

MAINTENANCE OF INTERSTATE HIGHWAY ROADSIDES AS AFFECTED BY WORK OPERATIONS

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When the 41,000 miles of the Interstate System of Highways have been completed, the individual states will be faced with the sole responsibility for maintaining some 1,500,000 additional acres of roadsides.

It is apparent that if satisfactory and economical maintenance of this tremendous roadside acreage is to result, every effort must be directed toward maximum efficiency in all roadside maintenance activities. This is possible only through well planned programs, full complements of skilled personnel, sufficient essential materials and ample equipment which has been carefully selected for the several roadside maintenance operations.

In most sections of the country grass is the vegetative cover favored to heal the raw areas resulting from construction operations because it is most effective in preventing costly soil erosion and can be established at a comparatively low cost.

The present day highway, with wide rights-of-way, flat slopes and broad medians, represents a considerable increase in the acreage of turf, most of which can be mowed with the modern mowing equipment now in service. Consequently, the tendency is to mow far more than is necessary or justifiable.

If this practice is to be remedied on the Interstate System, a carefully outlined program designating the acres to be mowed and the intensity of mowing is of paramount importance.

In general, turf along urban sections should be close cropped with as many as 10 or more mowings each season. It is in the rural areas where substantial savings in the maintenance work load can be made by reducing, in part, the amount of permanent turf acreage, and, in certain other areas, lowering the frequency of mowing.

It is a common sight to see miles of roadsides comprised of wide, flat areas and high cut and fill slopes, all carefully maintained in close cropped turf, regardless of the surrounding country through which the highways pass. It would seem appropriate that on many of these rural sections, particularly adjoining woodlands, abandoned fields or pastures, and within many of the huge areas at interchanges, mowing operations could be discontinued, or reduced to 2 or 3 cuttings annually.

True, it is essential to keep the turf close cropped for a reasonable distance back from the roadway. Sight distance must be maintained unimpaired, fire hazards reduced to a minimum, and drainage ditches kept free from undesirable growth and other obstructions. Also, those portions of the median which are in grass should be mowed frequently. For the most part, this can be accomplished speedily with the modern mowing equipment now available.

On those portions of the roadsides which are left unmowed, volunteer native growth usually will take over. Aside from occasional selective thinning to remove undesirable weed growth and improve the composition of that which is left, very little future maintenance should be required. In addition to appreciably lowered

maintenance cost, such roadsides will assume a natural beauty which it would be difficult to surpass.

The use of chemicals to control undesirable growth in the roadside turf now goes hand in hand with mowing operations. Carefully timed applications will free the grass of unwanted plants, improve the quality of the turf, and at the same time generally reduce the frequency of mowing.

Soil sterilants applied, at a nominal cost, directly under guardrails will kill all growth and eliminate the necessity of costly hand mowing. Considerable mileage of guardrail now exists under which the soil has been so treated and then immediately covered with a light application of asphalt. This treatment was made over 4 years ago and, to date, no significant regrowth has occurred.

Sign posts, delineators and other forms of traffic guidance will continue to increase. When these are placed in turf areas, soil sterilants applied around the posts will eliminate the laborious task of hand trimming.

The potential of grass growth inhibitors as aids in turf maintenance should not be overlooked. For a number of years, extensive tests in their use for this purpose have been carried on. Although the results of these trials have varied, some of them have proved to be most satisfactory. At least one state in this country is using limited quantities of these chemicals successfully. In England they are being used most effectively in various sections as a part of the turf maintenance operations.

Continued tests based on newly acquired information are already under way. If their effectiveness meets expectations, the use of these chemicals should play an important role in the future maintenance of turf on the Interstate System of Highways.

If good turf on the roadsides is to result, maintenance fertilizing is imperative. On steep slopes and other inaccessible areas, this can be accomplished readily with hydraulic seeding equipment or air blast guns, using pelleted fertilizer. On flat areas, agricultural fertilizer spreaders are most effective for distributing plant food. If soluble fertilizers are used, regular hydraulic tree spray rigs, equipped with the necessary spray bars, will do the job rapidly and effectively. On medians and other areas which are treated with herbicides, fertilizers in soluble form may be applied simultaneously with the weed killers.

The importance of plantings on the roadsides is unquestionable, not only for their aesthetic effect but also for their functional value. If properly located in the medians of divided highways, they effectively blot out the headlight glare of opposing traffic. They may be planted to screen unsightly objects from the highways, abate the noise of heavy traffic in residential areas, or direct traffic on ramps at interchanges.

If these plantings are to serve the purpose for which they are installed, they must be given proper maintenance in order that they may grow to healthy maturity. Until the plants become well established, they must be systematically fertilized and the plant beds kept free from weeds and grass. Fertilizing can be made relatively simple, if soluble fertilizers are employed. Wood chips placed at a depth of 4 in. over the entire beds will give excellent protection against the invasion of weeds, or timely applications of preemergence sprays usually will suffice to eliminate the laborious task of hand cultivation.

The care of the untold thousands of shade trees which will be contained within the limits of the Interstate System should not be overlooked. Pruning, feeding, spraying and the removal of dead and hazardous trees will be continuing tasks,

lightened only by the tree maintenance equipment now available, plus adequate numbers of skilled tree workers.

The probable installation of hundreds of rest areas on the Interstate System will add another maintenance problem of no small dimension. Their acceptance by the traveling public will be dependent largely upon the degree of maintenance which they receive.

As previously mentioned, the maintenance of the roadsides of the Interstate System of Highways will increase the work load substantially for the individual states. However, improved techniques and the greater use of more efficient equipment should help to lessen this load materially.