas in the United States and the trend is expected to continue without significant change for many more years. Recognizing this well established growth trend and foreseeing the inevitable traffic problems arising from the requirements for new and improved traffic facilities to adequately accommodate the burgeoning population, the City of Phoenix requested that further studies be made to consider realignment of the Interstate and Defense Highway 10 corridor in the western urban and rural segments of Phoenix in a continuing effort to affect the greatest benefit to the greatest number of people through an improved interface of the area's urban and rural street program with that of the Interstate and Defense Highway 10 to be constructed

# STUDY ALTERNATES

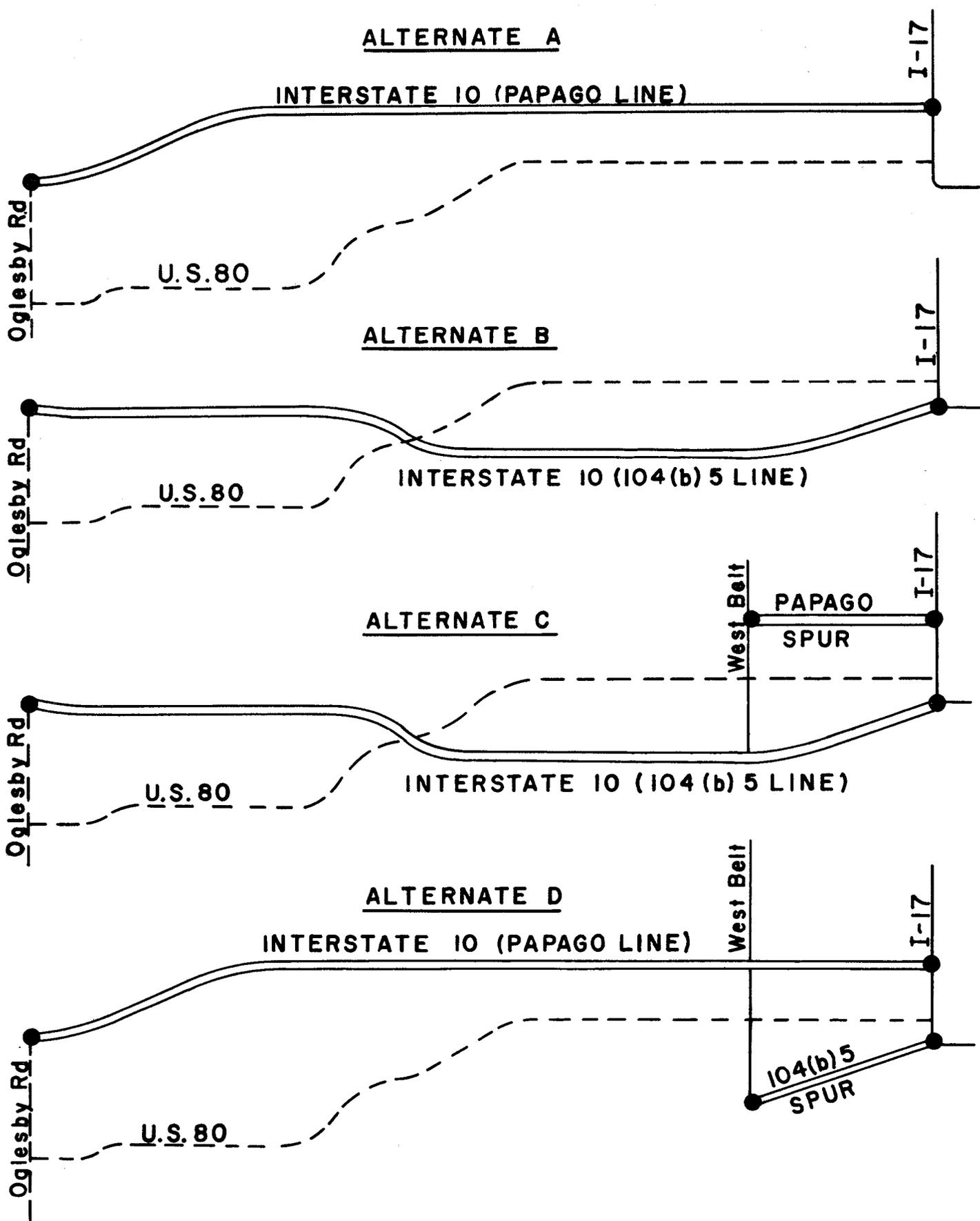


FIGURE 1

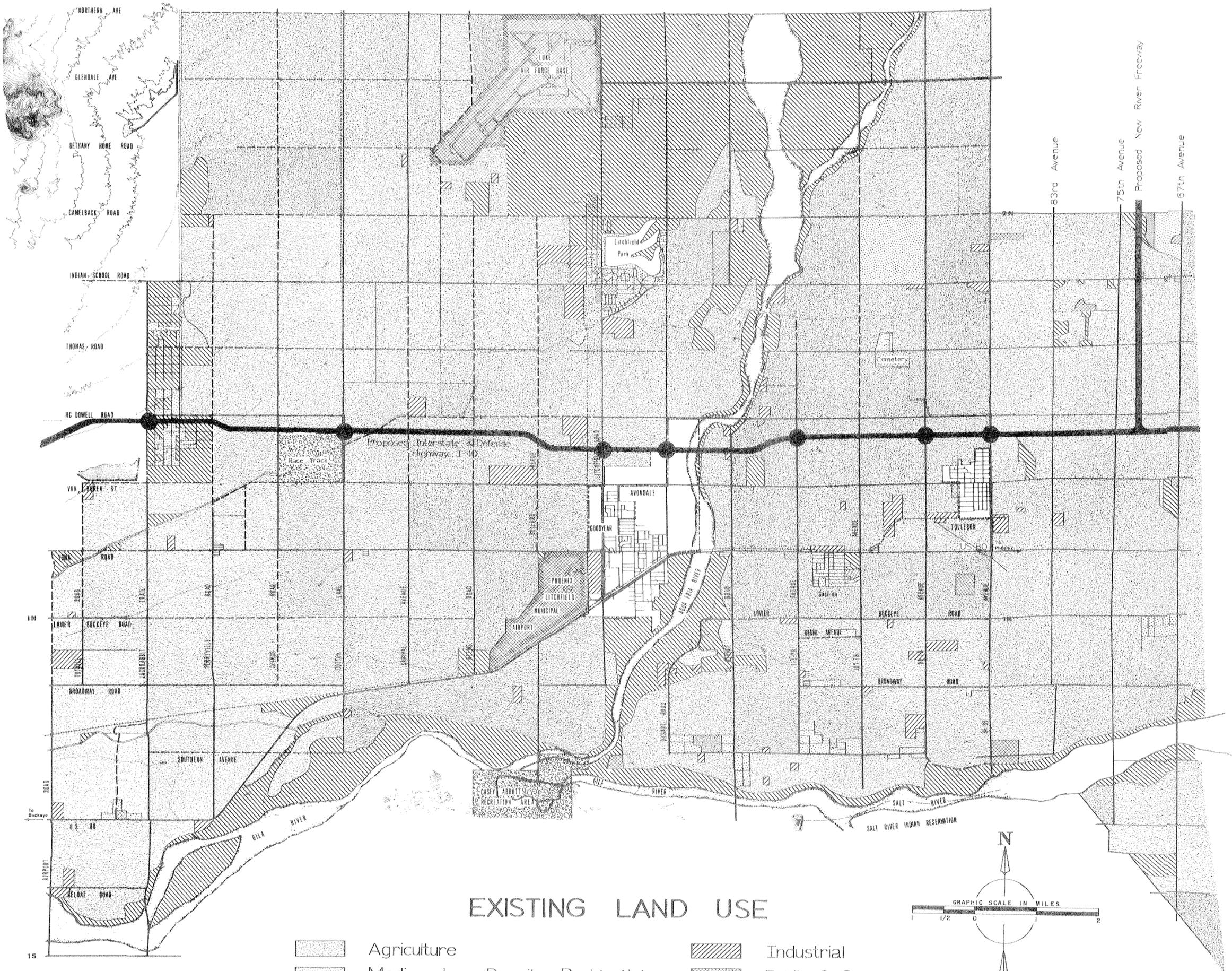
into Phoenix from the west.

Planning studies which were conducted after 1961 substantiated the need for more and better traffic facilities in the urban and rural areas of west Phoenix and indicated that a greater benefit would be realized by moving the proposed interstate highway alignment northward to a line coincidental to a major east-west urban highway corridor which was included in the "Major Street and Highway Plan" for the Phoenix Metropolitan area, prepared in 1960 through joint coordination and planning of the City of Phoenix, Maricopa County, the Arizona Highway Department, and other involved agencies and municipalities.

E. 1963 Interstate Route 10 Report

In November 1963, the Arizona Highway Department submitted a report to the Bureau of Public Roads entitled "Interstate Route 10, West Phoenix Metropolitan Analysis of Route Location" which evaluated the alternate routes considered between the community of Buckeye, Arizona and the connection to I-17 (Black Canyon Freeway) in the City of Phoenix, a distance of approximately 30 miles.

In June 1964, a supplemental report for the above mentioned report was submitted to the Bureau of Public Roads which set forth a thorough evaluation of the four alternate corridors which were considered in requesting that the interstate alignment from Buckeye to Phoenix be moved from the Buckeye Road corridor to the Papago line corridor. The supplemental report also contained discussions pertinent to land-use and social-economic factors, and planned development and expansion of the communities lying in the outer western segments of the greater Phoenix Metropolitan area. Contained in the following paragraphs is information from the 1964 supplemental report relative to the proper evaluation of each alternate and the related land-use and social-economic factors as was generally presented. A map is attached herewith for identification of the alternate routes A, B, C, and D, and other maps which indicate land-use and ADT projections for each major alternate. (See Figures 2a, 2b, 3, 4, 5 and 6)

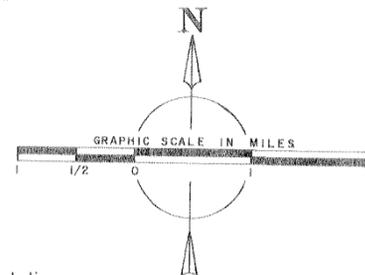


### EXISTING LAND USE

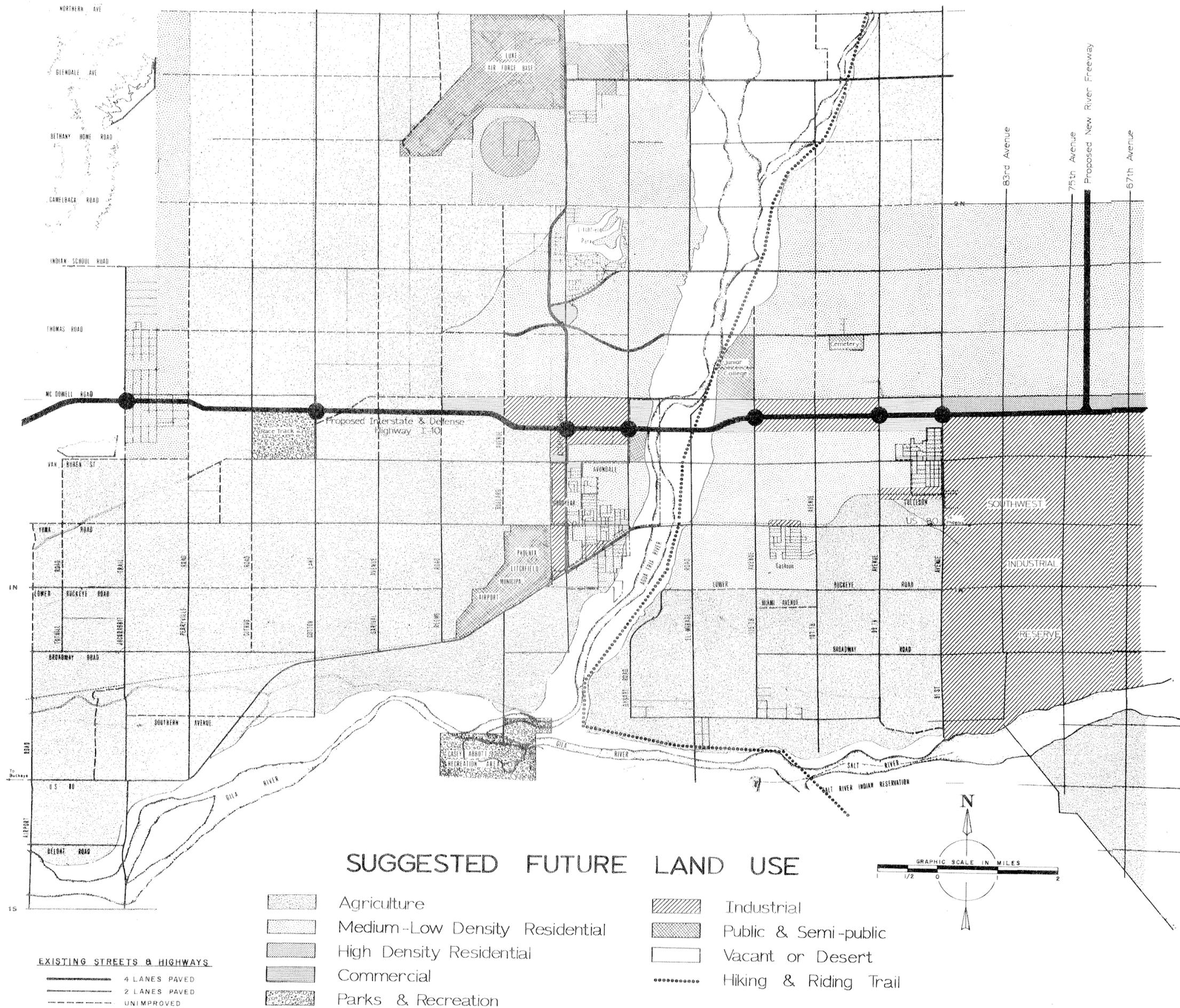
- |  |                                |  |                      |
|--|--------------------------------|--|----------------------|
|  | Agriculture                    |  | Industrial           |
|  | Medium-Low Density Residential |  | Public & Semi-public |
|  | High Density Residential       |  | Vacant or Desert     |
|  | Commercial                     |  | City or Town         |
|  | Parks & Recreation             |  |                      |

#### EXISTING STREETS & HIGHWAYS

- 4 LANES PAVED
- 2 LANES PAVED
- UNIMPROVED

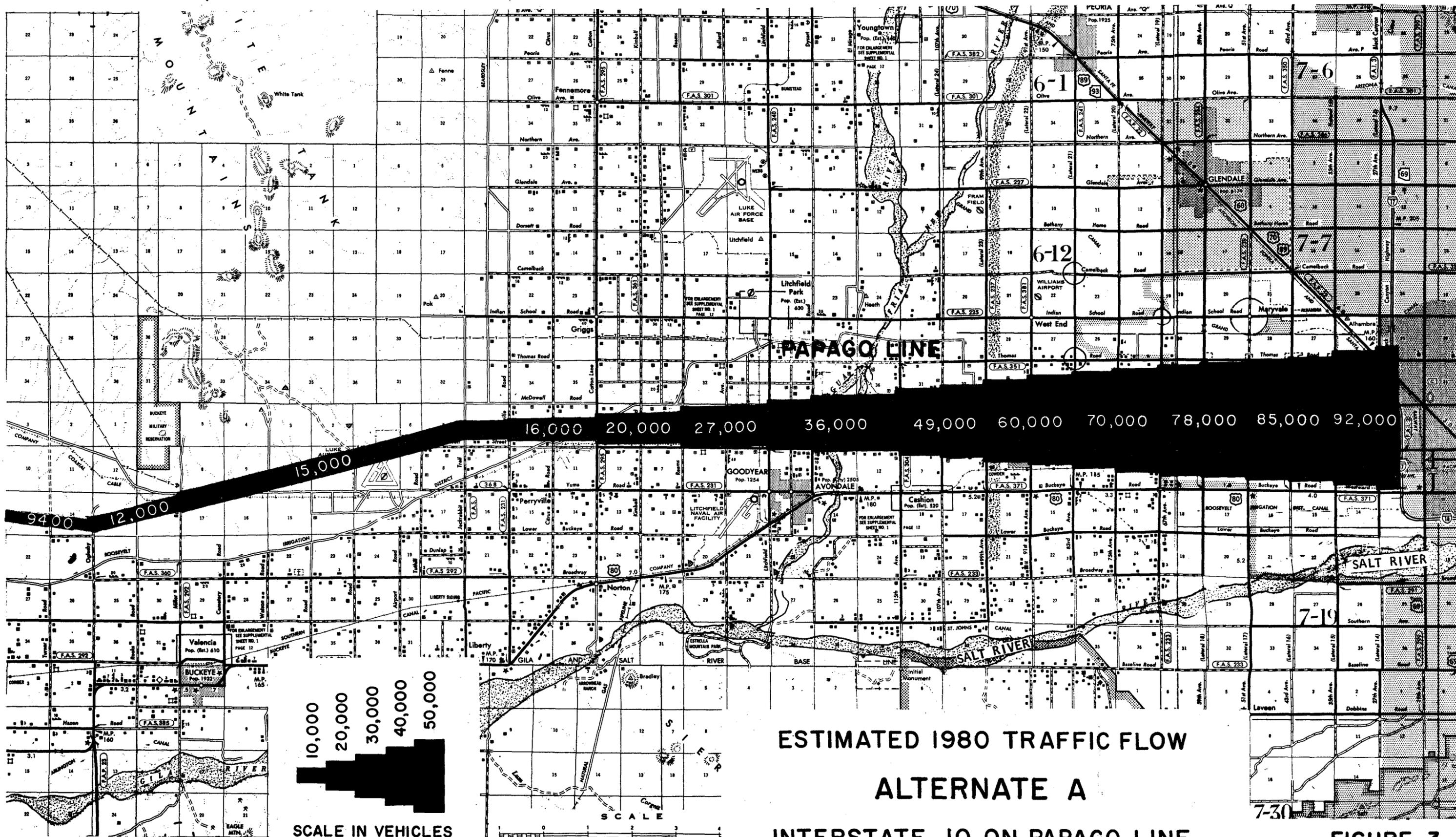


Prepared by the Environmental Planning Division,  
 Arizona Highway Department, April, 1972, from data  
 supplied by the Maricopa County Planning & Zoning  
 Commission and the City of Phoenix Planning Department.

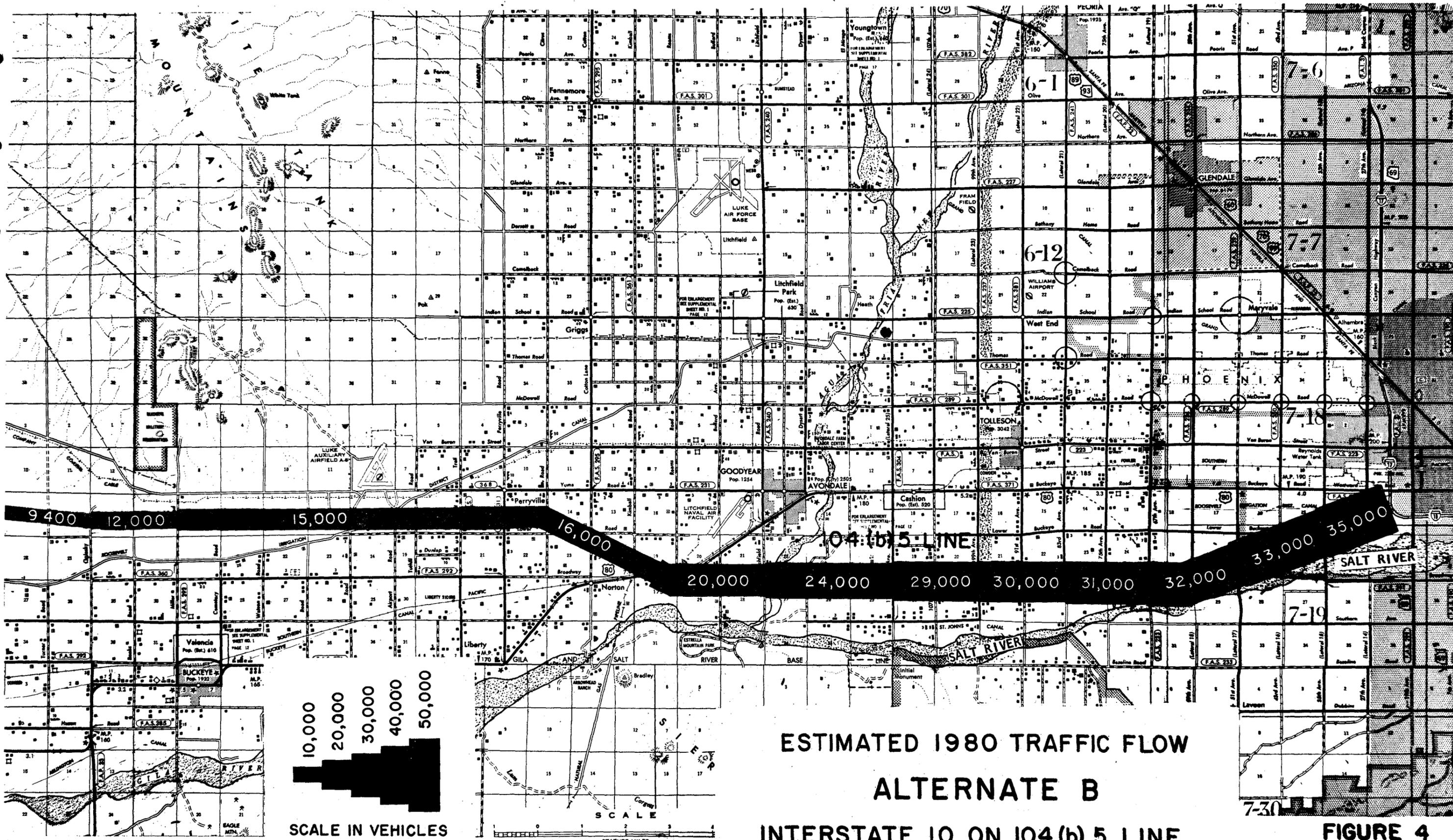


Prepared by the Environmental Planning Division,  
 Arizona Highway Department, April, 1972, from data  
 supplied by the Maricopa County Planning & Zoning  
 Commission and the City of Phoenix Planning Department.

Figure 2b

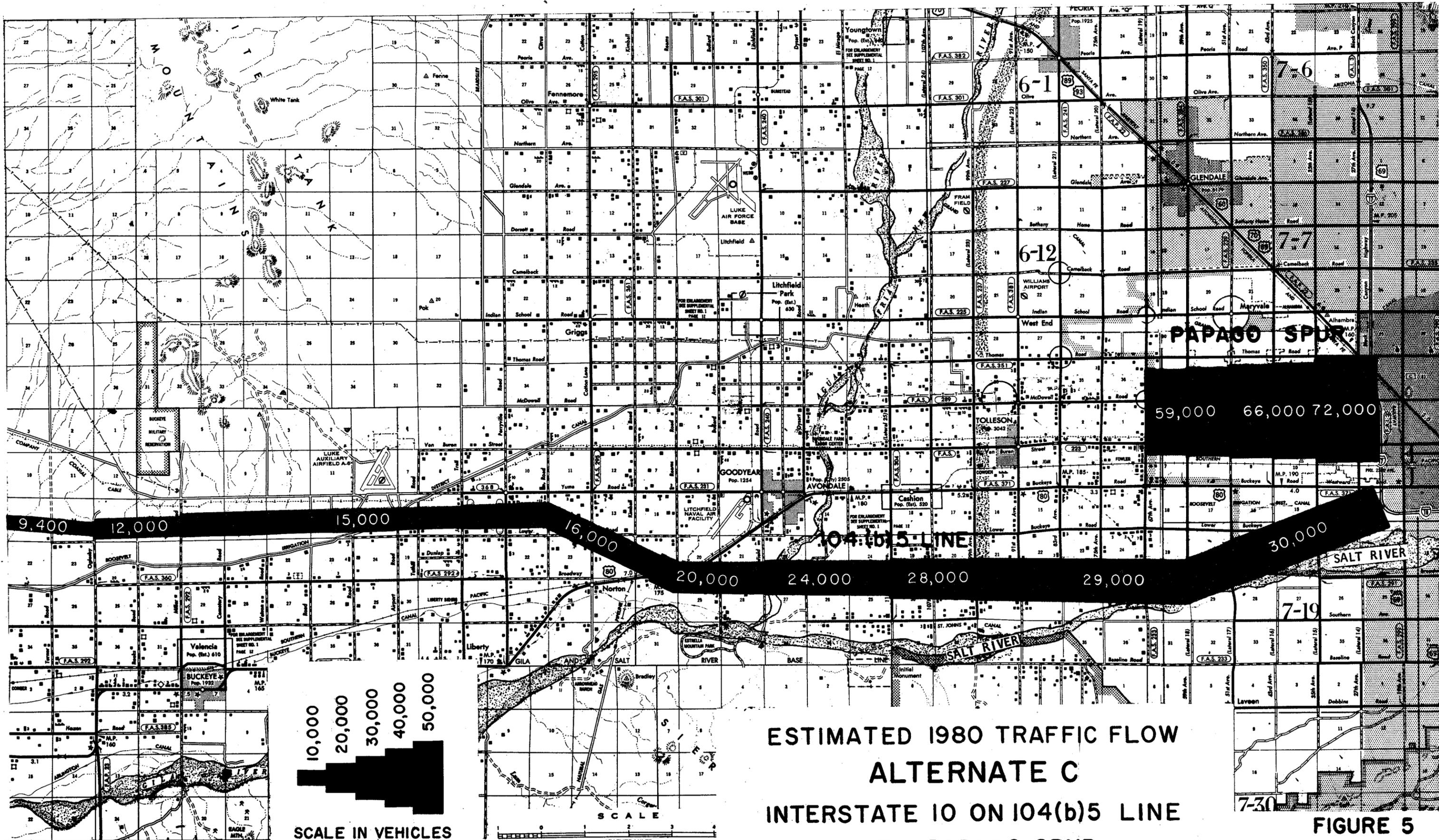


**FIGURE 3**



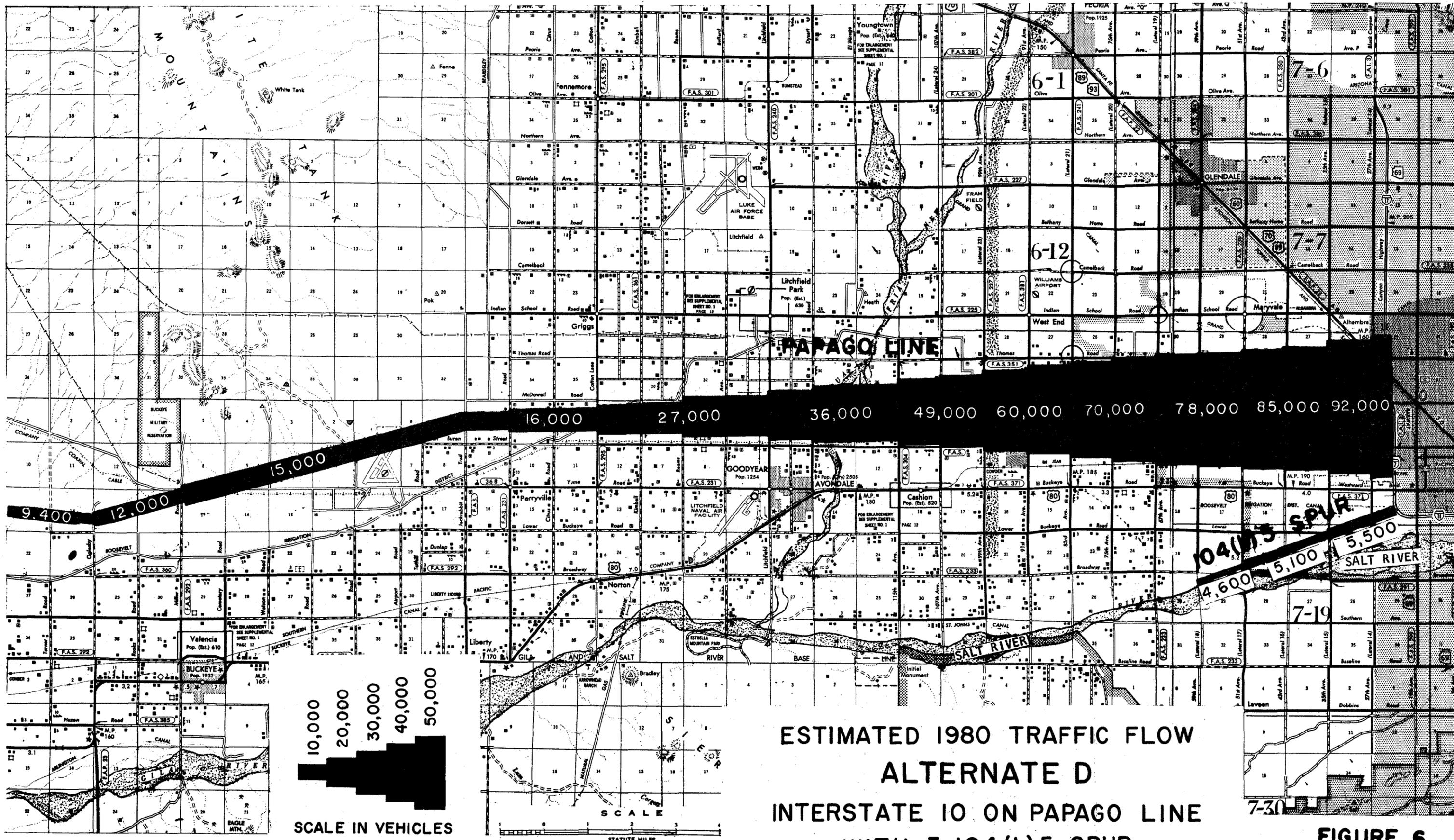
ESTIMATED 1980 TRAFFIC FLOW  
 ALTERNATE B  
 INTERSTATE 10 ON 104(b)5 LINE

FIGURE 4



ESTIMATED 1980 TRAFFIC FLOW  
 ALTERNATE C  
 INTERSTATE 10 ON 104(b)5 LINE  
 WITH PAPAGO SPUR

FIGURE 5



ESTIMATED 1980 TRAFFIC FLOW  
 ALTERNATE D  
 INTERSTATE 10 ON PAPAGO LINE  
 WITH I-104(b)5 SPUR

FIGURE 6

\*(Following indicates beginning and end of quoted content from 1964 Supplemental Report)

Discussion - Alternates (Refer to Figure one)

\*The Arizona Highway Department has considered all feasible alternates for Interstate 10. It is felt that there are only two practical alternates to consider in the "traffic corridor of influence" lying between a common point northwest of Buckeye and the Black Canyon Freeway in Phoenix (a north-south line which will be considered as the trace of a point). The alternates are:

- A. Interstate 10 on the Papago line
- B. Interstate 10 on the 104(b) 5 line (See footnote \*\*)

These two alternates were described and analyzed in the previous reports of November 1963, and Alternate A was recommended. The Bureau of Public Roads pointed out possible refinements to the analysis of these two alternates, and suggested that Alternate C and Alternate D also be included in the analysis.

Land Development and Traffic Service

Figure two depicts existing and expected land development in the traffic corridor study area. Planning studies made by the City of Phoenix and Maricopa County indicate that by 1980 an additional 100,000 persons are expected to occupy the study area bounded by the Black Canyon Freeway on the east, 99th Avenue on the west, the Salt River on the south, and Camelback Road on the north.

Farther to the west lies the proposed Goodyear development, which is now being planned as a complete community by the Goodyear Company. There is already some industrial activity in the general area and plans call for expanding industrial operations with over 700 acres allocated for that use. The plans also call for a wide range of housing and for extensive development of commercial, commercial-recreational, and resort-type development. Population estimates for the Goodyear development are between 50,000 and 80,000 persons in the area by 1980, with an ultimate capacity of close to 100,000 persons. This new city will undoubtedly develop affinity with the rest of the metropolitan area, thereby stimulating growth of the surrounding area, including the westward growth of Phoenix.

The increased intensity of land development expected in the west Phoenix Metropolitan Area causes a considerable increase in estimated future traffic volume. This is reflected in the estimated 1980 traffic flow shown by Figures 3, 4, 5, and 6. The traffic demand on the Papago line is much greater than on the 104(b) 5 line. The Papago line would, therefore, provide

\*\*The 104(b) 5 designation was first applied to a possible highway corridor location between Brenda and Phoenix in early preliminary route studies conducted by the Arizona Highway Department in the 1950's. The term as used in the environmental impact statement is for route identification purposes only, in conjunction with the use of other historical data containing the old designation. The term has no further current significance.

\* much greater traffic service. The reason for this is obvious upon examination of Figure 2. The location of the Papago line provides greater service to both existing and future residential, commercial, and industrial population. The Papago line would serve as well, or better, existing small communities to the west, including Tolleson, Avondale, Goodyear, and Buckeye. In keeping with defense considerations of the Interstate system, the Papago line would better serve Luke Air Force Base and the SAGE installation. It would provide comparable service to the Litchfield Naval Air Facility as the 104(b) 5 line.

In terms of vehicle-miles of traffic service the Papago line would serve an estimated 8,632 million vehicle-miles in a 20-year period, assuming 1980 as the average year. This compares to 5,022 million vehicle-miles on the 104(b) 5 line.

\*VEHICLE MILES OF TRAVEL

	Alternate A Papago Line	Alternate B 104 (b) 5 Line	Alternate C 104 (b) 5 Line - Plus Papago Spur	Alternate D Papago Line Plus 104 (b) 5 Spur
Vehicle-miles per day in 1980 (millions)	1.18	0.69	0.94	1.21
Annual vehicle-miles in 1980 (millions)	432	251	342	442
20-year vehicle- miles (millions)	8632	5022	6847	8834

Benefit-Cost Analysis

The Benefit-Ratios derived for the four Alternates are:

First Benefit Ratio

Alternate A	$\frac{92,492,690 - 78,684,000}{2,760,000 - 382,000} = \frac{13,808,690}{2,378,000} = 5.81$
Alternate B	$\frac{92,492,690 - 84,695,000}{1,552,000 - 382,000} = \frac{7,797,690}{1,170,000} = 6.66$
Alternate C	$\frac{92,492,690 - 79,978,000}{2,764,000 - 382,000} = \frac{12,514,690}{2,382,000} = 5.25$
Alternate D	$\frac{92,492,690 - 78,244,000}{2,878,000 - 382,000} = \frac{14,248,690}{2,496,000} = 5.71$

Second Benefit Ratio

Difference in Annual Costs

	<u>Investment</u>	<u>User</u>	<u>Ratio to Alternate B</u>
Alternate B	-	-	1.00
Alternate A	1,208,000	6,011,000	4.98
Alternate D	1,326,000	6,451,000	4.86
Alternate C	1,212,000	4,717,000	3.89

The first Benefit-Ratios for the four Alternates are approximately equal. Alternate B, with its lower construction and rights of way costs, is slightly the highest with a value of 6.66. However, it

\*provides the least service for all of the possible users.

The second Benefit-Ratio comparing each of the other alternates with Alternate B, which has the higher first benefit-ratio value, shows that the increase in the annual investment for Alternate A would offer a considerable saving to the road users. The results are similar for each of the other Alternates.

The benefit-cost analysis assumes that (1) the study area bounded by the Salt River on the south, Indian School Road on the north, and Interstate 17 on the east, would be served by an existing grid of four-lane arterials; and (2) that five east-west arterials extend westerly from I-17 through an urban type of development to approximately two miles west of Litchfield Road.

Alternate A requires four freeway lanes between its western terminus and 99th Avenue, and six freeway lanes between 99th Avenue and Interstate 17. Alternate B requires four freeway lanes for its entire length. Alternate C requires four freeway lanes for the total length of the 104 (b) 5 line, and six freeway lanes for the Papago spur. Alternate D requires four freeway lanes on the Papago line between its western terminus and 99th Avenue, and six freeway lanes between 99th Avenue and Interstate 17. The 104 (b) 5 spur in Alternate D would serve adequately as a conventional four-lane surface urban arterial.

Construction and rights of way estimates for the four Alternates are:

Alternate A

Construction	\$26,781,000
Rights of way	<u>13,436,000</u>
Total	\$40,217,000

Alternate B

Construction	\$16,152,000
Rights of way	<u>2,991,000</u>
Total	\$19,143,000

Alternate C

Construction	\$27,315,000
Rights of way	<u>12,288,000</u>
Total	\$39,603,000

Alternate D

Construction	\$28,237,000
Rights of way	<u>13,536,000</u>
Total	\$41,773,000

\*Since each of the basic alternates in this study is a segment of a longer new alignment for Interstate 10 between Mile Post 31 and Phoenix, an unusual condition exists in regard to the traffic that would use the alternates. A 1980 ADT of 9400 vehicles is estimated on Interstate 10 at the western terminus of the study alternates. None of the present Interstate through traffic operates on the study grid of arterial streets. It uses U.S. 60 (Grand Avenue) as a portion of a much larger local volume. Achievement of balance in the 1980 traffic assignments required that these 9400 vehicles be computed in the Base Condition as operating on an exterior route. This has been done by placing them on U.S. 60 between Morristown and Interstate 17 in Phoenix. Their operation has been assumed in their relation to all vehicles on this highway. Morristown lies directly north of the western terminus of the study alternates. Because the entire 9400 vehicles are assigned to each of the freeway alternates, no residual traffic costs have been computed for U.S. 60.

Commercial vehicle volumes, stops and delay times have been estimated from various studies recently made for this purpose. Classification counts were taken on the arterials and of the comparable city streets. Delay studies were provided by the City of Phoenix. This data was incorporated into trial computations and the percentage factors used in this report were estimated.

A review of highway bond issues, as reported in "Highway Statistics" in the last several volumes, indicates that a net cost of 3 percent to 3.5 percent is the usual rate. Such higher interest rates as are reported appear to be for toll facility bonds or re-funding issues. Those rarely exceed 5 percent. The use of 5 percent as the recovery factor is continued. Although the rate appears somewhat higher than the existing rent for money, it is not believed to be unreasonable. It is suggested that should the cost of money increase greatly above 5 percent, then inflationary or other causes would likewise increase all other cost estimates by some unknown factor.\*

\*(End of quote from the 1964 Supplemental Report)

#### F. Public Hearing on Realignment of I-10 Corridor

On May 8, 1965, a public hearing was held in the auditorium of the Arizona Highway Department at 206 South 17th Avenue in Phoenix, Arizona, at which the proposed realignment route of the Interstate and Defense Highway 10 between Oglesby Road near Buckeye, Arizona, and a junction with I-17 Highway in Phoenix was presented for public consideration and discussion. A public notice of the hearing and a letter of certification that such hearing was officially conducted may be found on the following two pages.

Overwhelming support for the proposed new corridor location was presented at the public hearing from officials, representatives, and residents of the cities, towns, businesses, and neighborhoods along the general proximity of the proposed corridor. Typical of such support is the following resolution and comments from the City of Phoenix as officially presented at the public hearing by the then Mayor, Milton Graham.

(Beginning of quoted content from Milton Graham's presentation at the 1965 public hearing.)

It is indeed a pleasure to have the opportunity to participate in this hearing concerning the location of the Interstate 10 going west from the Black Canyon Freeway.

The location of this important facility is of great importance to the City of Phoenix, and properly located on the Papago Line, it will have long-range beneficial effects. The City of Phoenix strongly supports the shift in the location of the Interstate 10 to the west to the Papago Line.

Further, we urge that every effort be made to accelerate the construction of this most important facility from the Black Canyon westerly at the earliest possible time.

At this time I would like to introduce some of the key members of the City staff -- and inasmuch as I'm speaking from a prepared statement, I'm going to skip that paragraph because I've already done that.

To get down to this: last Tuesday the City Council of the City of Phoenix passed a resolution reaffirming their support for the re-location of Interstate Route I-10 to the Papago Freeway Line.

At this time I would like to present this resolution for the record, and I shall read the same.

"WHEREAS, the Arizona Highway Commission has recommended that the Interstate route going west from the Black Canyon Freeway (I-17) be located along the Papago Freeway line generally a quarter of a mile south of McDowell Road, and

"WHEREAS, the Papago Freeway is the most urgently needed single transportation facility in the Phoenix urban area, and

"WHEREAS, the Papago location will serve several times as much traffic in the design year as the route along the Salt River and thus will provide relief to crowded surface streets, and

"WHEREAS, the Papago line will far better serve the industrial development as well as the residential growth pattern to the west and northwest of Phoenix, and

"WHEREAS, the economic return to the motorist will be approximately five (5) times as great from the Papago line compared to the Salt River location, and

"WHEREAS, the Papago location is four (4) miles closer to Luke Air Force Base and the SAGE installation than the southern location, and

"WHEREAS, the Papago location makes efficient use of limited funds inasmuch as it better serves both interstate and urban traffic, and

"WHEREAS, great savings can be realized if the right of way for the Papago Freeway can be secured prior to the more intense development of the land that is expected on the northerly line as contrasted to the Salt River location,

"NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PHOENIX as follows:

"That the shift to the interstate route I-10 going west from Black Canyon Freeway to the Papago line just south of McDowell Road is most strongly supported and urgently requested;

"That because of the increased traffic service that the freeway would provide through the industrial, commercial, and residential areas to be served by the Papago location, adequate interchanges be provided at least at the following locations:

"Full interchanges -- 35th Avenue, 43rd Avenue, 51st Avenue, 59th Avenue and 67th Avenue.

"Partial interchange at 27th Avenue with service to and from the west.

"Structure with right of way for future interchanges at major arterials west of 67th Avenue where no interchange is provided in the initial construction.

"That the Arizona Highway Department be commended for its efforts to provide this most-needed facility, and urged to proceed as rapidly as possible with the acquisition of right of way and construction of Interstate 10 along the Papago Freeway line west from the Black Canyon Freeway.

"WHEREAS, the immediate operation of the provisions of this resolution is necessary for the preservation of the public peace, health, and safety, an EMERGENCY is hereby declared to exist, and the resolution shall be in full force and effect from and after its passage by the Council, approved by the Mayor, and publication posted as required by law and is hereby exempted from the referendum clause of the City Charter."

The City of Phoenix would like to emphasize that one of the basic reasons for moving the freeway from the Salt River location to the Papago line is to place it where it will serve the people. For this reason it is essential that adequate full interchanges be placed at every major arterial street within the City of Phoenix. If this is not done it would impose problems upon the City of carrying heavy interstate traffic on our local streets for excessive distances. In addition, the lack of interchanges will force the City to expend considerable additional funds, and actually this would be about five and a half to six million dollars to provide more lanes than would otherwise be needed in the major arterial streets in the immediate vicinity of the freeway.

These adverse effects will not result if adequate full interchanges are provided as requested in our resolution.

By placing Interstate 10 on the Papago Freeway line, the freeway system to serve the Phoenix urban area will be accelerated by a decade. This is of tremendous importance to the community in terms of its economy, safety of our motorists, and the provision of adequate traffic service to foster our continued orderly development.

The development of this great urban freeway will have many long-range benefits on our economy. Unquestionably it will accelerate developments along the general Papago corridor in an area where our long-range master planning calls for such industrial, commercial, and residential intensification of development. Unquestionably the freeway will accelerate the value of land and developments in its immediate vicinity. Certainly no better illustration of this exists than our own Black Canyon Highway and the extensive industrial and subdivision developments that have taken place in this service area.

The freeway will benefit the economy from the employment that will be brought about by the construction, as well as the savings to the motorist from this improved traffic facility. Further, it will foster tourist traffic because of the fine service to be provided west to California along Interstate 10. The Papago Freeway line brings the tourist into the heart of the urban area.

Engineering studies that have been done by the Arizona Highway Department show that the user receives approximately five times the return on his investment with the interstate on the Papago line compared to the Salt River line. In short, the Papago location makes far better use of limited funds and gives better service to both interstate and urbanstate traffic.

In summary, the Papago location places this most important facility where the people are and provides a far better return on the motorist's dollar. Furthermore, and even more important, it contributes to the orderly development of the community.

The City of Phoenix urges that every effort be made to provide this most-needed facility as rapidly as possible along the Papago Freeway line west from the Black Canyon Freeway. Thank you very much.

(End of quoted content from Milton Graham's presentation at the 1965 public hearing.)

Also included herein are the comments of Mr. Patrick J. Cusick, Professional Civil Engineer and City Regional Planner, which indicates further the typical support for the proposed corridor location.

"Mr. Chairman, my name is Patrick J. Cusick, Jr. By education and experience I am a professional civil engineer and city and regional planner. I am presently employed as Vice-President and General Manager of the Litchfield Park Land & Development Company. This company is a subsidiary of the Goodyear Tire & Rubber Company, which was established for the purpose of converting the 14,000 acres of Goodyear Farms property, located about 18

"miles due west of downtown Phoenix, into a planned new town having an eventual population of some 90,000 people in approximately 25 years.

"When this new community was conceived, I-10 was to be located several miles south of the Farms' property. Our consultants proposed a direct connection to this road, assuring us after exhaustive studies that we could successfully carry out this project. Now this hearing is being held on a different location -- one which will take this road through the southerly portion of the Goodyear property, between Litchfield Park and the cities of Goodyear and Avondale. Our consultants now tell us that the net effect of this on our undertaking is to shorten somewhat the development period.

"I mention this only to indicate quite honestly that the gain to us from this shift, while quite real, is nevertheless relatively in the order of 'good' versus 'better'."

"But please do not misinterpret my position here today: it is one of unequivocal support of the presently-proposed location for Interstate 10 from Interstate 17, the Black Canyon Freeway, west.

"It seems to me that the important issue that must occupy our attention at this hearing is not the extent of benefits or injury to individuals or groups but the general public benefit from this facility in this location, now and in the future. I have honestly attempted to appraise it objectively from this viewpoint as a professional planner, and my study confirms the wisdom of the location proposed by the Arizona Highway Department.

"Close in to a major metropolitan area, such as Phoenix, a freeway inevitably must serve two major classes of vehicular traffic -- local and long distance. While long distance traffic can usually accommodate itself to a variety of route locations -- a few miles more or less making little difference -- local traffic has very much less origin-to-destination flexibility. It is, therefore, necessary that, in a location such as the one we are considering today, the dominant determinant of a freeway's route be its local traffic-serving aspects --within, of course, the obvious limitations of economics as measured by user-benefits, which include consideration of total costs.

"In my opinion this is a location for I-10 which not only will accommodate long distance traffic very well, but also will provide excellently for the intra-Phoenix-metropolitan-area movements having their origins or destinations west of Black Canyon Freeway.

"Thus, it will be immediately beneficial to a sizeable proportion of the people, businesses, and industries located in that part of our community. But the long-range benefits will surely dwarf

"this by comparison since one of the major directions -- perhaps the only one -- of population growth, in an area which even today continues to increase at a rate well in excess of the national average, is west. In that direction the Phoenix area has room to grow unhindered by mountains, Indian Reservations, or other deterrents.

"I regret my detailed knowledge of the needs of the west side of Phoenix is not so intimate as to make it possible to comment constructively on the tentative locations of the interchanges on this portion of I-10, with one exception. That exception is, of course, in the Litchfield Park area where the interchanges shown for Litchfield Road and Cotton Lane make all kinds of good sense, since they will be vitally needed.

"I do not presently feel that any interchange will be necessary between Cotton Lane and Litchfield Road, but I would like to suggest that consideration be given to the necessity to providing an interchange at Dysart Road. During the past several years Maricopa County has invested substantially in improving this artery so as to make it possible for Dysart to accommodate the considerable amount of through north-south traffic in this part of the country -- apparently principally moving between Grand Avenue and Buckeye Road and desiring to avoid Luke Field, the Litchfield Naval Air Facility, Goodyear Aerospace, Uni-dynamics, the centers of Goodyear and Litchfield Park, and so forth -- all of which are and will continue to be served by Litchfield Road. Our excellent County Engineer, Mr. Lanford, can best advise you about this; but it does appear desirable to me, on the basis of close observation of the traffic in the Goodyear Farms area, that an exception be made in the spacing of interchanges on I-10 in order to provide one at Dysart Road, as well as at Litchfield Road.

"And I think, incidentally, that if this were done this would provide for a lot of the problem that was mentioned by the representative of the Luke Air Force Base when he spoke here. The Dysart Road interchange would permit even more traffic to bypass the gates of Luke Field.

"In summary, my position is one of full support and endorsement of the proposed location of I-10 west from the Black Canyon Freeway because I sincerely believe that this location is best from the standpoint of the general public interest and the present and future economic development of Maricopa County and the Phoenix area as a whole. Thank you."

Representatives for Maricopa County made the following two presentations:

1. Maricopa County Flood Control District

"MR. OHSIEK: I am L. E. Ohsiek, I am representing the Maricopa County Flood Control District. I am here just representing the Flood Control District, not the rest of the County.

"I'd like to invite your attention to the fact that the Maricopa County Flood Control Program includes the channelization of the Agua Fria River, and I think the State Highway Department-- I know they are completely familiar with the plan, they have received copies of our report and the information is available, we will be happy to cooperate at any time.

"A letter has been given to Mr. Price, outlining the general information. I should like to point out that the letter states -- gives the top width of the channel; actually that should be 'bottom width'.

"We have here some copies of plans which we wish to turn over to you. They show in a little more detail the locations of the channel, and we are available for technical consultation with your people at any time and will be very happy to cooperate and coordinate the program insofar as related to the Flood Control Project in this area. Thank you."

2. County Engineer for Maricopa County  
Mr. Sam Lanford, County Engineer

"For the purpose of cutting our presentation short, I wish to state on behalf of County officials we do support and heartily recommend the Papago alignment as proposed over the Salt River alignment.

"We do have some concern as to the locations -- for study purposes acknowledged -- of the proposed interchanges versus grade separations. We have long-range plans on certain County arterials which, while minor today, in the overall planning will become of much more major importance than they now are, or will become much more important than some routes which are considered important today.

"We would like to request, before final decisions are made on the location of specific interchanges or grade separations, that representatives from some of the local communities on the west side with County officials and the State Highway Department, study the effects, not only of the present County road system, but the plans which are under way for long-range development in order to meet the needs of the future in our local road system as well as the County development plans."

Objections

The only objections set forth at the above public hearing were from two land owners from the area of the proposed corridor who objected to the location of the corridor and the lack of traffic interchanges, as indicated in the following statements taken in their entirety from the public hearing transcript.

1. "Mr. Clifford A. Clements. I'm a resident of Phoenix, Arizona.

"I have a personal interest in this hearing. I own the South Half of the North Half of Section 5, 1 North and 1 East, and I farm that.

"According to your map up here there is an interchange proposed on 107th Avenue which is on the west boundary of my property, but there is no interchange on 99th Avenue. This, I think should be a must because 99th Avenue goes all the way through to Northern. I think that the study should still be made for the use of the Salt River Freeway in place of this one you have up here. Thank you."

2. "My name is Ray Cowden, I own property in the West Half of Section 4, lying just east of 99th Avenue, also the West Half of Section 9 directly south of that, and also some property in Section 8 where my headquarters for my operations are.

"First, you realize that I have a personal interest in this location, and I'm opposed to where it's been located because it creates some serious problems for me in my operation. But if it is finally decided this will be the location of this freeway, why, it's most important that you have interchanges at more places than you now indicate you will have them. Especially 99th Avenue because that is the one avenue that goes all the way through to Glendale and on to Northern. Glendale is the first street north of this and will have a bridge over the Agua Fria and New River.

"Then as far as Tolleson is concerned, the town is growing to the west, a subdivision will be started very shortly west of the present town. The high school grounds are past the center of Section 9; they also plan their municipal buildings west of the high school grounds and purchased the property for those.

"If this location is decided as the proper place to put the freeway, it is most important that we do have adequate interchanges so the public can use it. And those of us who are left out there in the farming business can properly operate our farms without having to go around the section to get to our other property that is left on the north side of the field. Thank you."

Much concern was expressed relative to the types and location of traffic interchanges and grade separations throughout the length of the proposed project. The public was advised that future traffic studies and analyses would indicate the type and location of the interchanges necessary to accommodate the projected traffic requirements of the highway, and that such requirements would be reflected in the final design plans for the facility.

Subsequent to this public hearing and about 1970 a group calling themselves "Citizens for Mass Transit and Against Freeways" was formed under the direction of Professor Gerard Judd who is a chemistry professor at Phoenix College. Their avowed purpose is to stop the construction of all freeways in the Phoenix Urban area. On August 25, 1971, the group sent a letter to the Arizona Highway Department demanding it stop the construction of Interstate Highway 10 (Papago Freeway), including the section here under discussion. This was done by a short letter enclosing a copy of a news release made by the group that they would soon file a suit against Secretary of Transportation, John R. Volpe, to accomplish this purpose and that they had hired an attorney to do this.

On November 23, 1971, this suit was filed in United States District Court and is entitled "Citizens for Mass Transit and Against Freeways, et al vs. John R. Volpe, Secretary of the Department of Transportation" and is cause Number CIV 71-636 PHX CAM. The avowed purpose of the law suit was set forth by the attorney for this group in a memorandum filed on January 19, 1972, page 3 as follows:

"The purpose of the suit quite clearly is to stop the building of urban freeways. Contrary to the obligations of the proposed intervenors, there is nothing in the lawsuit which will prevent the construction of the Brenda cut-off, Interstate highway or any other rural facilities."

Secretary Volpe is being defended by the United States Attorney's Office for the District of Arizona and the Department of Justice. The State of Arizona, the City of Phoenix and the County of Maricopa have also intervened and are assisting in its defense. Litchfield Park Properties, Inc., the planner and developer of Litchfield Park, Arizona, which plans to increase that community to a size of some 50,000 to 80,000 people on some 13,000 acres it owns in the area, has also intervened and is involved in the defense

of the suit on behalf of Secretary Volpe.

G. Selection of Realignment Route "A"

After carefully analyzing and evaluating the data compiled from the various traffic and area studies performed relative to the Interstate and Defense Highway program in the west Phoenix Metropolitan area, and after careful consideration of the information presented at and compiled from the public hearing, the Arizona Highway Department requested Federal approval of realignment Route "A" for location of the Interstate and Defense Highway 10 between Oglesby Road in Buckeye, Arizona, and a connection on Interstate and Defense Highway 17 at a point coincidental to the Papago Line in Phoenix, Arizona.

H. Federal Approval of Realignment Route "A"

On March 8, 1965, the Bureau of Public Roads accepted the realignment concept as being feasible and in the best interest of the public. Federal approval of the specific alignment location within the accepted corridor was given in three stages in accordance with the following:

- a. December 28, 1965, location approval was given to that section of I-10-2 from two miles west of Oglesby Road near Buckeye, Arizona, east to  $\frac{1}{2}$  mile west of Airport Road.
- b. August 30, 1966, location approval was given to that section of I-10-2 from  $\frac{1}{2}$  mile west of Airport Road east to 67th Avenue.
- c. April 12, 1967, location approval was given to that section of I-10-2 from 67th Avenue, east to Junction of I-17 in Phoenix, Arizona.

2. Various Modes of Transportation

The study area of this Environmental Impact Statement Supplement of the Interstate and Defense Highway 10 begins at Perryville Road in the community of Perryville, Arizona, and terminates at 67th Avenue in the western section of the City of Phoenix. However, since any system or means of commercial or public transportation to the communities, towns, and cities in or contiguous to the study area would probably be provided through transportation facilities operating in or through the City of Phoenix, the discussion of the

various modes of transportation as contained herein shall encompass a greater geographic area so as to include adequate evaluation of such facilities and services.

A. Local Transit System

Several types of local transit systems have been employed to serve the needs of Metropolitan Phoenix as indicated in the following paragraphs quoted from Transit and the Phoenix Metropolitan Area (VATTS Report Number 10, 1970).

"Horse-drawn cars marked the beginning of transit in Phoenix in 1887. The system grew to a five-car operation with eight miles of track in 1892. Electric railway cars replaced the horse car system by 1895. Fire, unprofitable expansion, and organized labor led to purchase by the City in 1925 for \$20,000. This completed the first of three cycles of public-private ownership of Phoenix Transit Systems.

"Rebuilding of the system was financed by a \$750,000 bond issue, and in 1928, the first of 18 street cars began operation. The City system expanded to 17 street cars and 23 buses by 1941.

"Private operation in 1935 provided bus service to Tempe and Mesa.

"In the early 1940's, the City began converting street car lines to bus operation. A fire also curtailed the City street car operation, destroying all but six cars which remained on one line until 1948 when the line was converted to bus operation.

"In the 1950's, the private line then operating within the extended limits of the City of Phoenix, changed ownership twice and, eventually, purchased the City system providing an integrated service for the entire City.

"In 1966, the ownership transferred to the Phoenix Transit Corporation, a subsidiary of Chromalloy American. Local service is presently provided in Phoenix, Scottsdale, and Glendale. Sun Valley Busline operates between Phoenix, Tempe, and Mesa. Greyhound Busline provides a similar service to the communities to the southwest of Phoenix. A jitney service operated on the Arizona State University campus for several years, but financial problems resulted in its closure in 1969.

"The historical trend to the Phoenix Transit Corporation has been a steady decline in revenue passengers and passenger revenue. Other sources of revenue, including charter service and advertising, have been steadily increasing, but it has not been sufficient to offset the decline in passenger revenue. The history of revenue passenger use is shown on Table 3.

"Table 3

Yearly Phoenix Bus Transit Patronage

<u>Year</u>	<u>Revenue</u> <u>Passengers</u>
1960	9,309,573
1961	8,785,691
1962	6,415,263*
1963	7,813,739
1964	7,366,656
1965	6,917,424
1966	7,419,175
1967	5,180,372
1968	5,131,331
1969	4,786,130

\*56-day strike

Source: Phoenix Transit Corporation Semi-annual reports filed by the company with the Arizona State Corporation Commission.

"The trend is similar to other transit operations. People who are essentially captive users of transit probably account for most of the current use of transit in Phoenix. The Phoenix Transit regularly scheduled bus routes have about 18,000 paid fares per weekday or about 9,000 users of the weekday service. High school students represent approximately 12 percent of the total passengers on these routes. Weekend patronage falls off sharply to about 9,000 paid fares on Saturday and 2,500 on Sunday.

"In 1947, there was an average of 71,318 transit trips per day. Of this total, 17,337 were school trips. Ten years later, there were 38,042 school transit trips per day. However, the total number of trips per day had decreased 13,741 to 57,577 in 1957. Last year, there were 4.5 million less revenue passengers than in 1960. There were only 4.8 million passengers utilizing the 1969 Phoenix bus transit service which operated about 3 million total bus miles. This is less than 2 revenue passengers per revenue mile.<sup>15</sup>

"Currently, a great deal of interest surrounds transit as a solution to the urban transportation problem. New transit systems and improvements to existing systems may result in increased passenger utilization.

"<sup>15</sup>City of Phoenix, Personalized Transit Study - History of Mass Transit and Travel Time Studies for Automobile and Transit, June, 1969. pp. 18-20; Wilbur Smith & Associates, A Major Street and Highway Plan - Phoenix Urban Area - Maricopa County, May, 1960, p. 43."

\* \* \*

During the 1950's, bus transit service was provided to the outlying communities of Tolleson, Avondale, Goodyear, Litchfield Park, and Luke Air Force Base, west of Phoenix, which are located in the general study area. The service originated in Phoenix and was an extended operational route of the metropolitan transit facilities.

Because of the continued decline of revenue passengers on the metropolitan transit system and because of extreme financial difficulties, revisions to service routes and schedules were made which terminated operations on the extended route to the aforementioned communities. Current service routes of the metropolitan transit system do not extend west of 59th Avenue within the western city limits of Phoenix proper. Only commercial carrier bus service is now available to these areas, as is more fully explained in the following Part B of this supplement. No service is available to Litchfield Park, or Luke Air Force Base in the north central section of the study area.

#### B. Commercial Carrier Bus Service

Commercial bus service to some communities in the study area is currently provided by Interstate facilities of the Greyhound Bus Line and Continental Trailways Bus Lines and by Intrastate services of the Arizona Bus Lines.

Greyhound presently operates two westbound and two eastbound daily schedules between Phoenix, Arizona and San Diego, California, which serves the communities of Cashion (on U.S. Highway 80), Tolleson, Avondale, Goodyear, and Buckeye.

Arizona Bus Lines operates two westbound and two eastbound daily schedules between Phoenix and Ajo, Arizona, with service points identical to those of the Greyhound Bus Line.

Continental Trailways Bus Lines operates one daily schedule each way between Phoenix and San Diego, California, via Buckeye, Arizona.

In addition to the above service which exists presently over U.S. Highway 80 along the proposed Interstate and Defense Highway 10 corridor through the study area, commercial bus service is also provided to the communities and towns located along U.S. Highways 60 and 89 between Phoenix, Arizona, and Los Angeles, or other points in California and Las Vegas, Nevada.

The Greyhound Bus Line operates 13 westbound and 12 eastbound daily schedules between Phoenix and Los Angeles, via Wickenburg, Arizona. It is anticipated that approximately 70 percent of this service will be re-routed onto the new Interstate and Defense Highway 10 upon completion.

Two daily schedules are maintained each way between Phoenix and Flagstaff via Wickenburg, Arizona, which will continue unaffected.

The following passenger traffic data was furnished by Greyhound which represents the total numbers of east and westbound Greyhound passengers traveling between Phoenix and Los Angeles and between Phoenix and San Diego, in the years 1968 and 1971.

Phoenix - Los Angeles

<u>1968</u>	<u>1971</u>
E.B. 158,000	E.B. 148,000
W.B. 160,000	W.B. 145,000

Phoenix - San Diego

<u>1968</u>	<u>1971</u>
E.B. 16,500	E.B. 15,500
W.B. 16,500	W.B. 15,400

The Las Vegas, Tonopah, Reno Stage operates two eastbound and two westbound daily schedules between Phoenix and Reno, Nevada, via Wickenburg and Kingman, Arizona. No re-routing is expected to occur to these schedules when the Interstate and Defense Highway 10 is completed.

Sun Valley Bus Line operates two westbound and two eastbound daily Intra-state schedules between Phoenix and Parker via Wickenburg and Hope, Arizona. No routing change is anticipated for these services.

Continental Trailways maintains six daily schedules each way between Phoenix and Los Angeles, California, via Wickenburg, Arizona. It is anticipated that some future re-routing onto the proposed new Interstate and Defense Highway 10 may occur.

Figures are not readily available to include in this supplemental statement which would indicate the total number of revenue passengers of the study area who utilize the commercial, long-distance bus services for short trip commuter type purposes. The percentage however, is believed to be extremely low.

With regard to local transit trips, use of bus transportation or other forms of public transit does not seem a viable alternative since almost all of the area within one mile on either side of the proposed highway route has a population density of less than one person per acre or 640 persons per square mile.

The anticipated future re-routing of some of the existing commercial bus services onto the Interstate and Defense Highway 10 will provide an improved potential of transportation opportunities for persons of the study area and Metropolitan Phoenix. Thus it is believed the commercial bus service will fill an active role in meeting some of the short trip needs of future revenue passengers in the absence of a metropolitan transit system in the study area.

#### C. Railroad Transportation Facilities

Railroad transportation, since its introduction into Arizona in the 1800's has been a major contributing factor in the growth and development of early Phoenix and the surrounding communities that make up the Phoenix Valley Area. The valley area has for many years been served by two principal railroad companies.

The Santa Fe Railroad Company, until recent years, afforded passenger service to the Phoenix area via a daily train schedule from the mainline connection at Ash Fork, or Flagstaff in northern Arizona. With the decline of passengers in the 1950's, the daily schedule was reduced to a multiweekly schedule; and with the continued decline of revenue passengers, passenger service between the mainline and Phoenix was discontinued altogether in May, 1967.

The Southern Pacific Transportation Company, operating in the central and southern part of the State, has provided passenger service to the Phoenix area with mainline accommodations available to the Los Angeles area on the west coast, and Chicago and other points to the east via New Orleans. Railroad stations for many years were maintained for passenger service in the study area at Goodyear, and at Buckeye, Arizona. The station at Goodyear was identified as "Litchfield" station due to the fact that most passengers to or from the station were visitors and patrons of the Wigwam Resort located four miles north of Goodyear in the community of Litchfield Park, Arizona. However, because of the decline of passengers, both the Litchfield and Buckeye stations were long ago closed down and abandoned by the Southern Pacific, leaving the communities through the study area west of Phoenix without railroad passenger service.

The following information table was supplied by the Southern Pacific Transportation Company relative to the numbers of daily trains and the numbers of revenue passengers pertinent to the Phoenix area for the period 1957-1971.

TRAINS OPERATED WEST OF PHOENIX

January through September 1957	- 4	Trains	in	each	direction	(Daily)
October 1957 through April 18, 1964	- 3	"	"	"	"	"
April 19, 1964 through August 17, 1967	- 2	"	"	"	"	"
August 18, 1967 through September 30, 1970	- 1	"	"	"	"	"
October 1, 1970 through December 31, 1971	- 1	"	"	"	"	(Tri-Weekly)

PASSENGER LOADINGS WEST OF EL PASO YEARS 1957-1971

<u>YEAR</u>	<u>WESTBOUND ANNUAL PASSENGERS</u>	<u>EASTBOUND ANNUAL PASSENGERS</u>
1957	236,155	232,140
1958	218,635	223,015
1959	215,715	224,475
1960	205,326	225,090
1961	202,940	218,635
1962	181,040	190,895
1963	188,705	188,340
1964	146,034	138,348
1965	128,845	114,245
1966	112,055	104,025
1967	80,300	76,285
1968	69,540	77,226
1969	63,145	64,970
1970	54,073	53,427
1971	31,668	31,512

\* \* \*

This factual information clearly indicates the steady decline of rail passengers and the subsequent reduction of rail service obviated by such decline. This declining trend is generally typical of that experienced by railroad transportation companies across the country.

In 1971, Amtrak, which is a federally subsidized organization, assumed responsibility for management of passenger train service throughout the United States. In recent discussion with Southern Pacific personnel in Phoenix, it was learned that passenger volume in the area has shown some increase since Amtrak assumed management of the railroad passenger facilities of that company.

Historical operational data of the new management concept is at this point in time too limited to draw any conclusions for future projections. However, because railroad stations do not exist in the study area, it is believed that the railroad will not in any way contribute to the solution of the short-trip commuter type transportation problems associated to the Phoenix Metropolitan area, as it is known today.

Should Amtrak be highly successful in promoting long-trip passenger service, it is conceivable that some influence could be reflected on the number of motorists who might elect to ride the trains rather than drive automobiles on

such long trips. It must also be assumed that some of the potential railroad passengers would probably come from other sources or modes of long-trip transportation facilities such as the airlines and the buslines. It is not possible to factually predict a reasonable picture of future railroad passenger service and revenue passengers at this time, but with improved management offering much improved passenger service, the railroad may at some future time once again become a major carrier of long-trip passengers.

D. Air Transportation Facilities

Phoenix-Litchfield Municipal Airport

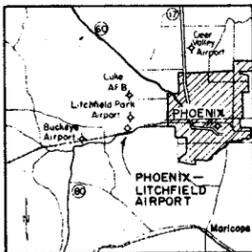
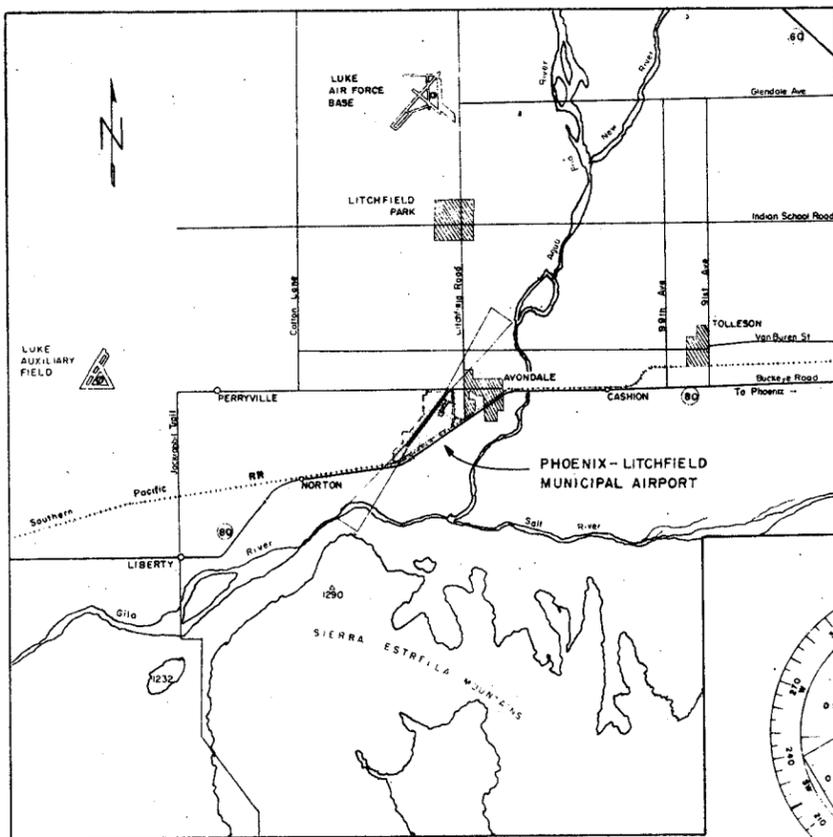
Contained in the 1963 Interstate Route 10 Report and the 1964 Supplement prepared by the Arizona Highway Department, was reference to the Litchfield Naval Air Facility.

Because this facility is located within the study area of this Supplemental Environmental Statement, and because future use of the airport facility is expected to be of significant importance in the major air transportation picture in the Phoenix Metropolitan area, the following discussion is included herein to indicate and evaluate the anticipated relationship between that air facility and the proposed Interstate and Defense Highway 10 to be constructed through the study area.

The Phoenix-Litchfield Municipal Airport is a satellite facility of the Phoenix-Sky Harbor International Airport located in the City of Phoenix. The satellite airport, formerly the U.S. Naval Litchfield Facility, was purchased from the Federal Government by the City of Phoenix in 1968.

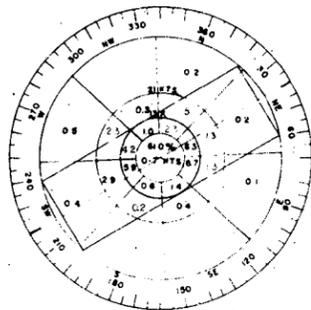
The airport is located on Litchfield Road, approximately one and one-half miles south of the proposed Interstate and Defense Highway 10 corridor, in the Town of Goodyear, Arizona, some 18 miles west of Phoenix.

An Airport Layout Plan, dated 1971, is included herein (see page 30A). Shown on the plan are the many and various buildings on the airport grounds



LOCATION MAP

WIND ROSE  
RUNWAY ORIENTED ON TRUE NORTH  
NUMBERED ON MAGNETIC BEARING



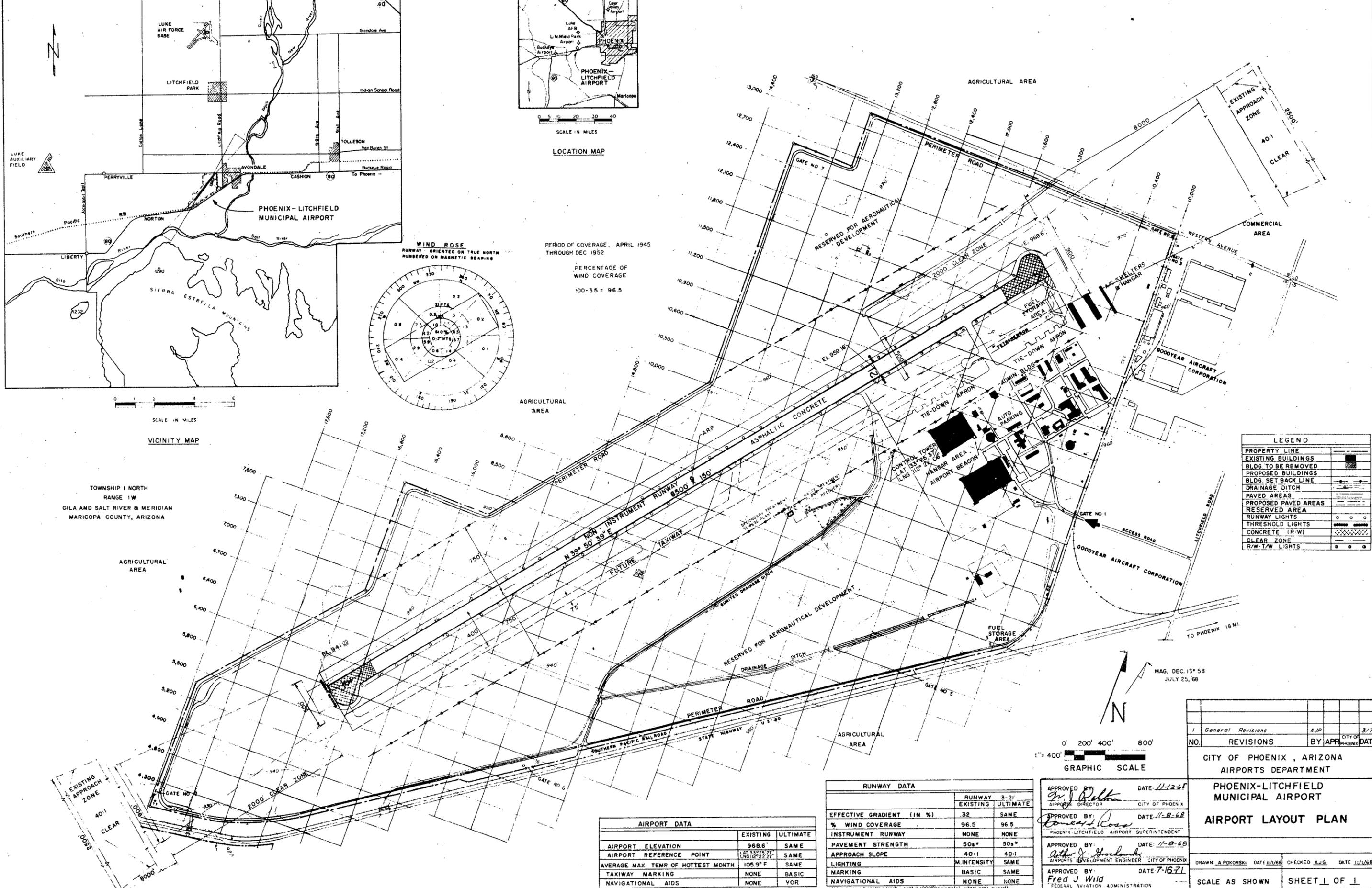
PERIOD OF COVERAGE, APRIL 1945  
THROUGH DEC 1952

PERCENTAGE OF  
WIND COVERAGE  
100 - 3.5 = 96.5

VICINITY MAP

TOWNSHIP 1 NORTH  
RANGE 1W  
GILA AND SALT RIVER & MERIDIAN  
MARICOPA COUNTY, ARIZONA

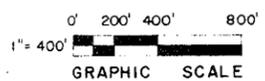
AGRICULTURAL  
AREA



LEGEND

PROPERTY LINE	
EXISTING BUILDINGS	
BLDG. TO BE REMOVED	
PROPOSED BUILDINGS	
BLDG. SET BACK LINE	
DRAINAGE DITCH	
PAVED AREAS	
PROPOSED PAVED AREAS	
RESERVED AREA	
RUNWAY LIGHTS	
THRESHOLD LIGHTS	
CONCRETE (R/W)	
CLEAR ZONE	
R/W-T/W LIGHTS	

MAG. DEC. 13° 58  
JULY 25, '68



AIRPORT DATA		
	EXISTING	ULTIMATE
AIRPORT ELEVATION	988.6'	SAME
AIRPORT REFERENCE POINT	LAT 33° 27' 27"	SAME
	LONG 112° 22' 27"	
AVERAGE MAX. TEMP. OF HOTTEST MONTH	105.9° F	SAME
TAXIWAY MARKING	NONE	BASIC
NAVIGATIONAL AIDS	NONE	VOR

RUNWAY DATA		
	EXISTING	ULTIMATE
EFFECTIVE GRADIENT (IN %)	.32	SAME
% WIND COVERAGE	96.5	96.5
INSTRUMENT RUNWAY	NONE	NONE
PAVEMENT STRENGTH	50s*	50s*
APPROACH SLOPE	40:1	40:1
LIGHTING	M. INTENSITY	SAME
MARKING	BASIC	SAME
NAVIGATIONAL AIDS	NONE	NONE

APPROVED BY: *M. J. Belter* DATE: 11-2-68  
AIRPORTS DIRECTOR CITY OF PHOENIX

APPROVED BY: *Conrad Ross* DATE: 11-8-68  
PHOENIX-LITCHFIELD AIRPORT SUPERINTENDENT

APPROVED BY: *Arthur J. Gooden* DATE: 11-8-68  
AIRPORTS DEVELOPMENT ENGINEER CITY OF PHOENIX

APPROVED BY: *Fred J. Wild* DATE: 7-16-71  
FEDERAL AVIATION ADMINISTRATION

NO.	REVISIONS	BY	DATE
1	General Revisions	AJP	3/77

CITY OF PHOENIX, ARIZONA  
AIRPORTS DEPARTMENT

PHOENIX-LITCHFIELD  
MUNICIPAL AIRPORT

AIRPORT LAYOUT PLAN

DRAWN A. POKORSKI DATE 11/1/68 CHECKED A.J.G. DATE 11/1/68

SCALE AS SHOWN SHEET 1 OF 1

as well as the aircraft tie-down areas, the 8,500 foot by 150 foot asphaltic concrete non-instrument runway, the clear zones, and all other existing amenities pertinent to the airport property.

The airport was acquired by the City of Phoenix as an auxiliary air service facility to which some of the smaller and lighter aircraft could be relocated from Phoenix Sky Harbor International Airport as a result of planned expansion to the larger metropolitan facility, and as a result of increasing demands for more small-aircraft service facilities in the area.

The following air traffic information was furnished by the City of Phoenix which indicates the numbers and types of operations occurring at the Litchfield facility for the fiscal years 1968 through 1971, and the numbers of aircraft based at the airport during those years.

PHOENIX-LITCHFIELD MUNICIPAL AIRPORT  
ACTIVITY REPORT (FISCAL YEARS)

	<u>1968-1969</u>	<u>1969-1970</u>	<u>1970-1971</u>
Air Force Itinerant	175	69	19
Air Force Local	693	416	32
Civil-Itinerant	19,878	36,813	53,628
Civil-Local	<u>34,993</u>	<u>70,670</u>	<u>164,134</u>
	55,739	107,968	217,813
Based Aircraft	31	34	87

\* \* \*

The Litchfield Airport will accommodate many types of propeller and jet-powered aircraft including the larger Boeing 727 and 707 jet liners, and similar crafts; however, the principal user will be the smaller piston-type planes, and the executive-jet craft, such as the Lear Jet 23 and 24, North American Sabreliner 6 and 40, the Hawker Siddley 125, etc.

One very large, vacant hangar located near the runway, because of having been constructed for servicing and testing all types of naval aircraft prior to acquisition of the facility by the City, affords an excellent potential service capability to some large commercial aircraft user or perhaps to some

governmental agency, such as the Air National Guard, who might desire to locate at the Litchfield site.

Considerations for future development and improvement of the airport by the City of Phoenix are reflected in the Proposed Airport Development Plans. (See page 32A)

Because of the demands of the public for more small aircraft facilities to accommodate the rapidly increasing numbers of such aircraft, the Litchfield Airport is expected to assume a significant status in the future over-all transportation program in the Metropolitan Phoenix area.

The proposed Interstate and Defense Highway 10, upon completion, will serve as a catalyst to crystalize the orderly growth and further planned development of the Phoenix-Litchfield Municipal Airport.

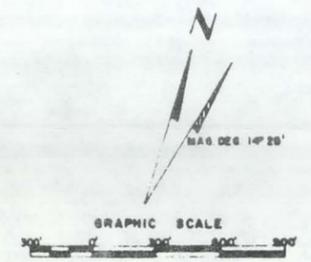
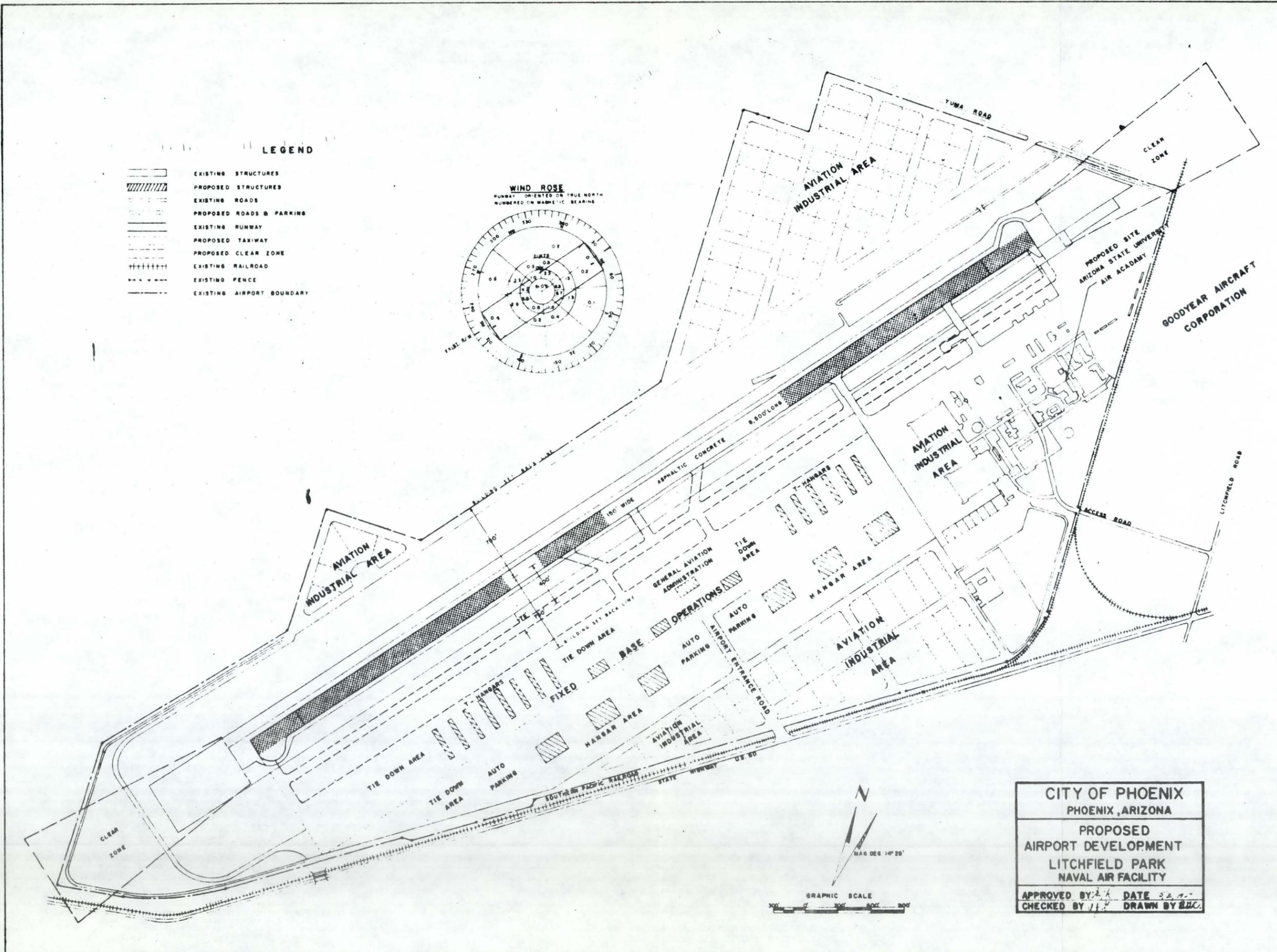
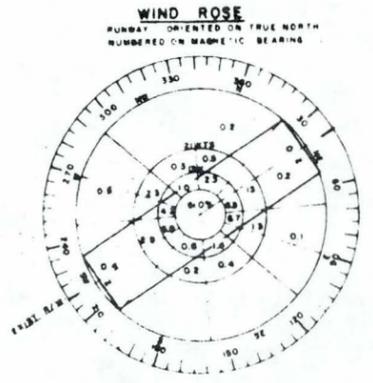
Traffic to or from the Litchfield Airport will not generally be commuter-type in nature and therefore will not contribute toward the solution of the short-trip roadway problems existing in the Metropolitan Phoenix area. The facility will, however, permit expansion of the Phoenix Sky Harbor International Airport to more adequately and safely accommodate the rapidly increasing numbers of long-trip air passengers utilizing the Phoenix Airport.

#### E. Other Factors

In the evaluation of other modes of transportation, it is important to consider that the area adjacent to the proposed I-10 Highway corridor in the study area has very low population density which is less than 1,000 persons per square mile. Attached hereto on the following pages 32B and 32C are the latest density maps for the area, published by the Maricopa Planning and Zoning Department.

As can be seen by the maps, the population density reflects the rural characteristics of the subject area. A sufficient population density required to justify and support public transportation as a feasible alternative to this

- LEGEND**
- EXISTING STRUCTURES
  - PROPOSED STRUCTURES
  - EXISTING ROADS
  - PROPOSED ROADS & PARKING
  - EXISTING RUNWAY
  - PROPOSED TAXIWAY
  - PROPOSED CLEAR ZONE
  - EXISTING RAILROAD
  - EXISTING FENCE
  - EXISTING AIRPORT BOUNDARY

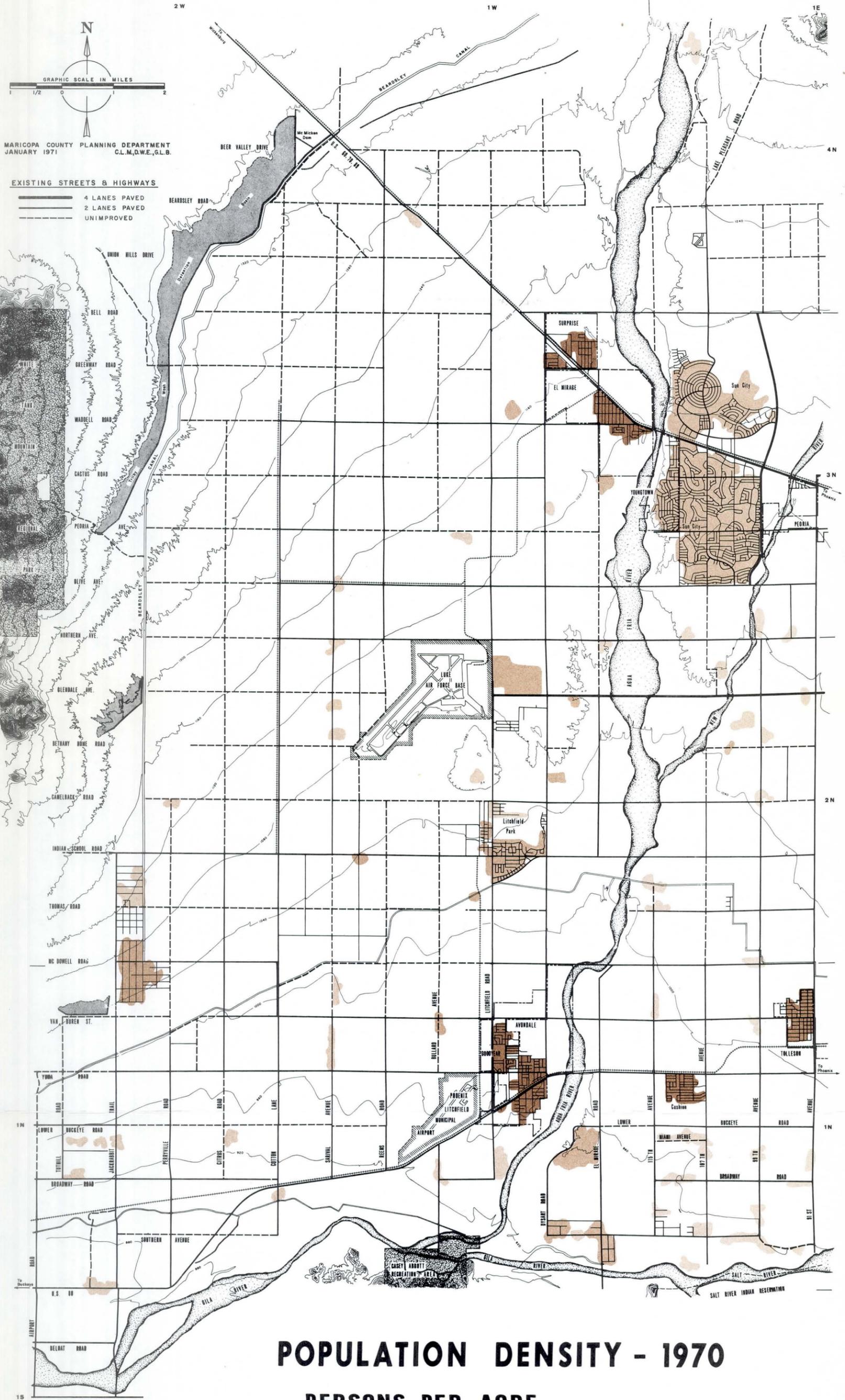


CITY OF PHOENIX  
 PHOENIX, ARIZONA

PROPOSED  
 AIRPORT DEVELOPMENT  
 LITCHFIELD PARK  
 NAVAL AIR FACILITY

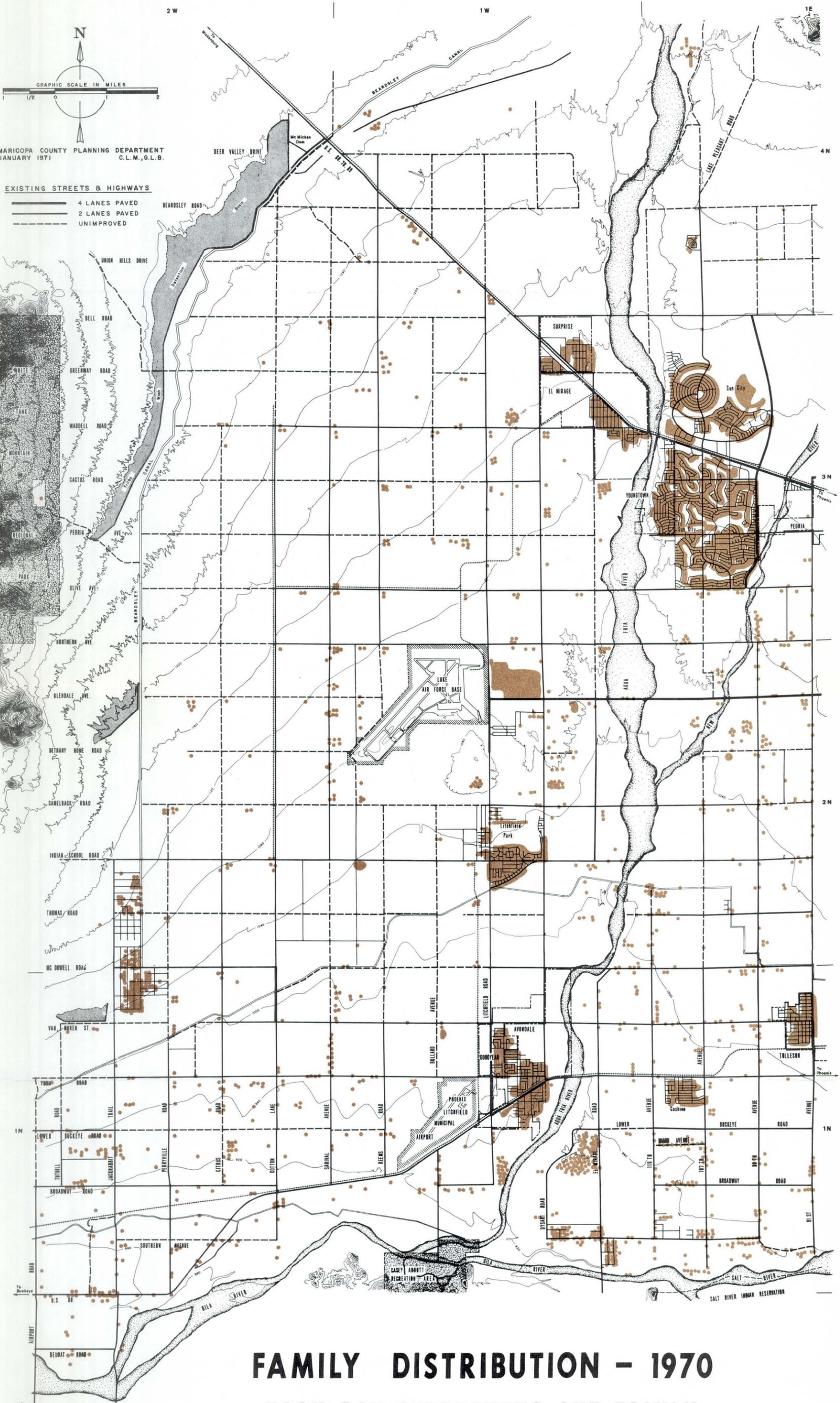
APPROVED BY: [Signature] DATE: 5.2.57  
 CHECKED BY: [Signature] DRAWN BY: [Signature]

# WEST CENTRAL MARICOPA COUNTY, ARIZONA



MARICOPA COUNTY PLANNING DEPARTMENT  
JANUARY 1971  
C.L.M.,D.W.E.,G.L.B.

# WEST CENTRAL MARICOPA COUNTY, ARIZONA



planned Interstate highway segment is not evidenced.

Further, a substantial portion of traffic on this highway will be interstate cars and trucks traversing between Phoenix and the metropolitan areas of southern and central California. An alternate means of transportation, which would require these travelers (or the goods and commodities being transported by interstate truck) to change modes of transportation when they reach or are leaving the outskirts of the Phoenix area, hardly seems possible in the reasonable, foreseeable future.

### 3. Land Use Evaluation

Land-use in the study area has remained generally stable and unchanged over the past several years. However, because construction of the proposed Interstate and Defense Highway 10 is expected to influence land-use along the highway corridor, discussions have been included herein which evaluate the existing and proposed future use of these lands, and the impact the highway will affect upon the land-use, planning and development of the communities in the study area.

#### A. Existing Land-Use (See Figure 2a which follows page 8)

Beginning at Perryville Road in the community of Perryville, Arizona, and progressing eastward one mile to Citrus Lane, the proposed highway corridor traverses unfarmed agriculturally zoned acreage.

From Citrus Lane eastward one mile to Cotton Lane, the highway corridor passes through lands that were recently rezoned from agricultural to public and semi-public to accommodate the construction and operation of the Phoenix Harness Track which is located in the eastern half of the section, about 1,000 feet south of the highway corridor.

From Cotton Lane eastward three miles to Bullard Avenue, the corridor traverses agricultural lands which are utilized for growing of cotton and silage crops for livestock feed and for seasonal livestock grazing.

Between Bullard Avenue and Litchfield Road one mile to the east, the corridor passes through lands zoned for agriculture (used for growing cotton and silage crops) and for industrial where the Boswell commercial enterprise is located.

From Litchfield Road eastward nine miles to 67th Avenue, the highway corridor traverses lands zoned for agriculture which are used for growing cotton, silage, and other ground crops. Some of the land is vacant and presently not being farmed. Seasonal livestock grazing occurs in parts of this section.

B. Suggested Future Land-Use (See Figure 2b which follows page 8)

Data used in preparation of the Suggested Future Land-Use Map was furnished by the Planning Departments of the City of Phoenix and Maricopa County, and is subject to change at the direction of those having authority for approval of the final future land use maps being prepared for the City and the County.

From the beginning of the study area at Perryville Road to Reems Road four miles to the east, agricultural and public land-use along the highway corridor will remain unchanged.

From Reems Road one mile eastward to Bullard Avenue, agricultural use will continue south of the corridor. Commercial use has been assigned to the area immediately north of the highway along the corridor with residential use given to northern contiguous land.

Between Bullard Avenue and Litchfield Road, part of the agricultural land-use south of the corridor will remain and part will change to industrial purposes with residential lands abutting thereto on the north.

Between Litchfield Road and Dysart Road one mile to the east, land-use will be industrial on both sides of the highway corridor with contiguous residential land abutting thereto.

Land-use in the two-mile section between Dysart Road and 115th Avenue is primarily a drainage-flood-plain area crossing the highway corridor generally

midway between the above terminus points. Use of remaining lands on the north side of the corridor are designated as commercial. Abutting lands to the north of the commercial area are designated as residential (west of the flood-plain), and public (east of the flood-plain). Remaining lands south of the corridor are designated as public (west of the flood-plain) with residential lands abutting on the south and commercial (east of the flood-plain) with residential lands abutting on the south.

From 115th Avenue to 99th Avenue, the land-use is designated industrial on both sides of the highway corridor with residential lands abutting thereto.

Between 99th Avenue and 91st Avenue, land-use on both sides of the corridor is identified as commercial with residential lands abutting thereto.

From 91st Avenue to the end of the study area at 67th Avenue, the land-use on the north side of the highway corridor is designated as residential and the lands to the south of the corridor are industrial.

In the first part of May, 1972, the Planning and Zoning Department of Maricopa County issued its report on suggested land uses for an area between 91st Avenue westward to Airport Road and from Northern Avenue south to the Gila and Salt Rivers. The land uses suggested in that report along the proposed freeway route are all compatible to the construction of the freeway between Perryville Road to 67th Avenue. Further, the section of the report regarding transportation for the area calls for the construction of Interstate and Defense Highway 10 along the route proposed is a major, needed transportation element. The suggested land-use map published as a part of the report shows Interstate and Defense Highway 10 as a prominent part of its suggested land uses.

This planning report was presented to the Maricopa County Board of Supervisors for consideration as its official plan for the area. The plan has not yet been officially adopted by the Board.

### C. Land-Use Summary

A brief comparison and summation of the changes expected to occur between the existing and the suggested future use of the lands within a one-mile band in which the highway corridor will traverse indicates that agriculture will continue in the extreme west end of the study area (three+ miles); commercial and/or industrial land-use will occur for about eight miles along both immediate sides of the highway corridor with residential land-use resulting in the outer fringes of the one-mile wide corridor; residential and industrial land-use will occur along the highway corridor through the final three miles of the study area.

Changes in land-use as shown on the existing and the suggested future land-use maps is indicative of the coordination and long-range planning instituted by the City of Phoenix and Maricopa County in conjunction with the towns and cities in the study area to meet the planned growth and development needs of those communities.

When land in the study area is being utilized according or similar to the suggested future land-use map, such change from agricultural to industrial, commercial and residential classification will favorably influence the tax base and economic structure of the communities in the study area and of Maricopa County and the State.

### 4. Long Range Planning and Development

Significant growth and development is expected to occur in and around the towns and cities located in the study area in anticipation of, in conjunction with, or subsequent to the construction of the proposed Interstate and Defense Highway 10.

#### A. Communities with Similarities

Many similarities exist between the communities of Tolleson, Avondale, Goodyear, and Buckeye relative to existing or anticipated long-range planning

### C. Land-Use Summary

A brief comparison and summation of the changes expected to occur between the existing and the suggested future use of the lands within a one-mile band in which the highway corridor will traverse indicates that agriculture will continue in the extreme west end of the study area (three+ miles); commercial and/or industrial land-use will occur for about eight miles along both immediate sides of the highway corridor with residential land-use resulting in the outer fringes of the one-mile wide corridor; residential and industrial land-use will occur along the highway corridor through the final three miles of the study area.

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### 4. Long Range Planning and Development

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#### A. Communities with Similarities

Many similarities exist between the communities of Tolleson, Avondale, Goodyear, and Buckeye relative to existing or anticipated long-range planning

and land-use for the areas along the proposed highway corridor. Because of such similarities, the discussions contained in the following paragraphs will apply generally to the entire area which is comprised of those communities.

Several factors exist which are of significance to the future growth and development of the area; some of the most important of these are:

1. The fact that lands are available for most all types of expansion purposes within or generally adjacent to the town or city limits of each respective community within the area;
2. Land values in the area generally are more attractive to prospective industrial, commercial, and residential developers and builders than similar lands located closer to the Phoenix area;
3. A generally stable labor force is available in or near the area to meet requirements of potential new commerce and industry;
4. Adequate transportation facilities are planned (Interstate and Defense Highway 10) which will provide easy access for local commuters and which will provide better local and long-distance traffic routes for incoming and outgoing commercial and industrial goods and products;
5. Municipal officials of the area are very interested in and are actively engaged in attracting new commercial, industrial, and residential growth in their local community;
6. Long-range planning is being undertaken which will provide adequate land-use for the expanding communities within the area, thereby assuring the orderly growth and development of the entire area, and which will provide for the improvement and extension of municipal services and facilities for those communities.
7. Development and expansion of the respective communities within the area is part of the planned growth pattern established in the development of the master plan for the entire Phoenix Metropolitan area as a result of joint coordination between the cities, the County, and the State.

Current and planned expansion consists of annexation of lands to enlarge municipal boundaries, plotting of lands for development to accommodate present and future industrial and commercial growth, and the construction of literally hundreds of single and multiple family dwellings.

Should the same trend occur here which has been experienced in other cities and towns along previously constructed Interstate and Defense highways elsewhere in the State, commercial and industrial land-use will develop along the highway corridor and at major traffic interchanges with high and low density residential development occurring in contiguous areas thereto. When this occurs, a very favorable

impact will be affected to the economic and tax base structure of the entire community.

B. Litchfield Park

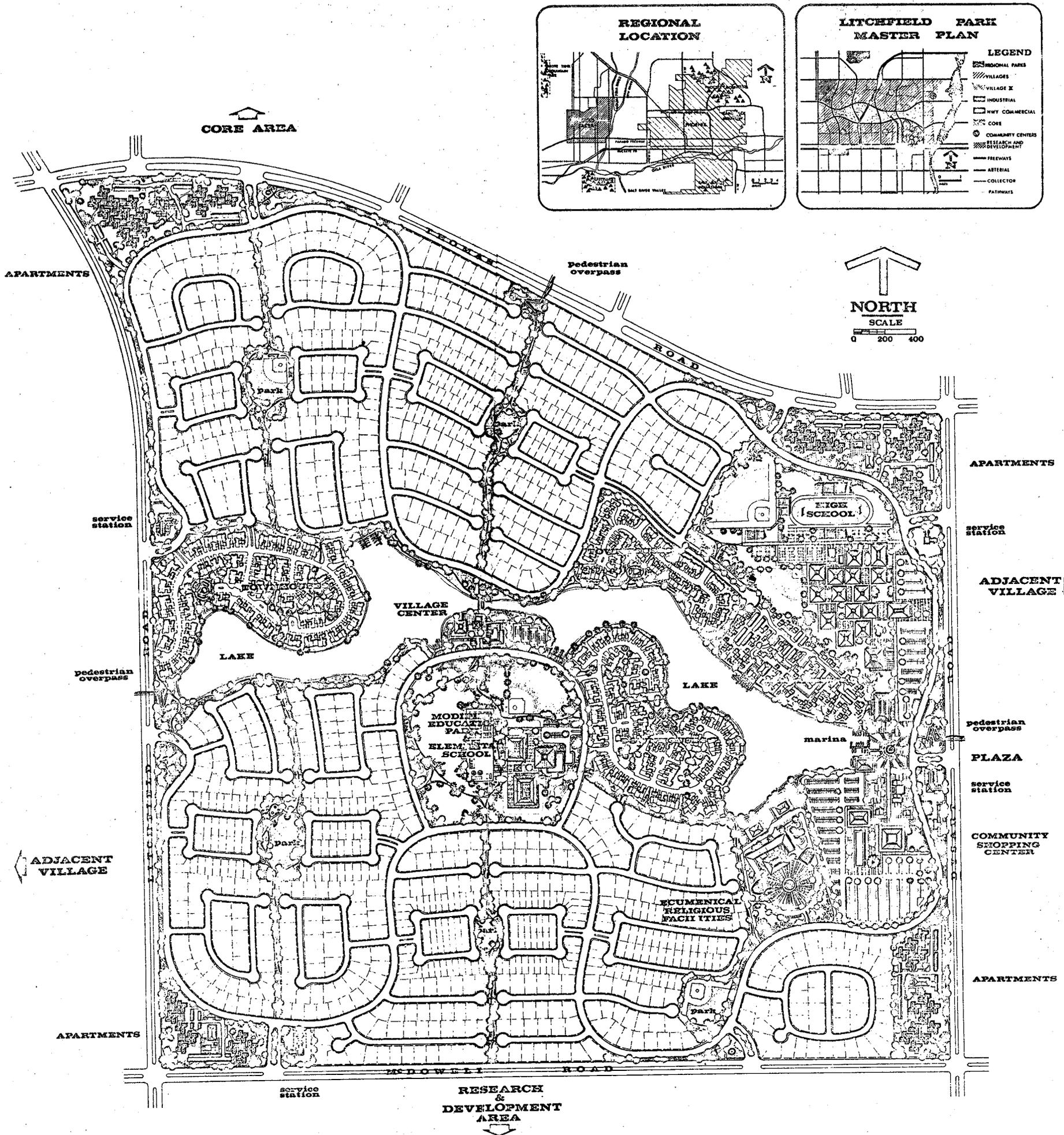
Located in the study area (see Figure 2a following page 8) but not similar in fact, or in planning to other previously mentioned communities, is the community of Litchfield Park which is located on 13,000 acres of land owned by the Goodyear Farms, a subsidiary of Goodyear Tire and Rubber Company of Akron, Ohio. This community is located immediately north of the proposed highway corridor between Camelback Road on the north and McDowell Road on the south, and lies generally between Dysart Road on the east and Cotton Lane on the west. The center of the present municipality is situated in the vicinity of Litchfield Road and Indian School Road.

Long range planning provides for the orderly growth and development of a city containing six separate but interrelated communities. Each community will be comprised of two villages, and will provide a compact and convenient community center of business and professional offices and a wide range of retail shops, stores, and service centers. Each village will be comprised of neighborhoods containing centrally located elementary schools, a recreation center, and a modern general store, and will include recreational and housing areas.

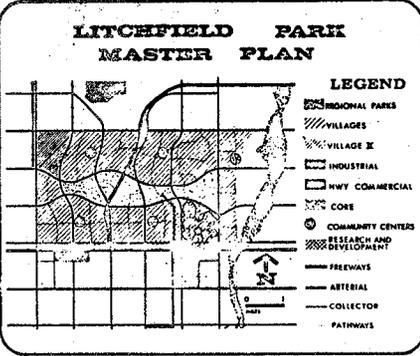
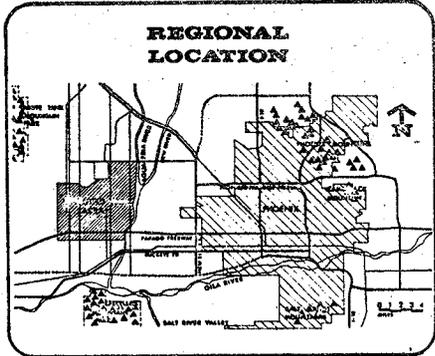
Included in the overall city concept will be large commercial and industrial centers to accommodate existing and future enterprise, department stores, shops, restaurants, hotels, high-rise apartments, office buildings, and civic and medical centers.

A map of Village II is included herein on the following page 38A which portrays the somewhat, although not altogether, typical planning and development concept of the villages which will make up the City of Litchfield Park.

When fully developed, the planned city will be substantially self-supporting and will contain a resident population of approximately 90,000.



**CORE AREA**



- LEGEND**
- REGIONAL PARKS
  - VILLAGES I
  - VILLAGES II
  - INDUSTRIAL
  - HWY COMMERCIAL
  - CORE
  - COMMUNITY CENTERS
  - RESEARCH AND DEVELOPMENT
  - FREWAYS
  - ARTERIAL
  - COLLECTOR
  - PATHWAYS



**MASTER PLAN OF VILLAGE II**

The City has been planned to utilize the Interstate and Defense Highway 10 when constructed. Land-use and development along the area immediately north of the proposed highway corridor is planned to be compatible with the highway corridor and the traffic interchanges planned for Litchfield Road, and Dysart Road.

Development of the City of Litchfield Park is inevitable with or without the proposed highway, however, the highway when constructed will act as a catalyst to hasten such development, and will provide for orderly growth of the entire region, both in and adjacent to the study area.

C. Luke Air Force Base

Luke Air Force Base is located on Litchfield Road at Glendale Avenue, approximately five miles north of the proposed highway corridor.

1) The base opened during the pre-war emergency in 1941 and has grown over the years to its current recognition of being the largest tactical training wing in the world, hosting six USAF tactical squadrons and one of the German Luftwaffe.

1) The work force of 8,500 at Luke includes 2,000 civilians and representatives. The total population of the base is 27,000 which includes servicemen and their families.

1) The annual operation of the base contributes \$80 million to the economy of the valley area which represents payrolls, supplies, and construction on the base.

1) Luke averages about 550 to 700 runway actions daily.

Servicemen from Luke who reside off-base generally are located in Glendale, Maryvale, or Phoenix. Others find housing available in one of the aforementioned communities along the study area. Many are daily commuters to and from Phoenix.

Construction of the proposed Interstate and Defense Highway 10 through Arizona will connect Luke Air Force Base to the coast to coast network of Interstate and Defense highways being built across the nation, thereby improving the land access routes of all Air Force ground-type support vehicles, equipment, and operational personnel in the event of National or Civil emergencies or disasters.

1) The Westsider Newspaper, Published April 5, 1972, in Avondale, Arizona.

In the event of a National air alert, the proposed highway will also serve as a fast commuter carrier for quick base access to off-base servicemen residing in areas along the highway corridor.

The proposed highway is expected to contribute favorably as a means of easy access for the shopping commuters who reside on or near the base, and who shop in the Phoenix area, and for the many retired military personnel and their families who live throughout Metropolitan Phoenix and who commute to the shopping, medical, and hospital facilities found on the base.

It is expected that I-10 traffic bound to or from the base will utilize the traffic interchange planned at Dysart Road. Some base traffic, however, will probably use the Litchfield Road Interchange.

Because the proposed Interstate and Defense Highway 10 is located some five miles from the immediate proximity of Luke Air Force Base, no adverse impact or incompatibility is expected to occur as a result of construction of the proposed highway project. The highway will, however, afford the previously mentioned benefits to both the base and its personnel, and to the continued operation of Luke, which when analyzed in simple consideration, is a significant and vital enhancement to the economic structure of the entire Phoenix Metropolitan area and the State of Arizona.

##### 5. Air Pollution Considerations

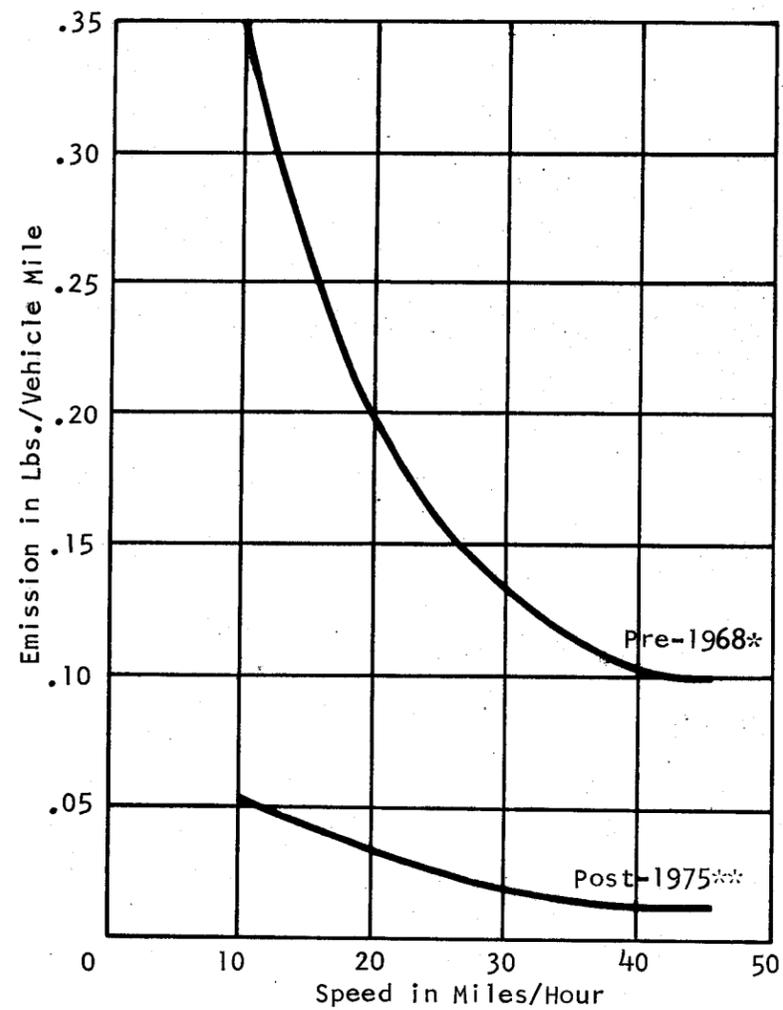
The section of Interstate and Defense Highway 10 from Perryville Road to 67th Avenue, although traversing an area consisting primarily of farmland and native desert terrain, will become the new backbone of an already extant network of lesser highway facilities. Where such a network of roadways exists, it has not generally been possible to correlate overall air pollution levels or even automotive air pollution levels with the volume of traffic using any one highway facility.

Although construction of this project will facilitate the production of a greater number of vehicle miles daily in and near the western edge of the Phoenix Metropolitan area, it is reasonable to assume that overall long-term air pollution levels in that area will decline and not be as great at any time during the design life of the facility as they are currently. This apparent contradiction is due to the effect which the requirements of recently enacted legislation will have on individual pollution sources. In August 1971, the Federal Environmental Quality Council stated in a report to the Congress that, "We have apparently (as of 1968) reached the peak level of automotive pollution, and as older cars are replaced by newer ones..we can expect automobile-related pollution to decline."\*

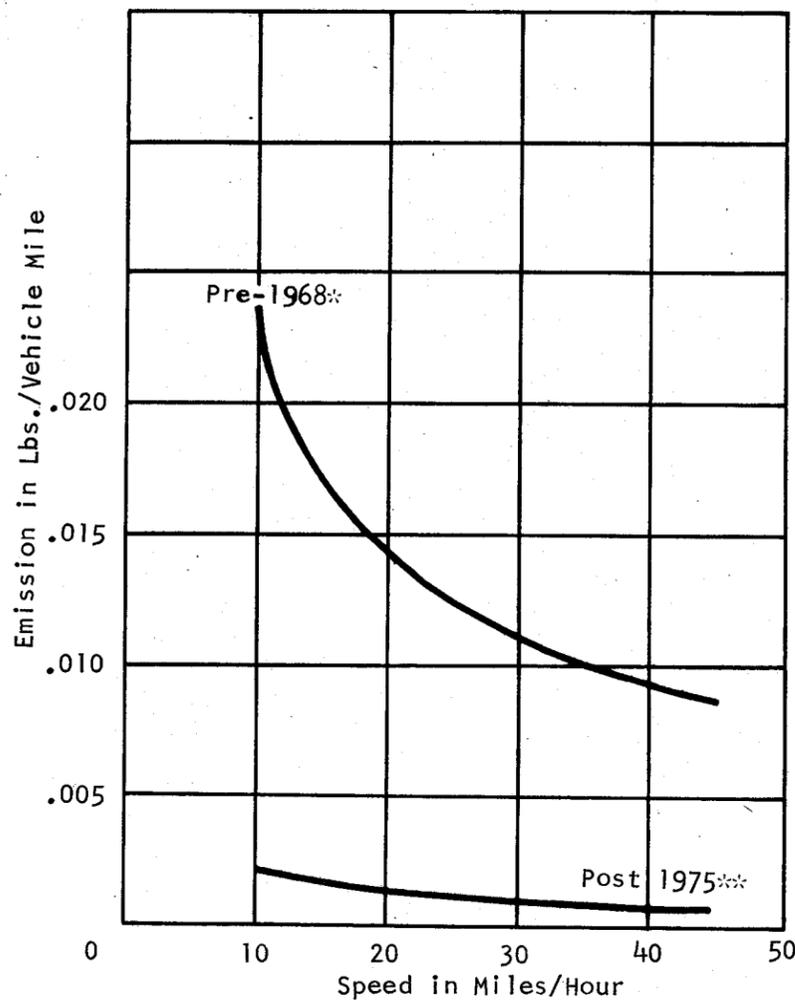
Traffic data supplied by the Transportation Planning Program of the Maricopa Association of Governments (MAG) indicates that the total traffic volume on U.S. 80, I-10, and U.S. 60 during the year 1995 at the western limit of MAG planning area is estimated to be approximately 35,500 vehicles per day essentially, regardless of the alignment chosen for I-10. The 1970 traffic flow on U.S. 80 and U.S. 60 (I-10 traffic uses U.S. 60) was approximately 13,350 vehicles per day, most of which were not fitted with devices capable of significantly reducing pollution. Therefore, despite a traffic flow 2.6 times as great, controls already legislated will permit this increased number of vehicles to produce only a fraction as much total pollution in 1995 as did their 1970 counterparts. Further legislative action over this time span could cause a further reduction in total pollutant emissions.

Construction of I-10 on new alignment can have the further unquantifiable benefit of dispersing those emissions which remain, rather than concentrating them along the existing U.S. 60 or U.S. 80 highways. As average vehicle speed is maintained or even increased by the construction of added high speed traffic capacity, the output per vehicle of hydrocarbons and carbon monoxide can decrease.

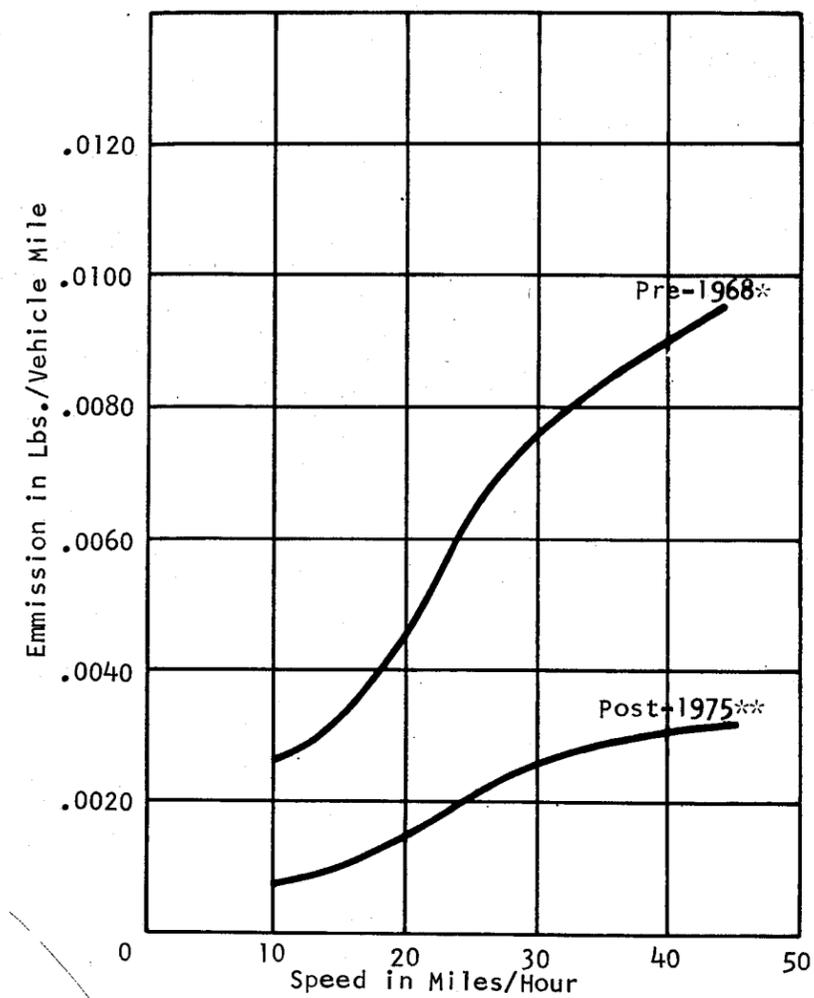
\*See charts on following sheet "A" which compares pollutant emissions with travel speed for pre-1968 (uncontrolled) and post 1975 vehicles.



Carbon monoxide vehicular emission versus speed.



Hydrocarbon vehicular emission versus speed.



Nitrogen oxide vehicular emission versus speed.

\* Source: 2nd Report Secretary of H.E.W. to U.S. Congress pursuant to P.L. 88-206 Clean Air Act, 2/19/65, Table I.

\*\* Based on 1975 Emission Standards Set by U.S. Congress.

## VEHICULAR POLLUTANT EMISSIONS VERSUS SPEED

The quantity of all major deleterious automotive pollutant emissions is related to the travel speed of the subject vehicle. But, only the production of nitrogen oxides increases with vehicle speed. Production of both hydrocarbons and carbon monoxide generally decreases as speed increases. \*

Concentration of individual pollutants is as much a function of ambient weather conditions as of any other factor. For instance, it is apparent that pollutants will disperse from the immediate highway right of way unless air-flow (windspeed) is absolutely negligible. Truly still air is a rarity even in the Salt River Valley where periods of so-called air stagnation occur commonly, particularly during the winter months. It can be seen that increased windspeed causes an increase in the rate of dispersion of pollutants from a highway.

The photochemical formation of pollutants which do not occur initially in automotive emissions is also a function of weather conditions since sunlight is a basic requirement of the photochemical process. In this respect, the climate of the Salt River Valley is also somewhat disadvantageous since Phoenix receives more hours of sunshine annually than any other major American city.

Carbon monoxide concentrations in the central part of Phoenix have in the past attained levels greatly in excess of proposed national air quality standards and have been among the highest in the nation. The highest recorded levels are, however, less than half of the concentration required to bring about any detectable impairment of performance by volunteers in experiments at the Medical College of Wisconsin. Concentrations of carbon monoxide near I-10 west of Phoenix can be expected to be considerably less than those recorded in central Phoenix because of lesser concentrations of people and vehicular movement. It is not likely that national air quality standards for carbon monoxide will be exceeded in rural areas such as that which I-10 will traverse west of Phoenix in the section from Perryville Road to 67th Avenue.

\*See charts on preceding sheet "A" which compares pollutant emissions with travel speed for pre-1968 (uncontrolled) and post 1975 vehicles.

Hydrocarbon concentrations in the Phoenix area have been considerably less than those called out in air quality standards and can be expected to remain so, particularly as overall emissions per vehicle continue to decrease under the influence of existing legislation. Therefore, for the Phoenix area, hydrocarbon emissions are of significant consequence only as they contribute to the formation of other pollutants through photochemical processes after leaving the individual vehicle's exhausts.

Nitrogen oxides concentrations in central Phoenix have also been in excess of proposed State and National air quality standards. These compounds also are necessary ingredients in the formation of photo-chemical pollutants. It is, however, not likely that air quality standards for nitrogen oxides will be exceeded in rural areas such as that west of Phoenix from Perryville Road to 67th Avenue along I-10 because of lower vehicle concentrations.

Lead, as found in automotive emissions, is significant primarily as it affects the production of other pollutants. Discontinuing the addition of lead to automotive fuels can be beneficial in furthering the effective longevity of other emission control devices proposed for automotive use. Regarding the direct effect of lead in gasoline, Washington Academy of Sciences stated in the summer of 1971 publication that there have been no known cases of any illness or death to animals or man traceable to lead particles from automobile exhausts. A study, by the University of California at Riverside, of crops similar to those grown along the alignment of I-10 from Perryville Road to 67th Avenue resulted in the following statements:

"The combined findings from the edible portion of...(cauliflower, tomatoes, cabbage, and Valencia oranges) suggest that automobile lead particulates are not absorbed. They exist rather as a topical dust coating of which at least 50 percent can be removed by simple water washing. Neither did these crops show any inclination to absorb lead via their root systems."

When consideration is given to the continued further elimination of lead from automotive fuels, it becomes apparent that automotive lead emissions from vehicles using I-10 west of Phoenix will not bring about significant consequences.

Photochemically produced pollutants, those which are associated with smog of the variety commonly found in Los Angeles, are also found in central Phoenix in quantities in excess of those permitted by State and National air quality standards. As with other pollutants, however, particularly nitrogen oxides from which photochemical pollutants derive in part, it is not likely that concentrations beyond permissible limits will occur in areas adjacent to the Perryville Road to 67th Avenue section of I-10 because of the semi-rural nature of the area which certainly does not attain the vehicular concentrations of a central city area.

The foregoing comments apply generally to any routing for Interstate and Defense Highway 10 in the area west of 67th Avenue since all routings so far considered would have essentially the same effect on long-distance travel. Within the area studied by the Maricopa Association of Governments Transportation Planning Program, it is likely that the currently proposed routing for I-10 would carry the greatest amount of local traffic. This was a major factor in the decision to place the highway in its currently proposed location. Construction of the highway on the proposed alignment will probably do more to stimulate economic activity, and therefore the production of vehicle miles of travel on the west side of the Phoenix Metropolitan area, than would construction of any other route considered. It does not necessarily follow, however, that this routing would over an extended period result in the generation of the greatest amount of automotive air pollution in the Phoenix Metropolitan area as a whole, because the highway routing can only cause a redistribution of metropolitan activity rather than an essential change in the overall quantity thereof. If it is assumed that most economic activity in the Phoenix Metropolitan area

will be serviced by automotive transportation, then the stimulation of activity on the west side (vs. north or east) would likely result in the least production of automotive pollutants because vacant land is available closer to the core of the city on the west side; hence, fewer vehicle miles of travel would be generated.

If, however, it is assumed that a significant portion of the metropolitan economic activity will be served by public transportation, it does not necessarily follow that overall pollution levels will be reduced. Studies done by the General Motors Corporation (see Note A) indicate that after currently effective pollution-control legislation has been fully implemented, automobiles will have pollutant emission rates per person carried quite similar to those of public transportation vehicles on a pollutant mass basis, regardless of whether such transit vehicles are powered by internal combustion engines or electricity. Pollutants considered included carbon monoxide, hydrocarbons, nitrogen oxides, and sulfur dioxide. These four categories will encompass virtually all automotive emissions under Federal criteria for 1975 because of the reduction of lead usage in automotive fuels.

It is apparent that the use of electrically powered transit vehicles in the Phoenix area would effectively reduce the quantity of pollutant emissions at the point where transportation is actually provided; but this does not mean that regional pollution is abated. It is currently being found necessary to construct fossil-fueled generating plants to supply the electrical needs of the Phoenix area and other parts of the southwestern United States. Implementation of an electrically powered transit system would require the construction of even more generating stations. As an example, it has been estimated that the Bay Area Rapid Transit System will consume as much electricity as a city of

Note A: It should be remembered that various divisions of the General Motors Corporation also produce vehicles oriented toward rubber-tired and rail transit applications. Hence, the interest of the Corporation is not served exclusively by the promotion of automobile usage.

approximately one-quarter million population. Provision of enough electrical generating capacity to meet the proportionate additional electrical needs of Metropolitan Phoenix would involve fossil-fueled generating stations which have sulfur dioxide as a major pollutant emission. Although such generating stations would probably not be located in the immediate urban area, they would have significant impact on the environment. For instance, on the basis of government air quality standards, it takes at least one hundred tons of carbon monoxide to reach the same level of concern in the atmosphere as one ton of sulfur dioxide.

The alternative of doing nothing would probably result in less automotive pollutant emissions in the immediate vicinity of the highway; but the overall effect would be a redistribution rather than reduction of pollutant emissions. Long distance travel would probably continue to occur essentially undiminished, although certainly not unhindered. Traffic from completed portions of I-10 along the Brenda cutoff would use Buckeye Road (U.S. 80) into Phoenix anyway, as is currently planned for the interim period prior to completion of the Perryville Road to 67th Avenue section. Local traffic would be more substantially affected as growth of the urban area is channeled into other areas offering easier accessibility through better transportation. As mentioned previously, this could result in the generation of more vehicle miles of travel, hence more pollutants because other developable land to the north and east of central Phoenix is at a greater distance from the central area.

In summary, it is readily apparent that the construction and use of Interstate and Defense Highway 10 from Perryville Road to 67th Avenue will have considerable impact upon the environment. This impact will not, however, be detrimental if considered relative to legislated pollutant emission controls and the probable beneficial impact of redistributed traffic flows.

## 6. Noise Considerations

Construction of Interstate and Defense Highway 10 in a corridor from Perryville Road to 67th Avenue or along any comparable routing will have a definite impact upon the noise characteristics of the environment. Provision of a high-speed, high-capacity highway where none existed previously will cause a concentration of automotive noise in the immediate vicinity of the highway corridor.

The specific noise levels to be expected in the vicinity of I-10 west of Phoenix were calculated using the methods of National Cooperative Highway Research Program Report 117 and are reported in the accompanying Tables A, B, C, and D for various representative areas along the roadway and for three roadway configurations. (See following four pages)

Policy and Procedure Memorandum (PPM) 90-2 of the Federal Highway Administration establishes the following criteria for exterior noise levels where the various land uses are present.

<u>Land Use Category</u>	<u>Design Noise Level - L<sub>10</sub></u>	<u>Description of Land Use Category</u>
A	60 dBA (Exterior)	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	70dBA (Exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
C	75 dBA (Exterior)	Developed lands, properties or activities not included in categories A and B above.
D	---	For requirements on undeveloped lands see paragraphs 5.a(5) and (6) of PPM 90-2.

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B	70dBA (Exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
C	75 dBA (Exterior)	Developed lands, properties or activities not included in categories A and B above.
D	---	For requirements on undeveloped lands see paragraphs 5.a(5) and (6) of PPM 90-2.

TABLE A

Noise levels in dBA (decibels on A-scale) expected from traffic on Interstate and Defense Highway 10 between 67th Avenue and 75th Avenue in west Phoenix. (<sup>L</sup><sub>10</sub>/<sup>L</sup><sub>50</sub>)

Distance to near lane	Freeway 20' below grade	Freeway near grade	Freeway 20' above grade
100'	69/64	76/73	65/60
200'	60/--	70/68	64/--
400'	--/--	67/65	63/--
600'	--/--	64/63	62/--
800'	--/--	63/62	61/--
1,000'	--/--	61/60	--/--

-- : Noise levels shown thusly are less than 60 dBA, hence, acceptable for all outdoor activities.

<sup>L</sup><sub>10</sub>: Noise level exceeded ten percent of time during peak traffic hours, the basis of Federal standards.

<sup>L</sup><sub>50</sub>: Noise level exceeded 50 percent of time during peak traffic hours, the "average".

TABLE B

Noise levels in dBA (decibels on A-scale) expected from traffic on Interstate and Defense Highway 10 between 91st Avenue and 99th Avenue near Tolleson. (<sup>L</sup>10/<sup>L</sup>50)

Distance to near lane	Freeway 20' below grade	Freeway near grade	Freeway 20' above grade
100'	68/62	74/71	63/--
200'	--/--	68/66	62/--
400'	--/--	65/63	61/--
600'	--/--	63/61	60/--
800'	--/--	61/60	--/--
1,000'	--/--	--/--	--/--

-- : Noise levels shown thusly are less than 60 dBA, hence, acceptable for all outdoor activities.

<sup>L</sup>10: Noise level exceeded ten percent of time during peak traffic hours, the basis of Federal standards.

<sup>L</sup>50: Noise level exceeded 50 percent of time during peak traffic hours, the "average".

TABLE C

Noise levels in dBA (decibels on A-scale) expected from traffic on Interstate and Defense Highway 10 between Dysart Road and Litchfield Road near Avondale, Goodyear, and Litchfield Park. (<sup>L</sup>10/<sup>L</sup>50)

Distance to near lane	Freeway 20' below grade	Freeway near grade	Freeway 20' above grade
100'	66/--	73/68	62/--
200'	--/--	66/63	60/--
400'	--/--	62/60	--/--
600'	--/--	60/--	--/--
800'	--/--	--/--	--/--
1,000'	--/--	--/--	--/--

--: Noise levels shown thusly are less than 60 dBA, hence, acceptable for all outdoor activities.

<sup>L</sup>10: Noise level exceeded ten percent of time during peak traffic hours, the basis of Federal standards.

<sup>L</sup>50: Noise level exceeded 50 percent of time during peak traffic hours, the "average".

TABLE D

Noise levels in dBA (decibels on A-scale) expected from traffic on Interstate and Defense Highway 10 between Cotton Lane and Perryville Road near Perryville. (<sup>L</sup>10/<sup>L</sup>50)

Distance to near lane	Freeway 20' below grade	Freeway near grade	Freeway 20' above grade
100'	65/--	72/65	61/--
200'	--/--	66/60	--/--
400'	--/--	61/--	--/--
600'	--/--	--/--	--/--
800'	--/--	--/--	--/--
1,000'	--/--	--/--	--/--

-- : Noise levels shown thusly are less than 60 dBA, hence acceptable for all outdoor activities.

<sup>L</sup>10: Noise level exceeded ten percent of time during peak traffic hours, the basis of Federal standards.

<sup>L</sup>50: Noise level exceeded 50 percent of time during peak traffic hours, the "average".

The exterior noise levels apply to outdoor areas which have regular human use and in which a lowered noise level would be of benefit. These goal noise level values are applied only at those locations where outdoor activities actually occur. The goal values need not be applied to those portions of a tract of land devoted to parking, storage, non-use, or other non-noise-sensitive uses. Areas which have limited human use and where lowered noise levels would produce little benefit and developed areas having uses which are not significantly affected by high noise levels, such as junk yards, heavy industrial areas, railroad yards, parking lots, etc., need not be considered in applying the goal noise level values.

It can be seen from Tables A, B, C, and D that the traffic noise will not exceed even the most stringent limitations of PPM 90-2 at a distance of more than one thousand feet from the roadways even under the most unfavorable conditions near 67th Avenue where traffic volumes and thusly noise levels are highest. If the freeway's vertical alignment is such that the roadways are either raised or lowered significantly relative to the adjacent ground level, then the area of significant noise impact is reduced.

Because most of the land adjacent to the proposed routings for Interstate and Defense Highway 10 is currently devoted to agricultural usage, even the highest noise levels projected to be generated by the highway traffic will be acceptable at most points. It is, however, reasonable to assume that much of the land within one thousand feet of the freeway will be developed within the foreseeable near future. PPM 90-2 provides that local officials have the responsibility to control such land development, to establish zoning, and to see that future development is compatible with the highway. The Arizona Highway Department can be of considerable assistance to local officials in these efforts.

It is necessary to consider that much of the rural area through which the route passes west of the Agua Fria River has much higher noise levels than would

normally be present because of the overflight of aircraft using either Luke Air Force Base or the Phoenix Litchfield Municipal Airport. Air traffic is currently not great at Litchfield but can be expected to increase substantially in the future, resulting in a higher noise level. Luke air traffic is currently sufficient to cause the responsible authorities to change the approach patterns for normal maneuvers. The presence of substantial noise from air traffic is more likely than I-10 traffic to restrict the future development of the west central portion of Maricopa County.

The width of the freeway right of way corridor totally precludes any development within one hundred feet of the eastbound roadway or within two hundred feet of the westbound roadway. The greater distance from the westbound (north) roadway is due to the "buffer zone" which will be acquired for a drainage channel along the freeway under current planning.

Along the proposed right of way corridor and within one thousand feet of the proposed roadways, there are currently fifteen to twenty points, residences, which must be considered under the provisions of PPM 90-2. Of these developed properties, two or three will probably be taken for right of way purposes, hence will not ever be subject to traffic noise from the freeway. The majority of the remaining residences are located in such manner that they will experience completely acceptable noise levels of 60 dBA or less.

The following points are projected to experience noise levels which may not be completely acceptable under the provisions of PPM 90-2:

- (a) Homes on the north side of Randell Street, near Dysart Road in Avondale are estimated to experience a noise level of 61 dBA.
- (b) Several mobile homes near 119th Avenue and lying south of McDowell Road are estimated to experience a noise level as high as 62 dBA.

- (c) One home on 69th Avenue south of McDowell Road is estimated to experience a noise level of 67 dBA.

A noise level of 61 or 62 dBA is mathematically but perhaps not essentially in excess of the 60 dBA goal exterior noise level for parcels which require serenity and quiet. The methods of noise level projection are such that a difference of one or two dBA may only represent the inherent lack of precision in the projection methods. A noise level variation of one decibel is in fact hardly audible and therefore not consequential.

The "Comprehensive Plan - 1990" as published by the City of Phoenix Planning Department generally anticipates industrial development south of the subject section of Interstate and Defense Highway 10 (Papago Freeway) and high-density residential development north of the freeway to McDowell Road. Industrial development is generally tolerant of noise levels in the range likely to be generated by freeway traffic and is therefore appropriate for the local conditions.

Table A in conjunction with the goal exterior noise levels of PPM 90-2 set forth previously would seem to indicate that high-density residential development is not appropriate adjacent to a high-traffic-volume freeway. Some recent high-density residential developments along Interstate and Defense Highway 17 in Phoenix, where adjacent land was planned for similar zoning and development, have been designed and constructed in such a manner that the residents will likely experience excessive noise levels. For instance, second level patio doors which encourage balcony usage have been constructed facing the freeway at a distance of little more than one hundred feet from roadside. But, this need not be the case. High-density residential developments have been and can be designed so that residents' windows and outdoor activity areas do not face the freeway.

For instance, windowless walls and parking areas (which are not subject to the need for noise abatement) can be located next to the freeway. Outdoor activity areas, if located properly, can be shielded from noise by the first row of buildings. Goal interior noise levels are such as to be easily met through the use of normal Phoenix-area building materials and methods and conscientious design. The importance of noise-effective designs for residential buildings and complexes located adjacent to freeways should be stressed by those responsible for zoning and issuance of building permits.

Provision of a high-traffic-volume freeway in an urban or semi-urban environment can bring about noise levels not compatible with all activities and land uses. But, methods are readily available to protect existing land usage from excessive noise and to plan future land usage so that noise will not pose a problem.

#### 7. Archaeological Values

The National Register of Historic Places indicates no involvements in the project area.

The Arizona State Museum at the University of Arizona has advised that part of the project area has been surveyed for archaeological, historical, and paleontological values and that no such remains were located. It is believed that farming and other modern-day activities occurring in the area may have removed all traces of historical values from a formerly designated site immediately west of 75th Avenue within the proposed highway corridor.

Further archaeological surveys will be made on the remaining sections of the project at a later date after the right of way has been acquired by the State. The Arizona Highway Department will work closely with the University of Arizona in salvaging any historical remains that may be located in such future surveys.

8. Federal, State and Local Agencies and Other Organizations from which Written Comment was received on the (Draft) Supplement to the Final Environmental Impact Statement and the Response of the Arizona Highway to the Comments

U.S. Department of Agriculture  
Soil Conservation Service

7-17-72

Comment

This letter stated that Soil Conservation Service had no comment to make on this project.

Reply

None required.

U.S. Department of the Interior  
Bureau of Land Management

7-5-72

Comment

"The proposed construction of the I-10 segment from Perryville Road to 67th Avenue will not directly or indirectly affect lands administered by the Bureau of Land Management.

"We thank you for the opportunity to review the Draft Supplement to the Final Environmental Statement on these projects."

Reply

No reply is required.

U.S. Department of the Interior  
Office of the Secretary

8-7-72

Comment

"The draft supplement has neglected to consider possible historical and archeological values in the project area. The National Register of Historic Places should be consulted and steps taken to preserve any affected sites pursuant to the provisions of the National Historic Preservation Act of 1966 (80 Stat. 915). The draft supplement should contain evidence of contact with the Arizona State Liaison Officer for Historic Preservation and a copy of his comments concerning the effect of the undertaking upon historical and archeological resources, including sites which may be nominated to the National Register of Historic Places.

Reply

The National Register of Historic Places was consulted and there are no involvements in the subject project area. The University of Arizona was contacted regarding archaeological values of the area. A letter of reply from University of Arizona is incorporated into Part 7 of this Final Supplemental Statement.

Comment

"No data on the geology of the area of the highway construction are provided in the draft statement. However, environmental problems that may result from geologic conditions should be recognizable from preconstruction investigations and should be within the range of standard engineering practice."

Reply

The geology of the project area presents no major environmental problems, as indicated in the original Environmental Impact Statement. Drainage of runoff waters from seasonal storms required special engineering considerations which will be reflected in the final design plans of the project. Such drainage features will be compatible to and somewhat in conjunction with a flood control project planned by the Soil Conservation Service of the Department of Agriculture and the Army Corps of Engineers. A letter of comment from the Soil Conservation Service is included herein in Part 8 of this Final Supplemental Statement.

Comment

The Bureau of Sport Fisheries and Wildlife in this Department was not given the opportunity to review the final environmental impact statement prior to its submission with the draft supplement. We dispute the claim in that statement that the proposed borrow areas currently supporting valuable wildlife habitats in the Agua Fria and Gila River channels will be self-rehabilitating" (Appendix "A", page 4). Bureau of Sport Fisheries and Wildlife biologists contend that in a desert environment a riparian habitat once destroyed is not self-rehabilitating unless some effort is made to replace it. Unaided reestablishment of vegetation in stream bed borrow areas ordinarily requires many years, during which time the areas have reduced value for wildlife habitat and may become sources of sedimentation, a detriment to wildlife habitat downstream.

Reply

\* Information relative to wildlife in the project area was obtained from the Arizona Game and Fish Department. A letter of comment from that agency is included herein in this final Supplemental Statement.

The proposed borrow pit, No. 7659, 3400 feet left of station 6892, is located in a section of the Agua Fria River which will be channelized by the Army Corps of Engineers as a part of a planned flood control program for the area. The extraction of materials from this pit for highway construction purposes will coincide with flood control channelization requirements for the river in the project area. The original Environmental Impact Statement appropriately discussed the

negligible impact to the sparse, small wildlife indigenous to some parts of the project area. Seeding of vegetation in this normally dry river bed upon completion of the proposed highway project is not contemplated due to the forthcoming flood control channelization project. The flow of storm runoff drainage waters will cause some natural rehabilitation of the stream bed, and will cause some spontaneous revegetation in the river channel both before and after the construction of the flood control channelization project.

Material Pit No. 5392 is located six miles right of station 6561 in the Gila River bed about 1250 feet west of Cotton Lane and some three miles west (downstream) of the confluence of the Salt, Gila, and Agua Fria rivers near Avondale, Arizona.

The Arizona Game and Fish Department classifies this area as a low density, low quality area.

The Phoenix Office of the Bureau of Land Management states that no significant impact will be created to the low density wildlife or the low quality wildlife habitat as a result of developing this proposed material pit.

The normally dry river area is populated with sparse growths of salt cedars, salt bush, and mesquite, which are used for nesting by small numbers of Whitewing and Morning Doves. Such plants are considered to be self revegetative in nature and are fast growers. Flow of seasonal storm runoff waters will cause some natural rehabilitation of the material site after excavation. Should the excavation process reach the water table of the area, the Soil Conservation Service of the U.S. Department of Agriculture has expressed an interest in developing the site into a wildlife and recreation area. This matter will be evaluated further after highway construction is completed.

The haul road into the pit site, located in the river bottom, will be obliterated when no longer required. The rehabilitation factor for the haul road is the same as for the pit site as described in above paragraph.

The Arizona Highway Department will continue to work with the various involved agencies to ascertain what, if any, measures are feasible and will, where practicable, implement such measures to protect and restore environmental values adversely affected by construction of the subject project.

Department of the Air Force  
Headquarters 58th Combat Support Group (TAC)  
Luke Air Force Base, Arizona 85301

7-7-72

Comment

"We have reviewed the draft supplement to the final environmental statement for projects I-10-2(34), I-IG-10-2(37), and I-10-2(40) and concur with the proposals as stipulated in the statement.

"It is believed that the proposed projects will have a beneficial impact on Luke Air Force Base in the event that mass evacuation of base personnel should become necessary during national or civil emergencies, or disasters. There are no anticipated detrimental environmental effects concerning Luke Air Force Base that might result from the completion of the indicated projects."

Reply

No reply is necessary.

Arizona Game and Fish Department

6-23-72

Comment

Mr. Thomas Barnes, Region V. Supervisor, and I have reviewed the Draft Supplement Statement for Projects I-10-2(34), I-IG-10-2(37), and I-10-2(40), and find no conflicts with wildlife interests.

Reply

No reply is necessary.

Arizona Health Department

7-17-72

Comment

A review of the draft Environmental Statements for the subject projects indicates acceptable consideration of the levels of automotive exhaust pollution resulting from increased traffic flow in combination with improved and more effective emission control systems.

Reply

No reply required.

Comment

Insufficient comment has been made in the Environmental Statements regarding control of dust during construction.

Reply

Since this matter was discussed on pages 6 and 10 of the original Environmental Statement (see Exhibit A of Supplement) which received official acceptance in July 1971, the Arizona Highway Department did not deem it necessary to include the same matter again in the Supplemental Statement.

Comment

More specific planning should be given to the control of rock crushers, asphalt hot-mix plants, and grading operations with regard to dust suppression.

Reply

A provision of each highway construction contract requires the contractor to operate all project equipment in compliance with all local and federal laws and regulations regarding pollution. The Arizona Highway Department will cooperate fully with those agencies responsible for enforcement of such laws.

Arizona Department of Economic Planning and Development

7-6-72

Comment

The State Clearinghouse has had opportunity to review the Draft Environmental Statement for the above highway project. The Clearinghouse review indicates that no significant adverse effects are likely to occur from this project.

We believe your submission is in conformity with current requirements as set forth in the Office of Management and Budget Circular A-95 Revised.

This letter serves as the State Clearinghouse signoff on this matter.

Reply

No reply is no reply is necessary.

Arizona State University  
University of Arizona

7-14-72

Comment

This agency concurs with the findings and the projects may be considered as cleared in regard to archaeological involvement. Further assessment will be made upon acquisition of the right of way.

Reply

No reply is required.

Maricopa County Planning and Zoning Department

7-10-72

Comment

"We have reviewed the Draft Environmental Statement for Projects Numbers I-10-2(59), I-10-3(122), I-10-2(34), I-IG-10-2(37) and I-10-2(40) and concur with the findings of the statement.

"In the Draft Supplement to the Final Environmental Statement, the last sentence on page 35 should be corrected. On May 18, 1972, the Planning and Zoning Commission unanimously passed a motion "\*\*that this "Report Upon West Central Maricopa County" dated May 1972, be recommended to the Board of Supervisors for adoption as a general guide for the development of the area in question with the recognition that the plan will be reviewed and revised periodically as circumstances may require." As of this date, no action has been taken by the Board."

Reply

The referenced correction has been made. (See page 35.)

Flood Control District of Maricopa County

7-12-72

Comment

"Reference is made to your letters of June 19th and 20th, 1972; with enclosed Environmental Statements. This office has reviewed the statements and it is believed the projects have no adverse effects on the operation of the Flood Control District."

Reply

No comment is required.

City of Phoenix, Arizona  
City Manager's Office  
Community Development and Transportation

7-17-72

Comment

"In response to your letter of June 19 concerning Interstate 10, west of 67th Avenue, we are pleased to submit the following comments:

"We would suggest that the Introduction emphasize the great contribution to mobility that the Papago Freeway (Interstate 10) will contribute to the Phoenix urban area. Mobility is the foundation of orderly community development, economic vigor and quality of living. Further, we would suggest emphasizing the relief of congestion and the improved traffic safety that will result from the construction of the Papago Freeway Interstate to the west.

"It is suggested that reference be made to the 1960 Adopted Major Street and Highway Plan and to the newly accepted Transportation System Plan accepted by the Maricopa Association of Governments Regional Council on May 18, 1972.

"On page 48A, the reference to "substantial noise from air traffic" is of concern to us. The City of Phoenix has made diligent efforts to minimize air traffic noise and has secured a change in the traffic patterns at Phoenix Litchfield Satellite Airport in order to minimize the noise. Consequently, we are curious as to the basis for this statement.

"The City of Phoenix requests that efforts be made to properly landscape the concrete lined drainage ditch going west along the side of the Papago Freeway. Certainly it would be unfortunate if a stark concrete lined channel were built with no aesthetic treatment being applied.

"In summary, the City of Phoenix urges that every effort be made to accelerate the construction of this urgently needed facility. The Papago West, combined with the Papago Inner Loop, is the most urgently needed single transportation facilities in the Valley and will contribute materially to the development and high quality of living once it is opened to traffic service."

Reply

Mobility, relief of congestion in the urban areas, and improved traffic safety resulting from completion of the Interstate and Defense Highway through the Phoenix Metropolitan area, are indeed anticipated enhancements for both local and interstate motorists. Considerations of traffic service to the Phoenix area as a result of construction of this rural section of highway are graphically described and evaluated in Figures 3 through 6 and in the part entitled "Land Development and Traffic Service" found on pages 9 through 13 of the Supplement.

In addition to being a vital segment of the 1960 Adopted Major Street and Highway Plan and the newly accepted Transportation System Plan of Maricopa Association of Governments Regional Council, the Interstate and Defense Highway 10 is compatible with long-range plans of each involved city and town along the corridor and will contribute significantly to the orderly growth and development of such communities.

Aircraft noise will increase with the increase in numbers of aircraft utilizing the Phoenix Litchfield Satellite Airport. The City of Phoenix has initiated new flight patterns to minimize noise to the Town of Goodyear and the City of Avondale situated north and east of the airport. Noise complaints from residents of the area are being evaluated to determine what further corrective measures may be feasible. Many other diligent steps have already been implemented to minimize air traffic noise in the area.

Landscape requirements for the area in which the cement-lined drainage ditch traverses will be thoroughly evaluated. Aesthetic treatment consistent with the situation will be applied where practicable.

City of Phoenix  
Air Ports Department  
Phoenix Sky Harbor International Airport

6-28-72

Comment

"In accordance with the provisions of Section 102(2)(C) of the National Environmental Policy Act, we have reviewed the Draft Supplement to the Final Environmental Statement for Projects I-10-2(34), I-IG-10-2(37) and I-10-2(40) and concur with the findings of the statement.

"We feel the completion of this project will result in significant improvement in the access from Phoenix to the Phoenix-Litchfield Municipal Airport. This should result in greater use of the facilities at Litchfield, relieving the congestion at Sky Harbor International Airport."

Reply

No reply required.

Litchfield Park Properties

6-22-72

Comment

"I have reviewed the copy of the Draft Supplement to the Final Environmental Statement for the various projects of Highway I-10 which you sent to me.

"I would like to draw your attention to the last paragraph on page 35. The Maricopa County Board of Supervisors have not adopted the P & Z Department plan as of this date.

"A hearing was held by P & Z on May 11, 1972, and on May 19, 1972, the Arizona Republic reported that the P & Z Commission had, the day before, adopted the plan. If this plan is eventually adopted unchanged by the Supervisors, then a revision of the Gruen Plan for Litchfield Park will be necessitated.

"We at Litchfield Park Properties, through our attorney, have asked for and been granted time to obtain various facts to present to the Board of Supervisors concerning this matter.

"Depending on the outcome of this presentation and the action of the Supervisors, some of the statements made on Pages 38 and 39 may no longer be valid."

Reply

We have corrected the statement to indicate that the P & Z Department plan has not, as yet, been adopted by the Maricopa County Board of Supervisors.

Southern Pacific Transportation Company

6-22-72

Comment

"We received your letter of June 20 transmitting your study of the above projects and inviting our comment on environmental impact.

"We are transmitting this study to the departments concerned. They will communicate with you directly."

Reply

Reply will be made to comments from departments concerned upon receipt of these letters.

The following are the Federal, State and Local Agencies and other Organizations from which written comment has been received:

U. S. Soil Conservation Service

U. S. Bureau of Land Management

U. S. Department of Interior

Luke Air Force Base

Arizona Game and Fish Department

Arizona State Department of Health

Department of Economic Planning and Development

University of Arizona (Arizona State Museum)

Maricopa County Planning and Zone Department

Maricopa County Flood Control District

City of Phoenix, Community Transportation Development

Phoenix Sky Harbor International Airport

Litchfield Park Properties

Southern Pacific Transportation Company

**UNITED STATES DEPARTMENT OF AGRICULTURE**

**SOIL CONSERVATION SERVICE**

6029 Federal Building, Phoenix, Arizona 85025

July 17, 1972

Mr. Wm. N. Price  
State Highway Engineer  
Arizona Highway Department  
206 South 17th Avenue  
Phoenix, Arizona 85007

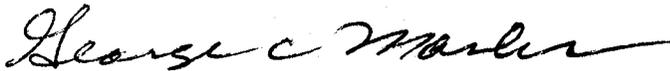
Re: Projects (Ehrenberg-Phoenix Highway)  
I-10-2(34) Perryville-Bullard  
I-IG-10-2(37) Bullard-107th Avenue  
I-10-2(40) 107th Avenue-67th Avenue  
Maricopa County, Arizona

Dear Mr. Price:

The Draft Supplement to the Final Environmental Statement for the above referenced projects has been reviewed.

We appreciate the opportunity to review this Statement. We have no comments relative to the environmental impact which may occur from development of these projects.

Sincerely,



George C. Marks  
State Conservationist

RECEIVED

JUL 20 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

RECEIVED

JUL 19 1972

WM. N. PRICE

RECEIVED  
JUL 19 1972  
WM. N. PRICE  
STATE ENGINEER



T



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT

State Office  
3022 Federal Building  
Phoenix, Arizona 85025

IN REPLY REFER TO

1791 (911)  
Your reference:  
Projects (Ehrenberg-  
Phoenix Highway)

July 5, 1972

Mr. Wm. N. Price  
State Highway Engineer  
Arizona Highway Department  
206 S. 17th Ave  
Phoenix, Arizona 85007

Dear Mr. Price:

The proposed construction of the I-10 segment from Perryville Road to 67th Avenue will not directly or indirectly affect lands administered by the Bureau of Land Management.

We thank you for the opportunity to review the Draft Supplement to the Final Environmental Statement on these projects.

Sincerely,

*J. T. Jallin*  
State Director

RECEIVED

JUL 12 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

RECEIVED  
JUL 7 - 1972  
WM. N. PRICE  
STATE ENGINEER

A



UNITED STATES  
DEPARTMENT OF THE INTERIOR

OFFICE OF THE SECRETARY

PACIFIC SOUTHWEST REGION  
BOX 36098 • 450 GOLDEN GATE AVENUE  
SAN FRANCISCO, CALIFORNIA 94102  
(415) 556-8200

ER-72/783

August 7, 1972

Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
Phoenix, AZ 85007

Mr. Chadwick:

This Department has reviewed the draft supplement to the final environmental statement for three segments of the Ehrenberg-Phoenix Highway, Interstate Highway 10, in Maricopa County, Arizona.

The draft supplement has neglected to consider possible historical and archeological values in the project area. The National Register of Historic Places should be consulted and steps taken to preserve any affected sites pursuant to the provisions of the National Historic Preservation Act of 1966 (80 Stat. 915). The draft supplement should contain evidence of contact with the Arizona State Liaison Officer for Historic Preservation and a copy of his comments concerning the effect of the undertaking upon historical and archeological resources, including sites which may be nominated to the National Register of Historic Places.

No data on the geology of the area of the highway construction are provided in the draft statement. However, environmental problems that may result from geologic conditions should be recognizable from preconstruction investigations and should be within the range of standard engineering practice.

The Bureau of Sport Fisheries and Wildlife in this Department was not given the opportunity to review the final environmental impact statement prior to its submission with the

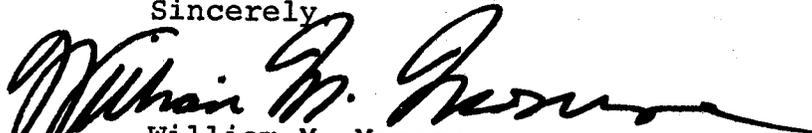
Mr. A. L. Chadwick  
Page 2  
August 7, 1972

draft supplement. We dispute the claim in that statement that the proposed borrow areas currently supporting valuable wildlife habitats in the Agua Fria and Gila River channels will be "self-rehabilitating" (Appendix "A," page 4).

Bureau of Sport Fisheries and Wildlife biologists contend that in a desert environment a riparian habitat once destroyed is not self-rehabilitating unless some effort is made to replace it. Unaided reestablishment of vegetation in stream bed borrow areas ordinarily requires many years, during which time the areas have reduced value for wildlife habitat and may become sources of sedimentation, a detriment to wildlife habitat downstream.

We appreciate the opportunity to review the draft supplement.

Sincerely



William M. Monroe  
Secretary's Field Representative

cc: Director, Office of Environmental Project Review, USDI  
w/cy BOR, BSF&W, NPS & USGS Comments  
Regional Director, BOR, San Francisco  
Regional Director, NPS, San Francisco  
Regional Director, BSF&W, Albuquerque  
Regional Director, USGS, Menlo Park  
Regional Director, BR, Boulder City  
Area Director, BIA, Phoenix

DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 58TH COMBAT SUPPORT GROUP (TAC)  
LUKE AIR FORCE BASE, ARIZONA 85301



REPLY TO  
ATTN OF: DE

7 July 1972

SUBJECT:

TO: Mr. William N. Price  
State Highway Engineer  
Arizona Highway Department  
Phoenix, Arizona 85007

We have reviewed the draft supplement to the final environmental statement for projects I-10-2(34), I-IG-10-2(37), and I-10-2(40) and concur with the proposals as stipulated in the statement.

It is believed that the proposed projects will have a beneficial impact on Luke Air Force Base in the event that mass evacuation of base personnel should become necessary during national or civil emergencies, or disasters. There are no anticipated detrimental environmental effects concerning Luke Air Force Base that might result from the completion of the indicated projects.

  
L. E. ENGLAND, Major, USAF  
Base Civil Engineer

RECEIVED

JUL 12 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

RECEIVED  
JUL 10 1972  
WM. N. PRICE  
STATE ENGINEER

Governor  
JACK WILLIAMS

Commissioners

HOMER L. G. KRYGER, Chairman, Yuma  
MILTON G. EVANS, Flagstaff  
ROBERT J. SPILLMAN, Phoenix  
GLEN D. DALY, Winslow  
CHARLES F. ROBERTS, O.D., Bisbee

Director

ROBERT A. JANTZEN

Asst. Director, Operations

PHIL M. COSPER

Asst. Director, Services

ROGER J. GRUENEWALD



**ARIZONA GAME & FISH DEPARTMENT**

2222 West Greenway Road Phoenix, Arizona 85023 942-3000

June 23, 1972

Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
1739 West Jackson Street  
Phoenix, Arizona 85007

RECEIVED

JUN 27 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

Dear Mr. Chadwick:

Mr. Thomas Barnes, Region V Supervisor, and I have reviewed the Draft Supplement Statement for Projects I-10-2(34), I-IG-10-2(37), and I-10-2(40), and find no conflicts with wildlife interests.

We appreciate the opportunity to review and comment on these projects. If we can be of any assistance, please contact us.

Sincerely,

Robert A. Jantzen, Director

By: Mark Peterson, Specialist  
Project Evaluation Branch

MP:iw

cc: Mr. Thomas Barnes, Region V Supervisor

Environmental Health Services  
Division of Air Pollution Control  
Hayden Plaza West  
4019 North 33rd Avenue  
Phoenix, Arizona 85017



### Arizona State Department of Health

ARIZONA STATE OFFICE BUILDING  
1624 WEST ADAMS STREET  
PHOENIX, ARIZONA 85007

ELAINE MC FARLAND, R.N.  
CHAIRMAN, BOARD OF HEALTH

BEN T. DIBBLE, P.E.  
VICE-CHAIRMAN, BOARD OF HEALTH

A. V. DUDLEY, JR., M.D.  
SECRETARY, BOARD OF HEALTH

WM. E. NAUMANN  
MEMBER, BOARD OF HEALTH

C. H. FREDELL, M.D.  
MEMBER, BOARD OF HEALTH

LOUIS C. KOSSUTH, M.D., M.P.H.  
COMMISSIONER OF HEALTH

July 17, 1972

RECEIVED

JUL 31 1972

*AKC*  
Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
Phoenix, Arizona 85007

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

Re: Projects (Ehrenberg - Phoenix Highway)  
I-10-2(34) Perryville - Bullard  
I-IG-10-2(37) Bullard - 107th Avenue  
I-10-2(40) 107th Avenue - 67th Avenue  
I-10-2(59) Ehrenberg - Phoenix Highway  
67th Ave. - Grand Ave.  
I-10-3(122) Phoenix - Casa Grande Highway  
Grand Avenue - Junction I-17  
Maricopa County, Arizona

Dear Mr. Chadwick:

A review of the draft Environmental Statements for the subject projects indicates acceptable consideration of the levels of automotive exhaust pollution resulting from increased traffic flow in combination with improved and more effective emission control systems.

Insufficient comment has been made in the Environmental Statements regarding control of dust during construction.

More specific planning should be given to the control of rock crushers, asphalt hot-mix plants, and grading operations with regard to dust suppression.

Sincerely,

Norman E. Schell, Director  
Division of Air Pollution Control

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RECEIVED

ARIZONA



DEPARTMENT OF  
**ECONOMIC PLANNING AND DEVELOPMENT**

3003 NORTH CENTRAL AVENUE • SUITE 1704 • PHOENIX, ARIZONA 85012 • (602) 271-5371

*MC*  
Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
206 South 17th Avenue  
Phoenix, Arizona 85007

Re: Project Title: Ehrenberg-Phoenix Highway  
I-10-2(34) Perryville-Bullard  
I-IG-10-2(37) Bullard-107th Avenue  
I-10-2(40) 107th Avenue-67th Avenue  
Maricopa County, Arizona

S.A.I. No. 72-80-0025

Dear Mr. Chadwick:

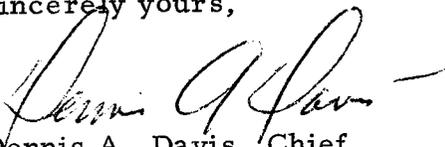
The State Clearinghouse has had opportunity to review the Draft Environmental Statement for the above highway project. The Clearinghouse review indicates that no significant adverse effects are likely to occur from this project.

We believe your submission is in conformity with current requirements as set forth in the Office of Management and Budget Circular A-95 Revised.

This letter serves as the State Clearinghouse signoff on this matter.

Please include the reference number above in any future correspondence regarding this project.

Sincerely yours,

  
Dennis A. Davis, Chief  
Planning Section

DAD:lf

1045



ARIZONA STATE MUSEUM

THE UNIVERSITY OF ARIZONA

TUCSON, ARIZONA 85721

RECEIVED

JUL 19 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION  
July 14, 1972

Mr. A.L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
Phoenix, Arizona 85007

Re: Draft Supplement to the Final  
Environmental Statement. Projects  
(Ehrenberg-Phoenix Highway)  
I-10-2(34) Perryville-Bullard  
IG-10-2(37) Bullard-107th Ave.  
I-10-2(40) 107th Ave-67th Ave.  
Maricopa County, Arizona

Dear Mr. Chadwick:

We have reviewed the (Draft) Supplement to the Final Environmental Statement on the above referenced projects and offer the following comments on the archaeological resources affected by the proposed construction.

Project I-10-2(34) was surveyed for archaeological, historical and paleontological remains on November 12, 1970. This survey is documented in Highway Salvage Records 1970-48. No indication of such remains were located. Portions of the remaining projects have also been surveyed, however, complete assessments have not been made because cultivation and irrigation in progress during the times surveys were attempted made access impossible.

A map prepared in 1922 locating the major prehistoric village sites and canal systems in the Phoenix area indicates the presence of a small Hohokam site just west of 75th Ave. within the proposed corridor of Interstate 10. Extensive reconnaissance in this area however, has failed to uncover any evidence of this village. Therefore, it must be presumed that modern cultivation has removed all traces of this site or that the site location was misplotted when the map was prepared.

From the information presently available it appears that there will be no damage to archaeological resources by construction of these projects. Complete investigation of the corridor will, of course, be made when the land has been acquired and archaeological excavations will be undertaken through the Statewide Highway Salvage Program if surface indications are found. For purposes of this Environmental Statement, however, these projects can be considered cleared.

Sincerely,

A handwritten signature in cursive script, reading "Laurens C. Hammack".

Laurens C. Hammack  
Associate Archaeologist

LCH:sp

# MARICOPA COUNTY PLANNING AND ZONING DEPARTMENT

300 County Administration Bldg. 111 S. 3rd Avenue, Phoenix, Arizona 85003



July 10, 1972

Mr. William N. Price  
State Highway Engineer  
Arizona Highway Department  
Phoenix, Arizona 85007

Attention: Mr. A. L. Chadwick

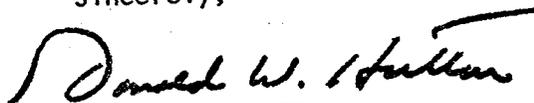
Dear Mr. Price:

We have reviewed the Draft Environmental Statement for Projects Numbers 1-10-2 (59), 1-10-3 (122), 1-10-2(34), 1-1G-10-2 (37) and 1-10-2 (40) and concur with the findings of the statement.

In the Draft Supplement to the Final Environmental Statement, the last sentence on page 35 should be corrected. On May 18, 1972, the Planning and Zoning Commission unanimously passed a motion " \* \* that this "Report Upon West Central Maricopa County" dated May 1972, be recommended to the Board of Supervisors for adoption as a general guide for the development of the area in question with the recognition that the plan will be reviewed and revised periodically as circumstances may require." As of this date, no action has been taken by the Board.

We appreciate the opportunity to review and comment on these projects.

Sincerely,

  
DONALD W. HUTTON  
DIRECTOR

LJR/sfh

RECEIVED

JUL 13 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

RECEIVED

JUL 13 1972

DEPUTY STATE ENGINEER  
HIGHWAY DEPARTMENT

RECEIVED

JUL 11 1972

WM. N. PRICE  
STATE ENGINEER



**Flood Control District  
of  
Maricopa County**

3325 WEST DURANGO STREET  
PHOENIX, ARIZONA 85009

July 12, 1972

*ALC*  
Mr. A. L. Chadwick  
Arizona Highway Department  
206 S. 17th Avenue  
Phoenix, Arizona 85007

Re: PROJECTS  
I-10-2(59)-EHRENBERG-PHOENIX HWY.  
67TH AVENUE-GRAND AVENUE  
I-10-3(122)-PHOENIX-CASA GRANDE HWY.  
GRAND AVENUE-JUNCTION I-17  
MARICOPA COUNTY, ARIZONA

PROJECTS (EHRENBERG-PHOENIX HWY.  
I-10-2(34) PERRYVILLE-BULLARD  
I-IG-10-2(37) BULLARD-107TH AVE.  
I-10-2(40) 107TH AVE.-67TH AVE.  
MARICOPA COUNTY, ARIZONA

Dear Mr. Chadwick:

Reference is made to your letters of June 19 and June 20, 1972, with enclosed Environmental Statements. This office has reviewed the statements and it is believed the projects have no adverse affects on the operation of the Flood Control District.

Sincerely,

*John C. Lowry*  
John C. Lowry  
Chief Engineer and General Manager

JCL/BN/aa

RECEIVED

JUL 13 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

T



CITY MANAGER'S OFFICE

251 WEST WASHINGTON

PHOENIX, ARIZONA 85003

(602) 262-6941

July 17, 1972

RECEIVED

JUL 21 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

*Ake*  
Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
206 South 17th Avenue  
Phoenix, Arizona 85007

Dear Mr. Chadwick:

In response to your letter of June 19 concerning Interstate 10, west of 67th Avenue, we are pleased to submit the following comments:

We would suggest that the Introduction emphasize the great contribution to mobility that the Papago Freeway (Interstate 10) will contribute to the Phoenix urban area. Mobility is the foundation of orderly community development, economic vigor and quality of living. Further, we would suggest emphasizing the relief of congestion and the improved traffic safety that will result from the construction of the Papago Freeway Interstate to the west.

It is suggested that reference be made to the 1960 Adopted Major Street and Highway Plan and to the newly accepted Transportation System Plan accepted by the Maricopa Association of Governments Regional Council on May 18, 1972.

On page 48A, the reference to "substantial noise from air traffic" is of concern to us. The City of Phoenix has made diligent efforts to minimize air traffic noise and has secured a change in the traffic patterns at Phoenix Litchfield Satellite Airport in order to minimize the noise. Consequently, we are curious as to the basis for this statement.

The City of Phoenix requests that efforts be made to properly landscape the concrete lined drainage ditch going west along the side of the Papago Freeway. Certainly it would be unfortunate if a stark concrete lined channel were built with no aesthetic treatment being applied.



CITY MANAGER'S OFFICE

251 WEST WASHINGTON

PHOENIX, ARIZONA 85003

(602) 262-6941

July 17, 1972

RECEIVED

JUL 21 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

Mr. A. L. Chadwick *ALC*  
Chief Deputy State Engineer  
Arizona Highway Department  
206 South 17th Avenue  
Phoenix, Arizona 85007

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CITY MANAGER'S OFFICE

251 WEST WASHINGTON

PHOENIX, ARIZONA 85003

(602) 262-6941

July 17, 1972

RECEIVED

JUL 21 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

*AKC*  
Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
206 South 17th Avenue  
Phoenix, Arizona 85007

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CITY MANAGER'S OFFICE

251 WEST WASHINGTON

PHOENIX, ARIZONA 85003

(602) 262-6941

July 17, 1972

RECEIVED

JUL 21 1972

Mr. A. L. Chadwick *ALC*  
Chief Deputy State Engineer  
Arizona Highway Department  
206 South 17th Avenue  
Phoenix, Arizona 85007

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

Dear Mr. Chadwick:

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CITY MANAGER'S OFFICE

251 WEST WASHINGTON

PHOENIX, ARIZONA 85003

(602) 262-6941

July 17, 1972

RECEIVED

JUL 21 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

*AKC*  
Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
206 South 17th Avenue  
Phoenix, Arizona 85007

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7

Mr. Chadwick  
July 17, 1972  
Page 2

In summary, the City of Phoenix urges that every effort be made to accelerate the construction of this urgently needed facility. The Papago West, combined with the Papago Inner Loop, is the most urgently needed single transportation facilities in the Valley and will contribute materially to the development and high quality of living once it is opened to traffic service.

If we can be of further assistance please let me know.

Sincerely,



EDWARD M. HALL  
Deputy City Manager  
Community Development and Transportation

EMH:ap

cc: Mr. Wentz  
Mr. Glendening  
Mr. Ralston  
Mr. Beatty  
Mr. Attebery  
Mr. Haley  
Team



AIRPORTS DEPARTMENT

3200 SKY HARBOR BOULEVARD

PHOENIX, ARIZONA 85034

June 28, 1972

Mr. William N. Price  
State Highway Engineer  
Arizona Highway Department  
1739 West Jackson  
Phoenix, Arizona 85007

Dear Mr. Price:

In accordance with the provisions of Section 102(2)(c) of the National Environmental Policy Act, we have reviewed the Draft Supplement to the Final Environmental Statement for Projects I-10-2(34), I-IG-10-2(37) and I-10-2-(40) and concur with the findings of the statement.

We feel the completion of this project will result in significant improvement in the access from Phoenix to the Phoenix-Litchfield Municipal Airport. This should result in greater use of the facilities at Litchfield, relieving the congestion at Sky Harbor International Airport.

Very truly yours,

WM. J. RALSTON, AAE  
Airports Director

WJR:rlm  
cc: Mr. Hall

RECEIVED

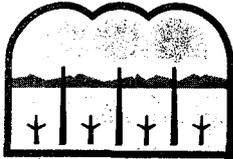
JUL - 3 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

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JUN 30 1972

WM. N. PRICE  
STATE ENGINEER



Litchfield Park

June 22, 1972

Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
Phoenix, Arizona

Dear Mr. Chadwick:

I have reviewed the copy of the Draft Supplement to the Final Environmental Statement for the various projects of Highway I-10 which you sent to me.

I would like to draw your attention to the last paragraph on page 35. The Maricopa County Board of Supervisors have not adopted the P & Z Department plan as of this date.

A hearing was held by P & Z on May 11, 1972, and on May 19, 1972, the Arizona Republic reported that the P & Z Commission had, the day before, adopted the plan. If this plan is eventually adopted unchanged by the Supervisors, then a revision of the Gruen Plan for Litchfield Park will be necessitated.

We at Litchfield Park Properties, through our attorney, have asked for and been granted time to obtain various facts to present to the Board of Supervisors concerning this matter.

Depending on the outcome of this presentation and the action of the Supervisors, some of the statements made on pages 38 and 39 may no longer be valid.

Very truly yours,

Vice President

G W Busey  
mlm

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JUN 22 1972

ARIZONA HIGHWAY DEPARTMENT  
ENVIRONMENTAL PLANNING DIVISION

# Southern Pacific Transportation Company

722 Security Building, Phoenix, Arizona 85004

June 22, 1972

F. E. WHITCHER  
TRAFFIC MANAGER  
J. T. BERTRAM  
ASSISTANT TRAFFIC MANAGER  
G. E. SHAFFER  
DISTRICT TRAFFIC REPRESENTATIVE

J. H. CARRUTH  
MANAGER,  
PUBLIC RELATIONS - SW

IN REPLY PLEASE REFER TO:

PR:620-ID

Mr. William N. Price  
State Highway Engineer

Mr. A. L. Chadwick  
Chief Deputy State Engineer

Arizona Highway Department  
Phoenix, Arizona, 85007

Re: Projects (Ehrenberg-Phoenix Highway)  
I-10-2(34) Perryville-Bullard  
I-IG-10-2(37) Bullard-107th Avenue  
I-10-2(40) 107th Avenue-67th Avenue  
Maricopa County, Arizona

Dear Sirs:

We received your letter of June 20 transmitting your study of the above projects and inviting our comment on environmental impact.

We are transmitting this study to the departments concerned. They will communicate with you directly.

Sincerely,

JHC dc



RECEIVED  
JUN 26 1972  
WM. N. PRICE  
STATE ENGINEER

CONCLUSION

Other matters previously discussed in the statement accepted on July 16, 1971, as to which this agency felt no further comment was required, have not been discussed in this Supplement. As to such matters, this Supplement will rely on the discussion contained in that statement.

**Appendix "A"**

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

FINAL

ENVIRONMENTAL IMPACT STATEMENT

FOR

INTERSTATE HIGHWAY 10  
EHRENBERG-PHOENIX HIGHWAY

IN

MARICOPA COUNTY, ARIZONA

PROJECTS

I-10-2(34) PERRYVILLE RD.-BULLARD RD.

I-10-2(37) BULLARD RD.-107th AVE.

I-10-2(40) 107th AVE.-67th AVE.

PURSUANT TO SECTION 102(2)(C)

P. L. 91-190

This statement has been compiled by the

ENVIRONMENTAL PLANNING BRANCH

of the

ROADSIDE DEVELOPMENT DIVISION

within the

DESIGN SECTION, HIGHWAY DEVELOPMENT GROUP

ARIZONA HIGHWAY DEPARTMENT

in cooperation with the

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

## SUMMARY SHEET

EHRENBERG-PHOENIX HIGHWAY  
INTERSTATE HIGHWAY 10  
I-10-2(34) PERRYVILLE RD.-BULLARD RD.  
I-10-2(37) BULLARD RD.-107th AVE.  
I-10-2(40) 107th AVE.-67th Ave.  
MARICOPA COUNTY, ARIZONA

JUNE 18, 1971

FINAL ENVIRONMENTAL STATEMENT

As the above referenced construction projects all traverse lands of similar composition and usage, ranging from sparse desert growth at the extreme western terminus to agricultural acreage and rural residential areas at the eastern end, it was decided to combine the three into a single environmental statement, referenced "project."

### Federal, State and Local Agencies From Which Comment Has Been Received

Federal Highway Administration - Much time and assistance has been received from the Federal Highway Administration.

Arizona Game and Fish Department - Descriptive information regarding population densities and typical species of game and wildlife in the project vicinity has been received.

In addition to the above agencies, discussions, consultations and invaluable information has been provided by the U. S. Soil Conservation Service, the Maricopa County Flood Control District and the records and personnel of various divisions of the Highway Department.

Comments in response to the Draft Environmental Impact Statement have been received from:

Soil Conservation Service  
Bureau of Land Management  
Arizona Game and Fish Department

### Environmental Impact

The construction of another segment of this Interstate highway, to modern, safe and efficient standards and the creation of a new flood and drainage control system, will have beneficial effects on the local, State and national environments by permitting the safe, uninterrupted movement of Interstate traffic and will provide a measure of general flood control.

### Adverse Environmental Effects Which Cannot be Avoided

Based on all available information, with respect to the tentative nature of the design, only one primary adverse result will be experienced. Limited encroachment on the natural environment is anticipated, and this will be confined to the desert areas occupied by the corridor and to the entry through some agricultural lands.

### Alternatives

Although numerous designs and revisions for the drainage facilities have taken place and the present concept is tentatively a final one, no alternative highway alignments, which have been studied, are feasible and have not been pursued. The present plan is considered the most economical route.

### This Action is Administrative

FINAL ENVIRONMENTAL STATEMENT

INTERSTATE HIGHWAY 10

I-10-2(34)	PERRYVILLE ROAD-BULLARD ROAD
I-1G-10-2(37)	BULLARD ROAD-107th AVENUE
I-10-2(40)	107th AVENUE-67th AVENUE

1. Location, Description and Purpose of the Project

This project, designated as the: a) Perryville Road to Bullard Road Section, b) Bullard Road to 107th Avenue Section, and c) 107th Avenue to 67th Avenue Section of the Ehrenberg to Phoenix Highway, is an integral part of the Interstate 10 Highway. It is located in central Maricopa County, and extends west of the City of Phoenix. The project traverses lands owned by private interests (individuals, corporations, etc.) as well as lands under public holdings. Vicinity and topographical maps are attached.

The proposed construction begins at the Perryville Road grade separation, at Station 6472<sup>+</sup>, in the northwest corner of Section 3, T1N, R2W and continues due easterly to the 67th Avenue Traffic Interchange, at Station 7245<sup>+</sup>, in the northeast corner of Section 1, T1N, R1E. The total length of this alignment is 14.8 miles.

The work consists of the design and eventual grade, drain and surfacing of two, 38 foot roadways running east to Dysart Road, each with two traffic lanes; from Dysart Road to 67th Avenue, the main roadway components are the same as the preceding section, except that each roadway is composed of three traffic lanes and will be 50 feet in width; limited access, confined to a standard five-wire fence, together with necessary grade separation and interchange structures will be included; a water collecting and channeling system will be located just outside of the westbound right of way, on the northern edge of the highway.

The purpose of the project is the completion of another link of the Interstate Highway system to better serve local, State, and National traffic requirements.

## 2. The Probable Impact of the Proposed Project on the Environment

To date, three public hearings have been conducted, relative to the ultimate design and location of the highway. A preliminary hearing was held on February 24, 1960, and was to consider alternate proposals for Interstate 10, west, from Phoenix into Yuma County. A location hearing was held on May 8, 1965 and the design hearing was held on June 17, 1970. Copies of the public notices and the certification letters, relative to the 1960 and 1965 hearings are attached.

From Perryville Road east to 67th Avenue the land use is devoted almost exclusively to agriculture, with scattered small communities, or settlements and isolated individual private improvements. Efforts were made in the location of the centerline to minimize severance to property holdings and damage to improvements. Major conflicts, however, have been experienced with irrigation ditches and other gravity flow type facilities. Anticipated solutions to these problems are discussed in a later section of this report.

Full control of access will be acquired for the entire length of this project. At specific points, where required, cattle guards and gates will be installed, for the protection of livestock and other, non-game animals. The Arizona Game and Fish Department indicates that a medium density small game population comprises much of the wildlife in this region, consisting of quail, dove, ground squirrels and rabbits. In areas where there is a drainage channel located immediately to the north of the highway, the control of access line will be situated between the highway and the channel.

The highway is to be elevated over all elements which present any alignment conflicts. Included are crossroads, canals and a crossing of the Southern Pacific Railroad lines in the vicinity of Litchfield Road. This choice of profile minimizes the loss of access to abutting land along the crossroads.

It also enhances traffic operation at interchanges as well as confining the actual right of way requirements to minimums. Any attempts to elevate or depress the crossroad grade line, the areas where the drainage channel parallels the highway, would be extremely difficult, physically, and very costly.

Frontage roads in general will not be necessary. The highway location is such as to minimize severance. There will, however, be infrequent locations where frontage roads will be necessary to provide access to severed parcels of land or to restore continuity to existing roads.

Aesthetic viewpoints from the new alignment include mountains, farmland, sparse desert growth and tree masses. Since protection and relocation, where ever possible, of selected existing vegetation is to be an integral factor in the construction phases of this project, no long-term, adverse visual impact is anticipated.

Figures obtained from the Interstate Cost Estimate Book 104(b)(5) of 1970, indicate that significant increases in ADT, along the proposed corridor, can be expected as a result of increasing traffic volume capacities. From Perryville Road to Bullard Road, the anticipated 1975 ADT is 12,000 vehicles, with the 1990 projection set at 30,000. From Bullard Road to Dysart Road, the 1975 ADT is expected to be 18,000, with 46,000 by 1990. From Dysart Road to 83rd Avenue, ADT for 1975 will be 19,000 and for 1990, 49,000 vehicles. From 83rd Avenue east to 67th Avenue, the 1975 figure is expected to be 22,000 and 53,000 ADT is projected for 1990.

No significant relocation problems are expected to be incurred as a result of construction. As previously stated, this area is primarily an agricultural district, with sparsely developed residential areas and private dwellings on expansive land holdings. Where unavoidable entry and traverse through these properties does occur, a program of relocation assistance, in

accordance with Federal and State relocation procedures and regulations, will be conducted. As right of way plans and requirements are in a revisionary status at the present time, no specific requirements with regard to eligible relocatees have yet been established. It is not expected, however, that any significant number of displaced persons will be involved in this project.

Inasmuch as the flood and drainage waters will be controlled by the aforementioned channel facility, a very positive environmental benefit will accrue to surrounding agricultural lands. Damage by frequent high flood waters and drainage runoff will be virtually eliminated by proper diversion techniques. The borrow material from the channel excavation will provide much of the fill required for the roadbed from Perryville Road to Bullard Road. Other fill material can be obtained from the Agua Fria River. An additional and economical benefit will also result to the cities of Glendale and Phoenix, in that the proposed drainage channel will intersect the storm drain outlets of these cities, permitting ideal disposal of flood waters into the main channel.

At the present time, two primary material sources are tentatively scheduled for use on this project, in addition to the previously discussed channel excavation, which will provide the bulk of the base fill material.

(a) Pit number 5392 - Special compaction, select material, aggregate base, and mineral aggregate. Located six miles right of Station 6551 $\pm$  in the bars and channel of the Gila River.

(b) Pit number 7659 - Special compaction and borrow. Located 3,400 feet left of Station 6892 $\pm$  in the Agua Fria River.

Both sources consist of silt, sand, clay and gravel, and will require light to moderate clearing of weeds and brush. As both sources are located in river beds, they are considered to be self-rehabilitating and no reseeding is anticipated following use. Unless subsequently requested by land owners,

constructed haul roads will not be left intact. They will be obliterated and scarified, in accordance with Standard Specifications 701(g) of 1969. Because of normal regeneration of native vegetation, no undue environmental impact is expected to result from the extraction of materials in these areas. By virtue of their locations, neither material site is visible from the highway alignment.

Because of the planned drainage and channel system, more tillable lands will be made available from longer periods of time than has previously been the case. Increased yield and productivity of the land is, therefore, an anticipated benefit.

In July of 1968, the City of Phoenix acquired the former Litchfield Naval Air Station from the Federal Government, and opened the Phoenix-Litchfield General Aviation Airport. With the completion of this project will come significant improvement in the access from the Phoenix urban area to this needed aviation facility, thereby relieving the congestion at Phoenix Sky Harbor International Airport, in eastern Phoenix.

No archaeological salvage operations are programmed for this project.

No additional environmental impact, positive or negative, can be foreseen at this time.

### 3. Probable Adverse Environmental Effects Which Cannot be Avoided

The basic right ofway width is to be 308 feet, with flaring required at interchange locations and crossroads. Additional right of way will also be required, along the north side of the highway from approximately Bullard Road to 67th Avenue, for construction of a drainage channel, varying in width from 40+ feet to 100+ feet.

The necessary acquisitions and removal of this land from its normal use, and subsequent limited reduction of natural wildlife habitat, cannot be avoided. Native cacti specimens and other specimen plants which must be moved in

construction will be salvaged and relocated.

The project corridor, of necessity, runs more or less perpendicular to the natural fall of the land. This poses certain drainage problems. Ponding of water on the upstream (northerly) side incurs the possibility of liability for flood damage, while collection of storm water with passage of concentrated flows at selected points carries the hazard of potential downstream damage (south of the highway alignment) where no natural or man-made water courses exist.

The open channel, discussed earlier, in conjunction with the relatively few natural waterways available, will collect storm waters and channel them, eliminating ponding. These waters will then be passed under the highway at various points, utilizing some north-south crossroads as carriers, as well as drainage culverts. From Bullard Road to the Agua Fria River, the drainage will be collected in the channel and carried eastward to the river. Drainage from the highway itself will also be discharged into the channel. From the Agua Fria River to 67th Avenue, flood waters will be collected in the channel and carried westward to the river. The drainage channel and the highway itself, will traverse the Roosevelt Irrigation District canal, as elevated sections, at 91st Avenue.

It is believed that the resultant, and substantial reduction of flood damage to agricultural acreage and surrounding rural-residences, will in some measure compensate for the acquisition of those lands required for right of way.

Dust created during the construction phase, cannot be avoided. It will, however, be reduced by standard sprinkling techniques.

Encroachment on desert wildlife habitats will be held to a minimum, and a five-wire safety fence will be installed at the right of way boundaries along the entire length of the project.

Resultant construction scars to the landscape cannot be avoided. They

will, however, be ameliorated by reshaping and contoured grading. As stated previously, plant materials will be salvaged for reuse, when it is at all practical to do so.

No additional adverse impact is anticipated at the present time.

4. Alternatives to the Proposed Project

As the proposed drainage channel, by engineering necessity and in the interests of economy and practicality, must parallel the highway corridor, any proposal to change the highway alignment would also affect the channel alignment.

During the early design and location stages of this project, specifically during the time of the 1960 preliminary hearing, a number of alignment possibilities were promulgated. Most were based on northerly routes, extending east by northeast, from the Brenda "cutoff" area, then leading southerly into the Phoenix metropolitan area, through a series of circuitous arterials. Less direct than the present corridor, these alternate routes also traversed a substantial area of mountainous terrain. The acceptance of any one of these routes would have incurred significantly higher costs than the current proposal because of increased cuts and fills, a large number of structures and subsequent drainage problems. For these reasons, the current alignment was considered to be the most feasible.

One design change has been proposed since the design hearing in June of 1970 was held. This would elevate the highway profile over both Kimball and Reems Roads, at Section 6, TIN, RIW, retaining the crossroad profiles near the existing ground. Supporting reasons for this proposal are:

- a) Virtually no differential in cost.
- b) Reduction in loss of access along the crossroad.
- c) Adaptability to a future interchange.
- d) Treatment consistent with that of adjacent grade separations.

The initial interchange locations were proposed by the Arizona Highway Department in March of 1966. The Federal Highway Administration approved an arrangement on July 6, 1966. The approved arrangement was amended in 1970 to include an additional traffic interchange at 91st Avenue, under which will pass the Roosevelt Irrigation District canal.

5. The Relationship Between Local Short-Term Use of Environment and the Maintenance and Enhancement of Long-Term Productivity

Completion of any segment of an interstate highway may be considered a long-term benefit, through development of safe, rapid transport and enhancement of future land use.

Much of the land in the project's vicinity is under cultivation. The availability of land for such use will increase subsequent to construction of adequate drainage facilities to control the flow of storm and flood runoff. This will permit the restoration of more land to its highest and best use, and assure long-term productivity.

This project satisfies the transportation requirements of tourists and vacationers, of local motorists and commerce centers and provides an essential National defense arterial.

6. Irreversible and Irretrievable Commitments of Resources

The total land area occupied by this highway project, including the rights of way for both the highway and the drainage channel, will be irrevocably committed to highway purpose, and will, to some extent, limit future development of the area.

It is believed, however, that the long-term benefits elaborated upon in Section 5 herein, will more than compensate for a short-term reduction of utility.

7. Problems and Objections Raised by Others

The public hearing on location plans held May 8, 1965 with over 200 persons in attendance, yielded the following:

a) An unanimous demand for more interchanges; sections to be planned so that as each is finished, it could be immediately used.

b) Requests were made to study possible realignment, to miss the subdivision near Perryville Road.

c) The Naval Reserve facility officials requested that they be kept informed so that they could plan future moves well in advance.

d) Horse passes were requested to serve riders in the White Tank foothills and vicinity.

As mentioned in a preceding section of this statement, an additional traffic interchange has been included in the proposal, at 91st Avenue, accomodating the Roosevelt Irrigation District Canal. Penetration through the community near Perryville Road is being kept to a minimum, but is unavoidable due to the alignment of adjoining sections. The Naval Reserve facility has since been deactivated and purchased by the City of Phoenix. It will serve as a supplemental City aviation facility and enjoy the benefits of increased accessibility through the provision of this interstate project.

As previously noted, the design public hearing was held on June 17, 1970. Comments received then and later, through correspondence, can be summarized as follows:

a) More access and additional interchanges were requested for many of the locations where only grade separations are now proposed.

There was no express opposition to the proposed location or profile. Earlier objections have apparently been resolved to the satisfaction of those concerned.

A significant number of comments were made endorsing the proposal and urging that design and construction proceed as rapidly as possible.

Letters of concurrence have been received from the U. S. Soil Conservation Service, Arizona Game and Fish Department and the Bureau of Land Management. Copies of these letters are attached. A letter from HUD indicated that agency was interested only in areas of urban environment. No comment was received from the Flood Control District, Maricopa County.

8. Steps Taken to Minimize Harm From Unavoidable Adverse Effects

a) As described herein, a more adequate flood and drainage control system is to be provided in conjunction with the proposed highway improvements. The construction of a 12 feet deep, 40 to 100 feet wide, trapezoidal drainage channel, paralleling the northerly right of way boundary of the project, will eliminate extreme flood conditions.

b) Excavation material, removed for construction of the drainage channel, will provide much of the fill material for the five foot, elevated roadbed.

c) New cattle guards, gates and a five-wire fence will be installed for protection of small game and livestock.

d) Both material sources are considered to be self-rehabilitative by virtue of their riverbed locations. Reseeding will be unnecessary here.

e) During construction, blowing dust will be a hazard and will be relieved by normal sprinkling procedures.

f) Areas scarred by construction will be, where ever possible, reshaped and restored.

g) In the sparse desert zones, the existing vegetation will be protected and salvaged, when possible. In open agricultural areas, the landscaping will reflect the nature of the planting within the immediate areas.

h) Interchanges will be landscaped with desert plant materials.

\* \* \*  
\* \*  
\*

ARIZONA HIGHWAY DEPARTMENT

NOTICE OF PUBLIC HEARING  
February 24, 1960

Notice is hereby given that a Public Hearing will be conducted by the Arizona Highway Department at the Phoenix Woman's Club, 302 West Earll Drive, Phoenix, Arizona, on February 24, 1960, beginning at 9:00 A.M.

At that time all interested persons will be given an opportunity to be heard concerning their views on the proposed locations of the following section of Interstate Highway 10:

Beginning at a point along the Phoenix Freeway and terminating at a point east of Quartzsite at M.P. 30.5.

A four-lane limited access divided highway is to be eventually constructed between these points with necessary interchange and grade separation structures to permit adequate access.

Interested citizens and owners of property in the immediate area of the proposed improvements will have the opportunity to state their opinions concerning the proposed locations or any other location of this section of Interstate 10, and their possible economic effects. These comments will be recorded at the time and will receive consideration with final design determinations.

ARIZONA HIGHWAY DEPARTMENT

A. L. CHADWICK  
Assistant State Engineer

HOMER RICHARDS  
District Engineer

*H. Public Hearing  
(Brenda Cut-off)*

October 9, 1962

Mr. W. H. Baugh  
Division Engineer  
U.S. Bureau of Public Roads  
Phoenix, Arizona

Re: Public Hearing  
Interstate 10-1  
(Brenda Cut-off)

Dear Mr. Baugh:

I, J. R. VAN HORN, State Highway Engineer of the Arizona Highway Department, do hereby certify that a public hearing was held on February 24, 1960, at the Phoenix Women's Club, 302 W. Earll Drive, Phoenix, Arizona, beginning at 9:00 a.m. The following was discussed:

Proposed location of section of Interstate Highway 10, beginning at a point along the Phoenix Freeway and terminating at a point east of Quartzsite at Milepost 30.5. A four-lane limited access divided highway is to be eventually constructed between these points, with necessary interchange and grade separation structures to permit adequate access.

Transcript of this hearing was forwarded to your office April 18, 1960.

Very truly yours,

J. R. VAN HORN  
State Highway Engineer

JRVH/ejv  
In triplicate

ARIZONA HIGHWAY DEPARTMENT

NOTICE  
OF PUBLIC HEARING

May 8, 1965

Notice is hereby given that a Public Hearing will be conducted by the Arizona Highway Department in the Highway Department's Auditorium located at 206 South 17th Avenue, Phoenix, Arizona, beginning at 9:00 A.M., May 8, 1965.

At that time all interested persons will be afforded an opportunity to express their views on the proposed location of a section of the Interstate Highway System designated as Interstate 10. Discussion will be limited to the one project.

Beginning on the west side of I-17 (Black Canyon Freeway) in the vicinity of Culver and running west generally between Moreland and Belleview Streets to 43rd Avenue, thence continuing along a line located approximately 1/4 Mile south of McDowell Road to Tuthill Road, a distance of approximately 20 Miles; thence southwest to a point on Oglesby Road approximately 1/2 Mile north of lower Buckeye Road - a total distance of approximately 30.4 Miles.

A four to eight lane divided highway with limited access is to be constructed. Grade separations will be located at principal mile crossroads and interchanges located to afford adequate access.

The object of the Public Hearing is to provide an opportunity for every interested citizen and owners of property in the immediate area of the proposed improvement to state their opinions on the location of the highway and its possible economic effects.

The hearing will be recorded and information compiled will receive full consideration in the developing of final plans.

WM. N. PRICE  
State Highway Engineer

HOWARD SHELP  
District Engineer

May 12, 1965

Mr. W. H. Baugh  
Division Engineer  
U. S. Bureau of Public Roads  
Phoenix, Arizona

Re: Public Hearing  
Papago-West  
I-10-2(1)71

Dear Mr. Baugh:

I, WM. N. PRICE, State Highway Engineer, hereby certify that the Arizona Highway Department conducted a public hearing on the above-captioned project at 9 a.m. Saturday, May 8, 1965, in the Auditorium of the Highway Department Building, Phoenix, Arizona.

Consideration was given to the proposed location of a section of Interstate 10 from a point on Oglesby Road 1/2 mile north of Lower Buckeye Road easterly to the junction of I-10 and I-17 at approximately Culver Street and the Black Canyon Freeway.

A four to eight lane divided highway is ultimately to be constructed within this 30.4 mile area, with full control of access, grade separations at principal mile crossroads, and interchanges to afford adequate access.

I further certify that the Arizona Highway Department has considered the economic effect of this proposed location, and finds it to be justified.

Transcript of hearing, copies of notice, and affidavit of publication will be forwarded at a later date.

Very truly yours,

WM. N. PRICE  
State Highway Engineer

WNP:fk  
In triplicate



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
AREA OFFICE  
2500 WILSHIRE BOULEVARD, LOS ANGELES, CALIFORNIA 90057

AREA OFFICES  
Los Angeles, California  
San Francisco, California

April 23, 1971

REGION IX  
REGIONAL OFFICE  
SAN FRANCISCO, CALIFORNIA

IN REPLY REFER TO:

9.2SP

Mr. A. L. Chadwick  
Chief Deputy State Engineer  
Arizona Highway Department  
Phoenix, Arizona 85007

RECEIVED

APR 29 1971

ARIZONA HIGHWAY DEPARTMENT  
ROADSIDE DEVELOPMENT DIV.

Dear Mr. Chadwick:

We have reviewed the enclosed twenty draft environmental statements for various highway projects. Please be advised that we have no reservations from an environmental standpoint.

Since HUD's area of jurisdiction by law and special expertise primarily relates to urban or urbanizing areas, we would like to propose that future referrals from your agency be related to such areas. In addition we wish to suggest that it might be possible to develop a "screening device" through DOT and the CEQ that would not necessitate the preparation of an environmental impact statement on every project. For example HUD guidelines, a copy of which is enclosed, include the use of "thresholds" and an environmental clearance worksheet prior to a decision to prepare an environmental impact statement.

Thank you for providing us with an opportunity to comment on your projects. If you desire to discuss the points mentioned in this letter, please contact Malcolm Findley of my staff. He may be reached at 213 688-5825.

Sincerely,

Raymond Carrasco  
Area Director

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Arizona State Office, 6029 Federal Building, Phoenix, Arizona 85025

April 26, 1971

Mr. Wm. N. Price  
State Highway Engineer  
Arizona Highway Department  
206 South 17th Avenue  
Phoenix, Arizona 85007

RECEIVED

APR 28 1971  
ARIZONA HIGHWAY DEPARTMENT  
ROADSIDE DEVELOPMENT DIV.

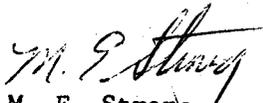
Re: Buckeye Watershed - Highway Project: Perryville Rd. - 67th Ave.

Dear Mr. Price:

The draft of the ENVIRONMENTAL IMPACT STATEMENT for the Ehrenberg-Phoenix Highway transmitted with your letter of April 12, 1971 has been reviewed.

It appears that all practical measures have been taken to protect the natural environment, that the overall environmental impact will be beneficial to the area, and that construction should proceed as planned.

Sincerely yours,

  
M. E. Strong  
State Conservationist

RECEIVED  
APR 28 1971  
WM. N. PRICE  
STATE ENGINEER





# United States Department of the Interior

IN REPLY REFER TO

2850 (PC)

BUREAU OF LAND MANAGEMENT

State Office  
3022 Federal Building  
Phoenix, Arizona 85025

May 6, 1971

Mr. William N. Price  
State Highway Engineer  
Arizona Highway Department  
Phoenix, Arizona 85007

RECEIVED

MAY 7 1971

ARIZONA HIGHWAY DEPARTMENT  
ROADSIDE DEVELOPMENT DIV.

Re: Projects:  
I-10-2(34) Perryville Road-Bullard Road  
I-IG-10-2(37) Bullard Road - 107th Ave.  
I-10-2(40) 107th Ave. - 67th Ave.  
Ehrenberg-Phoenix Highway

Dear Mr. Price:

We appreciate the opportunity to review your draft environmental statement for the named projects.

Our review indicates that neither the road right-of-way nor the material sites involve any public lands administered by the Bureau of Land Management. Therefore we have not provided comments on the environmental impacts that could occur from development of these projects.

We understand that environmental statements on future highway projects will be prepared on major highway segments such as Phoenix to Brenda, rather than on one to several individual projects. Environmental statements can be much more responsive to the environmental impact that may be expected to result from a project if the statement is prepared on major highway segments.

We will be happy to work with you in developing the environmental impact of highway projects where public lands are involved.

Sincerely,

*J. T. Fallini*  
State Director

RECEIVED  
MAY 6 - 1971  
WM. N. PRICE  
STATE ENGINEER

4610

Governor  
JACK WILLIAMS

Commissioners  
JACK MANTLE, CHAIRMAN, TUCSON  
HOMER L. G. KRYGER, YUMA  
MILTON G. EVANS, FLAGSTAFF  
ROBERT J. SPILLMAN, PHOENIX  
GLEN D. DALY, WINSLOW

Director  
ROBERT A. JANTZEN

Asst. Director, Operations  
PHIL M. COSPER

Asst. Director, Services  
ROGER J. GRUENEWALD



## ARIZONA GAME & FISH DEPARTMENT

2222 West Greenway Road Phoenix, Arizona 85023 942-3000

April 16, 1971

Mr. William N. Price  
State Highway Engineer  
Arizona Highway Department  
1739 West Jackson  
Phoenix, Arizona 85007

Attention: Mr. A. L. Chadwick *ma*

Dear Mr. Price:

In accordance with the provisions of Section 102(2)(C) of the National Environmental Policy Act, we have reviewed the Draft Environmental Statement for Projects I-10-2(34), I-IG-10-2(37) and I-10-2(40) and concur with the findings of the statement.

We appreciate the opportunity to review and comment on these projects. If we can be of any assistance, please contact us.

Sincerely,

*Robert A. Jantzen*  
Robert A. Jantzen, Director

RAJ:nrh

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ARIZONA HIGHWAY DEPARTMENT  
ROADSIDE DEVELOPMENT DIV.

