State Route 360 / Priest Drive Interchange

AND

SR 360 Widening - Priest Drive to Mill Avenue

Final Supplemental Environmental Assessment

Arizona Department
of Transportation

ARIZONA DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

ENVIRONMENTAL PLANNING SERVICES

205 South 17th Avenue
Phoenix, Arizona 85007

FINAL SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

STATE ROUTE 360/PRIEST DRIVE INTERCHANGE
AND
SR 360 WIDENING - PRIEST DRIVE TO MILL AVENUE

ADOT PROJECT NUMBER: IR10-3(311)

Approved by: William P. Belt Date: 26 MAY 1992

William P. Belt, Manager
Environmental Planning Services
Arizona Department of Transportation

FEDERAL HIGHWAY ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT
FOR
IR-10-3(311)
STATE ROUTE 360/PRIEST DRIVE INTERCHANGE &
STATE ROUTE 360 WIDENING -
PRIEST DRIVE TO MILL AVENUE

The FHWA has determined that this project will not have any significant impact on the human environment. This Finding of No Significant Impact is based on the attached Supplemental Environmental Assessment which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the attached Supplemental Environmental Assessment.

May 29, 1992
Date

Division Administrator

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SUMMARY OF MITIGATION MEASURES

1. The design and construction of the project will be coordinated with the plans of the City of Tempe to widen and improve Priest Drive between Baseline Road and Southern Avenue (Page 19).

2. A program of archeological testing for the Los Hornos site, as approved by the State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) will be completed prior to construction. Mitigation will be coordinated with SHPO and ACHP. Any previously-unidentified cultural resources that may be encountered during construction will be brought to the attention of ADOT Environmental Planning Services. Construction will be halted until the resources are evaluated (Page 20).

3. Noise walls will be constructed to mitigate traffic-generated noise levels. A noise wall is proposed on the westbound side of the project along the right-of-way between Priest Drive and Hardy Drive. This wall would vary in height from 12 feet at Priest Drive to six feet at Hardy Drive. A new noise wall with a height of 7.5 feet should also be built along the westbound right-of-way between Hardy Drive and Kyrene Road. On the eastbound side, a wall is proposed along the right-of-way between Hardy Drive and the western end of the apartment complex that is located between SR 360 and the Western Canal. This wall would be 9.5 feet high. A 6 foot soundwall is proposed along the southern right-of-way from Station 166 to Kyrene Road to protect the mobile home park. (Pages 31-34)

4. The project design will mitigate the aesthetic impacts cause by the addition of one lane in each direction on SR 360 between Priest Drive and Mill Avenue. A retaining wall with surface treatment will be added and the existing grass and other landscaping will be removed. The landscaping will be replaced with low-water-use plant material. (Pages 35-36)

5. Several specific measures will be used to mitigate the short-term air quality impacts caused by fugitive dust and mobile source emissions during construction. The highway contractor will be required to comply with all air pollution regulations and orders from agencies having jurisdiction. These regulations require burning permits and certification of burning methods, use of dust palliatives, and licensing of

pavement and crushing plants. In order to minimize construction dust, specific measures will be taken during site preparation, construction, and post-construction. These measures are listed on pages 25-26. In order to minimize the increase of mobile source emissions caused by traffic congestion through the construction area, a traffic management plan will be prepared that will limit traffic disruption during construction, especially during peak travel periods. (Page 26)

6. Temporary noise impacts during construction will be mitigated by measures to be contained in the construction plan. These measures include design considerations, sequence of operations, construction of soundwalls during the initial stages, alternate construction methods, source control, and time and activity constraints. These measures are further described on page 34.

7. A traffic management plan will be prepared to minimize traffic disruption and delay during construction. Access through the construction area will be maintained. Coordination will be effected with school district officials regarding bus routes. (Page 42).

8. If previously-unidentified hazardous materials are encountered during construction, work will stop at that location, and ADOT Environmental Planning Services and ADOT Safety will be contacted to arrange for proper treatment of those materials.

9. The required National Pollutant Discharge Elimination Permit (NPDES) will be covered by the General Permit that will be obtained by ADOT. (Page 42).

1.0 PROJECT OVERVIEW

The purpose of this report is to describe the potential environmental impacts of the construction of a half-diamond traffic interchange on State Route 360 (Superstition Freeway) at Priest Drive in Tempe, Arizona. This new interchange will provide access between the two facilities to and from the east. In addition, the project includes the addition of one lane in each direction to State Route 360 between Priest Drive and Mill Avenue.

Figure 1 shows the project location in a statewide context. Its location in a regional context is illustrated in Figure 2. Figure 3 provides a still more precise depiction of the immediate vicinity.

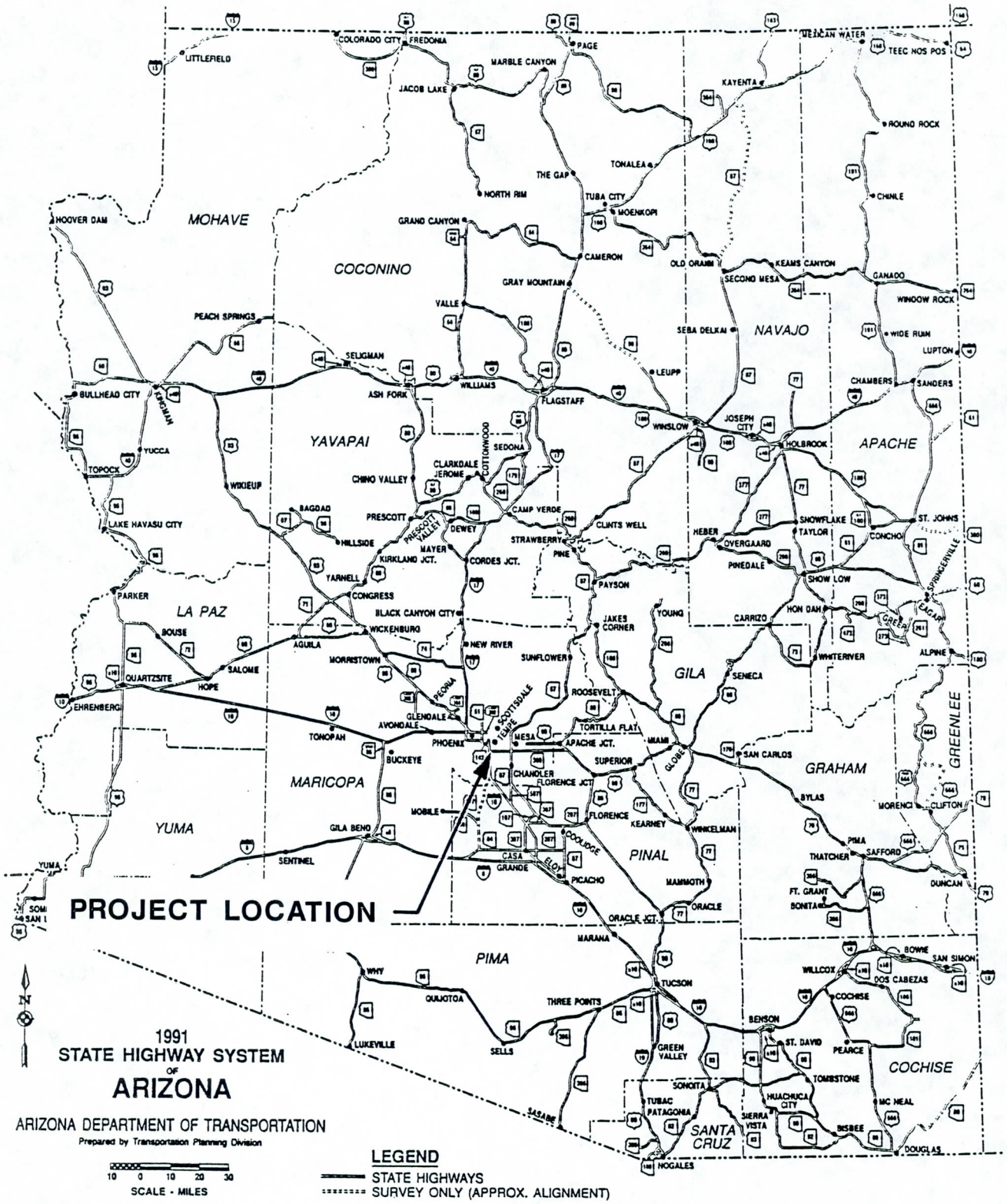
The proposed improvements will be accomplished in conjunction with the reconstruction of the traffic interchange between State Route 360 and Interstate 10, which is located immediately to the west of Priest Drive. An evaluation of the environmental impacts of the planned improvements to the I-10/SR 360 interchange was completed in 1990. The results of that study are contained in the "Final Environmental Assessment, Upgrading of I-10/Superstition and I-10/Baseline Road Traffic Interchanges, June 1990." The Environmental Assessment was approved by both the Arizona Department of Transportation (ADOT) and the Federal Highway Administration (FHWA) in May 1990.

The project area addressed by the I-10/SR 360 Environmental Assessment includes the portion of SR 360 between I-10 and Hardy Drive. Thus, the location of the proposed SR 360/Priest Drive interchange has been addressed. However, the portion of SR 360 between Hardy Drive and Mill Avenue, where additional lanes are proposed as part of the SR 360/Priest Drive project, is not included in the I-10/SR 360 project area.

Three "build" alternatives for improvement to the I-10/SR 360 interchange are described in the I-10/SR 360 Environmental Assessment. All of these alternatives include the possibility of the addition of a half-diamond interchange at SR 360 and Priest Drive. However the document does not directly address the potential environmental impacts of the proposed SR 360/Priest Drive interchange. This supplemental environmental assessment describes the potential environmental effects of the proposed interchange and the addition of one lane in each direction between the Priest Drive and Mill Avenue ramps.

Several environmental considerations were discussed in the 1990 I-10/SR 360 Environmental Assessment that will not be affected by the SR 360/Priest Drive interchange. Therefore, they are not addressed in this Supplemental Environmental Assessment. These subjects are: parks and recreation (4f), farmlands, scenic roads and parkways, minority involvement, and hazardous materials.

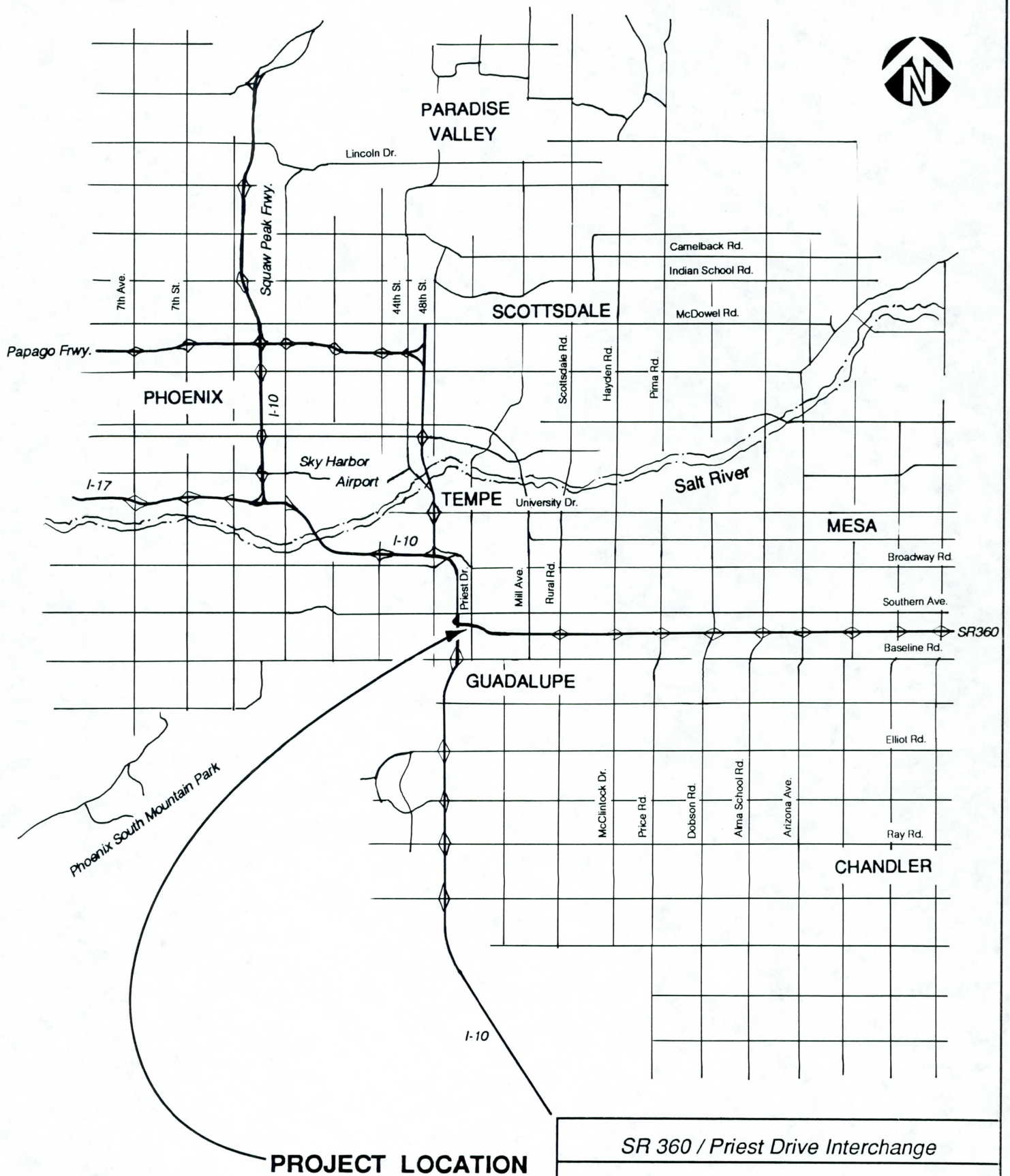
A Change of Access Report for the SR 360/Priest Drive traffic interchange was completed in October 1991. The report includes a description of existing conditions, the need for the project, a traffic analysis, and a preliminary discussion of environmental considerations. The report was approved by ADOT and FHWA in November 1991 .



SR 360 / Priest Drive Interchange

Project Location

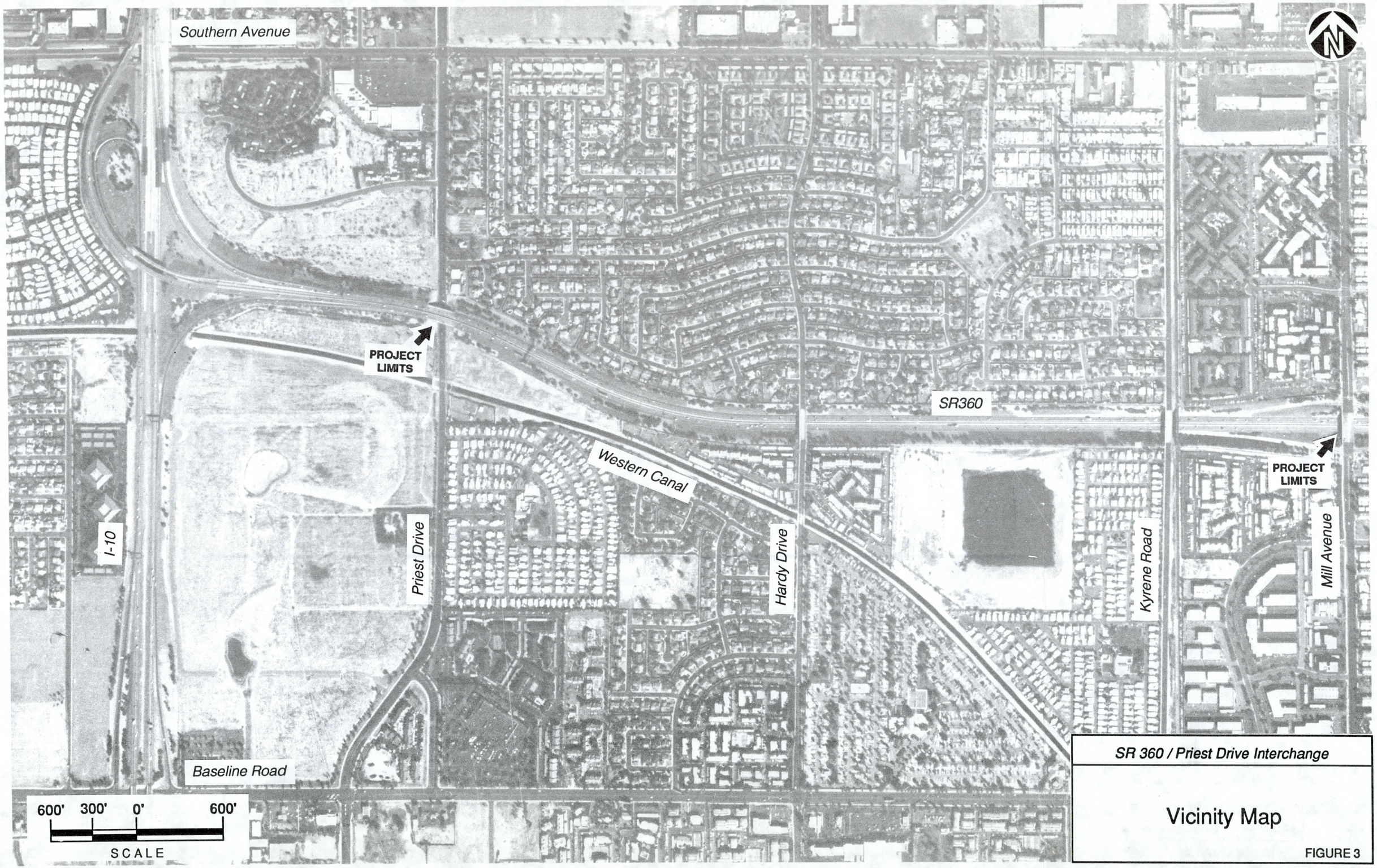
FIGURE 1



SR 360 / Priest Drive Interchange

Urban Area Location Map

FIGURE 2



SR 360 / Priest Drive Interchange

Vicinity Map

FIGURE 3

2.0 PROJECT NEED

The need for the proposed project complements the planned I-10/SR 360 improvements (Project No. IR-10-3(311) PE). That project involves the reconstruction of two miles of I-10, almost one mile of SR 360, the I-10/SR 360 traffic interchange, and the I-10/Baseline Road traffic interchange. The I-10/SR 360 Environmental Assessment, which also discusses the possibility of the SR 360/Priest Drive interchange, documents the overall need for the project. In addition to the information presented in the I-10/SR 360 report, additional analysis has been conducted of the need for a half-diamond interchange on SR 360 at Priest Drive. The previously-cited Change of Access Report contains the results of that analysis.

In summary, the major additional considerations on which the need for the SR 360/Priest Drive intersection is based include the following:

- ***Service to the planned commercial center at Priest Drive and Baseline Road***

The interchange on SR 360 at Priest Drive will provide essential access to Tempe's high-intensity commercial center planned for the northwest corner of Priest Drive and Baseline Road. The development of this site has long been a high priority of the City of Tempe and is an important element in the city's development plans. The traffic impact study prepared in the Spring of 1990 for the Spectrum Center showed that an interchange on SR 360 at Priest Drive will divert a significant amount of traffic both from the I-10/Baseline Road interchange and the SR 360/Mill Avenue interchange. If the interchange is not constructed, this increased demand will not be well served. Congestion will continue to exist, and will likely worsen at the other interchanges on SR 360 (especially Mill Avenue), and at the interchange of I-10 and Baseline Road.

- ***Service to the major transportation corridor created by changes to Priest Drive***

Priest Drive has become a major transportation corridor in this part of the metropolitan area. The new bridge over the Salt River, together with the connection of Priest Drive to Galvin Parkway, links Tempe, Phoenix, Scottsdale, and Guadalupe to major employment centers,

and will provide access to Sky Harbor Airport at the East Papago interchange. The proposed half-diamond interchange will add an important linkage between SR 360 and these areas. This connection will become even more important as additional development occurs along Priest Drive.

- ***Alleviation of traffic congestion on both the existing freeway and local street systems***

The new interchange will alleviate existing traffic congestion as well as serve the added volumes to be created by the new developments. Existing congestion on SR 360 will be reduced at the Mill Avenue interchange and, to a lesser extent, the Rural Road interchange. Documentation of this conclusion is contained in the Change of Access report, which was approved by ADOT and FHWA in November 1991. Lower traffic volumes are also expected to occur on the surrounding arterial streets, including Southern Avenue, Baseline Road, and Mill Avenue. Heavy commercial traffic on these streets is likely to decrease because of direct access to SR 360 from the industrial areas along Priest Drive.

- ***Direct access to the Town of Guadalupe***

Associated with the projected new development along the Priest Drive corridor is the potential for economic development in the Town of Guadalupe. As a federally-designated economic hardship area, the Town has a major need for assistance in the creation of jobs and the enhancement of its tax base in order to provide essential public services. The new interchange will provide freeway access into the community to assist in attracting industry and jobs. It will complement the benefits that will be provided by the improvements to the I-10/Baseline Road interchange.

3.0 PROJECT DESCRIPTION

The proposed project has the following two major elements:

1. Construction of a half-diamond traffic interchange on SR 360 connecting to the east side of Priest Drive.

2. Addition of a fourth traffic lane in each direction on SR 360 between the Priest Drive and Mill Avenue ramps.

A summary of the features of these two elements is provided below.

3.1 Related I-10/SR 360 Improvements

The project is planned to be constructed in conjunction with the planned improvements to the I-10/SR 360 traffic interchange. The related features of the I-10/SR 360 project include the addition of lanes to I-10; the relocation of SR 360 to the south between I-10 and Hardy Drive; widening of the Priest Drive overpass and Priest Drive; and the re-construction of ramps between I-10 and SR 360.

The I-10/SR 360 project will be built in two stages identified as Unit 1 and Unit 2. Unit 1 will include the construction of the eastbound SR 360 roadway between I-10 and Hardy Drive and the related ramps from I-10 to eastbound SR 360. The new roadway will be relocated approximately 125 feet to the south. The new ramps will enable the movement of traffic from the north and south on I-10 to the east on SR 360. Unit 1 is expected to be bid in July 1992. An 18-month construction period is planned.

Unit 2 will include the westbound SR 360 roadway between Hardy Drive and I-10 and the associated ramps from westbound SR 360 to I-10. The new roadway will be relocated approximately 125 feet to the south. The new ramps will enable the movement of traffic from the east on SR 360 to the north and south on I-10. Unit 2 is planned for bid following completion of the Unit 1 project. An 18-month construction period is planned.

3.2 Major Design Features

The major features of the proposed project are summarized below. Figure 4 shows a plan view of the improvements. Typical cross-sections are illustrated in Figure 5.

- ***Half-Diamond Interchange***

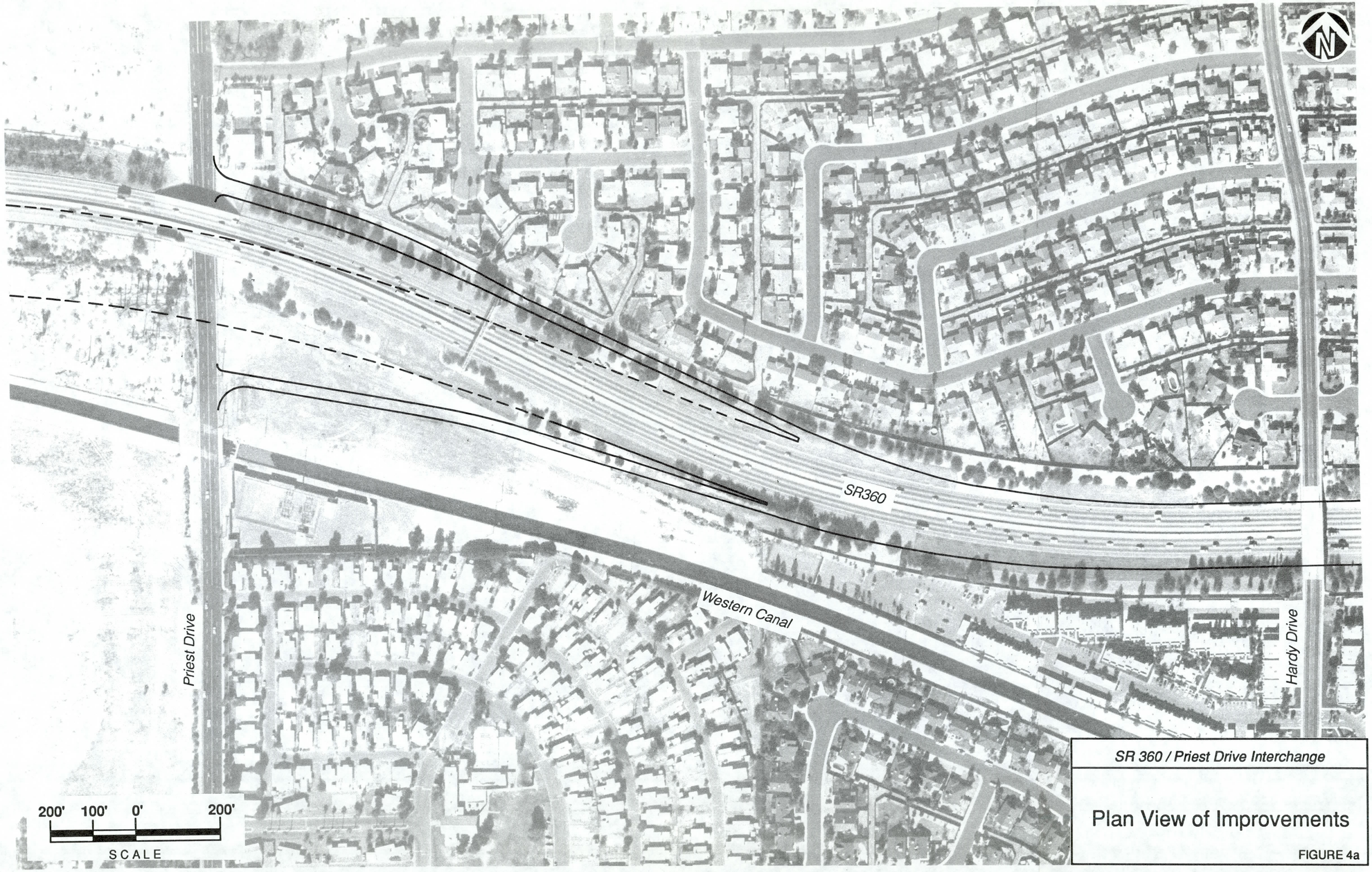
A half-diamond interchange to and from the east will be constructed at SR 360 and Priest Drive. The interchange ramps will connect to the re-aligned SR 360 roadway near Hardy Drive. The eastbound on-ramp will be located between the SR 360 mainline and the existing Western Canal. The westbound off-ramp will be located within existing right-of-way on an alignment slightly north of the existing location of the westbound SR 360 roadway. The ramp intersection at Priest Drive will be controlled by traffic signals.

- ***Additional Lanes on SR 360***

An additional lane in each direction will be constructed on SR 360 between the Priest Drive and Mill Avenue ramps. The lanes will be 12 feet wide plus an additional 14.5-foot shoulder. The lanes will be accommodated by cutting back the existing slope on either side of the roadway. A retaining wall will be constructed and the landscaping behind the wall removed and replaced.

- ***Priest Drive Widening***

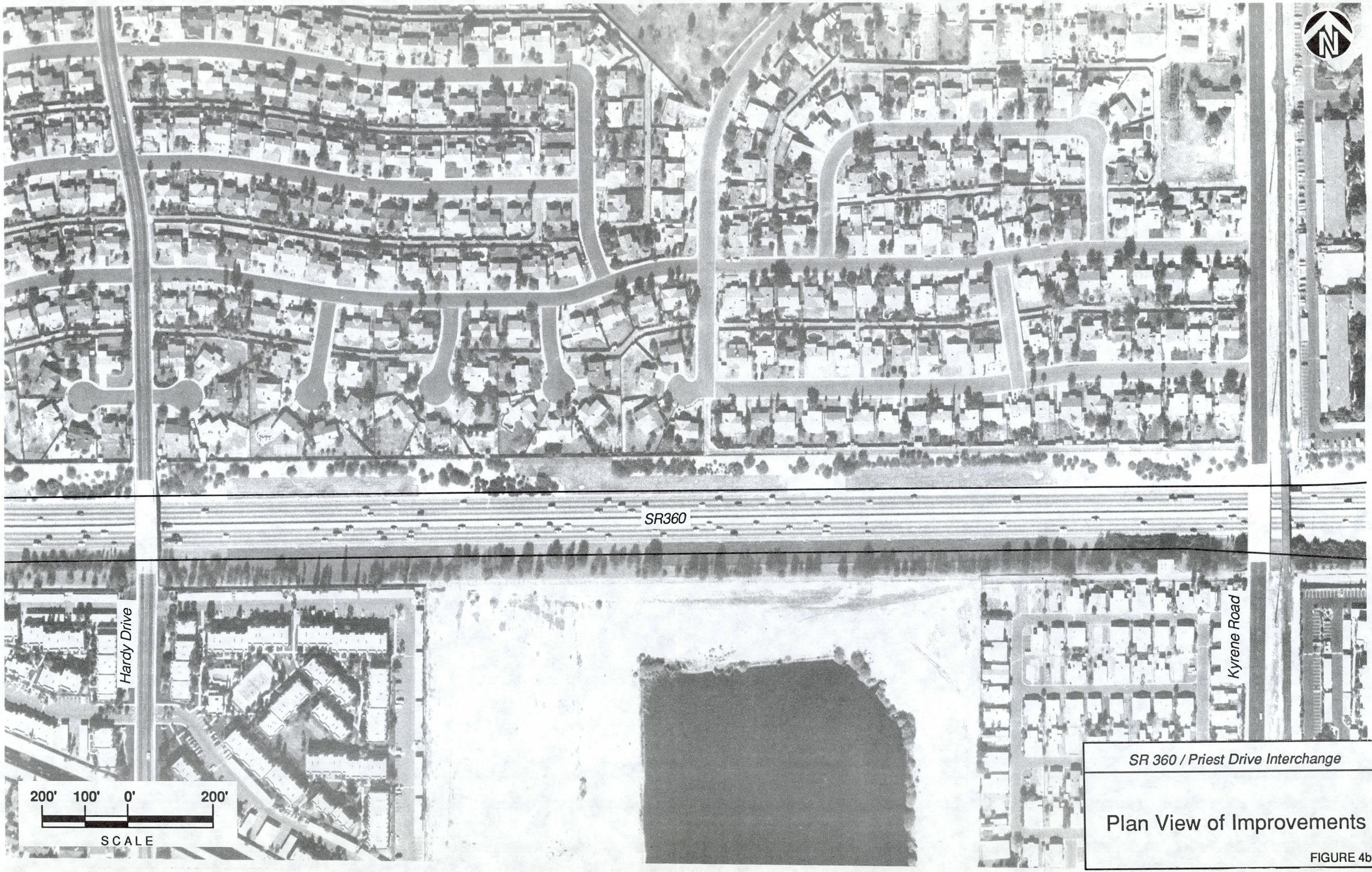
Priest Drive will be widened in order to accommodate double left turn lanes from southbound Priest Drive to the new eastbound on-ramp. This action will be coordinated with the City of Tempe plans to improve Priest Drive between Baseline Road and Southern Avenue.



SR 360 / Priest Drive Interchange

Plan View of Improvements

FIGURE 4a



SR 360 / Priest Drive Interchange

Plan View of Improvements

FIGURE 4b

SR360

Kyrene Road

Mill Avenue

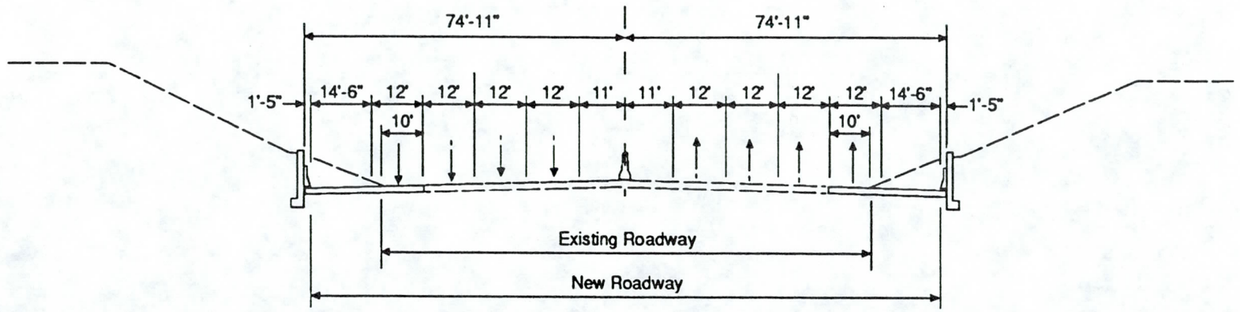
200' 100' 0' 200'

SCALE

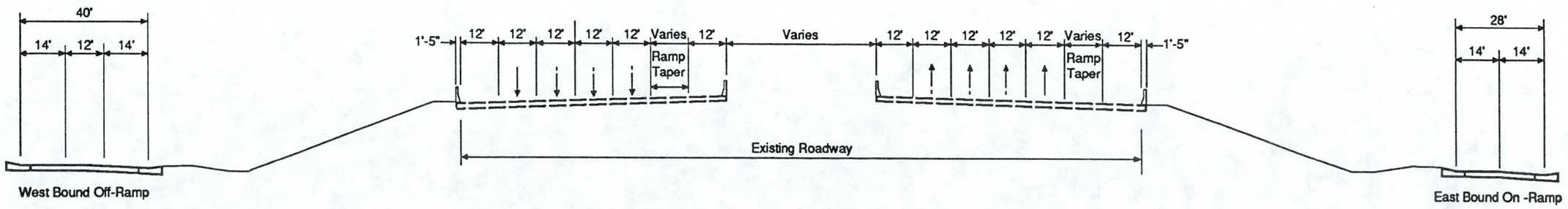
SR 360 / Priest Drive Interchange

Plan View of Improvements

FIGURE 4c



Typical Freeway Cross-Section
Near Hardy Drive



Typical Freeway Cross-Section
At Priest Drive

SR 360 / Priest Drive Interchange

Typical Cross-Sections

FIGURE 5

3.3 Project Schedule

The proposed project is planned to be constructed in conjunction with the I-10/SR 360 improvements. The eastbound on-ramp, eastbound traffic lane between Priest Drive and Mill Avenue, and the westbound traffic lane between Mill Avenue and Hardy Drive will become a part of Unit 1 of the I-10/SR 360 project. All retaining walls and noise walls will also be included in Unit 1. Unit 1 is expected to begin construction in November, 1992 and be completed in March, 1994. The westbound off-ramp and the westbound traffic lane between Priest Drive and Hardy Drive will be a part of Unit 2. Unit 2 is expected to begin construction in April, 1994 and be completed in July 1995.

3.4 Project Financing

Financing for the traffic interchange will be a joint public/private venture. Grossman Company Properties, the developer of the Spectrum Center at Priest Drive and Baseline Road, has committed $8 million to the design and construction of the project. This amount is expected to cover the major portion of the cost of constructing the interchange and the additional lanes on SR 360 between Priest Drive and Mill Avenue. Costs in excess of $8 million will be borne by the State of Arizona. The improvements to Priest Drive between Baseline Road and Southern Avenue will be financed by the City of Tempe.

4.0 ALTERNATIVES

The number of alternatives that can be considered is limited by the existing facilities, the planned improvements to the I-10/SR 360 interchange, and the surrounding conditions. These alternatives are described below.

4.1 No Action

The no-action alternative would result in the continuation of the existing circulation system, as modified by the projects that have been approved. No Priest Drive interchange or additional lanes on SR 360 would be constructed.

This alternative would have major negative impacts on the existing and future traffic conditions in the area. Essential access to the high-intensity commercial center to be built at the northwest corner of Priest Drive and Baseline Road would not be provided. The increased traffic demand would thus create congested conditions at the other interchanges on SR 360, at the I-10/Baseline interchange, and on the arterial streets in the area.

Also negatively affected by this alternative would be the major transportation corridor represented by Priest Drive, which will be widened and improved in the future. Service to the projected new development along Priest Drive to the north of SR 360 would be inadequate, resulting in additional congestion at arterial intersections and SR 360 interchanges. The potential for new development in the Town of Guadalupe would also be lessened.

4.2 Half-Diamond Interchange with Additional Lanes (Selected)

This alternative would include the construction of a half-diamond interchange on SR 360 at Priest Drive, with access to and from the east. In addition, a new lane in each direction would be added to SR 360 the between Priest Drive and Mill Avenue ramps. This alternative is described in Section 3.0 and is the subject of this environmental assessment. This is the selected alternative.

4.3 Half-Diamond Interchange With No Additional Lanes

This alternative would result in the construction of a half-diamond interchange on SR 360 at Priest Drive, with access to and from the east. However, no new lanes would be added to SR 360. The new ramps would connect to the existing three-lane mainline of SR 360.

This alternative is not recommended because of the impact on the SR 360 mainline that would be caused by the traffic using the new interchange. Without the new lanes, congestion would be caused by the weaving movements of traffic entering and exiting SR 360 at Priest Drive. These movements are further complicated by the proximity of the Priest Drive interchange to the I-10/SR 360 interchange. Thus, the additional lanes are needed to serve as auxiliary weaving lanes to provide more distance for Priest Drive traffic to gain access to the three mainline SR 360 lanes in each direction.

4.4 Other Alternatives Considered

Other alternatives were also considered, but were eliminated early in the evaluation. A full interchange that provides full access would normally be desirable. However, the I-10/SR 360 interchange, located 3,000 feet west of Priest Drive, precludes the straight-leg ramps that would be needed for a full diamond interchange.

Also considered was a partial-cloverleaf interchange with loop ramps on the east side of Priest Drive. However, this option would require the acquisition of extensive additional right-of-way. This acquisition would impact residences on the north side of SR 360 and would impact both the Western Canal and the new Salt River Project substation on the south side of the Western Canal.

5.0 ENVIRONMENTAL CONSIDERATIONS

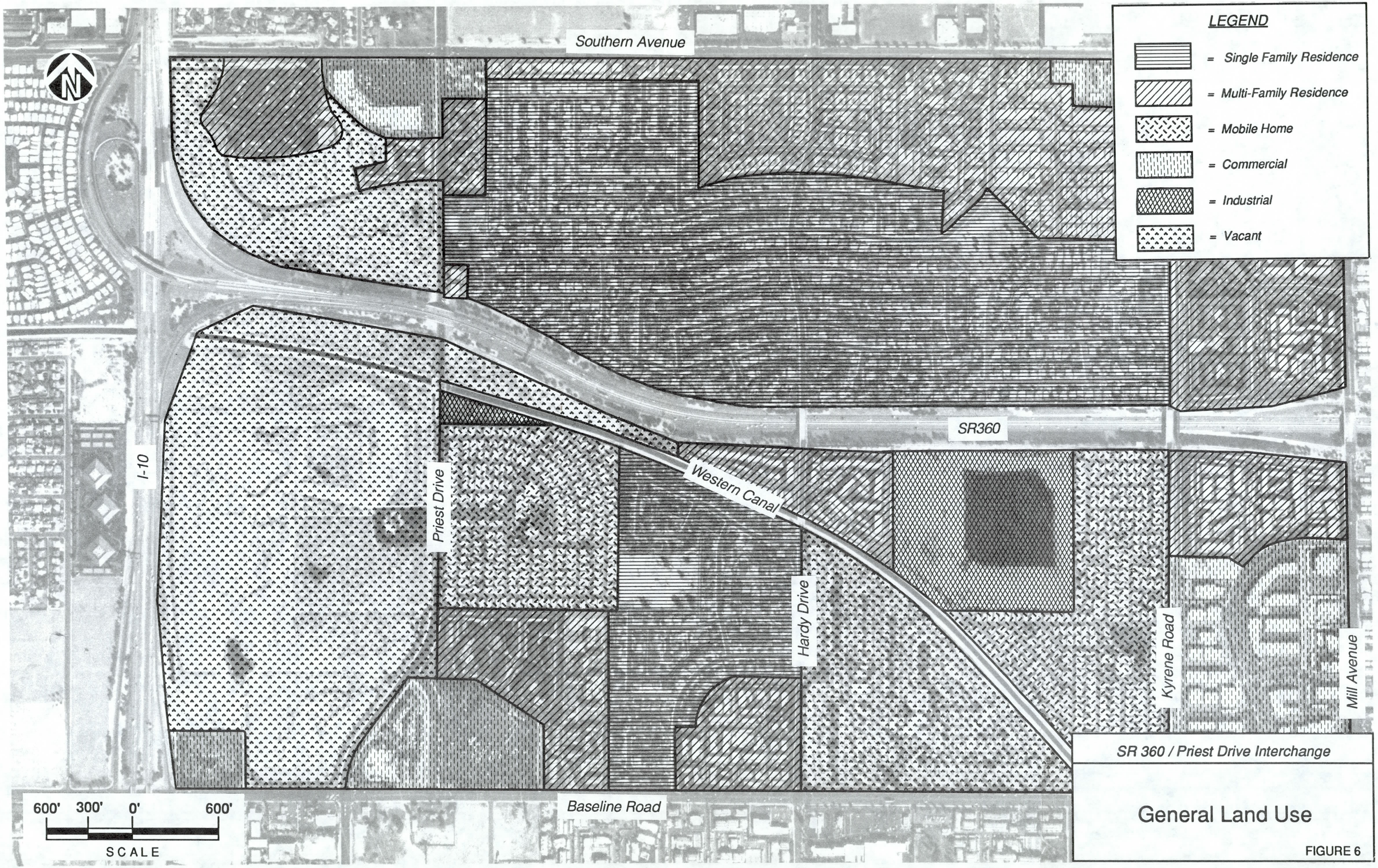
5.1 Land Use

The general area within which the project is located is bounded by I-10 on the west, Southern Avenue on the north, Mill Avenue on the east, and Baseline Road on the south. This area is characterized by a variety of land uses. Included are single-family homes, multi-family residential units, mobile home parks, industrial uses, commercial uses, and vacant land. The general land uses are illustrated on Figure 6.

The area immediately north of SR 360 between Priest Drive and Kyrene Road is almost entirely single-family residences. A single-family area is also situated west of Hardy Drive and south of the Western Canal. Multi-family complexes occupy the areas north and south of SR 360 between Kyrene Road and Mill Avenue. Multi-family developments are also located on either side of Hardy Drive south of SR 360, at Hardy Drive and Baseline Road, and on Priest Drive south of Southern Avenue. Large mobile home parks are situated on Priest Drive south of SR 360 and along Kyrene Road between SR 360 and Baseline Road. Commercial uses are located at the intersections of the major arterial streets. A large business park occupies the area between Kyrene Road and Mill Avenue north of Baseline Road. A large vacant parcel is bounded by I-10, SR 360, Priest Drive, and Baseline Road. Vacant property also exists north of SR 360 between Priest Drive and I-10.

The major land use compatibility issue relates to the vacant property between Priest Drive and I-10. Of particular relevance is the parcel south of SR 360. The City of Tempe General Plan designates this area as a major growth node. This land use category is characterized by the General Plan as an area that supports a mix of four land uses; multi-family residential, office, commercial, and industrial. It requires a high level of quality and a specific plan of development that must be approved by the City.

A major regional shopping center has been proposed for this site. The development is compatible with the growth node description of the General Plan. The City of Tempe has approved the request by the developer for the project. The approval includes the needed zoning changes and the general plan of development for a regional shopping center of 1,100,000 square feet and related retail facilities of 389,000 square feet on approximately 98 net acres. The development of this site has long been a high priority of the City of Tempe and is an important element of the City's development program.



SR 360 / Priest Drive Interchange

General Land Use

FIGURE 6

The Spectrum Festival Traffic Study, prepared in April 1990, has shown that the proposed interchange at Priest Drive and SR 360 is an important element in accommodating the traffic that will be generated by the development. In addition, the City of Tempe General Plan provides for the addition of the proposed interchange at Priest Drive and SR 360. Thus, the proposed project is completely compatible with the General Plan.

The City of Tempe also plans to widen and improve Priest Drive between Baseline Road and Southern Avenue. The proposed interchange is compatible with these improvements. The two projects will be closely coordinated.

5.2 Socioeconomic Factors

The proposed project will not require the acquisition or displacement of any residences or business establishments. The overall project to improve the I-10/SR 360 interchange will involve the acquisition of additional right-of-way between the existing SR 360 and the Western Canal immediately east of Priest Drive. This acquisition of vacant land is necessary in order to shift the SR 360 mainline to the south. The eastbound on-ramp of the proposed project will require a slight addition of area to this acquisition. The on-ramp will then be located on this vacant property north of the Western Canal. The westbound off-ramp will be located on property now occupied by the westbound lanes of the SR 360 mainline. No additional property acquisition on the north will be required.

Interruptions to existing local businesses will not be caused by the project. No businesses are presently located in the immediate area of the project. The project will thus not disrupt existing access to either businesses or residences.

Economic impacts are expected to be positive. Employment opportunities will be created and the tax base will be increased by the developments that will be enhanced by the project. The regional shopping center described in Section 2.0 will be a major economic benefit to the area. In addition, undeveloped land on both sides of Priest Drive is expected to develop within the next few years. The parcel on the northwest corner of Priest Drive and SR 360 is anticipated to develop as a retail/commercial use. It is expected that the vacant property at the northeast corner of Southern Avenue and Priest Drive will become an office/warehouse facility. The proposed project will enhance the potential of these developments.

5.3 Cultural Resources

Previous cultural resource surveys have identified and documented the presence of prehistoric Hohokam sites in the vicinity of the proposed project. A preliminary review of the archeological site records for these areas was conducted as a part of the preparation of the Environmental Assessment for the I-10/SR 360 interchange improvements. Information from the review is summarized in that document.

The area that will be affected by both the I-10/SR 360 project and the SR 360/Priest Drive interchange includes the previously-identified Los Hornos site. In conjunction with the I-10/SR 360 project, a program has been defined to determine the extent and condition of the Los Hornos site. This program outlines procedures for archeological testing and data recovery. It has been reviewed and approved by the State Historic Preservation Office and the Advisory Council on Historic Preservation. The work is now underway by SWCA, Inc. under contract to ADOT. This work will be completed prior to project construction.

A report on the results of the study will be prepared. Mitigation will be coordinated with the State Historic Preservation Office and the Advisory Council on Historic Preservation. All requirements of Section 106 of the Historic Preservation Act will be met.

In addition to the documentation provided by this study, any previously-unidentified cultural resources that may be encountered during project construction will be brought to the attention of ADOT Environmental Planning Services. Construction will be halted until the significances of the resource is evaluated.

5.4 Air Quality

An analysis of the air quality impacts of the proposed project was conducted. The details of the analysis and its results are contained in a separate Air Quality Report, which is on file with ADOT Environmental Planning Services.

The purposes of the air quality study were (1) to describe the air pollutants associated with motor vehicle exhaust; (2) determine applicable air quality standards and regulations; (3) examine the existing air quality conditions in the study area; and (4) identify and quantify the possible air quality impacts of the proposed project. Each of these topics is discussed in the Air Quality Report. The results of the impact assessment are summarized below.

- ***Pollutants for Analysis***

Pollutants that can be traced principally to motor vehicles are those that are of relevance to evaluating the impacts of the project. These include carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NO_X), ozone (O_3), and lead. Transportation sources account for a very small percentage of regional emissions of sulfur oxides (SO_X) and particulate matter (PM_{10}), and detailed analyses for these contaminants are not warranted.

Motor vehicles have historically constituted a major source of lead emissions to the atmosphere. Lead levels have decreased significantly and will continue to do so, due to the mandated decrease and elimination of lead in gasoline. Therefore, a detailed analysis of the impact of lead emissions is also not warranted.

CO impacts are localized. Even under the worst meteorological conditions and most congested traffic conditions, high concentrations are limited to within a relatively short distance (300 to 600 feet) of heavily travelled roadways. Consequently, it is appropriate to predict concentrations of CO on a localized or "microscale" basis.

HC and NO_X emissions from automotive sources are of concern primarily because of their role as precursors in the formation of ozone. Ozone is formed through a series of reactions which take place in the atmosphere in the presence of sunlight. Since the reactions are slow and occur as the pollutants are diffusing downwind, elevated ozone levels are often found many miles from sources of the precursor pollutants. The effects of HC and NO_X emissions are therefore generally examined on a regional or "mesoscale" basis.

While the addition of ramps from SR 360 to Priest Drive is expected to lessen local congestion, it is not expected to demonstrate any large-scale regional improvement. Due to this, no analysis of regional pollutants such as HC or NO_X was conducted. A microscale study of CO was done to quantify the local effects of the project.

The regional pollutants for which detailed analyses are not warranted are covered by the process used by the Maricopa Association of Governments (MAG) for assuring conformity with air quality plans. The Arizona State Implementation Plan (SIP) includes regional air quality plans addressing the three pollutants for which the Maricopa County area has not attained national ambient air quality standards: carbon monoxide, ozone, and particulate matter. The MAG 1987 Carbon Monoxide Plan for the Maricopa County Area and the MAG 1987 Ozone Plan for the Maricopa County Area were adopted by the MAG Regional Council on June 24, 1987. On March 28, 1988 the Regional Council adopted the MAG 1988 Particulate Plan for PM-10: Phase One. In these air quality planning efforts, the adopted MAG Freeway/Expressway Plan and priorities were incorporated into the technical analysis for the assessment of base case conditions, as well as the evaluation of alternative control measures. Thus, the assessments of the freeway/expressway plan and the air quality plans are performed simultaneously. Through this procedure, the air quality effects of the freeway/expressway plan are directly accounted for and conformity is assured. Both the transportation plan and the Transportation Improvement Program (TIP) conform to the SIP. The SR 360/Priest Drive project is included in the approved TIP.

- ***Methodology***

Microscale air quality modeling was performed using the most recent version of the EPA mobile source emission factor model (MOBILE 4.1) and the CAL3QHC air quality dispersion model to estimate existing, no build, and build CO levels in the project area. Vehicular Emissions were estimated using the EPA Mobile 4.1 vehicular emission factor model (User's Guide to MOBILE 4.1, Mobile Source Emission Factor Model, Publication No. EPA-AA-TEB-91-01, Ann Arbor, Michigan, July 1991). MOBILE 4.1 is a recent update of MOBILE 4 (User's Guide to MOBILE 4, Mobile Source Emission Factor Model, Publication No. EPA-AA-TEB-89-01). The CAL3QHC air quality dispersion model is a modification of the CALINE3 model (CALINE3: A Versatile Dispersion Model for Predicting Air Pollutant Levels Near Highways and Arterial Streets, Report Number FHWA/CA/TL-79/23). Detailed descriptions of these models are contained in the Air Quality Report.

CO levels resulting from motor vehicles using the proposed project and associated roadways were estimated at 5 locations using the CAL3QHC model. These locations are illustrated on Figure 7. Sites were selected on the basis of existing and estimated future traffic conditions and included the locations where the greatest project-related air quality impacts could occur. Sites included sensitive receptors, such as residences, along the corridor.

The transport and concentration of pollutants emitted from motor vehicles are influenced by three principal meteorological factors: wind direction, wind speed, and the temperature profile of the atmosphere. The values for these parameters were chosen to maximize pollutant concentrations at each prediction site (i.e., to establish a conservative worst case situation).

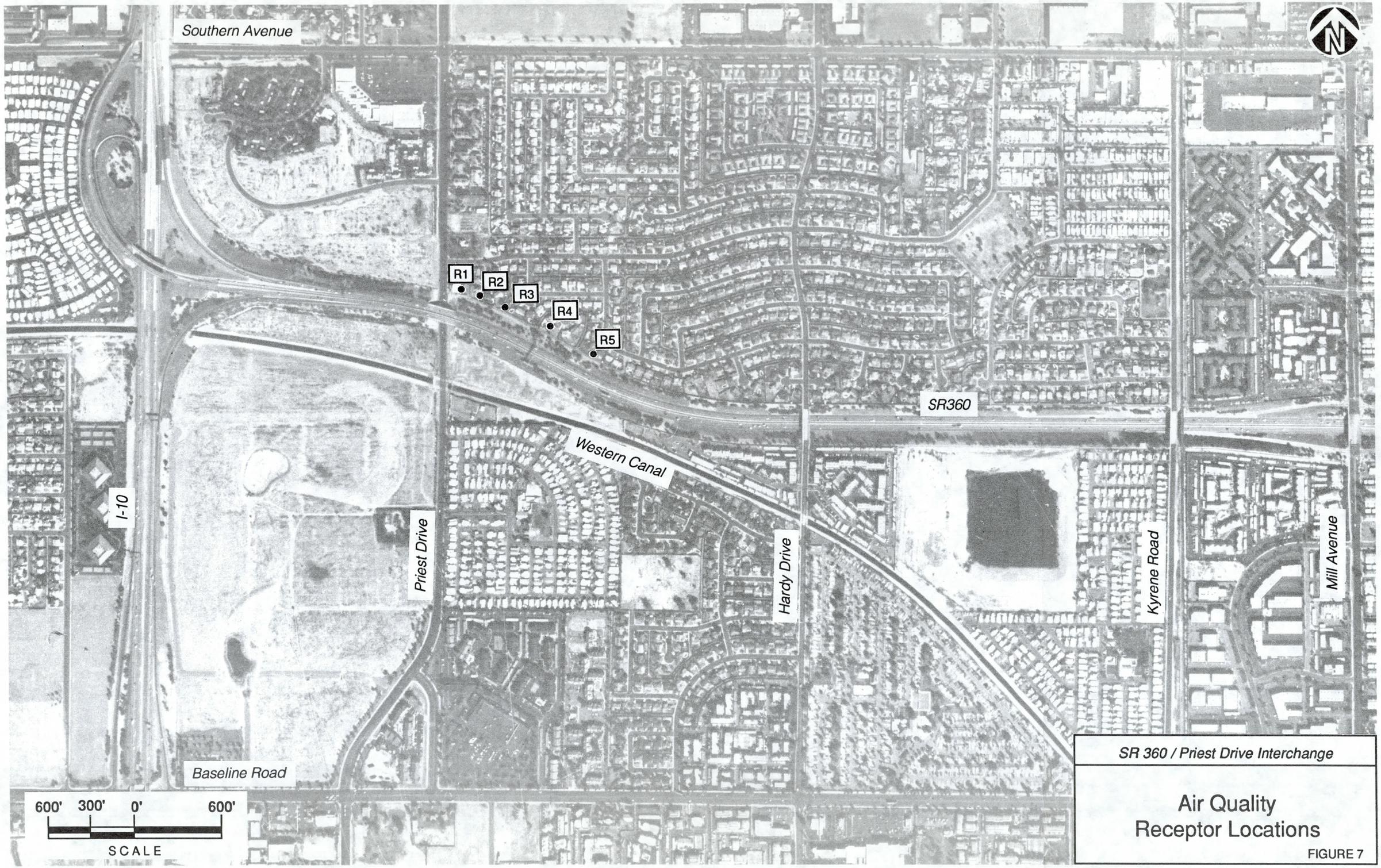
- ***Analysis Results***

Results of the 1 and 8 hour microscale CO analyses predict that there will be no violation of the appropriate CO standard for all scenarios (build and no-build). Due to the addition of the westbound off ramp and the resulting intersection with Priest Drive, build CO levels will be slightly higher than the no build levels. The receptors nearest the intersection (R1, R2 and R3) show the largest impacts. This increase (less than 1 ppm for the 8 hour analysis) will not cause any violation of the National Ambient Air Quality Standards.

- ***Construction Impacts on Air Quality***

The air quality impacts of the proposed action would be limited to short-term increased fugitive dust and mobile source emissions during construction.

Fugitive Dust Emissions - Fugitive dust is airborne particulate matter, generally of a relatively large particulate size. Construction-related fugitive dust would be generated by haul trucks, concrete trucks, delivery trucks, and other earth moving vehicles operating around the construction sites. This would be due primarily to particulate matter resuspended ("kicked up") by vehicle movement over paved and unpaved roads and other surfaces, dirt tracked onto paved surfaces from unpaved areas at access points, and material blown from uncovered haul trucks.



SR 360 / Priest Drive Interchange

Air Quality Receptor Locations

FIGURE 7

The highway contractor is required by the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction to observe and comply with all air pollution ordinances, regulations, orders, etc., from those agencies having expertise and/or jurisdiction. These ordinances and regulations require burning permits and certification of burning methods, use of dust palliatives, and licensing of pavement and crushing plants to ensure compliance with particulate emission regulations.

Generally, the distance that particles drift from their source depends on their size, emission height, and wind speed. Small particles (30 to 100 micron range) can travel several hundred feet before settling to the ground, depending on wind speed. Most fugitive dust, however, is made up of relatively large particles (i.e., particles greater than 100 microns in diameter). These particles are responsible for the reduced visibility often associated with this type of construction. Given their relatively large size, these particles tend to settle within 20 to 30 feet of their source.

In order to minimize the amount of construction dust generated, the guidelines below will be followed. Since the project is in a PM_{10} non-attainment area, all the proposed particulate control measures related to construction activities will be followed. The following preventative and mitigative measures will be taken to minimize the possible particulate pollution problem:

I. Site Preparation

A. Minimize land disturbance;
B. Use watering trucks to minimize dust;
C. Stabilize the surface of dirt piles if not removed immediately;
D. Use windbreaks to prevent any accidental dust pollution;
E. Limit vehicular paths and stabilize these temporary roads; and
F. Pave all unpaved construction roads and parking areas to road grade for a length no less than 50 feet where such roads and parking areas exit the construction site to prevent dirt from washing onto paved roadways.

II. Construction

A. Use dust supressants on traveled paths which are not paved;
B. Minimize unnecessary vehicular and machinery activities; and

C. Minimize dirt track-out by washing or cleaning trucks before leaving the construction site (alternative to this strategy is to pave a few hundred feet of the exit road, just before entering the public road).

III. Post Construction

A. Revegetate any disturbed land not used;
B. Remove unused material;
C. Remove dirt piles; and
D. Revegetate all vehicular paths created during construction to avoid future off-road vehicular activities.

(Provided by the Arizona Department of Environmental Quality)

Mobile Source Emissions - As discussed previously, carbon monoxide (CO) is the principal pollutant of concern when considering localized air quality impacts of motor vehicles. Since emissions of CO from motor vehicles increase with decreasing vehicle speed, disruption of traffic during construction could result in short-term elevated concentrations of CO, the temporary reduction of roadway capacity, and the increased queue lengths. In order to minimize the amount of emissions generated, every effort will be made during the construction phase to limit disruption to traffic, especially during peak travel periods.

- ***Conclusion***

The addition of a half diamond interchange from SR 360 to Priest Drive is expected to have no impacts on regional (mesoscale) air quality levels. The project is not expected to reduce regional vehicle miles traveled (VMT) or increase regional vehicle speeds. The project will relieve some congestion in the area, but the impact is predicted to be too small to show any regional improvement.

The project is in a non-attainment area for PM_{10}, thus care must be taken during construction to reduce the amounts of particulates generated.

The project is predicted to cause slightly elevated carbon monoxide levels at selected receptors when compared to a no build alternative. This increase is primarily due to two factors. The first and most significant is the creation of signalized intersections at Priest Drive and SR 360 westbound off-ramp crossing and at Priest Drive and SR 360 eastbound on-ramp crossing. Intersections generally cause increased carbon monoxide levels due to vehicular idling. The second factor is the decreased distance between roadway (in this case the newly created ramps) and receptors. These factors contribute to an increase in predicted carbon monoxide levels. The overall values however, a relatively low and no violation of the one or eight hour National Ambient Air Quality Standards is predicted.

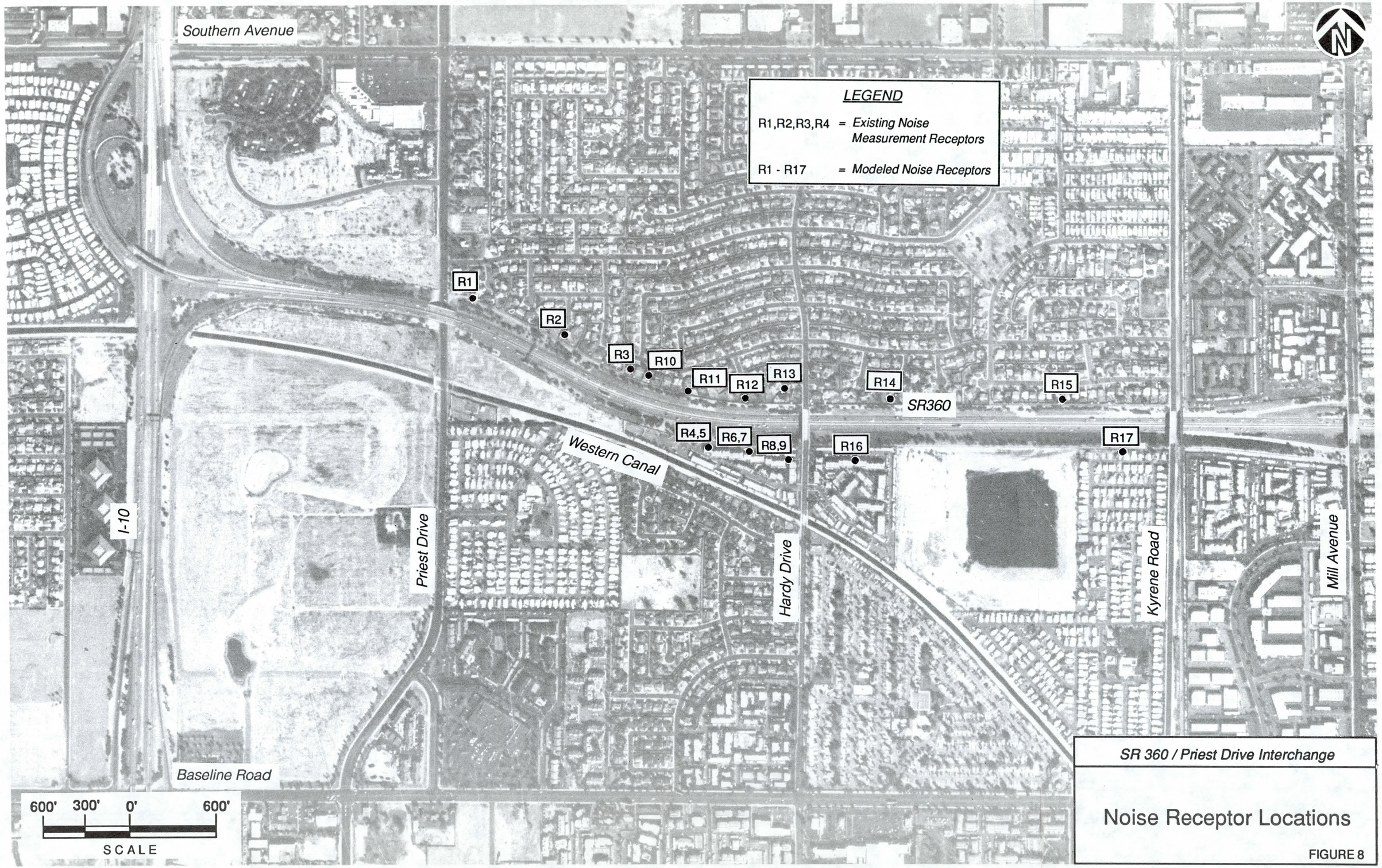
5.5 Noise

An analysis of the noise impacts of the proposed project was conducted. The details of the analysis and its results are contained in a separate Noise Assessment Report, which is on file with ADOT Environmental Planning Services. A summary of the results of the assessment is provided below.

Existing noise levels and future noise impacts were assessed at noise sensitive receptors along the SR 360/Priest Drive interchange project corridor. Sensitive land uses in the vicinity include single-family, multi-family and mobile home residences. The receptor locations are illustrated in Figure 8.

- ***Methodology***

Existing and future noise levels were determined using the latest version of SOUND32, a menu driven version of the FHWA Stamina 2.0 highway traffic noise modeling program (FHWA-DP-58-1). SOUND32 was developed by the California Department of Transportation (Caltrans, 1991) and is based entirely on Stamina 2.0 fitted with the FHWA reference sound emission curves. Reference sound levels are calculated using these speed-dependent reference noise emissions curves. The SOUND32 computer model calculates a predicted noise level through a series of adjustments to the reference sound levels. The model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level".



SR 360 / Priest Drive Interchange

Noise Receptor Locations

FIGURE 8

The traffic noise impact assessment was prepared in accordance with the FHWA Federal Highway Policy Manual 7-7-3, "Procedures for Abatement of Highway Traffic Noise and Construction Noise". The predicted traffic generated noise levels are compared to the FHWA criteria to determine mitigation measures necessary for each alternative.

- ***Existing Noise Levels***

The existing background conditions were modeled based on results of a measurement survey conducted at four sensitive receptor sites along the project corridor. Results of the survey were used to calibrate the computer model used to calculate noise impacts. Noise sensitive receptors adjacent to SR 360 presently experience peak hour noise levels in the 61 to 71 dBA (one-hour Leq) range. Most of the receptors experience existing noise levels that approach or exceed the FHWA noise abatement criteria of 67 Leq, which applies to residential exterior activity areas. Table 1 shows the existing modelled noise levels.

- ***Future Noise Impacts***

Future noise levels for No-Build and Build conditions were computed at seventeen noise sensitive receptor locations along SR 360 to determine project related impacts. Resultant noise levels for the year 2005 are expected to be in the 62 to 74 dBA range for the No-Build scenario and 64 to 74 dBA the Build alternative. The highest noise increase over existing levels is 5 dBA which includes the effects of increased traffic levels due to future development. The highest project-related noise increase of 3 dBA is expected to occur at homes along the north side of SR 360 adjacent to the proposed westbound Priest Drive off-ramp and would be primarly due to ramp traffic. The noise levels at a majority of sensitive receptors would approach or exceed the 67 Leq criteria with or without the project; Build noise levels are 1 to 3 dBA higher than the No-Build scenario. Table 3 shows the predicted noise levels for the 17 receptor locations.

Intermittent peak noise levels associated with the construction phase of the project were estimated to be in the 85 to 95 dBA range along the proposed right-of-way. The earth moving and grading phases of project construction would generate the highest noise levels but would only occur sporadically for short periods of time.

Table 1

FUTURE UNMITIGATED NOISE LEVELS

RECEPTOR NUMBER	RECEPTOR NAME	STATION NUMBER	LAND USE	EXISTING MODELED Leq (dBA)	FUTURE NO BUILD Leq (dBA)	FUTURE BUILD Leq (dBA)	INCREASE OVER EXISTING	INCREASE OVER NO BUILD
1	Duplex	122+00	MFR	65	66	69	5	3
2	House	128+00	SFR	68	69	72	4	3
3	House	134+40	SFR	69	72	74	5	2
4	Apartment, 1st Floor	141+60	MFR	66	67	68	2	1
5	Apartment, 2nd Floor	141+60	MFR	71	74	74	3	0
6	Apartment, 1st Floor	144+00	MFR	66	67	68	2	1
7	Apartment, 2nd Floor	144+00	MFR	71	71	72	2	1
8	Apartment, 1st Floor	147+50	MFR	66	68	69	3	1
9	Apartment, 2nd Floor	147+50	MFR	68	69	70	3	1
10	House (Behind Wall)	135+00	SFR	71	70	71	0	1
11	House (Behind Wall)	140+90	SFR	65	66	67	2	1
12	House (Behind Wall)	144+50	SFR	66	66	68	2	2
13	House (Behind Wall)	148+00	SFR	61	62	63	2	1
14	House (Behind Wall)	154+.00	SFR	65	66	67	3	1
15	House (Behind Wall)	167+.00	SFR	64	65	67	3	2
16	Apartments	151+.00	MFR	61	62	64	3	2
17	Mobile Home Park	171+.00	MHP	65	66	67	2	1

- ***Conceptual Mitigation***

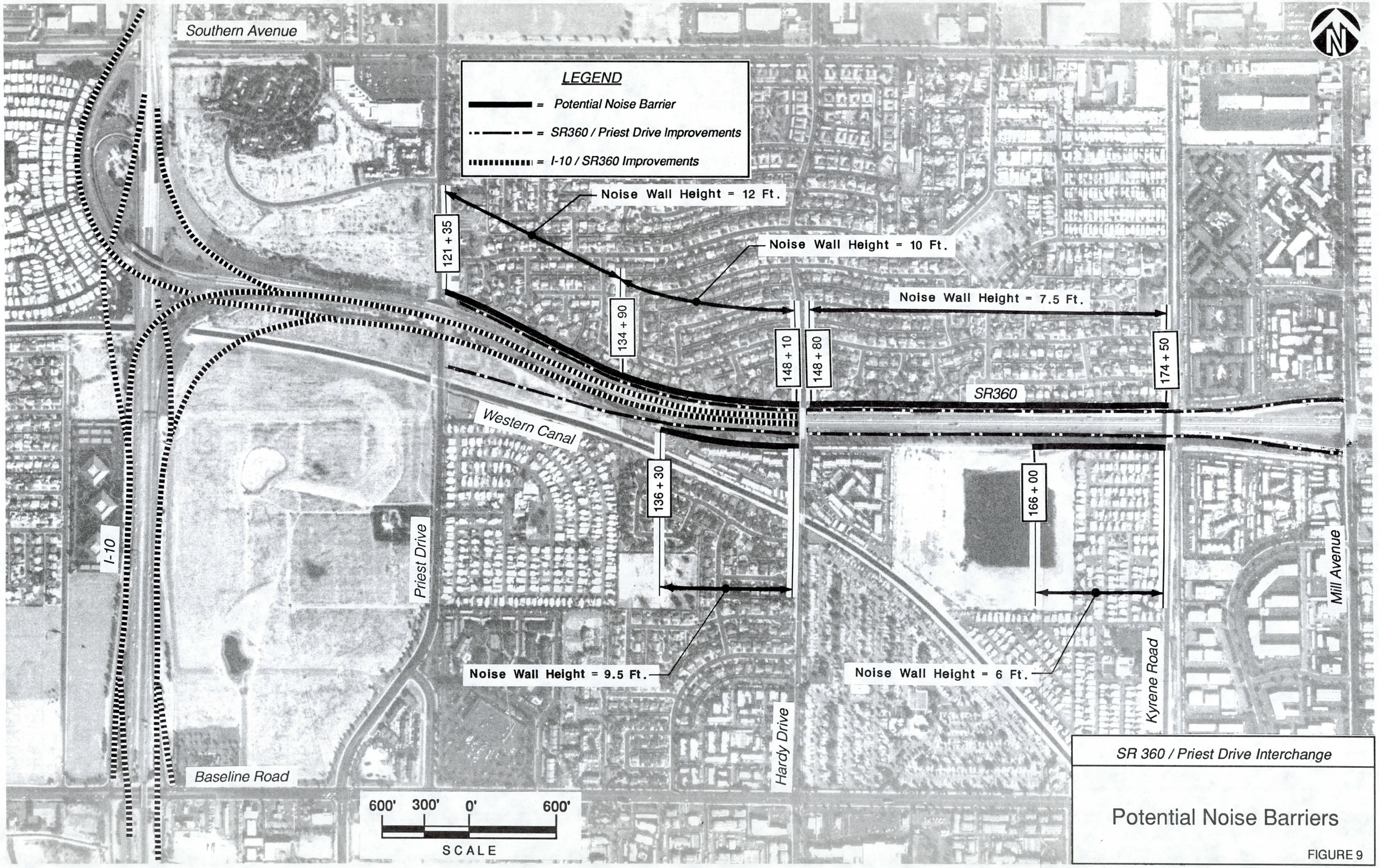
Mitigation of traffic generated noise levels could be achieved through the use of soundwalls along the freeway right-of-way between SR 360 and adjacent residential land uses. The following soundwalls are the minimum necessary to reduce noise impacts at all affected residences. Figure 9 illustrates the general location of these potential soundwalls. They are described further in Table 2.

Westbound Side, Station 121+35 to 134+90 - A new twelve foot high soundwall 1,355 feet in length is proposed along the right-of-way to reduce noise from the westbound off-ramp. This wall would not mitigate noise emanating from the freeway mainlines which are substantially elevated in this area. The proposed soundwall would reduce ramp impacts and partially reduce mainline noise resulting in combined noise levels in the 63 to 66 dBA range at Receptors 1, 2, and 3.

Westbound Side, Station 134+90 to 148+10 - An 9-10 foot high soundwall is proposed at the R.O.W. north of SR 360. The wall should be a minimum of 10 feet at Station 134+90, tapering to 9 feet at Station 145+00 and tapering to the existing wall height of 5.5-6.0 feet at Station 146+00 and continuing at this height to Station 148+10. This could be a new sound wall or an extension (upward) of the existing block wall located in this area.

Westbound Side, Station 148+80 to 174+50 -The existing block wall along the northern side of SR 360 from Hardy Drive to Kyrene Road would need to be extended upward by at least 2 feet in order to reduce future impacts to 66 dBA or below. A new soundwall with a height of 7.5 feet could be built along the right-of-way in this area if the existing developer wall proves to be structurally inadequate.

Eastbound Side, Station 136+30 to 148+10 - A concrete block wall with a height of approximately 5.5 feet presently exists along the property line of the apartment complex. Extending the existing wall upward to a total height of 9.5 feet would mitigate all first floor apartment patio areas and substantially reduce noise impacts at a majority of second floor balcony areas. If the existing wall can not be extended, it is recommended that a minimum 9.5 foot soundwall be constructed at the top-of-slope in front of the developer wall.



SR 360 / Priest Drive Interchange

Potential Noise Barriers

FIGURE 9

Table 2

PROPOSED MITIGATION

RECEPTOR NUMBER	RECEPTOR NAME	STATION NUMBER	LAND USE	EXISTING MODELED Leq (dBA)	UNMITIGATED BUILD Leq (dBA)	MITIGATED BUILD Leq (dBA)	MITIGATION DESCRIPTION
1	Duplex	122+00	MFR	65	69	63	12' R.O.W. Wall
2	House	128+00	SFR	68	72	66	12' R.O.W. Wall
3	House	134+40	SFR	69	74	66	12' R.O.W. Wall
4	Apartment, 1st Floor	141+60	MFR	66	68	66	9.5' T.O.S. WALL
5	Apartment, 2nd Floor	141+60	MFR	71	74	72	Second Floor
6	Apartment, 1st Floor	144+00	MFR	66	68	66	9.5' T.O.S. WALL
7	Apartment, 2nd Floor	144+00	MFR	71	72	71	Second Floor
8	Apartment, 1st Floor	147+50	MFR	66	69	65	9.5' T.O.S. WALL
9	Apartment, 2nd Floor	147+50	MFR	68	70	68	Second Floor
10	House (Behind Wall)	135+00	SFR	71	71	66	10' R.O.W. Wall
11	House (Behind Wall)	140+90	SFR	65	67	65	10' R.O.W. Wall
12	House (Behind Wall)	144+50	SFR	66	68	66	8' R.O.W. Wall
13	House (Behind Wall)	148+00	SFR	61	64	64	Existing Wall
14	House (Behind Wall)	154+.00	SFR	65	67	65	7.5' R.O.W. Wall
15	House (Behind Wall)	167+.00	SFR	64	67	65	7.5' R.O.W. Wall
16	Apartments	151+.00	MFR	61	64	64	Existing Wall
17	Mobile Home Park	171+.00	MHP	65	67	62	6' ROW Wall

Eastbound Side, Station 166+00 to 174+50 - A 6 foot soundwall is proposed along the southern right-of-way from Station 166 to Kyrene Road to protect the mobile home park.

Construction related noise impacts are expected to occur at existing homes located near areas where the use of heavy equipment is likely to take place. Construction related noise impacts are considered short term in nature, and peak noise would occur sporadically. The average noise levels experienced over time would be significantly less than predicted peak levels. General mitigation measures are recommended for use as guidelines in developing a construction plan which takes into consideration the adverse impacts to the surrounding noise environment. These measures are summarized below. Detailed mitigation should be developed as part of the final design phase of the project.

1. *Design Considerations* - Use artificial barriers such as ground elevation changes and existing buildings as shields for construction noise. Strategically place stationary equipment to reduce impacts to sensitive receptors.

2. *Sequence of Operations* - Schedule multiple noisy operations concurrently.

3. *Construction of Soundwalls During Initial Stages* - Construct planned R.O.W. soundwalls during initial project phases.

4. *Alternate Construction Methods* - Use alternate construction methods where possible (e.g. vibration of hydraulic insertion or drilled holes for cast in place piles as alternatives to pile driving.)

5. *Source Control* - Emphasize source reduction noise mitigation including noise reducing muffler systems and regular equipment maintenance to keep machinery properly tuned.

6. *Time and Activity Constraints* - Use noisier equipment during daytime hours. Limit nighttime construction to quieter activities.

5.6 Biological Resources

Biological resources in the project area were evaluated for the I-10/SR 360 Environmental Assessment. The area was found to contain no endangered plants or wildlife resources or native plants. The SR 360/Priest Drive project will be located within the same area. Thus, no impact to biological resources will occur. This conclusion has been confirmed by the Arizona Game and Fish Department and the Arizona Department of Agriculture.

5.7 Visual and Aesthetic Impacts

Views of the structure that will result from the improvements to the I-10/SR 360 interchange were described in the Environmental Assessment for that project. The addition of the half-diamond interchange at Priest Drive will not alter the visual impacts as described in that document.

The addition of the fourth lane in each direction on SR 360 between Hardy Drive and Mill Avenue will affect the existing landscaping. The slope of the embankment on each side of the existing roadway will be cut back to allow for the additional lane. A retaining wall with surface treatment will be added and the existing grass and other landscaping will be removed. The replacement landscaping will utilize low-water-use plant material. The removed plant material will be salvaged where possible and used in other areas.

Landscaping plans for the segment west of Hardy Drive will be a part of the design of the I-10/SR 360 project. The design of the SR 360/Priest Drive interchange and additional lanes will include landscaping plans for the segment between Hardy Drive and Mill Avenue.

A visual impact may be caused by the relocation of an existing 69kv power transmission line. This line presently begins at the southeast corner of Priest Drive and the Western Canal and extends northward along the east side of Priest Drive. The reconstruction of the SR 360 mainline will require higher bridges over Priest Drive than presently exist. In order to maintain the required clearance over the freeway, the height of the power lines will have to be increased. Construction of the bridges will also require that the line be relocated laterally to clear the ends of the new bridges.

The proposed relocated line would begin at the SRP substation at a point approximately 150 feet east of Priest Drive, extend northward over SR 360 to the northern edge of the SR 360 right-of-way, then west along the right-of-way to the east side of Priest Drive, then north along Priest Drive in its present location. This relocation would place the power line and its support structures closer to the residential uses north of SR 360. This line would be directly south of the multi-family complex that is located on Priest Drive immediately north of SR 360. The line would also be closer to the single-family residences that abut the SR 360 right-of-way.

5.8 Local Traffic Impacts

The proposed project will affect the traffic volumes and patterns on the surrounding arterial streets. As noted in Section 2.0, the construction of the half-diamond interchange at Priest Drive is essential to serving the traffic demands that will result from the development of the approved Spectrum Center. The manner in which the local traffic patterns are affected was analyzed as part of the preparation of the Change of Access Report for the proposed project. This analysis developed traffic volumes for 2015, using MAGTPO forecasts and the traffic expected to be generated by the Spectrum Center.

In addition to using the projected traffic volumes, the traffic analysis also assumed the completion of improvements to the arterial street system. These improvements are included in the I-10/SR 360 project and in plans by the City of Tempe for Priest Drive. The assumed improvements are summarized below:

1. Widening of Baseline Road at I-10 to three through lanes and two left-turn lanes.

2. Construction of double left-turn lanes on the north and west approaches of the intersection of Baseline Road and Priest Drive.

3. Widening of Priest Drive to three through lanes in each direction and a center left-turn lane between Darrow Drive and Southern Avenue.

4. Widening of the intersection of Priest Drive and Southern Avenue to three through lanes, double left-turn lanes, and a separate right-turn lane on all four approaches.

5. Addition of eastbound double left-turn lanes and a traffic signal on Baseline Road at Lindon Lane.

6. Addition of a one-way eastbound access road from the Spectrum Center development to Priest Drive opposite the SR 360 on-ramp.

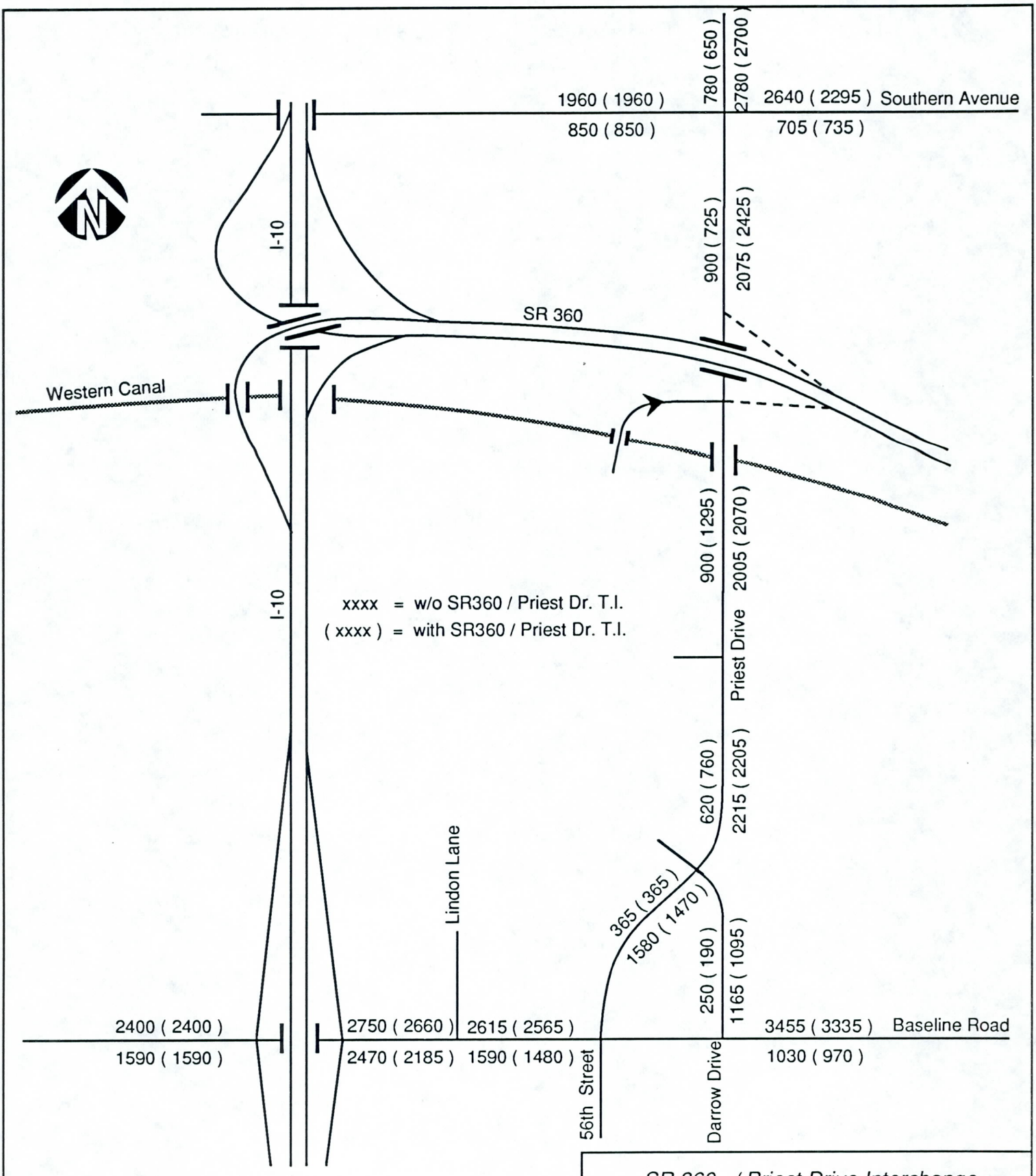
7. Addition of a traffic signal at Priest Drive and Darrow Drive.

Figures 10 and 11 illustrate the peak hour traffic volumes that are projected for the surrounding arterial streets. Figure 10 compares the 2015 a.m. peak hour volumes that will occur with and without the Priest Drive interchange. A similar comparison for p.m. peak hour volumes is shown in Figure 11.

The projections indicate that increased traffic volumes can be expected to occur on Priest Drive between Southern Avenue and Baseline Road with the addition of the interchange. The peak-hour increase occurs in directions away from SR 360 in the morning and toward SR 360 in the afternoon. On a daily basis, the Priest Drive traffic can be expected to include a higher proportion of truck traffic. Commercial vehicles serving the industrial areas along Priest Drive will have a more direct route to eastbound SR 360.

Corresponding decreased traffic volumes are projected on other surrounding arterial streets. Lower volumes will occur on both Southern Avenue and Baseline Road between Priest Drive and Mill Avenue and on Mill Avenue between Southern Avenue and Baseline Road. Improvements will also be seen on Baseline Road east of I-10. Heavy commercial traffic is expected to decrease on Southern Avenue between Hardy Drive and Mill Avenue and on Mill Avenue between Southern Avenue and SR 360.

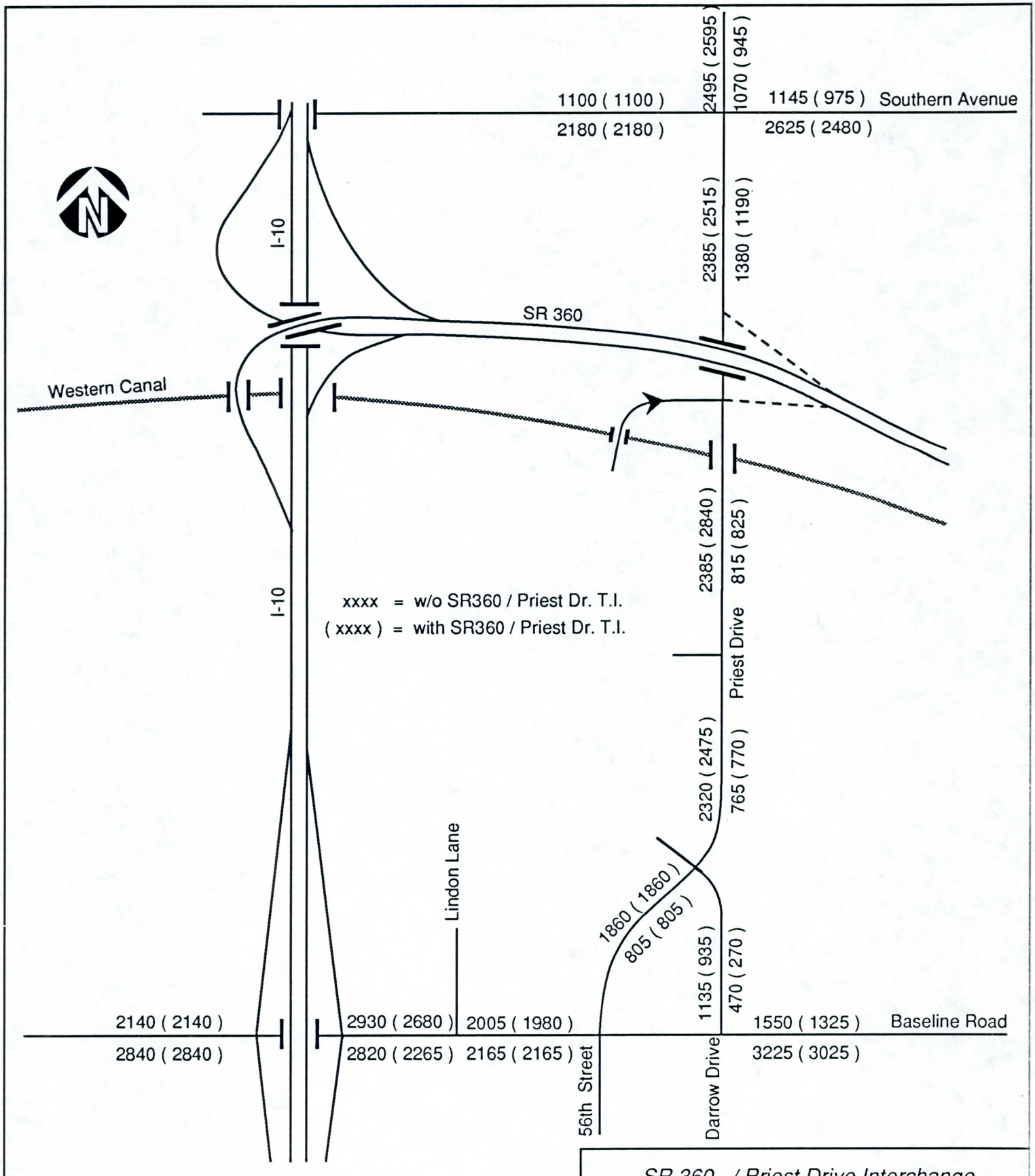
The traffic study also analyzed the volume/capacity relationships of the signalized intersections along Baseline Road and Priest Drive for the 2015 peak hour volumes. This analysis was based on the planning methodology of the 1985 Highway Capacity Manual. The planning analysis takes into account the volumes and basic geometrics of an



SR 360 / Priest Drive Interchange

2015 A.M. Peak Hour Traffic Volumes

FIGURE 10



SR 360 / Priest Drive Interchange

2015 P.M. Peak Hour Traffic Volumes

FIGURE 11

intersection. The procedure determines the critical volumes passing through an intersection in one hour based on the conflicting movements. The total critical volume for an intersection is compared to capacity criteria to determine whether the intersection would be under, near, or over capacity. The capacity criteria are shown in Table 3. The results of the capacity analysis are shown in Table 4 for the am and pm peak hour.

TABLE 3
CAPACITY CRITERIA FOR PLANNING
ANALYSIS OF SIGNALIZED INTERSECTIONS

Critical Volume for intersection, vph	Relationship to Probable Capacity
0 to 1,200	Under Capacity
1,201 to 1,400	Near Capacity
$\geq$ 1,401	Over Capacity

Source: Highway Capacity Manual, Transportation Research Board, Special Report 209, National Research Council, Washington, D.C., 1985, P. 9-21.

TABLE 4
YEAR 2015 LEVELS OF SERVICE

Intersection	CAPACITY			
	A.M. Peak Hour		P.M. Peak Hour	
	Without T.I.	With T.I.	Without T.I.	With T.I.
W. Ramp Terminal I-10 & Baseline Road	Under	Under	Near	Under
E. Ramp Terminal I-10 & Baseline Road	Under	Under	Under	Under
Lindon Lane & Baseline Road	Near	Near	Near	Under
Priest Drive & Baseline Road	Over	Over	Near	Near
Darrow Drive & Baseline Road	Under	Under	Near	Under
Priest Drive & Darrow Drive	Under	Under	Under	Under
S. Ramp Terminal 360 & Priest Drive	-	Under	-	Near
N. Ramp Terminal 360 & Priest Drive	-	Under	-	Near
Southern Avenue & Priest Drive	Near	Near	Near	Near

A comparison of the am peak hour with and without the Priest Drive interchange at S.R. 360 indicates that one intersection is expected to be over capacity both with and without the interchange. The results of the pm peak hour analysis shows that three intersections will have an improvement in their volume capacity relationships with the interchange.

5.9 Temporary Construction Impacts

The construction of the proposed project will cause short-term impacts that are commonly associated with any large-scale construction project. These effects will be associated with both the I-10/SR 360 interchange improvements and the SR 360/Priest Drive project.

Construction impacts that are expected to result from the I-10/SR 360 interchange improvements are described in the Environmental Assessment for that project. These impacts include: (1) increased traffic congestion and travel delays on SR 360 and I-10; (2) higher levels of exhaust emissions from construction machinery and delayed automobiles; (3) increases in fugitive dust resulting from soil exposed to wind and traffic; (4) potential short-term interruptions in utility service; and (5) increased noise levels from construction machinery.

In addition, the proposed project construction is likely to impact the traffic flow on Priest Drive. Increased congestion and delays may result. In addition to normal automobile and truck traffic, the school bus routes of Tempe School District No. 3 may be affected.

The construction of the SR 360/Priest Drive interchange is unlikely to cause major construction impacts beyond those already associated with the I-10/SR 360 project. By combining the projects into one construction contract, the lengthy disruption caused by sequential construction projects will be alleviated.

The impacted area will be extended by the construction of the additional lanes on SR 360 between Priest Drive and Mill Avenue. Traffic delays may be somewhat increased beyond those that will be caused by the I-10/SR 360 project.

Mitigation of the temporary construction impacts will be required as provisions in the construction contracts. Standard ADOT specifications will be used. Noise impacts will be mitigated as described in Section 5.5. Fugitive dust will be controlled as described in Section 5.4. A traffic management plan will be prepared that will allow continued vehicular circulation. Coordination with school district officials regarding bus routes will be included.

5.10 Right-of-Way Acquisition

The I-10/SR 360 interchange project will require the acquisition of additional right-of-way between the existing SR 360 and the Western Canal immediately east of Priest Drive. The eastbound on-ramp of the SR 360/Priest Drive project will require a slight addition of area to this acquisition. In total, the area to be acquired is bounded by SR 360 on the north, Priest Drive on the west, the Western Canal on the south, and the 1/16 section line of Section 33 (TINR4E) on the east. This entire area is vacant. No relocations of homes or businesses will be required. All other portion of the SR 360/Priest Drive project will be constructed within existing right-of-way.

5.11 Water Quality

In accordance with Section 402(p) of the Clean Water Act, a National Pollutant Discharge Elimination System (NPDES) permit will be required for the project construction activities as more than five acres of land are expected to undergo excavation and/or grading during construction. The Arizona Department of Transportation is in the process of obtaining a General Permit through the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI). It is expected that the General Permit will be in-place prior to the Priest Drive TI project construction.

6.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

6.1 Contact Letter and Responses

An initial contact letter was sent to selected public agencies and neighborhood organizations. The purpose of the letter was to convey information about the project and to request the identification of issues that should be considered in the environmental evaluation. The letter described the proposed project and its relationship to the I-10/SR 360 interchange improvements. A general location map and a more specific vicinity map were enclosed.

The letter was sent on October 29, 1991. Responses were requested by November 22, 1991. The following agencies and groups received the letter:

- City of Tempe
- City of Guadalupe
- Arizona Department of Agriculture
- Arizona Game and Fish Department
- Arizona Department of Environmental Quality
- U.S. Bureau of Reclamation
- Flood Control District of Maricopa County
- Salt River Project
- Tempe School District No. 3
- Peterson Park Homeowner's Association
- Tempe South Mountain Neighborhood Association

A copy of the letter, mailing list, and responses received to date are included in the Appendix.

6.2 Agency Meeting

A meeting with the City of Tempe was held on December 5, 1991. Attendees included representatives of various departments of the City of Tempe, ADOT, Stanley Consultants, and Parsons Brinckerhoff. Its purpose was to convey information about the project and to identify issues that should be considered.

Issues identified included the following:

- Relationships of the project to the City's general plan, especially with regard to the Spectrum Center development.
- Impacts on immediately-adjacent properties, with particular reference to the residential area north of SR 360
- Noise impacts and the potential need for noise barriers
- Potential air quality impacts
- Relationships to the City's planned Priest Drive improvements
- Visual effects of the project, specifically with reference to the landscaping along SR 360.
- Traffic impacts on the surrounding local street system.
- Temporary construction impacts.

6.3 Public Informational Meeting

A public meeting concerning the proposed project was held on January 8, 1992, at the Edna Vihel Activity Center, 3340 South Rural Road, Tempe. The purposes of the meeting were to display preliminary information about the project, respond to questions, and receive comments from the public.

Several actions were taken to advise the public of the meeting. These actions included the following:

- An advertisement was published by ADOT in the Tempe, Mesa, and Chandler Tribune newspapers on December 23, 1991 and January 2, 1992. The ad contained a brief description of the project, its location, and details concerning the time and place of the meeting.

- A notice of the meeting was mailed on December 23, 1991 to each residence in the area bounded by SR 360 on the south, Priest Drive on the West, Manhatton Drive on the north, and Kyrene Road on the east.

- A notice of the meeting was posted on December 26, 1991 at all apartment complexes, mobile home parks, and condominium developments in the area bounded by Baseline Road on the south, Interstate 10 on the west, Southern Avenue on the north, and Mill Avenue on the east.

- A notice of the meeting was sent to each of the public agencies that received the initial contact letter. These agencies are listed in Section 6.1.

- Information concerning the meeting as provided to each of the following neighborhood associations: Peterson Park Homeowner's Association; Tempe South Mountain Neighborhood Association, Baseline/Hardy Neighborhood Association; and Kyrene/Superstition Neighborhood Association.

- A news release concerning the meeting was issued by the ADOT Public Information Officer.

An informal open house format was used. Displays were provided that summarized the project description, the need for the project, environmental issues to be addressed, and future public involvement opportunities. Maps were displayed that illustrated both the general location and the specific components of the project. Members of the public were invited to attend the meeting at any time during the hours of 4:00 p.m. to 8:00 p.m. Representatives from the Arizona Department of Transportation and Parsons Brinckerhoff were present to discuss the material and answer questions. A comment form was provided for use by those who wished to submit written comments.

A total of 59 persons signed the meeting registration sheet. Eleven comment forms were returned. Issues and concerns expressed on the comment forms include the following:

- *Noise Impacts* - The potential for additional noise was the issue of most concern. Five persons listed this issue. Specific requests for the construction of noise barriers were included in the comments. The need to include the area between Hardy Drive and Mill Avenue in the noise analysis was also specified.

- *Traffic on Local Streets* - The generation of additional traffic on local streets, particularly Priest Drive, was identified as a concern. Difficulties in entering Priest Drive from Manhatton Drive and from the Rancho Tempe Mobile Home Park were specifically mentioned.

- *Need and Cost* - Two persons questioned the need for the project and expressed concern about its cost, particularly if it would raise taxes.

- *Air Quality* - Concern for the impact of the project on air quality was listed by one person.

- *Safety* - One person questioned the safety of the project as presented.

- *Construction Impacts* - One person suggested care in providing for traffic flows during construction.

- *Relationship to Future Projects* - Concern was expressed about the relationship of the proposed project to future plans for SR 360 and to the surrounding local streets.

6.4 Comments on Draft Environmental Assessment

The Draft Environmental Assessment was made available to the public and local agencies for review and comment through May 12, 1992. In addition to the responses that were submitted by persons who attended the public hearing, one letter was received from a local

agency. The Flood Control District of Maricopa County expressed concern about the possible need for a National Pollutant Discharge Elimination Permit (NPDES) permit. This letter is included in the Appendix. Section 5.11 of this environmental assessment was added in response to this comment.

6.5 Public Hearing

A location/design public hearing concerning the proposed project was held on April 22, 1992, at the Pyle Adult Recreation Center, 655 East Southern Avenue, Tempe. The purpose of the hearing was to receive public comments on the proposed new interchange and the draft environmental assessment.

Several actions were taken to advise the public of the hearing. These actions included the following:

- An advertisement was published by ADOT in the Tempe, Mesa, and Chandler Tribune newspapers on April 8, 1992 and April 17, 1992. The ad contained a brief description of the project, its location, and details concerning the time and place of the hearing.

- A notice of the meeting was mailed on April 14, 1992 to each residence in the area bounded by SR 360 on the south, Priest Drive on the West, Manhatton Drive on the north, and Kyrene Road on the east.

- A notice of the meeting was posted on April 15, 1992 at all apartment complexes, mobile home parks, and condominium developments in the area bounded by Baseline Road on the south, Interstate 10 on the west, Southern Avenue on the north, and Mill Avenue on the east.

- A notice of the meeting was sent to each of the public agencies that received the initial contact letter. These agencies are listed in Section 6.1.

An informal open house format was used. Displays were provided that summarized the project description, the need for the project, and the results of the environmental assessment. Maps were displayed that illustrated both the general location and the specific

components of the project. Members of the public were invited to attend the meeting at any time during the hours of 4:30 p.m. to 8:00 p.m. Representatives from the Arizona Department of Transportation and Parsons Brinckerhoff were present to discuss the material and answer questions. A comment form was provided for use by those who wished to submit written comments. A court reporter was present to record formal statements.

A total of 21 persons signed the meeting registration sheet. Four comment forms and one letter were received. No verbal statements were given to the court reporter. Copies of the transcript of the hearing responses are available from the Arizona Department of Transportation, Environmental Planning Services, 205 South 17th Avenue, Mail Drop 619E, Phoenix, Arizona, 85007, (602) 255-7767. The responses expressed on the comment forms are summarized below.

- Noise Impacts - Four persons commented on the noise issue. All expressed support of the proposed noise walls. Two of the four suggested that the walls be as high and as long as feasible. Landscaping and vegetation were also suggested as aids in reducing noise levels.

- Traffic Impacts - One person expressed concern with the increase in traffic levels that could occur on Priest Drive, which would increase the difficulty of entering Priest Drive from Manhatton Drive. Also of concern was the impact on the safety of school children that use the bus stops on Priest Drive. Another person commented that the project will result in improvement to traffic flows.

- Construction Impacts - One person expressed concern about possible noise and dust that could be created by construction activities. Also of concern was the possibility of structural damage caused by the operation of heavy equipment.

- Visual Impacts - One person expressed concern about the appearance of the proposed sound walls.

6.6 List of Preparers

The final environmental assessment was prepared by Parsons Brinckerhoff Quade & Douglas, Inc., under contract to Grossman Company Properties, who will provide a major portion of the funding for the construction of the project. The document was prepared in accordance with the relevant guidelines of the Arizona Department of Transportation (ADOT) and the Federal Highway Administration (FHWA), with direction and assistance from ADOT Consultant Management Services and Environmental Planning Services.

The following individuals participated either as preparers or reviewers in the preparation of this final environmental assessment.

Federal Highway Administration

Kenneth H. Davis, District Engineer, B.S. Civil Engineering; 22 years experience in highway project development.

Stephen D. Thomas, A.A. Civil/Mechanical Engineering; 15 years experience in highway project development.

Phil Bleyl, C.E., Brigham Young University, 30 years experience in highway development.

Arizona Department of Transportation

Steven Wilcox, P.E., Project Manager, Consultant Management Services, B.S. in Mining Engineering; South Dakota School of Mines and Technology; seven years experience in construction design and project management.

William P. Belt, Manager, Environmental Planning Services; B.S. in Agriculture, University of Arizona, six years experience in highway project development.
Michael R. Dawson, Supervisor, Project Coordination Branch, Environmental Planning Services; B.S. Natural Resource and Recreation Management, University of Arizona; seven years experience in highway project development and environmental analysis.

Bettina H. Rosenberg, Historic Preservation Specialist-Archaeologist, Environmental Planning Services, M.A. Archaeology, Arizona State University, B.A., State University of New York; 10 years experience in highway project development.

Larry R. Yeager, P.E., Transportation Engineering Specialist (Noise Analysis), Environmental Planning Services, B.S. Civil Engineering, Arizona State University; 18 years experience in highway project development.

Fred Garcia, Transportation Engineering Specialist (Air Quality), Environmental Planning Services, A.A. Phoenix College; 20 years experience in highway project development.

Parsons Brinckerhoff Quade & Douglas, Inc.

Daniel J. Hartig, P.E., Project Manager, M. Engineering, Pennsylvania State University; B.S. Civil Engineering, University of Delaware; 18 years experience in civil and transportation engineering.

Dennis A. Davis, AICP, Planning & Environmental Manager; M. Regional Planning, Cornell University, B.S. Civil Engineering, University of Arizona; 22 years experience in planning and environmental assessment.

Bruce D. Vana, P.E., Project Engineer, B.S. Civil Engineering (In-Progress), Arizona State University, 14 years experience in civil and highway engineering.

Kelly Vandever, Senior Environmental Technician; Certificate of Achievement, Acoustics, Golden West College; B.S. (In Progress), Engineering Computer Science, Orange Coast College; six years experience in air and noise analysis.

Alice Lovegrove, Environmental Engineer; B.E. Engineering Science, State University of New York; two years experience in air quality and noise modeling.

APPENDIX

Parsons Brinckerhoff 100 YEARS

Parsons Brinckerhoff Quade & Douglas, Inc.

Engineers
Architects
Planners

1501 W. Fountainhead Parkway
Suite 400
Tempe, Arizona 85282
602-966-8295
Fax: 602-966-9234

P.O. Box 24158
Tempe, Arizona 85285-4158

October 29, 1991

Mr. Harvey Friedson, Traffic Engineer
CITY OF TEMPE
31 East 5th Street
Tempe, Arizona 85281

Dear Mr. Friedson:

The firm of Parsons Brinckerhoff Quade & Douglas, Inc. has been retained to assist in the design of improvements to State Route 360 (Superstition Freeway) at Priest Drive in Tempe. In addition to the engineering design of the improvements, an environmental evaluation will be conducted in accordance with the National Environmental Policy Act (NEPA) and the corresponding procedures of the Arizona Department of Transportation (ADOT) and the Federal Highway Administration (FHWA). The purpose of this letter is to convey information about the project and to request your assistance in identifying environmental issues that should be considered.

The proposed project includes a half-diamond interchange on State Route 360 at Priest Drive. This new interchange will provide access between the two facilities to and from the east. In addition, one lane in each direction will be added to State Route 360 between Priest Drive and Mill Avenue. These improvements will be accomplished in conjunction with reconstruction of the interchange between Interstate 10 and State Route 360.

An evaluation of the environmental impacts of the improvements to the Interstate 10/State Route 360 interchange was completed in 1990. The results of this study are contained in the "Final Environmental Assessment, Upgrading of I-10/Superstition and I-10/Baseline Road Traffic Interchanges, June 1990". This report was approved by both ADOT and FHWA in May 1990. The environmental evaluation of the State Route 360/Priest Drive project will supplement this previous work. A supplemental environmental assessment will be prepared. This document will address only the additional impacts that may be caused by the half-diamond interchange and the additional lanes.

Enclosed is information that illustrates the project. Included is a general location map and a more detailed vicinity map. The vicinity map includes a sketch of the proposed project, as well as the changes that will be made by the I-10/SR 360 project.

Your identification of environmental issues from the perspective of your agency is requested. If no such issues exist, a letter to that effect would be appreciated. Your response is needed by November 22, 1991. Subsequent opportunities for involvement will be a public informational meeting in early December, an opportunity to review the draft supplemental environmental assessment, and a public hearing in March 1992.

Thank you for your assistance.

Sincerely,

PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

Dennis A. Davis, A.I.C.P.

CONTACT LETTER MAILING LIST

Mr. Harvey Friedson, Traffic Engineer
CITY OF TEMPE
31 East 5th Street
Tempe, Arizona 85281

Mr. Jose Solarez, Town Manager
TOWN OF GUADALUPE
9050 South Avenida Del Yoqui
Guadalupe, Arizona 85283

Mr. Larry Richards
ARIZONA DEPARTMENT OF AGRICULTURE
1688 West Adams Street, Room 421
Phoenix, Arizona 85007

Mr. Dave Walker, Habitat Evaluation Coordinator
ARIZONA GAME AND FISH DEPARTMENT
2222 West Greenway Road
Phoenix, Arizona 85023

Mr. Edward Fox, Director
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
2005 North Central Avenue
Phoenix, Arizona 85004

Mr. Tom Lincoln
U.S. BUREAU OF RECLAMATION
P.O. Box 9980
Phoenix, Arizona 85068

Mr. Dan Sagramoso, Director
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
2902 West Durango Street
Phoenix, Arizona 85009

Mr. Robert Maurer, Operational Support
SALT RIVER PROJECT
P.O. Box 52025
Phoenix, Arizona 85072-2025

Ms. Gail Penrose
PETERSON PARK HOMEOWNERS ASSOCIATION
3007 South Harl
Tempe, Arizona 85282

Mr. Patrick Brenner
TEMPE SOUTH MOUNTAIN NEIGHBORHOOD ASSOCIATION
2619 West Dunbar Drive
Tempe, Arizona 85282

Mr. Agustin A. Orci, Superintendent
TEMPE SCHOOL DISTRICT NO. 3
3205 South Rural Road
Tempe, Arizona 85282

City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
602-350-8204

Tempe

Public Works Department
Traffic Engineering Division

November 20, 1991

Mr. Dennis Davis
Parsons Brinckerhoff Quade & Douglas, Inc.
1501 W. Fountainhead Parkway, Suite 400
Tempe, AZ 85282

Re: S.R. 360/Priest Drive T.I.
Environmental Concerns

Dear Dennis:

Thank you for the opportunity to comment on environmental issues regarding the proposed improvements at the above-referenced location.

Our comments are as follows:

1. Provide adequate sound walls to protect adjacent residential neighborhoods along the length of the proposed improvements.

2. Remove the existing landscaping between Priest Drive and Mill Avenue, and replace it with low water use plant material.

Again, thanks for the opportunity to comment on environmental issues.

Sincerely,

CITY OF TEMPE

Harvey Friedson, P. E.
Traffic Engineer

cyg

cc: Jim Jones
Larry Shobe
Bill Coughlin

THE STATE OF ARIZONA

GAME & FISH DEPARTMENT

2221 West Greenway Road, Phoenix, Arizona 85023-4312 (602) 942-3000

December 19, 1991

Mr. Dennis A. Davis, A.I.C.P.
Parsons, Brinckerhoff, Quade & Douglas, Inc.
1501 West Fountainhead Parkway, Suite 400
Tempe, Arizona 85282

Dear Mr. Davis:

Re: Environmental Impacts; Improvements to S.R. 360

The Arizona Game and Fish Department has reviewed your letter of October 29, 1991, regarding potential environmental impacts resulting from proposed improvements to S.R. 360 from Mill Avenue to Interstate 10 and corresponding access roads, and the following comments are provided.

The Department's Heritage Data Management System has been accessed and current records do not indicate the presence of any Endangered, Threatened or other special status species in the vicinity of the area described in your letter. We do not anticipate that any significant adverse impacts to wildlife or wildlife habitat will result from the completion of the proposed roadway improvements.

Thank you for the opportunity to comment on this proposed project.

Sincerely,

Ron Christofferson

Ron Christofferson
Habitat Evaluation Specialist
Habitat Branch

RAC:rc

cc: Kelly Neal, Regional Supervisor, Mesa Regional Office

KEITH KELLY
Director

DAN F. RICE
Associate Director

Arizona Department of Agriculture

1688 West Adams, Phoenix, Arizona 85007
(602) 542-4373 FAX (602) 542-5420
PLANT SERVICES DIVISION

December 23, 1991

Dennis A. Davis
Parsons, Brinkerhoff, Quade & Douglas
1501 W. Fountain Head Pkwy.
Suite #400
Tempe, Arizona 85282

RE: 1/2 Diamond Interchange - Priest/SR-360

Dear Mr. Davis:

The project for the proposed Diamond Interchange would not affect protected native plants due to its location.

If you have any questions, please call me at (602) 542-4373.

Sincerely,

James McGinnis
Native Plant Law Program Manager

JM:tg

Tempe School District No.3

3205 South Rural Road • P.O. Box 27708 • Tempe, Arizona 85282 • (602) 839-7100

November 7, 1991

Dennis A. Davis, A.I.C.P.
Parsons Brinkerhoff Quade & Douglas, Inc.
1501 W. Fountainhead Parkway
Suite 400
Tempe, Arizona 85282

Dear Mr. Davis:

I have received your letter and enclosures requesting identification of environmental issues pertaining to improvements in State Route 360/Priest Drive Project. At this time Tempe School District No. 3 has not identified any specific environmental issues involved with the project.

However, two concerns have been discussed in our maintenance/transportation center. The first is the restrictions placed on the school bus routing on Priest Drive due to the actual construction phase and dust and dirt created by road reconstruction.

Sincerely,

Jim Richmond

Jim Richmond
Supervisor Custodial Services

JJ:aj

FIFE SYMINGTON, GOVERNOR
EDWARD Z. FOX, DIRECTOR

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

NONPOINT SOURCE UNIT
2655 E. MAGNOLIA ST., STE. 2
PHOENIX, AZ 85034
(602) 392-4069
FAX (602) 392-4017

November 19, 1991

Mr. Dennis A. Davis, A.I.C.P.
Parsons BrinckerHoff Quade and Douglas, Inc.
1501 W. Fountainhead Parkway, Suite 400
Tempe, Arizona 85282

Dear Mr. Davis:

Re: Half-diamond Interchange on State Route 360 and Priest Drive:

The Department of Environmental quality, Office of Water Quality, Non-point Source Unit appreciates the opportunity to comment upon State Route 360 and Priest Drive Interchange Project.

The Department is the responsible agency for administration and implementation of the Arizona Environmental Quality act and the Clean Water Act. The Nonpoint Source Unit is concerned regarding the potentials for:

(1) The discharge of sediment, oil, grease and or fuel in runoff as a result of construction activities,

(2) Contamination of soil in maintenance and/or equipment storage areas due to discharge/spills of oil, grease and/or fuel,

(3) Discharges of fugitive dust as a result of construction activities.

The Department recommends that all contracts sublet by the Arizona Department of Transportation (ADOT) require the contractors to implement the appropriate Management Practices to minimize discharge of pollutants from the construction area.

Sincerely,

Mike Hill
Nonpoint Source Unit

MH/cjb

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

FIFE SYMINGTON, GOVERNOR
EDWARD Z. FOX, DIRECTOR

November 21, 1991

Dennis A. Davis, A.I.C.P.
Parsons, Brinckerhoff, Quade & Douglas, Inc.
1501 West Fountainhead Parkway, Suite 400
Tempe, Arizona 85282

Dear Mr. Davis:

This letter is in response to your October 29, 1991 request for an air quality impact review, of the following Community Development Block Grant Project:

Design of improvements to State Route 360 at Priest Drive in Tempe.

The planned project is located in an air quality nonattainment area, that is, an area which currently does not meet federal health standards for air pollution levels, including particulates.

We have reviewed the submitted proposal and no significant adverse air quality impact is anticipated as a result of the project. However, since the site is in a PM_{10} Nonattainment Area, the applicant should follow all proposed particulate control measures as they relate to construction activities when they become part of the Phoenix PM_{10} State Implementation Plan (SIP).

In addition, we would request that steps are taken to minimize the amount of particulate matter (dust) generated, including incidental emissions caused by strong winds, as well as tracking of dirt off the construction site by machinery and trucks. We recommend that the following preventive and mitigative measures are taken to minimize the possible particulate pollution problem:

I. Site Preparation

A. Minimize land disturbance;
B. Use watering trucks to minimize dust;
C. Cover trucks when hauling dirt;
D. Stabilize the surface of dirt piles if not removed immediately;
E. Use windbreaks to prevent any accidental dust pollution;
F. Limit vehicular paths and stabilize these temporary roads; and
G. Pave all unpaved construction roads and parking areas to road grade for a length no less than 50 feet where such roads and parking areas exit the construction site to prevent dirt from washing onto paved roadways.

II.

A. Cover trucks when transferring materials;
B. Use dust suppressants on traveled paths which are not paved;
C. Minimize unnecessary vehicular and machinery activities; and
D. Minimize dirt track-out by washing or cleaning trucks before leaving the construction site (alternative to this strategy is to pave a few hundred feet of the exit road, just before entering the public road).

III.

A. Revegetate any disturbed land not used;
B. Remove unused material;
C. Remove dirt piles; and
D. Revegetate all vehicular paths created during construction to avoid future off-road vehicular activities.

Applicable state rules are contained in A.A.C. R18-2-404, R18-2-405, R18-2-406, and R18-2-407. Enclosed please find a copy of these rules.

In addition, please be aware that portable sources of air pollution such as rock, sand, gravel, and asphaltic concrete plants are required to receive Installation and Operating permits from the Office of Air Quality in order to operate in the State.

Thank you for the opportunity to comment. Should you have any further questions, please contact this office at 257-6965.

Sincerely,

Joe Gibbs
Environmental Planner
Air Quality Planning Section

JG/sds

Enclosure

and development concerning the effects of forest burn programs on air quality. Such report shall include, where applicable, innovations in the management of prescribed burning using meteorological data, as well as special burning methods, or innovative equipment. Alternatives to burning shall also be considered. Research as to cost effectiveness of the various methods should also be included.

Historical Note

Former Section R9-3-403 repealed, new Section R9-3-403 adopted eff. May 14, 1979 (Supp. 79-1). Former Section R9-3-403 renumbered without change as Section R18-2-403 (Supp. 87-3).

R18-2-404. Open areas, dry washes or riverbeds

A. No person shall cause, suffer, allow, or permit a building or its appurtenances, or a building or subdivision site, or a driveway, or a parking area, or a vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, without taking reasonable precautions to limit excessive amounts of particulate matter from becoming airborne. Dust and other types of air contaminants shall be kept to a minimum by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means.

B. No person shall cause, suffer, allow, or permit a vacant lot, or an urban or suburban open area, to be driven over or used by motor vehicles, trucks, cars, cycles, bikes, or buggies, or by animals such as horses, without taking reasonable precautions to limit excessive amounts of particulates from becoming airborne. Dust shall be kept to a minimum by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means.

C. No person shall operate a motor vehicle for recreational purposes in a dry wash, riverbed or open area in such a way as to cause or contribute to visible dust emissions which then cross property lines into a residential, recreational, institutional educational, retail sales, hotel or business premises. For purposes of this Subsection "motor vehicles" shall include, but not be limited to trucks, cars, cycles, bikes, buggies and three-wheelers. Any person who violates the provisions of this Subsection shall be subject to prosecution under A.R.S. § 36-1720.

Historical Note

Former Section R9-3-404 repealed, new Section R9-3-404 adopted eff. May 14, 1979 (Supp. 79-1). Amended by adding Subsection C. eff. Sept. 22, 1983 (Supp. 83-5). Former Section R9-3-404 renumbered without change as Section R18-2-404 (Supp. 87-3).

R18-2-405. Roadways and streets

A. No person shall cause, suffer, allow or permit the use, repair, construction or reconstruction of a roadway or alley without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Dust and other particulates shall be kept to a minimum by employing temporary paving, dust suppressants, wetting down detouring or by other reasonable means.

B. No person shall cause, suffer, allow or permit transportation of materials likely to give rise to airborne dust without taking reasonable precautions, such as wetting, applying dust suppressants, or covering the load, to prevent particulate matter from becoming airborne. Earth or other material that is deposited by trucking or earth moving equipment shall be removed from paved streets by the person responsible for such deposits.

Historical Note

Former R9-3-405, Other industries, renumbered R9-3-406, new Section adopted eff. Sept. 17, 1975 (Supp. 75-1). Former Section R9-3-405 repealed, new Section R9-3-405 adopted eff. May 14,1979 (Supp. 79-1). Amended eff. Oct. 2, 1979 (Supp. 79-5). Former Section R9-3-405 renumbered without change as Section R18-2-405 (Supp. 87-3).

R18-2-406. Material handling

No person shall cause, suffer, allow or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne.

Historical Note

Former Section R9-3-405, renumbered eff. Sept. 17, 1975 (Supp. 75-1). Former Section R9-3-406 repealed, new Section R9-3-406 adopted eff. May 14, 1979 (Supp. 79-1). Former Section R9-3-406 renumbered without change as Section R18-2-406 (Supp. 87-3).

R18-2-407. Storage piles

A. No person shall cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled, or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne.

B. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to prevent excessive amounts of particulate matter from becoming airborne.

Historical Note

Adopted eff. May 14, 1979 (Supp. 79-1). Former Section R9-3-407 renumbered without change as Section R18-2-407 (Supp. 87-3).

City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
602-350-8204

Tempe

Public Works Department
Traffic Engineering Division

December 19, 1991

Mr. Steve Wilcox, P. E.
Project Engineer
Arizona Department of Transportation
205 S. 17th Avenue, Mail Drop 621E
Phoenix, AZ 85007-3213

Re: School Bus Stops on Priest Drive
From Southern Avenue to Baseline Road

Dear Steve:

After discussion with the Tempe Elementary School District No. 3 and the Tempe Union High School District, we offer the following information regarding the above:

1. Mr. Toth, Supervisor of Transportation and Safety for Tempe School District No. 3, provided the following schedule and bus stops:

   a. Carminatti School - Four stops on Priest Drive northbound at LaJolla Drive. 1. 7:50 a.m. 2. 11:30 a.m. 3. 2:40 p.m. 4. 3:10 p.m.

   b. Gilliland Middle School - Four stops on Priest Drive, two northbound at LaJolla Drive. 1. 8:30 a.m., 2. 3:56 p.m., and two northbound north of Darrow Drive at the entrance to the mobile home park. 1. 8:30 a.m. 2. 3:55 p.m.

   c. Frank Elementary School also has four busses daily. Their stop is on Darrow East of Priest Drive, but they also use Priest Drive as their route. Their stops are as follows: 1. 7:45 a.m., 2. 11:15 a.m., 3. 2:40 p.m., and 4. 3:10 p.m.

2. Mr. Rudy Hernandez, Transportation Director for the Tempe Union High School District, informs me that they have one southbound stop on Priest at Manhatton, and that in view of the circumstances when construction occurs, they will probably move that bus stop to another location.

Please keep these school districts informed regarding the construction schedule, and maintain these bus stops during construction.

Should you wish additional information, please give me a call or contact Mr. Toth or Mr. Hernandez at the numbers below.

Sincerely,

CITY OF TEMPE

Larry L. Shobe
Lighting and Transportation Planner

cyg

cc: Harvey Friedson
Fred Toth, Phone: 784-1337
Rudy Hernandez, Phone: 345-3781

July 24, 1991

William P. Belt, Manager
Environmental Planning Services, 240 E
Arizona Department of Transportation
206 South Seventeenth Avenue
Phoenix, AZ 85007-3212

RE: Tempe, Los Hornos, I-10/Superstition Interchange, Archaeological Testing Report, MOA and Data Recovery Proposal, DOI-BR, SRP, ADOT and FHWA

Dear Mr. Belt:

Thank you for providing us with copies of the final archaeological testing report, revised Memorandum of Agreement (MOA) and data recovery proposal prepared by SWCA, Inc. I have reviewed all of these documents and have the following comments pursuant to 36 CFR Part 800 since the Federal Highway Administration (FHWA) will act as lead agency for the project:

1. As you know, I previously commented on the testing report. This document is acceptable as written.

2. I have also reviewed previous drafts of the MOA and it is my opinion that the current draft may be acceptable as written. However, it needs to be reviewed by the Advisory Council on Historic Preservation (Council) as well as the Salt River Project (SRP) and Bureau of Reclamation (Reclamation) as SRP and Reclamation have an interest in the canal(s) within the project area.

3. Your cover letter indicates that the Arizona State Museum will get involved in this project since the project is on private/state land and the agency is of the opinion that the State statues found at A.R.S. 41-844 may apply as respects the disposition of human remains. I have just discussed this matter with Dr. Lerner and it is her opinion that because this is a Federal project, the Federal laws and regulations supercede any State laws; therefore, it is our opinion that A.R.S. 41-844 would not apply to this project. This office has always taken the stance that if there is both Federal and State involvement in a project, the Federal regulations supercede.

4. In my opinion, the data recovery proposal is also acceptable as written. This proposal demonstrates a familiarity with the pertinent literature and is tailored to the specific project. I have a few comments on this proposal, however, that perhaps should be considered during the implementation of the data recovery program and subsequent write-up. These are as follows:

a. The research objectives imply that the proposed study can investigate the site structure and its relationship to other sites. While this may be true, it must be kept in mind that only a portion of Los Hornos will be investigated and it may be difficult to extrapolate what is found within the project area to the entire site.

b. There is not a clear indication of how many structures and features will be excavated. It is stated that house groups representing each period of occupation will be excavated, but it should be acknowledged that there may be no Pioneer period house groups and perhaps no Colonial period house groups. Perhaps it would be more realistic to state that a representative number of

ARIZONA STATE PARKS

800 W. WASHINGTON
SUITE 415
PHOENIX, ARIZONA 85007
TELEPHONE 602-542-4174

houses from each period will be excavated and these excavations will focus on clusters of such houses.

c. Page 22 of the data recovery proposal mentions Crown (1991) which is an article in a recent book entitled Exploring the Hohokam. I believe the Crown reference could be used in other sections of the proposal and recommend that other articles, such as Jeff Dean's chronology for the Hohokam, be incorporated in the final report. In addition, I believe it would be wise to make more use of the Grand Canal report and there should be references to the La Lomita report and Canal System 2 synthesis. My botanical work at Los Hornos was done more than 10 years ago; I would prefer that the consultant refer to more recent work by Hutira.

d. NAGRPA is mentioned on pages 24 and 39 of the data recovery proposal. Since NAGRPA only applies to Federal or Indian land, it is not pertinent to this project and reference to this recent law should be deleted.

e. It is stated that the botanical sampling will follow Fish and Miksicek (1982). I recall that this reference states that it may not be necessary to sample hearths for pollen because pollen can be destroyed by fire. My experience indicates that very good pollen samples can be obtained from hearths.

It is obvious that SWCA put a lot of effort into the data recovery proposal. It is well conceived and should meet the requirements of 36 CFR 800.9(c)(1) if implemented. As you point out, however, because human remains are within the project area, this project should be viewed as having an adverse effect on this National Register eligible property.

We look forward to continuing our consultations on this project and appreciated your continued good cooperation with this office. If you have any questions, please do not hesitate to contact me.

Sincerely,

Robert E. Gasser
Compliance Coordinator

for Shereen Lerner, Ph.D.
State Historic Preservation Officer

cc: Judy Brunson, SRP
Thomas Lincoln, DOI-BR

FLOOD CONTROL DISTRICT
of
MARICOPA COUNTY
1959

FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009
Telephone (602) 506-1501
Fax (602) 506-4601
TDD (602) 506-5897

D. E. Sagramoso, P.E., Chief Engineer and General Manager

MAY 05 1992

Mr. Dennis A. Davis, A.I.C.P.
Parsons Brinckerhoff Quade and Douglas, Inc.
1502 W. Fountainhead Parkway, Suite 400
Tempe, Arizona 85282

SUBJECT: HALF-DIAMOND INTERCHANGE ON STATE ROUTE 360 AND PRIEST DRIVE

Dear Mr. Davis:

The Flood Control District of Maricopa County, Environmental Branch appreciates the opportunity to comment on State Route 360 and Priest Drive Interchange Project.

The Environmental Branch is concerned with the lack of reference to the National Pollutant Discharge Elimination System (NPDES) for storm water. After October 1, 1992, a construction activity (road building), that disturbs more than five (5) acres will be required to be covered by a NPDES Storm Water permit. This will also require the development of a Storm Water Pollution Prevention Plan.

Thank you for the opportunity to comment. Should you have any further questions, please contact me at 506-1501.

Sincerely,

Catesby W. Moore

Catesby W. Moore
Environmental Program Manager

Note: Section 5.11 was added to the Environmental Assessment in response to this comment.

ARIZONA
STATE
PARKS

800 W. WASHINGTON
SUITE 415
PHOENIX, ARIZONA 85007
TELEPHONE 602-542-4174

May 11, 1992

William P. Belt, Manager
Environmental Planning Services, 240 E
Arizona Department of Transportation
206 South 17th Avenue
Phoenix, AZ 85007

RE: Tempe, SR 360/Priest Drive Interchange EA, FHWA

Dear Mr. Belt:

Dennis Davis from Parsons Brinckerhoff recently sent us a draft Supplemental Environmental Assessment (EA) for the above project. I have reviewed those portions of the EA that apply to cultural resources and have the following comments:

The document acknowledges that the project area will impact a portion of Los Hornos and shows that we have already commented upon the archaeological testing and data recovery proposals for the project. Therefore, in my opinion, the draft supplemental EA is acceptable as written.

Sincerely,

Robert E. Gasser
Compliance Coordinator

for Shereen Lerner, Ph.D.
State Historic Preservation Officer

City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
602-350-8371

Tempe

Public Works
Department

June 2, 1992

Mr. Dennis A. Davis, AICP
Environmental Manager
Parsons Brinckerhoff Quade & Douglas Inc
1501 W. Fountainhead Parkway, Suite 400
Tempe, Arizona 85282

RE: Draft Supplemental Environmental Assessment
State Route 360/Priest Drive Interchange and
SR360 Widening - Priest Drive to Mill Avenue

Dear Mr. Dennis:

The above referenced project, as proposed, is compatible with the City's program. The City fully supports this traffic interchange.

Sincerely,

Harvey Friedson

CITY OF TEMPE
Harvey Friedson,
Deputy Public Works Director