

DRAFT ENVIRONMENTAL ANALYSIS
BUSH HIGHWAY FROM MCDOWELL ROAD
TO SAGUARO LAKE
MARICOPA COUNTY HIGHWAY DEPARTMENT
WORK ORDER NO. 68194
HES 388(4)

April 25, 1983



Prepared by
Maricopa County Highway Department
Engineering Division
3325 West Durango Street
Phoenix, Arizona 85009

As Approved by
R. C. Esterbrooks, P.E.
Director of Public Works
and County Engineer

A999.920

Property of
Flood Control District of MC Libray
Please Return to
2801 W. Durango
Phoenix, AZ 85009

DRAFT ENVIRONMENTAL ANALYSIS
BUSH HIGHWAY FROM MCDOWELL ROAD
TO SAGUARO LAKE
MARICOPA COUNTY HIGHWAY DEPARTMENT
WORK ORDER NO. 68194
HES 388(4)

April 25, 1983



Prepared by
Maricopa County Highway Department
Engineering Division
3325 West Durango Street
Phoenix, Arizona 85009

As Approved by
R. C. Esterbrooks, P.E.
Director of Public Works
and County Engineer

INDEX

	Page No.
1. LOCATION OF THE PROJECT	1
2. NEED AND PURPOSE FOR THE PROJECT	1
3. DESCRIPTION OF THE PROPOSED ACTION	1
3.1 General	1
3.2 Right-of-way	2
4. ALTERNATES CONSIDERED	2
4.1 Routes	2
4.2 Concept	2
5. SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS	3
5.1 Socio-Economic Factors	3
5.2 Environmental Factors	3
5.2.1 Land Use	3
5.2.2 Vegetation and Soils	3
5.2.3 Minority Considerations	4
5.2.4 Noise Considerations	4
5.2.5 Air Quality	4
5.2.6 Water Quality and Wetlands	4
5.2.7 Cultural Resources	4
5.2.8 Threatened and Endangered Species	4
5.2.9 Native Plants	4
5.2.10 Section 4(f) Lands	4
5.2.11 Floodplain Considerations	4
5.2.12 Section 404 of the Clean Air Act	5
5.2.13 Natural and Man-made Features	5
5.2.14 Material Sources	5
5.2.15 Aesthetic Quality	5
6. COORDINATION	5

ATTACHMENTS

- A. Location Map (State)
- B. Location Map (Area)
- C. Typical Section
- D. Traffic Data
- E. Agencies Contacted

1. LOCATION OF THE PROJECT

This project will provide safety improvements at five separate sites on Bush Highway between McDowell Road and Saguaro Lake, as shown on the map (Attachment B). These locations are within the Tonto National Forest on lands administered by the U.S. Forest Service.

2. NEED AND PURPOSE FOR THE PROJECT

Bush Highway, in the area of this project, is near the Salt River between Granite Reef Dam and Stewart Mountain Dam (Saguaro Lake). Roadway widths are on the order of 28 feet. The roadway for the most part follows the existing terrain contours. Generally, the first three proposed sites lie in terrain that can be described as rolling. The last two sites are in mountainous terrain.

The Traffic Engineer, Maricopa County Highway Department, has identified these sites as those most requiring safety improvements.

The proposed improvements will change both horizontal and vertical alignments to reduce the hazards to the less than prudent driver.

3. DESCRIPTIONS OF THE PROPOSED ACTION

3.1 General

For the purposes of this report, the five proposed improvement locations are labeled A through E in the direction of travel from Mesa to Saguaro Lake (Map Attachment B).

A major consideration of this project will be that this length of Bush Highway passes through and serves a major recreational area on the lower Salt River. There is boating and swimming at Saguaro Lake and tubing and other activities along the project length below Stewart Mountain Dam (Saguaro Lake). Through traffic uses this route to travel from east Maricopa County communities to Payson and recreational areas in the Mogollon Rim area. It must be assumed that as a consequence of this type of use that many of the drivers may be young and inexperienced, overtired and may have used intoxicants to some degree.

The new roadway will be comprised of two 14-foot paved travel lanes with 10-foot shoulders or guardrail, where required. Additional widening may be constructed on some curves. This requirement will be coordinated with the Maricopa County Traffic Engineer during the design phase to determine advisability on a case by case basis.

Curves will be designed to reduce degree of curvature, provide connecting tangents and improved sight distance.

Consideration must be given to drainage structures and erosion control. Check dams and flumes may be required at some locations and a retaining wall at another. In designing these structures, attention to the natural desert surroundings must be a concern.

Total length of the project will be on the order of 2.5 miles. For purposes of preliminary discussions it is assumed that each site will require approximately one-half mile of construction. Estimated construction cost is \$500,000. Construction is scheduled for fiscal year 1984.

Traffic control during construction will be in accordance with the Arizona Department of Transportation Traffic Control Manual for Highway Construction and Maintenance.

When the new roadway is opened to traffic, the remaining segments of the old asphalt roadway in the project area will be removed and disposed of. The areas will be restored to as near a natural condition as possible by reseeding and replanting with suitable growth removed from the construction area. This will require coordination with the Tonto National Forest and may necessitate a temporary plant storage area.

3.2 Right-of-way

The entire section of Bush Highway in the Tonto National Forest is on a Special Use Permit. It is the intention of the interested agencies to change this to formal right-of-way. Preliminary work to accomplish this is presently in progress. Those sections of the roadway to be improved by this project will be reflected in the right-of-way documents. If necessary, right-of-entry or other approvals will be obtained to work in these areas that are to be abandoned.

4. ALTERNATES CONSIDERED

4.1 Routes

Bush Highway is the only route serving the recreational areas along the Salt River from Granite Reef Dam to Saguaro Lake. Consequently, for those people desiring to use facilities along the river there is no viable alternate route.

Gilbert Road, six miles to the west of the Bush Highway entrance to the Tonto National Forest, crosses the Salt River and joins the Beeline Highway (SR 87) providing an alternate route to Saguaro Lake for the traveler originating in the east Mesa-Apache Junction area. However, during recent flooding periods the Gilbert Road crossing of the Salt River and the Beeline Highway crossing of the Verde River have been closed for extended periods of time. The Bush Highway Salt River crossing (Blue Point Bridge) was more easily and rapidly restored and the Bush Highway provided the only access to Payson and other communities and facilities along the Mogollon Rim until the Beeline Highway was reopened. Consequently, there is no alternate to the Bush Highway route and none were considered.

4.2 Concept

Various concepts of design were considered including the "Do Nothing" approach.

"Do Nothing" is not practical if the premise that this project is intended to improve highway safety is accepted.

The general concept that has been adopted is to realign the selected sections of highway with flatter curves, considering connecting tangents, grades, superelevation, guardrail and other factors. Safety is the primary purpose of the project. The secondary consideration of the project will be the need to preserve the nature of the area. Where a choice is possible, solutions maintaining the natural beauty of the area will be adopted.

5. SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS

Construction of the proposed safety improvement project in this remote area is not expected to create significant impacts upon the quality of the human environment.

5.1 Socio - Economic Factors

Bush Highway in the project area serves as an important route for travel between the Payson/Mogollon Rim communities and eastern Maricopa County. It serves as the only access to the recreational facilities along the lower Salt River. Winter traffic is relatively light and represents mainly travel through the area. Warm weather traffic is heavy and is predominantly to recreational sites in the project area. Construction should take place during the winter months.

Law enforcement and medical emergency personnel and equipment use this route as a principal access to and through the region.

It must be assumed, considering the types of hot weather river oriented activities, that many drivers are young, inexperienced, over tired and may have used some intoxicants.

It is expected that the proposed roadway realignments will result in a substantial reduction of vehicle accidents at these locations.

5.2 Environmental Factors

5.2.1 Land Use

The proposed project is located on unimproved vacant land in the western section of the Tonto National Forest in central Arizona, on lands administered by the U.S. Forest Service. The principal land use activities in this area are those of an established transportation corridor, wildlife habitat, and livestock grazing. There are no homes, churches, parks or businesses in the project vicinity except for a guest ranch and Salt River Project owned employee housing in the vicinity of curve D. (Map B)

5.2.2 Vegetation and Soils

This section is to be completed after response from the Tonto National Forest officials.

5.2.3 Minority Considerations

Completion of the project will have no adverse effect upon any minority groups. All roadway users will benefit equally from increased highway safety of the improved facility.

5.2.4 Noise Considerations

Sound level studies/determination will be made by ADOT.

5.2.5 Air Quality

Air quality studies/determination will be made by ADOT.

5.2.6 Water Quality and Wetlands

The roadway crosses a number of normally dry washes. No water sources are in the area of the project. As a result, this project will not have an adverse impact on water quality.

No designated wetlands exist in the project construction area.

5.2.7 Cultural Resources

Surveys will be made by ADOT and Tonto National Forest archaeologists.

5.2.8 Threatened and Endangered Species

This section will be completed after response from the Arizona Game and Fish Department.

5.2.9 Native Plants

Several of the vegetative species described in Part 5.2.2 are common to the project area and are protected by the Arizona Native Plant Law. Any protected plants in the construction area will be removed or treated in accordance with provisions of the Native Plant Law in cooperation with the Arizona Commission of Agriculture and Horticulture, and Tonto National Forest.

5.2.10 Section 4(f) Lands

Bush Highway is a recognized transportation corridor through the Tonto National Forest. The project segment of the route is located in an area utilized for livestock grazing. No section 4(f) lands are involved in the proposed project.

5.2.11 Floodplain Considerations

No FEMA floodplains have been established in this region. With the possible exception of the lower portion of curve D, the project sites to be improved by this project are expected to be above potential flooding of the Salt River. The lower portion of curve D is expected

to be close to the alignment and elevation of the existing road. Consequently this project will not create a significant encroachment on any declared or undeclared floodplain or make a significant change from existing conditions.

5.2.12 Section 404 of the Clean Water Act

The proposed project will not involve any section 404 concerns.

5.2.13 Natural and Manmade Features

Other than the existing roadway there are no manmade or natural features in the project area which would be impacted by the proposed highway safety project.

5.2.14 Material Sources

It is anticipated that commercial sources will be utilized for the proposed project. Material pits other than commercial sources, if used on the project will be approved by Tonto National Forest officials.

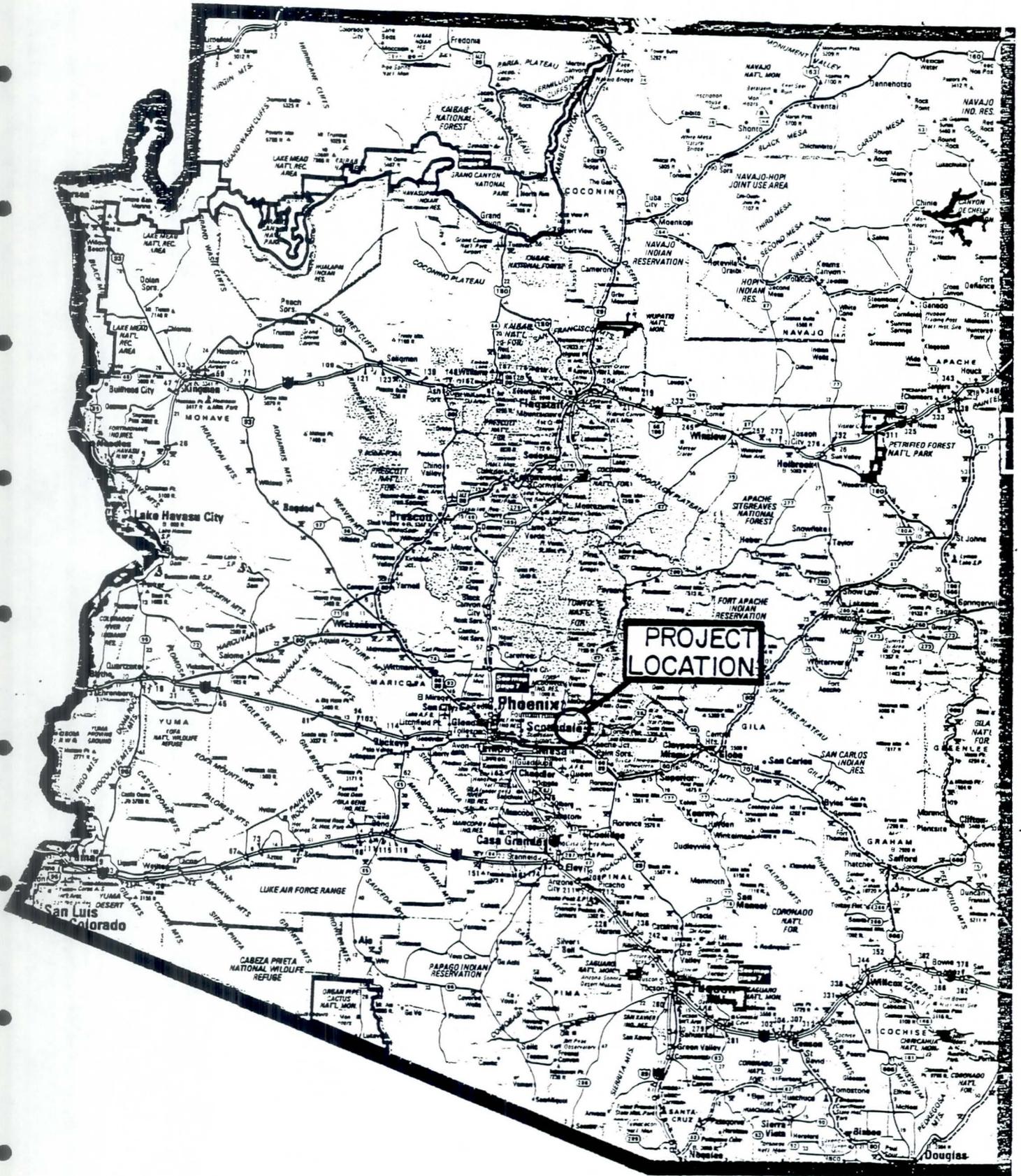
5.2.15 Aesthetic Quality

To maintain the quality of the present aesthetic environment, the project will include appropriate erosion control and revegetation measures for construction-disturbed areas. These measures will be reviewed with Tonto Forest personnel prior to construction of the project.

6. COORDINATION

The requirement for a public hearing or hearing offer will be determined by ADOT.

The agencies shown on Attachment E. have been contacted.



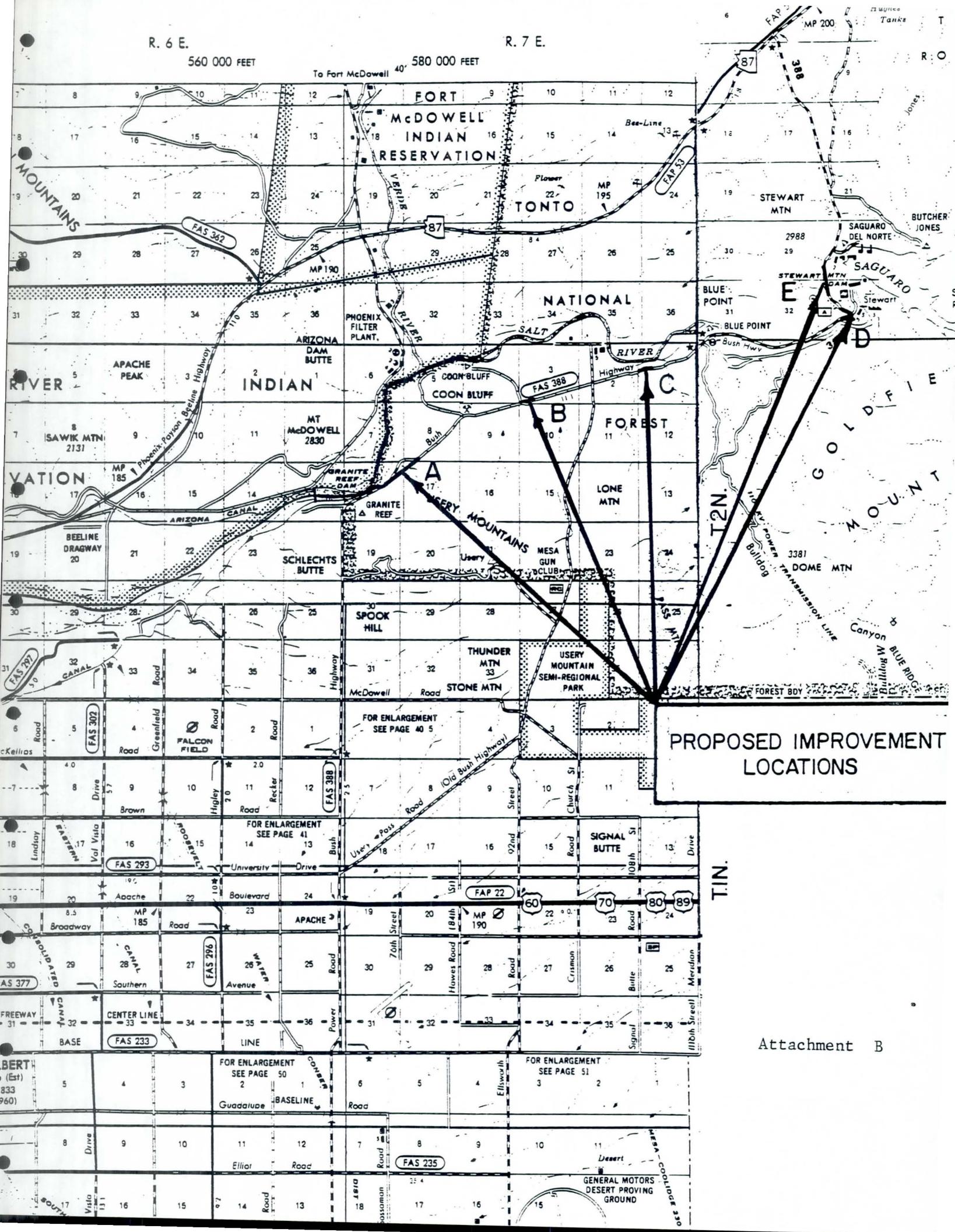
PROJECT
LOCATION

R. 6 E.

R. 7 E.

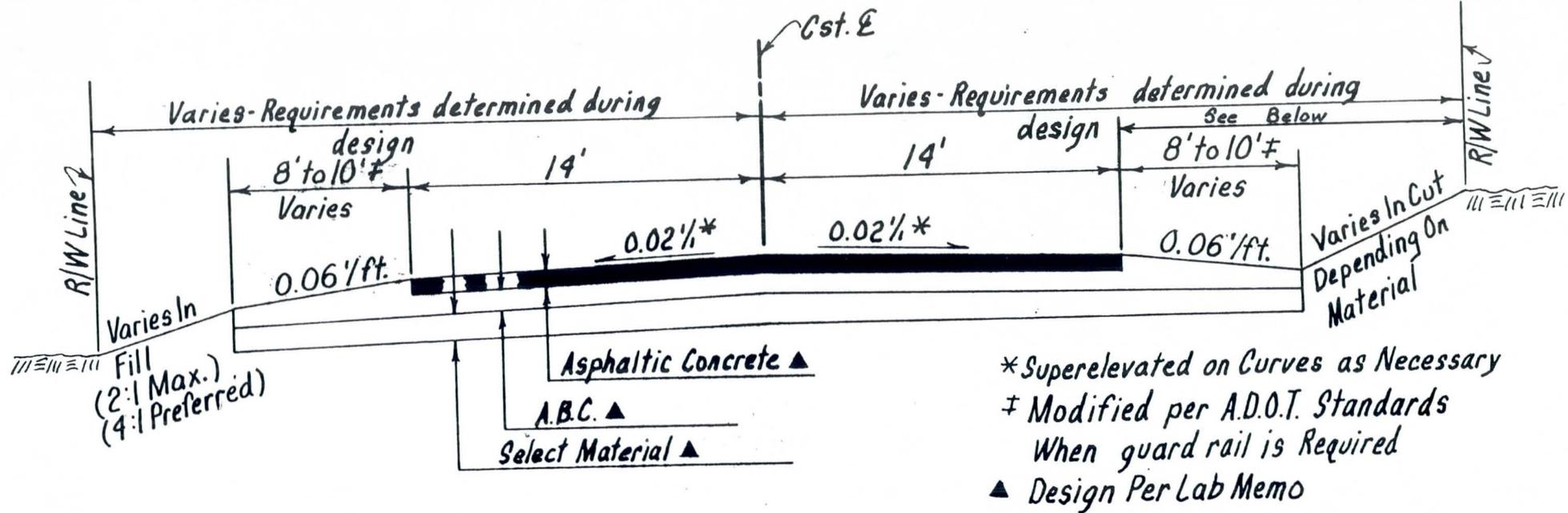
560 000 FEET

To Fort McDowell 40' 580 000 FEET

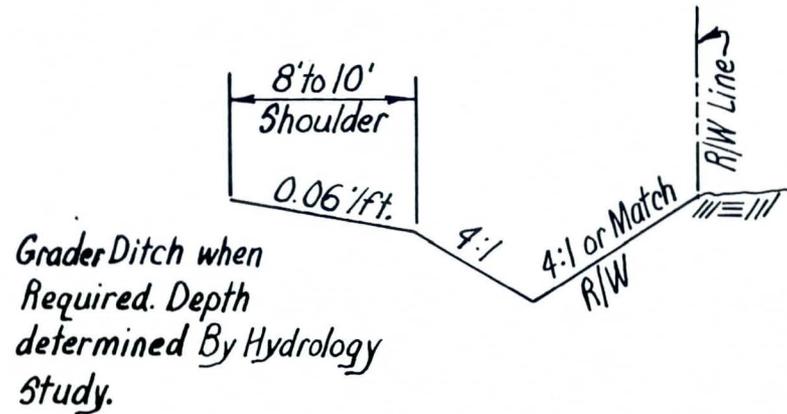


PROPOSED IMPROVEMENT LOCATIONS

Attachment B



TYPICAL SECTION-N.T.S.





MARICOPA ASSOCIATION OF GOVERNMENTS

Transportation & Planning Office

1739 WEST JACKSON STREET
PHOENIX, ARIZONA 85007
(602) 261-7867

January 17, 1983

MARICOPA COUNTY
HIGHWAY DEPT.
DATE RECEIVED
1983 JAN 20 PM 2:03

Mr. Glenn L. Soules
Traffic Engineering
Maricopa County Highway Department
3325 W. Durango St.
Phoenix, AZ 85009

Dear Mr. Soules:

This is in response to your request of January 6, 1983, for traffic forecasts for Bush Highway. Our best estimate is that in the year 2005 the average weekday traffic (AWDT) on Bush Highway is 5,000 vehicles per day east of Usery Pass Road and 3,000 west of Usery Pass Road. Because of several reasons (especially the uncertainty of future levels of recreational activity on the lower Salt River) the above forecast has a considerable range of uncertainty.

Sincerely,

Mark L. Schlappi
MARK L. SCHLAPPI

cc: Roger Herzog
Terry Johnson

Attachment D



Reply to

Date: November 2, 1982

7720 Development

Subject:

Road 204, Bush Highway Meeting with Maricopa County

To:

Forest Supervisor, Tonto

On October 13, 1982, Maricopa County Engineers met with us to discuss possible alignment changes in Bush Highway to alleviate safety hazards.

Maricopa County was represented by Harry Keller, Bill Harrington, John Orrahood, Bill Horne and Joel Lieberman. Forest Service was represented by Don Van Driel, Larry Soehlig, Lee Redding and Rod Mendenhall.

Maricopa County proposed to change the alignment of Bush Highway in four areas between Granite Reef C.G. and Saguaro Lake. Funding is not firm at this time; however, they intend to proceed with design in anticipation of funds.

The Forest Service indicated an application for easement would be appropriate for the length of Bush Highway on forest lands. The following items were discussed concerning easement:

1. Future development in and adjacent to the easement will be needed by the forest, such as intersections, parking lots, and entry signs. Maricopa County sees no problem with this as long as they meet AASHTO and MUTCD design criteria.
2. Possibility of a sidewalk attached to the blue point bridge was discussed. County stated that it was not their policy to install sidewalks, but did not object to the Tonto constructing it.
3. Future signing of the recreation sites was discussed. Maricopa County indicated that they were bound to MUTCD. The use of brown signs is acceptable and they would be receptive to a sign plan acceptable to both parties.
4. The Tonto indicated that there is existing utilities long the road inside the proposed easement. Maricopa County sees no problem with the utility easements.
5. The possibility of fencing the Right of Way was discussed. Maricopa County will check the feasibility, but they doubt that it can be done as it is not their policy. They have no objection to the Tonto doing it.
6. The installation of Fee Stations in the R/W for recreation users was discussed. Maricopa County stated they would seek a legal opinion and respond to the Tonto on the matter.

Ranger Van Driel indicated that an Environmental Assessment would be required. The following items were discussed:

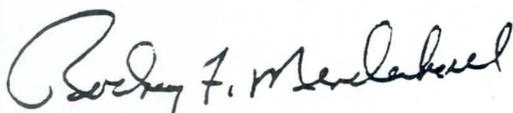


a. The Ranger will need traffic counts, accident data and other safety information as these are the primary reasons for the alignment changes. The county indicated they would furnish the data.

b. The County will need to mark the area of proposed disturbance outside the existing Roadway in order that Archeological and Threatened and Endangered Plant and Animal investigation can be done. The County agreed to do this.

The Tonto stated the intention to complete ERFO work at the Blue Point Bridge during CY 1983.

The possibility of closing Usery Pass Rd. #207 was discussed. Action on this item was deferred to a later date pending studies and Environmental Assessment.



RODNEY F. MENDENHALL
Forest Engineer

AGENCIES CONTACTED

Arizona Department of Transportation

Arizona Department of Health Services

Arizona Game and Fish Department

Arizona Commission of Agriculture and Horticulture

Arizona State Parks

U.S. Fish and Wildlife Service

Maricopa County Planning and Zoning Department

Maricopa County Flood Control District

Maricopa Association of Governments

Tonto National Forest

Salt River Project