Landscape Elements

The functional rather than formal aspect of highway design has controlled the landscape on which the roadbed sits. Contemporary society’s desire to control its world is most evident in the planning, design and construction of the highway. The landform, that underlies the roadbed is treated as a platform or receptacle, has lost much of its inherent character. Movement at high velocity enganges massive quantities of surface areas of the landscape to accommodate alignments, curvatures and slopes. At the same time, the aesthetic qualities of the landscape are erased to meet the functional dictates. Trees, natural features, surface materials as well as archaeological sites are stripped to meet the safety requirements. There are far to few roadways where the design intent was in harmony with the landscape. As a result, the overall aesthetic of the interstate highway system is negative and noted for its singular lack of "expressive content."

This section of the design handbook stresses the landform over that of the roadway by presenting ideas that develop the ecological, geological, and topographical qualities of the region. The central motif, in employing landscape elements, is the large or massive scale of the natural landform. The sculptural quality of the landscape and roadway strip can be enhanced to
express the natural aesthetic. Where the visual expression of the technology is necessary to support the roadway, the sculptural form can be emphasized. One idea is based on the collection of water and its method of storage in water basins along the highway. Another series of project ideas utilize the geological structure underlying the roadbed as a means of increasing driver attention and safety. Planted forms are used to isolate the highway from the surrounding context or to create forced vistas highlighting historical or landmarks within the landscape. This method is used extensively in Europe. Other schemes stress the visual quality of formal gardens that are tilted to face the flow of traffic. The gardens, set in a variety of historical styles and designs, are planted with trees, shrubs, perennial flowers. The roadway garden presents to the passing motorist, a sense of the landform and its inherent aesthetic quality while still meeting the functional requirements of slope stability and erosion control.

The educational potential inherent within the landscape is expressed in a project where a large organic form, placed within the median strip, is made to resemble a hump-back whale or a prehistoric dinosaur. The visual landmark accentuates local geological history. The use of earth berms, and natural landforms, can assist the highway designer in introducing all sorts of visually stimulating forms and landmarks. Major surface areas have been reclaimed and redesigned into parks, recreational zones that provide benefit to the motorist as well as those in the surrounding area.
Landscape Elements

Object: Formal Tree Alignments in Perspective

The effect of highway construction project is enormous. Its impact is felt across the entire landscape. The cut and fill operations combined with the wide swath cut through the landform has a long-term impact. Surface vegetation in the
vicinity of the roadway is stripped and discarded. Surfaces are smoothed and ground cover is placed. The result is a highway corridor free from obstruction and devoid of life. The Taconic Parkway or the Garden State Parkway offer the motorist a view that is obstructed between lanes with vegetation. The trees are placed randomly throughout and around the median strip. The trees include coniferous and deciduous and flowering shrubs which are selected for their annual color. The tree is used as a design element to enhance or reinforce the expressive content of the area. In this scheme, coniferous trees are placed in such a fashion as to emphasize the diagonal and parallel quality of the planting. This type of planting is frequently used in commercial forestry and the potential exists for expanding the growing area into an extended median strip. Using a variety of tree, flowering shrub or alternating swatches of different types of ground cover would provide a higher level of visual interest.
Landscape Elements

Object: Linear Perspectives using Treeforms

One of the major ingredients that must be considered in highway travel is driver fatigue. The reduced state of driver alertness has been a major contributor to highway accidents. One means of increasing highway safety is to introduce landscape
elements that have both visual meaning but also ask a question. This scheme is designed as a random experience that plays with the driver's intellect while at the same time providing an event along the route. Using a mixture of tree types, the highway is criss-crossed with diagonal lines creating changing perspectives. As the vehicle moves through the assembly, certain vistas open up and then close creating an external dynamic. The visual content of the landscape is enhanced by placing the trees in single or multiple lines. Whether placed in a straight line or curved, the sense of change afforded the motorist not only maintains driver interest but highway safety as well.

These assemblies can be placed in a random interval along the corridor. Type of tree, height and density can be controlled to offer greater screen effect for the surrounding area.
Landscape Elements

Object: Platonic Plantings

Every stretch of interstate highway has some location where the expressive content of the landform works. Certain parts of a typical roadway appear to have a higher visual aesthetic than further down the road. One of the unique characteristics of such
a spot is its sense of "place". Place is that location where a combination of certain formal qualities and visual meaning leave a lasting impression. This scheme is based on the creation, through natural plantings, of just that place. Using trees in a double circle to form an outer and inner space, the sense of place is established around the movement of the automobile. The driver, approaching a stand of trees in the distance, is presented with two distinctly different scales of place. As movement continues through the construction, one place opens into another. The eccentric placement insures a difference between the two directions of movement. The composition may be triangular, square, oval or free-form, however, the main concern is that there are two identifiable places that the motorist would perceive.
Landscape Elements

Object: **Platonic Space Enclosure**

The Greek *temenos* or precinct is the theme of this scheme. A large open area is surrounded by a natural screen of trees. The scale of this project can range from 600 feet to several miles in length. Where high winds affect highway travel and the need for
wind screening is necessary, the precinct is an excellent solution. The enclosed spaces may be repeated on a regular or irregular basis. Each space may have certain identifiable characteristics. In Germany, the *temenos* is used to isolate and preserve streams, ponds and small lakes that parallel the autoroute.

The trees, that form the edge of the precinct, act as a screen or shelter for the interior space. The space may be tapered to give the driver a sense of visual compression before exiting into the next sequence or an open stretch. The sculptural potential of this scheme is open to variation in tree height, density and type of foliation. In addition, the shape of the precinct may be irregular or skewed to the roadway.
Landscape Elements

Object: Earth Berms with Opposing Textural Form

The use of earth berms to create sculptural form along the interstate highway system has unlimited potential. The vast quantities of earth that are pushed around to develop a stable roadbed can be also used to create forms that enhance the visual experience of the roadway. In this scheme, the embankments are treated in two different ways: one is composed of small scale terraces that can be constructed in a linear manner or in a controlled criss-cross, and the other is a planar surface that would be covered with a uniform natural ground cover but of different colors or foliation. In addition, planar sculptural forms in a variety of shapes can be attached or embedded in the sloped portion of the berm to create geometric patterns.
INTEGRATION OF THE HIGHWAY AND LANDFORM
Landscape Elements

Object: Earth Berms in Wave Form

The motion of the landscape relative to the motion of the automobile is deceiving. While the distant view remains static, the automobile is moving at a certain velocity. The imbalance between the two can create a hazardous condition. This
scheme is designed to counteract the effects of imbalance. By introducing large scale wave forms, the visual effect of speed is narrowed. The rise and fall of the wave motion, shown in a singular direction, will open and close the horizon to the driver. This will narrow the field of vision thus equalizing the differences in apparent velocity.

The wave forms are built of earth with a ground cover finish. Their forms may be modified in height, frequency and interval.

By reversing the direction of the wave and offsetting the valleys, a greater alternating pattern of view will be evident. The driver will be presented with a varying perspective. If greater visual interest is necessary, trees, flowering shrubs or sculpture can be placed on the sloped side toward the direction of traffic.
Landscape Elements

Object: Free-Form Earth Berms

This environmental sculpture uses the landscape as an integral part of its design. The landscape in its natural form is not viewed as having a designed aesthetic and therefore the man-made sculpture provides a means by which the expressive content or
art content is developed. This proposal uses a series of amorphous forms that evoke visual interest and emotional interest. The artist is at liberty to develop forms that evoke memories of the past, present or future. The forms are shaped from earth or natural byproducts of the highway construction. The berms are placed in a random pattern and at different angles to the direction of traffic flow. Each form can be treated in a very unique manner through color, texture, vegetation and scale. Other possibilities include serpentine forms, recreating North American Indian campgrounds or other cultural or natural phenomena.
Landscape Elements

Object: Tilted Gardens - Sequence

Scenic quality is defined as that specific distance from the roadway, and in suburban and rural settings contains the land that is most vulnerable to visual modification. Scenic quality is based on existing conditions and when those conditions are de-
graded, the opportunity exists to introduce sculptural land forms. In this design scheme, tilted gardens are presented to the motorists view as a means of upgrading the visual zone. A landscape of varied topography will accept and absorb this type of development. The garden, replete with a variety of perennials, some set within a historical period (i.e. Baroque) could intensify the expressive content of a landform and contribute to the normative character of the region.
Landscape Elements

Object: Existing Artifacts and Trees

A major resource for developing expressive content on the highway are discarded artifacts such as bridges, walkways, abandoned railroad beds. By introducing plantings, berms, vegetation and trees they can be aesthetically integrated.
In the design of the highway corridor, the vast distances of the roadway may overcome some of the negative visual qualities of the road. In areas with low scenic character, or where the scenic value is limited, the use of large scale forms may be appropriate. In an area such as Wisconsin, where the landform landscape was shaped almost exclusively by glacial action, there are unique sculptural forms resulting from the glacial action of the glacier that could be reintroduced into other areas of the landscape. In areas where towns have concentrated their open space programs around the highway, the use of geologically

Landscape Elements

Object: Geological Median Forms - Paleolithic

the design of the highway corridor, the vast distances of the road may overcome some of the negative visual qualities of the roadway. In areas with low scenic character, or where the scenic value is limited, the use of large scale forms may be appropriate. In an area such as Wisconsin, where the landform landscape was shaped almost exclusively by glacial action, there are unique sculptural forms resulting from the glacial action of the glacier that could be reintroduced into other areas of the landscape. In areas where towns have concentrated their open space programs around the highway, the use of geologically
based forms could enhance the immediate environment as well as provided screening to the highway strip. The benefit to the motorist is education and safety while allowing the community to maintain their open areas as a buffer. In this scheme, a large scale hump form, reminiscent of a submerged whale or similarly scaled form, with trees placed along the ridge line to further simulate a paleolithic creature emerging from the landscape.
Landscape Elements

Object: Extended Gardens

Historic preservation and conservation of the landscape is central to the continued growth of the United States. The value of the land has recently become a major issue in the planning of new highway connections. The character and the quality of the landscape provide the scenic imagery of any locale. The landscape represents the "open space" based upon natural factor characteristics that deserve preservation so that their present role in the environment is not significantly altered or lost to competing land uses. Superimposed on these "open spaces" are areas of high cultural or historical value, which should be considered for conservation. While a conservation area may be used and altered by man, such alteration should occur only within the limitations that will permit the protection of the area's...
special value.

This landscape design uses the highway corridor as an integrated edge to the conservation area. Using both flowering and needle bearing trees, the highway is crisscrossed by lines of trees and landforms to create a changing perspective for the motorist. The containment of the highway through the reinforcement of the landscape offers the highway designer/planner a means to achieve "expressive content."
Landscape Elements

Object: **Contained Landform**

Containment delineates lands that are nearly flat and enclosed or contained by surrounding topography or water. Historically, these "contained" areas were preferred locations for settlement. Residential growth will inevitably seek sites that are accessible and open, hence most vulnerable visually. Such changes will cause a dramatic change in the rural or suburban appearance of the region. The potential for incompatibility between new development and existing landscape patterns is the central problem. The placement of the roadbed becomes critical since sites with dramatic views which are especially attractive will occupy land most likely to be used for the highway. In many cases, the highway is placed along marginal land which offers little design incentive to the planner. The
scenic road is typically located along ridge lines which provide focal attractions and distant views or along wide valley bottom lands where agricultural activity predominates. Because visual boundaries are often extensive, controls that will preserve scenic roads and panoramic views are difficult to establish and enforce. A scenic road may have a combination of nearby focal views and sweeping panoramic views. The nearby, or foreground, view is the zone most sensitive to disruption and a single building, improperly sited, can effectively block a significant long range view. As more and more marginal land is claimed for highway construction, the scenic value must be "fabricated" and what natural features remain after the construction must be cosmetically enhanced. This project presents a view of the possible containment through the creation of a scenic pathway extending toward a natural feature. Surrounded by lines of flowering and needle bearing trees, the pathway becomes the central focus for the contained area.