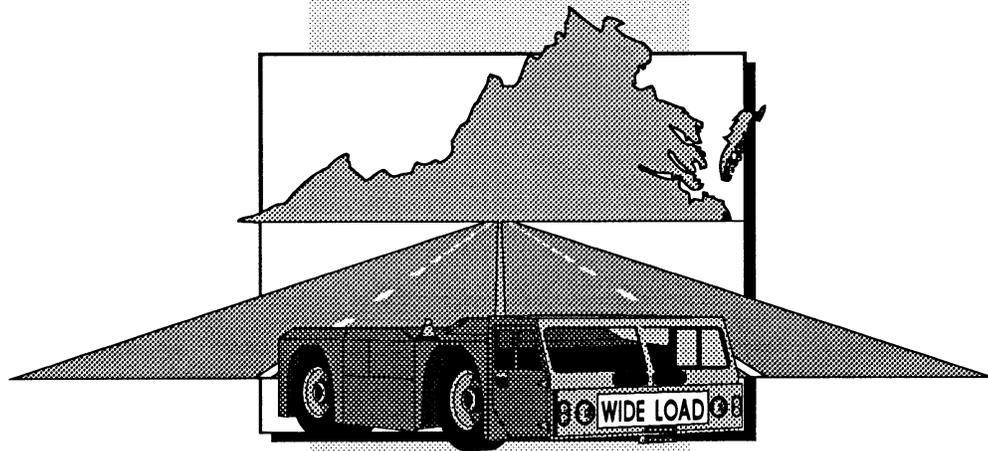


TECHNICAL ASSISTANCE
REPORT

**REVIEW OF VIRGINIA'S PROGRAM
TO REGULATE AND CONTROL
HIGHWAY TRANSPORT
OF OVERWIDTH VEHICLES**



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Virginia Department of Transportation 1401 E. Broad Street Richmond, Virginia 23219	University of Virginia Charlottesville Virginia 22903			
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Abstract <p>Federal and Virginia laws restrict the width of commercial vehicles traveling on interstate and federal-aid highways to 102 inches (8'6") without a special permit. Virginia regulations generally allow the issuance of special permits for loads up to 14 feet in width. Loads greater than 14 feet may be shipped only in exceptional circumstances. In addition, loads with buckets, blades, or scoops must be disassembled whenever the bucket, blade, or scoop exceeds 102 inches.</p> <p>This report examines the state hauling permit regulations for overwidth loads and the routine operation of the Virginia Department of Transportation's Hauling Permit Office. It describes the reasons for the width restrictions, safety concerns of the Virginia Department of Transportation's Permit Office, available data on overwide load shipments, and the concerns of the Commonwealth's Port Authority and the prefabricated housing industry that the regulations may be overly strict and excessive compared to other states. Also included are data and regulations from several states bordering on and/or economically competitive with the Commonwealth.</p> <p>The report lists three options for the state to amend certain of the hauling permit width restrictions or to maintain the status quo. The description of each option also includes the probable benefits and costs associated with it.</p>				

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(The opinions, findings, and conclusions expressed in this report are those of the authors and not necessarily those of the sponsoring agencies.)

**Virginia Transportation Research Council
(A Cooperative Organization Sponsored Jointly by the
Virginia Department of Transportation and
the University of Virginia)**

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EXECUTIVE SUMMARY

The power to regulate motor vehicle traffic on Virginia's highways rests with the General Assembly. The Assembly delegated to the Commonwealth Transportation Board ("Board") the responsibility to issue special permits for commercial vehicles that exceed the statutory width limitation of 8'6". Under this grant of authority, the Board promulgated the *Hauling Permit Manual* ("Manual"), which establishes a strict 14-foot-wide maximum limit for special trip permits on all commercial vehicles (absent extraordinary circumstances). The Virginia Department of Transportation (VDOT) Permit Office, the entity responsible for handling permit requests, strictly enforces the maximum width restriction except in cases where the transport of an overwide load is truly an exception. As a result, only a limited number of loads greater than 14 feet wide are approved for travel on the state highways, and prefabricated housing units that are 16 feet wide are not approved as a matter of policy.

In a January 1992 report, the Virginia Port Authority (VPA) expressed concern that the 14-foot maximum restricts the competitiveness of Virginia's industries. VPA believes that shipping lines perceive the state policy as being an absolute and that their occasional need to ship an overwide load will be denied. Such shipping lines may consider moving their operations to other ports that explicitly allow occasional overwide shipments. VPA is also concerned that shippers may avoid Hampton Roads as a result of Virginia's restriction on scoops, buckets, and blades. The *Manual* requires loads to be broken down as much as possible, even when a scoop, bucket, or blade can otherwise fit within the 14-foot maximum. Although haulers are permitted to transport the disassembled load on one truck, they may elect to use ports in other states that do not require a breakdown if the undivided load fits within width restrictions. VPA requested a review of the state's permitting regulations.

Approximately eight months after receipt of VPA's request, VDOT received a request from the Virginia Manufactured Housing Association (VMHA) for a review and modification of the hauling permit regulations so that that industry could be permitted to move 16-foot-wide housing units. To amplify their request, the VMHA stated that manufacturers in other states are routinely allowed to ship 16-foot-wide units; therefore, Virginia producers are being shut out of that market. In addition, consumers in Virginia are being denied the right to purchase state-of-the-art housing.

In light of these requests, the Virginia Transportation Research Council was asked to perform a policy review of the permit regulations in Virginia and to compare and contrast them with the regulations in other states. Research indicates that hauling-width policies in about 19 states allow 16-foot-wide (or greater) shipments on a routine basis. Eight additional states allow either 16-foot-wide prefabricated housing on the roadways on a routine basis or on a case-by-case basis. States that have ports competing in at least some degree with Hampton Roads (Delaware, Georgia, Maryland, and South Carolina) allow movements of 16-foot-wide loads

from their ports either in explicit statutory language or in regulations regulating the issuance of special permits. Although many states allow the movements routinely, there are few available data to indicate whether or not accidents in those states have increased or whether road conditions have degenerated.

It is recognized that heavy equipment and housing units have many different characteristics that influence their transport. Because this report deals with both wide equipment and housing issues, and no data were found on the movement of wide equipment loads, housing data is used to show the problems (or lack thereof) that could arise as a result of the *width* of the object being moved. The University of Michigan Transportation Research Institute published a study in May 1992 that compared the movement of 14-foot- and 16-foot-wide housing units. The Michigan study results were broken down along two lines.* The first involved overwide loads on multilane, divided highways:

- Units 16 feet wide encroached into the passing lane more than 14-foot-wide units. Specifically, 16-foot-wide units were observed encroaching an average of 40.3% of the time for each passing event as compared to 20.5% of the time for 14-foot-wide units.
- The shoulder encroachment by passing vehicles remained at about the same rate regardless of the width of the unit being passed. In the case of both 14-foot- and 16-foot-wide loads, passing vehicles encroached on the left shoulder two thirds of the time. Motorists' safety was degraded for both 14- and 16-foot wide units because the passing maneuvers were being attempted in areas not designed for such use; there was less room for driver error; and shoulder surface conditions were often much poorer than traffic lane conditions, thereby increasing the chance of loss of control of the vehicle.

The study found much more serious safety problems on two-lane, undivided highways:

- Drivers were more likely to use the shoulders when passing 16-foot-wide loads than when passing 14-foot-wide loads. Of oncoming drivers, 57% used the shoulder when passing the 16-foot-wide units, whereas only 32% of drivers used the shoulder when passing the 14-foot-wide units.
- In many of the shoulder use events, "observed drivers chose to move off of the paved road surface onto an unpaved shoulder area." Safety concerns in this regard are serious: the drop-off from and return to the paved lane is very hazardous and can result in a loss of control; there is less tire friction; and drivers must maneuver on an uneven surface.

The study also found characteristics relevant to driving on both two-lane and multi-lane highways:

- Units 16 feet wide use the right shoulder 80.6% of the time, and units 14 feet wide use the right shoulder 55.5% of the time.

*See *infra* notes 41–51 and accompanying text for source documentation.

- Even when there is no appreciable right shoulder, 16-foot-wide units encroach over the edge line 58.0% of the time.
- Trucks passing the overwide units use an available shoulder 62.6% of the time when passing the 16-foot-wide unit, whereas cars use an available shoulder 28% of the time when passing the 16-foot-wide unit.
- Encroachment into the left adjacent lane by both 14-foot- and 16-foot-wide loads is related to the condition of the right shoulder: the poorer the condition of the right shoulder, the more time the units will spend encroaching into the left adjacent lane.

The Michigan report detailed 43 recommendations, the most pertinent of which are as follows:

- Transport of 14-foot- and 16-foot-wide loads on divided, multilane free-ways with wide paved shoulders in low-traffic-density areas did not present a significant safety problem as long as the state continued to mandate standards for routing, time of travel, traffic control, and escorts.
- The recommended cleared lane width on a two-lane, undivided highway should be at least 20 feet (meaning a paved 12-foot lane, a 5-foot-wide paved shoulder, and 3 feet of cleared width).
- The study did not support allowing 16-foot-wide housing units to use two-lane highways until substantial shoulder upgrades could be undertaken, including widening and strengthening.
- The use of state police or additional escorts on two-lane roadways is not a sufficient remedy to the serious safety and pavement wear concerns caused by 16-foot-wide loads.

The concerns and opinions of the VDOT Permit Office are very similar to those expressed in the Michigan study: driving dynamics will be altered and safety will suffer if 16-foot-wide loads are allowed on the roadways in significant numbers. In addition, it is likely that if changes are made to the *Manual* to appease industry in this instance, a slippery slope phenomenon will begin as other demands are made on the state to change other hauling restrictions.

Incorporating the concerns of all parties and in the shadow of the issues presented by the Michigan report, we recommend the following change:

- The restriction on scoops, buckets, and blades should be changed so that the disassembly of such construction equipment is not required unless these devices exceed the width of the load being transported; however, loads would continue to be restricted to the 14-foot width limit. For example, a hauler would not be required to disassemble a 10-foot-wide scoop attached to a 12-foot-wide tractor. Such a change should cause no more traffic-related problems than those that may currently arise with other permissible loads of up to 14 feet in width.

We also believe that two viable options exist concerning the present width policies in the *Manual*. We believe both options are defensible on both safety and economic grounds:

- *Option 1: Maintain the status quo . . .*

The Michigan study clearly showed decreases in safety when 16-foot-wide loads are transported: encroachment occurs at high levels on both multi-lane and two-lane highways, and drivers are using shoulder areas at high levels even in the absence of paved areas, pointing to a serious and detrimental change in driving dynamics. The current system allows the VDOT Permit Office to monitor more closely the amount and types of oversized loads on the highways, arguably satisfying the role the General Assembly intended it to play.

. . . and change the perception, not the regulation.

Although shippers may not realize it, loads over 14 feet in width are approved for transport on Virginia highways if the move is indeed an exception to normal practice and can be made safely without endangering the vast majority of highway users. To “get the word out” on this practice, we recommend that VDOT do one of the following: (1) prepare an informational pamphlet that outlines hauling permit restrictions and states what is currently implicit, i.e., if a true exception arises, the Permit Office will consider it and will almost always approve it if the move can be performed safely; (2) conduct a one-half-day meeting in Richmond for the Port Authority and other concerned government agencies in order to brief all parties fully on current regulations, so that the public is properly informed of the state’s hauling permit policies.

- *Option 2: Allow for single-trip permits only on multilane roadways.*

This option would require a rewrite of section 5.0170(4) in order to set the new maximum width at 16 feet. Travel of 16-foot-wide loads should continue to be restricted to multilane, divided highways and those roadways with 20 feet of cleared width. At no point should loads greater than 14 feet wide be granted blanket permits. Travel on two-lane roadways would be forbidden except in exceptional cases.

The benefits of this recommendation are numerous. First, travel would be restricted to roadways that are the safest for extremely wide loads. Second, roadside and shoulder damage would be kept to a minimum. Third, the Permit Office can continue to track the types and amounts of oversized loads on the highways and should be better able to monitor unacceptably dangerous patterns that may develop. Fourth, shippers using the Hampton Roads ports will clearly see the *Manual* language and will not be misinformed about the state’s policy regarding the exceptional overwide load.

We are reluctant to recommend Option 3 unless policy makers truly understand the ramifications involved. We believe that a real dilemma occurs in the choice between Option 2 and Option 3. At present, only six permits per month are issued for loads greater than 14 feet. Option 2 would allow overwide loads on the

highways in higher numbers, but not in extremely large numbers. Option 3 would greatly increase the number of overwide units: upwards of 3,000 prefabricated housing units alone could be expected if such permits were routinely granted. The impact of such a tremendous increase cannot be ascertained, but in light of the Michigan study and other projects involving overwide loads, extreme caution should be exercised before adopting a permissive single-trip permit policy for loads greater than 14 feet in width.

- *Option 3: Allow for single trip permits on all roadways.*

This option would allow haulers to apply for single-trip permits to move loads up to 16 feet wide on secondary highways, including two-lane roadways. Each trip would require a separate permit application, hence the Permit Office could continue to monitor overwide movements closely.

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INTRODUCTION

The Commonwealth of Virginia restricts vehicular traffic on the state's roadways through a variety of means in order to increase driving safety and decrease wear on highway systems. A series of regulations restrict commercial vehicle widths to 14 feet in all but very special circumstances. The guiding philosophy of the Virginia Department of Transportation (VDOT) has been that widths in excess of 14 feet are extremely hazardous to other highway users and can be justified only in those rare situations in which no other means of transportation is available¹ and the roadways to be used are determined to be engineered to permit such traffic safely.

In January 1992, the Intermodal Department of the Virginia Port Authority (VPA) completed a report entitled *Overwidth Shipments on Virginia Highways*. VPA was concerned about the shipment of noncontainerized loads involving machinery and construction and agriculture equipment. The authors stated that "Virginia's permitting policy . . . is one of the most restrictive in the United States." In addition, it was stated that "Virginia has an overall restriction of 14 feet with a permit." It was concluded that these policies caused "Virginia to lose . . . shipments to other [out-of-state] ports." VPA requested a review of the state's permitting regulations.

Approximately eight months after VDOT received the request from VPA for a review of the state regulations relative to the movement of 16-foot-wide equipment loads, they received a request from the Virginia Manufactured Housing Association (VMHA) for a review and modification of the hauling permit regulations, so that

1. And even so, the shipment must be for a short distance or in the context of a national emergency. The phrase "no other means of transportation" is interpreted very strictly and narrowly.

industry would be permitted to move 16-foot-wide housing units. To amplify their request, VMHA stated that manufacturers in other states are routinely allowed to ship 16-foot-wide units; and therefore, Virginia producers are being shut out of that market. In addition, VMHA stated that consumers in Virginia are being denied the right to purchase state-of-the-art housing.

In light of these requests, the Virginia Transportation Research Council (VTRC) was asked to perform a policy review of the permit regulations in Virginia and to compare and contrast them with the regulations in other states. This report presents the following:

1. the legal framework of the regulatory scheme and the permit process with regard to loads with widths between 14 and 16 feet, as it presently operates
2. an overview of the policies in other states
3. the concerns of VPA, VMHA, VDOT's Permit Office, and others
4. a review of the literature describing the current body of knowledge in regard to vehicles exceeding 14 feet in width
5. proposed changes to the current system, along with the possible costs and benefits of each
6. the conclusions and recommendations of the authors with regard to the shipping of units up to 16 feet in width.

LEGAL FRAMEWORK

Legislature

In the absence of federal regulations, the authority to regulate motor vehicle width in Virginia rests with the General Assembly. The General Assembly has codified numerous requirements for trucks that use Virginia highways, including a width restriction on commercial vehicles of 102 inches (8'6").² Section 46.2-1109 states that no vehicle with a width in excess of 102 inches can operate on any interstate highway or on any federal-aid highway in the Commonwealth.

2. Va. Code Ann. § 46.2-1109 (Michie 1989 & Supp. 1992). *See also id.* §§ 46.2-1105, 1107-09 (detailing non-commercial and bus width restrictions). The federal Surface Transportation Assistance Act of 1982 mandates that no state shall establish, maintain, or enforce any commercial width restriction of more or less than 102 inches on any interstate or federal-aid highway. 49 app. U.S.C. § 2316 (1988 & Supp. 1992). The statute allows states to issue special use permits to vehicles that exceed 102 inches. *Id.* § 2316(c).

Commonwealth Transportation Board

The Code of Virginia also gives to the Commonwealth Transportation Board (“Board”) the power to issue special permits to vehicle operators to use vehicles that otherwise exceed size and weight restrictions.³ The statute stipulates that the operator must make written application to the Board showing good cause. The Board itself is expressly limited in its discretion only by certain weight restrictions⁴ and by any federal regulations applying to federal-aid highways.⁵ In addition, the Board is authorized “[t]o make rules and regulations . . . not in conflict with the laws of [the] Commonwealth, for the protection of and covering traffic on and the use of systems of state highways. . . .”⁶

Hauling Permit Manual

Under the authority of sections 33.1-12(3) and 46.2-1139, the Board adopted uniform instructions and restrictions for the granting of special permits by promulgating the *Hauling Permit Manual* (“*Manual*”). Prepared for the Board by the Maintenance Division of VDOT, the *Manual* requires that the shipper of any load that exceeds the 102-inch width restriction of the Code of Virginia and the Surface Transportation Assistance Act of 1982 (23 U.S.C. 127) obtain a permit from the Hauling Permit Office. Section 1.020(2) sets the maximum allowable width at 14 feet, and section 5.0170(4) reiterates that permits “will *not* be issued for movements in excess of fourteen feet . . . width except in the case of emergencies, movements certified as essential to the national defense, or for short distances where other means of transportation are not available.” The *Manual* states that the basic philosophy of VDOT is that widths in excess of one-half the pavement width are extremely hazardous to other highway users and should be allowed only after an engineering study of the roadways to be used has been completed.⁷

The Permit Process

The Permit Office staffing includes a supervisor and two full-time employees who process all superload⁸ permit requests, as well as two backup employees who fill in as necessary. These five individuals are trained to provide the special attention that superload permits require. The group examines the proposed roadways’

3. Va. Code Ann. § 46.2–1139.

4. *Id.* § 46.2-1139(B).

5. *Id.* § 46.2–1139(D).

6. *Id.* § 33.1–12(3) (Michie 1990 & Supp. 1992).

7. Hauling Permit Manual § 5.0170. VDOT had maintained a 12-foot-wide maximum on commercial vehicles until the mid-1970s.

8. In this report, the terms “oversized load” and “superload” refer to those loads with dimensions that exceed any or all of the 14-foot height, 14-foot width, 100-foot length, or 90,000-pound limitations contained in the *Manual*.

specifications,⁹ coordinates the move, establishes alternate routes (if necessary), and devises a secondary plan in case the vehicle encounters timing problems.¹⁰

Two types of hauling permits are available from the Permit Office: the blanket permit and the single-trip permit. The blanket permit allows the shipper to continually transport loads across specifically designated state-maintained roadways for a 1- or 2-year period. The single-trip permit is valid for travel within a 13-day period on the route stated on the permit.

The blanket permit process begins when the shipper submits a completed hauling permit application to the Permit Office in Richmond at least 5 days prior to the proposed move. Such permits are issued only if the applicant can demonstrate that undue hardship results from the requirements of securing a single-trip permit for each move and/or it is in VDOT's administrative interest to issue extended term permits in lieu of numerous single-trip permits.¹¹ If the holder of the permit violates any restrictions stipulated in the permit, the permit can be revoked immediately.

Blanket permits can be issued for loads within the following dimensions: 14-foot height by 14-foot width by 100-foot length and weight not to exceed 90,000 pounds. Blanket permits have been issued for loads that exceeded those dimensions only with respect to the weight restriction¹² but usually only after specific travel routes have been analyzed and approved by the Permit Office.

The blanket permit is issued with a map that outlines all state roadways upon which the permittee may travel and travel regulations pertaining to the over-wide load. The permit itself is issued to the company, and not to a tractor, driver, trailer, or specific load. Movement is allowed on the designated roadways unless restrictions are posted. In addition, the load itself is not regulated as long as the loaded dimensions of the vehicle fall within the blanket permit limitations.

Exceptions to these general rules do exist, mainly owing to the fact that the process for obtaining a blanket permit is individualized. For example, the Code explicitly mandates the issuance of overweight permits for solid waste haulers, coal haulers, concrete haulers, and containerized freight.¹³ With the exception of the latter, such permits limit travel to noninterstate highways. In addition, all extended term permits are subject to restrictions involving days of the week and times

9. VDOT's Bridge Division verifies height specifications.

10. Examples include moves that risk running outside travel window constraints into urban rush hours or moves scheduled for night-time hours that risk running into morning traffic.

11. *Hauling Permit Manual* § 1.170.

12. The Permit Office has issued blanket permits ranging from 13 days to 1 year for loads up to 105,000 pounds when the state's interest has been involved (e.g., movement of highway construction equipment).

13. Va. Code Ann. §§ 46.2-1141 to 1145 (Michie 1989 & Supp. 1992).

of the day. Last, it must be recognized that the blanket permit process is discretionary; the Permit Office retains the power to deny a request for valid safety, congestion, or other considerations.

The second category of permit, the single-trip permit, is divided into two categories: (1) loads that fall within the blanket permit load limitations and (2) those that exceed the blanket permit restrictions. If the load is within the blanket permit requirements, a procedure identical with that outlined above is employed, with the exception that the single-trip permit is limited to one load within a 13-day travel window. A time extension for a single-trip permit is not granted once the permit is issued.

Additional steps are required for single-trip permits of oversized loads exceeding a 14-foot width. The shipper or receiver must file a "letter of variance" with the following information:

1. the exact origin of the load
2. the exact destination
3. a description of the item to be transported
4. why the load is nondivisible
5. why the load cannot be transported by any other means
6. the proposed routes to be traveled
7. the loaded dimensions
8. the requested move date(s).

Widths in excess of 14 feet are then subject to section 5.0170(4) of the *Manual*, which states that "permits will *not* be issued for movements in excess of fourteen (14) feet width except in the case of emergencies, movements certified as essential to national defense, or for short distances where other means of transportation are not available."

The Permit Office analyzes the routes the shipper proposes for the oversized load movement. Important factors in the approval process include a determination of whether the proposed route can safely accommodate the oversized load; possible congestion problems; and the likelihood of timing constraints.¹⁴ The Permit Office's overriding concern, once an application is deemed to fit section 5.0170(4), is ensuring the safest possible move with the least amount of inconvenience to others on the roadway.

How Often Do Haulers Meet the Section 5.0170(4) Requirement?

In the period beginning May 23, 1992, and ending December 31, 1992, the Permit Office approved 57 oversized loads per month on average. Of these, approxi-

14. For examples of timing constraints, *see supra* note 10.

mately 6 per month involved loads 14 to 16 feet wide, and an average of 2 per month involved loads exceeding a 16-foot width.¹⁵

In practice, the Permit Office places requests for superload permits in two categories, usually depending on the load to be moved. In the first category are those moves that are truly an exception to the rule, meaning that the hauler or industry is not attempting or likely to make repeated movements of the overwide load type and thereby circumvent the *Manual* maximum of 14 feet. Very few overwide loads of this type have been rejected solely for safety concerns. The last overwide load permit request that was denied as of August of 1993, involved the movement of a 20-foot-wide boat, and that decision was made by the Assistant Commissioner for Operations. The second category includes shipments of loads that are likely to be repeated continuously. The shipment of prefabricated housing in excess of 14 feet fits into this category. The Permit Office routinely denies permit requests in this category because they are not an exception to the rule but will likely be repeated and, if allowed, would effectually nullify the maximum limit.

Virginia's hauling permit fees for the movement of oversized loads are currently among the lowest in the country.¹⁶ The fees are based on the actual administrative cost incurred by the state in the oversized vehicle permit process.¹⁷ Overwide loads generally do not cause road structure damage and are rarely assessed additional fees for anticipated shoulder damage.¹⁸ Further, any state expense incurred as a result of the transportation of a superload is billed to the shipper (e.g., the applicable wage rate for any state employee who assists in escorting an overwidth vehicle). The state currently charges \$30 for a one-year blanket permit and \$10 for each single-trip permit issued.¹⁹ A blanket permit can also be purchased for \$60 for a two-year period. If the vehicle is not licensable or is overweight, there is an additional charge of 10¢ per mile. Mobile homes are not subject to the 10¢ per

15. The Permit Office reports that from May 23 through December 31, 1992, a total of 410 superload permits were approved. Of those, 48 were for loads with widths between 14 and 16 feet, and 14 permits were issued for loads greater than 16 feet. A breakdown by months:

Month	Load Width	
	14 to 16 feet	Greater than 16 feet
May	6	0
June	12	5
July	4	2
August	5	2
September	3	0
October	7	5
November	1	0
December	10	0
Total	48	14

16. This information is based on a January 5, 1993, telephone conversation with Kenneth Jennings (Maintenance Division) and Joel Hess (Permit Office) of VDOT.

17. *Id.*

18. *Id.* Road structure damage, including damage to shoulders, is of much more critical concern with overweight vehicles. Prefabricated homes rarely exceed acceptable weight limitations.

19. *Hauling Permit Manual* § 1.140(A).

mile charge if they are not licensable because of their dimensions; instead, a \$1 per trip fee is levied.²⁰

The transportation of superloads is generally not coordinated with the state police. Exceptions include loads that involve some level of state government interest, such as the movement of the national Christmas tree. In any event, local sheriffs are likely to be contacted by the Permit Office if road closings are necessary for the transportation of the superload.²¹

Hauling Regulations and Processes in Other States²²

VTRC examined the policies of several of the Commonwealth's neighboring states (Maryland, North Carolina, Tennessee, and West Virginia) as well as states containing ports that rival Hampton Roads (Delaware, Florida, Georgia, and South Carolina). Each state requires that a hauler obtain special permission from a state agency in order to move loads beyond the legal width limit imposed.²³ What is interesting to note, however, is that many states differentiate between superloads of prefabricated housing units and most other load types. (See the Appendix for a chart summarizing the width limitations in the surveyed states.)

Regulations for Loads Other Than Manufactured Housing

As in Virginia, many states set a maximum width limitation for general over-width loads but in practice allow shipments over the stated maximum in exceptional cases. Florida, North Carolina, and South Carolina set their maximums at 15 feet, and Georgia has recently adopted a 16-foot limitation. According to the respective permit offices in each state, loads are approved that exceed the stated limit after a slightly more burdensome application process is undertaken, if they are considered exceptional in nature.

20. *Id.* § 1.140(B).

21. *See supra* note 16.

22. The information contained in this section was obtained through the following telephone interviews:

State	Contact	Position	Date
Delaware	Charles Johnson	Permit Agent	1/13/93
Florida	Billy Berry	Permit Engineer	1/14/93
Georgia	Jack Williams	Administrator	1/14/93
Maryland	Lynn Selba	Office Clerk	1/13/93
N. Carolina	Tammy Denning	Administrator	1/12/93
S. Carolina	Nancy Kyzer	Permit Supervisor	1/12/93
Tennessee	Jerry Smith	Permit Supervisor	1/12/93
West Virginia	Courtney Joshin	Permit Supervisor	1/13/93

23. Of the states surveyed, Delaware, North Carolina, and West Virginia have not extended the restriction of 8-foot 6-inches required by the STAA to all of their secondary roadways, but instead enforce an 8-foot width restriction.

Four states (Delaware, Maryland, Tennessee, and West Virginia) do not set a maximum width but instead treat loads on a case-by-case basis. Tennessee requires an explanatory letter for loads that exceed 14 feet, but the state routinely issues single-trip permits for such loads.²⁴ In practice, Delaware does not issue blanket permits but offers a “coupon booklet” that allows a hauler to make up to 10 repeated trips with loads of dimensions identical with those stated in the permit. Maryland explicitly outlines a 3-tier system that permits loads over 13 feet wide with a single-trip permit.

VTRC also examined fees and logistical requirements imposed on haulers in the comparison states. Most states charge permit fees that include only the cost of paperwork.²⁵ Maryland, on the other hand, charges \$50 per month or \$500 per year for a blanket permit;²⁶ \$300 for a 10-trip coupon booklet;²⁷ and, most important for our purposes, \$30 per single-trip permit plus \$5 per ton for loads exceeding 13 feet. In addition, the typical state surveyed requires one escort (provided by the hauler) for loads greater than 12 feet and two escorts for loads exceeding 14 feet.²⁸ Last, although most states do not require costly police escorts, Delaware and Maryland require a police escort in addition to two escorts provided by the hauler when a load exceeds 16 feet in width.

Hauling Permit Policies for Prefabricated Housing Units

The surveyed states are in general more restrictive concerning shipments of prefabricated housing units. Florida, South Carolina, and West Virginia strictly adhere to a 14-foot-wide maximum for such units (notwithstanding higher width limits for other loads), and North Carolina limits housing units to 14 feet plus a 1-foot overhang. Georgia and Maryland treat prefabricated housing units as they do other loads and grant single-trip permits for loads up to 16 feet in width. Delaware sets its limit at 18 feet, and Tennessee has created a special exemption for housing units up to 16 feet in width that exempts them from a variance letter procedure applicable to other loads exceeding 14 feet.

Summation

It appears from the survey that Virginia’s hauling permit system is very similar to those in other states. The most obvious difference is the official maximum width limit of 14 feet, although only four of the eight surveyed states officially allow loads over that limit on a “rubber stamp” basis. The four states without maximum limits do in fact seem to adopt “unofficial” maximums, the only difference being that almost all hauling requests are treated on a case-by-case basis. In any event, all of

24. An explanatory letter is not required for the shipment of a boat, mobile home, or prefabricated housing unit.

25. Georgia, North and South Carolina, and West Virginia charge \$100 or less for their blanket permits.

26. Loads up to 12 feet in width.

27. Loads with widths up to 13 feet.

28. *See, e.g.*, North Carolina.

the surveyed states but one²⁹ allow the hauling of 14-foot-wide loads or greater only on a single-trip permit basis. Virginia fits within that category as well.

The story is much different for prefabricated housing shipments. Four of eight states explicitly exclude manufactured housing units from their width maximums, and the four remaining states require single-trip permits for loads between 14 and 16 feet. On this issue, there is clearly no "majority" state policy as to the desirability of loads over 14 feet.

CONCERNS OF INDUSTRY AND THE PERMIT OFFICE IN THE COMMONWEALTH

Virginia Port Authority

VPA believes that current oversized load restrictions, as well as the policy requiring the breakdown of loads with buckets, blades, or scoops,³⁰ disadvantage in-state ports in their competition with other East Coast ports for shipping lines.³¹ Consequently, on February 17, 1992, VPA formally requested (through the Virginia Department of Economic Development) that VDOT commence a study of the state's hauling permit policies.

VPA is not able to compile a detailed list of shipments that have been lost as a result of Virginia's hauling permit restrictions because of the dynamics of the shipping process. Manufacturers contact the haulers directly, and the hauling company makes port recommendations based on the dimensions of the loads, the likelihood of obtaining a state hauling permit, and the time and expense necessary to do so. Business may then be lost as a result of the strict language in the *Manual* relating to the 14-foot-wide maximum and the blade, scoop, and bucket regulation. VPA's knowledge of shipments diverted to other ports comes through the "grapevine." VPA is aware, however, that although Hampton Roads is the designated port for Caterpillar, some of their shipments have gone to the Port of Baltimore as a result of Virginia's bucket, scoop, and blade breakdown policy and the 14-foot-wide width limitation.³²

Although VPA is conscious of the concern that an increased maximum load width may adversely affect highway safety, it believes that any changes in the maximum permissible load width will not affect the current dimensions of containerized loads.³³ The current standard container dimensions are well within legal limits, and because of the diversity of the hauling permit policies of the various states with

29. The exception is Georgia.

30. *Hauling Permit Manual* § 6.027(A-C)

31. Based on telephone conversations with William White of the Virginia Port Authority on January 7-8, 1993.

32. *Id.*

33. Va. Code Ann. § 46.2-1141 (Michie 1989 & Supp. 1992) expressly exempts sealed, overweight, containerized cargo from any type of weight reduction (i.e., any type of load breakdown requirement). Although other noncontainerized loads may increase in size as a result of a change in industry standards, containerized cargo will not according to Mr. White.

regard to widths above 102 inches, haulers will not be likely to switch to standardized containers above the current width because of administrative problems. VPA believes a switch to a 16-foot-wide maximum will lead to only a small increase in superloads on the roadways.³⁴

VPA fears that Virginia's current hauling permit policies will lead to losses in shipments or shipping lines for the state's ports solely because of the few overwide loads the shippers handle. Shipping lines may find it easier to do all of their business with the same port and not be bothered with the administrative and logistical problems arising from the occasional superload shipped by their firm. VPA believes changes to hauling permit policies regarding the maximum allowable width and the breakdown of buckets, blades, or scoops will likely increase shipments to Virginia's ports without causing a significant safety hazard related to vastly increased superload shipments. The increase in shipments will affect the state's economy in numerous ways: longshoremen hours will increase, along with economic trickle-down effects in such areas as gasoline purchases, truck repair, tax revenues, etc.

Virginia Manufactured Housing Association

Approximately eight months after VDOT received the request from the VPA, VMHA requested a review of the state's hauling policy regarding 16-foot-wide shipments. VMHA would like the state to approve the transport of 16-foot-wide manufactured housing units throughout Virginia.³⁵ The basis for VMHA's request is to allow Virginia's manufactured housing industry to remain competitive with other states and to provide affordable state-of-the-art housing for Virginia's residents.³⁶

Manufactured housing units are shipped directly from the builder to 127 dealers located throughout Virginia, as well as to dealers in neighboring states. From the dealerships, the manufactured housing units are transported to the home sites. Approximately 6,000 units are sold and transported in Virginia each year, 90% of which are manufactured out of state (mostly in North Carolina and Tennessee).³⁷ VMHA estimates that if Virginia permitted transportation of 16-foot-wide units, the superloads initially would account for 15% of the units sold each year, and after a few years, they would account for 50% of the units sold.

VHMA is limiting their request to the transport of 16-foot-wide housing units to dealers throughout Virginia on a single-trip basis and would be willing to comply with travel restrictions implemented by the Board. However, once routes are determined to be safe in the trial period, VHMA envisions the implementation of a blan-

34. *Id.*

35. The request was made by Ron Dunlap, Executive Director of the Virginia Manufactured Housing Association, in a letter to Ray D. Pethel, Commissioner of the Commonwealth Transportation Board, dated November 12, 1992 (copy on file with the authors).

36. Based on telephone conversations with Ron Dunlap on December 22, 1992, and January 5, 1993.

37. There are currently three manufactured home builders in Virginia represented by Mr. Dunlap: Virginia Homes in Boynton, Commodore Homes in Danville, and Fleetwood Homes in Rocky Mount. However, builders of "modular housing" would also be able to take advantage of changes in the 14-foot maximum.

ket permit process for 16-foot-wide homes on the routes to dealers. The special permit process would be retained for the many shipments from dealers to the home site.³⁸

It should be noted that although other types of transportable housing (such as modular housing units or mobile homes) were not surveyed, they would also benefit from any increase in the allowable load width. It is safe to assume that there may be substantially more requests for loads with 16-foot widths on Virginia's highways beyond the estimates given by VMHA if the maximum width limit is raised to 16 feet.

VDOT Permit Office

The main focus for concern of the Permit Office is safety.³⁹ Placing 16-foot-wide loads on the roadways changes driving dynamics in ways not quantifiable. In addition, any loosening of the restrictions will place the Board on a slippery slope: exceptions have been made here, so they can be made in other instances. Once single-trip permits are allowed, even if only in the limited context of travel on interstate highways, it may be seen as only a matter of time before the industry requests routine permits in all contexts, then a switch to blanket permits, ever-widening maximum limits, etc.

The slippery slope argument leads to one view that cannot be overemphasized: the Permit Office is opposed to the very possibility that blanket permits could be allowed for 16-foot-wide loads. The Permit Office believes that, especially on primary roadways and certain congested interstates, 14-foot-wide loads are already pushing the limits on safety. And the Permit Office is concerned that it, and government in general, will lose the ability to oversee the types and numbers of overwide loads on the roadways, thereby reducing its ability to guarantee safety to the traveling public.⁴⁰ Sixty loads involving machinery or equipment over the 14-foot-width maximum per year is one thing, but the more than 3,000 loads per year that would be attributable to manufactured housing is quite different.

Effects of a 16-Foot Maximum Width Restriction

Many demands are being made on VDOT and the Board to change the 14-foot width maximum. The countervailing arguments to maintain the status quo are based on safety considerations and fears that 16-foot-wide loads will wreak havoc on shoulder areas throughout the Commonwealth.

38. From Dunlap conversation. *See supra* note 36.

39. Based largely on a January 5, 1993, telephone conversation with Kenneth Jennings and Joel Hess, both of whom work for the Maintenance Division of VDOT.

40. An example of this involves blanket permits for 14-foot-wide loads: the Permit Office does not know how many such loads are on the roadways per year or where they are traveling—it knows only how many permits have been granted.

Little relevant research exists in the transportation literature that explores the effects of 16-foot-wide loads on highway safety or roadway conditions. The exception is a recent study performed by the University of Michigan Transportation Research Institute (UMTRI) throughout 1991 and 1992 that included both a field study and computer analysis of 14-foot- and 16-foot-wide manufactured housing units on Michigan highways. The report is an extremely beneficial contribution to the issues presently being discussed in Virginia, and a rather detailed summary of its findings is crucial to an understanding of VTRC's considerations on wide-load movements in general. It is recognized that heavy equipment and housing units have many different characteristics that influence their transport; unfortunately, no data were found on the movement of wide equipment loads. Lack of heavy equipment data notwithstanding, the authors believe the use of housing data do show the problems (or lack thereof) that could arise as a result of the *width* of the object being moved.

The UMTRI study focused on the differential effects that 16-foot-wide manufactured housing units may have on adjoining traffic and maneuverability as compared to 14-foot-wide housing units. Next, the study involved tractor/home combinations that originated outside the state and had as their destinations prefabricated housing dealers in the state. Last, 13 total trips were analyzed involving both 14-foot- and 16-foot-wide loads.

The results of the study focused on two areas: shipping on multilane divided highways and on two-lane undivided highways. With regard to the former, UMTRI determined that 16-foot-wide units encroached into the passing lane at twice the rate of 14-foot-wide units. Specifically, the 16-foot-wide loads encroached into the passing lane an average of 40.3% of the time, whereas the 14-foot-wide loads encroached only 20.5% of the time on average.⁴¹ Although there were differences in the percentage of encroachment into the passing lane, there was little difference in the percentage of shoulder encroachment by passing vehicles when the width of the tractor/home unit being passed was considered. In the case of both 14-foot- and 16-foot-wide loads, passing vehicles encroached on the left shoulder two thirds of the time. The UMTRI report cautioned that, although left-shoulder encroachment remained constant, both 14-foot- and 16-foot-wide loads degrade the safety of vehicles attempting to pass those units: passing maneuvers are being attempted in areas not designed for such use; there is less room for error when passing on the shoulder; and shoulder surface conditions are often much poorer than traffic lane conditions, thereby increasing the chance of loss of control of the vehicle.⁴²

The results for two-lane undivided highways were much different. There was a noticeable difference in shoulder use by oncoming traffic depending on the size of the load. Drivers were more likely to use the shoulder when passing the 16-foot-wide loads than when passing the 14-foot-wide loads. Fifty-seven percent of

41. University of Michigan Transportation Research Institute, Final Report to the Michigan State Legislature and Steering Committee Regarding the 16-Foot Wide Mobile Home Study 19-21 (1992) [hereinafter UMTRI Report]. Encroachment data involve only those times in which the tractor/home was being passed by a vehicle. Encroachment into a passing lane is not a safety concern *per se* when the tractor/home is the only vehicle on the roadway.

42. *Id.* at 26.

oncoming drivers veered onto the shoulder when passing the 16-foot-wide loads, whereas only 32% of drivers did the same when passing the 14-foot-wide loads. In fact, the report stated that in many of the shoulder use events “observed drivers chose to move off of the paved road surface onto an unpaved shoulder area.”⁴³ The safety concerns in this regard are quite serious: the drop-off from and return to the paved lane is very hazardous and can result in a loss of control; there is less tire friction; and drivers must maneuver on an uneven surface.⁴⁴

Results that relate to both multilane divided and two-lane undivided roadways are also pertinent. UMTRI found that 16-foot-wide loads use the right shoulder 80.6% of the time, whereas 14-foot-wide loads use it 55.5% of the time.⁴⁵ The data also show that 16-foot-wide loads encroach 58.0% of the time even when there is no appreciable right shoulder.⁴⁶ Next, trucks passing the tractor/home units were more likely than cars to use the shoulder on both multilane divided and two-lane undivided highways, to the extent that 62.6% of trucks used the shoulder when passing the 16-foot-wide loads versus 28% of the cars.⁴⁷

And encroachment into the left adjacent lane by both 14-foot- and 16-foot-wide loads is related to the condition of the right shoulder, such that the poorer the condition of the right shoulder, the more time the tractor/home combinations spent encroaching into the left adjacent lane.⁴⁸

Michigan Study Conclusions and Recommendations

UMTRI concluded that although more encroachment occurred and the level of safety decreased to some extent, transport of 14-foot- and 16-foot-wide loads on divided, multilane freeways in low-traffic-density areas with wide shoulders did not present a significant safety problem. UMTRI cautioned that safety concerns continue to mandate the imposition of standards for routing, time of travel, traffic control, and escorts.

Much more serious problems do occur, however, when loads up to 16 feet wide access narrower secondary roadways, as they must in almost all instances of prefabricated housing shipments. UMTRI concluded that the transport of 16-foot-wide homes along two-lane highways with narrow shoulder widths was not supported by their study until upgrades could be undertaken. The main reason is that 16-foot-wide homes more frequently encroach across the centerline into oncoming traffic, which “is not normally viewed as a reasonable method of ordinary transport prac-

43. *Id.* at 28–29.

44. *Id.* at 29.

45. *Id.* at 37.

46. *Id.* at 39.

47. *Id.* at 43.

48. *Id.* at 96.

tice for highway vehicles.”⁴⁹ More specifically, the study recommended that for home widths of 16 feet, the “minimum cleared width” should be at least 20 feet, meaning that on roadways with a 12-foot lane, the paved shoulder should be at least 5 feet wide along with 3 additional cleared feet to allow sufficient clearance for lateral overhang.⁵⁰ Last, UMTRI recommended that shoulders be upgraded in design and strength (e.g., through increased depths) in order to handle the increased loads placed on them. UMTRI did not advocate the use of state police or additional escort vehicles on two-lane roadways as a means of addressing the serious safety and wear concerns in this context.⁵¹

VTRC’s 14-Foot-Plus-1 Study

One other research project has been completed that studied loads wider than 14 feet on various roadway types. VTRC performed roadway studies comparing three different tractor/home units that were 14 feet wide at the base and had a 1-foot roof eave overhang with a control unit of manufactured housing that was 14 feet wide. The study did not include an analysis of the behavior of passing vehicles, but data were compiled involving encroachment of both the edge line and the centerline on multilane divided, multilane undivided, five-lane undivided, and two-lane undivided roadways. The research indicated that there is a small increase in the amount of encroachment, but that the 14-foot-plus-1 units did not create a significant safety threat to passing motorists based on encroachment times. Yet it should be noted that the 14-foot-plus-1 study is unique: the overhang is very high over the roadway and does not present the same type of danger, either objectively or subjectively, to passing motorists as does a 16-foot-wide solid object.

Summation of Current Literature

Overall, the existing data seem to be comprehensive enough to warrant some conclusions concerning widths greater than 14 feet. First, as expected, there is clearly a positive relationship between width and encroachment times: as width increases, so does encroachment. Next, as widths increase beyond 14 feet, changes occur in traffic dynamics that affect both safety and shoulder wear to some degree. On a standard 12-foot-wide lane, a 16-foot-wide load must necessarily encroach on a shoulder when available and on an adjoining traffic lane when not available. Hence, in the majority of cases, the 16-foot-wide load causes traffic to risk safety and drive on surfaces not meant for normal traffic; indeed, drivers use surfaces that safety engineers and highway officials normally admonish them to avoid using

49. *Id.* at 102.

50. The recommendations are based on a formula for estimating minimum cleared width given by $C = W + 4.25$, where W is the width of the home and C is the minimum cleared width; 4.25 feet accounts for the effects of cross-wind influences (1.5 feet), highway cross-slopes (0.25 feet), normal driver steering uncertainty (>0.5 feet), and 1-foot buffer margins along each side of the home unit. *Id.* at 103.

51. *Id.* at 104.

in routine situations. And, even though 16-foot-wide loads themselves are usually within weight restrictions, the combination of the unit's and passing traffic's encroachment on shoulders will likely decrease the life of shoulders.

CHANGES TO THE *MANUAL*

Board Must Authorize Change

Any proposed change to the *Manual* needs to be approved by the Board, subject to notice and comment rule-making under the Administrative Process Act ("APA").⁵² First, the Board must approve any changes because it is the entity that has been delegated the statutory authority to issue special permits.⁵³ The Maintenance Division generated the *Manual* and enforces its provisions subject to the Board's approval. Second, the APA requires that the proposed creation or modification of a rule or regulation by a state agency⁵⁴ must be subject to public participation and informational proceedings before it becomes effective. A rule or regulation is defined as "any statement of general application, having the force of law, affecting the rights of conduct of any person, promulgated by an agency in accordance with the authority conferred on it by basic laws. . . ."⁵⁵ Any proposal to change the 14-foot maximum falls under that definition and needs to satisfy the requirements of the APA before it can be enforced.

Requirements of the APA

The APA requires that every state agency develop public participation guidelines for the solicitation of input from parties that may be interested in a proposed regulation.⁵⁶ The APA also requires the agency, in this situation the Board, to allow interested persons an opportunity to submit "data, views and arguments, either orally or in writing," to the Board or its designated subordinate.⁵⁷ If the Board decides to hold a hearing on the proposed change (or is so required by its public participation guidelines), the change and general notice of the opportunity for the public to submit information or opinion must be published in the *Virginia Register of Regulations*, in a newspaper of general circulation in the state capital, and in newspapers in localities particularly affected, as well as publicized through press releases

52. Va. Code Ann. §§ 9-6.14:1 to 9-6.14:25 (Michie 1989 & Supp. 1992).

53. *Id.* § 46.2-1139.

54. "Agency" in this context is defined as "any authority, instrumentality, officer, board or other unit of the state government empowered by the basic laws to make regulations or decide cases." *Id.* § 9-6.14:4(A). The Commonwealth Transportation Board falls under this definition.

55. *Id.* § 9-6.14:4(F).

56. *Id.* § 9.6-14:7.1(A).

57. *Id.* § 9.6-14:7.1(B).

and other media that will best serve the subject matter involved.⁵⁸ The *Register* and newspaper publication must be made at least 60 days in advance of the last date given in the notice for public submittal.⁵⁹ In effect, changes to the *Manual* will likely take several months to wind through the APA requirements before the new regulations become enforceable.

POSSIBILITIES FOR CHANGE

Changes to the *Manual* not mandated by the state legislature would need to be approved and promulgated by the Board. This section analyzes those changes regarding the state's 14-foot-wide maximum limitation in section 5.0170(4) that seem most plausible in light of available research on this subject, the possible costs to Virginia taxpayers (in terms of safety and money), and requests from industry.

Scenario 1: Maintenance of the Status Quo

It is entirely possible that the Board may validate the current permit system and approve very few substantive changes. Perhaps the strongest argument for maintaining the current regulations is partially borne out by the Michigan study and by comments from the current Acting Head of the Permit Office: safety will be degraded to some degree. Officials in the Permit Office, as a result of years of experience in this area, believe that driving dynamics will change fundamentally in the presence of loads greater than 14 feet wide. The Michigan study illustrated that 16-foot-wide homes will encroach on the shoulder and will do so often even when an adequate shoulder does not exist. In addition, the overwide loads, often by necessity will encroach across the centerline into oncoming traffic, thereby causing the average driver to swerve onto the shoulder in ways disapproved of in all other contexts by highway and safety officials.

A second supportive argument is that although industry and consumers of the shipped goods will reap the benefits, VDOT and the taxpayer will carry the costs. Extra-wide loads will put more strain on right-side shoulders while forcing passing motorists to use the shoulders on the opposite side of the roadway. In either case, shoulders of only average or good condition will have their life-spans cut, and more serious damage is possible on shoulders of below-average condition. The state will be required to make the improvements to those shoulders, and it is questionable whether increased tax revenues from business generated by overwide shipping will meet the increased costs. Hence, upon a pure cost-benefit analysis, it may be more probable than not that costs to the taxpayers will be higher than in the absence of overwide loads on Virginia's highways. This argument is further bolstered

58. *Id.* § 9.6–14:7.1(C).

59. *Id.*

with regard to shipments transiting Virginia to ports that have out-of-state destinations: there are no additional benefits to the state's consumers that may allay shoulder degeneration concerns.

Third, the present system allows the Permit Office to monitor and regulate the types and numbers of oversized vehicles on the roadways more efficiently, thereby increasing safety and more adequately carrying out the objectives of the state legislature in this regard. When overwidth vehicles must transit the state, the Permit Office presently entertains requests for variances and does issue special permits for loads greater than 14 feet in width. The result is that the routes used are pre-planned and are the safest available from an engineering perspective.

Next, the potent argument of the prefabricated housing industry that neighboring states possess a competitive advantage has been dealt a blow. In December 1992, the governor of North Carolina blocked an attempt to allow 16-foot-wide housing units on that state's highways under a special permit program. The outgoing administration felt that safety considerations made the proposed change too controversial and risky.⁶⁰

Last, any significant changes will open Pandora's box. Other industries will see the changes and will press the state to create exceptions for them, possibly even when safety considerations support maintaining the status quo. Amendments to the *Manual* may also encourage industries to change an "industry standard" in order to take advantage of greater width allowances; hence, the number of oversized loads on the roadways could increase at an unexpected and dangerous rate.

Yet, in many ways, the arguments for the status quo are not as solid as they may appear. First, safety may be put at risk, but only at a small marginal rate. This is especially true on interstates in which the paved shoulders and clearances are more than adequate to allow encroachment on the edge line. In addition, there are little if any data available in states that allow 16-foot-wide loads that demonstrate any correlation between increased accidents and the extra-wide loads on the roadways. As the Michigan study pointed out,⁶¹ one must be very cautious in this regard, since many accidents or near accidents may be the result of the obstruction of sight lines or irrational driver behavior that cannot be definitively linked to overwide shipping in the vicinity; yet in the absence of such data, the safety argument loses much of its force.

The safety argument is further weakened by the fact that many states routinely allow 16-foot-wide loads of both equipment and housing through some permitting mechanism. One can infer that safety has not been a problem, especially in the absence of documented increases in accidents related to extra-wide movements. Under current Virginia regulations, both the manufactured housing industry and VPA may be at a competitive disadvantage, especially with *Manual* language that explicitly limits loads to 14 feet except in very rare circumstances.

60. North Carolina's incoming administration is believed to favor a change to the 16-foot-wide maximum according to a lobbyist in that state. Bill Krueger, *News and Observer* (Raleigh, N.C.), December 3, 1992, at 1A, 17A.

61. UMTRI Report, *supra* note 41, at 97.

Last, the valid concern of damage to shoulders may be overemphasized. According to the Permit Office, damage to shoulders is more of a problem with loads that are both overwide and overweight. Generally, 16-foot-wide prefabricated housing shipments fall within weight restrictions; hence, the true concern with regard to shoulder damage may be 16-foot-wide loads transported through Hampton Roads that are overweight. A more specialized standard could meet this need; in fact, regulations are already in place for overweight loads (over the 8'6" statutory width) that require additional per-mile fees for anticipated wear on shoulders.⁶²

Scenario 2: Blanket Permits

On the other end of the spectrum is the option to allow 16-foot-wide units to operate with blanket permits. The permit process itself would remain largely as described earlier in the report. Under the most open option, the Permit Office could approve a hauler's request to ship any specified load types using a qualified driver. The only exceptions would be day-of-week and time-of-day restrictions.

The benefits of the "full" blanket system are mainly in low administrative costs. Shippers would have to submit an application or variance request only once (meaning one blanket permit per *vehicle*⁶³) in order to ship for up to 2 years. In addition, businesses in the Commonwealth would be on an "equal footing" with most other states in the South and Midwest.

The problems with the blanket permit proposal are serious and fundamental. First, with regard to the shipment of prefabricated housing, once blanket permits are permitted, even on a limited number of roadways, Pandora's box will have been opened to shipments virtually throughout the state. The VMHA has focused on receiving the authority to transport to the state's 127 dealers, yet the housing does not remain with the dealers: eventually the housing, in almost all cases, will need to be shipped on two-lane roadways that are unsafe in light of the Michigan study (unless, of course, some entity is willing to invest enormous sums of money for upgrading shoulders throughout the state).

Next, granting permission for blanket permits for loads up to 16 feet wide effectively changes shipping patterns in the state. It will become a rational, if not compelling, business decision to upgrade all prefabricated housing units to the 16-foot-wide allowance, and it is rather apparent that the prefabricated housing industry is set on moving to 16-foot-wide housing units as the industry standard. It is more than arguable that the 14-foot-wide standard has served the interests of safety for the last decade, and road widths have not increased during that time to justify increasing the width allowance by 2 feet.

Third, the state, through the Permit Office, would lose a great deal of control over overwidth vehicle travel on the roadways. At present, the Permit Office has

62. *Hauling Permit Manual* § 1.140(B).

63. *Id.* § 1.0190.

little independent knowledge of the number of 14-foot-wide movements that occur in the state under blanket permits. (VMHA estimates that 6,000 shipments take place each year under special permits for 14-foot-wide prefabricated housing loads.)

Last, many other regulations in place would need to be changed in order to incorporate what is effectively a new 16-foot-wide shipping standard. Existing construction lane closure standards and detour routes would need to be changed, and construction costs would likely rise accordingly.⁶⁴

Scenario 3: Case-by-Case Special Permits

A number of options are available under a case-by-case special permit determination procedure. The least controversial option, and the one best in accordance with the Michigan study findings, would allow the shipment of a 16-foot-wide load with a single-trip permit on predetermined, specified roadways. The hauler or receiver would need to obtain a permit for each individual shipment on the designated roadways, which would be limited to interstates and roadways with 20 feet of lane clearance width. Shipping would continue to be denied on a routine basis for 16-foot-wide shipments on secondary roadways that do not meet the proper Michigan study shoulder requirements.

This option would be most attractive to VPA: most, if not all, of its traffic is on interstates, and the number of overwidth shipments that would transit the state's ports requiring special permits would not rise to the level of administrative impracticality. Next, changes to the *Manual* language that outline the waiver policy would help to eliminate the "perception problem" that currently causes some shipping lines to avoid Hampton Roads. Such a policy would bring in-state ports into a regulatory environment comparable to those in Maryland and Georgia.

The biggest problem with this approach involves the interests of the prefabricated housing industry. Allowing 16-foot-wide housing shipments on interstate and qualified primary roadways alone would satisfy the interests of industries outside Virginia that are transporting homes to other states; little benefit would accrue to dealers or manufacturers in the state that must use unapproved secondary roadways in order to reach home purchasers, since their requests for permits would be categorically denied.

One solution to that problem would be to add an additional step and allow a case-by-case determination for shipments to dealers and home purchasers that need to use less-than-satisfactory roadways. The benefits would be that the Permit Office could maintain better control over trucks using the roadways; consumers would have some level of choice on the latest products available; and there would be some limits to the number of overwide loads on the roadways. This proposal might also include a permit fee structure that internalizes not only administrative costs but also projected damage to shoulders caused by the overwide load itself and passing vehicles.

64. From conversations with Jennings, *supra* note 39.

A third option involving single-trip permits may be to retain the current case-by-case process, including section 5.0170(4), with the exception that the 14-foot-wide maximum be changed to a 16-foot-wide maximum. This approach would soften the effects of the “perception” problem in that industry, and shipping lines would not be immediately deterred from seeking single-trip permits. And the new standard need not turn into a perfunctory review in which all requests were granted. The Permit Office could still retain the freedom to designate “preapproved” roadways for 16-foot-wide vehicles, and it could more closely monitor the ever-changing roadway conditions resulting from construction or other factors that would necessitate shipping restrictions for the public safety.

RECOMMENDATIONS

Before making specific recommendations concerning 16-foot-wide vehicles on Virginia’s roadways, we find it necessary to recommend other steps that should be taken in the near future to make clearer the impact that such loads have on the driving environment. Only one extensive study exists involving the impacts of 16-foot loads on the roadways, and even that study was limited to 13 overwide load trip events. Hence, we strongly suggest the following:

- The federal government or a well-financed research organization should undertake a comprehensive study of overwide loads and their effect on driving dynamics. The study should include the behavior of passing motorists, potential wear on shoulders, and a review of accidents attributable to overwide loads on the highways.
- The federal government should review its policies relating to 16-foot-wide loads on the interstate system in the belief that a consistent interstate standard might eliminate the “tit for tat” raising of state vehicle width limits now taking place in many regions of the country.
- The Commonwealth should fund a study to determine the actual costs that arise from overwide hauling on the state roadways so that permit fees can more accurately internalize the burden created by such shipping. (The costs involved include the processing of permit applications and wear to the state’s roadways.)

In the meantime, we make the following recommendation for change in the *Manual*: The restriction on scoops, buckets, and blades should be changed so that the disassembly of such construction equipment is not required unless these devices exceed the width of the load being transported; however, loads would continue to be restricted to the 14-foot width limit. For example, a hauler would not be required to disassemble a 10-foot-wide scoop attached to a 12-foot-wide tractor. Such a change should cause no more traffic-related problems than those that may currently arise with other permissible loads of up to 14 feet in width.

We also believe that two viable options exist that we can offer as recommendations. Both options are defensible on both safety and economic grounds:

- *Option 1: Maintain the status quo . . .*

The Michigan study clearly showed decreases in safety when 16-foot-wide units are transported: encroachment occurs at high levels on both multi-lane and two-lane highways, and drivers are using shoulder areas at high levels even in the absence of paved areas, pointing to a serious and detrimental change in driving dynamics. Next, the current system allows the Permit Office to monitor more closely the number and types of oversized loads on the highways, arguably satisfying the role that the General Assembly intended it to play.

. . . and change the perception, not the regulation.

Although shippers may not realize it, loads over 14 feet in width are approved for transport on Virginia highways if the move is indeed an exception to normal practice and can be made without endangering the vast majority of highway users. To “get the word out” on this practice, we recommend that VDOT do one of the following: (1) prepare an informational pamphlet that outlines hauling restrictions and states what is currently implicit, i.e., if a true exception arises, the Permit Office will consider it and will almost always approve it if the move can be performed safely; (2) conduct a meeting in Richmond by the Permit Office for VPA, and other concerned government agencies in order to brief all parties fully on current regulations so that the public is properly informed of the state’s hauling policies.

- *Option 2: Allow for single-trip permits only on multilane roadways.*

This option would require a rewrite of section 5.0107(4) in order to set the new maximum width at 16 feet. Travel of 16-foot-wide loads should continue to be restricted to multilane, divided highways and those roadways with 20 feet of cleared travel lane width. At no point should loads of greater than 14 feet be granted blanket permits. Travel on two-lane roadways would be forbidden except in exceptional cases.

The benefits of this recommendation are numerous. First, travel would be restricted to roadways that are the safest for extremely wide loads. Second, roadside and shoulder damage would be kept to a minimum. Third, the Permit Office could continue to track the types and amounts of oversized loads on the highways and would be better able to monitor unacceptably dangerous patterns that may develop. Fourth, shippers using the Hampton Roads ports will clearly see the *Manual* language and will not be misinformed about the state’s policy regarding the exceptional over-wide load.

We are reluctant to recommend Option 3 unless policy makers truly understand the ramifications involved. We believe that a real dilemma occurs in the

choice between Option 2 and Option 3. At present, only six permits per month are issued for loads greater than 14 feet. Option 2 would allow overwide loads on the highways in somewhat higher numbers but not in extremely large numbers. Option 3 would greatly increase the number of overwide units, upwards of 3,000 prefabricated housing units alone can be expected if such permits are routinely granted. The impact of such a tremendous increase cannot be ascertained, but in light of the Michigan study, extreme caution should be exercised before adopting a permissive single-trip permit policy for loads greater than 14 feet in width.

- *Option 3: Allow for single trip permits on all roadways.*

This option would allow haulers to apply for single-trip permits to move loads up to 16 feet wide on secondary highways, including two-lane roadways. Each trip would require a separate permit application, hence the Permit Office could continue to monitor overwide movements closely.

Appendix
MAXIMUM WIDTH LIMITATIONS FOR STATES SURVEYED

The reader is cautioned to refer to pages 7 and 8 for a more thorough treatment.

STATE	MAXIMUM LIMIT NONPREFAB UNITS	MAXIMUM LIMIT PREFAB UNITS
Delaware	None	18 feet
Florida	15 feet	14 feet
Georgia	16 feet	16 feet
Maryland	None	16 feet
N. Carolina	15 feet	14 feet plus 1
S. Carolina	15 feet	14 feet
Tennessee	None	16 feet
Virginia	14 feet	14 feet
West Virginia	None	14 feet

All of these states will consider hauling requests that exceed the official maximum limitation in regard to nonprefabricated housing unit shipments. Most states *strictly* enforce the official maximum width limitation for prefabricated housing units.