Sec. 109. Standards

(a) In General. - The Secretary shall ensure that the plans and specifications for each proposed highway project under this chapter provide for a facility that will -

(1) adequately serve the existing and planned future traffic of the highway in a manner that is conducive to safety, durability, and economy of maintenance; and

(2) be designed and constructed in accordance with criteria best suited to accomplish the objectives described in paragraph (1) and to conform to the particular needs of each locality.

(b) The geometric and construction standards to be adopted for the Interstate System shall be those approved by the Secretary in cooperation with the State transportation departments. Such standards, as applied to each actual construction project, shall be adequate to enable such project to accommodate the types and volumes of traffic anticipated for such project for the twenty-year period commencing on the date of approval by the Secretary, under section 106 of this title, of the plans, specifications, and estimates for actual construction of such project. Such standards shall in all cases provide for at least four lanes of traffic. The right-of-way width of the Interstate System shall be adequate to permit construction of projects on the Interstate System to such standards. The Secretary shall apply such standards uniformly throughout all the States.

(c) Design Criteria for National Highway System. -

(1) In general. - A design for new construction, reconstruction, resurfacing (except for maintenance resurfacing), restoration, or rehabilitation of a highway on the National Highway System (other than a highway also on the Interstate System) may take into account the environmental, scenic, aesthetic, historic, community, and preservation impacts of the activity; and

(A) the constructed and natural environment of the area;

(B) the environmental, scenic, aesthetic, historic, community, and preservation impacts of the activity; and

(C) access for other modes of transportation.
(2) Development of criteria. - The Secretary, in cooperation with State transportation
deptments, may develop criteria to implement paragraph (1). In developing criteria under this
paragraph, the Secretary shall consider -

(A) the results of the committee process of the American Association of State
Highway and Transportation Officials as used in adopting and publishing "A Policy on
Geometric Design of Highways and Streets", including comments submitted by interested
parties as part of such process;

(B) the publication entitled "Flexibility in Highway Design" of the Federal
Highway Administration;

(C) "Eight Characteristics of Process to Yield Excellence and the Seven
Qualities of Excellence in Transportation Design" developed by the conference held
during 1998 entitled "Thinking Beyond the Pavement National Workshop on Integrating
Highway Development with Communities and the Environment while Maintaining
Safety and Performance"; and

(D) the publication entitled “Highway Safety Manual” of the American
Association of State Highway and Transportation Officials;

(E) the publication entitled “Urban Street Design Guide” of the National
Association of City Transportation Officials; and

(F) any other material that the Secretary determines to be appropriate.

(d) On any highway project in which Federal funds hereafter participate, or on any such project
constructed since December 20, 1944, the location, form and character of informational, regulatory and
warning signs, curb and pavement or other markings, and traffic signals installed or placed by any public
authority or other agency, shall be subject to the approval of the State transportation department with the
concurrence of the Secretary, who is directed to concur only in such installations as will promote the safe
and efficient utilization of the highways.

(e) Installation of Safety Devices. -

(1) Highway and railroad grade crossings and drawbridges. - No funds shall be approved
for expenditure on any Federal-aid highway, or highway affected under chapter 2 of this title,
unless proper safety protective devices complying with safety standards determined by the
Secretary at that time as being adequate shall be installed or be in operation at any highway and
railroad grade crossing or drawbridge on that portion of the highway with respect to which such
expenditures are to be made.

(2) Temporary traffic control devices. - No funds shall be approved for expenditure on
any Federal-aid highway, or highway affected under chapter 2, unless proper temporary traffic
control devices to improve safety in work zones will be installed and maintained during
construction, utility, and maintenance operations on that portion of the highway with respect to
which such expenditures are to be made. Installation and maintenance of the devices shall be in
accordance with the Manual on Uniform Traffic Control Devices.

(f) The Secretary shall not, as a condition precedent to his approval under section 106 of this
title, require any State to acquire title to, or control of, any marginal land along the proposed highway in
addition to that reasonably necessary for road surfaces, median strips, bikeways, pedestrian walkways,
gutters, ditches, and side slopes, and of sufficient width to provide service roads for adjacent property to
permit safe access at controlled locations in order to expedite traffic, promote safety, and minimize
roadside parking.

(g) Not later than January 30, 1971, the Secretary shall issue guidelines for minimizing possible
soil erosion from highway construction. Such guidelines shall apply to all proposed projects with respect
to which plans, specifications, and estimates are approved by the Secretary after the issuance of such guidelines.

(h) Not later than July 1, 1972, the Secretary, after consultation with appropriate Federal and State officials, shall submit to Congress, and not later than 90 days after such submission, promulgate guidelines designed to assure that possible adverse economic, social, and environmental effects relating to any proposed project on any Federal-aid system have been fully considered in developing such project, and that the final decisions on the project are made in the best overall public interest, taking into consideration the need for fast, safe and efficient transportation, public services, and the costs of eliminating or minimizing such adverse effects and the following:

- (1) air, noise, and water pollution;
- (2) destruction or disruption of man-made and natural resources, aesthetic values, community cohesion and the availability of public facilities and services;
- (3) adverse employment effects, and tax and property value losses;
- (4) injurious displacement of people, businesses and farms; and
- (5) disruption of desirable community and regional growth.

Such guidelines shall apply to all proposed projects with respect to which plans, specifications, and estimates are approved by the Secretary after the issuance of such guidelines.

(i) The Secretary, after consultation with appropriate Federal, State, and local officials, shall develop and promulgate standards for highway noise levels compatible with different land uses and after July 1, 1972, shall not approve plans and specifications for any proposed project on any Federal-aid system for which location approval has not yet been secured unless he determines that such plans and specifications include adequate measures to implement the appropriate noise level standards. The Secretary, after consultation with the Administrator of the Environmental Protection Agency and appropriate Federal, State, and local officials, may promulgate standards for the control of highway noise levels for highways on any Federal-aid system for which project approval has been secured prior to July 1, 1972. The Secretary may approve any project on a Federal-aid system to which noise-level standards are made applicable under the preceding sentence for the purpose of carrying out such standards. Such project may include, but is not limited to, the acquisition of additional rights-of-way, the construction of physical barriers, and landscaping. Sums apportioned for the Federal-aid system on which such project will be located shall be available to finance the Federal share of such project. Such project shall be deemed a highway project for all purposes of this title.

(j) The Secretary, after consultation with the Administrator of the Environmental Protection Agency, shall develop and promulgate guidelines to assure that highways constructed pursuant to this title are consistent with any approved plan for -

- (1) the implementation of a national ambient air quality standard for each pollutant for which an area is designated as a nonattainment area under section 107(d) of the Clean Air Act (42 U.S.C. 7407(d)); or
- (2) the maintenance of a national ambient air quality standard in an area that was designated as a nonattainment area but that was later redesignated by the Administrator as an attainment area for the standard and that is required to develop a maintenance plan under section 175A of the Clean Air Act (42 U.S.C. 7505a).

(k) The Secretary shall not approve any project involving approaches to a bridge under this title, if such project and bridge will significantly affect the traffic volume and the highway system of a contiguous State without first taking into full consideration the views of that State.

(l) (1) In determining whether any right-of-way on any Federal-aid highway should be used for accommodating any utility facility, the Secretary shall -
(A) first ascertain the effect such use will have on highway and traffic safety, since in no case shall any use be authorized or otherwise permitted, under this or any other provision of law, which would adversely affect safety;

(B) evaluate the direct and indirect environmental and economic effects of any loss of productive agricultural land or any impairment of the productivity of any agricultural land which would result from the disapproval of the use of such right-of-way for the accommodation of such utility facility; and

(C) consider such environmental and economic effects together with any interference with or impairment of the use of the highway in such right-of-way which would result from the use of such right-of-way for the accommodation of such utility facility.

(2) For the purpose of this subsection -

(A) the term "utility facility" means any privately, publicly, or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway drainage, or any other similar commodity, including any fire or police signal system or street lighting system, which directly or indirectly serves the public; and

(B) the term "right-of-way" means any real property, or interest therein, acquired, dedicated, or reserved for the construction, operation, and maintenance of a highway.

(m) Protection of Nonmotorized Transportation Traffic. - The Secretary shall not approve any project or take any regulatory action under this title that will result in the severance of an existing major route or have significant adverse impact on the safety for nonmotorized transportation traffic and light motorcycles, unless such project or regulatory action provides for a reasonable alternate route or such a route exists.

(n) It is the intent of Congress that any project for resurfacing, restoring, or rehabilitating any highway, other than a highway access to which is fully controlled, in which Federal funds participate shall be constructed in accordance with standards to preserve and extend the service life of highways and enhance highway safety.

(o) Compliance With State Laws for Non-NHS Projects. - Projects (other than highway projects on the National Highway System) shall be designed, constructed, operated, and maintained in accordance with State laws, regulations, directives, safety standards, design standards, and construction standards.

(p) Scenic and Historic Values. - Notwithstanding subsections (b) and (c), the Secretary may approve a project for the National Highway System if the project is designed to -

(1) allow for the preservation of environmental, scenic, or historic values;
(2) ensure safe use of the facility; and
(3) comply with subsection (a).

(q) Phase Construction. - Safety considerations for a project under this title may be met by phase construction consistent with the operative safety management system established in accordance with a statewide transportation improvement program approved by the Secretary.

(r) Pavement Markings. - The Secretary shall not approve any pavement markings project that includes the use of glass beads containing more than 200 parts per million of arsenic or lead, as determined in accordance with Environmental Protection Agency testing methods 3052, 6010B, or 6010C.