

visual quality and the motorist

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This paper presents a framework that can be used by either a specialist or a non-specialist to achieve better decisions concerning visual quality. It brings together the major elements of visual quality and their relation to the highway program. The implementing procedures and techniques used by various organizations will vary, but I feel that all will have some common ground.

This paper suggests that, if we can define the elements of visual quality, define the goals for desired visual values, and adopt the procedure normally followed by a highway agency to develop and advance a highway project, then we can use our resources to implement a program that provides visual quality at the correct time and to the degree necessary.

ELEMENTS

The elements include the motorist, who perceives and evaluates visual quality, the object, which imparts visual quality, and the context or environment, which surrounds or conditions both.

Because all cars have drivers but not necessarily passengers, it is the driver, performing his task, to whom primary consideration of visual quality will be directed. The health, welfare, and cultural bias of the driver and his reasons for driving are so diverse that it is unrealistic to attempt to consider them except in the most general fashion.

Objects within his range of vision include the highway, the roadside, and the views beyond the right-of-way. The most important object is the highway. All others should be subdued so that the highway remains visible, obvious, and primary. Some of those other objects we can control, and some we cannot. The objects that can be controlled are of greatest concern to highway professionals. Controllable objects include the highway, the roadside, and other elements located within the right-of-way. We cannot control the weather, the design of the vehicle, or objects located on lands beyond the right-of-way. However, the visual quality of the objects beyond the right-of-way can often be controlled by the way the highway is placed in relation to them. One can vary

the motorists' visual access to environmental objects through many combinations of line and grade.

GOALS

I believe that the most important goal is the proper and safe behavior of the driver. Any development that conflicts with that goal, regardless of its independent visual quality, should be discarded in favor of the necessary requirements of the driver. A secondary goal is the enjoyment of the environment by the driver.

PROCEDURE

This discussion covers the general area of highway planning and provides an example of the type of visual quality information that should be gathered and evaluated at the planning stage of highway development. A similar framework can easily be developed for the functions of location, design, construction, maintenance, and operations.

The consideration of visual quality for the driver must begin concurrently with other highway planning efforts. Planning, in this context, is intended to include system and segment planning in a regional context. Usually the highway planning process produces corridors within which certain types of highway facilities will satisfy certain types of transportation needs. Obviously, the visual quality of minute details such as concrete scoring patterns are not of concern at the planning stage. What are elements of concern to the visual specialist at this time?

Motorist

The system proposed will give clues to the general characteristics of the drivers. Interstate users travel at high speeds and for long distances and look for directional information in an unfamiliar environment. An analysis of a particular highway in a particular state can give information necessary to make a rough analysis of characteristics and needs of primary highway drivers. Urban highways have high traffic levels and drivers need clear, concise information from signs. Distractions from the driving task should be minimized. Scenic views should be carefully selected to prevent dangerous driving conditions.

Objects

Lakes, mountains, rivers, cities, and forests are among the types of objects that should be identified and evaluated, if only in the most elementary fashion, in terms of their relative visual quality. Those resources, often regional in nature, have great value to the planner. A highway corridor can often take advantage of several regional visual resources if they have been identified and evaluated during the planning process.

Context

Mt. Shasta, in California, and the Atlantic Ocean along the eastern coast are examples of visual context. Mt. Shasta, in geographical spread, is small, yet its elevation makes it visually powerful from great distances. If the highway planner were to map the area within which sight of the mountain were possible, he would have identified a large geographic area. The object and the broad area from which it may be viewed, taken together, would provide several possible highway corridors. The Atlantic Ocean, on the other hand, is a vast eye-catching resource in terms of surface area covered. However, because a great portion of the eastern coastline supports either barrier dunes or cottages, both visually disruptive, the areas from which this large resource can be seen are extremely limited in number. The highway planner should recognize those problems as early as possible so that, if a solution is not possible during planning, they can be given attention by the location and design teams.

IMPLEMENTATION

In the past we have had to rely altogether on people to evaluate subjects. We now have an additional tool—the computer. Many things that a computer can do in terms of visual quality evaluation, especially in the areas of information storage, retrieval, and display, have only recently begun to be recognized. I believe it will take an expanded level of creativity on the part of all professionals in this field to properly blend the mechanical and the human systems.

Human System

People must be selected to do or to supervise the work related to visual quality. From the conceptual and managerial level, I do not believe that whether they are landscape architects, planners, engineers, or other professionals is as important a consideration as whether they are generalists or specialists.

The generalist should be able to relate the various degrees and levels of visual quality opportunity to other determinants in the highway planning process. When should the view from the road give way to the view from the community? When should visual quality be given a lower priority than community disruption? But more important, how can we achieve the highest level of visual quality for each facility on any location? These concerns require persons who have the broadest possible outlook and who do not become sidetracked with details. Such a person does not need to be recruited from a single professional background. That may be a heretical statement from a landscape architect, but I can support neither the proposal that visual quality as determined by any one professional group must dominate nor the proposal that visual quality itself is a more desirable goal than other economic, social, or cultural goals. Visual goals must be adequately considered, but decisions need not be made by one professional group.

Specialists who are capable of exploring all of the detailed visual alternatives are, however, absolutely necessary. Operating under guidelines pertinent to a phase or level of concern, they can thoroughly and expertly deal with the many opportunities offered by variation in line, grade, shape, color, texture, and other elements of visual design.

Neither generalists nor specialists operating alone can be expected to produce the product quality that is possible when they work together. That should not be interpreted as a recommendation for different people for different functions. Most people deal with both general and specific aspects of visual problems. It is important, however, that the correct role be played at the proper time.

Mechanical System

The mechanical system includes the aids that are necessary to present material for visual analysis and decision-making. Drawings, sketches, maps, and photographs may be supplemented today with various elements of computer science, cathode ray tube display, and gaming simulation. Many of these newer techniques will have to be modified to fit goals, organizations, and budgets, but I am confident that this can be done by creative people with a minimum of effort.

SUMMARY

The elements include the motorist, who interprets visual quality, the object, which imparts visual information, and the context or environment, which surrounds both in a given situation. The motorist is identified as a driver.

The development of visual quality goals is essential. The primary goal is to maximize and focus on safe driver behavior. The secondary goal is to provide visual enjoyment when that has not been considered in the primary goal.

Combining the elements and goals of visual quality with highway development practice can provide a rational visual quality procedure. During each activity phase, including planning, location, design, construction, maintenance, and operations, the applicable and appropriate characteristics of each element should be inventoried and evaluated.

All activities should be developed in anticipation of their actual implementation. Both a human and a mechanical system are needed in the evaluation of visual quality.

I believe this program is adequate to incorporate the necessary elements of visual quality into highway design for the benefit and enjoyment of the motorist. There are undoubtedly other approaches and more sophisticated methodologies for accomplishing visual quality. In any case, a clear, understandable, and implementable process must be established throughout the highway process by each highway agency to ensure an adequate level of visual quality for the motorist.