

## FREIGHT MANAGEMENT AND OPERATIONS

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# Pulling Together: The National Highway System and Its Connections to Major Intermodal Terminals

The Secretary of Transportation  
Washington, D.C. 20590

May 24, 1996

The Honorable John H. Chafee  
Chairman, Committee on Environment and Public Works  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

Pursuant to Section 101 of the National Highway System Designation Act of 1995 (Public Law 104-59), I am pleased to enclose the Department's recommendations on National Highway System (NHS) connections to major intermodal terminals. With the addition of these connections, the role of the NHS as the backbone of the Nation's 21st century intermodal transportation network will be strengthened.

Section 1006 of the Intermodal Surface Transportation Efficiency Act of 1991 (Public Law 102-240) authorized the NHS. However, the act made clear that the NHS was not intended to be simply a highway system. Rather, it was intended to provide the links that would unite a national intermodal transportation network in a unified, interconnected manner.

In December 1993, the Department submitted its recommendations to Congress for designation of the NHS. The recommendations included some connections to intermodal terminals, but the Department's report noted that the proposals received from the State transportation departments were not sufficiently consistent to warrant final designation of all connectors. The 1995 act, which designated the NHS, directed the Department to submit, within 180 days of enactment, modifications to the NHS to provide connections "...to major ports, airports, international border crossings, public transportation and transit facilities, interstate bus terminals, and rail and other intermodal transportation facilities." These connections, which are eligible on an interim basis for NHS funding, are subject to approval by Congress.

This submission, developed with the cooperation of the State transportation departments, metropolitan planning organizations, and terminal operators, identifies additional connections that should be part of the NHS. As discussed in the enclosed report, *Pulling Together: The National Highway System and Its Connections to Major Intermodal Terminals*, the recommended connections are consistent with criteria developed to address the earlier concern about consistency.

The Congress, in creating the NHS, recognized that the Nation's transportation infrastructure must be viewed as a single system with each mode complementing the others. With the NHS and its connections to major intermodal terminals as the unifying force, our national transportation network will sustain economic growth, increased our competitiveness in the international market place of the 21st century, and enhance the personal mobility of every American.

Identical letters were sent to the Ranking Minority Member, Committee on Environment and Public Works, and to the Chairman and Ranking Minority Member, House Committee on Transportation and Infrastructure.

Sincerely,

Federico Peña

Enclosure

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# Pulling Together: The National Highway System and Its Connections to Major Intermodal Terminals

## Introduction

In 1991, with the Dwight D. Eisenhower System of Interstate and Defense Highways essentially complete, the Congress, the U.S. Department of Transportation (DOT), State and local officials, and the highway community turned their attention to shaping the Nation's post-Interstate surface transportation policy for the 21st century. The National Highway System (NHS) emerged from this review and was authorized by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

As defined by ISTEA, the NHS includes the Interstate System, congressionally designated high-priority corridors, non-Interstate highways essential to national defense, other urban and rural principal arterials, and highways that provide connections to major intermodal terminals. In authorizing identification of routes for the NHS, ISTEA strongly emphasized the need for close coordination among Federal, State, and local officials. The NHS, which is limited by law to 250,000 kilometers (155,000 miles), plus or minus 15 percent, will enhance personal mobility, serve commerce, support economic growth, and increase the Nation's competitiveness in international markets.

Although the NHS includes only 4 percent of all roads in the country, it currently carries 42 percent of existing highway traffic and will serve as the backbone of Nation's transportation system in the 21st century. This strategic role is reflected in the purpose of the NHS, as stated in ISTEA:

The purpose of the National Highway System is to provide an interconnected system of principal arterial routes which will serve major population centers, international border crossings, **ports, airports, public transportation facilities, and other intermodal transportation facilities** and other major travel destinations; meet defense requirements; and serve interstate and interregional travel. [Emphasis added]

Congress retained the authority to designate the NHS and required the DOT to submit recommendations within 2 years of enactment of ISTEA on December 18, 1991. In developing its recommendations, the DOT was guided by the purpose of the NHS, as defined in ISTEA. The DOT worked with State transportation officials, local officials, and other Federal Agencies to develop a proposed NHS, which was submitted to Congress on December 9, 1993.

As noted in the report to Congress, however, the connections to intermodal terminals submitted by the States were not sufficiently consistent to warrant final designation of the connections as part of the proposed NHS. This was a vital concern to the DOT because of the importance of the NHS to the efficiency of the Nation's transportation system. The NHS is intended to help tie the system together so that each mode can operate more efficiently with other modes.

For that reason, the DOT's December 1993 report to Congress recommended that the States, in cooperation with the metropolitan planning organizations (MPO) and other officials, be required, within 2 years of enactment of the NHS, to identify major intermodal facilities and appropriate NHS connections based on criteria to be established by the DOT.

## Purpose

Designation of the NHS was completed on November 23, 1995, when President Clinton signed the National Highway System Designation Act of 1995 (Public Law 104-59). Section 101 required the Secretary of Transportation to submit NHS connections to "...major ports, airports, international border crossings, public transportation and transit facilities, interstate bus terminals, and rail and other intermodal transportation facilities." The connections were to be proposed by the States and revised by the Secretary and were to be submitted within 180 day after enactment.

*Pulling Together: The National Highway System and its Connections to Major Intermodal Terminals* is submitted in response to this Section 101 requirement. However, this report emerged from a 2-year process that began shortly after the DOT submitted its December 1993 report to Congress, *The National Highway System: The Backbone of America's Intermodal Transportation Network*, on the recommended NHS.

## The Process

In January 1994, the DOT, through the Federal Highway Administration (FHWA), began the process of establishing procedures and criteria for identifying NHS connections to major intermodal terminals. Because the success of the NHS depends on the support of Federal, State, and local officials and the owners, operators, and users of intermodal facilities, the FHWA relied on an extensive collaborative process to provide guidance on procedures and criteria.

The FHWA's first step was to consult with DOT's Office of Intermodalism as well as the Research and Special Programs Administration and the other DOT Modal Administrations: the Federal Aviation Administration, the Federal Railroad Administration, the Federal Transit Administration, and the Maritime Administration. Based on these initial consultations, the FHWA decided that a flexible criteria-based approach offered the greatest opportunity for achieving consistent results among the States without unduly constraining the States and MPO's in identifying proposed connections.

To shape the criteria-based approach, the FHWA contacted the State transportation departments to request information from the Intermodal Management Systems they were developing in accordance with ISTEA. At the same time, the FHWA conducted many outreach sessions with public and private interest groups and agencies to obtain additional information and to obtain their views.

Working with information obtained from the States, the other Modal Administrations, industry associations, and terminal operators, the FHWA developed draft criteria for further review and discussion. Additional outreach sessions were conducted by the FHWA to explain the criteria and to obtain comments and recommendations for changes. Finally, a focus group representing the States, the MPO's, and transit operators reviewed the criteria and made final adjustments prior to acceptance. The FHWA issued the final guidelines and criteria in April 1995 for use by the States in cooperation with the MPO's and terminal operators in identifying the connections to major intermodal terminals.

## The Criteria

In such a geographically diverse country as the United States, achieving consistency for the NHS connections was as important as it was difficult. The FHWA wanted to provide sufficient flexibility to accommodate differing State characteristics, plans, and investment strategies. However, consistency at the national level—a recognition of what constituted a "major" intermodal connector under ISTEA—was important as well.

To accomplish these sometimes conflicting goals, the FHWA established primary and secondary criteria for identifying intermodal terminals that may warrant connections to the NHS:

- Primary criteria consisted of volume or activity levels by terminal type.
- Secondary criteria consisted of more subjective factors that underscore the importance of an intermodal terminal within a specific State.

For example, an activity level of 250,000 annual enplanements is the primary criterion for providing an NHS connection to a commercial aviation airport. Under the secondary criteria, however, a State may propose a smaller airport that did not meet this primary criterion but is important within the State. The secondary criteria demonstrating this importance might include identification of the airport as a major facility in the Intermodal Management System or in State/metropolitan transportation plans. Similarly, the terminal or connecting route might be targeted for investments to address existing or anticipated deficiencies as a result of a significant expansion of traffic.

Similar primary and secondary criteria were used for other terminal types, including ports, rail/truck terminals, pipeline terminals, Amtrak stations, intercity bus terminals, public transit stations, and ferry terminals. The appendix to this report contains descriptions of the primary and secondary criteria along with a further discussion of their application.

In April 1995, the FHWA distributed the criteria to the State transportation departments, the MPO's, and to other organizations, agencies, and groups, and to operators of intermodal terminals. Each State DOT was asked to submit proposed connections, consistent with the criteria. Although the FHWA asked the States to take the lead, they were advised to work closely with the MPO's and other interested groups, companies, and agencies.

This collaborative process resulted in identification of proposed connections that, from State-to-State, reflected a consistent approach that had not been evident in 1993. This consistency is illustrated by the fact that for most States, the FHWA accepted proposed NHS connections to major intermodal terminals without change. In the remaining States, changes were minor and were made only after consultation with the States.

## The Results

The NHS designated on November 28, 1995, included connections to 143 intermodal passenger and freight terminals. Based on the proposals submitted by the States in cooperation with their public and private sector partners, the FHWA has identified appropriate connections for an additional 1,251 major terminals. (Some terminals do not require connections because they are adjacent to or in close proximity to NHS routes.) These terminals include:

- 194 major port facilities,
- 167 major airports,
- 68 major Amtrak stations,
- 198 major rail/truck terminals,
- 96 major intercity bus terminals,
- 66 major pipeline terminals,
- 377 major public transit terminals,
- 43 major ferry terminals, and
- 42 major multi-modal passenger terminals.

The additional connections total approximately 3,208 kilometers (1,925 miles).

## Connections to International Border Crossings

The National Highway System Designation Act of 1995 designated connections to 32 crossings along the U.S.-Canadian border and 21 crossings along the U.S.-Mexican border. These connections were identified in cooperation with the States and the Canadian and Mexican governments. The FHWA has reviewed these connections and determined that no changes (additions or deletions) are needed at this time. As a result, the DOT is not proposing any additional connections to international border crossings. However, this important component of the NHS will be monitored, in cooperation with the States, so that changes in the NHS can be made as conditions and needs warrant.

## The Products

The NHS connections to major intermodal terminals are presented and described in two products: (1) geographic information system-based maps for each State and urbanized area, and (2) a listing and narrative descriptions, by State, for each terminal and connection(s). Although the maps are the primary means of identifying routes on the NHS, the DOT concluded that narrative descriptions are needed for the connections because many are very short (less than 1.6 kilometers (1 mile)) and thus are difficult to illustrate well on the maps. Both products are transmitted as part of this report.

## Implementation of Projects

Section 101 of the 1995 Act established interim eligibility provisions for the NHS connections to major intermodal terminals. The connections identified in this submission are now eligible for improvement with NHS funds. The States and MPO's may, at their discretion, immediately advance projects through the statewide and metropolitan planning processes to improve these important highway connections. Implementing agencies must work through the States and MPO's to advance projects through normal planning and programming processes.

Although the connections identified in this report are eligible for improvement with NHS funds on an interim basis,

Section 101 indicates that formal designation of the connections as part of the NHS may take effect only following enactment of a law.

## Addendum to Summary Report Criteria for Identifying Major Intermodal Terminals

The primary and secondary criteria used for identifying major intermodal terminals are described below. The primary criteria are based on annual passenger or freight volumes or daily vehicular traffic on one or more principal routes that serve the facility. The secondary criteria include factors which underscore the importance of an intermodal facility within a specific State.

In arriving at the passenger volume criteria, the FHWA concluded that different passenger volumes should be applied to commercial aviation airports than for Amtrak stations and intercity bus terminals. The passenger volume criterion for airports was established at 250,000 annual enplanements; the criterion for Amtrak stations and intercity bus terminals was established at 100,000 annual boardings and deboardings. Even though the criterion is higher, airports with 250,000 annual passenger enplanements handle nearly 96 percent of total enplanements at all commercial aviation airports. Thus, NHS connections to these major airports will serve a significant share of total passenger volumes nationwide. The criterion for commercial aviation airports was applied in a somewhat liberal sense, particularly in States which may not have any airports that meet the criterion and in States which may have only one airport that meets the criterion. States were permitted to identify connections to airports with 100,000 to 250,000 annual enplanements where the significance of these airports is reflected in State airport and aviation plans and increased service levels was anticipated.

### Primary Criteria

National Highway System connections were required to all terminals that meet the primary criteria unless justification was provided for not identifying a connection.

Commercial aviation airports:

- Passengers – scheduled commercial service with more than 250,000 annual enplanements.
- Cargo – 100 trucks per day in each direction on the principal connecting route, or 100,000 tons per year arriving or departing by highway transport vehicles.

Ports:

- Terminals that handle more than 50,000 TEUs per year, or other units measured that would convert to more than 100 trucks per day in each direction. (Trucks are defined as large single-unit trucks or combination vehicles handling freight.)
- (Note: A TEU, a volumetric measure of containerized cargo, stands for twenty-foot equivalent units).
- Bulk commodity terminals that handle more than 500,000 tons per year **by highway transport vehicles** or 100 trucks per day in each direction on the principal connecting route.

(If there is no individual terminal that handles this amount of freight, but a cluster of terminals in close proximity of each other does, then the cluster of terminals could be considered as meeting the criteria. In such cases, the connecting route might terminate at a point where the traffic begins to separate to each terminal.)

- Passengers – terminals that handle more than 250,000 passengers per year or 1,000 passengers per day for at least 90 days during the year.

Truck/rail:

- 50,000 TEUs per year or 100 trucks per day in each direction on the principal connecting route, or other units measured that would convert to more than 100 trucks per day in each direction. (Trucks are defined as large single-unit trucks or combination vehicles carrying freight.)

Pipelines:

- 100 trucks per day in each direction on the principal connecting route.

**Amtrak:**

- 100,000 passengers per year (entrainments and detrainments).

(Joint Amtrak, intercity bus, and public transit terminals should be considered based on the combined passenger volumes. Likewise, two or more separate facilities in close proximity should be considered based on combined passenger volumes.)

**Intercity bus:**

- 100,000 passengers per year (boarding and deboardings).

**Public transit:**

- Stations with park and ride lots with more than 500 spaces or 5,000 daily bus or rail passengers with significant highway access (i.e., a high percentage of the passengers arriving by cars and buses using a route that connects to another NHS route), or a major hub terminal that provides for the transfer of passengers among several bus routes. These hubs should have a significant number of buses using a principal route connecting with the NHS.

**Ferries:**

- Interstate/international – 1,000 passengers per day for at least 90 days during the year. A ferry which connects two terminals within the same metropolitan area should be considered as local, not interstate.
- Local – see public transit criteria.

## Secondary Criteria

Justification was required when NHS connections were proposed based on the secondary criteria. The justification was based on the significance of the facility within the State and plans that the State, metropolitan planning organization (MPO), or others have for improving the access to or for development of the facility. Any of the following criteria could be used to justify an NHS connection where there is a significant highway interface.

- Intermodal terminals that handle more than 20 percent of passenger or freight volumes by mode within a State,
- Intermodal terminals identified in either the Intermodal Management System or the State/metropolitan transportation plans as a major facility,
- Significant investment in, or expansion of, an intermodal terminal,
- Connecting routes targeted for investment by the State, MPO, or others to address an existing or anticipated deficiency as a result of increased traffic.

