1.0 Introduction

The Rosemont Copper Project (Project) is a proposed copper-molybdenum mining project located on the east side of the Santa Rita Mountains, approximately 30 miles southeast of Tucson, Arizona and west of State Route 83 (SR-83). The anticipated life of the Project is 25 to 30 years and includes the construction, operations, and the closure period. As shown on Figure 1, the Project lies approximately 1.5 miles west of SR-83, between Mile Post (MP) 46.9 and 42.8.

On September 20, 1985, the Patagonia-Sonoita Road, which extends along SR-83 and SR-82, was designated as a scenic road by the Parkways, Historic and Scenic Road Advisory Committee (PHSRAC). As shown on Figure 1, the Patagonia-Sonoita Scenic Road is approximately 52.5 miles long and starts south of the SR-83 and Interstate 10 (I-10) interchange at MP 58 on SR-83 and continues south ending at MP 4.5 on SR-82. Although this roadway is designated as a state Scenic Road, local community members are considering the possibility of applying for a national designation.

The following technical memorandum was prepared by Tetra Tech and presents a summary of requirements for the Arizona state level designation of a Scenic Road. The requirements presented herein were taken from the Arizona Department of Transportation (ADOT) Scenic Road guidelines and rules (http://www.azdot.gov/highways/SWProjMgmt/enhancement/scenic_roads/index.asp) and the Corridor Management Plan for the Patagonia-Sonoita Scenic Road (ADOT, 2003). This memorandum also presents the reasons why the Project should not effect the scenic road designation for the Patagonia-Sonoita Scenic Road.

2.0 Scenic Road Designation Criteria

As stated on the ADOT Scenic Road guidelines and rules, the scenic designation for a road at the state or federal level should be evaluated in terms of its intrinsic qualities. The designation process includes the assessment of each intrinsic quality by features or...
resources that are considered unique, irreplaceable, representative, or distinctly characteristic of the region. These intrinsic qualities are divided into the following six (6) categories:

- Archaeological;
- Cultural;
- Historic;
- Natural;
- Recreational; and
- Scenic.

According to the Arizona Revised Statutes (A.R.S.) 41-512 through 41-518 (Attachment A), once a scenic road designation is proposed, the factors in which PHSRAC considers when approving the designation are as follows:

- Vividness – memorability of the visual impression;
- Intactness – integrity of the visual order;
- Unity – forms a harmonious, composite visual pattern;
- Historical or cultural impact;
- Proximity to the highway or area;
- Sufficient land area for parkways to accommodate facilities for visitors needs; and
- Evaluation by the Arizona Historical Advisory Commission.

Of the seven (7) factors listed above, the three (3) major ones are: 1) Vividness, 2) Intactness, and 3) Unity. The designation is evaluated by the PHSRAC based on the summary sheet of visual quality ratings provided in Attachment B.

Per ADOT Roadway Design Guidelines (ADOT, 2007), roadway design exemptions may be made from standards normally applied to the construction and maintenance of a road in order to insure the protection and enhancement of special resources that warrant the scenic road designation. It is also stated that exceptions to the normal design criteria should be approved by the ADOT Assistant State Engineer, Roadway Engineering Group, and that such roads must reasonably provide for the safety and service of the traveling public.

The following explains the guidelines and requirements needed in order to maintain a scenic road designation.

- Vegetation Protection: All vegetation within the designated zone of influence on scenic roads should be protected against destruction or unauthorized removal.
• Access Permits: ADOT Roadside Development Section shall review applications for access permits on scenic roads for any possible negative environmental and visual impacts before the permit is issued. If possible, it is recommended that all permit applicants conform to the Landscape and Irrigation Design Guidelines for Arizona Department of Transportation Encroachment Permit Applications as presented in Attachment C.

• Development: Development along scenic roads should be environmentally compatible.

• Utilities: ADOT Roadside Development Section shall review any permits for a utility that crosses a designated scenic road for possible negative environmental and visual impacts.

• Roadway Construction and Maintenance: All construction related activities shall be done in a manner that creates the minimum disturbance to the visual or historic resources of a scenic road.

3.0 Corridor Management Plan for the Patagonia-Sonoita Scenic Road

The objective of the Corridor Management Plan (CMP) for the Patagonia-Sonoita Scenic Road is to: 1) identify the distinguished, outstanding intrinsic features of the scenic road, 2) provide a thorough understanding of a designated scenic road, and 3) present goals and corresponding actions to protect and manage the intrinsic features. The CMP for the Patagonia-Sonoita Scenic Road presents five (5) goals to preserve the distinguished qualities of the road and provides the corresponding action items to carry out each goal. These five (5) goals are listed below.

• Goal #1: Intrinsic Qualities Protection Program 1 - Conserve and enhance the natural scenic resources that make this area such an important place to protect and a privilege to visit.

• Goal #2: Intrinsic Qualities Protection Program 2 - Protect cultural and historic qualities of the region that reflects the long-standing rural way of life.

• Goal #3: Maintain and improve services and facilities, for residents and visitors, that are consistent with small town, rural character and local values.

• Goal #4: Transportation and Traffic Safety - Improve safety along the scenic road for all users without jeopardizing intrinsic qualities.

• Goal #5: Partnerships – Continue to build partnerships and foster cooperation among agencies and organizations to ensure that the goals of the scenic road are in harmony with existing programs that protect and enhance the intrinsic qualities along the roadway.

One of the historic intrinsic qualities stated in the CMP includes the several mining communities that thrived in the Santa Rita, Empire, and Patagonia Mountains. The
Rosemont Copper Mining Camp, located on the eastern slope of the Santa Rita Mountains, is listed as an historic intrinsic quality of the Patagonia-Sonoita Scenic Road.

4.0 Conclusion

The development of the Rosemont Copper Project should not effect the designation of the Patagonia-Sonoita Scenic Road. Project activities along the roadway represent a segment of less than 10% of the entire roadway length and an actual visual impact of less than 5%. Additionally, several aspects of the Project are being managed to protect the five (5) requirements needed to maintain a scenic road designation. The following text describes how each of those five (5) requirements are being meet.

Vegetation

- Concurrent reclamation plans for the Project include the use of native vegetation as recommended by the Natural Resources Conservation Service (NRCS). These activities will ensure that an appropriate vegetative community will continue to exist during and after the end of operations.

Access Permit

- Development of the Main Access Road to the Project site will conform as appropriate to ADOT’s Landscape and Irrigation Design Guidelines (Attachment C).
- The Main Access Road to the Project site will be located near an existing rest area (i.e., an exiting roadside development) on SR-83. Additionally, the design of the access road is planned to be unpaved so that it is similar to existing roads in the area.

Development

- The Project site is located in a historic mining district; therefore, mine development in the area is part of the intrinsic historic quality associated with the roadway.
- The overall development plans for the Project are designated such that several facilities will be located in areas with limited visibility from SR-83. One aspect of these development plans includes the construction of a screening berm at the start of mining operations.
- Planned concurrent reclamation activities will shorten the time in which the facility may not appear to blend into the surrounding environment.

Utilities

- Proposed utility alignments have been designed to maintain adequate distance from SR-83 and will not cross the roadway.
Roadway Construction and Maintenance

- Construction associated with upgrading the Main Access Road from SR-83 will be reviewed as part of an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA). The best alternative for safety, as well as for cultural and environmental protection, will be chosen.

SR-83 is currently designated as a state scenic road and maintaining this classification is a desired condition. In addition to the items discussed above, other aspects of the Project that will mitigate potential impacts include:

- The Rosemont Public Access and Recreation Mitigation Plan provided in the Mine Plan of Operations (WestLand, 2007) proposes to maintain public access for hiking, biking, horseback riding, rock hounding, hunting, camping, birding, and other types of recreation in most areas within the vicinity of Project site.

- Lighting designs for the Project will implement dark sky technology, to the extent practicable, to help minimize the potential sky glow from mine operations.

- The ore processing facilities have been located in a recessed canyon and designed as low-profile buildings.

In summary, the proposed Rosemont Copper Project is not expected to have significant negative visual impacts to the Patagonia-Sonoita Scenic Road. Pre-operation and simulated-operation photos are provided in Attachment D to allow for visual impact comparisons of the Project activities. Several aspects of the Project have been and continue to be developed in a manner that is protective of the environment and surrounding land uses.

5.0 References


ATTACHMENT A
ESTABLISHMENT AND DESIGNATION OF PARKWAYS, HISTORIC, AND SCENIC ROADS LAWS AND RULES
APPENDIX
LAWS AND RULES

ESTABLISHMENT AND DESIGNATION OF PARKWAYS,
HISTORIC, AND SCENIC ROADS

The Law: ARS 41-512 through ARS 41-518

41-512 Definitions

In this article, unless the context otherwise requires:

1. “Director” means the director of the Department of Transportation.

2. “Historic road” means a highway, street, road or route that is of historical or cultural importance in the settlement and development of Arizona and is established or designated as a historic road by the Transportation Board.


4. “Parks Board” means the Arizona State Parks Board.

5. “Parkway” means an area along either or both sides of a highway, street, road or route acquired in fee or by easement by the governmental body having jurisdiction over the highway, street, road or route for the protection of geographic, natural flora or scenic values, and established or designated as a parkway by the transportation board.

6. “Scenic road” means a highway, street, road or route through a scenic area that is established or designated as a scenic road by the Transportation Board.

7. “Transportation Board” means the Transportation Board of the Department of Transportation.

41-513 Cooperation With Other Agencies

The Department of Transportation may cooperate and enter into agreements with other federal, state, county or private agencies in carrying out the purposes of this article.

41-514 Administration, Advisory Committee, Composition, Duties, Designation of Parkways and Historic and Scenic Roads.

A. There is established an Advisory Committee to the Director consisting of eleven members. The Directors of the Parks Board, the Department of Transportation, the Office
of Tourism and the Historical Society shall each appoint to the Advisory Committee one employee from their respective agencies who serves at the pleasure of the appointing authority. The Tourism Advisory Council shall appoint one of its members to the Advisory Committee who shall serve at the pleasure of the council. The Governor shall appoint, for a term of three years to begin and end on June 30 or until the successor is appointed and qualified, the remaining six members from the public, with no more than two public members from any one county. The Governor may appoint a public member to an additional term.

B. The Advisory Committee shall:

1. Review requests to establish or designate a highway or area as a parkway or historic or scenic road.

2. Prepare recommendations to the Transportation Board as to those highways or areas appropriate for establishment or designation as parkways or historic or scenic roads.

3. Review established or designated parkways or historic or scenic roads and recommend to the Transportation Board their continuation or deletion as parkways or historic or scenic roads.

C. Any agency, group or individual may submit requests for consideration by the Advisory Committee for the establishment or designation of a highway or area as a parkway or historic or scenic road.

D. Upon recommendation from the Advisory Committee, the Transportation Board may designate or establish a parkway or historic or scenic road or delete a previous designation or establishment.

E. If the parkway or historic or scenic road to be established or designated is not a state highway or route, the establishment or designation is not effective unless the board or body exercising jurisdiction over such road agrees to such establishment or designation.

F. Access roads intersecting parkways shall be spaced no closer than one mile apart, except where a county, state, or federal highway or city street intersects the parkway. No public agency may approve a subdivision bordering a parkway unless either:

1. The subdivision plat provides internal access to the one mile access roads across the parkway and would accommodate access to such access roads from unsubdivided adjoining lands.

2. The subdivision plat provides access to the general systems of public roads and streets by some means other than through or across the property devoted to parkway purposes.
G. Access roads across parkways which are legally established shall not be closed unless the owner of the land serviced by such access road has agreed to such closure.

41-515 Acquisition of Land for Parkways and Scenic and Historic Roads, Acquisition of Scenic Easement

A. The Director may acquire title to or easements over lands within parkways for the purpose of protecting and administering those areas for the enjoyment of the citizens of the state.

B. The state may acquire any land or scenic easement for the establishment or improvement of a state highway designated as a parkway or historic or scenic road by expenditures of state highway user revenues or other funding sources. Local authorities may acquire any land for the establishment or improvement of county highways or roads or city streets designated as parkways or historic or scenic roads within that jurisdiction by expenditures of local highway user revenues or other funding sources. Maintenance of the right-of-way of a parkway or a historic or scenic road is the responsibility of the governmental body that has jurisdiction over such highway.

C. The interest in land acquired under this article may be a fee simple or lesser estate. The acquisition may be by gift, agreement, purchase, lease, exchange or other legal means, but shall not be accomplished by exercising the power of eminent domain.

41-516 Exemption from Standards for Parkways and Historic and Scenic Roads

To ensure the protection and enhancement of the special features for historic roads, parkways, and scenic roads, the Department of Transportation, the Federal Highway Administration, the county or the city may allow an exemption from the standards normally applied to the construction and maintenance of the roads and parkways. Revised construction and maintenance procedures for such designated roads and parkways may be developed to reasonably provide for the safety and service of the traveling public.

41-517 Limitation

Notwithstanding any act of Congress or any federal rule or regulation to the contrary, nothing contained in this article and no official action taken pursuant to this article by any federal, state, county or municipal agency shall be deemed the establishment of a public park, recreation area, wildlife or waterfowl refuge or any historic site of national, state or local significance.

41-518 Rules and Regulations

The Director shall adopt rules, regulations, and guidelines to implement the purposes of this article.
THE RULES

Rule No. R17-3-801 through R17-3-809

Precis

These rules present information regarding Arizona State Law ARS 41-512 through 41-518 for providing procedures to establish and designate those highways, streets, roads or routes of this state which feature certain special qualities that should be protected and enhanced. The rules define the criteria and the process for the establishment and designation of parkways, historic, and scenic roadways, as well as the construction, maintenance, and signing requirements to protect and to enhance the designated road or area resource features.

The Advisory Committee will follow these rules and establish a process to provide recommendations to the Director for his concurrence and presentation to the Transportation Board as to those highways or areas appropriate for the establishment and designation as parkways, historic or scenic roads. The Transportation Board may then establish or designate a highway, street, road or route as a parkway, historic or scenic road.

Rules Adopted

The Arizona Department of Transportation, pursuant to ARS 41-512 through 41-518, as approved by the Legislature in 1982, adopts these rules to implement the aforementioned legislation.

R17-3-801 General Provisions

Definitions

In ARS 41-512 through 41-518 and these rules, unless context otherwise requires, the following definition shall apply:

1. "Advisory Committee" means the Arizona Parkways, Historic and Scenic Roads Advisory Committee;

2. "Department" means the Arizona Department of Transportation (ADOT);

3. "Historic road" means a highway, street, road or route that is of historical importance in the settlement and development of Arizona and is established or designated as a historic road by the Transportation Board;

4. "Parkway" means an area along either or both sides of a highway, street, road or route acquired in fee or by easement by the governmental body having jurisdiction over the highway, street, road or route for the protection of geographic, natural flora or scenic values, and established or designated as a parkway by the Transportation Board.
5. "Resources" means the cultural, natural, scenic and historic qualities significant to the designation. A parkway, historic or scenic road may contain one or more of these qualities.

6. "Scenic road" means a highway, street, road or route through a scenic area that is established or designated as a scenic road by the Transportation Board.

7. "Transportation Board" means the transportation board of the Department of Transportation.

R17-3-802 Meetings and Organization of the Advisory Committee

A. Advisory Committee meetings shall be held at least once each six months at a time and place designated by the chairman. The chairman, the vice-chairman with the chairman’s approval, or any six members of the Advisory Committee may call such other meetings as necessary to conduct the business of the Advisory Committee. A quorum shall consist of six or more members of the Advisory Committee members present at a legally convened meeting.

1. All meetings shall be noticed as provided in the Open Meeting Law.

2. At the first meeting of the fiscal year, the Advisory Committee shall elect a chairman and vice-chairman. They shall assume the duties of their offices at the close of the meeting.

B. If an Advisory Committee chairman or vice-chairman resigns or vacates his or her position prior to expiration of office, the Advisory Committee may elect a replacement to serve the remainder of the year.

R17-3-803 Duties of Officers

The chairman shall preside at all meetings, appoint subcommittees of the Advisory Committee, and perform all duties pertaining to the office of chairman. The vice-chairman shall, in the absence or incapacity of the chairman, exercise the duties of the chairman.

R17-3-804 Request to Establish or Designate a Highway or Area

A. Requests to establish or designate a highway or area as a parkway, historic or scenic road may be made to the Advisory Committee by any agency, group or individual who shall submit requests for consideration by the Advisory Committee. The following criteria shall be met:

1. All requests submitted for establishment or designation of highways, streets, roads or routes, other than those on the Arizona state highway system, shall require the body having jurisdiction to provide written notice of concurrence for such an establishment or designation. Upon the receipt of endorsement the
Advisory Committee shall initiate the process for designation of a parkway, historic or scenic road.

2. A report to provide pertinent information on the proposed designated road, including the benefits and impacts, shall be prepared by the requesting agency, group or individual, as approved by the agency having jurisdiction. The report shall be submitted as information to the Advisory Committee. Reports for highways under the jurisdiction of the Department of Transportation shall be prepared by the Department.

The report shall include the following:

a. Road segments or areas to be included;
b. Inventory of resources;
c. Adjacent land ownerships;
d. Existing major land use areas;
e. Area zoning;
f. Still photos of outstanding and representative scenery;
g. Information and recommendations defining the desirable zone of influence, the area to either side of the roadway, which would be required to protect the resources of the areas along the proposed designated road.

B. The Advisory Committee shall make a systematic evaluation of the extent and quality of the resources for the proposed establishment and designation of parkways, historic or scenic roads. The factors which may be considered in the process of providing recommendations to the Transportation Board shall include the following:

a. Vividness, memorability of the visual impression
b. Intactness, integrity of the visual order
c. Unity, forms a harmonious, composite visual pattern
d. Historical or cultural impact to the area, state or nation
e. Proximity to the highway or area
f. Sufficient land area for parkways to accommodate facilities for visitor needs
g. Evaluation by the Arizona Historical Advisory Committee.

C. The Advisory Committee shall, based on review of the prepared information report and systematic evaluation of the resources according to the procedures established for evaluation, forward approved recommendations to the Director for his or her concurrence and presentation to the Transportation Board as to those highways or areas that have been considered and determined appropriate for designation as parkways, historic or scenic roads. The Advisory Board’s decision-making procedures include the following:

1. Discussion and approval or denial of recommendations shall be made at
public, open meetings. Recommendations shall be made if passed by vote of the Advisory Committee of a majority of members in attendance and when a quorum is present.

2. The accepted recommendation for designation shall be sent to the Director for his or her concurrence and presentation to the Transportation Board for consideration.

3. Highways or areas proposed for designation which receive less than a majority of the votes of the Advisory Committee shall have no recommendation sent to the Director. They may be reconsidered at a later date.

R17-3-805 Reconsideration of Requests to Establish or Designate a Highway or Area

A. Only highways receiving favorable recommendation shall be forwarded for designation. Those receiving a non-favorable recommendation or those recommended for deletion by the Advisory Committee shall be reconsidered upon presentation of additional substantive information to the Advisory Committee by the agency having jurisdiction.

B. Additional substantive information shall be presented to the Advisory Committee within 60 calendar days of its decision and shall include the development of data that would affect the Committee’s evaluation of the extent and quality of the resources being considered. Emphasis shall be placed on the road’s unique features or special qualities that could be protected or enhanced. If no additional information is submitted, no further consideration shall be made on the proposal.

C. Reconsideration of the request for a recommendation to establish or designate a highway or area as a parkway, historic or scenic road shall conform to information and evaluation procedures of R17-3-80.

R17-3-806 Review of Existing Designated Parkway, Historic or Scenic Road

A. The Advisory Committee may, review established or designated parkways, historic or scenic roads because of changes in the extent and quality of the resources. The review may be initiated by the Committee or at the request of the agency having jurisdiction. The Advisory Committee shall compare the present or modified conditions with the information report and other criteria of certain special qualities that were to be protected or enhanced which resulted in the highway or area being designated.

B. The decision to recommend continuation or deletion of a designation of a parkway, historic or scenic road shall be made at a public, open meeting. The body having jurisdiction of a designated parkway, historic or scenic road recommended for deletion may appeal as per R17-3-805.
C. A recommendation for deletion shall be sent to the Director for his or her concurrence and presentation to the Transportation Board. The Transportation Board shall then vote on the recommendations of the Advisory Committee for deletion of an established or designated parkway, historic or scenic road.

The committee’s decisions shall have the following impact:

1. A decision for continuation shall require no action by the Department or the agency having jurisdiction.

2. A decision for deletion shall require the Department to cancel the agreement with the board or body having jurisdiction over the designated road.

R17-3-807 Approvals and Agreements Between Agencies for Designation.

A. Prior to consideration by the Advisory Committee, proposals for establishment or designation of a parkway, historic or scenic road which is not a state highway or route shall require the body having jurisdiction to provide notice of interest for such establishment or designation. Such notice shall be provided in writing.

B. Establishment or designation by the Transportation Board shall not become effective until an interagency agreement between the Department and the agency body having jurisdiction has been completed and is filed with the Secretary of State.

C. The interagency agreement may include the following:

1. The resource information included by the Advisory Committee in its recommendations to the Director for his or her concurrence and presentation to the Transportation Board.

2. Requirements or recommendations for protection of unique features and resources.

3. Provisions for Parkway, Historic or Scenic Road Designation Signing approved by the Department for established or designated roads.

4. Restrictions for access roads intersecting parkways and bordering subdivisions approval requirements as provided in ARS 41-514.

5. Statements to clarify the conditions of the establishment or designation.

6. Requirements in the event of a decision for deletion and cancellation of the agreement by the Transportation Board.
7. Provisions that neither the Arizona Department of Transportation, the Arizona State Parks Board, nor the Arizona Historical Society undertakes or assumes any financial or legal responsibilities of other agencies or units of government by the establishment or designation of a highway or areas as parkways, historic or scenic roads.

R17-3-808 Acquisition of Land for Parkways, Historic, and Scenic Roads

A. The Director may acquire title, either in fee simple or a lesser estate, over lands for the establishment or improvement of a state highway designated as a parkway, historic or scenic road. Acquisitions shall be accomplished in accordance with ARS 28-1865 and rules and procedures established by the Department, including the following:

1. Land other than state highway may be acquired for designated parkways, historic or scenic roads by the body having jurisdiction. Acquisitions shall be accomplished in accordance with the applicable state laws and its established rules and procedures.

2. Acquisitions by the Department or other body having jurisdiction may not be accomplished by exercising the power of eminent domain.

R17-3-809 Construction and Maintenance With Protection and Enhancement of Special Features

A. Established or designated parkways, historic or scenic roads may allow exemptions from standards normally applied to the construction and maintenance of the route to ensure the protection and enhancement of the special features or unique resources. Parkway, Historic or Scenic Roads Designation Signing shall be provided as a means of identification of established or designated parkways, historic or scenic roads. The following construction and signing standards shall apply, based on professional engineering discretion:

1. Exemptions allowed to ensure the protection and enhancement of special features or unique resources shall be specified for those features or resources. The revised construction procedures may be allowed if approved by the Department of Transportation, the Federal Highway Administration, the county, city or other body having jurisdiction or improvement in the design, construction or maintenance of the road.

2. Revisions from standards for construction and maintenance for designated parkways, historic or scenic roads shall be accomplished using procedures, standards, and practices to reasonably provide for the safe use and service of the traveling public.

3. Established or designated parkways, historic or scenic roads or areas, shall be signed using Parkway, Historic or Scenic Road Designation Signing approved by the Department on state, county or city rights-of-way of the route,
in accordance with the following criteria:

a. Locations shall be selected which neither will cause visual interference with or distraction from adjacent traffic control devices, nor detract from the historic or scenic quality of an area.

b. Signing of the established or designated parkway, historic or scenic road or area should be as close as practicable to the established termini. Interterminal signing may be installed at not less than five mile intervals. Where the termini are less than ten miles apart, interterminal signing shall not be installed.

c. Where a parkway, historic or scenic road has a terminal at a junction or intersection of state or other route, signing for such designated routes shall normally be located beyond the junction and beyond the normal complement of signing installed immediately after the junction or intersection.

Where appropriate, such signing may be incorporated with or into advance guide signing for the junction or intersection.

d. Where an intersecting roadway is established or designated a parkway, historic or scenic road and such facility has a designated terminal not immediately adjacent to the junction or intersection, signing may be installed only on the designated road.

e. Parkway, historic or scenic road designation signing for an established or designated parkway or historic or scenic road shall conform to the Arizona Department of Transportation approved design, color, and mounting standards and shall be reflectorized. Other signing shall be approved by the Parkways, Historic, and Scenic Roads Advisory Committee and the Director.

f. Historical markers and other related signing shall be in accordance with the Arizona Department of Transportation policies, guides, and procedures of the governmental entity having jurisdiction and are available from the Department upon request.

g. Roads deleted as established or designated parkways, historic or scenic roads shall have all designation signing removed.
VISUAL QUALITY SUMMARY SHEET

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Route number:

Date:

Assessor:

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Road Total:

Average Visual Quality:

1. Unit Total = Viewpoint Total X Length of Unit
2. Road Total = Sum of Unit Totals
3. Average Visual Quality = Road Total X Total Length of Road

Overall Visual Quality Ratings:

3 = Very low visual quality
12 = Medium visual quality
21 = Very high visual quality
LANDSCAPE AND IRRIGATION
DESIGN GUIDELINES
ARIZONA DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT APPLICATIONS

PREPARED BY:
ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADSIDE DEVELOPMENT SERVICES
INTRODUCTION

The Arizona Department of Transportation, Highways Division, encourages the landscaping of its rights of way through the cooperative efforts with local governments and adjacent property owners. Because the right of way is a public area, of prime importance with relation to landscaping is the protection of the public and its safe access to the facilities as well as the improvement of aesthetic considerations.

Landscaping, being composed of living plant material, is in a constant state of change and must consider the ultimate growth of plants. Additionally, other considerations are the use of low water requirement plant materials and any other local jurisdictional requirements, such as sidewalks, signing setbacks and other requirements in relation to each specific roadway. After all of these factors have been considered the completion of the landscaping can greatly enhance the beauty of the roadway and the community.
I. GENERAL

An approved Encroachment Permit is required before any landscape improvements may be incorporated within the ADOT Highway right-of-way. This applies to work performed under nationwide programs such as Global Releaf as well as individual efforts. Landscaping by local governments may be constructed and maintained within the control of access on the crossroads of major highways under a fully executed Intergovernmental Landscape Maintenance Agreement prepared by the State and an approved Encroachment Permit.

The highway roadside is an integral unit of a total highway facility. The term "roadside" generally refers to the area between the outer edge of the roadway and the right-of-way boundary. These include all unpaved areas within the right-of-way.

Permit applicants are encouraged to employ competent design professionals such as Registered Landscape Architects, Architects or Engineers, and to direct their work toward securing a product that fully represents the owner's needs and desires and meets the Arizona Department of Transportation (ADOT) standards, before submitting such plans for review and approval. Permit applicants and design professionals are encouraged
to discuss landscape needs and proposals with District Permits Supervisors and Roadside Development Services Landscape Architects before commencing work on final construction plans.

All plans and specifications shall be sufficiently complete and detailed for easy analysis and compliance inspection. Plans shall be designed to select plant materials appropriate for the intended use and location, to arrange plants for optimum effect of color, texture, form and to ensure reasonable maintenance within the capability of the proposed permittee. Permit applications will be reviewed for consideration of the following factors which can affect the safe and efficient operation of the highway facility.

II. DRAWINGS

A. PLANS:

Drawings must be legible, accurate and drawn to scale. They shall include a north arrow, name of development, designer and design firm with appropriate phone numbers and location of project.

B. PLANT MATERIALS:

Plants proposed for use must be clearly located, showing mature sizes, and identified as to botanical name (genus species, variety), planting size, quantity and spacing used.
Areas within an Arizona Department of Water Resources Active Management Areas must adhere to the plant list provided for that area. (See attached Plant Lists.)

C. EXISTING FEATURES:

Existing features such as curbs, sidewalks, pipe culverts, drainage structures, retention basins, driveways, highway and non-highway signs, overhead lines, underground utilities, irrigation lines, manholes, service cabinets, etc, shall be shown. In addition, the posted speed limit for the highway shall be indicated. Existing trees and shrubs shall be incorporated into the design wherever feasible. Clearing of trees and shrubs will not be permitted unless approved through the permit process. When planters are cut out of existing sidewalk areas, sufficient space must remain for compliance with ARS statutes relating to accessibility by the physically handicapped. The use of steel tree grates is recommended to maximize usable sidewalk space and to maintain a safe walking surface.

D. SLOPES:

Existing or proposed slopes shall be identified with respect to elevation differences between top and bottom and rate of slope between.
III. DESIGN

A. EROSION CONTROL:

Erosion control measures must be employed to prevent surface drainage from eroding soil surfaces and carrying the resultant silt into natural or man made drainage systems, highways or private properties.

B. SAFETY SETBACKS FOR FIXED OBJECTS:

Minimum setbacks from the travel way for newly planted trees with an ultimate trunk diameter of more than 4 inches or other hazardous fixed objects should be as follows:

1. 50 MPH or Greater Design Speed:

   a. Minimum setback from the edge of the traffic lane should be 35 feet unless one of the following reasons will allow for a lesser distance.

      1) Cuts of 3 to 1 or steeper - obstacles are allowed 10 feet behind the point of vertical intersection (P.V.I.) at the toe of the slope. (See illustration 'A'.)

      2) Where concrete barriers, walls, abutments, or other rigid obstructions are used - fixed objects may be placed 4' behind the obstructions. (See illustration 'B')
3) Where flexible guardrail (box-beam, w-beam, or cable) is used - 6 to 20 feet behind the face of the guardrail, depending upon the type. (See illustration 'C'.)

4) Where there are barrier curbs (5" or more vertical face) near a traveled lane 6 feet behind the face of the curb (see illustration 'D'); adjacent to a parking lane - no definite setback distance.

b. Where limited right-of-way or the necessity for planting would result in less clearance, all factors in the particular problem area should be weighed to decide if a special exception is warranted.

2. 50 MPH or less design speed:

a. Minimum setback of a fixed object from the edge of the traffic lane may be 30 feet unless one of the reasons set forth under (1) will allow for a lesser distance.

b. On curves, adequate sight distance for the design speed of the highway must be maintained.

C. REQUIREMENTS FOR SIGHT DISTANCE:

A clear line of sight must be maintained at all highway intersections and entrances. Generally, shrubs, plantings or other obstructions in
this zone must be limited to an ultimate height of 18" or less to allow a clear line of sight down the highway in either direction for at least 400' from the front of the vehicle located 10' behind the edge of the highway to be entered. (See illustration 'E'.)

D. CULTURAL REQUIREMENTS FOR PLANTS:

Use plants that require minimal maintenance and are hardy to the area. Avoid plants that are messy, brittle, short lived or subject to infestations of insects or disease. Plants used in areas where sight distance must be maintained shall have a mature height of 18" or less.

E. VISIBILITY OF HIGHWAY FEATURES:

The visibility of highway signs, delineators, edges of sidewalks, curbs, roadway or guardrail must be maintained at all times. Therefore, provide sufficient plant setbacks and plants with mature sizes that will not outgrow spaces to avoid costly trimming as plants mature.

IV. DETAILS

A. Plans shall include, as appropriate, planting details for trees, shrubs, ground cover, vines, and cacti showing size of planting pit in relation to size of plant ball. (See planting details.)
B. Plans should include staking or guying details as required by the size and species of plant proposed. (See planting/staking details.)

C. Plans should identify problem soils and propose appropriate measures to overcome them.

D. If a mineral surface treatment is proposed, details should be included to indicate the depth, gradation, color and the vertical relationship to the roadway curb or sidewalk. A pre-emergent herbicide should be specified to preclude weeds in these areas. (See Granite and Rock Mulch details.)

E. Details for headers, signs, walls, sidewalks, planters, etc., should be included whenever proposed.

V. MAINTENANCE

A. Problems in maintenance shall be anticipated during the design phase. Changes in environmental conditions should be anticipated.

B. It shall be the responsibility of the permittee to assure that all landscaping and irrigation can be maintained to the satisfaction of ADOT.
ILLUSTRATION 'C'