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ROADSIDE DEVELOPMENT IN ARIZONA

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## ROADSIDE DEVELOPMENT IN ARIZONA

The most difficult and frequent question I am asked in my present position as Landscape Supervisor for the Arizona Highway Department is: "What is Roadside Development?" In brief, anything that happens within the space between the roadway edge and the outer limit of Right-of-Way during and after construction is of concern to "Roadside Development." Prior to construction it is of concern to us that various factors relating to the use and effect of the highway be considered and applied to its location and design.

Going one step further, because of our deep interest in all aspects of highway usage, Roadside Development is also concerned with the highway user who is not found in the commonly thought of form of vehicular traffic, but is found beyond the Right-of-Way limits. This user may be a cattleman grazing his stock on grass re-seeded from an ungrazed seed supply on our side of the fence or a farmer fighting weeds from seed along uncontrolled drainage areas or fence rows. He might also be a user of the captive audience on the highway to advertise his goods or services. We are also interested in the highway user who uses the highway to bring business to his community.

Because of public and professional acceptance of certain types of work, Roadside Development has been delegated certain specific areas of responsibilities within the complete highway concept. These areas receive emphasis to a greater or lesser degree as dictated by local conditions. They may be categorized as follows: Safety and traffic accommodations, roadside vegetation management, educational and interpretive aids, highway aesthetics, "house-keeping" activities, and special activities.

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Safety and traffic accommodations consist primarily of safety rest areas and scenic overlooks. Emergency service telephones, information centers containing road conditions and local interest information, and emergency water supplies.

Roadside vegetation management includes all activities involving roadside plants, whether it be their establishment, growth control, or removal. Roadside vegetation is managed to obtain specific objectives in the following ways:

Vegetation Establishment: Plants are established by direct planting or seeding and by management practices that encourage natural re-vegetation. For functional highway purposes we establish agronomical and/or horticultural plants for a multitude of objectives such as control of erosion, screen headlight glare, delineate and emphasize turning and separation movements, mark hazards, dust control, accent traffic signs, serve as crash barriers for out of control vehicles, pedestrian control barriers, provide visual speed references, living snow fence, and to dampen traffic noises.

For aesthetic purposes plants are established to screen unsightly views, provide attractive ground cover, embellish structures, and to add pleasing color and interest to what might otherwise be a bleak, harsh motorist vista. Even though immeasurable, the existence of the more subtle effects of highway aesthetics upon the attitudes and performances of the motorist is acknowledged.

Most noticeable in urban aesthetic planting is its effect upon abutting properties to raise the standard of the area.

The coolness of shade, warmth of color and security of mass are other objectives of aesthetic plantings.

Vegetation Growth Control: Roadside vegetation management is not all add or subtract. Often times the presence of plants is desired but their size or shape must be controlled. This is normally accomplished in three ways; mechanical mowing, chemical mowing, and pruning. You are all familiar with mechanical mowing to encourage a more dense grass cover and reduce the weed population. We also mow to obtain neatness and to prevent grasses and other vegetation over-hanging the pavement edge to the extent it reduces the effective roadway width.

Pruning is done to protect the tree or to control a plant's shape or growth habit, as with a hedgerow, or trees competing for space with obstructions such as power and telephone lines. It will be a great day for the trees and the highway user when the utilities are placed underground or removed from the Right-of-Way. The utility companies are as anxious for this to happen as we are, because they carry a heavy financial burden of tree trimming and line repair.

Chemical mowing is the technique that involves the application of chemicals early in the growing season, which slows the growth rate and thereby eliminates several later mowings. This is particularly advantageous in areas where mechanical mowing is difficult.

Vegetation Removal: The definition of a weed is: "A weed is a plant out of place." We may have the finest specimen of sycamore or any other tree "out of place". If so, it is no more than a weed and should be removed. Such a tree would be a weed if it were obstructing sight distance on the inside of a turn or at an intersection. A pine tree would be a weed if it were creating shade that unduly prolonged an ice spot on the roadway. Any plant that clogs or materially impedes a drainage channel is a weed. It is for us involved in roadside vegetation management to make

plants and other natural forces work for us, not against us.

The judicious use of the axe, saw, and agricultural chemical is paramount in proper roadside management. It is unfortunate, too frequently, that the application of these tools is made on the "If a little is good, more is better" theory. This shortcoming can only be overcome with increased understanding of the "why" of roadside vegetation management.

Educational and interpretive aids: This is the area of roadside development activity wherein we endeavor to make our highways more meaningful and rewarding to their users. This is accomplished by the construction and placement of Historical Markers, signs identifying significant botanical specimens, geological features, geographical areas and other points of interest.

Arizona is fortunate to have staked a protective claim to two parkway areas, the "Pinal Pioneer Parkway", and the "Joshua Forest Parkway" of Arizona. We are negotiating with the U.S. Forest Service for the third area which will be known as the "Coronado Trail Parkway".

We have begun construction of the interpretative aids on the first two areas and have adopted the "Criteria and standards of operations" for all parkway areas. The development of these areas is progressing slowly because of the demands of our current interstate program. However, the protection of these areas is being pursued.

Highway aesthetics: Normally it is considered that highway aesthetics are the exclusive domain of the roadside development "pansy planter". Nothing could be farther from the truth. Everyone involved in the business of highways has a challenge and opportunity to do his part within his specialty to defeat ugliness and protect or create beauty. Reflect for a moment on the different duties within a highway organization and

their opportunity for beauty. Doesn't the patching crew take pride in the neatness and uniformity of a patch? Guard rails aren't painted only for protection or to be more visible. Lighting standards of architectural grace are coming into vogue. Rest area caretakers labor to improve an area's appearance. Location Engineers consider the scenic values while locating future highways. The Bridge Engineers win prizes for imaginative design. The Contractor has the opportunity to contribute to the cause with good workmanship and finishing. The Specification Writer prescribes methods of constructions and protections for existing aesthetic values. The Highway Administrator creates a climate of working conditions and incentives conducive to giving emphasis and values to beauty.

In other words, highway beauty is not something added as an after-thought, after construction, but must be liberally combined in all elements of location, design, construction and maintenance.

Because beauty is an intangible and must be interpreted individually, there are few standards beyond those of neatness and naturalness that can be applied. For instance, we may not think the English singers, The Beatles, are pretty, but judging from their popularity and mimics, someone must.

The point I stress here is that whether we think something is good or bad, we must continually strive for improvement of highway aesthetics. Being a public agency, we must be conservative, but please, let us not be cowardly.

The greatest opportunity for beauty we have in Arizona is the preservation of existing beauty. It has been created and given to us free. By preserving it, we are providing beauty at the least possible cost.

Every spring our office is deluged with calls inquiring as to how we plant the lovely wild flowers along our roadsides. This week one such call came from Carlos Ronstadt, here in Tucson. He said he had been vainly trying to get wild flowers to grow on his ranch, and would we please tell him how we were so successful growing them along Highway 89. He just knew that anything so spectacular had to have been planted.

As one profound philosopher said, "The largest room in the world is the room for improvement". In this respect won't each of you in your own areas of responsibility please resolve to do what you can for highway aesthetics?

"Beauty is good business". Communities and private industries have learned this through the painful process of the loss of business and employee efficiency. Let us take a page from their book and apply it to highways. According to our Origin-Destination Surveys, 65% of interstate traffic is recreation or vacation traffic. In other words this traffic was generated for pleasure touring. It is our responsibility and to our interest to make this touring pleasurable. By doing this we generate traffic and subsequently revenues, and subsequent to revenues, better highways. So on and on with a chicken and egg situation.

It is the responsibility of Roadside Development to stimulate, advise, promulgate and record the efforts of highway aesthetics. It is everyone's responsibility to participate.

Housekeeping activities are those activities whose result is visible aesthetic improvement. However, housekeeping activities go further to encompass safety and sanitation. These activities include litter prevention and clean-up, rest area maintenance; even weed control is applicable to a certain extent. By the way, the use of the grader for

this purpose should be discouraged for many reasons. They should be used for grading purposes such as cleaning drainage channels and improving substandard shoulder cross sections.

Special activities of Roadside Development are usually those activities that relate to the coordination of the Highway Department to other agencies, associations, or individuals concerning recreation, forestry, grazing, sanitation, or outdoor advertising.

In Arizona, Roadside Development is able to obtain a degree of effective influence far in excess of what would be expected of our few numbers because of the close cooperation and participation of the other Engineering Divisions and their personnel. We are all inspired by our commission and administrators zeal to provide Arizona with the best and most attractive highways possible within the limits of our revenues.

You may find it interesting to know how Roadside Development fares in its competition for the highway dollar. Our division expenses for personal services, travel, and other current expenses for the present fiscal year will exceed \$53,000. Expenditures of maintenance funds at the District level for Roadside Development work items will exceed \$188,142. Construction funds are more difficult to trace since they are combined with work on other jobs. There are a few examples that come to mind that are indicative of the amount of Roadside Development work being done.

The Texas Canyon rest area was a Federal Aid Job of over \$48,000. for facilities only. The previous year, the rest area east of Gila Bend was built with Federal Aid on Ramps and Parking only for over \$60,000. The contract was let the other day for the rest area along the Hassayampa River south of Wickenburg for \$12,000. On the same job there is a

\$2,000. item for transplanting. The Mohawk-Kim job has \$5,000. worth of planting. The Grand Avenue Medians were landscaped from Thomas to Camelback for \$26,620. Three interstate rest area ramps and parking areas were constructed this year with an average cost of \$54,000. each. For a total of \$162,000. we have authorization to expend \$5,000. for beautification of the approaches to Winslow this year.

These figures may seem impressive and they are for Arizona. However, we are lagging in the landscaping of Interstate Urban Areas such as Phoenix, Tucson, and Flagstaff. We hope this lag will be overcome in the later years of the Interstate program. We are ahead of most states with our rest area program and historical markers. Litter control is average or above. We have an excellent research program under the 1½% funds with the University of Arizona.

Roadside Development accomplishes its work within the Department in the following ways: In the design phase of Roadside Development work we prepare plans, specifications and estimates for inclusion in contract work for rest area structures, plot plans, landscape plantings and irrigation systems.

We participate in the preparation and modification of design standards and standard specifications. Our Division has lately been given the responsibility of designing and preparing departmental building jobs for contract.

In the construction phase we assist the Resident Engineers in their inspection of contract jobs containing Roadside Development work. We assist the district with Roadside Development specialty work items by providing a lead man and a laborer with specialized equipment for erecting structures, planting areas, and installing sprinkler systems.

In the maintenance phase we repair and modify structures upon request. Our rest area maintenance coordinator makes periodic inspections and consults with field maintenance personnel concerning rest area problems. He also collects the information to prepare the rest area inventory of all rest areas and their facilities.

We publish and distribute a rest area caretaker's manual which is modified and updated each year with information received from the maintenance forces and others.

We provide consulting service to all field personnel on horticultural problems such as weed control, watering, spraying, seeding, planting, and so forth.

In addition to the U. of A. research project, special surveys are made of rest area usage volume and patterns, and billboard control problems.

It has been a privilege to have the opportunity to bring this information to you. I want to thank the conference committee for allowing me the time.

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