

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ENVIRONMENTAL PLANNING SERVICES
205 SOUTH SEVENTEENTH AVENUE
PHOENIX, ARIZONA 85007

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FINAL
ENVIRONMENTAL ASSESSMENT

PROJECT S-987-301PE, 501C

MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238
MARICOPA AND PINAL COUNTIES, ARIZONA

APPROVED BY:

James L. Smith
James L. Smith, Manager
Environmental Planning Services
Arizona Department of Transportation

DATE:

5-4-87

This Environmental Assessment for the Maricopa-Mobile-Gila Bend Highway has been prepared in accordance with provisions and requirements of Section 3.2.4 of the Arizona Department of Transportation Action Plan for State Funded Projects on the State Highway System.

A901.925

**ENVIRONMENTAL MITIGATION MEASURES FOR PROJECT
S-987-301
MARICOPA-MOBILE-GILA BEND HIGHWAY**

1. A permanent boundary fence will be constructed along the right-of-way at four archaeological sites, thereby restricting construction activities and vehicle access to the width of the existing corridor. In addition, a fifth and sixth site is subject to direct impact and will be protected by a temporary fence constructed to restrict access during construction (reference 5.1.8 Cultural Resources, page 22).
2. If subsurface archaeological remains are encountered during road construction, such actions will be discontinued in the vicinity and the ADOT Environmental Planning Services notified to evaluate their nature and significance (reference 5.1.8 Cultural Resources, page 22).
3. The Contractor will be required to make adequate provisions to minimize soil erosion during construction activities, to provide temporary measures including dikes, basins and ditches to control any erosion and sedimentation (reference 5.2.3 Erosion Control and 5.2.5 Water Quality, pages 28 and 29).
4. The Contractor is required by the Arizona Department of Transportation's Standard Specifications for Road and Bridge Construction to observe and comply with all air pollution ordinances, regulations, orders, etc. from those agencies having local jurisdiction (reference 5.2.6 Air Quality Analysis, page 29).
5. Temporary detours in the vicinity of the construction project will be required during the project. The Contractor will be required to minimize any delays through the project (reference 5.3 Construction Impacts, page 33).
6. The Contractor will be required to water earthwork and other construction related activities that generate dust and to exercise whatever other means are necessary to minimize these conditions in conformance with State and County dust control regulations and ordinances (reference 5.3 Construction Impacts, page 33).
7. Game fence will be utilized throughout the project where fencing is required (reference 5.2.1 Natural Areas, page 26).
8. Vegetation protected by the Arizona Commission of Agriculture and Horticulture will be salvaged prior to construction as required (reference 5.2.1 Natural Areas, page 26).
9. Seeding with appropriate grass and forbs to aid the revegetation process for erosion control will be accomplished as part of the construction of this project (reference letter from Roadside Development Services on page 52).

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1. **PROJECT LOCATION**

The project is located within southeastern Maricopa County and northwestern Pinal County (see Vicinity Map, Exhibit 1, page 2). The project limits extend from the intersection of Garvey Avenue and Maricopa Road in the community of Maricopa, Pinal County, westerly along the existing Maricopa-Mobile-Gila Bend Highway through Mobile to approximately 6.5 miles southwest of Mobile, Maricopa County (see Location Map, Exhibit 2, page 3). The easterly 9.8 miles of the proposed reconstruction is in Pinal County and the remaining 11.8 miles is in Maricopa County. The alignment is contiguous with and north of the existing Southern Pacific Railway line except for the westerly Waterman Wash realignment (see Exhibit 4, page 7) and easterly "Proposed Action" realignment (see Exhibit 5, page 8) where the roadway moves northward away from the railroad alignment. The alignment passes through sparsely populated, predominately privately-owned agricultural and desert land, the Maricopa Ak Chin Indian Reservation and Bureau of Land Management grazing allotment lands.

2. **PROJECT DESCRIPTION - SELECTED ALTERNATIVE**

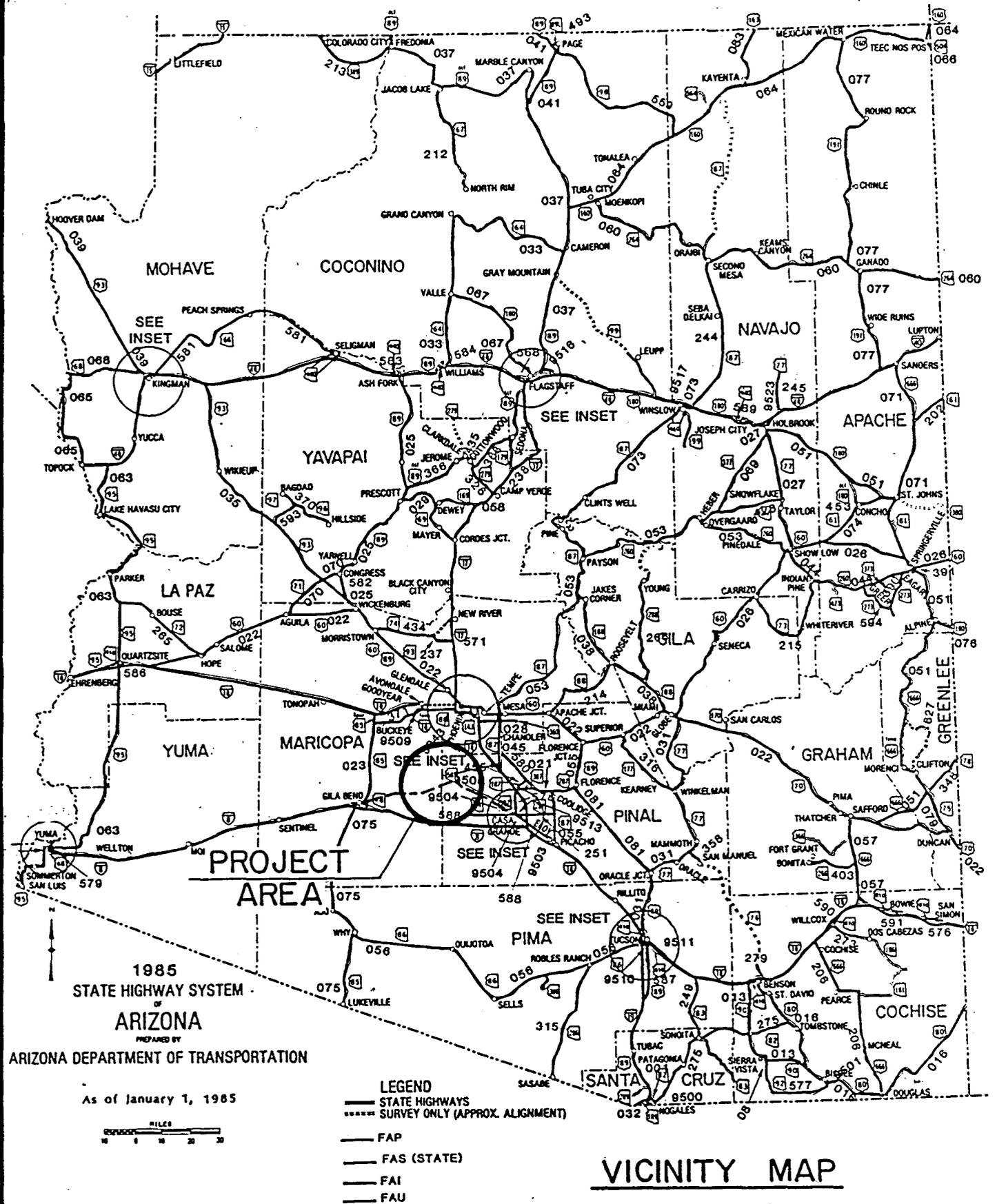
2.1 **Scope**

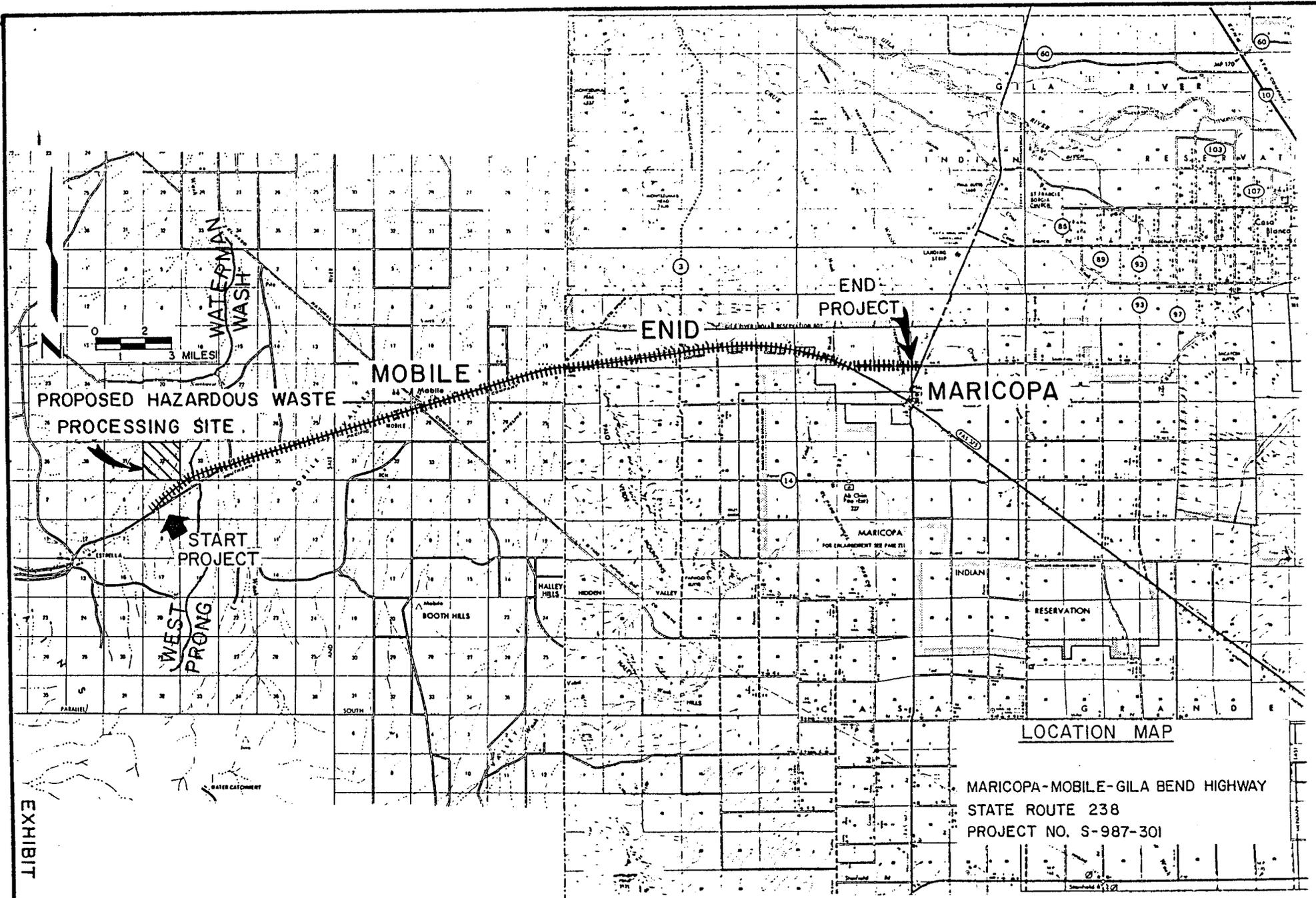
The proposed project consists of improving the 21.10 miles of existing graded roadway (nominal 28-42 foot width) by regrading and paving one fourteen foot lane in each direction and providing a ten foot graded shoulder on each side (see Typical Section, Exhibit 3, page 4). The construction is to be phased in two projects. Phase I will consist of improving 11.83 miles from the western end of the project to the Maricopa/Pinal County line. Phase II will consist of the remaining 9.83 miles to Maricopa Road.

The present alignment will be maintained for most of the route, but there will be a new alignment at each end of the project. At the eastern end of the project, the new alignment provides a by-pass north of the community of Maricopa. The other new alignment occurs at the extreme westerly end of the project to provide a better crossing location for the West Prong of the Waterman Wash.

2.2 **Design Criteria**

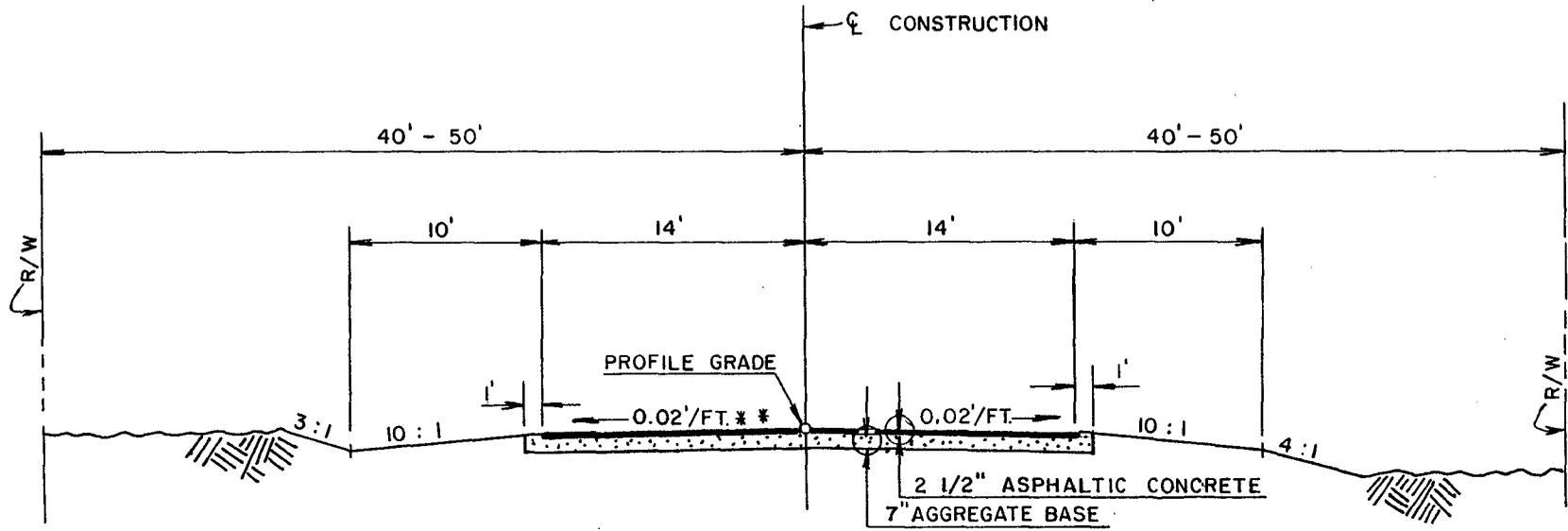
The basic design criteria are as described in the "Location-Design Concept Study for the Hazardous Waste Facility Site Roadway" prepared by the Arizona Department of Transportation Location Services dated May 1985 utilizing dip sections for cross drainage of





LOCATION MAP

MARICOPA-MOBILE-GILA BEND HIGHWAY
 STATE ROUTE 238
 PROJECT NO. S-987-301



TYPICAL SECTION

** CROSS SLOPE THRU DIP SECTIONS TO BE ADJUSTED TO ELIMATE PONDING

MARICOPA-MOBILE-GILA BEND HIGHWAY
 STATE ROUTE 238
 PROJECT NO. S-987-30I

4

EXHIBIT 3

EXHIBIT 3

the pavement, and in conformance with other pertinent ADOT/AASHTO, Maricopa and Pinal County Standards. Specific design controls and guidelines are presented below:

Design Speed	45 - 60 mph
Pavement Width	28 feet
Number of Lanes	2
Graded Shoulder Width	10 feet
Right-of-Way Width	80 - 100 feet
Access Control	ADOT Permit Process

The proposed preliminary typical section consists of 2-inches of asphalt concrete over 6-inches of aggregate base placed over a compacted subgrade. This section is not a standard ADOT typical section. The final recommended typical section will be determined by a geotechnical investigation which will result in a Pavement Design Summary and Materials Design Memorandum. This memorandum will also investigate and recommend borrow sites (if needed) as a source for fill material along the route.

2.3 Horizontal Alignment

The existing horizontal alignment of the roadway is generally of an acceptable standard. Most of the required alignment adjustments will be of a minimum nature to center the new roadway within the 80 - 100 foot right-of-way.

Generally the alignment (see Location Map, Exhibit 2, page 3) is a straight tangent section, with three exceptions. Along the roadway westerly from the community of Maricopa it sweeps through a long curve to the left, continuing along a tangent to Enid, to approximately nine miles west of the community of Maricopa, where the alignment shifts 100-150 feet north to accommodate a widened Southern Pacific Right-of-Way. The last exception is the long sweeping curve to the southwest just east of the West Prong of Waterman Wash. This portion of the roadway has been realigned to provide a better crossing of the wash to allow for box culverts to be constructed.

No connection between the proposed Hazardous Waste Processing Facility site has been developed, as the Facility's site development plan will provide the connection from the southeast corner of the Proposed Site (Section 32) to the proposed roadway.

At the west end of the project a major realignment of the existing roadway is proposed to provide a better defined crossing of the West Prong of the Waterman Wash. This realignment is approximately 1.7 miles in length. The existing graded crossing incurs substantial erosion damage each time a major storm event occurs requiring extensive maintenance and/or reconstruction to keep the crossing open to traffic. The realignment lengthens the overall route by approximately 400 feet (see Exhibits 4 and 5, pages 7 and 8).

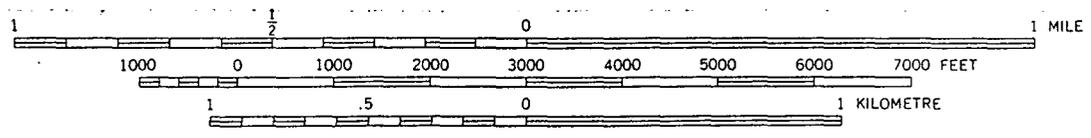
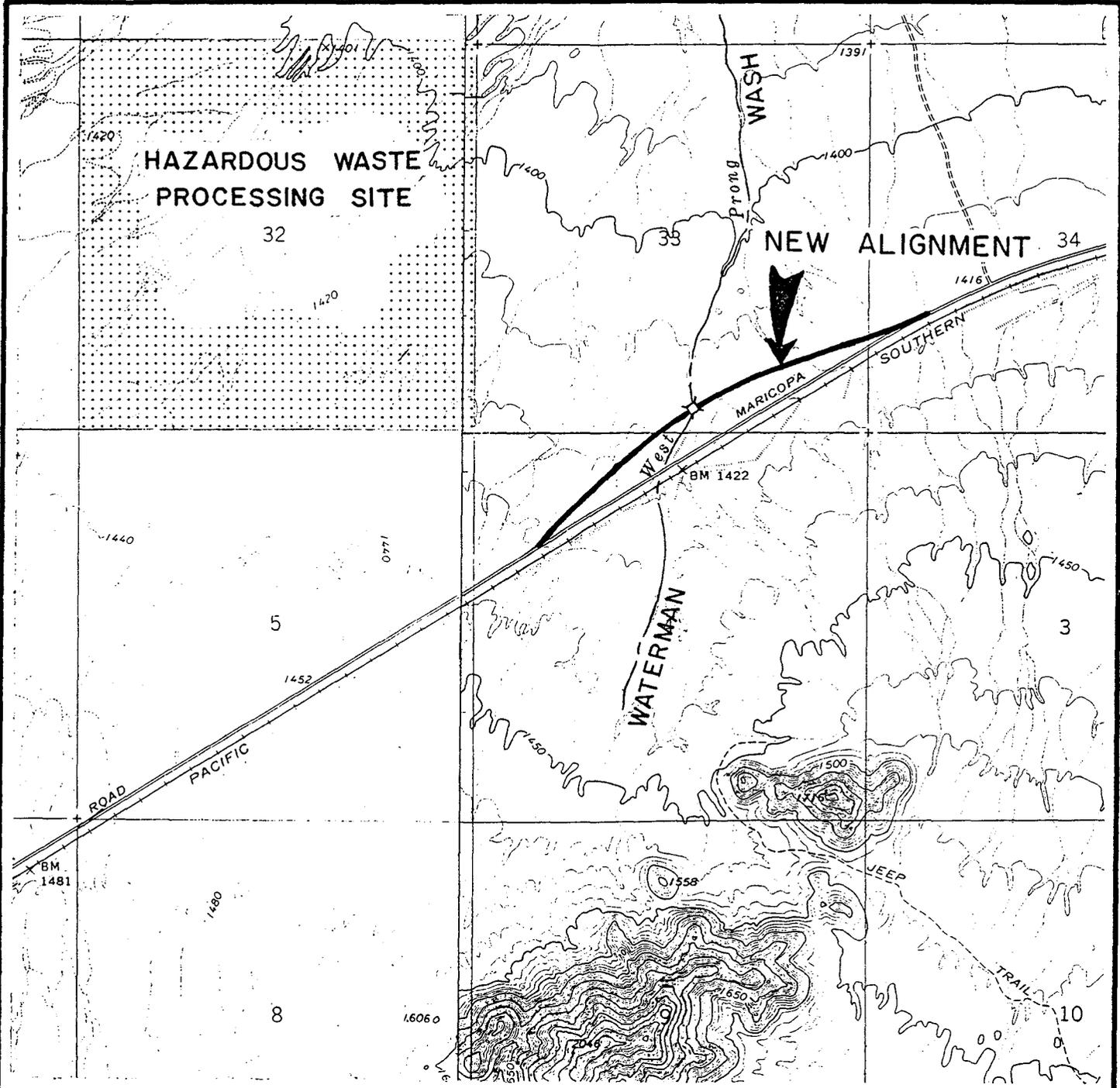
At the eastern end of the project, Alternative "B", the selected alternate, follows the north section line of Sections 16 and 17, Township 4 North, Range 3 East beginning approximately two miles northwest of the community of Maricopa. This alignment departs the existing Maricopa-Mobile-Gila Bend Highway to the east and extends easterly through undisturbed desert to a dirt farm road, then proceeds approximately 3000 feet along the farm road alignment to its intersection with Maricopa Road.

For the westerly mile and a quarter the route passes over two main drainage washes and crosses natural desert areas. The alignment is located just north of a major dairy feedlot operation. An irrigation well is located just south of the alignment approximately 2600 feet west of Maricopa Road. A Southern Pacific Petroleum gas line runs north/south crossing the alignment.

This alignment is approximately 10,700 feet long and is approximately the same length as the existing route along Garvey Avenue.

2.4 Vertical Alignment

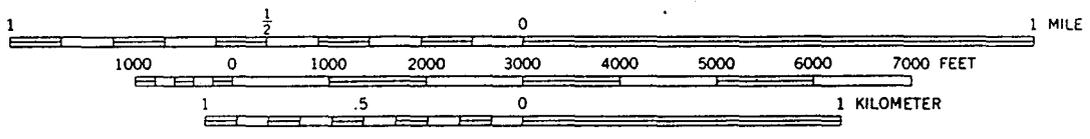
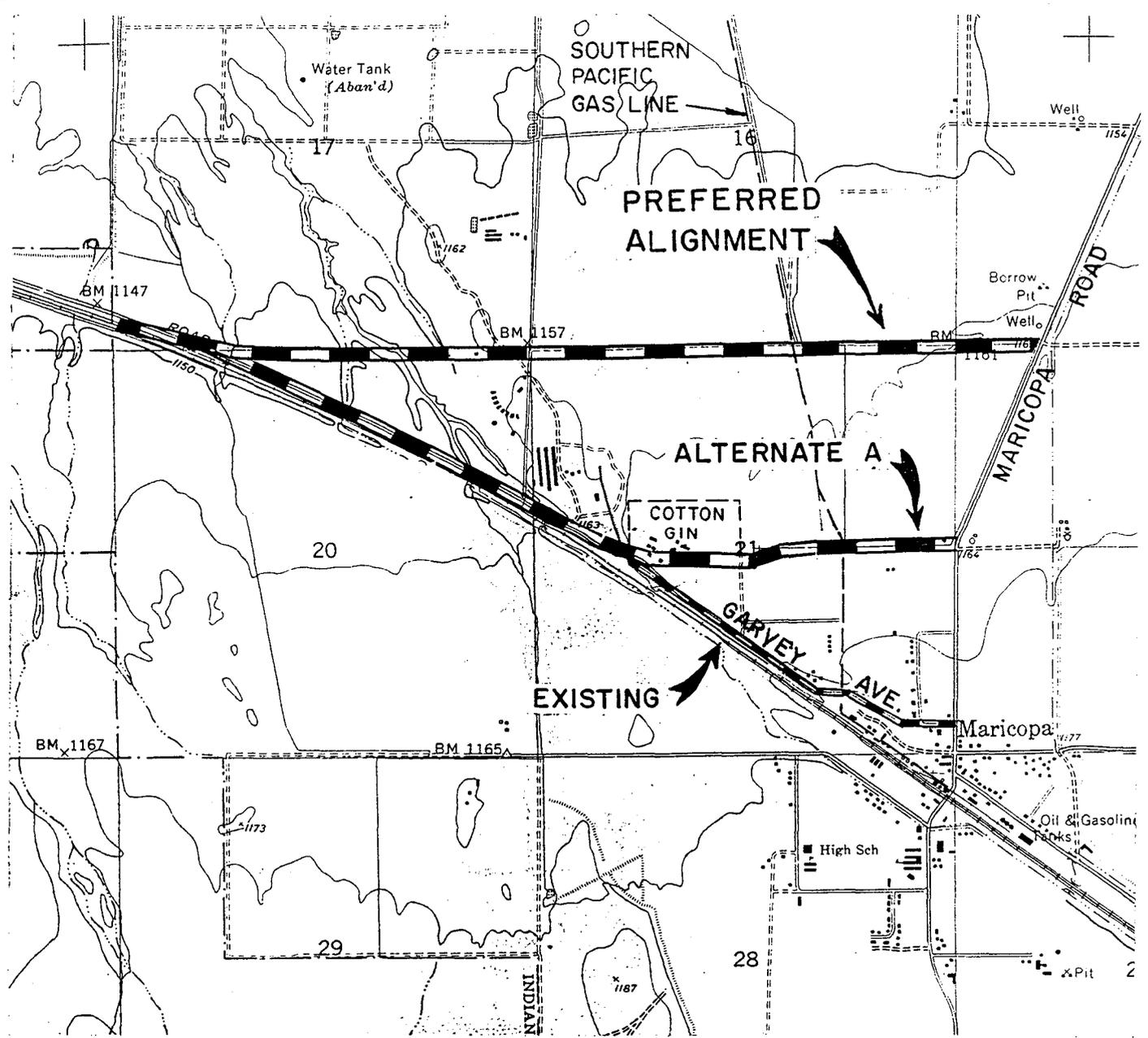
The existing vertical alignment generally provides adequate sight distance throughout the route except in the vicinity of dip sections at major wash crossings. Grade adjustments will be necessary at some locations to mitigate existing drainage problems. However, the design concept for this route provides for fords or dip sections throughout, with the exception of new structures to allow crossing of the West Prong of Waterman Wash. In addition, east of Enid, a rock outcrop will be removed to allow for adequate sight distance at the grade change. The existing grade will also be raised to the approximate elevation of the railroad tracks at three existing north-south railroad track crossings to maintain safe site distances at the intersections (see Exhibit 6, page 9).



CONTOUR INTERVAL 10 FEET
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

WATERMAN WASH REALIGNMENT
MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238
PROJECT NO. S-987-301

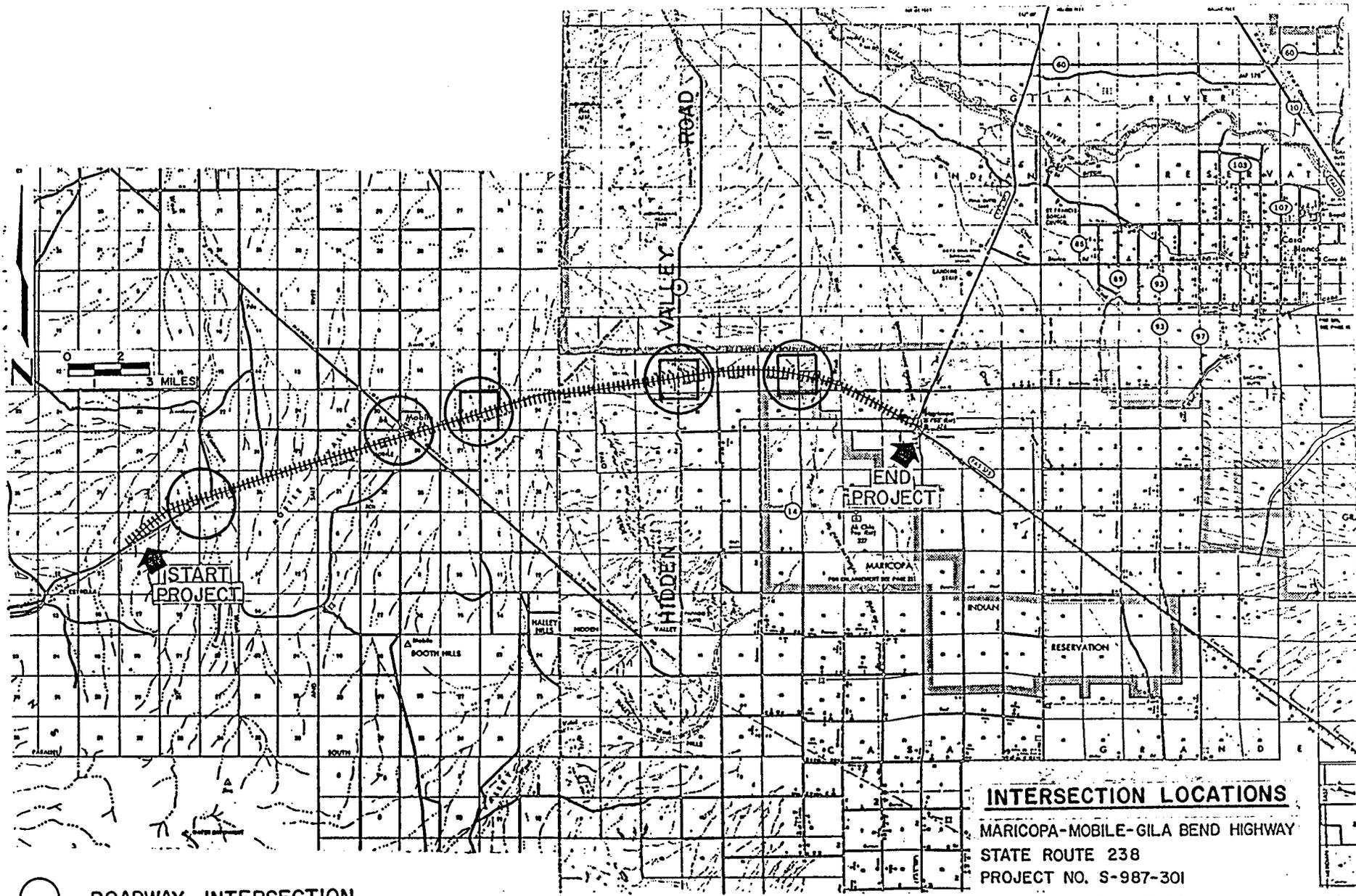
EXHIBIT 4



CONTOUR INTERVAL 10 FEET
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

ALTERNATE ALIGNMENTS

**MARICOPA-MOBILE - GILA BEND HIGHWAY
 STATE ROUTE 238
 PROJECT NO. S-987-30I**



INTERSECTION LOCATIONS

MARICOPA-MOBILE-GILA BEND HIGHWAY
 STATE ROUTE 238
 PROJECT NO. S-987-301

- ROADWAY INTERSECTION
- RAILROAD INTERSECTION

EXHIBIT 6

EXHIBIT 6

2.5 Intersections

It is anticipated that all major intersections along the route will be maintained and improved. There are only two major roadway intersections (See Exhibit 6, page 9), Hidden Valley Road approximately six miles west of the community of Maricopa and the intersection just west of and adjacent to the Mobile School and three minor intersections. There are no major alterations planned for these intersections with the exceptions of providing fully paved intersections back to the returns of each roadway.

A new intersection will be constructed at the west end of the project where the new access road for the Hazardous Waste Processing Facility access roadway intersects the highway alignment. All intersections will be equipped with two-way stop signs located on the secondary roadways providing through traffic movement for the highway.

2.6 Estimated Costs and Schedule

Construction costs were estimated based on a preliminary design dated October 1986. Total construction costs are estimated as follows:

Existing Alignment	\$ 6,094,000
Alternate "A"	\$ 7,070,000
Selected Alternate	\$ 7,011,000

The estimate is based on a preliminary pavement section of 2-inches of asphalt concrete and 6-inches of aggregate base material.

The current construction schedule separates the roadway improvements into two distinct sub-projects: 1) West project boundary to the county line (11.83 miles) and 2) the county line to the community of Maricopa (9.83 miles). The tentative design and construction schedule is presented below:

	<u>Design Completion</u>	<u>Construction Completion</u>
Segment 1	February, 1987	October, 1987
Segment 2	June, 1987	March, 1988

3. **NEED FOR THE PROJECT**

3.1 **Intent of the Project**

The primary purpose of the roadway improvements is to provide improved access to the proposed Hazardous Waste Processing Facility west of the community of Mobile. It will also enhance accessibility to areas of northwestern Pinal County and southeastern Maricopa County west of the community of Maricopa, including the communities of Mobile and Enid.

The existing graded roadway is readily damaged by erosion in the vicinity of major washes during storm events. Some sections of the roadway become impassable until major maintenance and reconstruction has occurred. Improvements to roadway locations and vertical profile are intended to improve safety and minimize the inconvenience to the traveling public and commercial traffic. Modifications to the existing profile will also enhance the available sight distances making the route safer to travel.

Environmental concerns and impacts regarding the risks from the transportation of hazardous waste are addressed in Chapter IV of the Final Environmental Impact Statement for Proposed Arizona Hazardous Waste Management Facility, prepared by the U.S. Environmental Protection Agency in cooperation with the U.S. Bureau of Land Management and the Arizona Department of Health Services, dated July, 1983.

4. **ALTERNATIVES TO THE SELECTED ALIGNMENT**

During the site selection process for the Hazardous Waste Processing Facility, the Arizona Department of Health Services evaluated several site locations and various access routes for each location. Potential alternative routes for the selected Mobile Site included access from the west (from Gila Bend) along the existing Maricopa-Mobile-Gila Bend Highway as well as possible new routes from I-10 and I-8. It was concluded that the most acceptable route was from the east, from the community of Maricopa, along the existing Maricopa-Mobile-Gila Bend Highway. This route was subsequently selected as the Designated Hazardous Waste Haul Route by the State Legislature.

For much of the project length, improvement of the existing alignment is the only prudent course of action other than the No Build Alternative. In and near the community of Maricopa, however, two other alignment alternatives were examined. These alternatives to the Proposed Action are described below:

4.1 No Build Alternative

The No Build Alternative would provide no improvements to the existing roadway. Continued periodic maintenance would be provided. Increased traffic would result in more frequent maintenance being required. Dust control could become a problem due to the more frequent use of the roadway. The "No-Build" alternate would effectively prohibit access to the proposed Hazardous Waste Processing Facility during and after significant storm events. The wash in this area causes major erosion to portions of the roadway making it all but impassible until maintenance crews are able to regrade the roadway after the runoff has subsided. The realignment will provide for a better crossing location of the wash and allow a structure to be placed to provide for all weather access and decreased remedial maintenance requirements.

The existing alignment provides the only access for the Hazardous Waste Processing Facility. Increased truck traffic and employee traffic necessitate some improvement to the roadway. Improvements along the route will not only provide a safer and more efficient transport for hazardous materials but will also provide for increased mobility for local residents and safer transportation for school children to and from the Mobile School.

The No-Build Alternative was not selected because of its high maintenance cost, low design speed, and its inaccessibility during and after major storm events. An improved route will provide a safer alignment, better accessibility and a less costly transport route for local residents as well as hazardous waste haulers and site employees.

4.2 Maricopa Alternative Alignments

Although other alternative routes were cursorily evaluated, it was concluded that the most desirable, least costly and least environmentally sensitive alternative, was to utilize the existing route alignment with the exception of the portion of the route through Maricopa. At this easterly end of the project, the Selected Alternative "B", an alternate route bypassing the community of Maricopa and the existing route through the community are evaluated (see Exhibit 5, page 8).

4.2.1 Existing Alignment

The existing alignment of the route ("No-Build" Alternate) passes through the residential area of the community of Maricopa and is located along Garvey Avenue westerly from its intersection with Maricopa Road. As the roadway proceeds westerly it passes through three (3) 6+ degree curves until it parallels the Southern Pacific Railroad right-of-way west of the residential area of Maricopa.

The existing alignment passes directly in front of eleven (11) residences thereby bringing hazardous waste truck traffic into the residential community and mixing heavy truck traffic with local residential traffic and pedestrians. This alignment does not meet the geometric criteria to comply with the 60 mph design speed. Local community sentiment and negative comments from the Arizona Department of Health Services, the Facility operator, ENSCO and local residents resulted in this alternative being rejected from further consideration (see comments from Public Meeting of October 2, 1986, beginning on page 55).

4.2.2 Alternative A

Alternative 'A' follows the East-West mid-section line of Section 21, Township 4 South, Range 3 East, beginning at Maricopa Road and extending westward to its intersection with the existing Maricopa-Mobile-Gila Bend Highway.

For the east quarter mile the route borders an existing cotton field on the north and undeveloped land to the south. Overhead powerlines and a concrete irrigation ditch parallel the route. An irrigation well is located approximately 1,300 feet west of Maricopa Road, twenty feet north of the mid-section line. As the alignment shifts to the south it bisects storage yards of the existing cotton gin. A Southern Pacific Petroleum gas line runs north-south crossing the alignment.

This alternative is approximately 4,600 feet long and would reduce the overall route length by approximately 600 feet and eliminate the need for the three 6+ degree curves on the existing alignment along Garvey Avenue. However, this alternative requires reverse (4+ - 5+ degree) curves to shift the alignment from the mid-section line to avoid the existing cotton gin buildings and facilities.

In order to maintain design speed, the reverse curves required to miss the cotton gin building, come very close to the existing scalehouse. This proximity, along with the close proximity of the intersection with the existing roadway to the scalehouse is not desirable from a safety standpoint. Such a configuration would mix turning movements into and out of the gin and scalehouse with traffic trying to make a tight turn onto or off Garvey Avenue.

Although preferred by a few, public opinion was against this alignment due to its proximity to residences, and the detrimental effect it had on the gin operations. This alternative was therefore rejected in favor of Alternative "B", the Selected Alternative.

Alternative "B", the selected alternative in the vicinity of Maricopa, is discussed in Section 2.3 (see Page 6).

5. SOCIAL, ECONOMIC AND ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

5.1 Human Environmental Effects of Project

The location and improvements to the Maricopa-Mobile-Gila Bend Highway will provide a wide range of benefits and advantages for the general public as well as for public and commercial roadway users. Adverse impacts resulting from the project are minor and will be confined to the construction phase. The socio-economic and environmental evaluation presents a summary of those issues examined with relationship to the proposed alignment.

5.1.1 Economics

The improvements to the roadway will have both direct and indirect impacts on the local economy. On a short-term basis, during the construction of the project, construction workers will frequent local business establishments for construction materials, personal items, food, gasoline and other products. Long-term benefits will include vehicular operation cost savings both in fuel economy as well as frequency of repair due to a better driving surface, and savings in travel time for roadway users including school buses and emergency vehicles.

Improved access to the west, may provide a stimulus for future development and thereby create jobs in housing construction as well as employment in an expanding local service industry. These impacts are not expected to be significant unless the highway improvements are extended on to Gila Bend, which would complete an improved east-west route between Interstate I-8 and Interstate I-10.

5.1.2 Local Traffic

An immediate increase in local traffic is expected as soon as the Hazardous Waste Processing Facility is completed. The increase will consist of passenger vehicles transporting employees to the facility as well as truck traffic hauling waste materials to the site. It has been estimated that approximately 60 employees will initially operate the facility and employment may reach as many as 300. Projections of truck traffic are only one to two trucks per hour (daytime hours only).

5.1.3 Right-of-Way

It is estimated that 105 acres of additional rights-of-way will be required, as detailed below:

Federal	53 Acres
Private	21 Acres
State	31 Acres
Indian	0 Acres

Right-of-way widths along the existing roadway alignment vary from 60 to 100 feet in Pinal County and 63 to 80 feet in Maricopa County. With the exception of the first one-half mile, the proposed 80 - 100 foot right-of-way is contiguous and parallel to the Southern Pacific Railroad right-of-way. From Mobile west to the end of the project, no deeded right-of-way exists.

Right-of-way maps are being prepared for acquisition (approximately 86 parcels) of those lands outside of the existing right-of-way. The Project will generally provide for an 80 foot-wide right-of-way from Mobile to Maricopa to minimize the acquisition of additional right-of-way. A 100 foot right-of-way will be acquired, however, along the realigned segment of the road north of Maricopa. From Mobile west, a full 100 foot right-of-way will be acquired.

Proposed right-of-way acquisitions for this project will not result in any residential or commercial relocations. Furthermore, no additional acreage will be required through the Ak-Chin Indian Reservation.

5.1.4 Land Use and Zoning

Beginning in the East, the Selected Alternative passes through agricultural lands for the first one-half mile as it proceeds west from Maricopa Road. For the next 5 miles the route passes a variety of land uses including feedlots, a cotton gin, mixed agriculture, automotive junk yards, a crop dusting strip and a sailport. The road also passes through one mile of the northern tip of the Maricopa Ak Chin Indian Reservation.

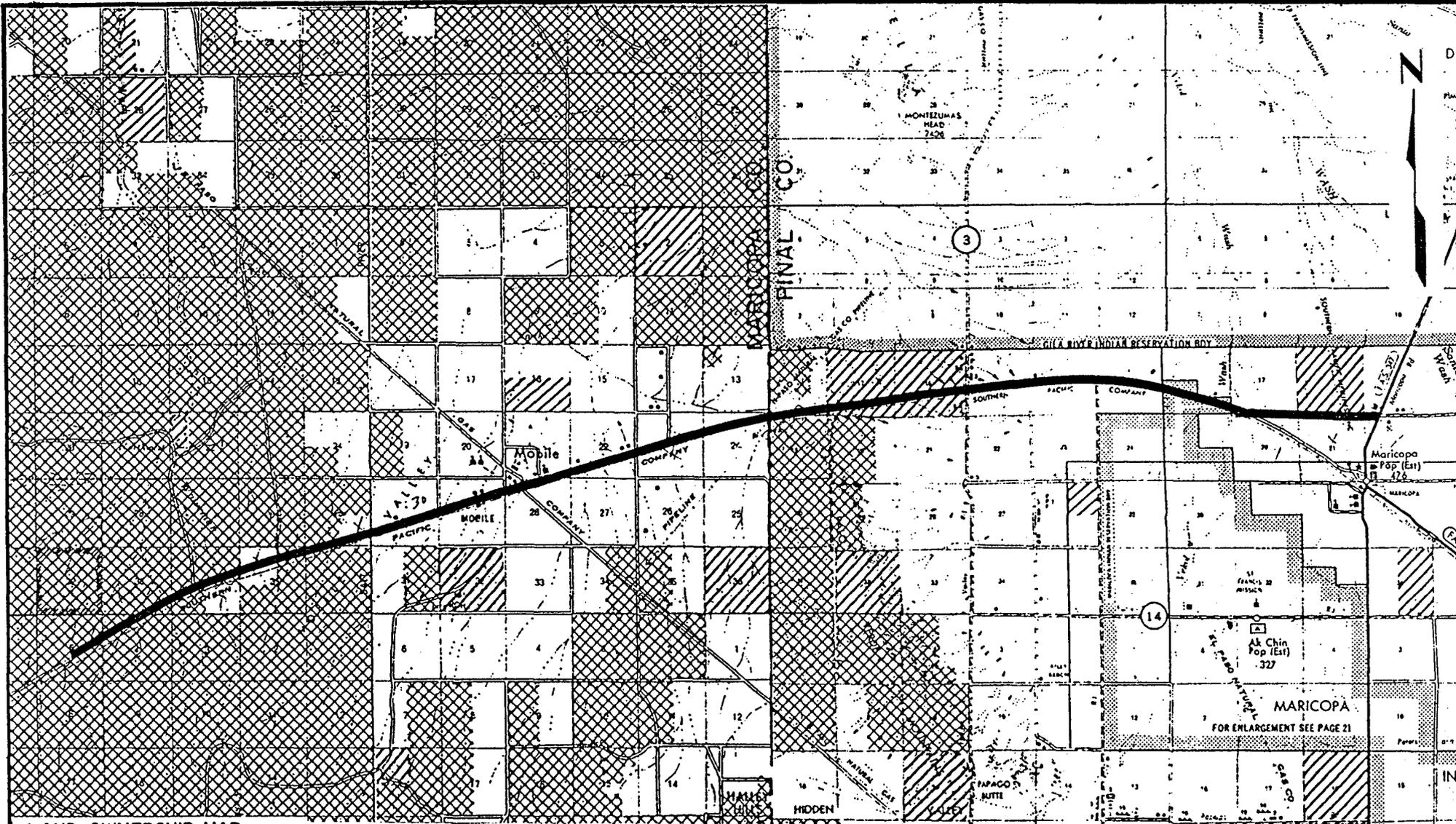
About seven acres of existing farmland are taken by the realigned roadway north of Maricopa; no other farmlands are affected. No prime or unique farmlands exist in the vicinity of the project.

Almost all the remaining lands to the west are open range lands. There are several residences on the north side of the alignment in the vicinity of Enid and in the area of Mobile. The Mobile School is adjacent to the roadway at its intersection with 99th Avenue.

Both public and private land ownerships are evident throughout the route. Private land holdings predominate along the eastern end of the project. The highway alignment passes through one section (Section 18, T4S, R3E) of the Maricopa Ak Chin Indian Reservation. Private land holdings are also predominant in the area of Mobile. However, west of this area lands are held by the U.S. Bureau of Land Management (see Exhibit 7, page 17).

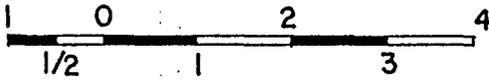
The Southern Pacific Railroad parallels the alignment for the entire route. Generally, the proposed alignment is contiguous to the existing railroad right-of-way. The only impact to the railroad will be improved grade crossings at the three intersections discussed in Section 2.4 on page 6. These improvements will enhance the sight distance available at each of the three locations and therefore improve the safety of these crossings.

17



LAND OWNERSHIP MAP

-  B.L.M.
-  STATE
-  PRIVATE



SCALE/MILES

LAND OWNERSHIP MAP

MARICOPA-MOBILE-GILA BEND HIGHWAY
 STATE ROUTE 238
 PROJECT NO. S-987-301

EXHIBIT 7

SOURCE: ARIZONA STATE LAND DEPT.

EXHIBIT 7

Existing zoning in the area consists of General Rural (GR), Heavy Industry (C1-2) and Indian Reservation on the eastern end of the project in Pinal County, (see Exhibit 8, page 19) to Rural-43, R1-18, and C-3 on the western end of the project in Maricopa County (see Exhibit 9, page 20).

The area in the immediate vicinity of Mobile is zoned C-3 commercial. There is however, a Special Uses parcel immediately south of the Southern Pacific Railroad that was once intended for an oil refinery.

The only pending development in the area that would change the existing land uses is a proposed private residential development on the north side of Maricopa that lies immediately west of Maricopa Road and approximately one-half mile south of the Selected Alternative alignment.

5.1.5 Utility Involvement

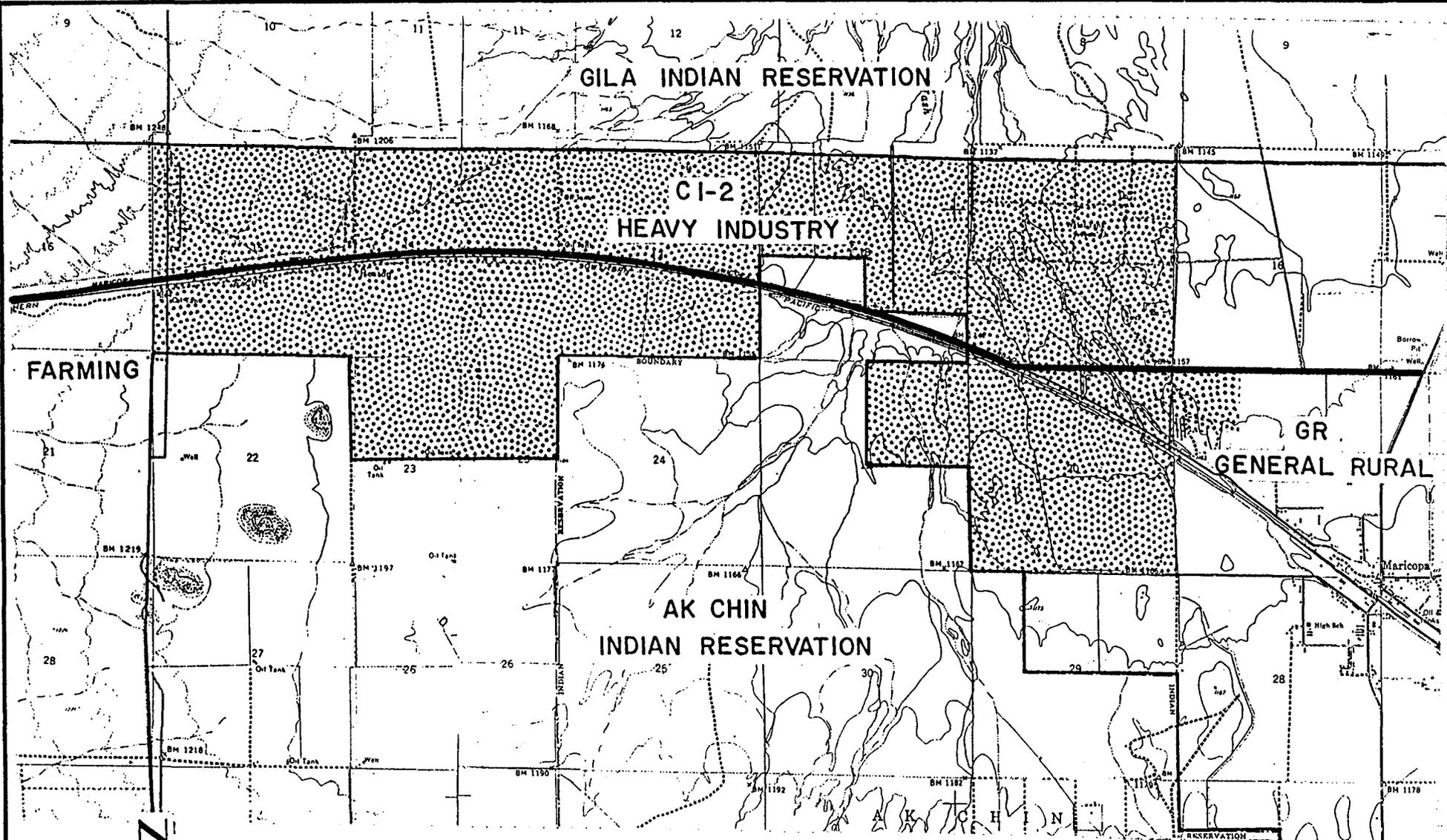
The project alignment crosses several utility corridors. There are five utilities in the project area: Arizona Public Service, Mountain Bell, El Paso Natural Gas, Southern Pacific Petroleum and Maricopa Community Water Systems.

Arizona Public Service provides electrical utility service to the area. Existing service is provided via overhead powerlines that run from Maricopa to Mobile. These powerlines are supported on a poleline that generally is parallel to and on the north side of the existing graded roadway.

Mountain Bell provides telephone service to various residences and the Mobile School. Service is provided via a buried cable system located on the north side of the existing graded roadway. The new vertical profile will require that most of this buried cable be relocated.

El Paso Natural Gas and Southern Pacific Petroleum have seven (7) pipelines that cross the roadway alignment. These lines are deep enough that the roadway construction will not require relocation.

The realigned roadway north of Maricopa does not cross any water lines operated by the Maricopa Community Water Company.

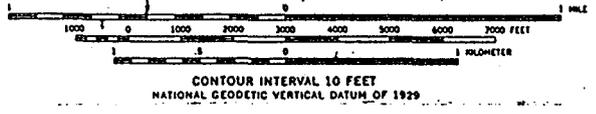


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EXHIBIT 8

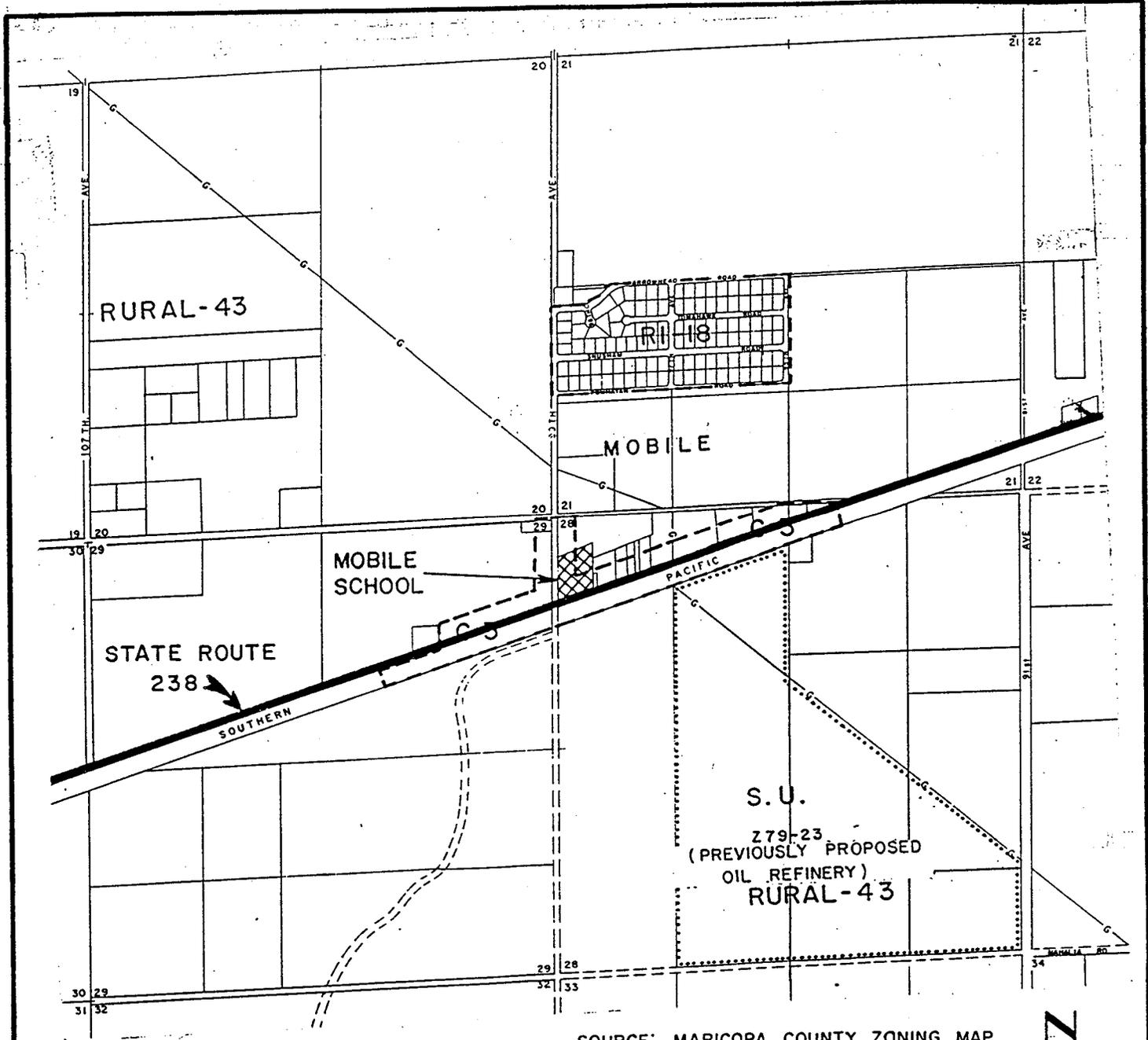


SOURCE: PINAL COUNTY ZONING MAP



**PINAL COUNTY/MARICOPA
ZONING MAP**

MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238
PROJECT NO. S-987-301 EXHIBIT 8



SOURCE: MARICOPA COUNTY ZONING MAP

LEGEND

- ZONING DISTRICT BOUNDARY
- BOUNDARY DELINEATING SPECIAL USES OR UNIT PLANS OF DEVELOPMENT



**MOBILE AREA
ZONING MAP**

MARICOPA-MOBILE-GILA BEND HIGHWAY
 STATE ROUTE 238
 PROJECT NO. S-987-301

EXHIBIT 9

5.1.6 Neighborhood Cohesion and Minority Considerations

No neighborhoods are affected by this project. The proposed project improvements are not expected to have any significant impact on local neighborhoods.

The only area of possible minority involvement is in the area of Enid where several Black families have houses north of the project alignment. These residences are several hundred feet north of the alignment and only minor inconvenience to ingress/egress is expected during the construction phase of the project. Other aspects of the project will affect all ethnic groups equally.

5.1.7 Public Facilities, Parks and Recreational Properties

The only public facility affected by the proposed project is the Mobile School. No medical facilities, police, fire or other emergency services are directly affected by the project.

There are no parks or recreational facilities in the vicinity of the proposed alignments with the exception of the Mobile School Playground. It is anticipated that a small amount of right-of-way will be reclaimed to improve the roadway. The southerly fence line of the playground is adjacent to the existing roadway and will have to be relocated 17 feet north to the actual north right-of-way line to accommodate the 80-foot right-of-way. Although Maricopa County acquired a full 80-foot right-of-way through the Mobile School property, the fenceline was never relocated. Approximately 7,650 square feet of land will be reclaimed. The field is currently used for softball, basketball and other elementary school recreational functions. Approximately twenty students attend the Mobile School. The acquisition of the additional 7,650 square feet will not substantially affect the usefulness of the playground or take any of its facilities. The school has over 227,000 square feet of existing open space that could accommodate replacement facilities.

The project is expected to improve the conditions for the school in that intersection improvements will increase the safety for parents dropping off and picking up their children from the school. A

paved surface will greatly reduce dust from vehicular traffic on the highway. Highway improvements will make bus transportation more reliable in bad weather as well as improving access for emergency vehicles in case of their need by the school.

5.1.8 Cultural Resources

During the months of June and July, 1986 a cultural resource survey of a 100 foot wide corridor along the entire route of the proposed project including alternatives was conducted. The survey identified eight previously unrecorded historic and two previously unrecorded pre-historic sites that appeared to meet criteria for eligibility for inclusion in the National Register of Historic Places. The State Historic Preservation Office (SHPO) has reviewed the cultural resource information prepared for the project and has concurred in this conclusion. In subsequent discussions, with the SHPO, agreement has been reached regarding testing, recovery or avoidance, for those sites that may be affected by the selected alternative (see letter on page 72). Fifty-three artifact isolates were also identified in the survey. The following is a summary of the findings:

Isolated historic artifacts are associated with the Southern Pacific Railroad and Maricopa Road, and reflect the continuous use of the area as a transportation corridor since the opening of the railroad in 1879. Isolated artifacts of prehistoric Hohokam and historic Pima origin were restricted to the vicinity of the Vekol Wash area (cf. Gasser 1981). The recording of isolated artifacts accomplished during the survey is considered sufficient documentation of those resources, and no further actions are recommended.

Of the 10 sites recorded during the survey, eight are of the historic period, the remaining two being prehistoric Hohokam sites. Seven of the historic sites are interpreted as being associated with the construction and maintenance of the Southern Pacific Railroad and sidings. The artifacts in several of these sites reflect the ethnic diversity of the workers involved with the establishment of the first rail line through Arizona. Although the larger of these sites have been disturbed through illicit digging, a substantial degree of spatial integrity within each site is still evident. Homesteading activities of the early 20th Century are also represented at two of the sites. Two prehistoric

Hohokam sites were recorded, both in the Vekol Wash area, and both along the proposed route realignment north of Maricopa. One of these Hohokam sites, designated AZ T:16:4(ARS), is likely to represent a village site with subsurface features. The other Hohokam site, AZ T:16:3(ARS), contains a variety of artifact types, but is of undetermined integrity.

It was determined that the two prehistoric sites recorded during the survey would be directly impacted by the preferred alignment. An archaeological testing project to determine National Register eligibility has been completed at these two sites. Site AZT:16:3 did not contain any subsurface indications. Site AZT:16:4 contained numerous trash pits, few artifacts and one burial pit. The Museum of Northern Arizona is in the process of reviewing the excavated material, evaluating the information and preparing a draft testing report with recommendations for additional work.

Two of the historic sites will be directly impacted by construction of the preferred alignment. A testing plan is currently being implemented to determine if these sites meet criteria of eligibility for the National Register.

All phases of the cultural resources investigations are being conducted in consultation with the State Historic Preservation Officer. Additional data recovery might be warranted. This work would have to be completed before any construction can begin.

If subsurface archaeological remains are encountered during the course of road construction, such actions must be discontinued in the vicinity of these remains and ADOT Environmental Planning Services notified for proper treatment of the resources.

5.2 Natural Environmental Considerations

5.2.1 Natural Areas

The project area is a part of the Lower Sonoran Life Zone of the Southern Desert Scrub Formation. The majority of the proposed alignment for the improved roadway follows an existing alignment with little or no impact on surrounding natural areas. However, realignments on both the east and west extremities of the project depart from the existing graded roadway alignment. The western realignment, in particular, crosses an undisturbed desert and requires the taking of 37+ acres.

Wildlife

Biologically, the Sonoran Desert is notable among desert environments for its diversity. The Maricopa-Gila Bend corridor includes a wide range of habitats and consequently supports a diverse fauna. Although it was not practical to conduct a comprehensive survey of wildlife which utilized the route corridor, it is possible to predict which species are likely to be found in the area based on other studies in comparable habitats and upon general sources of information about the Sonoran ecosystem. Thus, although this is not a comprehensive inventory these lists itemize those major vertebrate species that are most likely to breed near the route. In addition, the area provides habitat for many birds that either migrate through the area or nest nearby and utilize the site for hunting or foraging. Also, it should be noted that the area supports a diverse range of invertebrates.

Birds - The Sonoran Desert supports a diversity of bird life. Characteristic species include the Gambel's Quail (*Lophortyx gambelii*), Cactus Wren (*Campylorhynchus brunneicapillus*), Gila Woodpecker (*Centurus uropygalis*), Road Runner (*Geococcyx californianus*), Elf Owl (*Micathene whitneyi*) and Harris' Hawk (*Parabuteo unicinctus*).

Reptiles - Over 20 species of reptiles are likely to exist along the route corridor. Common snakes include the Long-nosed Snake (*Rhinocheilus lecontei*), Western Diamondback Rattlesnake (*Crotalus atrox*), and Gopher Snake (*Pituophis nelsoni*). Among the various lizards the Gila Monster (*Heloderma suspectum*) is the most notable specie because of its protected status under Arizona law.

Mammals - Numerous mammals also exist in this region. Among the more visible ones on the site are Desert Mule Deer (*Odocoileus hemionus*), Javelina (*Dicotyles tajacu*), Coyotes (*Canus latrans*) and the Desert Cottontail Rabbit (*Sylvilagus auduboni*).

Mitigation of Impacts - The alignment of the selected alternative follows the existing roadway for most of the project, thereby minimizing impacts. Approximately 37+ acres of previously undisturbed land will be affected by the project. Migration corridors will be preserved. Where roads cross washes, dip crossings or span construction will be used to ensure wildlife passages. Game fence will be utilized throughout the project where fencing is required. There are no other project design features that would inhibit wildlife movement.

Native and Protected Species

During the months of June, July, and November 1986, representatives from the Arizona Commission of Agriculture and Horticulture inspected the existing and proposed project alignments (see letters on pages 66-70) for plants protected by the Arizona Native Plant Law and the Endangered Species Act. The following native plants within the project limits are accessible, are of average or better quality, and are recommended for salvage and/or protection:

Saguaro	3' - 6'	2
	6' - 10'	1
Barrel Cactus		17
Ocotillo		28
Crucifixion Thorn		2
Palo Verde Trees	12'	3
Mesquite Trees	6' - 10'	18
	10' - 15'	15

These plants will be salvaged prior to construction in compliance with the State statute.

In addition, the U.S. Fish and Wildlife Service expressed their concern over the possible occurrence of one endangered plant (*Tumamoca maddougallii*), and one proposed threatened plant (*Mammillaria thornberi*) (see letters on pages 79-80). A letter from the Arizona Commission of Agriculture and Horticulture (see letter on page 70) responded that these plants are not found in the project area.

5.2.2 Drainage/Hydrology

Two major drainage basins are bisected by the proposed facility: the West Prong of the Waterman Wash on the west end of the project and Vekol Wash on the east end of the project.

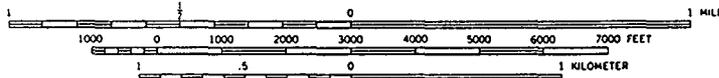
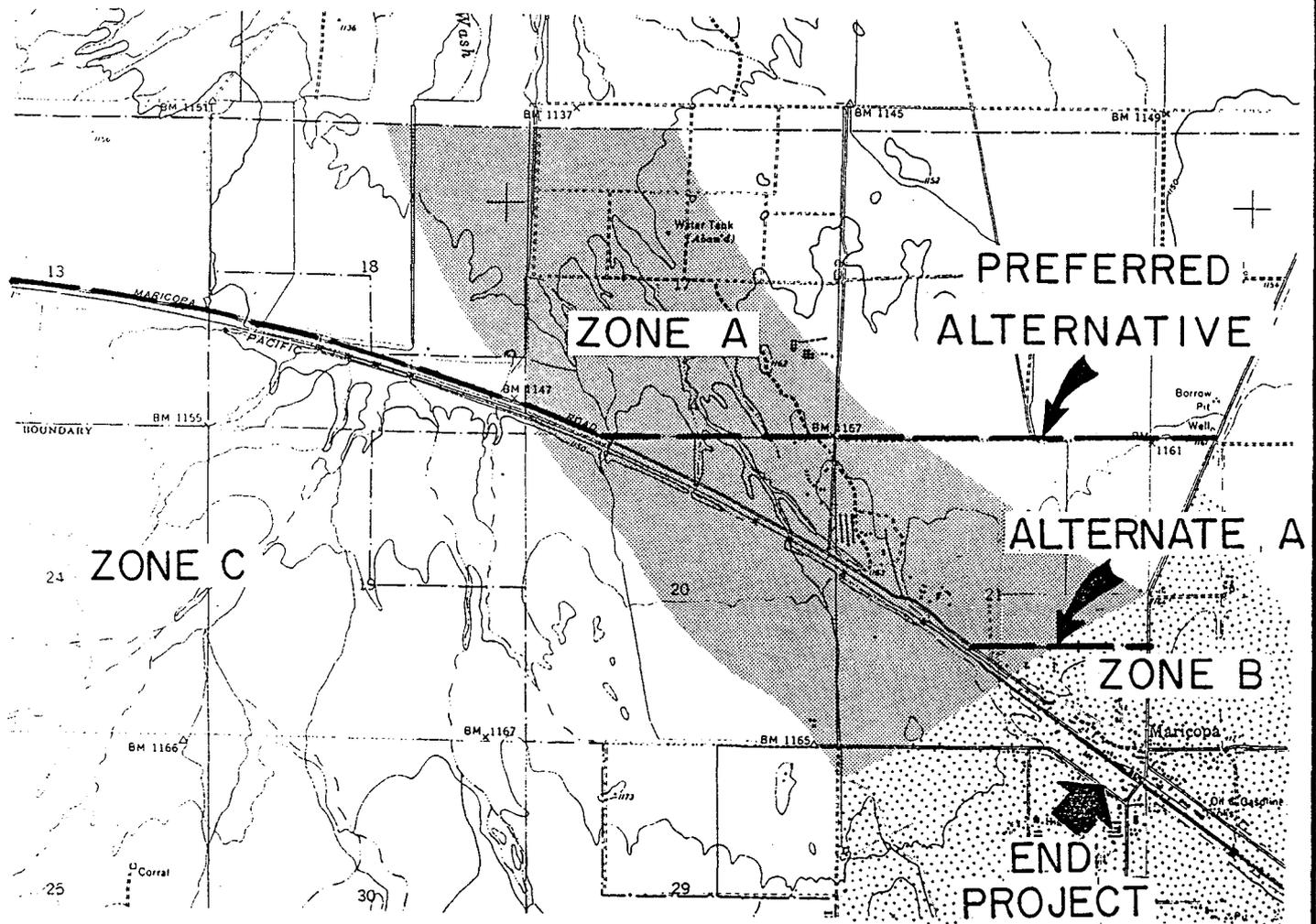
The various drainage basins tributary to Waterman Wash cover approximately 86.5 square miles and vary in size from less than 0.1 square mile to almost 17 square miles. The basins are predominantly desert brush rising from elevation 1295 at the railroad drainage structures to elevation 3270 at the highest end of one of the watersheds. The fifty year 1-hour design frequency yielded flows varying from 29 cfs to 3,233 cfs.

At the eastern end of the project, the Vekol Wash drainage area (248 square miles) generates a fifty year 1-hour design frequency flow of 24,393 cfs at the railroad crossings just west of Maricopa. During major storm events this area experiences extensive flooding.

Present access to lands adjacent to the highway is sometimes restricted due to inclement weather. Low flow dip crossings in some cases flood, prohibiting access, while others require extensive reconstruction and maintenance to be passable after major storm events. The proposed improvements to the highway will minimize the frequency with which the road requires extensive maintenance. There will be no major changes to the drainage patterns along the proposed route. However, many of the ford and dip sections are to remain and will certainly flood and become impassable during major storm events.

Practically speaking, all of the flows (Waterman and Vekol Washes) are intercepted by the railroad and are routed through the railroad drainage structures. In addition, existing cross slopes, in some areas, are so small compared with the slope of the roadway, that flows are diverted down the roadway until a convenient down gradient outlet can be found. The new roadway will provide for ford and dip sections at the major wash crossings maintaining the existing drainage flow patterns. An exception to this occurs at the West Prong of Waterman Wash where a drainage structure is planned to allow for all weather access.

A review of the Federal Emergency Management Agency (FEMA) program mapping indicates that no flood mapping is available for the western half of the project. The eastern half of the project is covered by FEMA Panel No. 04077 0450 C (see Exhibit 10, page 27) delineating a Flood Zone A that includes the project's various alternate alignments.



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

SOURCE: F.E.M.A. PANEL NO. 040077 0450 C

-  ZONE A - AREAS OF 100 YEAR FLOOD
-  AREAS BETWEEN LIMITS OF
ZONE B - 100 YEAR FLOOD AND 500
YEAR FLOOD
-  ZONE C - AREAS OF MINIMAL
FLOODING

PINAL COUNTY/MARICOPA FLOOD PLAIN AREA

MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238

PROJECT NO. S-987-301 EXHIBIT 10

Due to the location of the existing alignment and the alignment of the "Selected Alternative" alternate, significant encroachment into the floodplain will occur. There are no practical roadway alignments, however, that would eliminate or reduce this encroachment. However, the proposed project configuration does not include major excavation, fill or construction of drainage facilities other than fords at washes. Minimal construction activities confined to the 80 - 100 foot right-of-way will result in only minor environmental impact and will have no significant effect on the carrying capacity of the flood plain.

5.2.3 Erosion Control

Substantial earthwork activities will be required during construction of the new roadway. The Contractor will be required to implement dust control measures at borrow sites, temporary haul roads, spoil sites and in the placement and compaction of embankments. The Contractor will be required to make adequate provisions to minimize soil erosion during the course of his activities. Erosion control will be limited to protecting against runoff from major storm events (see also ADOT Roadside Development Service's letter on page 52). There are no perennial streams or other water bodies within the project limits.

5.2.4 Section 404 Considerations

The U.S. Army Corps of Engineers (COE), pursuant to Section 404 of the Clean Water Act (33 USC 1344), is responsible for administering a permit program for the excavation and/or placement of fill materials into "waters of the United States". These "waters of the United States" are defined as including any areas or tributaries to waters that are navigable. This broad definition includes any and all washes in the project area that might be tributary to the Gila and Salt Rivers. Maps and drawings showing the nature and extent of drainage improvements have been submitted to the Corps of Engineers for their review.

The project does not impact 10 acres of drainage ways in any one area and therefore the work is covered by Nationwide Section 404 Permit No. 26. The COE has been advised of the nature and extent of the work and concurrence in the above

conclusion has been obtained. Their letter of concurrence is included on page 51. It is anticipated that the excavation/fill work will be routine with minimum impacts.

5.2.5 Water Quality

The only potential impact to water quality will be the possible temporary increase in sediment load on the washes during major storm runoff events due to recently disturbed ground by construction vehicles. The Contractor will be required to provide temporary pollution control measures which may include dikes, basins and ditches to control erosion and sedimentation pursuant to the April 13, 1977 Water Quality Control Policy adopted by the Arizona State Water Quality Control Council.

5.2.6 Air Quality Analysis

Project generated air pollution is categorized into two areas: construction related and operational. Construction generated pollutants consist of dust from dirt moving activities (including asphalt, concrete, and rock crushing plants), burning of construction debris and construction vehicular emissions. These sources are minimized by requiring the roadway contractor to observe and comply with all air pollution ordinances, regulations, etc from those agencies having jurisdiction pursuant to the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction. These requirements ensure that the contractor obtains the necessary burning permits and certification of dust palliatives as well as the licensing of asphalt, concrete, and rock crushing plants, all in conformance with local regulations relating to particulate and other pollutant emissions.

The 1987 Interim CO Plan for Maricopa County has been submitted to EPA for approval. In the meanwhile, there are Federal Standards for vehicular emitted air pollutants. Of these pollutants, carbon monoxide (CO) is considered a potential health hazard at excessive concentrations. The analysis for carbon monoxide assumes the worst-case meteorological conditions with the receptor located at the edge of the right-of-way (40 feet from centerline).

The National Ambient Air Quality Standard (NAAQS) for carbon monoxide, which is not to be exceeded more than once per year, is as follows:

Carbon Monoxide
(National Ambient Air Quality Standard)
Parts per Million (ppm)

Maximum One-Hour Concentration 35 ppm
Maximum Eight-Hour Concentration 9 ppm

A simplified analysis technique, utilizing "FHWA Technical Advisory T 6640.6, dated March 2, 1981 entitled - A Graphical Solution Procedure for Estimating Carbon Monoxide (CO) Concentrations New Roadways" was used in carbon monoxide concentrations resulting from the projected roadway traffic.

The projected maximum one-hour pollutant concentrations above the assumed ambient (1.0 ppm) or background levels for the project are as follows:

Year	Background CO	Project Generated CO	Total Projected CO	1-Hour NAAQS
1988	1.0 ppm	0.1 ppm	1.1 ppm	35.0 ppm
2008	1.0 ppm	0.1 ppm	1.1 ppm	35.0 ppm

The analysis shows that the worst case projections will not approach the standards. Therefore, there will be no adverse air quality impact. No 8-hour projection is made, because the 1-hour worst case projection is already lower than the 8-hour NAAQS.

The project is in an area where the State Implementation Plan does not contain any transportation control measures. Therefore, the conformity procedures of 23CRF770 do not apply to this project.

The technical analysis of this report with supporting graphs, references and worksheets are on file at ADOT's Environmental Planning Services.

5.2.7 Noise Analysis

The only noise sensitive receptor identified within the project limits is the Mobile School site (190 feet from the roadway) and playground (40 feet). The nearest residence receptor is 150 feet from the roadway. The noise analysis identifies the initial and projected design year noise levels to be experienced at the various receptors.

ADOT has adopted a Noise Abatement Policy for State Funded Projects that is generally consistent with the Federal Highway Administration guidelines, (FHPM 7-7-3). Therefore, initial and design year levels shown in this report will be compared to the design noise level criteria used on federal-aid projects and other common indoor-outdoor sound levels. (The Federal Highway Administration noise abatement criteria for outdoor noise levels in residential and school areas is 67 dBA Leq.)

The noise level description used throughout the analysis will be the hourly dBA Leq (i.e., the steady dBA level which would produce the same A-weighted sound energy over a one-hour period as would a specified time-varying sound).

Future noise levels (both initial and projected) were estimated using the "FHWA Highway Traffic Noise Prediction Model", FHWA-RD-77-108, December 1978.

The Technical Analysis of this report with supporting graphs, references and worksheets are on file at ADOT's Environmental Planning Services. The results are as follows:

	dBA Leq.	
	<u>1988</u>	<u>2008</u>
R/W Line @ 40 Feet	62.0	66.1
Nearest Residence		
@ 150 Feet	56.9	60.0
Mobile School Building Line		
@ 190 Feet	56.1	59.2

To put these noise levels in perspective Exhibit 11 on page 32, compares projected roadway sound levels to common indoor/outdoor sounds with which we are all familiar.

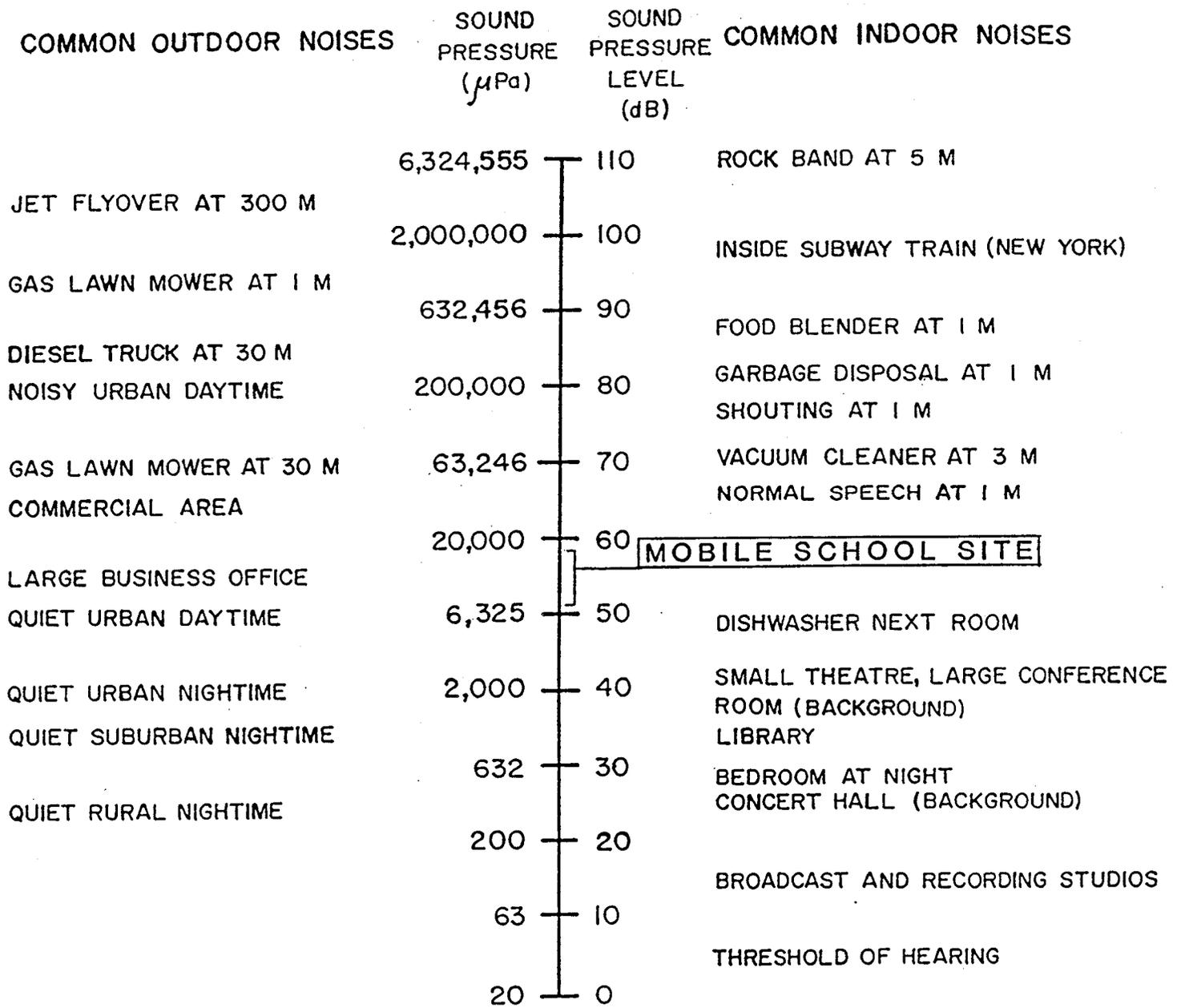


EXHIBIT II. COMMON INDOOR AND OUTDOOR NOISES

The analysis indicates that the projected traffic noise levels at sensitive receptors will not exceed the ADOT noise abatement policy level of 67 dBA and therefore no noise mitigation is required for this project.

5.3 Construction Impacts

The construction of the proposed highway will result in several short term impacts on the local populace as well as those who regularly use the facility. A certain amount of inconvenience by the traveling public will be experienced throughout the construction phase due to temporary detours around the construction project as well as possible short term delays due to road closures. These are expected to be minimal due to the proposed configuration of the facility. The Contractor will be required to minimize delays as much as possible and to maintain adequate detours around the work where activity warrants.

In addition, earthwork activities will generate a certain amount of construction related dust. The Contractor will be required to water the excavation and backfill operations and to exercise whatever means are necessary to minimize dusty conditions in conformance to County dust control ordinances and ADOT construction standards.

6. PROJECT COORDINATION AND PUBLIC INVOLVEMENT

6.1 Information Dissemination

At the outset of this project substantial coordination occurred among various divisions and sections of the Arizona Statewide Management Consultant (ASMC-Sverdrup Corporation), the Arizona Department of Transportation and the Arizona Department of Health Services. In addition, an information letter was distributed to interested parties on June 10, 1986 to request additional input from agencies as well as private individuals. A mailing list and copies of the responses are presented beginning on page 38.

6.2 Public Information Meeting

On Thursday, October 2, 1986, a Public Information Meeting was held at the Maricopa School's Cafeteria to provide general information to the public and to seek additional public opinion prior to the completion of the Draft Environmental Assessment and the formal Public Hearing.

Copies of the written comments are included beginning on page 55.

A summary transcript of the meeting is on file in the ADOT Environmental Planning Services offices.

6.3 Public Hearing

On Thursday, December 18, 1986 a Public Hearing was held at the Maricopa School's cafeteria to provide additional information to the public and to seek additional public input prior to the completion of the Draft Environmental Assessment for the subject project.

Copies of the Draft Environmental Assessment were also distributed to various individuals and agencies as a means of obtaining additional input.

Only three (3) individuals provided comments at the Public Hearing:

- Mr. Lyn Bowland requested information regarding the timing of construction.

Response: The project is being split into two (2) separate projects at the county line. The western project, in Maricopa County, is scheduled to be advertised for construction in May of 1987. The eastern portion of the project, in Pinal County, is tentatively scheduled to be advertised in August of 1987.

- Mr. Riffittin Curtis spoke for the selection of Alternate B.
- Mr. Gerald Sunna requested information regarding the timing of Public Hearings on the Gila River Indian Reservation, relating to the use of Maricopa Road.

Response: Public Meetings and/or Hearings are tentatively scheduled for the Spring of 1987 to discuss the designation of Maricopa Road as a hazardous waste haul route leading to State Route 238. The public will be notified of the time and place of these Public Meetings and/or Hearings.

In addition to the comments received at the Public Hearing, eight (8) written comments have subsequently been received. A copy of each of these letters is included beginning on page 64. The following represents a summary of the comments and responses to them.

1. Arizona Commission of Agriculture and Horticulture, letter dated December 15, 1986:

Comment: A subsequent native plant survey was conducted on the project site and roadway and neither the *Tumamoco Macdougallii* or the *Mammillaria Thornberi* was found in the concerned area.

2. Ensco Inc., letter dated December 18, 1986:

Comments:

(1) Design concerns regarding the Maricopa Road intersection.

Response: Traffic is insufficient to warrant the provision of right and left deceleration turn lanes.

(2) Dairy Farm Intersection concerns:

Response: Given lack of traffic local turnouts have not been provided with paved returns.

(3) Future intersection with hazardous waste processing site access road concerns.

Response: It is anticipated that if any special requirements for this intersection are required, they will be provided at the time of the construction of the access road.

- 3 & 4. Arizona Commission of Agriculture and Horticulture, letters dated December 23 and 30, 1986:

Comment: Additional field survey has identified an additional sixty-seven (67) native plants to be considered for plant salvage.

Response: These native plants along with the previously identified native plants will be considered for plant salvage pursuant to the appropriate Federal and State guidelines.

5. Maricopa County Highway Department, letter dated December 24, 1986:

Comment: Expressed concern regarding wash crossings (ford sections) and lateral clearance to obstacles.

Response: Because of the remoteness of the area and the very low traffic volume, the facility is considered to be a local road rather than a rural collector or highway. This designation coupled with cost effective analysis of the roadway features have resulted in the current design. The roadway is expected to function similarly to the existing Maricopa Road between I-10 and I-8. Arizona Department of Transportation letter dated January 12, 1987 - see page 75.

6. Arizona Game and Fish Department, letter dated January 12, 1987:

Comment: Agency felt that the biological impacts, Section 5.2.1, were incompletely described. Also concerned about any future plans to extend improvements of the highway to Gila Bend. This section passes through the Maricopa Mountains which is a critical habitat for desert big horn sheep and other wildlife species.

Response: Section 5.2.1 has been rewritten to include animal species inhabiting the Sonoran Desert scrub and mitigation measures.

7. Arizona State Parks, letter dated January 20, 1987:

Comment: Agency requested that mitigation needs for cultural resources be coordinated with the State Historic Preservation Office.

Response: Mitigation needs are being coordinated with the State Historic Preservation Office.

8. United States Department of the Interior - Fish and Wildlife Service Ecological Services, letter dated January 20, 1987:

Comment: Agency requested that right-of-way fencing be designed to permit wildlife passage and that all disposal and fill sites be located in an upland area away from washes. Also requested that the surface of the old roadway in the Waterman Wash realignment area be contoured to conform to the slope of the surrounding terrain and that the area be revegetated with native forb, grass, shrub and tree species, also concerned regarding the limits of construction in the Waterman Wash area. The Agency also referenced their November 18, 1986 letter regarding one (1) endangered plant and one (1) proposed threatened plant as well and a candidate category 1 plant found in the vicinity.

Response: Right-of-way fences will be typical three-wire ADOT fencing that will allow small wildlife passage. Disposal sites will be located away from washes. The existing roadway in the Waterman Wash area will be returned to a natural state. The crossing at Waterman Wash will utilize a bridge structure allowing for wildlife passage. Construction will be confined to the immediate area. The Arizona Commission of Agriculture and Horticulture has surveyed the area for plants protected by the Endangered Species Act and found none (see letters on pages 66-70).

6.4 Preparer

This Document has been prepared by Dibble and Associates Consulting Engineers, Phoenix, Arizona.

6.5 CORRESPONDENCE RECEIVED

PROJECT NO. S-987-301
MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238

RESPONSES RECEIVED FROM
JUNE 10, 1986 MAILING

Ak Chin Indian Community	
Arizona Comm. of Agriculture and Horticulture	<u>7/30/86</u>
Arizona Department of Commerce	
Arizona Dept of Health Services Bureau of Water Quality Control	<u>7/30/86</u>
X Arizona Dept. of Health Services Environmental Health Services	<u>6/27/86</u>
Arizona Dept of Health Services Office of Emergency Response and Environmental Analysis	
Arizona Dept of Public Safety	
Arizona Dept of Transportation Environmental Planning	
El Paso Natural Gas	<u>7/9/86</u>
Flood Control District of Maricopa County	
Gila River Indian Community Natural Resources	
ENSCO Inc.	<u>7/1/86</u>
Maricopa Assoc. of Govts. Transportation and Planning	
X Maricopa County Highway Dept. Maricopa Unified District #20	<u>6/26/86</u>
X U.S. Army Corps of Engineer Los Angeles District	<u>6/26/86 - 1/6/87</u>
X Arizona Department of Transportation Roadside Development Service	<u>6/19/86</u>
Arizona Game and Fish Division	<u>7/1/86</u>
Arizona Land Department	
Arizona Public Service Company	
X Arizona State Parks Arizona State Parks Arizona State Historic Preservation Office Bureau of Land Management	<u>6/27/86</u>

PROJECT NO. S-987-301
MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238

RESPONSES RECEIVED FROM
JUNE 10, 1986 MAILING

Department of the Interior

Central Arizona Associates of Governments

Mobile School District #86

Motor Transportation Division
Arizona Corporation Commission

Mountain Bell

Pinal County Engineering Department
County Courthouse

Sierra Club

Southern Pacific Railroad

Southern Pacific Pipe Lines

JUL 30 1986

**ARIZONA DEPARTMENT OF HEALTH SERVICES**

BRUCE BABBITT, Governor
LLOYD F. NOVICK, M.D., M.P.H., Director

July 28, 1986

Mr. Ronald L. Ewing, P.E./R.L.S.
Dibble and Associates
3625 North 16th Street
Phoenix, Arizona 85016

Dear Mr. Ewing:

RE: Project No. S-987-301, Maricopa-Mobile-Gila Bend Highway
State Route 238

We appreciate the opportunity to review the subject proposal during the planning phase of the project.

The April 13, 1977, Water Quality Control Policy (copy attached) should be consulted for guidance for minimizing water quality impacts. We are not aware of the availability of current water quality data for surface waters in the area of the project. Roadways, embankments, storm water handling facilities and other alterations of the natural environment should be designed and constructed to avoid causing exceedances of limits imposed by the State water quality standards regulations, Title 9, Chapter 21, Articles 1 through 4.

Reasonable precautions should be taken to minimize air quality impacts such as generation of excessive fugitive dust emissions during construction activities. The applicable State regulations are contained in Title 9, Chapter 3, Article 3.

As you know, we are currently holding preliminary discussions with Arizona Department of Transportation staff regarding measures to minimize the environmental impacts of hazardous materials spills by vehicles traversing the Gila River bridge. As yet no roadway design requirements have been established by this agency to mitigate potential spills.

Please contact me at 257-2332 if you should have questions.

Sincerely,

Handwritten signature of Edwin K. Swanson in cursive.

Edwin K. Swanson, P.E., Manager
Ambient Water Unit

EKS:md
Attachment

The Department of Health Services is An Equal Opportunity Affirmative Action Employer.

ARIZONA DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH SERVICES
BUREAU OF WATER QUALITY CONTROL

POLICY ON
CONSTRUCTION AND RELATED ACTIVITIES IN WATER

Appropriate items as listed below should be included in specifications for construction and related activities in waterways. Adherence to the cited procedures should assure compliance with Water Quality Standards for Surface Waters, R9-21. Specifications should require the person responsible for the activity to submit a program for effective control of water pollution to the person in charge of the project which includes procedures for protecting water from pollution with fuels, oils, bitumens, calcium chloride and other harmful materials, and for conducting and scheduling operations so as to avoid or minimize muddying and silting of the water.

Specific procedures for preventing water pollution may include:

1. Provision for temporary pollution control measures including dikes, basins, ditches and application of straw and seed.
2. Erosion control measures including minimizing clearing and grubbing and limiting exposure of erodible surface to 750,000 square feet for each location.
3. Construction of footings in water by sheet pile cofferdam method and pumping water from within the dam to settling ponds before returning it to the water.
4. Isolation of the construction area by sand dikes.
5. Erection of barriers, covers, shields and other protective devices as necessary to prevent any construction materials, equipment or contaminants from falling or being thrown into the water.
6. Construction of drainage facilities to control erosion and sedimentation.
7. Provision of an adequate means, such as a bypass channel, to carry a stream free from mud and silt around operations to remove material from beneath a flowing stream.
8. A requirement for transportation of materials across live streams to be conducted without muddying the stream, mechanized equipment should not be operated in stream channels of live streams except as may be necessary to construct crossings or barriers and fills at channel changes.

9. A requirement for wash water from aggregate washing or other operations containing mud or silt to be treated by filtration or retention in a settling pond, or ponds, adequate to prevent muddy water from entering live streams.
10. A requirement for oily or greasy substances originating from the contractor's operations not be placed where they will later enter a live stream.
11. Provisions for Portland cement or fresh Portland cement concrete not to be allowed to enter flowing water of streams.
12. A requirement to return the flow of streams as nearly as possible to a meandering thread without creating a possible future bank erosion problem when operations are completed.
13. A requirement that material derived from roadway work should not be deposited in a live stream channel where it could be washed away by high stream flows.

The person responsible for the activity should be required to monitor for turbidity every day in which there is a disturbance of the bed of the waterway. Monitoring should be performed not greater than one and one-half miles downstream from the construction or related operations and weekly reports of turbidity measurements should be reported to the water quality control agency.

JUN 27 1986



ARIZONA DEPARTMENT OF HEALTH SERVICES

BRUCE BABBITT, Governor
LLOYD F. NOVICK, M.D., M.P.H., Director

June 25, 1986

Mr. Ronald L. Ewing, P.E./R.L.S.
Dibble & Associates
Consulting Engineers
3625 North 16th Street
Phoenix, Arizona 85016

Dear Mr. Ewing:

We are in receipt of your letter dated June 10, 1986 regarding the 20-mile portion of State Route 238 (Maricopa-Mobile-Gila Bend Highway). The Environmental Health Services prefer Alternative B along the section line. This alternative bypasses the populated area of The Town of Maricopa and at this time is the community's preferred route.

Thank you very much for the information that you have provided.

Sincerely,

A handwritten signature in cursive script that reads "Chuck Anders".

Chuck Anders, Assistant Director
for Environmental Health Services

CA:MD:ct

JUL 9 1986

El Paso
Natural Gas Company

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-541-2600

July 7, 1986

Mr. Myron G. Jasmann, R.L.S.
Dibble & Associates Consulting Engineers
3625 North 16th Street
Phoenix, Arizona 85016

Re: R/W 860332 - Encroachment: Dibble & Associates -
Hazardous Waste Facility Roadway; Various EPNG
Facilities, Pinal and Maricopa Counties, Arizona

Dear Mr. Jasmann:

El Paso Natural Gas Company has reviewed the proposed route for the road to the hazardous waste facility site and confirms the three crossings of its high pressure gas lines at the locations listed in your letter. It should be noted that there are three large diameter high pressure lines to be crossed at the first crossing listed being the one in Section 28, Township 4 South, Range 1 East, G. & S.R.M.

In order to insure that the pipelines have adequate protection to safely accommodate the road, we hereby request that you contact Mr. Bill Ward of El Paso's Phoenix Cost Center at telephone 438-1675 and coordinate depth determinations of the lines. Based on depth checks, Mr. Ward or his representative will give the Company's consent to the crossings. Their consent may be subject to specific requirements necessary for the protection of the pipelines. However, no problems are anticipated if the lines have at least 5-1/2 feet of cover and the vehicular weight will not exceed 16,000 pounds per wheel load. The information concerning the maximum wheel loads should be furnished Mr. Ward.

Your cooperation in this matter will be greatly appreciated.

Very truly yours,



Edwin O. Nichols
Coordinator
Securities Group
Right of Way Department

TBT:ek

cc: Mr. Bill Ward

JUL 1 1986



June 30, 1986

Ronald L. Ewing, P.E./R.L.S.
Dibble & Associates
3625 North 16th Street
Phoenix, Arizona 85016

Re: Project No. S-987-301, Maricopa-Mobile-Gila Bend Highway, State Route 238

Dear Mr. Ewing:

Thank you for the opportunity to submit comments regarding the alternate routes identified in your June 10, 1986, letter.

The route selection is of considerable interest to the residents of Maricopa and I understand that the selection will be the subject of a public hearing to be held in Maricopa some time in September. ENSCO will submit comments as part of the public hearing process. In the meantime, I offer the following general observations for your consideration.

It is my understanding that Alternate B is preferred by Maricopa residents. Alternate A will intersect a gin yard and will complicate traffic flow both at the cotton gin and to the site of the proposed waste management facility. Such complications should be avoided to the extent practicable in the interest of safety.

I would appreciate being kept informed of your progress in the design process, including the identification of factors which impact the final route selection.

Again, thank you for the opportunity to submit preliminary comments.

Sincerely,

Jarrell E. Southall
CONTRACT ADMINISTRATOR

JES:id

MARICOPA COUNTY HIGHWAY DEPARTMENT

3325 West Durango Street
Phoenix, Arizona 85009



(602) 233-8600

June 25, 1986

Dibble and Associates
3625 North 16th Street
Phoenix, Arizona 85016

Attention Mr. Ronald L. Ewing, P.E.

Gentlemen:

RE MARICOPA-MOBILE-GILA BEND HIGHWAY (STATE ROUTE 238)
PROJECT NO. S-987-301

In reference to your letter dated June 10, 1986, we have reviewed the proposed project in regards to County interest and have no objections to the project.

Sincerely,

R. C. ESTERBROOKS, P.E.
ASSISTANT COUNTY MANAGER,
PUBLIC WORKS DIRECTOR & COUNTY ENGINEER

A handwritten signature in cursive script that reads "Harry R. Keller".

Harry R. Keller, P.E.
Assistant County Engineer

WHH:rg

JUN 26 1986



DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE
PHOENIX, ARIZONA 85012-1936

June 25, 1986

REPLY TO
ATTENTION OF:

Assistant Commander
for Civil Works

Mr. Ronald L. Ewing
Dibble & Associates
3625 North 16th Street
Phoenix, AZ. 85016

Dear Mr. Ewing:

Thank you for your letter concerning project #S-987-301, State Route 238.

To follow up on our phone conversation on June 24th, I would only add that the project's cumulative acreage of "dry washes" impacted by fill activities would be the area of concern under Section 404 of the Clean Water Act. One would not apply for separate permits for individual washes. (See attached information packet for 404 requirements). I hope this clarification is of benefit. Please feel free to contact me for further guidance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dennis R. Dowdy".

Dennis R. Dowdy
Major, Corps of Engineers
Assistant Commander
for Civil Works, AZ/NV

Information Sheet
Nationwide General Permit Number 26
Work Above Headwaters and in Isolated Waters and Wetlands

The Corps of Engineers has issued a nationwide general permit for placing dredged or fill material in the following waters:

a. Non-tidal rivers, streams, and their impoundments, including adjacent wetlands that are located above the headwaters. The headwater is defined as a point on a non-tidal stream where the average annual flow is less than 5 cubic feet per second.

b. Into isolated, non-tidal waters of the United States, including wetlands, that are not part of a surface tributary system to interstate waters or navigable waters of the United States.

This nationwide general permit eliminates the need for further processing for discharges which affect less than 1 acre of the above waters of the United States, including wetlands.

EXCEPTION - Those discharges which cause the loss or substantial adverse modification of 10 acres or more of the above waters of the United States, including wetlands, are not permitted under this nationwide permit. Such discharges would require an application for a Department of Army permit.

NOTIFICATION REQUIREMENTS - For discharges which cause the loss or substantial adverse modification of 1 to 10 acres of the above water of the United States, including wetlands, the District Engineer must be notified before beginning work. Notification must include the following information:

- a. Name, address, and phone number of nationwide permittee.
- b. Location of planned work (complete written description or indicated on a good quality map, for example, USGS topographic quadrangle).
- c. Brief description of the proposed work, its purpose, and approximate area of waters (including wetlands) that would be adversely affected as a result of the proposed work.
- d. Copies of other federal, state, or local permits and certifications obtained for the proposed work.
- e. Any other information that the permittee believes is appropriate.

THE NATIONWIDE PERMITTEE SHALL NOT BEGIN WORK:

- a. Until notified by the District Engineer that the work may proceed under the nationwide permit; or

b. Until an individual permit is obtained (if the Division Engineer determines that the nationwide permit will not apply); or

c. Until 20 days have passed from receipt of the permittee's notification by the District Engineer and no notice has been received from the District Engineer.

FOR YOUR DISCHARGE TO QUALIFY FOR THIS NATIONWIDE PERMIT, YOU MUST COMPLY WITH THE FOLLOWING:

a. The discharge will not be located in the proximity of a public water supply intake.

b. The discharge will not occur in areas of concentrated shellfish production unless the discharge is directly related to a shellfish harvesting activity.

c. The discharge will not jeopardize a threatened or endangered species as identified under the Endangered Species Act, or destroy or adversely modify the critical habitat of such species. In the case of federal agencies, it is the agencies' responsibility to review its activities to determine if the action "may affect" any listed species or critical habitat. If so, the federal agency must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service.

d. The discharge will consist of suitable material free from toxic pollutants in toxic amounts. (See Section 307 of the Clean Water Act.)

e. The fill created by the discharge will be properly maintained to prevent erosion and other non-point sources of pollution.

f. The activity will not cause an unacceptable interference with navigation.

THE FOLLOWING MANAGEMENT PRACTICES SHOULD ALSO BE FOLLOWED, TO THE MAXIMUM EXTENT PRACTICABLE, TO MINIMIZE THE ADVERSE EFFECTS OF THE DISCHARGE ON THE AQUATIC ENVIRONMENT. Failure to comply with these practices may be cause for the District Engineer to recommend or the Division Engineer to take discretionary authority to regulate the activity on an individual or regional basis.

a. Discharges of dredged or fill material into waters of the United States shall be avoided or minimized through the use of other practical alternatives.

b. Discharges in spawning areas during spawning season shall be avoided.

c. Discharges shall not restrict or impede the movement of

aquatic species indigenous to the waters or the passage of normal or expected high flows or cause relocation of the waters (unless the primary purpose of the fill is to impound waters).

d. If the discharge creates an impoundment of water, adverse impacts on aquatic system caused by the accelerated passage of water and/or the restriction of its flow, shall be minimized.

e. Discharges in wetland areas shall be avoided.

f. Heavy equipment working in wetlands shall be placed on mats.

g. Discharges into breeding areas for migratory waterfowl shall be avoided.

h. All temporary fills shall be removed in their entirety.

This nationwide general permit applies only to the authorization required under Section 404 of the Clean Water Act. THIS PERMIT DOES NOT OBVIATE THE REQUIREMENT TO OBTAIN ANY STATE, LOCAL, OR OTHER FEDERAL APPROVAL REQUIRED BY LAW.

If you have any questions or need additional information concerning the nationwide general permit, please write U.S. Army, Corps of Engineers, Regulatory Branch, P.O. Box 2711, Los Angeles, CA. 90053-2325; telephone (213) 894-5606; or visit the Los Angeles District office, Regulatory Branch, Room 6062 at 300 N. Los Angeles St., Los Angeles, CA. 90012.



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P. O. BOX 2711
LOS ANGELES, CALIFORNIA 90053

DEC 31 1986

RECEIVED

Office of the Chief
Regulatory Branch

ARIZONA DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION
ENVIRONMENTAL PLANNING SERVICES

Arizona Department of Transportation
Environmental Planning Services
Attention: James L. Smith
206 South Seventeenth Avenue
Phoenix, Arizona 85007

RECEIVED
JAN 6 1987

Gentlemen:

This is in reply to your letter dated October 16, 1986 concerning our permit authority over your proposal to discharge aggregate, asphalt, and concrete to widen and construct culverted or dip crossings in drainages along the eastern 20 miles of the existing "Maricopa-Gila Bend" county road..

Regulations for our permit program, published in the Federal Register, include Part 330 - Nationwide Permits (see the enclosure). Your proposed activity is covered under the nationwide permit for discharges of dredged or fill material into non-tidal rivers, streams and their lakes and impoundments, including adjacent wetlands, that are located above the headwaters, which would cause the loss or substantial adverse modification of less than one acre of such waters (Section 330.5 (a)(26)(i)).

As long as you comply with the nationwide permit conditions (Section 330.5 (b)), an individual permit is not required.

This letter does not convey any property rights, either in real estate or material, or any exclusive privileges. Also, it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations, nor does it obviate the requirement to obtain State or local assent required by law for the activity. Furthermore, your proposed activity may be subject to requirements of the National Flood Insurance Program and state or local regulations controlling activities in flood plains. Please check with local government agencies.

If you have any questions please call Robert J. Dummer, Regulatory Branch, at (213) 894-5606 any workday before 3:00 PM.

Sincerely,

Glenn Lukos
Chief, South Coast Section
Regulatory Branch

Enclosure

JUN 19 1986



ARIZONA DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

206 South Seventeenth Avenue Phoenix, Arizona 85007

ROADSIDE DEVELOPMENT SERVICES

June 18, 1986

W.O. FORD
State Engineer

BRUCE BABBITT
Governor

CHARLES L. MILLER
Director

Mr. Ronald L. Ewing, P.E./R.L.S.
Dibble & Associates
Consulting Engineers
3625 North 16th Street
Phoenix, Arizona 85016

Re: Project S-987-301
Maricopa-Mobile-Gila Bend Highway
State Route 238

Dear Mr. Ewing:

The following is an answer to the request in your letter of June 10, 1986 for comments regarding our concerns on the captioned project.

Revegetation: Seeding with appropriate grass and forbs to aid the revegetation process for erosion control will be accomplished as part of the constructions of this project.

Cactus, etc.: Cactus and other protected plant species will be moved and/or disposed of in accordance with current statutes.

No doubt similar comments would be given by Environmental Planning Services if you solicited input from them.

If we can be of further assistance please do not hesitate to contact us at 255-7357.

Very truly yours,

E. LEROY BRADY
Manager
Roadside Development Services

ELB:MM:vs



Commissioners:
W. LINN MONTGOMERY, Flagstaff, Chairman
FRED S. BAKER, Elgin
LARRY D. ADAMS, Bullhead City
FRANCES W. WERNER, Tucson
THOMAS G. WOODS, JR., Phoenix

Director
BUD BRISTOW

Assistant Director, Services
ROGER J. GRUENEWALD

Assistant Director, Operations
DUANE L. SHROUFE



ARIZONA GAME & FISH DEPARTMENT

2222 West Greenway Road Phoenix, Arizona 85023 942-3000

June 30, 1986

Mr. Ronald L. Ewing, P.E./R.L.S.
Dibble & Associates
3625 N. 16th Street
Phoenix, Arizona 85016

RE: Project No. S-987-301
Maricopa-Mobile-Gila Bend Hwy.
State Route 238

Dear Mr. Ewing:

The Arizona Game and Fish Department has reviewed the proposed improvement to 20 miles of State Route 238 from Maricopa to the hazardous waste site southwest of Mobile, and the following comments are provided.

We have accessed our Nongame Data Management files and the following sensitive species were listed in the vicinity of Maricopa:

- 1) Rough-seed spurge, Euphorbia trachysperma (plant) and
- 2) Spotted bat, Euderma maculatum

Both of these species are rare, but neither are listed as threatened or endangered at this time. We do not believe they will be adversely impacted by road construction.

There are numerous washes in Rainbow Valley which SR 238 crosses. Abundant vegetation in these washes supports a variety of small game species. We respectfully request that vegetation disturbance be kept to a minimum where SR 238 crosses these washes.

See
Pages
28-29

We appreciate the opportunity to review and comment on this project.

Sincerely,

Bud Bristow, Director

Robert K. Weaver
Habitat Evaluation Coordinator
Planning & Evaluation Branch

RKW:SAM:rmm

cc: Donald M. Turner, Supervisor, Mesa Regional Office
Estevan Escobedo, Wildlife Manager

JUN 27 1986

June 26, 1986



ARIZONA STATE PARKS

1688 WEST ADAMS STREET
PHOENIX, ARIZONA 85007
TELEPHONE 602-255-4174

BRUCE BABBITT
GOVERNOR

STATE PARKS BOARD MEMBERS

REESE G. WOODLING
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TUCSON

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GWEN ROBINSON
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ROBERT K. LANE
STATE LAND COMMISSIONER

DON CHARPIO, Ed.D.
EXECUTIVE DIRECTOR

ROLAND H. SHARER
DEPUTY DIRECTOR

Mr. Ronald Ewing, P.E., R.L.S.
Dibble and Associates
3625 North 16th Street
Phoenix, AZ 85016

RE: Maricopa-Mobile-Gila Bend
Highway
- State Route 238
ADOT

Dear Mr. Ewing:

I have reviewed the information submitted on this proposed roadway improvements project and have the following comments:

1. Based on a check of our cultural resource files and on professional judgment, the likelihood appears fairly good that cultural resources may be located within the project area. Numerous archaeological sites have been located in the immediate vicinity.
2. Therefore, pursuant to A.R.S. 41-861 through 864 of the State Historic Preservation Act, it is my recommendation that the project area be surveyed by a qualified archaeologist to locate and evaluate any existing cultural remains.
3. Once the survey has been completed, a copy of the report by the archaeologist should be sent to this office for review and comment.

Your cooperation with this office in meeting the historic preservation requirements for federally assisted projects is appreciated. If you have any questions, please contact me.

Sincerely,

Shereen Lerner, Ph.D.
Deputy SHPO, Archaeology and Compliance Coordinator

for Donna J. Schober
State Historic Preservation Officer

SL:ms

OCTOBER 2, 1986
PUBLIC INFORMATION MEETING
COMMENTS

OCT 7 1986



October 3, 1986

Kent Dibble
Dibble and Associates, Inc.
3625 North 16th Street
Phoenix, Arizona 85016

RE: Public Comments - Project No. S-987-301

Dear Mr. Dibble:

An invitation for a scoping meeting is included in the brochure which was distributed during the October 2 public meeting at Maricopa. I take this opportunity to request a scoping meeting which would provide ENSCO's engineering staff an opportunity to review pertinent design factors with you and your staff. Items of particular concern include the alignment at the west end of the project, design considerations which impact costs, estimates of 50-year flows, drainage studies, plans for investigations and mitigation measures associated with the archaeological site, and plans for providing water necessary for dust suppression and preparation of the road base.

If you could suggest a date during the week of the 20th, I will make travel arrangements for ENSCO's engineering personnel in Little Rock to meet with you.

Thank You,

Jarrell E. Southall
Contract Administrator

JES:id

cc: Jack Danielson
Beverly Westgaard

PUBLIC INFORMATION MEETING
OCTOBER 2, 1986

ARIZONA DEPARTMENT OF HEALTH SERVICES
AND
ARIZONA DEPARTMENT OF TRANSPORTATION

MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238
PROJECT NO. S-987-301

COMMENTS: There appears to be a discrepancy between Exhibits No. 2 and No. 5
in the alignment near the site of the proposed waste management
facility. Additionally, improvements to State Route 238 should
extend to the west beyond the point of intersection with the site's
See Exhibit access road in order to reduce visibility hazards due to dust
2 page 3 generated from traffic to and from the west.

NAME: JARRELL SOUTHALL/ ENSCO

ADDRESS: P.O. Box 721

Maricopa, AZ 85239

TELEPHONE NO: (602) 253-1507

MAIL TO:

October 3, 1986

Dibble and Associates
Consulting Engineers
3625 North 16th Street, Suite 128
Phoenix, Arizona 85016

PUBLIC INFORMATION MEETING
OCTOBER 2, 1986

ARIZONA DEPARTMENT OF HEALTH SERVICES
AND
ARIZONA DEPARTMENT OF TRANSPORTATION

MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238
PROJECT NO. S-987-301

COMMENTS: As a property owner for a cotton gin that is located on the West end of Alternate A route, intersecting with State Route 238, I have to protest this route for the following reasons. This route will split our property and reduce our storage capacity for cotton trailers by having land south of the road which would not be able to be used as storage that we have now. It would become invaluable to us. My main concern is the road will be so close to our scales, that it could create a traffic hazard. Also, with trucks coming from long distances to the waste site and farmers hauling all day long to our gin site, there will be fatigue which will affect their reaction time and I am afraid that there could be a major accident with loss of life, because of the bottleneck of our location and this new road. I highly recommend Alternate B as the safest route for our business and also the citizens of Maricopa.

See
Page
14

NAME: Riftin Curtis, Vice President
Chickasha Cotton Oil Company *R.C.*
ADDRESS: P. O. Box 959
Casa Grande, AZ 85222
TELEPHONE NO: 836-7406

MAIL TO:

Dibble and Associates
Consulting Engineers
3625 North 16th Street, Suite 128
Phoenix, Arizona 85016

PUBLIC INFORMATION MEETING
OCTOBER 2, 1986

ARIZONA DEPARTMENT OF HEALTH SERVICES
AND
ARIZONA DEPARTMENT OF TRANSPORTATION

MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238
PROJECT NO. S-987-301

COMMENTS: I attended the above named meeting and came to the following conclusions: THAT THE CULMINATION OF THIS PROPOSAL WILL PLACE ADDED TRAFFIC, MOSTLY LARGE TRUCKS, ON THAT PORTION OF MARICOPA ROAD FROM I-10 to city of MARICOPA. THIS PORTION OF ROAD, APPROXIMATELY 16 MILES, IS ALREADY HEAVILY TRAVELLED, 18-WHEELERS USE IT AS A SHORT CUT BETWEEN PHOENIX AND YUMA, AND IN MY OPINION IS ONE OF THE POOREST MAINTAINED ROADS, NOT ONLY IN THE STATE OF ARIZONA, BUT IN A LARGE PART OF WESTERN AND CENTRAL UNITED STATES. I BASE THIS CONCLUSION LARGELY UPON OUR RECENT TOUR OF ALMOST 5,000 MILES, THRU 12 STATES, AND A VARIETY OF HIGHWAYS AND ROADS. (DUE TO THE NATURE OF OUR TRIP VISITING FRIENDS AND RELATIVES WE TRAVELLED OVER SECONDARY ROADS IN SEVERAL OF THESE STATES) FRANKLY, THE WORST, AND THE ONE WE MOST DREAD DRIVING IS THAT PORTION OF MARICOPA ROAD FROM I-10 TO CITY OF MARICOPA. IN VIEW OF THE MILLIONS OF DOLLARS THAT ARE PROPOSED TO BE SPENT IMPROVING AND SURFACING 20 MILE SECTION FROM MARICOPA TO HAZARDOUS WASTE DUMP, THE STATE IS OFFERING AN EXCEPTIONALLY POOR TRADE-OFF TO MARICOPA. (SINCE THE FLOOD A FEW YEARS AGO WE HAVE BEEN DRIVING ON

See
Page
35

(SEE OTHER SIDE)

NAME: Luis P. Doknalski
ADDRESS: Rt 1 Box 678
Maricopa, Az 85239
TELEPHONE NO: none

MAIL TO:

Dibble and Associates
Consulting Engineers
3625 North 16th Street, Suite 128
Phoenix, Arizona 85016

3 P'S - PATRONIZING OFFICIALS, PROMISES AND POOR HIGHWAY.

IN SHORT, THE STATE IS ASKING US TO GIVE THEM AUTHORITY TO IMPROVE THE ROAD FROM MARICOPA TO H.W.D., AT ABOUT 2/3 TAXPAYERS EXPENSE, TO HAVE A HAZARDOUS WASTE DUMP IN OUR AREA, WITH ENSUING ADDED HEAVY TRAFFIC, ON AN ALREADY HEAVILY TRAVELLED HIGHWAY, WHICH IS POORLY MAINTAINED THAT ALL MARICOPA AND AREA RESIDENTS MUST DRIVE, FOR WHAT?

UNLESS THERE IS SOME POSITIVE AND DEFINITE GUARANTEE THAT THAT PORTION OF MARICOPA ROAD FROM I-10 TO MARICOPA WILL BE IMPROVED EQUAL TO THE PROPOSED 20 MILE SECTION BETWEEN MARICOPA AND THE H.W.D. WE WILL FIND IT NECESSARY TO OPPOSE ANY SUCH PLAN.

IN CLOSING: THE PROPOSAL OF THE HAZARDOUS WASTE DUMP, UNDER FAIR AND EQUITABLE CIRCUMSTANCES WOULD NOT PROVE ANY OBSTACLE TO US.

OCT 8 1986



BRUCE BABBITT
GOVERNOR

Arizona
State Land Department

1624 WEST ADAMS
PHOENIX, ARIZONA 85007



OFFICE OF
STATE LAND COMMISSIONER

October 6, 1986

Dibble & Associates
3625 N. 16th Street
Phoenix, Arizona 85016

Re: Project 5-987-301
State Route 238

Dear Administrator:

Thank you for sending us the notice of the October 2, 1986, public hearing in Maricopa. We did not feel it was necessary to attend this meeting because of our neutral position. However, between alternative A and B we feel alternative B will have a beneficial effect on our property. Please advise us when a final decision is reached.

If you have any questions please call me at 255-3671.

Sincerely,


Gordon S. Taylor
Project Manager

GST/cr

PUBLIC INFORMATION MEETING
OCTOBER 2, 1986

ARIZONA DEPARTMENT OF HEALTH SERVICES
AND
ARIZONA DEPARTMENT OF TRANSPORTATION

MARICOPA-MOBILE-GILA BEND HIGHWAY
STATE ROUTE 238
PROJECT NO. S-987-301

COMMENTS:

See Pages
26-28
See Page
35

- (1) VEKOL WASH should be bridged
- (2) FIRE BIRD LAKE - MARICOPA - STANFIELD should be improved to state standards
- (3) Alternate B is preferred

NAME: MRS. FRANCES ARENDELL
 ADDRESS: LOT 59 BROOKS RD T-BIRD NORTH
RT 1 BOX 727 MARICOPA AZ 85239
 TELEPHONE NO: 568-2326

MAIL TO:

Dibble and Associates
Consulting Engineers
3625 North 16th Street, Suite 128
Phoenix, Arizona 85016

LETTERS RECEIVED IN RESPONSE TO
DECEMBER 18, 1986
PUBLIC HEARING

DEC 31 1986

WRITTEN VIEWS AND COMMENTS

LOCATION & DESIGN PUBLIC HEARING
PROJECT S-987-301
MARICOPA - MOBILE
STATE ROUTE 238

December 18, 1986

Thank you for the opportunity to submit the following comments.

1. Maricopa Road Intersection - Suggest consideration be given to left turn lanes for approaches from the south and west as well as a right turn lane from the north. Additionally, reduced speed zone should be extended to encompass intersection. Does farm access road on eastern side of intersection require consideration in design of intersection?
See Page 35
2. Intersection With Access Road To Dairy Farm - Should approach be paved to prevent wear of the road bed occasioned by heavy dairy trucks?
See Page 35
3. Intersection With Access Road To State Site - Suggest a right turn lane (west bound) and extension of pavement 100 yards past intersection (to reduce visibility hazards at intersection). Drawings and legal description of access road will be provided to Dibble and Associates by ENSCO for final design of intersection.
See Page 35

Sincerely,

ENSCO, Inc.



Jarrell E. Southall
Contract Administrator

MAIL COMMENTS TO:

Dibble and Associates
Consulting Engineers
3625 North 16th Street, #128
Phoenix, Arizona 85016

DEC 19 1986



Arizona Commission of Agriculture and Horticulture

1688 WEST ADAMS • PHOENIX, ARIZONA 85007 • (602) 255-4373



FIELD SERVICES

District Offices
Fruit & Vegetable Standardization

Office of the State Chemist
State Agricultural Laboratory

December 15, 1986

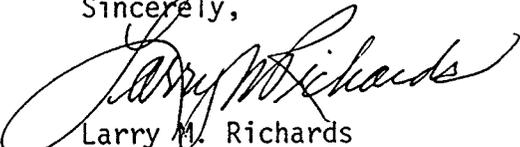
Mr. Ron Ewing
Dibble & Associates
Suite 128, 3625 North 16th Street
Phoenix, Arizona 85016

Dear Mr. Ewing:

A native plant survey was conducted on the Hazardous Materials project site and roadway, with concern to locate *Tumamoco macdougalii* and *Mammillaria thornberi*. Our survey shows that neither plant was found in the concerned area.

If you have any questions, please contact me at 255-4373.

Sincerely,


Larry M. Richards
Native Plant Law Specialist

LMR/1bb



JAN 2 1987

Arizona Commission of Agriculture and Horticulture

1688 WEST ADAMS • PHOENIX, ARIZONA 85007 • (602) 255-4373



FIELD SERVICES
AS A UNIT

State Agricultural Laboratory
Fruit & Vegetable Standardization

District Offices

Office of State Chemist
Board of Pesticide Control

To: Mr. Richard Countryman
Eastern Regional Director
Commission of Agriculture and Horticulture
1688 West Adams
Phoenix, Arizona 85007

Dec. 23, 1986

Re: Maricopa-Mobile-Gila Bend Highway

Dear Mr. Countryman:

An inspection of the above-referenced project/application number has determined the following:

- There are no protected native plants.
- The plants on the site are of low quality and salvage is not recommended.
- The terrain is too rough and rugged to make salvage of the plants possible.
- The plants or a portion of the plants on the property are accessible and are of average or better quality, and we recommend plant salvage.

VARIETY AND NUMBER OF PLANTS:

Saguaro (Ht. in feet)				Hedge- Hog	Barrel	Ocotillo	Cholla	Prickly Pear	Misc.	Inaccess.	Unsal.
1-3'	3-6'	6-10'	Over 10'								
									78		

Sincerely,
William Marceau
District Inspector

NOTE: See Attached Sheet for breakdown
of plants by type and specific
location.

TO: Richard Countryman

Dec. 23, 1986

RE: Native Plant Survey along Maricopa-Mobile-Gila Bend Highway

The following is a breakdown of native plants found in the above-referenced native plant survey.

Main Roadway - 3 Mesquite Trees, 10 ft.
3 Palo Verde Trees, 12 ft.
2 Crucifixion Thorn

Preferred Alignment - 15 Mesquite Trees, 6 - 10 ft.
15 Mesquite Trees, 10 - 15 ft.

Alternate A - 20 Mesquite Trees, 6 - 10 ft.
20 Mesquite Trees, 10 - 15 ft.



Arizona Commission of
Agriculture and Horticulture

1688 WEST ADAMS • PHOENIX, ARIZONA 85007 • (602) 255-4373



FIELD SERVICES

State Agricultural Laboratory
Fruit & Vegetable Standardization

District Offices

Office of State Chemist
Board of Pesticide Control

TO: Richard Countryman
Eastern Regional Director
Commission of Agriculture and Horticulture

FROM: William Marceau, District Inspector, Casa Grande

DATE: 12/30/86

Re: ~~Maricopa-Mobile-Gila Bend Highway~~, Waterman Wash Realignment

Dear

An inspection of the above-referenced project/application number has determined the following:

- There are no protected native plants.
- The plants on the site are of low quality and salvage is not recommended.
- The terrain is too rough and rugged to make salvage of the plants possible.
- The plants or a portion of the plants on the property are accessible and are of average or better quality, and we recommend plant salvage.

VARIETY AND NUMBER OF PLANTS:

Saguaro (Ht. in feet)				Hedge- Hog	Barrel	Ocotillo	Cholla	Prickly Pear	Misc.	Inaccs.	Unsal.
1-3'	3-6'	6-10'	Over 10'								
					21		2		6*		

* Miscellaneous - 1 20 ft. Palo Verde
1 10 ft. Palo Verde
2 20 Ft. Ironwood
2 10 ft. Ironwood

Sincerely,
William Marceau
District Inspector



Arizona Commission of
Agriculture and Horticulture

1688 WEST ADAMS • PHOENIX, ARIZONA 85007 • (602) 255-4373



FIELD SERVICES

District Offices
Fruit & Vegetable Standardization

Office of the State Chemist
State Agricultural Laboratory

February 18, 1987

Mr. Joe Leindecker
SVERDRUP Corporation
Suite 300, 432 North 44th Street
Phoenix, Arizona 85008

20

Dear Mr. Leindecker:

The Arizona Commission of Agriculture and Horticulture conducted plant surveys on the hazardous waste site and along the proposed roadway. These surveys were conducted on July 23, November 18, and December 3, 1986. They produced negative findings for the Tumamoca macdougalii (Tumamoc globe-berry) and Mammillaria thornberi (Thornber's fishhook cactus).

The Commission also contacted the Desert Botanical Garden to check on the type of environment that the plant could be found. According to the Garden, it is highly unlikely that these plants could be found within the project area, due to the difference in lower elevation and environment. These plants are Upper Sonoran Desert plants, and the project is considered Lower Sonoran Desert.

It is therefore the opinion of the Commission that these plants are not found in the project area and roadway.

If you have any further questions, please contact me at 255-4373.

Sincerely,

Larry M. Richards
Native Plant Law Specialist

AGRICULTURE	_____
EXTENSION	_____
RECORDS	_____
_____	_____
_____	_____
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November 5, 1986

TELETYPE

NOV 10 1986

ASMC

Mr. James Smith, Manager
ADOT-Environmental Planning Services
206 S. 17th Ave.
Phoenix, AZ 85007

Re: Maricopa, Hazardous Waste Road (Project S-987-501), ADOT

Dear Mr. Smith:

I have reviewed the cultural resources information provided for the proposed hazardous waste facility roadway near Maricopa. I understand that an archaeological survey of the proposed roadway identified 8 historic and 2 prehistoric sites. These sites, AZ T:16:1, 2, 3 and 4 (ARS), AZ T:15:1-6 (ARS) appear to be eligible for inclusion in the National Register of Historic Places (criterion "d").

I note that at this time that no preferred alignment has been designated. Once an alignment is selected, consultation with this office should occur to further evaluate the sites and potential impacts.

See Page 22

The above comments are provided pursuant to ARS 41-861 et seq.

We appreciate your continued cooperation with this office. If you have any questions, please contact me.

Sincerely,

Shereen Lerner, Ph.D.
Deputy SHPO, Archaeology and Compliance

for Donna J. Schober
State Historic Preservation Officer

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December 19, 1986



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Mr. Ronald Ewing, P.E./R.L.S.
Dibble and Associates
Consulting Engineers
3625 N. 16th St.
Phoenix, AZ 85016

Re: Maricopa, Hazardous Waste Road (Project S-987-501), ADOT

Dear Mr. Ewing:

I understand that a preferred alternate has been chosen for this proposed hazardous waste road. Ten archaeological sites have been identified within the preferred alternative. These sites appear to be eligible for inclusion in the National Register of Historic Places (criterion "d"). I concur with the following recommendations, as proposed by the archaeological consultant, Archaeological Research Services, Inc.:

See Page 22

1. Protect sites AZ T:16:1, 2, T:15:1, 4 by constructing permanent boundary fences along the appropriate sides of existing Maricopa-Mobile -Gila Bend Highway, thereby restricting construction activities and vehicle access to the width of the existing corridor.

2. Avoid sites AZ T:15:5 and 6 by constructing a temporary fence to restrict construction vehicle access.

3. In the event that sites AZ T:16:3 and 4 cannot be avoided, the sites should be tested to evaluate National Register significance and the extent of cultural deposits. Consultation with this office will be necessary to evaluate the testing program and results and determine mitigation alternatives.

4. Avoid sites AZ T:15:2 and 3 by flagging site boundaries and monitoring construction activities.

We appreciate the opportunity to comment and look forward to continuing the consultation process. If you have any questions, please contact me.

Sincerely,

Shereen Lerner, Ph.D.
Deputy SHPO, Archaeology and Compliance

for Donna J. Schober
State Historic Preservation Officer

cc: J. Smith, ADOT

MARICOPA COUNTY HIGHWAY DEPARTMENT



3325 West Durango Street
Phoenix, Arizona 85009

December 24, 1986

RECEIVED
DEC 31 1986

(602) 233-8600

STATE ENGINEER RECEIVED

Mr. Owen Ford, State Engineer
Arizona Department of Transportation
Highways Division
206 South 17th Avenue
Phoenix, Arizona 85007

ARIZONA DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION
ENVIRONMENTAL PLANNING SECTION

Dear Mr. Ford:

RE MARICOPA - MOBILE - GILA BEND (S.R. 238) HAZARDOUS WASTE
FACILITY ROADWAY, PROJECT NO. S-987-301PE, ETC.

We have reviewed the plans and environmental assessment submitted for the referenced project and have several concerns with the present design concepts for this project.

See
Page 36
and
letter on
Pages
75-76

The current design provides only for dip sections for all washes except for one bridge at a branch of Waterman Wash. The road is not designed for all-weather use.

The road is located in a remote area and is being paved specifically to provide improved access to the proposed state hazardous materials disposal facility by a variety of vehicles carrying hazardous wastes. The vehicles carrying the material must all be certified for that purpose, and the materials being carried must be carefully handled and controlled, including detailed manifests for each load. Although the quantity of traffic will be light, at least in early years, the sensitivity of the cargo is the highest possible.

The dip crossings will be covered with flowing water from time to time. If one of these vehicles attempts to cross a flowing wash and overturns after hitting an unobserved washout, serious environmental and legal issues could be created. This risk, coupled by the remoteness of the location for erection of barricades and maintenance of the crossings, requires all-weather construction for this road in the opinion of Maricopa County. It is strongly recommended that, at a minimum, bridges and/or culverts with a capacity to at least carry the flows passed under the railroad structures be provided. We understand the railroad is designed for a 50-year, one-hour storm.

Mr. Owen Ford
December 24, 1986
Page 2

See Page 36
and letter
on Pages
75-76

Secondly, the nature of the road and the design speed suggests a roadway classification as a rural collector. As such, in accordance with AASHTO standards, the minimum clear distance to obstructions is 30 feet. Sufficient right-of-way should be provided for power poles to be relocated beyond this clear distance. Headwalls and bridge abutments should be placed to provide the 30 foot clear distance or the use of flexible guardrail should be provided.

The design, as submitted, cannot be approved by Maricopa County. It is strongly recommended the road not be opened to vehicles carrying hazardous materials unless it is constructed to all-weather standards with adequate clear distances.


R. C. Esterbrooks, P.E.
Assistant County Manager,
Public Works Director & County Engineer

WHH:AWC:jem



ARIZONA DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

206 South Seventeenth Avenue Phoenix, Arizona 85007

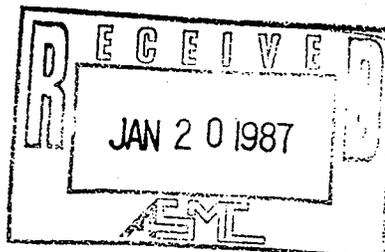
EVAN MECHAM
Governor

CHARLES L. MILLER
Director

January 12, 1987

W.O. FORD
State Engineer

Mr. Robert C. Esterbrooks, P.E.
Maricopa County Engineer
Maricopa County Highway Department
3325 West Durango Street
Phoenix, AZ 85009



Re: Maricopa-Mobile-Gila Bend (SR 238)
Hazardous Waste Facility Roadway
Project No. S-987-30LPE

Dear Mr. Esterbrooks:

Thank you for your letter of comment dated December 24, 1986, regarding the environmental assessment and conceptual plans for the referenced state-funded highway improvement project.

This section of gravel roadway was taken onto the State Highway System in conjunction with selection of the Mobile site for the future development and operation of a hazardous waste processing facility by the Arizona Department of Health Services and as approved by the Environmental Protection Agency. Because of the remoteness of the area and the very low volume of traffic on the roadway, this highway facility is considered to be a local road rather than a rural collector. The design plans developed for improving the existing facility are adequate for the local road designation. Upon completion of the planned improvements, the roadway can be expected to function similar to Maricopa Road between Interstate 10 to the north and Interstate 8 to the south.

The matter of how to handle the cross-drainage has been carefully evaluated in the project development process. It was determined that the high cost of placing all drainage under the roadway was not cost-effective when compared to the low traffic volume and the lesser cost of utilizing dip-sections. To mitigate the potential problem expressed in your letter, the Department will install standard motorist advisory signs at strategic points along the route warning of dip-section crossings during times of flooding.

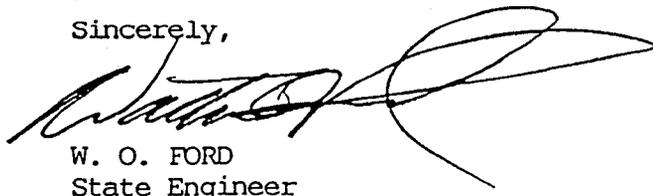


As your letter indicates, both the hauling equipment and the hazardous materials being transported are rigidly controlled by federal regulations. Likewise, the handling of any accidental spill of such materials will be rigidly controlled on this roadway by regulations and policies of the Arizona Department of Health Services and the operator of the waste processing facility at Mobile in concert with all applicable federal laws governing the subject matter.

Given all the factors and conditions with regard to the reconstruction, operation, and state-maintenance of State Route 238, it is believed that the proposed improvements and mitigation measures will provide a roadway that will satisfactorily meet the demands required of this highway facility.

Your comments regarding the proposed project are appreciated.

Sincerely,



W. O. FORD
State Engineer

WOF:eh

cc: R. Mickelson

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ARIZONA GAME & FISH DEPARTMENT

2222 West Greenway Road Phoenix, Arizona 85023 942-3000

January 12, 1986

Mr. Ronald L. Ewing, P.E./R.L.S.
Dibble and Associates
3625 N. 16th Street
Phoenix, Arizona 85016

RE: Environmental Assessment
State Route 238
Hazardous Waste Facility Roadway
Maricopa-Mobile-Gila Bend Highway
Project S-987-307

Dear Mr. Ewing:

The Arizona Game and Fish Department has reviewed the Draft Environmental Assessment (EA) for improvements to State Route 238, and the following comments are provided.

On the whole, this EA is well written, however, we feel that biological impacts (Section 5.2.1) were incompletely described. No mention is made of animal species which inhabit the 37+ acres of "Sonoran Desert Scrub", which will be destroyed, nor of what effect this loss will have on species populations. We feel this is a serious oversight in adequately describing the impacts of this project.

See
Pages
24-25
and
36

Although we do not anticipate serious biological impacts from the improvements to this section of Highway 238, we are concerned about any future plans to extend improvements to Gila Bend. This section of SR 238 passes through the Maricopa Mountains. Improvement of this roadway would increase human access and threaten critical habitat for desert bighorn sheep and other wildlife species indigenous to the area.

We appreciate the opportunity to review and comment on this draft EA.

Sincerely,

Duane L. Shroufe, Acting Director

Robert K. Weaver
Habitat Evaluation Coordinator
Planning and Evaluation Branch

RKW:SAM:nlm

cc: Donald M. Turner, Supervisor, Mesa Regional Office
Don Wingfield, Supervisor, Yuma Regional Office
Estevan Escobedo, Wildlife Manager
Al Guenther, Wildlife Manager

JAN 21 1987



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January 20, 1987

Ronald L. Ewing
Dibble and Associates
3625 N. 16th Street
Phoenix, AZ 85016

Dear Mr. Ewing,

Re: Maricopa - Mobile - Gila Bend Highway Project
No. S-987-301

In reference to the Draft Environmental Assessment received December, 1986, we have reviewed the proposed project in regards to state parks, natural areas and trails and have no objections to the project. Please coordinate mitigation needs for cultural resources with Dr. Shereen Lerner, State Historic Preservation office.

Sincerely,

Tanna J. Baldwin

Tanna T. Baldwin
Natural Resource
Planner

TTB:gli

JAN 24 1987



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
3616 W. Thomas, Suite 6
Phoenix, Arizona 85019

January 20, 1987

Ronald L. Ewing
Dibble and Associates
3625 North 16th Street
Phoenix, Arizona 85016

Re: Project No: 5-987-301, Maricopa and Pinal Counties

Dear Mr. Ewing:

Thank you for providing us with a copy of the draft environmental assessment for the Maricopa-Mobile-Gila Bend Highway, State Route 238 in Maricopa and Pinal Counties. We have reviewed this document and offer the following comments for your consideration.

See Page 25 The environmental mitigation measures include construction of a permanent boundary fence along the highway right-of-way at four archeological sites. The Fish and Wildlife Service (FWS) appreciates the need to protect these cultural resources but requests that the fence be designed to permit wildlife passage.

See Response Page 37 Both borrow and disposal sites may be needed to construct the highway. To minimize impacts to riparian vegetation and natural drainages in the area the FWS requests that all disposal or fill sites be located in an upland area away from washes. Borrow sites should be selected and excavated so that riparian vegetation is avoided or its loss is minimized. This would include any mesquite, ironwood, or palo verde trees in the area.

See Response Page 37 A realignment of the Waterman Wash crossing is proposed. If this is built the old roadway should be removed, the surface contoured to conform to the slope of the area, and the area revegetated with native forb, grass, shrub, and tree species. The new crossing at Waterman Wash should utilize a span. If this is not possible then culverts sized with the greatest openness factor should be used and fill in this drainage should be minimized. Construction should be confined to the width of the roadway and in the wash and removal of vegetation in the wash should be minimized.

See Letters Pages 66-70 As a reminder, if the proposed project will occur on federal land, if federal funds are to be used in planning and construction, or if a federal permit is required, then the project is considered a federal action and compliance with the Endangered Species Act is required. In our November 18, 1986 letter to you we noted that one endangered plant (Tumamoca macdougallii), one proposed threatened plant (Mammillaria thornberi), and

one candidate category 1 plant (Neolloydia erectocentra var. acunensis) may be found in the vicinity of the road project.

The FWS hopes that these concerns will be incorporated as part of the project design and mitigation measures. If we can be of further assistance, please contact Judy Hohman or me (Telephone: 602/261-4720 or FTS 261-4720).

Sincerely,



Sam F. Spiller
Field Supervisor

cc: Regional Director, FWS, Albuquerque, NM (FWE)
Director, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Mesa, AZ