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SYNTHESIS 304

NATIONAL
COOPERATIVE
HIGHWAY
RESEARCH
PROGRAM

Driveway Regulation Practices

A Synthesis of Highway Practice

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NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

NCHRP SYNTHESIS 304

Driveway Regulation Practices

A Synthesis of Highway Practice

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Highway Operations, Capacity and Traffic Control, and Safety and Human Performance

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TRANSPORTATION RESEARCH BOARD — THE NATIONAL ACADEMIES

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NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

Systematic, well-designed research provides the most effective approach to the solution of many problems facing highway administrators and engineers. Often, highway problems are of local interest and can best be studied by highway departments individually or in cooperation with their state universities and others. However, the accelerating growth of highway transportation develops increasingly complex problems of wide interest to highway authorities. These problems are best studied through a coordinated program of cooperative research.

In recognition of these needs, the highway administrators of the American Association of State Highway and Transportation Officials initiated in 1962 an objective national highway research program employing modern scientific techniques. This program is supported on a continuing basis by funds from participating member states of the Association and it receives the full cooperation and support of the Federal Highway Administration, United States Department of Transportation.

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The program is developed on the basis of research needs identified by chief administrators of the highway and transportation departments and by committees of AASHTO. Each year, specific areas of research needs to be included in the program are proposed to the National Research Council and the Board by the American Association of State Highway and Transportation Officials. Research projects to fulfill these needs are defined by the Board, and qualified research agencies are selected from those that have submitted proposals. Administration and surveillance of research contracts are the responsibilities of the National Research Council and the Transportation Research Board.

The needs for highway research are many, and the National Cooperative Highway Research Program can make significant contributions to the solution of highway transportation problems of mutual concern to many responsible groups. The program, however, is intended to complement rather than to substitute for or duplicate other highway research programs.

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The members of the technical committee selected to monitor this project and to review this report were chosen for recognized scholarly competence and with due consideration for the balance of disciplines appropriate to the project. The opinions and conclusions expressed or implied are those of the research agency that performed the research, and, while they have been accepted as appropriate by the technical committee, they are not necessarily those of the Transportation Research Board, the National Research Council, the American Association of State Highway and Transportation Officials, or the Federal Highway Administration of the U.S. Department of Transportation.

Each report is reviewed and accepted for publication by the technical committee according to procedures established and monitored by the Transportation Research Board Executive Committee and the Governing Board of the National Research Council.

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The Transportation Research Board evolved in 1974 from the Highway Research Board, which was established in 1920. The TRB incorporates all former HRB activities and also performs additional functions under a broader scope involving all modes of transportation and the interactions of transportation with society.

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PREFACE

A vast storehouse of information exists on nearly every subject of concern to highway administrators and engineers. Much of this information has resulted from both research and the successful application of solutions to the problems faced by practitioners in their daily work. Because previously there has been no systematic means for compiling such useful information and making it available to the entire community, the American Association of State Highway and Transportation Officials has, through the mechanism of the National Cooperative Highway Research Program, authorized the Transportation Research Board to undertake a continuing project to search out and synthesize useful knowledge from all available sources and to prepare documented reports on current practices in the subject areas of concern.

This synthesis series reports on various practices, making specific recommendations where appropriate but without the detailed directions usually found in handbooks or design manuals. Nonetheless, these documents can serve similar purposes, for each is a compendium of the best knowledge available on those measures found to be the most successful in resolving specific problems. The extent to which these reports are useful will be tempered by the user's knowledge and experience in the particular problem area.

FOREWORD

By Staff
Transportation
Research Board

This synthesis report will be of interest to local, regional, state, and federal officials, as well as to other transportation professionals who work with them in dealing with driveway regulation practices. This report provides an overview of current transportation agency practices, recent literature findings, and research. Specific objectives were to summarize permitting practices, provide case examples of regulation programs, identify impacts, and identify issues in current practice and lessons learned.

Administrators, engineers, and researchers are continually faced with highway problems on which much information exists, either in the form of reports or in terms of undocumented experience and practice. Unfortunately, this information often is scattered and unevaluated and, as a consequence, in seeking solutions, full information on what has been learned about a problem frequently is not assembled. Costly research findings may go unused, valuable experience may be overlooked, and full consideration may not be given to available practices for solving or alleviating the problem. In an effort to correct this situation, a continuing NCHRP project has the objective of reporting on common highway problems and synthesizing available information. The synthesis reports from this endeavor constitute an NCHRP publication series in which various forms of relevant information are assembled into single, concise documents pertaining to specific highway problems or sets of closely related problems.

This report of the Transportation Research Board contains information culled from survey responses from 28 state and 17 local transportation agencies. This information is combined with that from telephone interviews with selected respondents and reviews of applicable literature and ongoing research. In addition, the results of a nationwide survey of local access management policies conducted by the *Urban Transportation Monitor* were summarized.

To develop this synthesis in a comprehensive manner and to ensure inclusion of significant knowledge, the available information was assembled from numerous sources, including a large number of state highway and transportation departments. A topic panel of experts in the subject area was established to guide the author's research in organizing and evaluating the collected data, and to review the final synthesis report.

This synthesis is an immediately useful document that records the practices that were acceptable within the limitations of the knowledge available at the time of its preparation. As the processes of advancement continue, new knowledge can be expected to be added to that now at hand.

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South Dakota Department of Transportation
New Jersey Department of Transportation

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This study was managed by Donna Vlasak, Senior Program Officer, who worked with the consultant, the Topic Panel, and the Project 20-5 Committee in the development and review of the report. Assistance in project scope development was provided by Jon Williams, Manager, Synthesis Studies. Don Tippman was responsible for editing and production. Cheryl Keith assisted in meeting logistics and distribution of the questionnaire and draft reports.

Crawford F. Jencks, Manager, National Cooperative Highway Research Program, assisted the NCHRP 20-5 Committee and the Synthesis staff.

Information on current practice was provided by many highway and transportation agencies. Their cooperation and assistance are appreciated.

DRIVEWAY REGULATION PRACTICES

SUMMARY

The primary focus of this synthesis is to document the driveway regulation practices of state transportation agencies. The synthesis was developed based on a survey of state and local agencies, a review of the literature on driveway regulation, and conversations with selected respondents. The survey was sent to each state transportation agency, with responses received from 28 states; a response rate of 56%.

Another goal of the synthesis was to obtain insight into the driveway regulation practices of local governments. This was accomplished by surveying a subset of the local agencies that have participated in national access management conferences or are known to have an access management program. Of the 41 local agencies surveyed, 17 responded; a response rate of 41%.

The survey results revealed that driveway regulation practices vary widely from state to state. In addition, the scope of driveway regulation programs can vary from comprehensive access management to basic design objectives. Although the objectives of agency driveway regulation programs vary in scope, they are generally oriented toward assuring a safe and efficient transportation system, while providing reasonable access to private property. Many agencies also seek to accomplish administrative objectives, such as uniformity of procedures and standards, consistency in decision making, efficient turnaround for issuing permits, intergovernmental coordination, and adequate training of permit staff.

At a minimum, state driveway regulation programs provide state oversight of construction within the right-of-way of a state highway and address issues such as drainage, installation of culverts, driveway location/sight distance, driveway design, and driveway construction. Applicants must obtain a permit, often called a right-of-way encroachment permit, for these activities. However, state transportation agency practices vary considerably in the extent of access control or impact mitigation activities.

Some of the state transportation agencies responding to the survey of current practice have recently updated and expanded their driveway regulation programs. Several of these agencies indicated the need to expand their existing regulatory powers and statutory authority to ensure safe and efficient access. These contemporary programs provide insight into the state of the practice in driveway regulation and permitting.

In general, the more contemporary driveway regulation programs are oriented toward comprehensive and system-wide access management of state highways. The programs are designed to systematically regulate all highway access locations, including driveway access, as well as street connections, median openings, signals, turn lanes, and interchanges.

Another element unique to contemporary driveway regulation programs is the establishment of an access classification system that defines the planned level of access for

different state highways. The requirements of the access management regulations are generally based on the function of the roadway and may vary by roadway functional classification, speed, or some combination thereof. Other components of contemporary driveway regulation programs include traffic impact assessment procedures and criteria, as well as impact mitigation requirements for large developments.

Typical administrative components of contemporary programs include separate permit categories and analysis requirements for small and large developments and a concept review and pre-application process—particularly for large or complex developments. Most agencies do not have separate permitting procedures or requirements for new development versus redevelopment, although most acknowledge the difficulties in retrofitting an existing site and provide accommodation through increased flexibility and waivers. Several agencies have also established a threshold at which redevelopment projects must conform fully or partially to agency driveway or access standards.

In conventional practice, after a driveway permit is issued it is typically not revisited. Several of the agencies with contemporary access management programs reported that they impose limitations and conditions in a driveway permit that relate to the use of the access. Exceeding any limit or condition invalidates the permit and requires a new permit.

The majority of state and local agencies encourage driveway consolidation and shared access through their driveway regulation programs, although most noted that it is difficult to force the issue. Given the broader powers of local governments to address subdivision and site design issues, several states encourage shared access through coordination with local governments. Ironically, local governments noted constraints similar to those of the states, and tend to promote shared access in an opportunistic manner that relies on property owner cooperation. Some agencies require construction of the driveway at the property line or use conditional permits to promote future driveway consolidation.

Lack of consistency in variance decisions can make any regulatory program legally vulnerable. Therefore, procedures for considering deviations from standards, along with criteria to guide variance decisions, are important aspects of an effective driveway regulation program. Nonetheless, 14 of the state transportation agencies responding to the survey (50%) have no formal procedure for handling deviations from driveway standards. This undoubtedly helps explain why so many of the states report experiencing problems with inconsistent decisions.

An effective variance process is defined in the literature as one that results in a solution that can be widely applied to other similar situations. Eisdorfer and Siley, in "Variances—An Important Part of Access Management Decisions," suggest a hierarchy for variance decision making that reflects the relative importance of the access feature. Such a process allows agency staff to more effectively balance one access management criterion against another where conflicts arise.

Generally, most respondents believe that their driveway regulation efforts greatly benefit their state, county, or municipality. Among the state transportation agencies, the most noted positive impact was improved vehicular safety and crash reduction (93%), followed by improved roadway level of service (86%) and improved driveway design (64%). In contrast, local respondents were most likely to identify improved site design as a positive impact of their driveway permitting process (94%), followed by improved vehicular safety and crash reduction (82%) and improved roadway level of service (59%). This difference in perspectives reflects the differing priorities and regulatory emphasis of state versus local agencies.

Although less frequently mentioned, approximately one-third of the state and local agencies also noted improved bicycle and pedestrian safety, improved coordination between the applicant and approval authority, and lower maintenance costs as benefits of driveway regulation. Some respondents also mentioned the financial benefits of driveway regulation, including reducing the need for a bypass or capacity expansion and assuring that developers mitigate impacts by contributing their fair share for roadway improvements.

Of the adverse impacts identified, the most frequently noted address development considerations. Almost one-third of state respondents and approximately two-thirds of local respondents reported that their driveway permitting programs yielded "development constraints." A similar number of state and local respondents noted "increased development costs" as an adverse impact.

The survey responses clearly indicate that politics is a significant factor in driveway regulation. One-half of the state transportation agencies indicated that political interference and a lack of understanding by affected businesses are current problems in their driveway permitting programs. Approximately one-third of the state respondents are also experiencing problems with inconsistent decisions and inadequate intergovernmental coordination with local agencies.

Adding to political constraints is the difficulty of implementing and enforcing driveway regulations given limited staff and resources. State transportation agencies, in particular, reported insufficient trained staff and inadequate agency resources for permitting, inspection, and enforcement. Related problems included inadequate fees to help cover administrative costs and the additional time needed to handle complex applications. Some states are responding to this challenge by transferring inspection or permitting functions to local agencies or the private sector. However, as one respondent noted, private sector oversight of inspection functions can lead to conflicts of interest.

Another set of problems relates to inadequate statutory authority or outdated standards. A key regulatory weakness noted by several state and local agencies concerns the inability to require developer mitigation and offsite improvements. Other regulatory weaknesses include the lack of authority to deny access or require alternative access under certain conditions and the lack of adequate enforcement penalties for noncompliance.

Although most state and local agencies can deny access under certain conditions, these conditions tend to be narrow in focus, with a clear safety hazard or regulatory violation being the most typical conditions for access denial. However, 12 states responding to the survey stated that they could also deny direct highway access where reasonable alternative access is available.

Survey responses suggest that problems experienced at the local level are similar to those of the states and include outdated regulations, inadequate enforcement of standards, and political appeals and constraints. Other comments included the need for statutory authority for closure and consolidation of existing driveways, denials resulting in takings accusations, and the lack of timeliness by the processing agency.

Policy strengths noted by respondents provided insight into the effective aspects of driveway regulation programs. Consistent decision making was noted by several agencies as a strength of their program. Policy features contributing to that consistency include a clear application process, established design standards, and variance procedures and criteria. The

importance of management support, trained and knowledgeable staff, and effective coordination and communication within and across agencies was also mentioned.

For state transportation agencies, the more popular methods of coordination are frequent informal communication (67%) and involving local staff at pre-application meetings (54%). Approximately one-half of the respondents also review local subdivision proposals on state highways. Fifteen states (54%) withhold driveway permits until local development approval is obtained, and 39% solicit written comment from local governments on driveway permit applications. Only one-quarter of the state respondents reported that coordination is achieved through consistent policies, procedures, and standards. Four states reported no coordination with local governments on driveway regulation.

All but one of the local respondents reported that they coordinate with the state and other agencies on driveway permitting issues. The most popular methods noted by local respondents were to "inform the state transportation agency of all subdivision, rezoning, and development proposals involving access to state highways" and to "seek written comment on driveway permit applications." A slightly lower number indicated that they have frequent informal communication with other agencies on driveway permit issues. Other techniques include sign-offs on state permits and withholding the building permit or certificate of occupancy until the applicant provides evidence of state driveway permit approval.

Respondents offered a variety of suggestions to other agencies on effective driveway regulation. Consistent decisions and enforcement are strongly emphasized, as is the need to be fair, flexible, and "real world" responsive. Several respondents noted the benefits of a pre-application process for large or complex developments. Other suggestions included the need for strong statutory authority, up-to-date design standards, and field reviews of actual field conditions.

Finally, respondents pointed to the importance of coordination and effective communication with other agencies and stakeholders, both during policy development and during driveway permitting. Similarly, the importance of trained staff and public education are emphasized for any agency engaging in driveway regulation.

The review of current practice suggests that driveway regulation is in transition. State transportation agencies are expanding the scope of right-of-way encroachment permitting to address a broader range of access and development issues. Local governments are similarly expanding their driveway regulation policies. These contemporary driveway-permitting programs delve into the more complex and comprehensive objectives of access management and mitigation by developers. To facilitate the transition, practitioners noted the need for national access management guidelines from professional transportation organizations, as well as better education of politicians, developers, and the public about the importance and value of access management.

CHAPTER ONE

INTRODUCTION

OVERVIEW OF DRIVEWAY REGULATION

Most state transportation agencies have had some form of driveway regulation for several decades. These programs were developed to regulate construction within the right-of-way of a state highway and addressed issues such as drainage, installation of culverts, and construction of driveways. Applicants were required to obtain a permit for these activities, often called a right-of-way encroachment permit. These early programs addressed driveway location and design to some degree, although most state transportation agencies stopped short of applying their police power for more extensive control of access to state highways.

As metropolitan areas expanded and arterials became more congested, the need to manage all elements influencing arterial efficiency became apparent. Growing demands for highway access were making it increasingly clear that driveways, and the developments they served, were resulting in cumulative adverse impacts on the safety and efficiency of major roadways. It was also becoming clear that these cumulative impacts were not adequately addressed through traditional encroachment permitting.

Colorado was the first state to adopt a comprehensive access management code. In 1979, the Colorado legislature declared that all state highways were controlled access highways. In 1981, a new regulatory code of standards and procedures was adopted requiring permission from the state to access a state highway through the issuance of a permit. What made this approval process different from earlier permit systems in Colorado and other states was the application of contemporary access management principles to all state routes. The level of access control would be commensurate with the function of the highway and would consider other characteristics, such as highway volume and type, the character of abutting land, and community plans. The resulting access location, spacing, and design standards addressed long-term cumulative impacts of access decisions, as well as the immediate impacts.

Since then, an increasing number of state and local agencies have expanded their driveway regulation efforts for the purpose of access management. Comprehensive access management is the systematic control of the location, spacing, design, and operation of driveways, as well as street connections. Access management programs may also include policies related to the provision of turn lanes, signal spacing, median-opening spacing, interchange spacing and management, and median treatments.

Through driveway permitting, along with supporting policies and coordination practices, state transportation agencies and local governments can apply standards and guidelines to advance access management objectives. These objectives are to maintain or enhance short- and long-term roadway safety and efficiency by minimizing traffic conflicts, separating conflict areas, and removing turning vehicles and queues from through lanes. The driveway permitting process can also provide agencies with an opportunity to evaluate the effects of proposed development on the transportation system through traffic impact study requirements and to determine appropriate mitigation.

A driveway or access permit has been defined as "a legal document that grants approval to construct and operate a driveway or other access of a certain design at a specific location on a given roadway for specific purposes" (*1*). Permits are typically required when any new access point is to be constructed or when an existing access point needs to be modified within the right-of-way .

Generally, state transportation agencies conduct driveway permitting for the state highway system, although in some states this authority may be delegated to local agencies through a certification process. Driveway regulation at the local level is typically applied during development and site plan review, although local agencies with driveway regulation programs often require a driveway permit in addition to a building permit and other required permits.

OBJECTIVES

Driveway regulation practices vary widely from state to state. In addition, the basis for driveway regulation can vary from comprehensive access management programs to basic design objectives. The overall objective of this synthesis is to identify and discuss the current driveway regulation practices of state and local agencies. Specific objectives of the synthesis include

- Summarizing driveway permitting practices of state and local agencies,
- Providing case examples of state and local driveway regulation programs,
- Identifying impacts of driveway regulation practices, and

- Identifying issues in current practice and lessons learned.

METHODOLOGY

The synthesis was developed based on a survey of state and local agencies, review of the literature on driveway regulation, and follow-up interviews with selected respondents. The primary focus of the synthesis was to document driveway regulation practices of state transportation agencies. The survey was sent to each state transportation agency, with responses received from 28 states; a response rate of 56% (see Appendix A).

Another goal of the synthesis was to obtain insight into the driveway regulation practices of local governments. This was accomplished by surveying a subset of those local agencies that have participated in national access management conferences or are known to have an access management program. Of the 41 local agencies surveyed, 17 responded; a response rate of 41% (these responses are summarized in Appendix B). In addition, the results of a nationwide survey of local access management policies conducted in 2001 by *The Urban Transportation Monitor* were summarized.

A few of the state and local agencies surveyed were selected for the purpose of documenting more detailed case studies of current practices. The intent of the case studies was to illustrate the variation in driveway regulation practices among the state transportation agencies, as well as between state and local agencies.

PURPOSES OF DRIVEWAY REGULATION

Most of the agencies responding to the survey have written goals and objectives for their driveway regulation programs (57% of state agencies and 41% of local agencies). These include broad goals such as maintaining the public health, safety, and welfare, as well as specific goals and objectives related to traffic movement, safety, and maintenance considerations. Some also address administrative issues such as the uniformity of procedures and standards, intergovernmental coordination, and training. Typical written goals and objectives of state agencies include

- Maintaining the functional integrity of the state highway system,
- Encouraging uniformity of standards and practices,
- Maintaining smooth and efficient traffic flow,
- Enforcing minimum distances between driveways,
- Minimizing conflict points,
- Maintaining appropriate sight distances on the state highway system,
- Monitoring driveway design,
- Providing for motorist and pedestrian safety,
- Maintaining highway right-of-way drainage,
- Facilitating public access to state rights-of-way,
- Promoting close cooperation with local governments in site planning,
- Preserving transportation corridors, and
- Protecting the public investment in the state highway system.

One way to understand the range of driveway regulation programs is to examine the scope or emphasis of programmatic goals and objectives. West Virginia, for example, has the following program objective: "To provide for the orderly and safe movement of traffic into and out of private properties adjacent to the highway" (*2*). In Indiana, "driveway permits are used to ensure that standards and specifications are used."

The South Dakota Department of Transportation (SDDOT), which recently updated its driveway regulation policies for the purpose of access management, noted the following goals and objectives of its driveway regulation program:

> Protect the public's investment in the highway system by preserving its functional integrity through the use of modern access management practices; Coordinate with local jurisdictions to ensure that the state's access policy and criteria are addressed early in decisions affecting land use; Provide advocacy, educational and technical assistance to promote access management practices among local jurisdictions; Undertake proactive corridor preservation through coordinated state/local planning and selective investment in access rights; Provide a consistent statewide management of the state highway system; Maintain and apply access criteria based upon best engineering practices to guide driveway location and design; Establish and maintain an access classification system that defines the planned level of access for different highways in the state; Establish procedures for determining developer responsibilities for paying for improvements that address the safety and capacity impacts for major development; Enhance existing regulatory powers and statutory authority to ensure safe and efficient access; and permit exceptions to the SDDOT's access criteria only where retrofit techniques have been applied (*3*).

Local governments responding to the survey have written goals and objectives that are similar to those of the states, including orderly control of traffic movements, reducing the number of traffic accidents, minimizing the public investment in maintenance functions, and ensuring appropriate access to the municipal transportation system. The Regional Municipality of Waterloo, Ontario (Canada), provided a typical example of local policy goals regarding access to regional roads.

> The goals of this policy are: to provide the maximum protection to the public through the orderly control of traffic movements onto and from the road network; to maintain the traffic carrying capacity of the road network; to protect the public investment in roadway facilities; to reduce the potential for and

> the severity of collisions thereby protecting investment in property and personal well being; to minimize public investment in maintenance functions; to ensure uniform practices in the design and construction of accesses for the safety of the general motoring public; and to maintain and regulate legal access to private property fronting onto a highway (*4*).

Kane County, Illinois, noted the following administrative purposes of its access permitting procedure and manual:

> The purpose of this manual is to provide the Department with a procedure to effectively and efficiently review all transportation related permit applications from the public. The intent is also to provide a process and system that is "user friendly" for all staff, administration, developers, municipalities, and townships. The purpose is also to decrease the overall permit review time for potential developers without sacrificing the quality of the review and final construction product (*5*).

Other purposes indicated by state respondents, but not specified in policy, include limiting liability during construction, promoting overall economic development, managing growth, providing a timely and predictable decision-making process for landowners and developers, allowing flexibility and engineering judgment where warranted, keeping the number of variances at a reasonable level, and providing for an efficient appeals process. Additional general purposes noted by local respondents include preserving on-street parking, speed reduction, facilitating record keeping, and helping ensure compliance with development standards.

LEGAL BASIS FOR DRIVEWAY REGULATION

In 1907, the U.S. Supreme Court held that states should determine the access rights of abutting owners by their own laws and not by federal law (*6*). As a result, there is considerable variation across the United States in terms of the legal basis or authority for driveway regulation. Some states derive their authority from the state's general police powers, whereas others enact state statutes providing more specific authority. There is also considerable variation in terms of how state programs are implemented. Implementation may occur through administrative rules, access codes, official policies, written guidelines, and/or design standards.

Likewise, local government authority to regulate driveways may be derived from specific statutes related to access management or planning and regulation, or through their general police powers. In addition, local governments may enact ordinances, guidelines, policies, and/or design standards to implement their regulatory program.

Most states (82%) indicated that their authority to engage in driveway permitting is specifically established by state statute. The majority of these states (65%) also have an administrative rule in place outlining the procedures of the permitting process. Of the five states that did not indicate that their driveway permitting process was established in statute, four established their driveway permitting programs through administrative rule, whereas the fifth established its program through an official policy and "informal procedures."

At the local level, 71% of respondents have established driveway-permitting programs by ordinance. The four local governments without an adopted formal policy have established their programs though written guidelines or design standards. Only one city's program is based solely on an informal policy or procedure.

This statement in the city of Salem, Oregon, ordinance is typical of local ordinance requirements:

> 80.020. PERMIT: REQUIRED. It shall be unlawful for any person to construct or install any service driveway across any sidewalk, parking strip, curb, or in or upon any part of any street without first obtaining a permit from the director of public works (Ord. No. 4522) (*7*).

CHAPTER TWO

DRIVEWAY REGULATION PRACTICES

ORGANIZATIONAL STRUCTURE AND STAFFING

All of the responding states indicated that at least some of their driveway permitting functions are handled by regional or district offices. Of these, one-half noted that their entire permit process is decentralized, the other half that some functions are handled by regional offices and other functions reside within the central office. The Maryland DOT was the only state reporting that it has centralized the majority of its driveway permitting functions.

Driveway permitting for large or complex developments is most likely to be carried out by the central office. Other functions mentioned by respondents as being carried out by the central office include policy development, program management, "expert" corridor management and design review, access requests along partially controlled access highways, training, and appeals.

Some state transportation agencies also allow decentralization of driveway regulation functions to local governments. In Kentucky and Colorado, for example, a municipality can be authorized to issue encroachment permits on state highways within the municipality if it has driveway regulation policies and procedures that are equal to or more stringent than those of the state.

The Idaho DOT provides for delegation of authority to local governments to process state right-of-way encroachment permits through cooperative agreements with local governments. This applies only to designated sections of the State Highway System where the property owner's right of access has not been acquired. (Note: acquisition of access rights is one method that some states have used to limit and control access. This differs from driveway regulation as a method to limit or control access.) A city or county must follow state policies and submit the application to the District Office for review and concurrence before giving final permit approval.

More than one-half of the state agencies responding (57%) have minimum education or training requirements for staff who review driveway applications and issue permits (Figure 1). The majority of these (81%) indicated that driveway permit reviews are primarily conducted by a trained technician, with some oversight or approval authority of higher level engineers, where needed. In New York, for example, the technician coordinates permit review among several expert groups and a professional engineer (PE) often examines the design details. Some of the respondents add that a PE license is desirable or required for the traffic engineer or access management engineer.

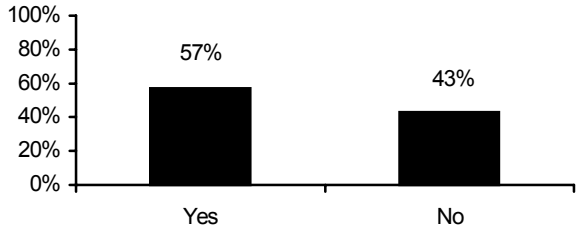


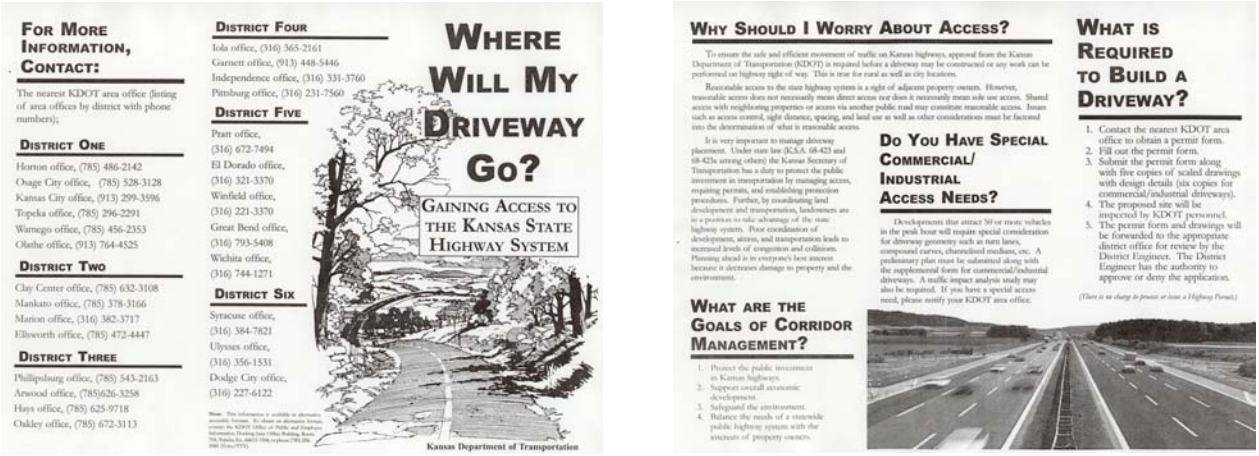
FIGURE 1 Percentage of respondents by state (state survey question 7: Do you require minimum education or training for staff who review driveway applications and issue permits?).

At the local level, 14 of the respondents (83%) indicated that a PE reviews and issues access permits. In 11 of these 14 communities, a trained technician or urban planner assists the PE. For example, in Clackamas County, Oregon, "an engineer is involved when the driveway is more complicated or there is a safety or major sight distance concern." In San Buenaventura, California, "the technician processes the permits and the driveways are approved by an engineer." In Norfolk, Virginia, major commercial driveways are reviewed by a committee made up of engineers and technicians, whereas residential driveways are usually reviewed by a technician only.

In the two cities and one county where a PE is not involved in the permitting process, a trained technician and/or urban planner supervises the review. In Washington County, Oregon, for example, the "urban planner reviews the zoning requirements and the technician reviews the operational requirements."

APPLICANT INFORMATION

Providing potential applicants with easy-to-understand information on the application and permitting process minimizes confusion and facilitates the application process. This may take the form of brochures, flow charts, checklists, instructions, typical access design plans, and other handouts that clearly explain the application process and content requirements. Other important information includes locations where applications may be obtained and contact information for permitting officials.



For More Information, Contact:

The nearest KDOT area office (listing of area offices by district with phone numbers);

District One
Horton office, (785) 486-2142
Osage City office, (785) 528-3128
Kansas City office, (913) 299-3596
Topeka office, (785) 296-2291
Wamego office, (785) 456-2353
Olathe office, (913) 764-4525

District Two
Clay Center office, (785) 632-3108
Mankato office, (785) 378-3166
Marion office, (316) 382-3717
Ellsworth office, (785) 472-4447

District Three
Phillipsburg office, (785) 543-2163
Atwood office, (785)626-3258
Hays office, (785) 625-9718
Oakley office, (785) 672-3113

District Four
Iola office, (316) 365-2161
Garnett office, (913) 448-5446
Independence office, (316) 331-3760
Pittsburg office, (316) 231-7560

District Five
Pratt office, (316) 672-7494
El Dorado office, (316) 321-3370
Winfield office, (316) 221-3370
Great Bend office, (316) 793-5408
Wichita office, (316) 744-1271

District Six
Syracuse office, (316) 384-7821
Ulysses office, (316) 356-1531
Dodge City office, (316) 227-6122

Where Will My Driveway Go?

Gaining Access to the Kansas State Highway System

Kansas Department of Transportation

Why Should I Worry About Access?

To ensure the safe and efficient movement of traffic on Kansas highways, approval from the Kansas Department of Transportation (KDOT) is required before a driveway may be constructed or any work can be performed on highway right of way. This is true for rural as well as city locations.

Reasonable access to the state highway system is a right of adjacent property owners. However, reasonable access does not necessarily mean direct access nor does it necessarily mean safe use access. Shared access with neighboring properties or access via another public road may constitute reasonable access. Issues such as access control, sight distance, spacing, and land use as well as other considerations must be factored into the determination of what is reasonable access.

It is very important to manage driveway placement. Under state law (K.S.A. 68-423 and 68-423a among others) the Kansas Secretary of Transportation has a duty to protect the public investment in transportation by managing access, requiring permits, and establishing protection procedures. Further, by coordinating land development and transportation, landowners are in a position to take advantage of the state highway system. Poor coordination of development, access, and transportation leads to increased levels of congestion and collisions. Planning ahead is in everyone's best interest because it decreases damage to property and the environment.

What are the Goals of Corridor Management?

1. Protect the public investment in Kansas highways.
2. Support overall economic development.
3. Safeguard the environment.
4. Balance the needs of a statewide public highway system with the interests of property owners.

Do You Have Special Commercial/ Industrial Access Needs?

Developments that attract 50 or more vehicles in the peak hour will require special consideration for driveway geometry such as turn lanes, compound curves, channelized medians, etc. A preliminary plan must be submitted along with the supplemental form for commercial/industrial driveways. A traffic impact analysis study may also be required. If you have a special access need, please notify your KDOT area office.

What is Required to Build a Driveway?

1. Contact the nearest KDOT area office to obtain a permit form.
2. Fill out the permit form.
3. Submit the permit form along with five copies of scaled drawings with design details (six copies for commercial/industrial driveways).
4. The proposed site will be inspected by KDOT personnel.
5. The permit form and drawings will be forwarded to the appropriate district office for review by the District Engineer. The District Engineer has the authority to approve or deny the application.

(There is no charge to process or issue a Highway Permit.)

FIGURE 2 Brochure on driveway permit requirements, Kansas Department of Transportation.

An increasing number of agencies are providing as much information as possible on their Internet websites. This increases applicant convenience and reduces the staff time needed to handle simple information requests. In addition, most of the agencies responding to the survey furnish applicants with specific information regarding the driveway permitting process. A majority of respondents that provide information do so in a text format (53%), whereas a few use additional graphic resources such as flow charts and brochures. These documents provide applicants with instructions regarding the purpose and procedures of an agency's driveway permitting process. For example, the brochure developed by the Kansas DOT briefly explains the steps involved in applying for a driveway permit (Figure 2). The brochure also outlines the purpose of the driveway permit program, additional requirements for applicants having special commercial or industrial access needs, and provides contact information for each Kansas DOT area office.

Region 4 of the New York State DOT (NYSDOT) developed a flow chart of the driveway permit process in coordination with the Rochester Chapter of Consultant Engineers Council (Figure 3). The flowchart outlines the responsibilities of and actions to be taken by each party in the permitting process, from development of the initial project scope through construction closeout. The flowchart is accompanied by a detailed explanation of responsibilities and actions, along with checklists to help participants track through the process. NYSDOT contacts and permit costs are included in the accompanying text.

The New Jersey Access Management Code includes a detailed checklist of the information to be provided in the application and the associated traffic study. A copy of the checklist appears in the driveway access application form (Appendix D). The detailed checklist and application clearly specify application requirements.

The Colorado DOT provides an example of an easy-to-follow application and permitting process. A flow chart of the decision-making process for access permits is provided in Figure 4. The one-page application form for an access connection and the Highway Access Approach Internal Processing Sheet are provided in Appendix D.

APPLICATION PROCESS

Driveway permitting programs typically involve a series of steps that applicants must follow to obtain an access permit. These steps can include concept reviews, pre-application meetings, and traffic impact studies. Some agencies use the term "concept review" and "pre-application meeting" interchangeably or in combination. Still other agencies, such as the Maine and New Hampshire DOTs, used the term "scoping meeting" to describe their pre-application process.

The concept review is generally an informal review of the development concept. It allows a potential applicant to meet with the appropriate regulatory official(s) and obtain general information on the application and review procedure, relevant regulations, and early direction as to potential issues with the permit concept. Some agencies use the concept review to initiate the development application process. Issues discussed may include alternative site layout(s) as well as potential access and circulation designs. These early reviews are critical to the developer who needs information on where the agency will allow driveway access in order to complete site design and on-site circulation plans.

A pre-application meeting would typically follow the concept review, where the applicant would be asked to submit a more specific project sketch plan than provided in the concept review. It is also where the applicant would

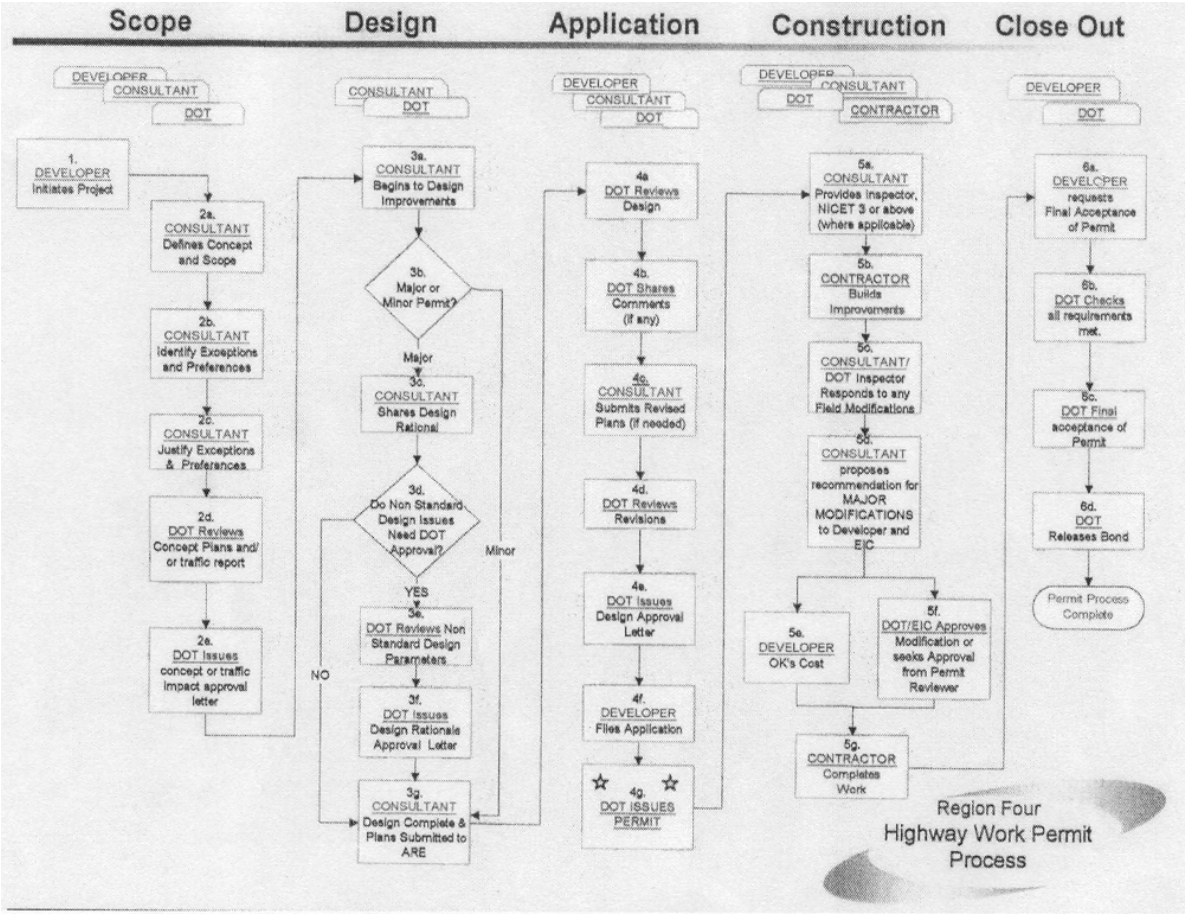


FIGURE 3 Permit process flowchart, New York State Department of Transportation, Region 4.

obtain more specific direction as to the category of the proposed development, analyses and technical procedures that will be required of large developments, and other application requirements.

The benefit of a concept review and/or pre-application meeting is that they enable an applicant to obtain feedback from the permitting agency before incurring the expense of preparing detailed site plans or traffic impact studies. This helps to minimize conflict and enables applicants or their consultants to more efficiently complete the required analysis.

Of the 28 states responding to the question regarding the use of concept reviews, pre-application meetings, and traffic impact studies, at least 27 (96%) provide for one or more of these procedures, with 17 states (61%) administering all three (Figure 5). Only five of the respondents do not offer concept reviews, and seven do not conduct pre-application meetings. Traffic impact studies are not required in three states. Only one state transportation agency does not provide any of these activities.

The New Jersey DOT (NJDOT), for example, noted that

> pre-application meetings are most commonly used for large developments, particularly those that will significantly affect the state highway system. Pre-application meetings provide an opportunity for the Department to explain the application process, discuss the scope of any required TIS [traffic impact study], and answer questions that the developer may have. A Concept Review is an optional application, and is usually used by developers that want to proceed cautiously and do not necessarily plan on immediate construction. The concept review enables the applicant to obtain feedback from the Department without going through the expense of preparing detailed plans. Approval of the concept does not permit construction. Application for a permit must be submitted within 2 years of concept approval.

At the local level, eight of the responding agencies (47%) offer concept reviews, pre-application meetings, and traffic impact studies as part of the access permitting program (Figure 6). Concept reviews are more prevalent (76%) than pre-application meetings (59%). Only three local agencies do not offer any of these activities.

Review and Analysis Requirements

The amount of information that is required of an applicant and evaluated by a permitting agency typically depends on the size and complexity of the proposed development and the importance or functional classification of the affected

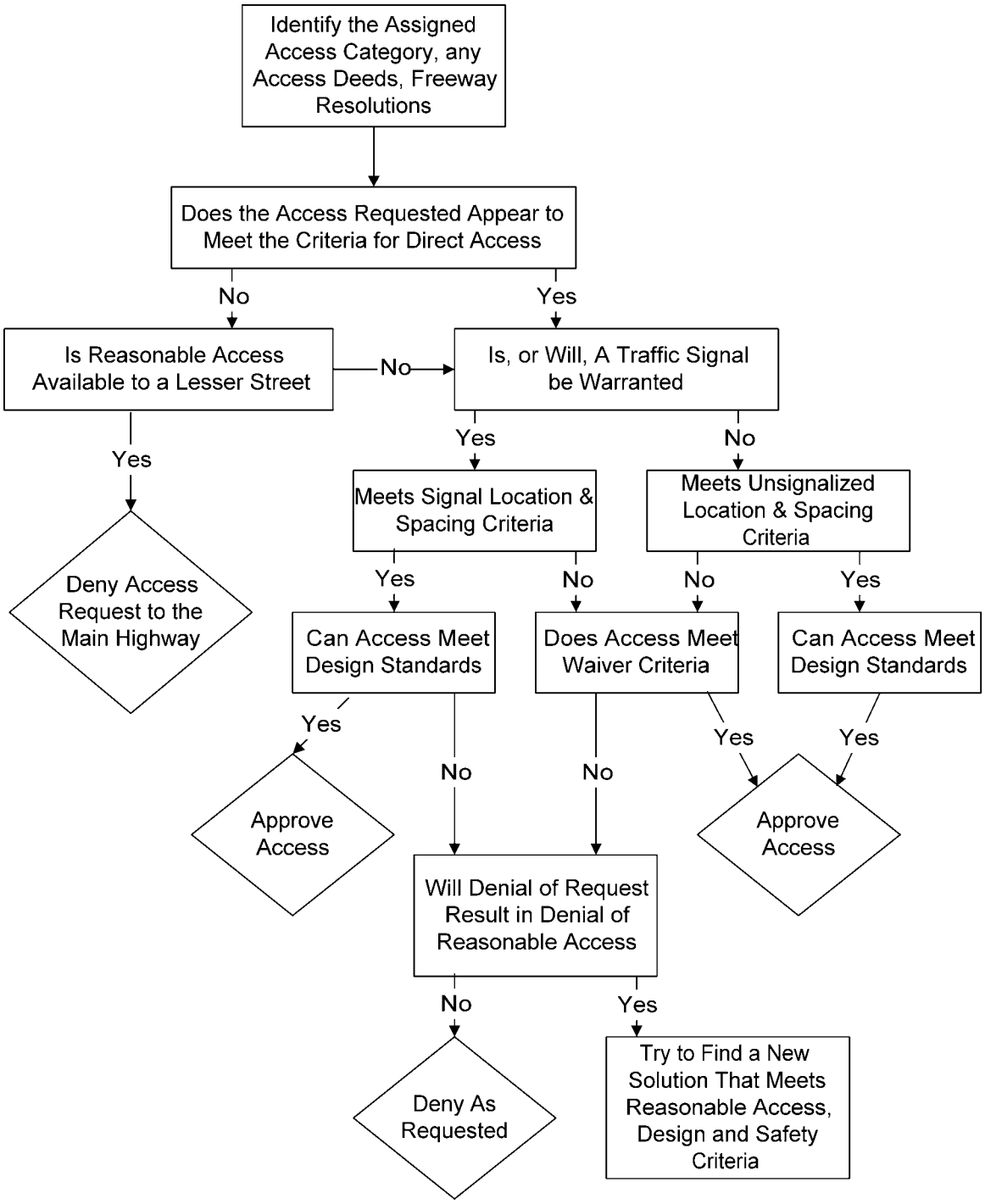


FIGURE 4 Colorado Department of Transportation access review process.

roadways. Large developments often connect to and directly affect roadways of a higher functional classification. Therefore, driveway permit applications for large developments generally include a detailed site plan, a traffic impact study, and, in states that have such authority, any off-site mitigation. Developments with a high percentage of large trucks, such as warehouses, distribution and manufacturing centers, or quarries, may also require more stringent review.

The permit application for a small development is typically much less rigorous. Applicants may be asked to provide basic information on the location of the property, zoning, and ownership, as well as a site plan. Site plans would include existing and proposed structures, existing and proposed access drives, on-site circulation and parking, the distance to adjacent access connections, and a statement of need for the proposed access connection.

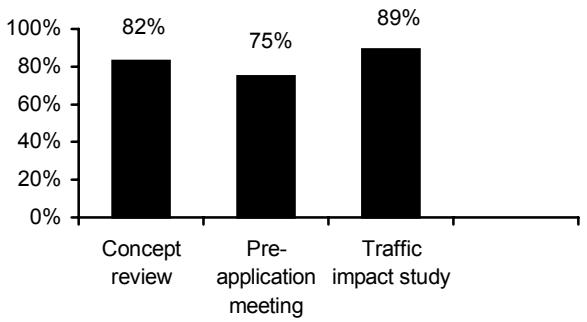


FIGURE 5 Percentage of respondents by state (state survey question 10: Does your permitting process provide these activities?).

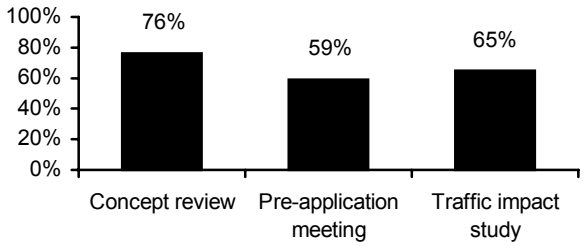


FIGURE 6 Percentage of respondents by locality (local survey question 5: Does your permitting process provide these activities?).

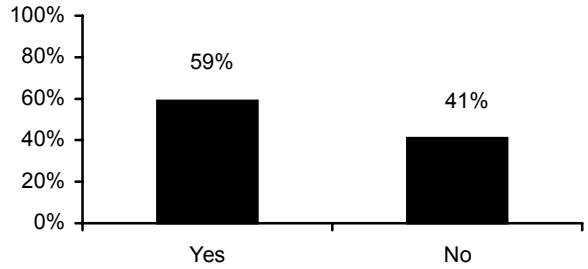


FIGURE 7 Percentage of respondents by state (state survey question 15: Do you have different driveway permitting procedures or requirements for small versus large developments?).

The length and type of review process described by respondents depends greatly on the size, use, and transportation impact of the proposed development. Sixteen of the state respondents (59%) described two sets of driveway permitting procedures: one for "small" developments and the other for "large" developments (Figure 7). Approximately 59% of local respondents do not have separate procedures or requirements for small versus large developments (Figure 8).

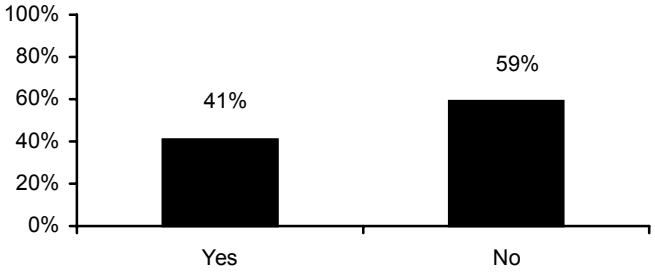


FIGURE 8 Percentage of respondents by locality (local survey question 13: Do you have different driveway permitting procedures or requirements for small versus large development?).

Definitions of small versus large developments vary widely, as do the type of thresholds used. The 15 state transportation agencies that have such thresholds use one or more of the following: land use, average daily trips (ADT), vehicles per hour, and peak-hour trips. Most of the states with thresholds by use divide their process between residential and commercial, with major and minor categories for each, and further refine the threshold based on the trip generation characteristics of the development. In addition, as noted by the CDOT, the thresholds are intended to reflect total site volumes, not just the volume of a specific access connection.

Another example was reported by the NYSDOT, which separates driveways into residential driveways, commercial driveways, and subdivision roads. Commercial driveways are further separated into major and minor, with minor commercial driveways defined as less than 100 one-way peak-hour trips and major commercial driveways as "100 or more one-way trips during the peak hour for either the adjacent roadway or the development or 50 or more one way trips during the 8th highest hour of annual driveway activity." A "commercial" driveway could also include driveways serving industrial uses, apartment buildings, or other comparable generators. Subdivision roads are defined as "driveways serving more than four private homes or a multiple-unit dwelling containing more than four family units" (*8*).

ADT thresholds for small developments range from fewer than 500 ADT to 750 ADT. The NJDOT, for example, defines a small development as "anything generating fewer than 500 daily trips directly to/from the state highway," whereas the Oregon DOT uses a threshold of fewer than 600 daily trips. The Wisconsin DOT uses a combination of methods, defining a small development as anything generating fewer than 100 trips in the peak hour, 50 new vehicle trips exiting the development in 1 hour, or fewer than 750 ADT.

Peak-hour trip thresholds for small developments are typically set at fewer than 100 peak-hour trips, with a few

states defining small developments as those generating fewer than 25 peak-hour trips. Peak-hour trips are commonly evaluated as two-way trips, because of added complexity in differentiating one-way trips and the potential for disputes over the distribution of in/out trips. In addition, use of total peak-hour trips rather than "new trips" avoids the often-controversial issue of the percentage of pass-by trips. Some states use vehicles per hour as the threshold. CDOT, for example, defines a small development as anything generating fewer than 100 vehicles per hour.

Many state transportation agencies have a shortened review process for smaller developments. Although staff still conducts a site-plan review, fewer documents are needed and the review is less extensive. The review typically focuses on drainage, anticipated traffic, and landscaping considerations, with some states (e.g., New Hampshire) requiring information on adjacent properties and the subdivision history of the site. In some instances, design guidelines differ. For example, the NYSDOT requires major commercial driveways to adhere to a separate set of guidelines regarding driveway width, location, and other design considerations. For large developments, most state respondents (86%) report that the review time is lengthened and the level of review is more intense (see also Length of Process).

The NJDOT uses the following categories to establish the type of permit and review that will be required of applicants for an access permit (*9*):

- Minor Access Permit—Any use generating fewer than 500 vehicle trips per day directly accessing a state highway to and from the lot.
- Major Access Permit Without Planning Review—Any use generating 500 or more vehicle trips per day directly accessing a state highway and fewer than 200 peak-hour vehicle trips to and from the lot.
- Major Access Permit with Planning Review—Any use generating 500 or more vehicle trips per day and 200 or more peak-hour vehicle trips directly accessing a state highway to and from the lot.

Seven (50%) of the local government respondents have separate guidelines for small and large developments. Of these, four define a small development as low-intensity residential (single family/duplex), whereas the other three use ADT or peak-hour volumes. For example, Licking County, Ohio, considers a development generating more than 40 peak-hour trips as a large development.

Generally, local governments evaluate the driveway of a larger development as part of an overall development review process that addresses site layout, landscaping, parking, and other considerations. Although responses to this question were somewhat vague, local respondents generally indicated that review of large developments involves more extensive review procedures and more detailed design requirements. In Norfolk, Virginia, for example, large developments "must adhere to access management guidelines and committee review." In Spokane, Washington, "traffic analysis or other transportation concerns are greater (for large developments), and impacts require mitigation, which is accomplished through public interaction and land use modification."

Traffic Impact Studies

A site traffic impact study assesses the effects that traffic attributable to a proposed development will have on the surrounding transportation network, the ability to get traffic onto and off of the site, and the need for off-site mitigation of traffic impacts, such as a turn lane, signal, or roadway intersection improvement. Traffic impact studies are not only appropriate during access permitting, but also during requests for subdivision, rezoning, and other development activities. Information and guidelines for conducting traffic impact studies is available from the Institute of Transportation Engineers (*10*).

In 13 states, all large developments must submit a traffic impact study. In Idaho, Colorado, and South Dakota large developments are those that generate more than 100 peak-hour trips. The Maine DOT can require a traffic study for projects between 100 and 200 peak-hour trips if certain conditions are met; for projects over 200 peak-hour trips, the applicant must prepare a traffic impact study. In South Carolina, only large "intensive" developments must submit a traffic impact study. According to the South Carolina DOT's (SCDOT) *Access and Roadside Management Standards,* a large intensive development includes the following (*11*):

- Shopping centers in excess of 100,000 square feet,
- Planned unit development over 75 acres,
- Large industrial developments with more than 300 employees, and
- Residential development with 100+ single-family detached units or 200+ dwelling units.

The Florida DOT (FDOT) uses the following guidelines to determine when a site-impact analysis may be needed (*12*):

- If the proposed development is projected to generate 100 or more peak-hour trips, a site-impact study should be considered. Developments generating fewer than 100 peak-hour trips generally should not require a site-impact study, but should be reviewed for consistency with driveway and access management standards.
- If a development generates at least 100, but fewer than 500, peak-hour trips, an abbreviated analysis

procedure may be proposed. Driveway volumes and consistency with driveway and access management standards should be reviewed at a minimum. Examples of this type of development may include small subdivisions (i.e., 92–547 single-family units), small hotels (i.e., 133–944 rooms), and small commercial developments (e.g., a fast food restaurant with drive-in).

- A detailed site-impact analysis should be considered if (1) the proposed development will generate a change in traffic volumes of 25% or more or a change in the anticipated level of service, or (2) a change in trip generation exceeding 25% (either peak or daily) of the existing land-use's trip generation and total trip generation for the site of greater than 100 peak-hour trips [adapted from Rule 14-97.002(29)]. Developments that typically require a detailed site-impact study include residential developments of 300 or more homes, convenience markets with fueling stations, and general office buildings.

A survey of a random sample of 550 local engineers (102 responses, response rate 19%) conducted in 2001 by *TheUrban Transportation Monitor* provided further insight into this issue (*13*). When asked when the local agency's access policies required traffic impact analysis, the majority of respondents indicated that this was handled on a case-by-case basis. Other respondents indicated that traffic impact analysis was required when development would generate at least 100 vehicle trips during peak traffic hours or increased beyond a specified level. Interestingly, 10% of respondents said that traffic impact analysis was never required, whereas 6% indicated that it was always required.

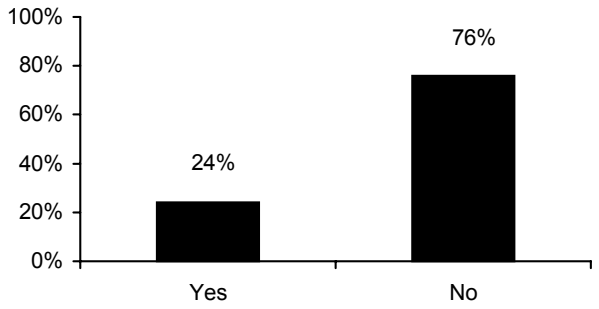


FIGURE 9 Percentage of respondents by locality (local survey question 14: Are there different driveway permitting procedures or requirements for new development versus redevelopment?).

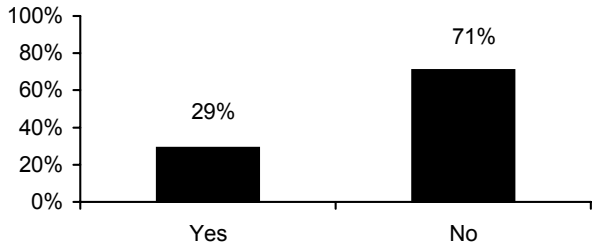


FIGURE 10 Percentage of respondents by state (state survey question 16: Are there different driveway permitting procedures or requirements for new development versus redevelopment?).

New Development Versus Redevelopment

The majority of local governments responding to the survey do not have separate permitting procedures or requirements for new development versus redevelopment (Figure 9). Of the four agencies that do, a few reported that the agency might honor the existing access locations. In Clark County, Washington, new development and redevelopment projects are "administered by a different department but the same criteria is used." In the city of Tucson, Arizona, alternative procedures for redevelopment are applied depending on the percentage of added space. Where that percentage is greater than 20%, full compliance is required with development services requirements.

Approximately 29% of the state respondents treat redevelopment somewhat differently than new development in their driveway regulation processes (Figure 10). The NJDOT, for example, notes that although "the procedures and requirements are the same, staff recognize the difficulties in retrofitting an existing site and changing existing on-site circulation patterns. Some access design criteria are occasionally waived as a result." Several other states provide similar responses.

Most of the states responding affirmatively to this question indicated that they may require redevelopment projects that exceed a certain threshold or intensity to conform fully or partially with agency driveway or access standards. Some of the states, including Utah, Oregon, Florida, Colorado, and New Jersey, have specific numeric thresholds for when a redevelopment project must be reviewed for conformance with agency access standards.

In Colorado, for example, access permits are issued for the intended use of the access according to volume and vehicle type. An access must be upgraded to current standards when a change in the use of the property increases access volume above a certain percentage, as stated in the terms and conditions of the access permit. The CDOT, at its own initiative and expense, can reconstruct or relocate an access when required by changes in roadway operations, design, and safety.

The SCDOT has somewhat more discretionary guidelines. As outlined in the SCDOT *Access and Roadside Management Standards* (*11*) "when there is a change in land use which will affect the amount, type, or intensity of

traffic activity to a site, the Department reserves the right to require submission of a new Application for Encroachment Permit."

Application or Permit Fees

Some agencies charge a fee to help cover the costs of administering a driveway regulation program. Twelve of the 28 states responding to this question (43%) reported charging a fee for the driveway application or permit (Figure 11). For residential developments, most states typically charge from $10 to $50 per driveway. However, the cost of a commercial driveway permit varies widely from state to state, ranging from a low of $50 per entrance to as much as $12,000 for major commercial developments that include the review of traffic impact studies.

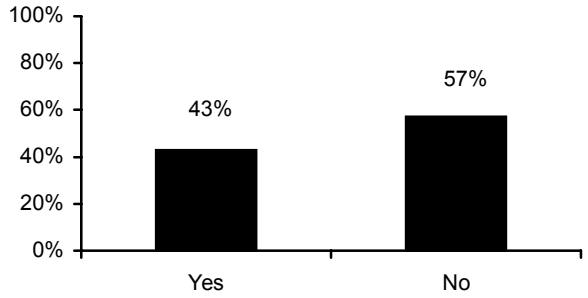


FIGURE 11 Percentage of respondents by state (state survey question 11: Are there fees for the driveway application or permit?).

Fee structures vary in complexity, with some states charging a flat fee and others using a fee structure based on variables such as intensity of land use, number of trips generated, need for a traffic impact study, and/or roadway functional classification. For example, the Maryland and Oregon DOTs charge $50 per entrance to process a driveway permit. The CDOT charges a $50 fee for a standard single driveway, $100 for high-volume driveways where a more detailed site review is required, and $300 for driveways where road improvements are necessary. In New Jersey, fees are charged per lot (not per driveway) and are broken down according to type of use; separate fees are assessed for applications, permits, and permit renewals (Table 1). Idaho's "right-of-way encroachment application and permit" fee is based on land use, functional classification of the roadway, and whether a traffic impact study is required (Table 2).

Eleven of the 17 local respondents (65%) charge a fee for their driveway permit (Figure 12). Local fees for residential driveway permits range from $30 to $100, and fees for commercial permits range from $50 to $200. Most of the local agencies charge a flat rate according to whether the use requiring access will be residential or commercial. For example, the city of Norfolk, Virginia, assesses $50 for residential driveways and $200 for commercial/industrial driveways. Alternatively, the city of Salem, Oregon, charges a flat fee of $79.50 for the first driveway and $37.25 for each additional driveway.

Length of Process

When asked the average time that elapses between the receipt of an application and the issuance of a permit, the majority of local respondents indicated 1 month or less. Of the 15 cities/counties that responded to this question, the average review time reported is less than 2 weeks in 37% of cases and between 2 weeks and 1 month in the remaining 63%. However, many of the cities and counties added that the timing of permit review and issuance depends on the complexity of the development and whether a traffic

TABLE 1
NEW JERSEY DEPARTMENT OF TRANSPORTATION APPLICATION AND PERMIT FEES

Type	Application Fee Each Lot ($)	Permit Fee Each Lot ($)	Renewal Fee Each Lot ($)
Single-Family Residential Driveway	35.00	15.00	15.00
Residence and Business Driveway	75.00	25.00	25.00
Government Driveway	150.00	500.00	250.00
Minor	265.00	85.00	85.00
Major	3,750.00	1,250.00	250.00
Major with Planning Review	9,000.00	3,000.00	250.00
Concept Reviews	500.00	—	—
Street Intersection	150.00	500.00	250.00
Street Improvement	5.00	25.00	25.00
Lot Subdivision or Consolidation	200.00	50.00	—
Temporary Access Permit	200.00	50.00	—

SOURCE: New Jersey Department of Transportation, *New Jersey State Highway Access Management Code*, March 1997, as amended through January 22, 2002 (*9*).

TABLE 2
IDAHO DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY ENCROACHMENT APPLICATION AND PERMIT FEES

Type	Fee
Farm or Field, Type I Access Control	$50.00
Farm or Field, Type II–IV Access Control	$75.00
Single-Family Residential, Type I Access Control	$50.00
Single-Family Residential, Type II–IV Access Control	$75.00
Multiple-Family Residential, Type I Access Control	$50.00
Multiple-Family Residential, Type II–IV Access Control	$75.00
Subdivision, Type I Access Control (no TIS required)	$50.00
Subdivision, Type II–IV Access Control (TIS required)	$75.00
Commercial, Type I Access Control (no TIS required)	$50.00
Commercial, Type I Access Control (TIS required)	$75.00
Commercial, Type II–IV Access Control (no TIS required)	$75.00
Commercial, Type II–IV Access Control (TIS required)	$100.00
Other Encroachments (see section 3.12)	$50.00

Note: TIS = traffic impact study.
SOURCE: Idaho Department of Transportation, *Access Management: Standards and Procedures for Highway Right-of-Way Encroachments*, draft, April 2001 (*15*).

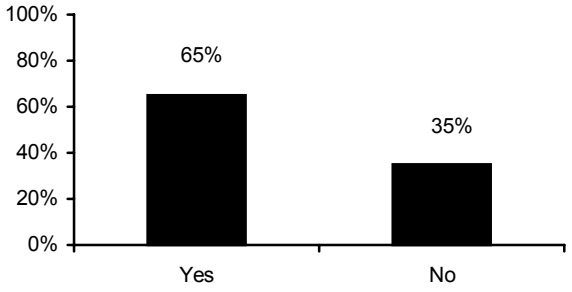


FIGURE 12 Percentage of respondents by locality (local survey question 7: Are there fees for the driveway application or permit?).

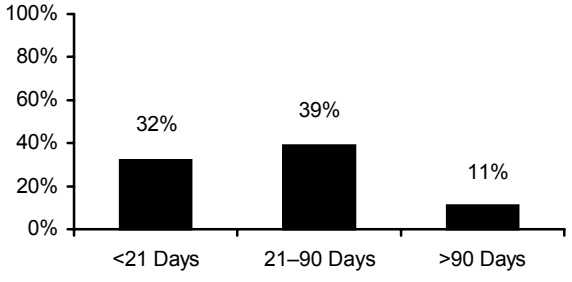


FIGURE 13 Percentage of respondents by state (state survey question 12: What is the average/typical time elapsed between application submittal and permit issuance?).

impact study is needed. For example, Clackamas County, Oregon, noted that "if a driveway is part of a commercial development, the review time may be 4 to 8 weeks, depending on the number of plan reviews." In the city of Springfield, Missouri, "large developments are normally in the system longer because required coordination, driveway application review, and reconciliation usually takes longer."

On average, the state transportation agencies take approximately 45 days between the time a developer submits an application to the time the agency issues a permit (Figure 13). In Utah, for example, upcoming legislation will require the Utah DOT to have a turnaround time of 45 days or less, as Colorado currently requires. Nine states (32%), generally those that are less populated or with less complex access policies, review driveway permits in 3 weeks or less. Eleven states (39%) indicated that review times are between 3 weeks and 3 months, whereas three states have review times that typically exceed 3 months.

As would be expected, most state respondents (86%) reported that obtaining an access permit generally takes longer when a large or complex development is under review. Reasons included the need for additional analysis of traffic impacts and mitigation, drainage and hydraulic characteristics, and signalization. Noted one respondent, "larger impact equals longer review time and more complex permit terms, conditions, specifications, design, and construction." Two states indicated that some applications can take up to 1 year, usually when a large or complex development is involved or "if complicate(d) by City/County involvement." Another respondent noted that incomplete applications delay the process.

One respondent adds that although larger developments normally require longer review times, "there have been cases involving small developments with unique and challenging design and conformance scenarios which impede the process. Conversely, some large developments have

been surprisingly easy to deal with (due in part to obvious solutions to impact mitigation)."

Permit Tracking Systems

More than one-half of the state respondents (53%) have a computerized system for tracking and recording driveway permits. None of the state respondents have a website that enables applicants to track the permit status.

Similarly, most local agencies have a computerized tracking system for permits (76%), and five local governments (29%) make some information accessible to the public on-line. For example, the city of Salem, Oregon, posts information regarding driveway permits on its website. Not only can applicants obtain application forms and instruction on-line, they can also check on the status of their permit application. The website offers information regarding which department has completed the review and whether the permit has been approved or denied. City staff updates the website twice daily to ensure that the information is current.

PERMIT CONDITIONS

In contemporary driveway regulation programs, limitations and conditions are often included in the driveway permit related to the use of the access and other considerations, as is the practice in Florida, Colorado, and New Jersey. Exceeding any limit or condition could invalidate the permit and require a new permit. Such conditions may include but are not limited to the following:

- Maximum driveway volume;
- Mix of vehicles (i.e., percentage of trucks, percentage of cars) that use the driveway;
- Alternative access available (i.e., when adjacent properties develop, cross-parcel circulation and alternative access must be provided by the development);
- Traffic conditions when turn bays may need to be provided, if not part of the initial development; and
- Bringing a previously granted design variance up to full standards when the cause of the waiver no longer exists (i.e., the constraint is gone).

Some agencies also limit the number of driveways to that stated in the permit and specify that future subdivision of the parcel will require joint and cross access or provision of a supporting on-site roadway system (*14*). The survey of current practice explored two types of conditions related to alternative access: driveway consolidation and shared access and outparcel access. The results are presented in the following section.

Driveway Consolidation and Shared Access

One objective of the survey of agency practices was to determine whether state and local agencies promote driveway consolidation or shared access through their driveway regulation program and, if so, whether this is accomplished through permit conditions or other measures. Twenty-six of the 28 states responding to the survey encourage driveway consolidation and shared access through driveway permitting procedures.

For example, the Kansas DOT stated that the agency will "very often not approve a permit unless a joint use connection is provided." If shared access is appropriate and feasible, the Wisconsin DOT "will make it a required condition of the permit." In North Dakota, staff "try to approve shared access points when possible by approving access points at the property line, so both property owners can use the same access point." In some states, such as Arizona, the responsibility of seeking support from neighboring properties for a joint-use driveway falls to the applicant. If a joint-use access is in the project's "best interest, then the applicant is asked to attempt to seek the cooperation of the adjoining property owner."

Several states reported that, although it is encouraged, they cannot require shared access and that it is difficult to force the issue. To help address this problem, several states try to encourage shared access through coordination with local governments. For example, the FDOT noted that shared access is encouraged, but that "local governments have more authority to do that than staff does at the state level."

In Maryland, shared access is encouraged "through the county review process. The state has also designated specific routes for access control, and an Access Management Team evaluates each driveway proposed on these routes. Shared access, where possible, is always encouraged through the development process." The Kentucky DOT works with planning and zoning boards to encourage shared access during the land development and subdivision process. Similarly, the South Dakota DOT (SDDOT) *Access Management Operations Guide* calls for encouraging shared access and property cross access through cooperation with local governments during the subdivision approval process (*3*).

The draft access management policy of the Idaho DOT, dated April 2001, encourages shared access as follows (*15*):

> The Department's goal is four approaches per side per mile in urban areas and three approaches per side per mile in rural areas. Joint-use driveways are encouraged to achieve this goal. The Department encourages joint-use approaches for access at common boundaries between adjoining properties to provide

access to smaller land parcels and reduce the number of approaches adjacent to major intersections or along arterials. Variances are also given favorable consideration if the variance offers an opportunity to accommodate a joint-use access serving two or more properties abutting the State highway.

Some of the respondents expressed frustration regarding their driveway consolidation and shared access policies. As one engineer noted "shared access is encouraged but seldom happens." Another respondent wrote that staff is "rarely successful because we are a home rule state, and that, if a locality doesn't have an access management plan, we can't require consolidation."

At the local level, all but one of the respondents encourages driveway consolidation and shared access through their driveway permitting process. (The *Urban Transportation Monitor* survey, discussed later in the synthesis, found a somewhat lower percentage, with approximately 60% of local respondents responding affirmatively to this question. This percentage is probably more accurate given the larger sample size and more random nature of the sample.) The responses indicated that driveway consolidation and/or property cross access is more likely to be pushed on major arterials or congested, high-volume roadways. In Norfolk, Virginia, for example, staff works to minimize the number of entrances on congested roadways by seeking consolidation of adjacent entrances.

Similar to the states, local responses suggested that several of the communities promote shared access in an opportunistic manner and rely on property owner cooperation. For example, in Ramsey County, Minnesota, local staff "work with property owners and developers to consolidate as much access as possible." A respondent from Durham, Ontario, noted: "We try to work with the developers to establish a (shared) access plan, but many are reticent to do so for a variety of reasons." Reasons often cited for such reticence include maintenance costs, a perceived increase in liability, and concern over competition with adjacent businesses.

Springfield, Missouri, indicated that applicants are "asked nicely" to provide shared access during site plan review, but that they may be required to do so as a condition of rezoning or in some cases during subdivision review. The city of San Buenaventura, California, promotes driveway consolidation or cross access through the planning process and policies in the local comprehensive plan.

A method sometimes used where shared access is not immediately available is to issue a conditional permit for a single-use driveway. Then, when alternative access becomes available through a neighboring property or side street, the permit expires and the applicant must construct a new entrance or otherwise provide cross access to the neighboring property. To gain insight on this approach state and local agencies were asked if they use this technique, how these conditions are tracked and enforced, and who is responsible for driveway reconstruction or closure.

Eighty-two percent of the local respondents reported that they have provided for temporary access with the condition that it be closed when alternative access becomes available. One of the local respondents indicated that, although this has been done, it is complicated and avoided unless there is no alternative. The majority of local respondents (71%) noted that the property owner is responsible for closure of the temporary access point, with one respondent noting that the agency is responsible for closure (Salem, Oregon), and another that the agency and property owner each share responsibility (Broomfield, Colorado).

The city of Salem, Oregon, is one of the localities that has used this technique as a method to promote shared access, albeit only once. Their code allows for temporary driveways until future final driveways can be constructed. In addition, Salem sometimes requires driveways to be located adjacent to the property line with an easement and encourages the cooperation of adjacent property owners. The city of Springfield, Missouri, indicated that they have used this technique, but added that "it is complicated and avoided unless there is no other alternative."

Local methods for monitoring shared access conditions vary. These include institutional knowledge, the development agreement process, field inspections, time limit on permit, documentation on plat, withholding the certificate of occupancy, and placing the onus on the developer to inform the agency when the condition has been met.

Seventy-one percent of the state respondents indicated that they have issued temporary or conditional driveway permits. Temporary permits usually have specific expiration terms, whereas conditional permits provide permit approval until the condition stated in the permit is triggered, thereby allowing the agency to revisit the permit. Several of the respondents referred to temporary access for construction and therefore the actual percentage of respondents using this technique to accomplish alternative access is not clear.

For states, monitoring the temporary access point (whether used for construction purposes or for access pending future shared access) is largely the responsibility of field personnel, although a few states mentioned that the permittee has legal responsibility to notify the department. The FDOT noted that they place such conditions into the permit and occasionally try to record the permit conditions in the county with the property description. Eleven states noted that staff conduct inspections to ensure that the driveway is closed at the appropriate time.

In 19 of the 28 states responding to the survey, property owners are responsible for closing the temporary access point. In two states, Maryland and Wisconsin, the state transportation agency shares a portion of the cost. In only one state, Utah, does the state transportation agency shoulder this cost. Four states collect funds up front, usually as a bond or surety fee, to ensure that the temporary access will eventually be closed according to state design standards.

Effective record keeping and long-term permit tracking, although not specifically surveyed for the synthesis, are essential to monitoring and enforcing temporary and conditional permits. Records enable the agency to track their commitments and those of the applicant.

Internal Access to Outparcels

Outparcels (or outlots) are lots on the perimeter of a larger parcel that break its frontage along the roadway. They are often created along thoroughfare frontage of shopping center sites and leased or sold to capitalize on these highly valued locations. If treated separately, each outparcel may need to be provided one or more driveways, thereby increasing access problems on the thoroughfare.

Contemporary practice is to establish that development sites under the same ownership, phased development plans, or properties consolidated for development be considered one property for the purposes of access regulation (*16*). In this way agencies can require a unified access and circulation system for the overall development site, thereby minimizing the need for separate outparcel access connections to the thoroughfare.

To determine current practices in this area, state and local agencies were asked whether they typically require outparcels/outlots to obtain access by means of the primary access and circulation system of the principal development. The majority of state transportation agencies responded affirmatively to this question (93%). However, one respondent added that this cannot be required if an outlot is under different ownership. The majority of local respondents also answered affirmatively to this question (12 of 15), and three did not respond.

DRIVEWAY SPACING AND DESIGN

Slightly more than one-half of the states responding to the survey of current practice have adopted driveway spacing standards that vary according to the classification of the roadway. In three other states the driveway spacing standards are varied according to the posted speed limit of the roadway. Of the local governments surveyed, 82% have driveway spacing standards based on different classes of roadway. Only one city and two counties either lacked standards or used another method to guide their driveway spacing standards.

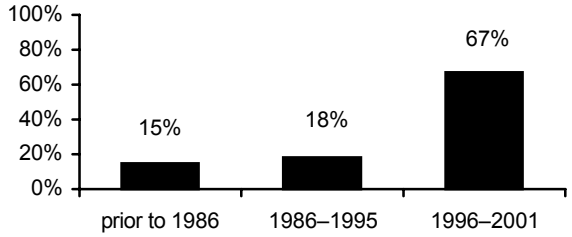


FIGURE 14 Percentage of respondents by state (state survey question 5: When were your driveway design standards revised and updated?).

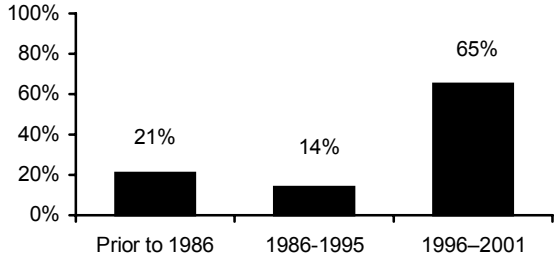


FIGURE 15 Percentage of respondents by locality (local survey question 4: When were your driveway design standards last substantially revised and updated?).

A majority of the states (67%) responding to the survey have substantially revised and updated their driveway design standards within the last 6 years, including three states that are currently in the process of updating their standards (Figure 14). One of these agencies, the FDOT, is currently preparing a "Driveway Handbook" for this purpose. Five states (18%) updated their driveway design standards between 1986 and 1995 and four states have not substantially revised or updated their standards since 1986.

Many local governments responding to the survey reported substantially revising and updating their driveway design standards between 1996 and 2001 (65%) (Figure 15). Only five local governments (35%) indicated that their design standards were updated prior to 1996. The remaining three local respondents did not respond to this question. All of the state and local government respondents reported that sight distance is routinely measured or determined as part of the driveway permit process.

DENIAL OF ACCESS

An effective driveway regulation policy includes specific written criteria under which a permit may be denied (*17*). Official criteria for denial also provide a legal basis for agency action. As noted by one state official, it is important

for letters announcing denial to "substantially itemize denial criteria by regulation section, provide a determination of facts, and a conclusion" (*18*).

All but one of the state respondents indicated that their driveway regulation program allowed them to deny access under certain conditions. Nineteen states referenced safety as a primary reason for denying access, as is the case in Louisiana where "unsafe conditions, most frequently due to lack of sufficient sight distance," is cause for denial of access to a state highway.

Twelve states can also deny access when reasonable alternative access is available. For example, the Arizona DOT can deny access to a state highway "if they have existing ability to access a city or county road or if their proposed access point is not safe." The SDDOT can deny access to state highways when "alternative access is available to a local street or through an adjacent parcel." The FDOT can also deny direct access, but will base this determination on whether the direct access presents a clear safety hazard or intolerable variance.

For the CDOT, the ability to deny access "depends on the category of the roadway and the availability of alternative reasonable access to a lesser street." Regulatory controls allow for denial or closure of direct access when alternative access to a secondary roadway is available. In addition, failure to construct, maintain, or use the access consistent with the terms and conditions of the permit can lead to permit revocation.

A few states, such as Utah, Indiana, and South Carolina, note that authority to deny access to a state highway is provided where access rights have been purchased or reserved by the state transportation agency. In New York, access may be denied "if right-of-way was purchased without access." Other conditions for denial cited by state respondents included access control plans or similar police power controls, failure to comply with state access permit policies or construction violations, and failure to provide subdivision lots with internal access.

Similarly, all but one of the local respondents can deny access to the primary roadway under certain conditions. The majority of respondents noted that safety is the overwhelming concern. Other reasons for denial cited included: where alternative means of access is available from a lower category road, the driveway is too close to a signal, where dedication of access rights is a condition of project approval, violation of ordinance requirements, and lack of a paved parking area.

VARIANCES

When administering driveway regulation programs, agencies may face a variety of site-related issues and proposed solutions that are inconsistent with adopted standards or engineering practices. In these circumstances, applicants may request variances or exceptions to agency regulations. Therefore, procedures for considering deviations from standards, along with criteria that specify when a variance may be granted, are important aspects of an effective driveway regulation program. The ultimate goal of an effective variance process is to "reach a solution that the agency can approve for the specific location, as well as other similar locations when comparable circumstances arise in the future" (*19*).

A review of the literature on access variances suggests the following general situations where variances may be appropriate (*19*):

- Unreasonableness of strict application—Where strict application of access management standards will result in an outcome that both the applicant and permitting authority can agree is unreasonable.
- Existing substandard conditions—Where existing conditions, such as geometric deficiencies of the abutting highway, are substandard and not attributable to the applicant.
- Existing environmental, economic, or social constraints—Where compliance with standards is constrained due to conditions such as limited right-of-way, wetlands, waterways, historic districts, utility conflicts, and topographical constraints.
- Uniqueness of the situation—Where a situation precludes compliance with standards that are rarely if ever encountered and, by virtue of its unique nature, would not likely set an undesirable precedent.
- Conflicts between the requirements of agencies having jurisdiction—Where the requirements of one or more regulatory agencies conflict, such as between transportation features and environmental policies.
- Near the threshold—Where a site may straddle a boundary that results in a change of standards, such as a site having frontage that is affected by two separate access categories with different driveway spacing requirements.
- Voluntary upgrades—Where applicants have access and could advance their project without triggering the need for a driveway permit, but would like to improve the existing condition (in such situations, lack of willingness to provide a variance may cause the applicant to leave the existing condition unimproved).

Consistency in administering variances is critical because inconsistent or infrequent application of standards makes them vulnerable to legal challenges. In a review of variance considerations for access management, Eisdorfer and Siley (*19*) noted the following:

> An exception which is granted to a standard has the effect of lowering that standard. Because agencies are obligated to act

> consistently, agency staff should be wary of recommending approval of any variance that they are not prepared to grant every time a similar circumstance arises. To achieve consistency, an agency must consider future decisions based on a record established through past decisions. This requires tracking of all exceptions which have been requested and noting the disposition and reasoning behind each outcome...Variances that are routinely granted should eventually be authorized as accepted practice.

Eisdorfer and Siley (*19*) suggest a hierarchy for variance decision making that reflects the relative importance of the access feature so that agency staff can "reach appropriate conclusions in cases where increasing compliance with one access management criterion can only be accomplished by decreasing compliance with another criterion." For example, using this concept, staff would place somewhat less emphasis on compliance with driveway spacing where a variance is needed to maintain adequate sight distance for safe operations. The hierarchy is as follows (*19*):

1. Safety (sight distance, etc.),
2. Spacing of interchanges,
3. Spacing of traffic signals,
4. Spacing of driveways,
5. Corner clearance,
6. Number of driveways on one property, and
7. Edge clearance between the driveway and property sidelines.

Demosthenes noted the importance of a two-step process for review of variance requests (personal communication, P. Demosthenes, CDOT, March 1, 2002). First, the agency should establish conditions for consideration of variances and weigh each request based on those conditions. A typical condition is the need for an applicant to demonstrate that he or she will endure exceptional and undue hardship without the waiver. Such record of necessity would go on file. Second, if the applicant can demonstrate that the waiver should be considered, then the next step is to evaluate the impacts of the waiver. The Colorado State Highway Access Code includes the following provisions relative to waivers (*20*):

> If the waiver is approved, the reasons for granting the waiver and references to the specific standards of practice should be clearly stated in writing and included in the Department permit. Restrictions on the use of the permit should be imposed as necessary to keep potential safety problems to a minimum. By the terms and conditions of the permit, the permittee may be required to improve, modify, eliminate, or correct the condition giving rise to the waiver when it becomes evident that the reason for the waiver no longer exists. . .

To gain insight into the state of current practice in this area, agencies were asked if they have a formal procedure for handling requests for deviation from driveway standards and, if so, to describe the process. Responses of state transportation agencies are evenly split across the 28 respondents. In the 14 states that have such a procedure, deviations are handled either by area/regional engineers, a committee, or the central office. In Montana, for example, "appropriate variations may be authorized after review of the proposed approach by the Chief Preconstruction Bureau." The Kentucky Transportation Cabinet reports that the central office reviews all requests that are "contrary to policy."

The Idaho DOT uses an application and appeals process for variance requests to ensure statewide consistency. The initial application is reviewed by the district or the local highway agency in areas where the local government has been approved to engage in driveway permitting. An appeal can be filed if the application is denied.

The CDOT attaches a form to the waiver request, which is circulated to the Design, Right-of-Way, Traffic, and Maintenance divisions for recommendations. It must be signed by the Region Engineer. Waiver denial cannot be appealed, as it is not considered a final agency action. The agency may continue to process the application and issue a permit without the waiver or issue a denial. At that point, the applicant may appeal.

The FDOT assembles an access management review committee to consider requests for deviation from access management standards for medians, signals, and driveway or street connections. The committee structure varies across district offices, but is typically comprised of the district design engineer, district maintenance engineer, and district traffic operations engineer. The district planning engineer is also included if the request involves a designated strategic highway (Florida Intrastate Highway System). Applicants may appeal the committee's decision to an administrative hearing officer.

As reported in the literature, benefits of the FDOT variance committee process include improved consistency in access permitting decisions (*21*). The highly professional, multidisciplinary review and the fair and open nature of the process help reduce the number of frivolous requests for variances from access spacing requirements, as well as inappropriate variance decisions that could become harmful precedents in the future. In addition, the variance committee process helps to buffer higher-level managers from political pressures to overturn staff decisions.

States without formal procedures tend to handle variances on a case-by-case basis. In Virginia, for example, deviations are granted by the chief engineer, after concurrence from the State's Location/Design and Traffic Engineering Divisions, but no formal criteria or procedures have been established to guide the process.

Maintaining consistency with driveway location and spacing standards is considered important to virtually all of

the state (96%) and local (94%) agencies that responded to the survey. As one state responded, "procedural and design consistency is very important. It results in predictability and a clear understanding of the process and standards."

At the local level, the most common method noted for maintaining consistency during the permit process is strict adherence to code requirements, design standards, and policies. For example, in Ramsey County, Minnesota, consistency is achieved by "applying equal criteria to all applications" during the review process. Many local agencies bring permits through a review committee that consists of various department representatives. Norfolk, Virginia, noted that committee review helps to maintain consistency.

Responses also revealed that the willingness of upper management and elected officials to enforce the standards is critical to maintaining consistency. Washington County, Oregon, also added the importance of "human factors," such as interaction with citizens and explaining the reasons behind the policy. Other methods noted for achieving consistency in driveway permitting decisions included training and supervision of staff, field inspections, being prepared to defend decisions to elected officials, and the use of a single reviewer, who is responsible for coordinating interdepartmental reviews and communication.

State transportation agencies were also asked how consistency is achieved within an office or between district/regional offices (Figure 16). The majority of respondents reported that they achieve consistency through regular meetings and communication (56%) and/or formal administrative procedures (48%). Centralized oversight is the third most frequent response (33%). Other methods to achieve consistency include "review teams or committees" (22%) and "frequent training" (19%). Several respondents mentioned more than one approach; for example, the SDDOT, which is in the process of adopting a new access management plan and permit process, intends to ensure consistency between the districts and central office through a "combination of administrative rules, an Access Management Operations Guide, and training."

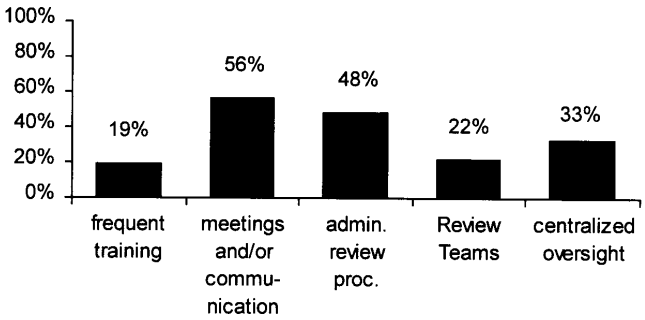


FIGURE 16 Percentage of respondents by state (state survey question 14: How do you achieve consistency within an office or between district/regional offices?).

One avenue whereby state transportation agencies may gain insight into potential consistency issues is through complaints and legal appeals. In Colorado, for example, complaints and appeals are handled by the central office, thereby providing a central point for identifying potential consistency problems.

The FDOT noted the importance of regular communication and statewide meetings. In Florida, the separation of access management and permitting oversight into two separate divisions of the central office, Planning and Maintenance, raises the issue of coordinating activities between the two divisions. Currently, only the Planning Office of the FDOT conducts statewide meetings to help promote consistency in access management decisions between district offices, whereas the State Maintenance Office promotes consistency by visiting each district office and conducting scheduled quality assurance reviews.

The Hawaii DOT noted interagency review and sign-off on applications as methods to assure consistency. In Hawaii, "The application and plans are referred to a number of city and state agencies with jurisdiction over specific aspects of the proposed work. Each of these agencies must sign the application form, indicating compliance with applicable laws."

Three states indicated inadequate statewide consistency. As one respondent commented, "while (consistency) is important to the Department, there is currently no structured mechanism in place to assure consistency."

INSPECTION AND ENFORCEMENT

Virtually all of the state respondents have some form of inspection and enforcement as part of their driveway regulation programs. The most popular methods of enforcement include reconfiguring the access at the property owner's expense, revoking the driveway permit, and closing or obstructing the entrance (Figure 17). Eleven states use all three of these approaches.

Only three of the states responding to the survey impose monetary penalties when a driveway fails to meet permit requirements. In Maine, penalties amount to $50 per day for residential and $100 per day for commercial. Utah charges $10 per day, whereas New Jersey collects $100 per day. Seven states also engage in enforcement through performance bonds, the proceeds of which can be used for rectifying "incorrect construction" or removing the driveway if a violation occurs. Other enforcement mechanisms

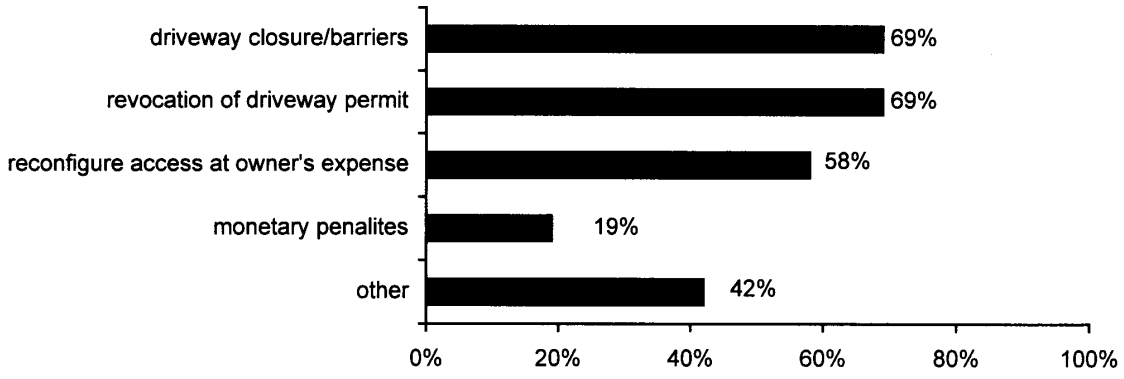


FIGURE 17 Percentage of respondents by state (state survey question 22: How are driveway permit requirements enforced?).

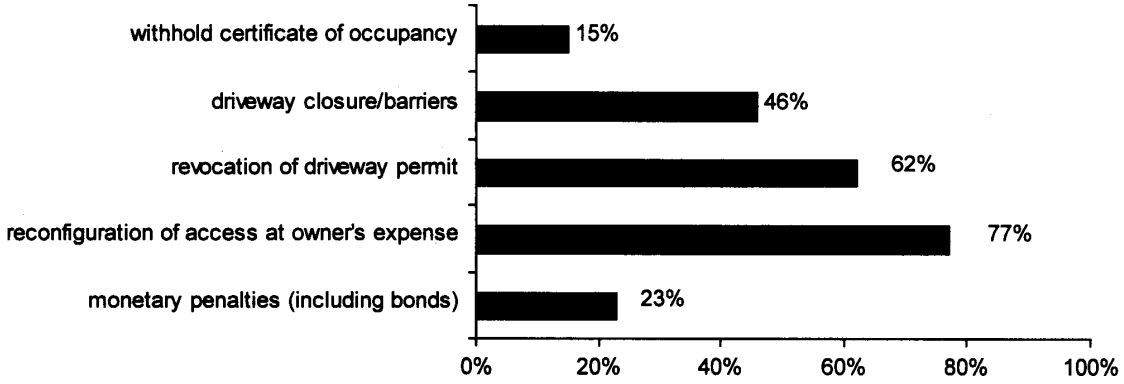


FIGURE 18 Percentage of respondents by locality (local survey question 2: How are driveway permit requirements reinforced?).

noted by respondents include legal action and denial of future permits.

Approximately three-quarters of the local respondents (76%) have inspection and enforcement programs to ensure driveways are constructed to adopted standards and that applicants comply with permit conditions. When standards and conditions are not met, the remedies are similar to those of state transportation agencies. Most of the local governments (77%) direct property owners to reconfigure the access at their own expense, revoke the driveway permit, or install barriers (Figure 18).

Only three local agencies impose monetary penalties. Durham, Ontario, has the authority to impose fines of not less than $10 and not more than $100 for the first offence, and not more than $500 for a second or subsequent offence. In San Buenaventura, California, the fine is double the permit fee. Another method of enforcement, as seen in Polk County, Iowa, and Spokane, Washington, is to withhold the Certificate of Occupancy until the driveway is improved.

INTERGOVERNMENTAL COORDINATION

Intergovernmental coordination between state and local agencies is important in driveway permitting for a variety of reasons. Access decisions often involve the participation of multiple divisions within an agency or of multiple agencies. Coordination strategies and procedures help to ensure the regular involvement of appropriate parties at each stage of the decision-making process. Alternatively, lack of coordination and incongruous decision making causes frustration for agency staff and applicants and can lead to enforcement problems.

Coordination is accomplished when the various parties responsible for access management decisions act in harmony. Effective intergovernmental coordination results in valid and timely decisions that are consistent with each agency's standards. Ideally, coordination would begin in the policy development stage, resulting in compatible standards and procedures within and across government agencies. Permit applications can then be processed efficiently and with less need for further specific coordination.

Multi-agency permit review, joint sign-off on permit applications, and early and ongoing communication are among the many other strategies for improving intergovernmental coordination and consistency in driveway regulation. Some local agencies will not issue building permits or certificates of occupancy until the applicant provides evidence of having received state approval of the access permit. Local agencies may also notify state transportation agencies of proposed land-use changes that involve access to a state highway to obtain early feedback on potential issues or impacts.

For insight into this issue, state transportation agencies and local government agencies were asked if and how they coordinate with one another on driveway permitting issues. Eighty-six percent of the state respondents reported coordinating with local agencies in driveway permitting (Figure 19).

Only 29% of the state respondents reported coordination is achieved through "consistent policies, procedures, and standards" (Figure 20). By contrast, many states actively seek local involvement during the permit review process. The more popular methods of coordination are "frequent informal communication" (67%) and "including local staff at pre-application meetings" (54%). More than half of the respondents also review all local subdivision proposals on state highways relative to driveway access.

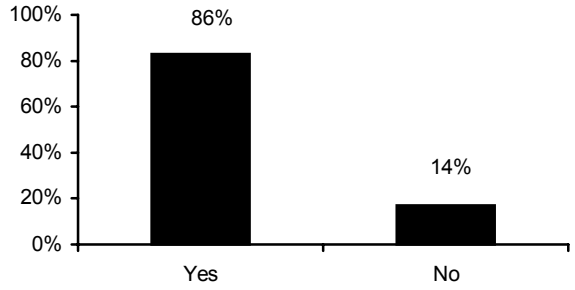


FIGURE 19 Percentage of respondents by state (state survey question 24: Do you coordinate with local agencies on driveway permitting issues?).

Forty-six percent of the state respondents solicit written comment from local governments on driveway permit applications. New Jersey, for example, requires developers to send a duplicate application to the "local municipality and county plan board for review and comment, concurrent with NJDOT review." Most of the states in this group, as well as seven that did not solicit local comments, noted that they perform a combined state and local review on large or complex driveway permit applications. In Utah, a new effort is underway to inform local governments of their joint responsibility in driveway regulation and to encourage local staff to participate in driveway permitting meetings.

Fifteen states (54%) withhold driveway permits until local development approval is obtained. For example, the Oregon DOT grants a conditional approval until local development approval is obtained. In Maine, the state transportation

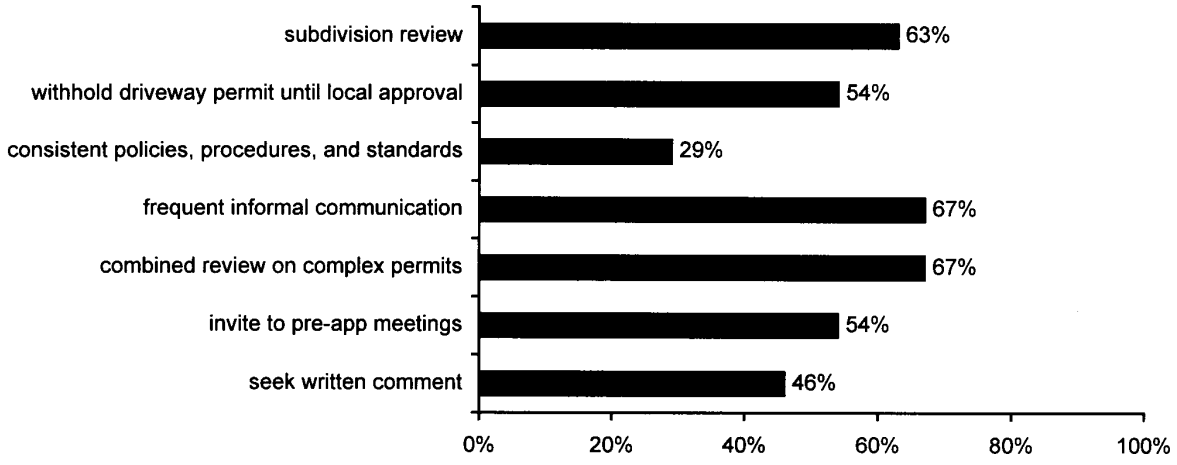


FIGURE 20 Percentage of respondents by state (state survey question 24: How do you coordinate with local agencies on driveway permitting issues?).

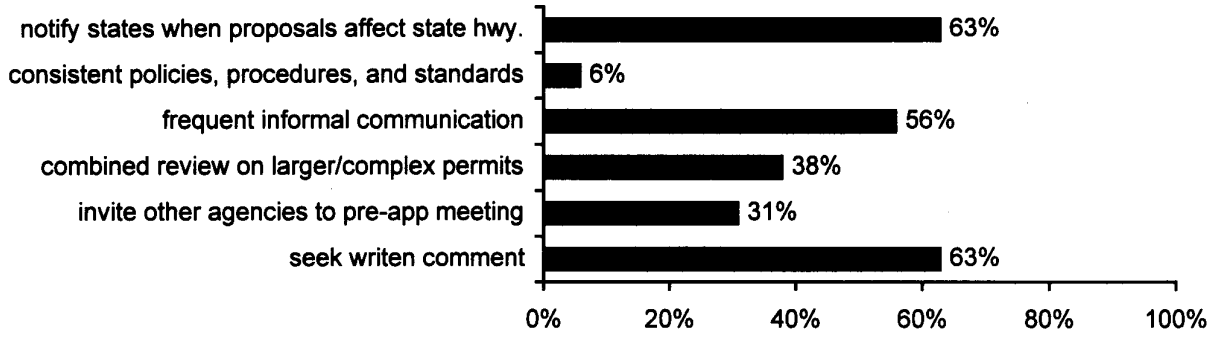


FIGURE 21 Percentage of respondents by locality (local survey question 19: How do you coordinate with state or other local agencies on driveway permitting issues in situations where jurisdiction over access and development issues overlap?).

agency seeks voluntary cooperation from local government agencies to hold local development permits until the state approves the driveway permit. Three states, Idaho, Kentucky, and Maryland, use all of the activities listed in Figure 20 to coordinate with local agencies. Only four states reported no coordination with local governments on driveway regulation.

All but one of the local respondents coordinates with the state and other agencies on driveway permitting issues. The most popular methods noted by respondents are to "inform the state transportation agency of all subdivision, rezoning, and development proposals involving access to state highways," "seek written comment on driveway permit applications," and "frequent informal communication with other agencies on driveway permit issues" (Figure 21). For example, in Springfield, Missouri, where the city approves site plans and the state approves driveway permits, the city and state inspectors "come to agreement before the (access) permit is issued."

More than one-third of the local respondents engage in combined interagency review of driveway permit applications for large or complex projects, and most of these same agencies invite other affected groups to attend their pre-application meetings. Polk County, Oregon, "sign(s) off on the (state) agency's permit." Only one local government reports that coordination is achieved through consistent policies, procedures, and standards.

CHAPTER THREE

CASE EXAMPLES

A few of the state and local agencies that responded to the survey were selected for the purpose of documenting case studies of current practices. The case studies illustrate variations in driveway regulation practices across the agencies and between state and local governments, as well as some areas of commonality. State transportation agencies reviewed included South Dakota, Florida, South Carolina, New York State (Region 4), and New Jersey. Local agencies reviewed included Licking County (Ohio), Washington County (Oregon), and the Regional Municipality of Durham, Ontario, Canada (to gain insight into driveway permitting practices in Canada).

STATE PERMIT PROGRAMS

South Dakota Department of Transportation (SDDOT)

The SDDOT has regulated access to state highways for many years using access permits, statutes, and policies. In 1999, however, recognizing that some of the statutes and policies are no longer adequate to address contemporary needs, South Dakota began a project to update its access management procedures. In 2000, the South Dakota Legislature granted the South Dakota Transportation Commission the authority to create new access management rules that require an approved access permit for each new access onto the state highway system. The following overview of South Dakota's new program is adapted from the South Dakota *Access Management Operations Guide,* published in 2001 (*3*).

Under the new rules, existing access points, either grandfathered or permitted prior to the 2001 rules, are allowed to remain until the land is developed, redeveloped to a higher intensity, or the access is changed through SDDOT reconstruction. Permits associated with reconstruction will be generated through the access management specialist, based on the right-of-way agreements. The appropriate Area Office will process all other permits.

Applicants are encouraged to meet with the area engineer or designee prior to submitting an application. This pre-application meeting provides an opportunity for SDDOT personnel to gain a preliminary understanding of the access proposal, and for the applicant to understand the application and review process. The pre-application meeting can be tailored to the complexity of the proposed access; a simple field entrance may require nothing more than a phone call, although a large commercial development may require one or more meetings involving the applicant, the department, and local government officials.

The applicant is required to complete all items in the area indicated on the front of the application, including

- Name and address of applicant;
- Name and address of property owner, if different from applicant;
- Legal description of property to be served by the access;
- State highway and location on the highway to be accessed;
- Land use of the property to be served by the access;
- Type of access requested;
- Estimated date of construction;
- Signatures of the applicant and, if different from the applicant, the property owner; and
- Signatures of local planning officials, such as the county zoning administrator or municipal planning director with jurisdiction over the proposed access site. The area engineer may determine which officials need to be contacted and may waive these signatures if the local government does not conduct planning or zoning.

In addition, the area engineer or designee may require the following additional items of information:

- A proposed access approach design,
- A vicinity map indicating the access location,
- Estimated daily traffic volumes to and from the site,
- Estimated daily traffic volumes to and from the access,
- Three copies of a site plan showing the design details of the access point,
- A construction traffic control plan,
- Proof of liability insurance,
- A detailed development plan,
- A drainage plan,
- A traffic impact study,
- A re-vegetation plan, and
- Other information deemed necessary by the area engineer.

The traffic impact study listed earlier involves a detailed analysis of traffic operations around the site and can be required for any development that generates at least 100 vehicle trips during the peak hour. The SDDOT access

management specialist and region traffic engineers can provide more information to applicants, as well as guidance about conducting traffic impact studies. Upon acceptance of the completed application, Area Office personnel record the date on the front of the application. The review period, limited to 60 days, begins upon acceptance.

The completed application is then reviewed and a decision rendered. It is expected that most access decisions can be made within 30 days. If not, the applicant must be notified of the status of the application at 30 days and a final decision is required within 60 days of receipt. The review is to be tailored to the complexity of the application. Area Office personnel are instructed to do the following:

- Record the highway, mileage reference marker, and displacement on the back of the form;
- Determine the highway access classification and criteria from the rules and evaluate whether the proposed access meets the access criteria;
- Check sight distance and other potential safety impacts;
- Determine which standard design details, if any, should be provided to guide access construction;
- Complete the decision, terms and conditions, and signature blocks on the front of the form;
- Attach the standard conditions to the signed permit; and
- Provide the original form to the access management specialist and retain copies for the Area Office and Region Office.

The manual advises permit staff that an analysis of corner clearance and traffic operations will frequently be needed in urban areas. Access criteria in adopted rules describe the conditions under which a new access may be approved. The area engineer is advised that circumstances regarding the granting of a variance should be completely documented and that variances may be granted when the applicant provides proof that

- Reasonably convenient access cannot otherwise be obtained,
- No feasible engineering or construction solutions can be applied to mitigate the condition, and
- No alternative access is available from a roadway other than the primary roadway.

The Area Office has the responsibility to ensure that all terms and conditions of the permit have been complied with during and after construction. SDDOT personnel are directed to be aware of any changes in the use of the access that may prompt review of the permit. In turn, once a permit is approved, the permittee has the following time-limited responsibilities:

- Notify the Area Office at least 2 days prior to beginning construction;
- Complete the construction within 45 days, unless an extension has been approved according to the rules; and
- Notify the Area Office at least 2 days before substantial completion.

The department and the local government may inspect the access during construction and upon completion to determine that all terms and conditions of the permit are met. Inspectors are authorized to enforce the conditions of the permit during construction and to halt any activities within state right(s)-of-way that do not comply with the provisions of the permit, that conflict with concurrent highway construction or maintenance work, or that endanger highway property, natural or cultural resources protected by law, or the health and safety of workers or the public.

The permittee is required to have a copy of the permit available for review at the construction site at all times. Minor changes and additions may be ordered by the department or local authority field inspector to meet unanticipated site conditions.

Changes in access approach use or design not approved by the SDDOT may result in the revocation or suspension of the permit. The permittee is responsible for the costs of construction, maintenance, and removal (if necessary) of the approach. A permit is considered expired if the access is not under construction within 1 year of the permit issue date or before the expiration of any authorized extension. A 1-year extension may be requested before the permit expires, but only one extension may be granted. Any person wishing to re-establish an access permit that has expired may begin again with the application procedures.

It is the responsibility of the property owner and permittee to ensure that the use of the access to the property is not in violation of the permit terms and conditions. The terms and conditions of any permit are binding on "all assigns, successors-in-interest, heirs and occupants." If any significant changes are made or will be made in the use of the property that will affect access operation, traffic volume, and/or vehicle type, the permittee or property owner must contact the department to determine if a new access permit and modification to the access are required.

Florida Department of Transportation (FDOT)

Rule 14-96 of the Administrative Code of Florida regulates vehicular access to and from transportation facilities under the jurisdiction of the FDOT. Rule 14-96 describes the connection permit application process and procedures, a voluntary pre-application process, and requirements for modification or closure of connections to the State Highway System. The rule also promotes close cooperation with

local governments in site planning decisions that affect the safe traffic operations of the State Highway System. Like other states, Florida's access permit regulations are based on the concept of reasonable access and do not grant the right of direct access to the public roadway system.

Although any new connection to the State Highway System is required to be permitted under the direction of Rule 14-96, any unpermitted connections to the State Highway System in existence prior to July 1, 1988, and in continuous use for a period of 1 year or more, are considered "grandfathered" and do not require a permit. Such connections to the State Highway System may continue except where significant land-use changes have occurred or modification or closure is determined to be necessary because the connection would jeopardize the safety of the public or have a negative impact on the operational characteristics of the highway, as substantiated by an engineering study. All other unpermitted connections are subject to closure.

All applicants are strongly encouraged to request a pre-application meeting on the site plan and proposed connections with the department and affected local agencies prior to filing a connection application and before receipt of development or site plan approval. This review is performed without a fee. The purpose of the pre-application meeting is to establish the application category and the general location and design of connections to the property. Traffic study requirements may also be determined during this meeting.

A determination will also be made at the pre-application meeting as to whether or not approval of the permit request may be contingent upon the findings of a District Variance Committee. This helps to reduce the need to devote agency resources to the review of permit requests that would not be permissible, and also saves planning and design time and costs to applicants for such permits. The pre-application meeting is advisory only and the results of this meeting are not binding on the department or the applicant. A connection application must still be submitted to FDOT and a Connection Permit must be issued before an applicant can initiate construction.

Access permitting by FDOT is decentralized and occurs at the district level. Where feasible, access permits are processed by the local maintenance offices located in each county. These offices are the first stop for all applicants who desire an access permit. Permit applications that require more extensive review are forwarded to the District Permits Office, which is headed by a district permits engineer. These applications may be forwarded to several offices within the district to ensure that the applicant's plans meet current standards, specifications, and design criteria. Applicants are charged a fee based on the number of trips (Table 3).

TABLE 3
FEES CHARGED TO PERMIT APPLICANTS BY FDOT

Category	Vehicles per Day	Fee
A	1–20	$50.00
B	21–600	$250.00
C	601–1,200	$1,000.00
D	1,201–4,000	$2,000.00
E	4,001–10,000	$3,000.00
F	10,001–30,000	$4,000.00
G	30,001+	$5,000.00
Temporary		$250.00

The permit application and fees are submitted to the local maintenance office, which checks the application to ensure that it is complete. If the application is not accepted as complete, the local office will return it with comments within 30 days. The applicant has 60 days to provide the department with all requested information. Applicants who have not submitted an acceptable application within a 180-day period must repeat the application review process. An applicant may request a waiver of the time requirements if more time is needed to provide additional information or to correct deficiencies in an application.

A complete application consists of the Connection Application Form, application fee, site plans, drawings, traffic data, and connection and roadway information. The following information is required of all applications for all connection categories:

- Identification and signature of property owner and applicant,
- Existing and planned property use in sufficient detail to determine the appropriate connection category of the application, and
- Location of all existing and proposed connections on the property.

In addition to the information required of all applicants, the following information is required from all applicants applying for categories C, D, E, F, and G permits (Table 3):

- Trip generation data and peak-hour trip generation for the site,
- A site plan,
- Detailed information on neighboring transportation facilities and connections, and
- Connection location and design.

All category D, E, F, and G applications or any application requesting or requiring a new traffic signal, a new median opening, an auxiliary lane, or a modified median opening, are also required to complete a detailed traffic study. The traffic study must include at least

- Critical peak-hour turn movements from each proposed connection and abutting public road in graphic form, and

- Traffic operations analysis of sufficient depth to analyze the impacts of the development on the surrounding transportation system.

When an application is deemed complete, it is forwarded to district specialists in Traffic, Drainage, and Design for review, and the FDOT must inform the applicant of a decision within 90 calendar days. The decision notification will include important details regarding the analysis and decision on access approval or denial. The notification will take one of the following forms:

- Notice of Intent to Issue Permit,
- Direct Permitting, or
- Notice of Intent to Deny.

Notice of Intent to Issue Permit

The FDOT will issue a Proposed State Highway Access Connection Notice of Intent to Issue Permit if it determines that an application is consistent with Rules 14-96 and 14-97 (establishing Access Management standards) and will meet or exceed the minimum standards, or if the FDOT determines that an application is not consistent with Rules 14-96 and 14-97, but that denial of a connection would be denial of reasonable access and that such a connection would not jeopardize the safety of the public or have a negative impact on the operational characteristics of the highway.

The notice will set forth all conditions not otherwise required by Rule 14-96 for issuance of a permit and maintenance of the connection(s). The notice will also specify which of the conditions must be met before issuance of a permit and those that must be met after the permit is issued. The notice does not authorize the initiation of connection construction within the FDOT right-of-way, but acknowledges completion of the agency review and indicates the FDOT's intent to issue a permit upon compliance with the conditions.

The notice is valid for 1 year and may be extended, pursuant to FDOT approval, upon a showing of good cause by the applicant. If the agency determines that the applicant has failed to comply with all conditions required prior to the issuance of a permit, it shall notify the applicant that a permit will not be issued and specify the conditions that have not been met. FDOT's action will become final unless a petition for a hearing is filed within 21 days after receipt of the notice.

Assurance of performance is required if the permit requires extensive work within the state right-of-way. Prior to the issuance of a permit, the applicant will be required to provide a security instrument (performance bond), with FDOT named as the beneficiary, in the estimated dollar amount of the improvements. The security instrument must be valid for a sufficient time to cover the construction and inspection of the permitted work. The FDOT will waive the security instrument requirement where there is an agreement with the appropriate local government to withhold the certificate of occupancy until problems are corrected and where there is no indication that the requirements of the Rule 14-96 chapter will be violated.

Once permitted, failure to abide by the permit provisions will be just cause for the FDOT to order alteration of the connection, revoke the permit and close the connection at the expense of the permittee, or for the FDOT to exercise the performance bond to have the necessary modifications made. The permit requirements are binding on the permittee, the permittee's successors, heirs and assigns, the permit application signatories, and all future owners and occupants of the property. The FDOT may require that these conditions be recorded with the legal description of the property where cross-access agreements or other applicable conditions apply.

Other permitting agencies may require an indication from the FDOT that the plan presented by the applicant is viable and likely will be permitted. Once granted, a "Notice of Intent to Permit" clears the applicant to obtain other necessary permits and approvals including

- Local government approval of the site development,
- Indemnity agreement with the department,
- Liability insurance,
- Department drainage permit requirements,
- Notification of utility owners, and
- Performance bond to cover all work within the right-of-way.

If local development approval is not granted, then the Notice of Intent to Permit is void. If local development approval is received, then the applicant may obtain a signed permit from the district permit engineer.

Direct Permitting

If an applicant provides an application that otherwise meets all the requirements of Rule 14-96, and the FDOT is not imposing any additional conditions, the FDOT will issue a permit directly.

Notice of Intent to Deny

The FDOT will send the applicant a Proposed State Highway Access Driveway/Connection Notice of Intent to Deny Permit if the agency determines that

- An application is not consistent with currently adopted FDOT rules and design standards, or additional site-specific operations and safety concerns apply;
- Denial of a connection would not be a denial of reasonable access; or
- Denial of a connection would be a denial of reasonable access, but that a connection would jeopardize the safety of the public or have a negative impact on the operational characteristics of the highway.

When a Notice of Intent to Deny is issued, the applicant is also provided with information on the appeal process. The appeal process involves a review of the relevant issues by the District Variance Committee, which addresses deviations from access management standards related to medians, signals, and driveway or street connections. The review may be arranged through the District Permits Office. The applicant receives a professional and considerate review of the opposing issues involved. A decision is made and communicated to the applicant that day. Further appeals may continue to an Administrative Hearing as prescribed in Section 120, Florida Statutes.

Construction

Applicants must retain a registered professional engineer to oversee the construction of the permitted driveway and establish a construction schedule before the district permit engineer will sign the permit. Field inspections are conducted to ensure that the driveway is being constructed as permitted.

Significant Change in Use

If at any time the property undergoes a "significant change" in use, as defined in the rule, the property owner must reapply for an access permit. If the FDOT determines that the increased traffic generated by the property does not require modifications to the existing permitted connections, a new permit application shall not be required.

South Carolina Department of Transportation (SCDOT)

The state of South Carolina has long recognized the necessity to minimize conflicts on public roadways through the regulation of access. In 1956, the South Carolina legislature passed legislation establishing a permit process for driveways and other encroachments in an effort to regulate the location, design, and construction of driveways on public roads, while also addressing a need for reasonable access from adjacent properties.

The permit process is based on a belief that "reasonable access means that a property owner must have access to the public highway system, rather than being guaranteed that potential patrons should have convenient access from a specific roadway to the owner's property." This standard recognizes that a balance has to be struck between the public's need for efficient and safe traffic movement and an individual property owner's need for adequate access to the highway system. Through its permit process, South Carolina has implemented comprehensive driveway spacing, design, and other access-related standards (enacted pursuant to Sections 57-3-610, 57-5-1080, and 57-5-1090 of the *Code of Laws of South Carolina*, amended in 1976) to ensure reasonable access to state highways from private property, but in a manner that preserves the efficient and safe flow of traffic. The access standards were last updated in 1996.

Given these standards, a number of conditions and limitations are applied in considering the manner in which access will be accommodated on state roadways from abutting properties. Safety is the most important limitation on the provision of access. In some cases, the state may find it necessary to restrict access due to unsafe conditions related to sight distance, geometry, vertical grades, horizontal curves, or other unique conditions. In addition, access at points within or near acceleration lanes may be restricted, limited, or prohibited.

To improve safety conditions while still accommodating access needs, the state may require access from service roads instead of the mainline. In addition, the SCDOT may install highway medians that limit property access to right-in and right-out movements from the state roadway. Joint and cross access with adjacent properties is encouraged.

Access spacing standards have been established to avoid undue interference with or hazard to traffic on the roadway. The access spacing standards are based on the operating speed of the roadway to which access will be achieved. They range from a minimum of 100 ft between driveways on roadways operating at or below 30 mph, up to a minimum of 350 ft between driveways on roadways operating at 55 mph or above. These minimum distances are measured from the center of one driveway to the center of adjacent driveways. Although these standards are flexible to accommodate unique conditions, nowhere are two one-way driveways allowed to be within 40 ft of each other, as measured from the driveway edges.

The state does not limit itself to applications for access for undeveloped land, but also considers changes in access conditions resulting from land-use changes and redevelopment. The SCDOT reserves the right to reconsider existing access when there is a change in land use that will affect the amount, type, or intensity of traffic activity to a site, although these thresholds are not specifically defined. This is true even when no significant building renovations are planned.

In some cases, changes in access may be required that may include a change in the width of existing driveways or a change in the number of driveways permitted on an individual property. In addition, the SCDOT considers access to future subdivided parcels during the initial access permitting process and is not obligated to allow direct access to a state roadway from any newly created parcels from the subdivision of a larger overall development.

The encroachment permit process is implemented at a county level, under the direction of the SCDOT's resident maintenance engineer in the county in which the work is to be completed. Large-scale and other complex developments may also be subject to review by central headquarters' staff before approval. This includes, but is not limited to

- Shopping centers and office complexes of more than 100,000 gross square ft,
- Planned unit developments of 75 acres or more,
- Industrial developments with more than 350 employees, and
- Residential developments of more than 100 single-family detached dwelling units or more than 200 total dwelling units.

To obtain a permit, the property owner or the property owner's agent must complete a permit application. The application itself requires little more than the name and address of the applicant, the type of encroachment (a driveway in this case), and a description of the location of the proposed encroachment. However, significant additional documentation is required in the submittal package, including

- A drawing giving details of the proposed work, including such items as the existing and proposed roadway geometry, pavement design specifications, proposed drainage features, and existing sight distance;
- Proof of bonding, when required; and
- A Stormwater Management and Sediment Control Plan for projects that involve bringing stormwater runoff or sediment to the state highway from a developed area of 2.0 acres or more.

Upon receipt of the application package, the SCDOT provides the construction completion date and any special requirements it deems applicable. In addition, the SCDOT may require the posting of a performance bond prior to the issuance of a permit to ensure compliance with all terms of the permit. Performance bonds must be equal to 1.5 times the estimated construction cost of the project, or a minimum of $5,000. Performance bonds are released only after the work described in the permit has been completed to the satisfaction of the SCDOT.

The SCDOT requires coordination with local jurisdictions during the encroachment permit process. Where local and state requirements are applicable to a project, the more restrictive requirements must be met. Additionally, for applications involving a significant increase in traffic volume, the SCDOT encourages applicants to submit a preliminary site plan for review by the SCDOT and the local jurisdiction. This step saves time, effort, confusion, and frustration for all of the parties involved. Additionally, shopping centers and other large developments may be required, at the discretion of the SCDOT, to complete traffic impact studies before the issuance of an encroachment permit.

New York Department of Transportation (NYSDOT), Region 4

The Region 4 office of the NYSDOT issues approximately 1,200 highway work permits per year—the second highest number in the state. A stated objective of Region 4 is to continually seek ways to improve the permit process, with an emphasis on reducing the time it takes customers to obtain a permit. Given the volume of permits processed every year and the resultant strain on staff to achieve their stated goal, Region 4 initiated an effort in 1995 to streamline the permitting process.

The first streamlining effort was focused on the development of four checklists that specify what is required when submitting plans for a permit. The four checklists, developed cooperatively by Region 4 staff and representatives from the Rochester Chapter of the Consultant Engineer's Council, were for minor entrance commercial permits, major entrance commercial permits, utility permits, and traffic impact studies.

The major and minor entrance permits were designed to inform developers and their consultants of what information needs to be submitted in each step of the permitting process. Major entrances were defined as being for land uses generating more than 100 peak-hour trips or requiring highway improvements; with all other entrances defined as minor entrances. The major entrance checklist identifies a total of 41 specific items that need to be included in the preliminary submission, whereas the minor checklist identifies 31 items.

The items identified on the checklist range from site plans and location maps to driveway typical sections and traffic signal designs. Some of the items required on the major entrance checklist that are not on the minor entrance checklist include the results of a traffic impact study, maintenance and protection of traffic details, and proposed sidewalk locations. The checklists also include a detailed list of specific forms to be submitted for final review. By adhering to the requirements of the checklists, applicants ensure that all necessary forms and other items are submitted, thereby reducing delay.

After a trial period, it was found that the checklists alone, although valuable in reducing the number of incomplete submissions, did not significantly reduce the length of time required to complete the process and have a permit issued. To improve on the first streamlining effort, a new group was formed (consisting of Region 4 staff, representatives from the Rochester Chapter of the Consultant Engineer's Council, and development community representatives) and charged with the task of reviewing the existing permitting process and developing a strategy for reducing the time it takes to issue a permit without jeopardizing the safety, integrity, and capacity of the region's highways.

The strategy developed by the group centered on better defining the roles and responsibilities of each participant in the permitting process, including developers, consultants, contractors, and the NYSDOT. A permit process flowchart was developed that defined the revised process (scope, design, application, construction, and close out) and the responsibilities of each process participant at each step (see Figure 3). Additional guidance was also developed that described in detail the actions to be taken at each step of the process.

No new requirements were integrated into the new process, as defined in the permit process flow chart. The new process placed sole responsibility for the design on the consultant and reduced the NYSDOT's review function. Also, a "conceptual design" component was added to the process in which initial design concepts and exceptions were discussed and ground rules were established. In this manner, consultants and developers did not waste time and energy on flawed design concepts.

The new process went into effect in April 2000, with a variety of anticipated benefits to each of these participant groups.

Developer

- An increased awareness as to what the process is and how long it will take,
- Defined time lines associated with critical steps, and
- A process for closing out the project that will result in decreased bonding periods.

Consultant

- A clear step-by-step approach to obtaining a permit,
- Early resolution of alternative designs or exceptions, and
- Clear direction from the NYSDOT throughout the process.

NYSDOT

- Tracking of applications through the entire process,
- Improved submissions due to clearer requirements, and
- Reduced review time due to early resolution of issues.

A small, but real, decrease in the amount of time it takes to issue a permit has been documented since the program was implemented. This was not measured in actual processing time, but in the decreased number of submissions required to receive a permit per project. That number decreased from approximately six submissions per project to approximately five. Unfortunately, future monitoring of the time benefit of the new process may be difficult, because the NYSDOT has shifted the review function from a small staff of dedicated reviewers to the entire capital project staff, resulting in additional time benefits that are not attributable to the new process.

In addition to the documented time benefit, process participants reported being pleased with the additional time spent early in the process resolving design alternatives. This provided consultants and developers with clear direction on what concepts will receive final approval, and it allowed the NYSDOT to deal with problem issues earlier in the process.

New Jersey Department of Transportation (NJDOT)

The New Jersey access permitting program has the goal of authorizing the construction of an access point to the state roadway system as well as the use and maintenance of that access (*9*). To achieve that goal, the NJDOT administers a comprehensive permit system that covers the construction, use, and maintenance of an access point, and addresses the following stages:

- Regulation or guideline implementation,
- Pre-application activity,
- Application submittal,
- Application review,
- Permit issuance,
- Access construction and inspection, and
- Access use and maintenance.

Access permits are issued for individual lots only and are not issued for whole developments or to an individual property owner. This allows a permit to be transferred when there is a change in ownership. Additionally, a permit expires when a property is subdivided or consolidated. Access for the newly created lots must be reapplied for and considered on their own merit.

To efficiently and effectively address the range of potential traffic impacts of various land uses, the NJDOT separates permits into categories based on traffic volumes. The *New Jersey State Highway Access Management Code* identifies the following categories of access permits (*9*):

- Minor Access Permit—Site traffic generation of fewer than 500 vehicles per day, total entering and leaving.
- Major Access Permit Without Planning Review—Site traffic generation equal to or exceeding 500 vehicles per day, entering and leaving, and fewer than 200 vehicles per hour, entering and leaving, during the peak hour.
- Major Access Permit with Planning Review—Site traffic generation of 500 vehicles per day entering and leaving, and 200 vehicles per hour or more, entering and leaving, during the peak hour. A traffic impact study is required for this category of access permit.

Access permits are processed by personnel of appropriate skill levels in relation to the category of the access permit under consideration. Maintenance personnel located in NJDOT regional offices process minor permits and inspect the construction related to access permits. A team of specialists in a separate Bureau of Major Access Permits, located at the NJDOT headquarters, process major permits. Fees are charged for the processing of permit applications based on the category of the access permit. Significantly higher fees are charged for major permits, with planning review based on the amount of staff time needed for review.

Pre-application meetings are required for complex access permits. The pre-application meeting allows the applicant and NJDOT staff to work out potential problems before the applicant has spent a great deal of time and effort preparing an access permit application, and increases the speed with which an application review can be conducted. The applicant is required to submit the following information at least 1 week prior to the pre-application meeting:

- Lot location noting route, direction, milepost, municipality, and county;
- Size and type of each different land use;
- Access and highway improvement schemes under consideration;
- Trip generation, distribution, and assignment for each land use and time period analyzed;
- Opening date or staging for development;
- Buildout year;
- Involvement with a NJDOT traffic signal or electrical facility; and
- Suggested agenda for pre-application meeting.

The New Jersey code contains a detailed checklist of items to be considered in the review of each category of permit. It also specifies the minimum traffic progression bandwidths that must be achieved where signalization is involved. An access permit application review can result in one of the following three outcomes:

- Approval,
- Conditional approval, or
- Denial.

If a permit is denied, the denial must be firmly established on published requirements. Specific actions to be taken are written into conditional approvals. The code also includes a procedure and methodology for establishing maximum volume limits as a condition of the permit when the property frontage is less than the minimum access spacing. Another unique feature of NJDOT's access permitting is that the code specifies the level of access (permitted movements) to each state highway segment identified by milepost. Permitted movements for each connection are identified in the access permit.

Provisions have been made in the code to permit deviation from the access permitting standards. Because an agency is obligated to administer the access permitting program equitably and consistently, any deviation granted to one applicant must be granted to other applicants under similar circumstances, after demonstrating that the standards could not reasonably be met.

LOCAL AND REGIONAL PROGRAMS

Licking County, Ohio

Licking County, Ohio, seeks to balance the right of reasonable access to private property from state and county roadways with the right of citizens of Licking County to safe and efficient travel on those same roadways. The county attempts to achieve this balance through regulations that provide and manage access to land development while preserving the regional flow of traffic in terms of safety, capacity, and speed. These regulations are implemented through the driveway permit process and the land division approval process.

The driveway permit process is a fairly straightforward process in which applicants submit a driveway permit application to the Engineering Department. The application requires the name of the applicant, the location of the property, the exact location of the access point, and other site-specific information. Additional information may be requested depending on the complexity of the site plan, the proposed driveway location, and the existing roadway configuration.

The permit process is a vehicle for monitoring compliance with driveway spacing standards that are established by roadway classification for major and minor arterials and major and minor collectors. In general, the access standards do not pertain to lower order roadways. The requirement for spacing between access points for a property on a classified

roadway is the least strict of the minimum safe stopping distance for either the posted speed limit on that roadway or the designated speed limit for that road segment's classification. The connection spacing standards are based on the AASHTO "Green Book" guidelines for safe stopping sight distance (*22*).

In addition, the county encourages property owners to align their driveway openings with driveway openings across the street. Applicants may be required to make additional improvements, including turning lanes, where it is deemed necessary by county staff for safety reasons. The county also encourages joint and cross access, particularly when the proposed driveway does not meet the minimum driveway spacing for the roadway classification.

The county does permit temporary access under certain conditions, but requires that the temporary access point be closed once alternative access becomes available. The expense of reconfiguring access is borne by the property owner. The county does not, however, collect funds up front in the event that the property owner is unable or unwilling to close the temporary access point. Where the proposed driveway location presents major safety concerns, the county may not permit temporary access. In general, however, the county attempts to work with the property owner to achieve reasonable access within the confines of the existing site plan and access configuration.

The personnel and agency involved in reviewing a driveway permit application depends on whether the road to be accessed is managed by the state, the county, or a township. A fee is charged for a driveway permit on a state road, but not on a county or township road. The county averages approximately 2 weeks between the receipt of a driveway permit application and the issuance of a driveway permit. To process applications in a timely manner and track the application through the process, the county has developed a computerized tracking system for internal use only. The tracking system allows county staff to track compliance with permit conditions even after a permit is issued. The county monitors condition compliance through visual inspection of the completed driveway.

Many access decisions are handled through the land division process, instead of the driveway permit process. There are two land division categories: major and minor. A minor land division includes actions that will (1) result in no more than five lots, including the remainder of the original lot; (2) not involve the opening, widening, or extension of any street or road, or easement of access; and (3) not be located on a roadway classified as a minor or major arterial by Licking County. Major land divisions include all land division actions that are not covered by the criteria for minor land divisions as well as any development activity that will involve multi-family, commercial, industrial, and quasi-public land uses.

The land division process covers a wide range of development issues including possible environmental impacts, infrastructure needs, and transportation. Provision of access is only a small component of the overall land division process. In general, both the major and minor land division processes involve the submission of a site plan that outlines the proposed site circulation system and access points, both within and between the lots to be created by the subdivision and to the external roadway network. In both cases, the proposed access must meet the driveway spacing standards applicable to the roadway to be accessed. This includes internal subdivision access where a new arterial or collector will be developed and made part of the state or county roadway system.

Developers involved in the major land division process are encouraged to participate in a pre-application review process to provide a venue for discussion and negotiation outside of the official subdivision review process. Issues related to access can often be worked out there, so that they do not become a point of contention later in the process, after significant time and money have already been expended.

Also, the major land division process requires notification and review by the Ohio DOT (ODOT) for any action proposed within 300 ft of the centerline of a state highway, proposed new highway, or a highway for which changes are proposed. This gives ODOT an opportunity to identify access and other transportation issues and to take such action as required. Site plan approval is withheld for 120 days from receipt of the notification by ODOT or longer, based on an agreement between the property owner and the agency.

Washington County, Oregon

On Washington County, Oregon, roadways access is controlled through one of two separate permit processes, for facilities and access; both of which are in place to ensure public safety and efficiency. Additionally, access to county roads is controlled and monitored by permit to ensure consistency in meeting the minimum engineering requirements for maintenance and liability purposes.

The Facility Permit process applies to larger developments requiring land-use approval, engineered plans, and extensive infrastructure improvements. Examples of infrastructure improvements that would trigger the Facility Permit process include, but are not limited to

- Sidewalk construction,

- Changing road grades,
- Road widening,
- Construction of new streets,
- Turn lanes, and
- Traffic signals.

Washington County requires all new development on county roadways within the urban growth boundary to incorporate sidewalks into the site plan. Therefore, most new development of any size within the growth boundary is covered under the Facility Permit process. This includes access to internal subdivision roadways that will eventually become part of the county roadway network.

The Facility Permit process is managed by the Washington County Land Development Assurances Office and is wrapped up in the broader site development and approval process. The Facility Permit process is initiated when a developer/applicant submits an application for land development approval, including a proposed driveway, and when the proposed development meets the triggers listed previously. The Land Development Services staff then prepares a Conditions of Approval document and forwards the application and conditions document to the Land Development Assurances Office, along with one set of construction plans and a construction cost estimate.

Based on the information submitted, the Land Development Assurances Office staff provides a Public Improvement Contract and sends it, along with the necessary examples and forms, to the developer/applicant. The contract requires that the developer/applicant provide monetary assurances for 100% plus 10% of the construction costs as estimated by the office of the county engineer. The developer/applicant is then responsible for submitting all required information, including the contract, to the Land Development Assurances Office. Once this has been done, and staff has executed the contract, a Facility Permit is issued. The process typically takes between 4 and 6 weeks. The expiration date of the contract is the expiration date of the permit. Extensions are possible at the discretion of Washington County.

When the public improvements are finished and all appropriate documentation has been furnished showing that the improvements were built to Washington County standards, then the Public Improvement Contract is released. If the access point is designated a public street, a maintenance period of 1 year is requested. During the maintenance period, the developer/applicant agrees that, if after 1 year any deficiencies are found during a final inspection, they (the developer/applicant) will be responsible for correcting the deficiency.

An Access Permit allows construction of an access point and its related improvements (such as vegetation removal, grading the roadside bank, or construction of a culvert under the driveway) in the county right-of-way. The Access Permit process generally applies to smaller developments requiring an improvement to existing access or new access to a county road and is not covered by the Facility Permit process. Access requests that may be covered under the Access Permit process include, but are not limited to

- Temporary construction access,
- Rural subdivision or private road access with no other public right-of-way improvements such as drainage facilities or sidewalks, and
- Individual relocation or construction of driveways.

Unlike development within the urban growth boundary, sidewalks are not required in the rural area. Therefore, most small-scale rural development along county roads is covered under the Access Permit process. Developments seeking access to a county road within the urban growth boundary that have an existing sidewalk are also covered under the Access Permit process, if no additional infrastructure improvements are required.

Four types of Access Permits are issued by Washington County. A Residential Access Permit allows the construction of a gravel, asphalt, or concrete driveway in the rural areas of the county, and an asphalt or concrete access driveway in the urban area. A residential driveway must be between 12 and 24 ft wide, unless special permission is granted for a wider driveway (up to 35 ft in width depending on the amount of frontage available). A Commercial Access Permit allows a driveway to be built between 15 and 40 ft wide. Temporary and Agricultural Access Permits allow driveways of various widths determined by their specific intended use (up to 40 ft wide for very large combine truck use). The construction material guidelines described above for Residential Permits also apply to Commercial Temporary and Agricultural Permits.

Applicants must comply with a number of specific criteria to receive an Access Permit. Included in the criteria is a requirement to meet access spacing standards according to road classification (as outlined in the Washington County Development Code) and sight distance standards. Sight distance standards require access spacing at 10 times the posted speed limit or 10 times the Basic Rule for unposted roads. The Basic Rule is 55 mph in the rural parts of the county, and 25 mph in urban areas.

Developments that do not meet spacing standards because of physical constraints of the site may be granted interim driveway permits until conforming access becomes available. They may also be encouraged to share with or obtain access from an adjacent parcel. Interim access must adhere to all minimum county traffic safety and operational requirements. Property owners seeking an interim permit

must record two agreements with the deed: the first, agreeing to participate in any future project to consolidate access points, and the second, agreeing to abandon the use of the existing private access way when adequate alternative access becomes available. These agreements are tracked by the county's Code Enforcement Division and by the county transportation planner, who is responsible for conducting a review of prior case files as part of the regular review of Land Development Applications for all transportation issues.

Washington County has made the Access Permit procedures and permit application form available on-line, but only accepts hard copies of the application form. Applicants must also submit copies of a site plan indicating existing and proposed access, a copy of the current Assessment and Taxation map, and a copy of the recorded easement agreement if access is to be achieved by means of an easement. The county charges a nonrefundable fee for each application applied for and a deposit/bond. The deposit/bond is refunded after the work is completed by the applicant (or applicant's contractor) and inspected and accepted by the county. Access Permits expire 120 days after issuance and may be renewed prior to expiration for an additional 120 days at no cost to the applicant.

Regional Municipality of Durham, Ontario, Canada

In the early 1970s, the Province of Ontario created a number of regional governments, primarily to manage growth in developing areas. Each region, called an "upper tier government," is comprised of several cities, towns, and townships. One of these is the Regional Municipality of Durham, a rapidly growing municipality of 540,000 people, located in the Province of Ontario, Canada, immediately east of the city of Toronto. The Regional Council is comprised of 29 members, 28 representing the 8 lower-tier municipalities, and a chairman appointed by these representatives.

Among other functions, the Durham Region is responsible for managing a network of 830 km of arterial roads, located in both urban and rural environments. Overarching policy direction for managing access to the regional road system is captured in the "Durham Regional Official Plan." A requirement of the Planning Act enacted by the province, this plan is the Regional Council's blueprint for managing and directing physical change and its effects on the social, economic, and natural environment of the municipality.

Among its many elements, the Official Plan includes a description of the goals, policies, and components of the region's transportation system. The plan designates a hierarchy of major roads, without regard for jurisdiction, comprising three categories of arterial roads (types A, B, and C) and freeways. It also details the design characteristics of the different arterial roads, including operating speed, right-of-way, and recommended access spacing. These parameters set the general direction for access management within the context of sound engineering practice.

The region has also recently completed a Transportation Master Plan to define the policies, programs, and infrastructure improvements required to meet future transportation needs. This plan recognizes the importance of managing access to the regional road system.

The Regional Municipalities Act (*23*), enacted by the province, provides the region with the authority to manage access. It enables the region to pass by-laws prohibiting or regulating the construction or use of any private road, entranceway, gate, or other structure or facility as a means of access to a regional controlled-access road. The act also gives authority to close accesses that are constructed in violation of such a by-law.

The region's Entranceway Bylaw (*24*) designates all roads in the regional road system as controlled-access facilities and requires landowners to obtain Property Access Permits prior to constructing an access. The by-law defines the conditions for granting and rescinding these permits, financial and maintenance responsibilities, and penalty provisions.

Permits are issued on a site-by-site basis, allowing the region to review and approve access plans before construction proceeds. In this way, the region can ensure that the property owner complies with the provisions of relevant policy documents and any conditions of development approvals.

If the request for a private entranceway stems from a land development application, the Planning Act enables municipalities to define access conditions through the development approval process. In areas covered by Site Plan Control by-laws, landowners must submit plans to the lower-tier municipality for approval (these are smaller municipalities within the region that lack similar regulatory authority). The lower-tier municipalities circulate the applications to a range of public bodies, including road authorities, transit organizations, school boards, and land-use planning agencies, for comments. This provides a consolidated approach to granting land-use approvals, which considers all issues in a coordinated manner.

As a condition of site plan approval, the region can request, among other items, facilities to provide access to and from the land, such as access ramps, curbings, and traffic direction signs. This includes specifying the location

and configuration of driveways. The region imposes the conditions of its approval through legally binding agreements. These agreements set out the provisions for managing access, the right-of-way widenings to be provided to the region at no cost, and the financial obligations of the landowner to provide said improvements. The landowner must also obtain a Property Access Permit from the region before receiving a building permit.

In reviewing site plan applications and Property Access Permits, staff applies the Region's Policy for Entranceways (*25*). Approved by the Regional Council, this policy addresses the goals and objectives of the region to control access to roads under its jurisdiction. It reflects the relevant provisions of the Official Plan and reinforces the directions established through the Master Plan.

The policy is based on existing state of the practice, referencing technical guidelines including the 1999 Transportation Association of Canada Geometric Design Guide for Canadian Roads, Ontario Ministry of Transportation design guides, the *Highway Capacity Manual*, AASHTO, TRB publications, and other sources. It outlines the details of access approval and design, considering relevant engineering practice and the operational policies, practices, and objectives of the region.

The Policy for Entranceways and Entranceway Bylaw reduce the staff effort required to manage access approval, because it is the responsibility of the proponent to show that the proposed access conforms to the policy and by-law. Alternatively, the proponent must appeal to the Regional Council for relief from the provisions of these documents.

CHAPTER FOUR

ISSUES IN CURRENT PRACTICE

IMPACTS OF DRIVEWAY PERMITTING PRACTICES

As part of the survey of state and local agencies conducted for the synthesis, respondents were asked to check the "positive impacts" that driveway permitting practices had on their state or community. Generally, most respondents believed that their driveway permitting programs greatly benefit their state, county, or municipality. The list of benefits and the percentages of respondents that cited them is included in Figure 22.

Among the 28 state transportation agencies that responded, the most frequently noted positive impacts were the improved safety and efficiency of the state highway system. The next most frequently noted benefit is improved driveway design. In contrast, more local officials agreed that improved site design is a positive impact of the permitting process, followed by the improved safety and efficiency of the roadway system.

In 26 states (93%), respondents believed their programs yield "improved vehicular safety and crash reduction." Although less frequently mentioned, improved "bicycle and pedestrian safety" was also considered a positive impact in nine states surveyed (32%). Other positive impacts included "improved roadway level of service" (86%), improved driveway design (64%), and "better site design" (50%). Some less frequently mentioned responses included "improved coordination between the applicant and approval authority" (36%), "lower maintenance costs" (32%), "improved coordination between work proposed by different parties" (25%), and "increased property values" (21%).

A few respondents mentioned the financial benefits of an effective driveway permitting program. For example, Wisconsin noted that their driveway regulation program "protects the investment in the highway" and thus can "eliminate or delay the need for a bypass." In Colorado, developers contribute to roadway improvements when it is deemed appropriate. This aspect of their regulatory authority yields several benefits, including an improved level of service on state roadways, as well as less expenditure of tax dollars to achieve this goal.

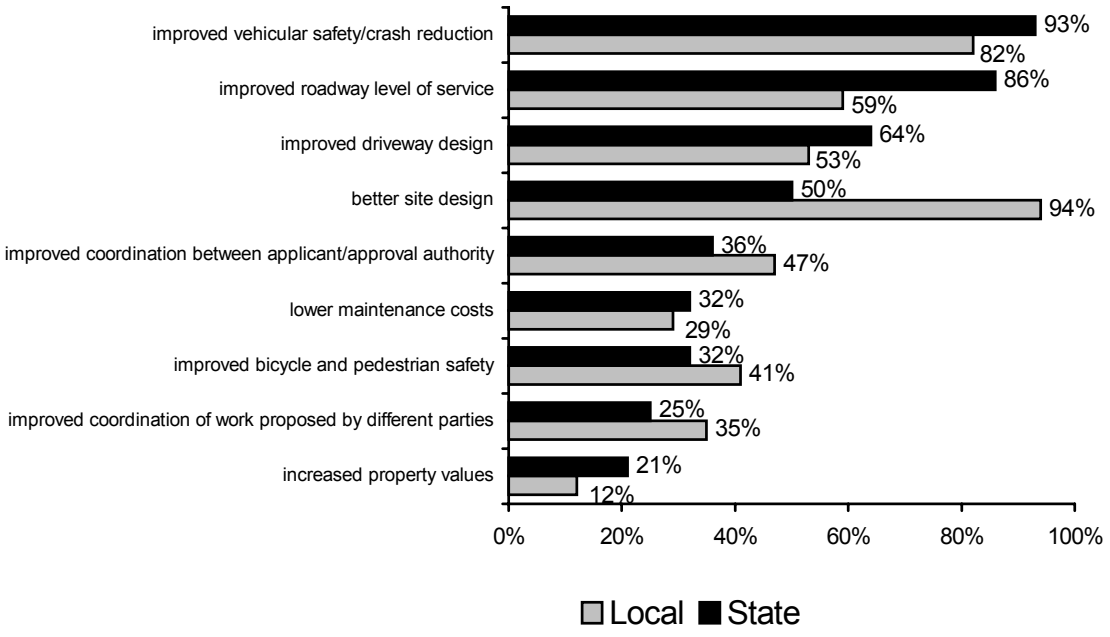


FIGURE 22 Percentage of respondents by state and locality (state survey question 25 and local survey question 21: What do you consider the primary *positive* impacts of your current driveway permitting program?).

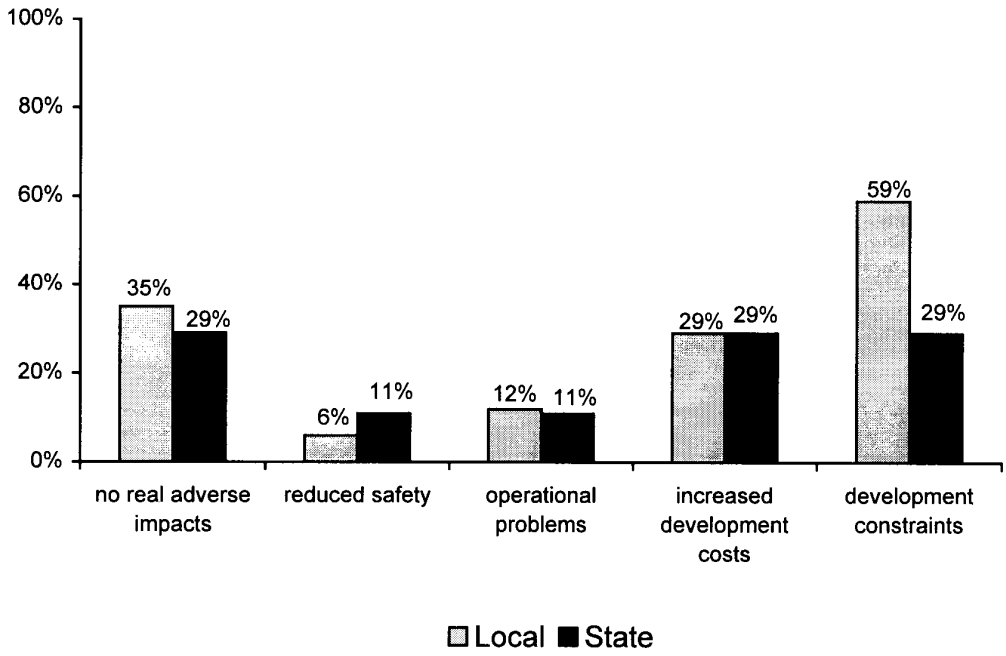


FIGURE 23 Percentage of respondents by state and locality (state survey question 25 and local survey question 21: What do you consider the primary adverse impacts of your current driveway permitting program?).

Virtually all of the local government respondents agreed that their driveway regulation efforts have led to improved site design (94%), whereas only 53% mentioned improved driveway design as a benefit. Improved vehicular safety and crash reduction were other popular responses among respondents (82%), although half that number mentioned that the program was beneficial to bicycle and pedestrian safety (41%). Improved roadway level of service is also mentioned by local agencies as a primary benefit (59%), as is improved coordination between the applicant and approval authority (47%).

Respondents were also provided with a list of potential adverse impacts that could result from their driveway permitting program (Figure 23), including increased development costs, inadequate driveway design, and development constraints. The comment on driveway design is likely because of inadequate agency driveway design criteria.

Respondents from eight states (29%) and six local governments (35%) noted that their program has "no real adverse impacts." Of the adverse impacts identified, most address development considerations. For example, almost one-third of state respondents and less than two-thirds of local respondents indicated that their driveway permitting programs have yielded "development constraints." The same number of state and local respondents (29%) noted "increased development costs" as an adverse impact.

One respondent noted that for developers, "more demanding access control sometimes requires more time and effort." New Jersey added that their practice of imposing trip limits on permits for nonconforming lots might be perceived as an adverse impact by the development community, but in reality has a positive impact on the traveling public. A handful of state and local respondents linked the permitting program to "reduced (roadway) safety" (11% state, 6% local) and "operational problems" (11% state, 12% local). Generally, the state and local agencies in which these latter problems are noted are also those that lack comprehensive, system-wide access management programs.

Among the other adverse impacts mentioned by respondents, most involve inadequate staffing. For example, one state respondent noted that the "tight regulation system and higher standards require more staff, training, and litigation." Another noted that increased regulations yield "increased employee labor costs and materials." Still another reported that the permitting program has led to "misunderstandings of what we want through the permit system. Municipalities try to substitute our system for their own zoning." Finally, one local respondent noted "politics" as an adverse impact, whereas another indicated that "sometimes there's no 'hammer' to encourage better design."

PROBLEMS IN CURRENT PRACTICE

State and local officials were asked to relate problems they routinely experience when administering the current

driveways permitting procedures, as well as weaknesses in their current program. A summary of comments related to programmatic weaknesses appears in the following lists.

"Weaknesses"—State Driveway Permitting Processes

- Political Interference and Inconsistent Decisions
  - "Influence of political entities to favor certain constituent's out-of-policy applications."
  - "Consistency of application of standards hampered by a political process."
  - "Politics in decision making."
  - "Allowing connections that are sometimes questionable because we are trying to be a 'friendlier' agency."
  - "Inconsistently enforced between districts."

- Lack of Public Understanding
  - "Not well understood by the public or public officials."

- Staffing and Enforcement Issues
  - "Need more staff and training in technical issues."
  - "Lack of enough staff to thoroughly review permit applications, monitor the construction of permitted driveways, and take the necessary actions against illegal connections to the State Trunk Highway system."
  - "Limited personnel available to inspect access-related construction, especially when economic conditions lead to growth in development and a flurry of privately initiated highway improvements."
  - "Inventory control on a 10,000 mile state highway system is very difficult. It is currently almost impossible to prevent encroachment of unpermitted access points on the entire system."
  - "Inadequate agency resources for permitting and inspections."
  - "Policies and standards change and engineers are reluctant to adhere to new changes."
  - "Developer hires consultant inspectors, which is a conflict of interest."
  - "Enforcement penalties are lacking."
  - "(Staff) are not always responsive for the need for quick action."

- Inadequate Regulations
  - "Design standards are specified in regulations and cumbersome to change."
  - "Outdated standards; no criteria for larger developments, turn lane, and signalization requirements."
  - "No ability to require alternative access."
  - "Some ambiguity on number of drives per parcel of land."
  - "Hard to enforce or uphold requirements; no legal basis for requiring major improvements."
  - "Lack of Adequate Public Facilities ordinances in some counties and municipalities hinders our ability to require off-site improvements."

- Length or Complexity of Process
  - "Central Office Reviews are thorough and require additional time, resulting in complaints from applicants."
  - "With 36,000 miles of road, a lot of driveways slip under the current process. Need more publicity and a simpler way for homeowners and farmers to get permits."

- Increased Costs/Lack of Fees
  - "It will require a greater expenditure of funds during any construction project to make sure that access is maintained at the new higher standards."
  - "We should have a fee system to recover expenses for review and inspection."
  - "Fees do not cover expenses to agency."

"Weaknesses"—Local Driveway Permitting Processes

- Political Interference and Inconsistent Decisions
  - "Inconsistencies between staff—the procedure manual and checklist are not used by everyone. Still subject to political intervention; the benefits of access management are not entirely understood by all."
  - "Politics."
  - "Lack of consistency with DOT on state routes."
  - "Multiple conflicts—lack of responsibility on property owner."

- Driveway Design
  - "Wide driveways."

- Insufficient Staffing and Training
  - "Inadequate experience by reviewers, resources."
  - "Inconsistencies between staff; procedure manual or checklist not used by everyone."

- Inadequate Regulations or Monitoring
  - "The process does not have strong standards in place. It becomes difficult to deny some driveways that should be denied because we don't have strong regulatory backing."
  - "(Lack of) follow-up or closure in future years."
  - "No teeth, we don't have any penalties or repercussions for noncompliance."
  - "Ability (of property owners) to change access with redevelopment."

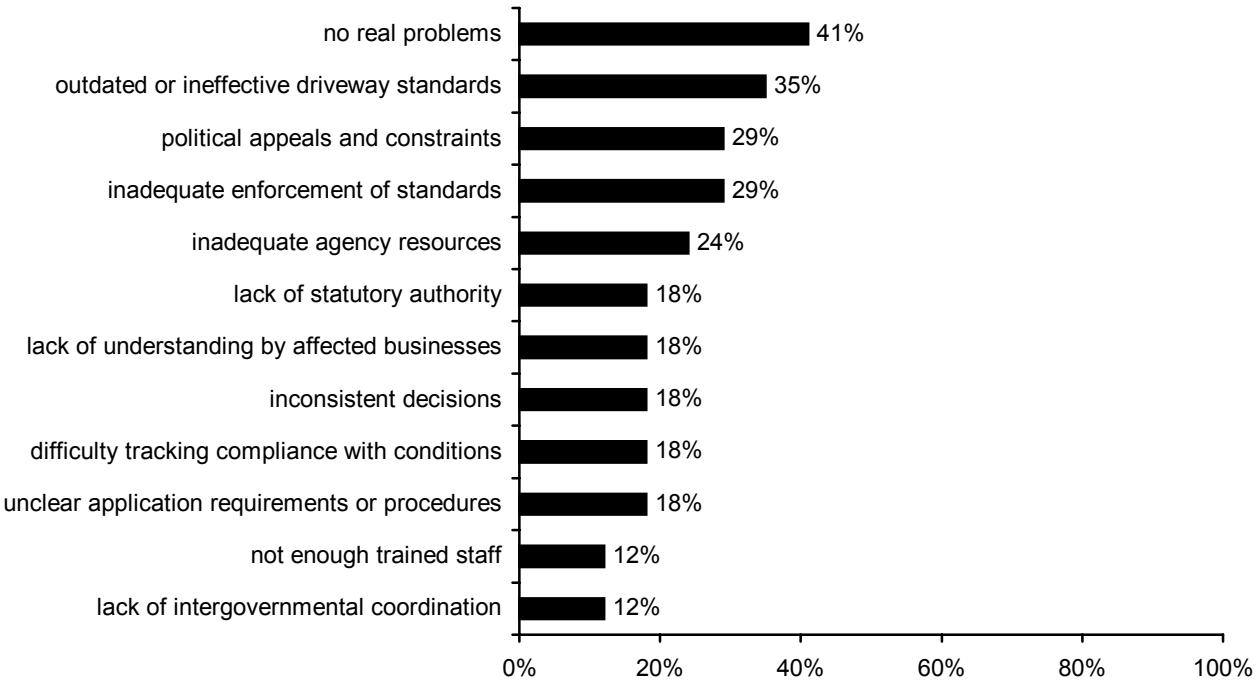


FIGURE 24 Percentage of respondents by locality (local survey question 22: What, if any, problems have you experienced related to your current driveway permitting procedures?).

As might be expected, responses regarding problems in current practice and programmatic weaknesses are similar. Approximately 40% of local respondents indicated that they experience "no real problems" (Figure 24). The most often noted permitting problems at the local level are outdated regulations, inadequate enforcement of standards, and political appeals and constraints. As noted by one local respondent, "political pressures and exceptions undermine compliance." Other comments included the need for statutory authority for closure and consolidation of existing driveways, denials resulting in takings accusations, and timeliness.

Only three states (11%) reported experiencing "no real problems" with their agency's driveway permitting program (Figure 25). Areas of concern most often noted by state transportation agencies included political interference (54%) and the lack of understanding by affected businesses (50%). However, one respondent added that "although politicians often muddy the water . . . they just as often have come to bat for us in support of the process and the principles of access management."

Other key areas of concern included not enough trained staff (46%) and inadequate agency resources for permitting/inspection (43%). Noted one respondent, "In a continuing era of small staffs, not all tasks are accomplished to the degree necessary to achieve a desirable level of overall program quality." In response to insufficient staffing problems, the NJDOT has begun to require that the developer hire inspection consultants from a list of prequalified firms. The consultant then reports to a NJDOT field manager at the appropriate regional office. Other problems cited included the lack of access management authority, difficulty of first time applicants in negotiating the process, and the tendency for poor design work by the developer's consultant to delay the process, generating complaints from the developer.

Several states (32%) also reported that inconsistent decisions and lack of intergovernmental coordination between state and local agencies (25%) were current problems in their permitting program. South Dakota, for example, noted that its new rules are undergoing a complete overhaul, as the current policy "has been ineffective and inconsistently applied." Another area of concern among state respondents is outdated, unclear, or ineffective driveway standards (18%). Most of these states also indicated that they have unclear application requirements or procedures (14%). Others reported difficulty in tracking compliance with permit conditions (21%) and inadequate enforcement of standards (14%).

The results of a nationally distributed survey reported in an August 2001 issue of *The Urban Transportation Monitor* (*13*) provide further insight into the nature of local driveway permitting policies and issues faced at the local level. A random sample of 550 city traffic engineers was surveyed about local traffic access management issues. A total of 102 surveys were returned completed; a 19% response rate.

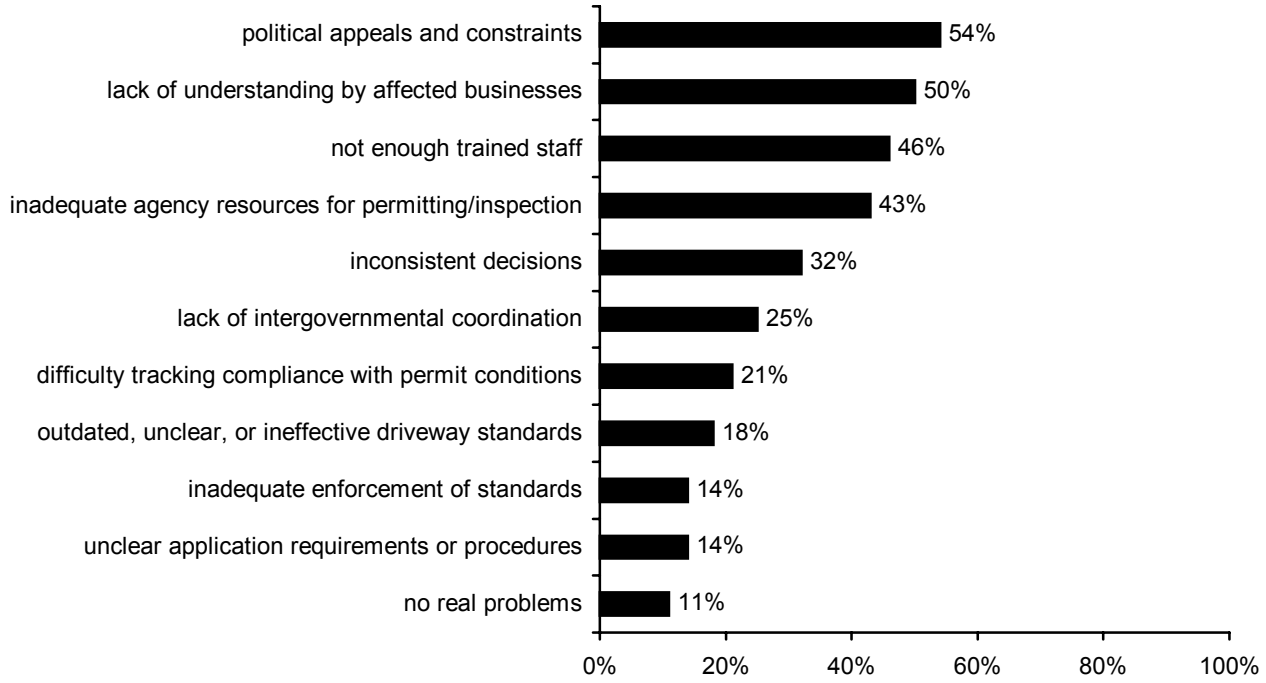


FIGURE 25 Percentage of respondents by state (state survey question 26: What, if any, problems have you experienced related to your current driveway permitting procedures?).

Most respondents (81%) have had active traffic access policies in place for more than 5 years and 66% reported that their policies were adopted by ordinance. The majority of respondents (87%) reported that their access policies involved the management and regulation of driveway location and design, with 52% also noting that their agency had access management policies (some respondents indicated that their agency had both).

Approximately two-thirds of respondents indicated that their policy was implemented through coordination with developers, whereas 41% pointed to their access permit review function (respondents could select more than one response). A majority of respondents (60%) also indicated that access management policies were implemented as part of roadway retrofit and reconstruction projects. Other respondents noted that access was managed and/or enforced through the issuance of building/land-use or development permits, through the site plan review process, or through some discretionary approval process.

Almost half of respondents (49%) indicated that their design policies were adopted as standards, as opposed to policies or guidelines. When asked which design standards their access polices included, the responses were as follows: 85% have driveway spacing standards, 83% have driveway geometric standards, 71% have sight distance criteria, and 28% have traffic signal coordination. An additional 16% also indicated that they have some other standards, the majority of which were related to corner clearance.

A majority of respondents (85%) indicated that their policies have built-in provisions to allow for variations. Most respondents (66%) indicated that their policies vary by roadway classification, whereas approximately one-third (34%) also indicated that their policies vary by the speed and volume of the roadway. Most respondents also indicated that their policies encouraged shared access and driveway consolidation (63% and 62%, respectively).

When asked about the strengths of their current policies, most respondents indicated uniformity (71%), flexibility (66%), and/or having a defendable rule (42%). Policy weaknesses indicated by respondents included: need upgrading (35%), guidelines only (36%), open to interpretation (24%), and lost legal challenges (14%). Politics and private economic issues were cited as the most common restraints to implementation of access policies (59% and 53%, respectively).

Respondents indicated that an ideal access management policy would include the following: can deny access (68%), can control spacing (88%), geometric design standards (80%), and transportation impact analysis (83%). When asked what the most important unresolved issues were in traffic access management, responses included

- The need for universal standardization and consistent guidelines and enforcement;
- The need to correct pre-existing conditions that do not meet current standards, especially those that have been "grandfathered";
- Education of politicians, developers, and the public about the importance and value of access management;
- Lack of cooperation between regional, state, and local authorities;
- Overdevelopment of frontage;
- Creating sites that can serve a variety of vehicles;
- Impacts on pedestrian and bike traffic; and
- Lack of a national comprehensive traffic access management guideline from professional transportation organizations.

POLICY STRENGTHS AND LESSONS LEARNED

The majority of respondents are directly involved in the permitting process. As part of the survey, they were asked to identify the strengths of their current driveway regulation programs and to provide advice to other agencies based on their experiences. A summary of programmatic "strengths" appears in the following lists.

"Strengths"—State Driveway Permitting Processes

- Consistency
  - "A statewide standard that is applied equally to all. A policy that gives precise clear direction to all involved in regard to all aspects of access management on the state highways.
  - "Outcome of application process is predictable since the process and standards are clearly defined; therefore, it is defensible and simple."
  - "Consistent application of regulations."
  - "Consistency and uniformity."

- Management Support
  - "Good agency-wide support for the implementation of standards, particularly within top management."

- Knowledgeable Staff
  - "Very good central support to staff to provide input, advice, and support to field personnel."
  - "Knowledgeable staff of District Permit Specialists."

- Efficient or Well-Understood Process
  - "Field division reviews are relatively quick with oversight when needed."
  - "Outcome of the application process is predictable since the process and standards are clearly defined; therefore, it is defensible and simple."
  - "Seems to be simple and make common sense."
  - "Been in existence for a long time and is quite well known."

- Clear Legal Authority
  - "It's the law."
  - "Exists as the State Code."
  - "Supported by state law. It is also compatible with the state's development and redevelopment goals."
  - "The statutory authority is solid and we have many tools available to manage access."

- Effective Regulations and Supporting Manuals
  - "Existing rule is good to work with."
  - The driveway permit manual, which gives guidelines for design."
  - "A good regulation, system-wide applications, management support, and dedicated people."

- Effective Coordination
  - "We have good communication between departments within and with other agencies."
  - Working with developers to make access work for the state, local government, and the developer."

"Strengths—Local Driveway Permitting Processes

- Consistency
  - "Provides consistency and promotes safety."
  - "Compliance with county standards."
  - "Consistency, developers know requirements early, allows them to contact us early in the design of the site. Some flexibility through appeal process."

- Clear and Concise Process
  - "It is part of an integrated permitting process and an integrated land development process."
  - "Free and usually quick, depending on applicant preparedness and expertise.
  - "Written policies and brochures."
  - "It's a relatively easy process with good staffing. The permit process is real world responsive."
  - "Permit application is straightforward."

- Knowledgeable Staff
  - "New development is reviewed thoroughly."
  - "Engineering review of all access applications."
  - "Engineer reviews each location in the field; approvals on a case-by-case basis."

- Enforcement
  - "Tracking and enforcement of maintenance."

- Coordination
  - "Communication within the staff."
  - "The small town atmosphere that allows inspector and citizen to communicate."

The following is a synopsis of some "lessons learned" from the agencies surveyed.

Local Governments

Be Consistent
- "Remain consistent, fair, flexible."

Adopt Appropriate Regulatory Language
- "A written permit system would be helpful."
- "Don't use (the driveway permitting process) to regulate development and provide a thorough explanation of basis for decision."
- "Driveway enforcement can be more effective with a development code than a street code. In the land development code, access is reviewed with each change of the site. In a street code, once a driveway is established, it tends to be forever."

Provide Enough Staffing
- "You need reasonable regulations and good staff to make sure driveways are as safe as possible and satisfy the regulations."
- "Train all staff involved in order to achieve consistency."

Communicate Effectively
- "Provide effective informational literature (multimedia)."
- "Do not assume that the applicant totally understands your regulations and specifications."
- "Explain your policies in detail to the applicant before project starts; it saves time, money, and headaches."
- "Educate professional proponents."

State Transportation Agencies

Be Consistent
- "A good permit program is based on consistency."
- "No matter what standards you put in a policy, your management must be willing to back those standards and not give into political pressure or you will lose control of your highways."
- "Try not to deviate from your permitting process even if there are political pressures to do so."

Allow Some Flexibility
- "Be open to changes if they are within the intent of the regulations."
- "Understand that some situations call for direction and flexibility in interpreting the regulations. Sometimes arriving at a win–win conclusion is desirable, but never at the expense of highway safety."
- "Develop a good policy covering all types of developments. Do not make it so restrictive that unusual requests cannot be accommodated."
- "All the standards are good guidelines, but a field review is essential. Sometimes access/connections will not meet standards, but it will make the site work without too much effect on the highway. Sometimes it is unfair to ask low trip generation permittee to fix all substandard conditions."

Provide Training
- "Training is essential."
- "Have better training in place for staff, public officials, and the public."
- "Hire a specialist."
- "Be sure you have one managing specialist with full-time program responsibility."

Coordinate
- "It is wise to involve stakeholders outside of the department during the policy development phase and you should inform politicians of proposed changes and the reasoning as early as possible."
- "Local agency coordination is important to getting a win–win in development site plans."
- "Have good coordination and communication between all staff involved in the process."
- "If specific highways are to be characterized by access restrictions or limitations, make sure the affected municipality fully understands the ramifications of these restrictions (zoning may be inconsistent or unsupportive of the access level established)."
- "Improve communication skills with our customers. Cooperation with other governmental agencies is imperative."
- "Pre-application reviews are worth their effort."

Adopt Regulations
- "Have written policies and guidelines concerning the driveway permitting process that are backed by state statutes."
- "Adopt a clear set of standards and procedures."
- "Create sound policies that have upper management backing."
- "Minimize driveways. Every driveway is like a mini-intersection."
- "Frequently review the policies and procedures and make necessary revisions."

Be Persistent
- "Many of the institutional barriers to the implementation of an access permitting system that are perceived to exist

have proven to be phantoms. Once confronted, they either cease to exist, or they are shown to be significantly less imposing than they were thought to be."

In addition to the lessons learned from the survey, a review of access management practices at selected state transportation agencies suggested the following improvements to state driveway permit procedures (*26*):

- State transportation agencies should seek comments from local agencies before approving access plans for state highways.
- Traffic impact study requirements could be set for when studies are required and what they should contain. This includes numeric thresholds based on the amount of traffic generation and requiring these studies whenever traffic signals are involved.
- Thresholds should be set for what constitutes a significant change in existing development for which a traffic study would be required.
- Criteria could be established for how and when state site plan and internal circulation reviews should be performed.
- Standards should be in place for decisions concerning the allowable number of driveways per feet of frontage.
- Driveway consolidation could be actively pursued whenever major road reconstruction takes place. Every attempt should be made to ensure reasonable alternative access to minimize or avoid compensation.

CHAPTER FIVE

CONCLUSIONS

With the changing traffic environment that has paralleled metropolitan expansion, many states are finding it necessary to update and expand their driveway regulation programs. Growing demands for highway access are making it increasingly clear that driveways, and the developments they serve, can have cumulative adverse impacts on the safety and efficiency of major roadways. These impacts have not been adequately addressed through traditional encroachment permitting.

The objectives of agency driveway regulation programs vary in scope, but are generally oriented toward providing the public with a safe and efficient transportation system, while assuring reasonable access to private property. Many agencies also seek to accomplish administrative objectives, such as uniformity of procedures and standards, consistency in decision making, efficient turnaround, intergovernmental coordination, and adequate training of permit staff.

At a minimum, state driveway regulation programs provide state oversight of construction within the right-of-way of a state highway and address issues such as drainage, installation of culverts, driveway location/sight distance, driveway design, and driveway construction. Applicants must obtain a permit for these activities, often called a right-of-way encroachment permit. However, state transportation agency practices vary considerably in the extent of their access control and/or impact mitigation activities.

Some of the state transportation agencies responding to the survey of current practice have recently updated and expanded their driveway regulation programs. Several of these agencies noted the need to expand their existing regulatory powers and statutory authority to ensure safe and efficient access. These contemporary programs provide insight into the state of the practice in driveway regulation and permitting.

In general, the more contemporary driveway regulation programs are oriented toward comprehensive and system-wide access management of state highways. These programs are designed to systematically regulate driveway access, as well as street connections, median openings, signals, turn lanes, and interchanges. Driveway standards address the location, geometric design, and spacing of driveways, and existing agency driveway standards typically need to be updated to reflect best engineering practices in these areas.

An element of contemporary driveway regulation programs that is not observed in more traditional programs is the establishment of an access classification system that defines the planned level of access for different state highways. The access management regulations are generally designed to parallel the function of the roadway, either by roadway functional classification, speed, or some combination of these methods. Other components of contemporary driveway regulation programs include traffic impact assessment procedures and criteria, as well as impact mitigation requirements for large developments.

Typical administrative components of contemporary programs include separate permit categories and analysis requirements for small and large developments, and a concept review and pre-application process, particularly for large or complex developments. Most agencies do not have separate permitting procedures or requirements for new development versus redevelopment, although most acknowledge the difficulties in retrofitting an existing site through flexibility and waivers. Approximately one-third of the states and several local agencies establish a threshold based on trip characteristics or intensity, whereby redevelopment projects must conform fully or partially with agency driveway or access standards.

In conventional practice, after a driveway permit is issued it is not revisited. Several agencies with contemporary access management programs stated that they impose limitations and conditions in a driveway permit that relate to the use of the access. Exceeding any limit or condition invalidates the permit and requires a new application.

The majority of state and local agencies encourage driveway consolidation and shared access through their driveway regulation program, although most noted that it is difficult to force the issue. Given the broader powers of local governments to address subdivision and site design issues, several states encourage shared access through coordination with local governments. Ironically, local governments reported constraints similar to those of the states and tend to promote shared access in an opportunistic manner that relies on property owner cooperation. Some agencies require construction of the driveway at the property line or use conditional permits to promote driveway consolidation in the future.

Lack of consistency in variance decisions can make any regulatory program legally vulnerable; therefore, procedures

for considering deviations from standards and criteria to guide variance decisions are important aspects of an effective driveway regulation program. Nonetheless, 14 of the state transportation agencies responding to the survey (50%) have no formal procedure for handling such deviations. This undoubtedly helps explain why so many of the state respondents are experiencing problems with inconsistent decisions.

An effective variance process is defined in the literature as one that results in a solution that can be widely applied to other similar situations. A hierarchy for variance decision making is suggested in the literature, which reflects the relative importance of the access feature. Such a process allows agency staff to effectively balance one access management criterion against another where conflicts arise. In addition, a two-step process is recommended that clarifies the conditions under which a variance will be considered, and does not further evaluate the variance unless the applicant can demonstrate necessity.

Generally, most respondents believe their driveway regulation efforts greatly benefit their state, county, or municipality. Among the state transportation agencies, the most noted positive impact was improved vehicular safety and crash reduction (93%), followed by improved roadway level of service (86%) and improved driveway design (64%). In contrast, local respondents were most likely to identify improved site design as a positive impact of their driveway permitting process (94%), followed by improved vehicular safety and crash reduction (82%) and improved roadway level of service (59%). This difference in perspectives reflects the differing priorities and regulatory emphasis of state versus local agencies.

Of the adverse impacts that were identified, the most frequently noted responses address development considerations. Almost one-third of state respondents and approximately two-thirds of local respondents reported that their driveway permitting programs have yielded "development constraints." The same number of state and local respondents (29%) noted "increased development costs" as an adverse impact.

The survey responses clearly indicate that politics is a significant factor in driveway regulation. One-half of the state transportation agencies indicated that political interference and a lack of understanding by affected businesses are current problems in their driveway permitting programs. Approximately one-third of the state respondents are also experiencing problems with inconsistent decisions and lack of intergovernmental coordination with local agencies.

In addition to political constraints is the difficulty of implementing driveway regulations, given limited staff and resources. In particular, state transportation agencies noted insufficient trained staff and inadequate agency resources for permitting, inspection, and enforcement. Related problems included inadequate fees to help cover administrative costs and additional time needed to handle complex applications. Some states are responding to this challenge by transferring inspection or permitting functions to local agencies or the private sector. As one respondent noted, however, private sector oversight of inspection functions can lead to conflicts of interest.

Another set of problems relates to inadequate statutory authority or outdated standards. A key regulatory weakness noted by several state and local agencies is the inability to require a developer to provide mitigation and off-site improvements. Other regulatory weaknesses include the lack of authority to deny access or require alternative access under certain conditions, and the lack of adequate enforcement penalties for noncompliance.

Most state and local agencies can deny access under certain conditions. However, these conditions tend to be narrow in focus, with a clear safety hazard (often due to inadequate sight distance) or violation of driveway regulations being the most typical conditions for access denial. Twelve states responding to the survey indicated that they could also deny access where reasonable alternative access is available.

Responses suggest that problems experienced at the local level are similar to those of the states and include outdated regulations, inadequate enforcement of standards, and political appeals and constraints. Other comments included the need for statutory authority for closure and consolidation of existing driveways, denials resulting in takings accusations, and lack of timeliness.

Policy strengths noted by respondents provided insight into the effective aspects of driveway regulation programs. Consistent decision making was noted by several agencies as a strength of their program. Policy features contributing to that consistency include a clear application process and variance procedures and criteria. The importance of management support, trained and knowledgeable staff, and effective communication within and across agencies was also noted.

Respondents offered a variety of suggestions to other agencies on effective driveway regulation. Consistent decisions and enforcement were strongly emphasized, as was the need to be fair, flexible, and "real world" responsive. Several respondents noted the benefits of a pre-application process for large or complex developments. Other recommendations included the need for strong statutory authority, up-to-date design standards, and field reviews of actual field conditions. Coordination and effective communication with

stakeholders was also noted, both during policy development and during driveway permitting. Similarly, the importance of trained staff and public education was emphasized.

The review of current practice suggests that driveway regulation is in transition. State transportation agencies are expanding the scope of right-of-way encroachment permitting to address a broader range of access and development issues. Local governments are similarly expanding their driveway regulation policies. These contemporary driveway permitting programs delve into the more complex and comprehensive objectives of access management and mitigation by developers. To facilitate the transition, practitioners indicated the need for national access management guidelines from professional transportation organizations, as well as better education of politicians, developers, and the public about the importance and value of access management. The TRB *Access Management Manual* (in progress) will be an important resource for disseminating information on best practices in driveway regulation, as well as other aspects of access management.

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APPENDIX A

Survey Responses—State

SURVEY OF STATE TRANSPORTATION AGENCIES

DRIVEWAY REGULATION PRACTICES

NCHRP Project 20-5, Synthesis Topic 32-05

Total Number of Respondents: 28

A. Legal Basis for Driveway Regulation Program

1. Is your driveway permit process established by:

- ❑ Statute (23)
- ❑ Administrative rule (19)
- ❑ Formal written policy (11)
- ❑ Design standards (10)
- ❑ Informal policy/procedure (1)
- ❑ Written guideline (7)

B. Background Information

2. Do you have ___text ___flow charts or ___ brochures that describe or illustrate the driveway application and permit process?

- ❑ Text (24) Arizona, Colorado, Florida, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Montana, Nebraska, New Hampshire, New Jersey, New York, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, Virginia, Washington, West Virginia, Wisconsin
- ❑ Flow Charts (4) Colorado, Florida, New York, Utah
- ❑ Brochures (6) Kansas, Maryland, Nebraska, Oregon, South Dakota, West Virginia

3. Are there written goals and objectives for your driveway permit process? Yes 17 No 10

For example:

Colorado: "…to provide procedures and standards to aid in the management of that investment and to protect the public health, safety, and welfare, to maintain smooth traffic flow, to maintain highway right-of-way drainage, and to protect the functional level of state highways while considering state, regional, and local transportation needs and interests." State of Colorado, The Transportation Commission of Colorado. *State Highway Access Code, Volume 2, Code of Colorado Regulations 601-1.* August 31, 1998. Section 1.2, pg. 1.

New Hampshire: "The purpose of this policy is to provide a uniform procedure throughout the state for receipt of applications, review of submissions, and issuance of driveway permits. All review of requests for access to the state highway system shall be in accordance with the following principles: a) Provide maximum safety and protection to the traveling public through the orderly control of traffic movement; b) Minimize conflict points; c) Acquire appropriate sight distance on or to any class I, III or the state maintained portion of class II highways; d) Maintain the serviceability of affected highways, which could require alterations to the existing highways; e) Monitor the design and construction of driveway entrances and exits; f) Maintain compliance with RSA 236:13, effective July 1, 1971, as amended, the language of which is contained in Appendix III." New Hampshire Department of Transportation, Bureau of Highway Maintenance. *Policy for the Permitting of Driveways and*

Other Accesses to the State Highway System. March 10, 2000. pg. 3.

South Dakota: Protect the public's investment in the highway system by preserving its functional integrity through the use of modern access management practices; Coordinate with local jurisdictions to ensure that the state's access policy and criteria are addressed early in decisions affecting land use; Provide advocacy, educational and technical assistance to promote access management practices among local jurisdictions; Undertake proactive corridor preservation through coordinated state/local planning and selective investment in access rights; Provide a consistent statewide management of the state highway system; Maintain and apply access criteria based upon best engineering practices to guide driveway location and design; Establish and maintain an access classification system that defines the planned level of access for different highways in the state; Establish procedures for determining developer responsibilities for paying for improvements that address the safety and capacity impacts for major development; Enhance existing regulatory powers and statutory authority to ensure safe and efficient access; and permit exceptions to the SDDOT's access criteria only where retrofit techniques have been applied. South Dakota Department of Transportation. *Access Management Operations Guide.* 2001. pg. 4.

4. Do you have a computerized tracking system for permits? Yes 16 No 12

Yes—Arizona, Colorado, Florida, Idaho, Kansas, Kentucky, Louisiana, Maine, Maryland, Nebraska, New Jersey, New York, Oregon, South Carolina, Washington, Wisconsin

If yes, is the information accessible to the public? Yes 1 No 13

Is the information available through a website Yes 0 No 14

5. About what year were your driveway design standards last substantially revised and updated?

- ❑ No answer (1)
- ❑ Before 1986 (4)
- ❑ 1986–1995 (5)
- ❑ 1996–2000 (12)
- ❑ 2001 or currently being updated (6)

C. Organizational Structure and Staffing

6. Characterize the organizational structure of your permit process: (*check one*)

- ❑ Centralized (0)
- ❑ Decentralized into regional or district offices (14) Arizona, Colorado, Florida, Hawaii, Illinois, Indiana, Maine, New Hampshire, South Dakota, Tennessee, Virginia, Washington, West Virginia, Wisconsin
- ❑ Some functions are centralized whereas others are decentralized (14) Idaho, Kansas, Kentucky, Louisiana, Maryland, Montana, Nebraska, New Jersey, New York, North Dakota, Oklahoma, Oregon, South Carolina, Utah

Please explain:

Program management is centralized and permitting is decentralized (4), Centralized "expert review" of select permits (4), Permits for non-residential or more intensive developments reviewed by central office (3), Appeals handled by Central Office (3), Permits along pre-selected highways issued by Central Office (2), Authority delegated to local highway agencies to issue permits (2)

7. Does your agency have minimum education or training requirements for staff who review applications and issue permits? Yes 16 No 11

If yes, what are those requirements?

- ❑ Professional engineer (PEs) (5)

- ❑ Engineer in training (no PE) (4)
- ❑ Trained technician (13)

D. Permit Application and Review

8. Are the driveway application and the driveway permit separate documents? Yes 12 No 15

9. Do you have different driveway spacing standards for different classes of roadway (principal arterial, minor arterial, etc.)? Yes 15 No 9

10. Does your driveway permitting process provide for one or more of the following activities (*check all that apply*)?

- ❑ Concept review (23)
- ❑ Pre-application meeting (21)
- ❑ Traffic impact study (25)
- ❑ None of the above (1)

11. Are there fees for the driveway application or permit? Yes 12 No 16

a) If yes, what are the fees? (*summarize here or attach a fee schedule*)

Example fees:
Colorado: $50–$300
Idaho: $50–$100
Louisiana: $2.00 per square yard of surfacing to be constructed on highway right-of-way
Maryland: $50 per entrance
New Jersey: $40–$12,000
Oregon: $50
Utah: $20
Virginia: Varies based on the cost to construct the entrance

b) How are the fees assessed?

- ❑ By number of trips generated (5)
- ❑ By size and/or type of development (4)
- ❑ Flat rate per driveway (3)
- ❑ Other approaches:
  Colorado: Based on volume and whether road improvements are necessary
  Idaho: By use, functional class of roadway, and whether a TIS is required
  Louisiana: Assessed by square yardage of surfacing on highway right-of-way
  South Dakota: Based on average cost to review and process permit

12. What is the average/typical elapsed time between receipt of an application and issuance of the permit?

- ❑ 14 days or less (6)
- ❑ 15 to 45 days (6)
- ❑ 45 to 90 days (7)
- ❑ More than 90 days (3)
- ❑ Depends on complexity (4)

Does the time differ by the size of the development? Yes 24 No 3
If yes, please explain?

Longer review times result from the following:
Traffic Impact Study review (7)

More detailed plans and components to review as part of a large/complex development (5)
Central office review for a large/complex development (1)
Central office review for developments accessing pre-selected corridors (1)
Types of access controls required (1)
Development involves work within the state ROW (1)
Controversial development (1)
Signalization required (1)

13. Do you measure or determine sight distance as part of your driveway permit process? Yes 28 No 0

14. Is consistency and adherence to your driveway location and spacing standards important to your agency? Yes 27 No 1

If yes, how do you achieve consistency within an office or between district/regional offices?

- ❑ Frequent training (5)
- ❑ Regular meetings and/or communication (15)
- ❑ Formal administrative procedures (13)
- ❑ Review teams or committees (6)
- ❑ Centralized oversight (9)
- ❑ Other: Complaints and legal appeals handled by headquarters;
  City and state agencies affected by the proposed driveway "sign off" on the application form;
  Combination of administrative rules, operations guide and training; and
  Oversight by Regional Traffic Engineer

15. Do you have different driveway permitting procedures or requirements for small versus large developments? Yes 16 No 11

a) What constitutes a small development?

Low volume entranceway:
Less than 20 vph (1)
Less than 100 vph (1)
Less than 500 vpd (1)
Less than 600 vpd (1)
Less than 100 peak hour trips (3)
Less than 100 ADT (1)
Less than 25 peak hour trips or less than 250 vpd (1)
Less than 100 peak hour trips or less than 750 ADT (1)

Residential:
All residential (1)
Less than 2 units (1)
Less than 5 units (2)
Agricultural (1)
Subdivision with less than 7 lots (1)

b) What are the procedures and minimum requirements for small developments?

Site plan review (6), Less extensive review (2), Abbreviated review (2), Design guidelines less restrictive for smaller developments (3)

c) What constitutes a large development?

High volume entranceway:
More than 100 vph (1)
More than 100 ADT (1)
More than 500 vpd (1)

More than 600 vpd (1)
More than 25 peak hour trips or more than 250 vpd (1)
More than 100 one-way peak hour trips (2)
More than 100 PCE/peak hour (1)
More than 100 trip ends in any hour or 750 ADT
Commercial (3)
Industrial (3)

Residential:
More than 1 unit (1)
More than 5 units (2)
Subdivisions with more than 5 lots (1)
Subdivisions with more than 7 lots (1)
"Significantly lowers current LOS" (1)

d) What are the procedures and minimum requirements for large developments?

Development must provide Traffic Impact Study (11), Extensive submittal and design requirements (4), More complex permit process (2), Longer permit review (1), Additional permits required (1), Memorandum of Agreement may be required (1), Local government coordination (1)

16. Do you have different driveway permitting procedures or requirements for new development versus re-development? Yes 8 No 20

If yes, please describe the difference in practice.

Procedures similar for development and redevelopment (3), Special consideration given to redevelopment (4), New permit required if trip generation threshold is exceeded (3), New permit needed if land use category changes (1), Existing access allowed if no increase in the number of trips (2), Mitigation may be required when traffic is increased (1), Traffic Impact Study may be required (1)

17. Do you have a formal procedure for handling requests for deviations from driveway standards? Yes 14 No 14

If yes, please attach a copy or describe below:

Deviation approved by the District Engineer (6), Committee reviews and approves deviation (2), Central Office reviews application to ensure consistency (2), Deviation is review in same manner as an access permit application (1)

18. Do you encourage driveway consolidation and shared access through your driveway permitting process? Yes 26 No 0

If yes, please explain how:

Applicant is encouraged during subdivision and site plan review (17), Required if conditions are appropriate (1), The construction of a temporary driveway accessing the highway is allowed (1), Incentives offered (i.e., density bonuses, relaxed parking requirements, and more lenient dimensional criteria) (1), Applicant encouraged to seek the cooperation of the adjoining property owner (1), Applicants who agree to shared access are given favorable consideration when a deviation is requested (3), Plan approval is withheld unless shared access is provided (1), Coordination with local planning authority (1)

19. Do you typically require outparcels/outlots to obtain access via the primary access and circulation system of the principal development? Yes 25 No 3

20. Do you issue temporary driveway permits with a condition that the driveway must be closed when alternative access from another road or neighboring property becomes available? Yes 20 No 8

If yes, please answer the following:

a) How do you track or implement the changes when the agreed to condition has been met?

Field inspection (11), Recorded with permit or on plat (3), No program for monitoring (2), District enforcement (1), Developer responsibility (1)

b) Who is responsible for the closure of the temporary access point(s)?

- ❑ Property Owner (19),
- ❑ Agency (1),
- ❑ Agency and Property Owner (2)

c) If the property owner is responsible, do you collect funds up front and hold them in an escrow account? Yes 6 No 15

21. Does your driveway permitting process allow you to deny access to a state highway under certain conditions? Yes 28 No 0

If yes, what are those conditions?

Unsafe conditions (i.e., insufficient sight distance, insufficient spacing, interference with intersection) (16), Ability to provide alternative access (11), Property access rights dedicated to state (3), "Intolerable" variance (2), Negatively impacts roadway (2), Property has existing access that sufficiently services the development (1), Multiple access denied if single access is sufficient (1), Interferes with drainage (1)

22. Do you have an inspection and enforcement process? Yes 26 No 2

If yes, are driveway permit requirements enforced through:

- ❑ Monetary penalties? (5) Kentucky, Maine, New Jersey, Utah, Virginia, West Virginia
  - If so, how much?
  - Kentucky—$5,000 minimum for commercial access (bond)
  - Utah—$10/day
  - Virginia—$2,500–$3,000 (bond/surety fees)
  - Maine—Up to $50/day for residential and $100/day for commercial
  - New Jersey—$100/day
- ❑ Reconfiguration of access at property owner expense? (15)
- ❑ Revocation of the driveway permit? (18)
- ❑ Driveway closure/barriers? (18)
- ❑ Other (11)

  For example:
  - Maryland: "May draw on monies posted as bond to rectify incorrect construction."
  - Virginia: "Deny permits to that particular person or contractor in the future."
  - Wisconsin: Physical removal of the driveway

23. Are you aware of any local agencies that have a driveway permitting process? Yes 17 No 11

Yes (17) Arizona, Colorado, Hawaii, Idaho, Indiana, Kentucky, Maine, Maryland, New Hampshire, New York, Oklahoma, South Carolina, South Dakota, Utah, Tennessee, Washington, Wisconsin

24. Does your agency coordinate with local agencies on driveway permitting issues? Yes 24 No 4

If yes, how do you coordinate? (*check all that apply*)

- ❑ Seek written comment on driveway permit applications (11)
- ❑ Hold pre-application meetings that include local agencies (13)
- ❑ Combined state/local review on larger or more complex driveway permit applications (16)
- ❑ Frequent informal communication on driveway permit issues (16)
- ❑ Consistent policies, procedures and standards (7)
- ❑ Withhold driveway permit until local development approval is obtained (13)
- ❑ Our agency reviews all local subdivision proposals on state highways relative to driveway access (15)
- ❑ Other (6)

For example:

Maine: "Coordination with local code officers by asking voluntary cooperation to not issue local permit until State permit deemed approvable."

New Jersey: "Duplicate application package must be sent to local municipality and county planning board for review and comment, concurrent with NJDOT review."

Oregon: Conditional approval is issued until local development approval is obtained.

E. Issues in Current Practice

25. What do you consider the primary positive and adverse impacts of your current driveway permitting program?

a) Positive Impacts:

- ❑ Improved vehicular safety/crash reduction (26)
- ❑ Improved bicycle and pedestrian safety (9)
- ❑ Improved roadway level of service (24)
- ❑ Lower maintenance costs (9)
- ❑ Improved coordination between work proposed by different parties (7)
- ❑ Improved driveway design (18)
- ❑ Better site design (14)
- ❑ Increased property values (6)
- ❑ Improved coordination between applicant and approval authority (10)
- ❑ Other (3)

"Developer contributes to highway improvements. Improved level of service means less tax capital expenditure."

"Current policy has provided little positive impact, new rules are planned to result in greater safety, better investment procedures, and better coordination between land use and transportation."

"Protecting the investment in the highway by eliminating or delaying the need for a bypass."

b) Adverse Impacts:

- ❑ No real adverse impacts (8)
- ❑ Reduced safety (3)
- ❑ Operational problems (3)
- ❑ Increased development costs (8)
- ❑ Inadequate driveway design (0)
- ❑ Development constraints (8)
- ❑ Other (6)

"To agency: I think a tighter regulation system and higher standards requires more staff, training and litigation. For developers: Sometimes more demanding access control requires more time and effort by developers."

"Development constraints—trip limits on permits for non-conforming lots, but this is only 'adverse' from developer's perspective."

"Schedule delays."

"Increased employee labor costs and materials costs."

"Misunderstandings of what we want through the permit system. Municipalities try to substitute our system for their own zoning."

26. What, if any, problems have you experienced related to your current driveway permitting program?

- ❑ Political appeals and constraints (15)
- ❑ Lack of understanding by affected businesses (14)
- ❑ Inadequate agency resources for permitting/inspection (13)
- ❑ Not enough trained staff (13)
- ❑ Inconsistent decisions (9)
- ❑ Lack of intergovernmental coordination (7)
- ❑ Difficulty tracking compliance with permit conditions (6)
- ❑ Outdated, unclear, or ineffective driveway standards (5)
- ❑ Inadequate enforcement of driveway standards (4)
- ❑ Unclear application requirements or procedures (4)
- ❑ No real problems (3)
- ❑ Little or no control over new driveways (2)
- ❑ Overly lengthy or cumbersome process (2)
- ❑ Lack of statutory authority (2)
- ❑ Frequent legal challenges (1)
- ❑ Other (7)

  "In a continuing era of small staffs, not all tasks are accomplished to the degree necessary to achieve a desirable level of overall program quality."

  "Not enough field personnel, extra training required when adapting to change such as new forms."

  "We are dealing with the problem of insufficient staffing for construction inspection by requiring the developer to hire inspection consultants from a list of pre-qualified firms. They would report to a D.O.T. Field Manager at the appropriate regional office. Often, politicians muddy the water. But just as often they have come to bat for us in support of the process and the principles of access management."

  "Lack of access management authority; Poor design work by developer's consultant delays the process and generates complaints by developers; First-time permittees have some trouble."

27. What are the strengths of your agency's current driveway permitting process?

Strong Support

Kansas: "Good agency-wide support for the implementation of the standards, particularly within top management. Very good central support staff to provide input, advice, and support to field personnel."
Wisconsin: "The statutory authority is solid and we have many tools available to manage access."
New Jersey: "Supported by state law."

Coordination

Arizona: "We have good communication between departments and with other agencies."

Consistency

Idaho: "A statewide standard that is applied equally to all. A policy that gives precise clear direction to all involved in regard to all aspects of access management on the State highways."
New Jersey: "Outcome of application process is predictable since the process and standards are clearly defined; therefore, it is defensible and simple. It is also compatible with the State's Development and Redevelopment goals."
Maryland: "Consistent application of the regulations."
Maine: "Focuses attention on highways of greatest need—arterials with higher than average access related crash rates."

Quick Review

Oklahoma: "Field Division reviews are relatively quick with oversight when needed."

28. What are the weaknesses of your agency's current driveway permitting process?

Insufficient Staffing and Enforcement

"Insufficient resources, need more staff, inadequate training in technical issues."
"Limited personnel available to impact access-related construction, especially when economic conditions lead to growth in development and a flurry of privately initiated highway improvements."
"Developer hires consultant inspectors, which is a conflict of interest."
"Enforcement penalties are lacking."
"Inventory control on a 10,000 mile state highway system is very difficult. It is currently almost impossible to prevent encroachment of unpermitted access points on the entire system."
"Inadequate agency resources for permitting and inspections."

Political Interference

"We allow connections that are sometimes questionable because we are trying to be a 'friendlier' agency."
"Influence of political entities to favor certain constituent's out-of-policy applications."
"Inconsistency of application of standards, hampered by political process."
"Inconsistently enforced between districts."

Inadequate Fee Structure

"We should have a fee system to recover expenses for review and inspection."
"Fees do not cover expenses to agency."

Higher Development Costs

"It will require a greater expenditure of funds during any construction project to make sure that access is maintained at the new higher standards."

Weak Regulations

"Outdated standards."
"No ability to require alternative access."
"Design standards are specified in regulations and cumbersome to change."
"Lack of Adequate Public Facilities ordinances in some counties and municipalities hinders our ability for requiring offsite improvements."
"No legal basis for requiring major improvements."

Lengthy Process

"Central Office Reviews are thorough and require additional time resulting in complaints from applicants."
"With 36,000 miles of road, a lot of driveways slip under the current process. Need more publicity and a simpler way for homeowners and farmers to get permits."

29. What lesson(s) have you learned relative to driveway regulation and permitting that you would pass on to other agencies?

Consistency

"Try not to deviate from your permitting process even if there are political pressures to do so."
"No matter what standards you put in a policy, your management must be willing to back those standards and not give into political pressure or you will lose control of your highways."
"A good permit program is based on consistency."
"Many of the institutional barriers to the implementation of an access permitting system that are perceived to exist have proven to be phantoms. Once confronted, they either cease to exist or they are shown to be significantly less imposing than they were thought to be."

Flexibility

"Understand that some situations call for discretion and flexibility in interpreting the regulations. Sometimes arriving at a win-win conclusion is desirable, but never at the expense of highway safety."
"That all the standards are good guidelines but a field review is essential. Sometimes access connections will not meet standards but it will make the site work without too much affect to the highways. Sometimes it is unfair to ask low trip generation permittee to fix all substandard conditions. It would help if more local governments planned cross access and rear road concepts."
"Original rule was written too strict and in turn required the emergence of a Variance Committee. Original rule should have not been as stringent on such items as driveway spacing and corner clearance."
"Develop a good policy covering all types of developments. Do not make so restrictive that unusual requests cannot be accommodated."

Coordination

"Cooperation with other governmental agencies is imperative."
"If specific highways are to be characterized by access restrictions or limitations, make sure the affected municipality fully understands the ramifications of these restrictions. Zoning may be inconsistent or unsupportive of the access level established."
"It is wise to involve stakeholders outside of the department during the policy development phase and you should inform politicians of proposed changes and the reasoning as early as possible."
"Local agency coordination is important to getting a win-win in development site plans."

Clarity

"Clear legal authority and a clear set of standards and procedures…use computer software for all processing needs. Be sure you have one managing specialist with full time program responsibility."
"Frequently review the policies and procedures and make necessary revisions; create sound policies that have upper management backing."

Training

"Training is essential and improves communication skills with customers…proper staffing and resources increase the effectiveness of the permit process as well as the timely completion of the review."
"Have better training in place for staff, public officials and the public; have good coordination and communications between all staff involved in the process."

Statutory Support

"Have written policies and guidelines concerning the driveway permitting process that is backed by state statutes."

APPENDIX B

Survey Responses—Local

SURVEY OF LOCAL TRANSPORTATION AGENCIES

DRIVEWAY REGULATION PRACTICES

NCHRP Project 20-5, Synthesis Topic 32-05

Number of Responses: 17

1. Is your driveway permit process established by (*check all that apply*):

   - ❑ Formal policy or ordinance (12)
   - ❑ Informal policy/procedure (4)
   - ❑ Written guideline (7)
   - ❑ Design standards (12)

2. Do you have ___text ___flow charts or ___ brochures that describe or illustrate the driveway application and permit process? (Please check if yes.) If yes, please provide a copy with this completed survey.

   - ❑ Text (9) Clackamas Co., Durham, Licking Co., Norfolk, Ramsey Co., San Buenaventura, Springfield, Washington Co., Waterloo
   - ❑ Flow Charts (1) Orlando
   - ❑ Brochures (2) San Buenaventura, Washington Co.
   - ❑ None (4) Broomfield, Brownsville, Spokane, Tucson

3. Are there written goals and objectives for your driveway permit process? Yes 7 No 7

4. If you have locally adopted driveway design standards, about what year were your driveway design standards last substantially revised and updated?

   - ❑ No answer (3)
   - ❑ Before 1986 (3)
   - ❑ 1986–1995 (2)
   - ❑ 1996–2000 (7)
   - ❑ 2001 or currently being updated (2)

5. Please indicate which of the following are components of your driveway permitting process (*check all that apply*):

   - ❑ Concept review (13)
   - ❑ Pre-application meeting (10)
   - ❑ Traffic impact study (11)
   - ❑ None of the above (3)

6. Who in your agency reviews driveway applications and issues permits?

   - ❑ Professional engineer (14)
   - ❑ Trained technician (14)
   - ❑ Urban planner (2)
   - ❑ Zoning administrator (0)

If you checked more than one, please explain why:

More complex applications are reviewed by a technician followed by an engineer (5), Urban planner reviews zoning requirements and a technician reviews the operational requirements (1), Professional engineer reviews and approves zoning and subdivision applications and the technician issues the permits (1), Type of review depends on driveway location (i.e., state highway, county road, or township road) (1)

7. Are there fees for the driveway application or permit? Yes 11 No 5

a) If yes, how are the fees assessed?

- ❑ By size and/or type of development (5)
- ❑ Flat rate per driveway (3)
- ❑ Width of driveway (1)
- ❑ By number of trips generated (0)

b) What are the fees? (Summarize here or attach a fee schedule)

Residential: $0–$75 (4), $76–$150 (2), $151 or more (0)
Commercial: $0–$75 (2), $76–$150 (1), $151 or more (3)
Communities with same rates for residential and commercial:
$36 per meter of curb cutting
$79.50 for one driveway, $37.25 for each additional driveway
$454.00 ($250.00 are a refundable bond)

8. What is the average/typical elapsed time between receipt of an application and issuance of the permit?

- ❑ 1 week or less (4)
- ❑ 1–3 weeks (7)
- ❑ 3 weeks or longer (1)
- ❑ Varies by development (2)
- ❑ N/A—no formal review (1)

Does the time differ by the size of the development? Yes 13 No 3
If yes, please explain?

Review time is longer for larger developments because:
Numerous access points to review (2)
Traffic Impact Studies are involved (2)
Increased number of plan reviews (2)
More agencies are involved (2)

9. Do you have a computerized tracking system for permits? Yes 13 No 3

If yes, is the information accessible to the public? Yes 5 No 8

10. Do you measure or determine sight distance as part of your driveway permit process? Yes 17 No 0

11. Do you have different driveway spacing standards for different classes of roadway (principal arterial, minor arterial, etc.)? Yes 14 No 3

If yes, please describe how you handle requests for deviation from driveway spacing standards and/or nonconforming situations:

Handled by Commission (2), Board process (2), Public Works review (2)

12. Is consistency and adherence to your driveway permitting procedures and standards important to your agency? Yes 16 No 1

    If yes, how do achieve consistency in driveway permitting decisions?

    Adhering to standards (5), Supervision (2), Coordination (2), Single reviewer (1), Teaching (1), Limit deviations (1)

13. Do you have different driveway permitting procedures or requirements for small versus large developments? Yes 7 No 10

    a) What constitutes a small development?

    Residential (4)
    Agricultural (1)
    Single driveway (1)
    Existing subdivision (1)
    Low volume entranceway (1)

    b) What are the procedures and minimum requirements for small developments?

    Less restrictive design requirements (2), Less intensive review (1)

    c) What constitutes a large development?

    Non-residential (2)
    High volume (3)

    d) What are the procedures and minimum requirements for large developments?

    Driveway review part of site plan review (1), Detailed design requirements (4), Greater analysis (2)

14. Do you have different driveway permitting procedures or requirements for new development versus re-development? Yes 4 No 13

    If yes, please describe the difference in practice:

    Old locations are typically grandfathered (3), Administered by different departments (1), If exceeds a pre-determined threshold, driveway must be brought into full compliance (1)

15. Do you encourage driveway consolidation and shared access through your driveway permitting process? Yes 15 No 2

    If yes, please explain how:

    Required along specified roadways (4), Recommended to applicant (3), Through land use planning process (2), Required when roadway's level of service is poor (1), Temporary driveways allowed until shared access is constructed (1)

16. Do you typically require outparcels/outlots to obtain access via the primary access and circulation system of the principal development? Yes 12 No 3

17. Do you issue temporary driveway permits with a condition that the driveway must be closed when alternative access from another road or neighboring property becomes available? Yes 15 No 2

If yes, please answer the following:

a) How do you track or implement the changes when the agreed to condition has been met?

Field inspection (5), Withhold occupancy permit until temporary driveway closed (2), Development agreements (1), Recorded on plat (1), Onus on the developer (1)

b) Who is responsible for the closure of the temporary access point(s)?

- ❑ Agency (1)
- ❑ Property Owner (12)
- ❑ Agency and Property Owner (1)

c) If the property owner is responsible, do you collect funds up front and hold them in an escrow account? Yes 6 No 7

18. Does your driveway permitting process allow you to deny access to the primary roadway under certain conditions? Yes 16 No 1

If yes, what are those conditions?

Safety concerns (i.e., insufficient spacing, too close to intersection, limited sight distance) (7), Lack of paved parking (1), Alternative access available (1), Access rights dedicated (1)

19. Does your agency coordinate with the state or other local agencies on driveway permitting issues in situations where jurisdiction over access and development issues overlaps? Yes 16 No 1

If yes, how do you coordinate? (*check all that apply*)

- ❑ Seek written comment on driveway permit applications (10)
- ❑ Hold pre-application meetings that include other agencies (5)
- ❑ Combined review committees on larger or more complex driveway permit applications (6)
- ❑ Frequent informal communication with other affected agencies on driveway permit issues (9)
- ❑ Consistent policies, procedures and standards (1)
- ❑ Inform the state transportation agency of all subdivision, rezoning, development proposals involving access to state highways (10)
- ❑ Other coordination measures:
  Local government signs off on agency's permit (1)
  City applies conditions during the development approval process (1)
  City issues driveway permits along state highways after review and comment by DOT (1)
  City must approve access to state-maintained roadways by working with state inspector prior to permit issuance (1)

20. Do you have an inspection and enforcement process for your driveway permit? Yes 13 No 3

If yes, are driveway permit requirements enforced through (*check all that apply*):

- ❑ Reconfiguration of access at property owner expense? (10)
- ❑ Revocation of the driveway permit? (8)
- ❑ Driveway closure/barriers? (6)
- ❑ Monetary penalties? (3)
  (Examples: $500 and "double the permit fees")
- ❑ Withhold Occupancy Permit (2)

21. What do you consider the primary positive and adverse impacts of your current driveway permitting program (relative to safety, operations, maintenance, land use, businesses, land value, etc.)?

    a) Positive Impacts:
    - ❑ Better site design (16)
    - ❑ Improved vehicular safety/crash reduction (14)
    - ❑ Improved roadway level of service (10)
    - ❑ Improved driveway design (9)
    - ❑ Improved coordination between applicant and approval authority (8)
    - ❑ Improved bicycle and pedestrian safety (7)
    - ❑ Improved coordination between work proposed by different parties (6)
    - ❑ Lower maintenance costs (5)
    - ❑ Increased property values (2)
    - ❑ Other positive impacts:
      Educate the public in the topic of safety and efficiency (1)
      Interjurisdictional coordination and consistency (1)

    b) Adverse Impacts:
    - ❑ No real adverse impacts (6)
    - ❑ Reduced safety (1)
    - ❑ Operational problems (2)
    - ❑ Increased development costs (5)
    - ❑ Inadequate driveway design (1)
    - ❑ Development constraints (10)
    - ❑ Other adverse impacts:
      Politics (1)
      Longer review times (1)

22. What, if any, problems have you experienced related to your current driveway permitting program?

    - ❑ No real problems (7)
    - ❑ Outdated, unclear, or ineffective driveway standards (6)
    - ❑ Political appeals and constraints (5)
    - ❑ Inadequate enforcement of driveway standards (5)
    - ❑ Inadequate agency resources for permitting and inspection (4)
    - ❑ Inconsistent decisions (3)
    - ❑ Difficulty tracking compliance with permit conditions (3)
    - ❑ Little or no control over new driveways (3)
    - ❑ Unclear application requirements or procedures (3)
    - ❑ Lack of understanding by affected businesses (3)
    - ❑ Lack of statutory authority (3)
    - ❑ Not enough trained staff (2)
    - ❑ Lack of intergovernmental coordination (2)
    - ❑ Frequent legal challenges (2)
    - ❑ Other:
      Longer review periods (1)
      Need for stronger regulations (1)

23. What are the strengths of your agency's current driveway permitting process?

    Timely and Thorough Review

    "The small town atmosphere that allows inspector and citizen to communicate."
    "Communication within the staff, permit application is straightforward."
    "It's a relatively easy process with good staffing. The permit process is real world responsive."
    "Free. Usually quick depending on applicant preparedness and expertise."

"It is part of an integrated permitting process and an integrated land development process."
"Written policies and brochures. Engineer reviews each location in the field and approvals are on a case-by-case basis."
"Engineering review of all access applications."
"New development is reviewed thoroughly."

Consistency

"Consistency. Developers know requirements early allowing them to contact us early in the design of the site. Some flexibility through appeal process. Provides consistency and promotes safety."
"Consistency for everyone."
"Compliance with County standards."

Enforcement

"Tracking and enforcement of maintenance."

24. What are the weaknesses of your agency's current driveway permitting process?

Inconsistency

"Lack of consistency with DOT on state routes."
"Inconsistencies between staff. Procedure manual or checklist not used by everyone. Still subject to political intervention because the benefits of access management are not entirely understood by all."
"Politics and inadequate experience by reviewers."

Lack of Enforcement

"No teeth, we don't have any penalties or repercussions for non-compliance."
"Follow-up or closure in future years."

Indifference of Property Owner

"Lack of responsibility on property owners."

Lack of Strong Regulations

"The process does not have strong standards in place. It becomes difficult to deny some driveways that should be denied because we don't have strong regulatory backing."

25. What lessons have you learned relative to driveway regulation that you would pass on to other agencies?

Educate Public

"Provide efficient informational literature."
"Do not assume that the applicant totally understands your regulations and specifications."
"Explain your policies in detail to applicant before project starts, it saves time, money, and headaches."
"Don't use it to regulate development and provide a thorough explanation of basis for decision."

Adopt Regulations

"A written permitted system would be helpful."
"Formalize."

"Driveway enforcement can be more effective with a development code than a street code. In a land development code, access is reviewed with each change of the site. In a street code, once a driveway is established it tends to be forever."

Provide Training to Staff

"Train all staff involved in order to achieve consistency."
"You need reasonable regulations and good staff to make sure driveways are as safe as possible and satisfy the regulations."

Consistency

"Remain consistent, fair, flexible."

APPENDIX C

List of Survey Respondents

States

Arizona Department of Transportation
Prescott District

Colorado Department of Transportation
Safety and Traffic Branch

Florida Department of Transportation
Systems Planning

Hawaii Department of Transportation
Highways Division

Idaho Department of Transportation
Headquarters' Traffic Section

Illinois Department of Transportation
Traffic Engineering and Standards Unit

Indiana Department of Transportation
Greenfield District

Kansas Department of Transportation
Bureau of Traffic Engineering

Kentucky Transportation Cabinet
Permitting Division

Louisiana Department of Transportation and Development Louisiana Transportation Research Center

Maine Department of Transportation
Planning Division

Maryland Department of Transportation
Engineering Access Permit Division

Minnesota Department of Transportation
Land Use and Access Management Section, Office of Investment Management

Montana Department of Transportation
Access Management Section, Right-of-Way Bureau

Nebraska Department of Roads
Materials and Research Division

New Hampshire Department of Transportation
Bureau of Highway Maintenance

New Jersey Department of Transportation
Bureau of Major Access Permits

New York Department of Transportation
Permitting Division

North Dakota Department of Transportation
Right-of-Way Section, Design Division

Oklahoma Department of Transportation
Traffic Engineering Division

Oregon Department of Transportation

South Carolina Department of Transportation
Traffic Engineering Section

South Dakota Department of Transportation

Tennessee Department of Transportation
Maintenance Division, Traffic Engineering Office

Utah Department of Transportation

Virginia Department of Transportation
Traffic Engineering Division

Washington Department of Transportation

West Virginia Department of Transportation
Traffic Engineering Division

Wisconsin Department of Transportation
Bureau of Highway Operations

Cities

City of Broomfield, Colorado
Engineering Department

City of Brownsville, Texas
Engineering Department

City of Norfolk, Virginia
Public Works, Division of Transportation

City of Orlando, Florida
Office of Permitting Services

City of Salem, Oregon
Department of Public Works

City of San Buenaventura, California
Planning Division

City of Spokane, Washington
Building and Engineering Services Department

City of Springfield, Missouri
Public Works Department

City of Tucson, Arizona
Traffic Engineering Department

Counties and Regions

Clackamas County, Oregon
Engineering Department

Clark County, Washington
Department of Community Development

Licking County, Ohio
Planning Department

Polk County, Iowa
Public Works Department

Ramsey County, Minnesota
Department of Public Works

Regional Municipality of Durham,
Ontario Transportation Planning and
Design, Works Department

Regional Municipality of Waterloo, Ontario
Transportation Division

Washington County, Oregon
Department of Land Use and Transportation

APPENDIX D

Driveway Access Permit Forms

COLORADO DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ACCESS PERMIT APPLICATION

Issuing authority application acceptance date:

Instructions:
- contact the Department of Transportation or your local government to determine your issuing authority.
- contact the issuing authority to determine what plans and other documents are required to be submitted with your application.
- complete this form (some questions may not apply to you) and attach all necessary documents and submit it to the issuing authority. Submit an application for each access requested.
- if you have any questions contact the issuing authority.

Please print or type

1) Property owner (Permittee)		2) Applicant	
street address, city		street address, city	
state & zip	phone #	state & zip	phone #

3) Address of propety to be served by permit (if known)

4) Legal description of property:

county	subdivision	block	lot	section	township	range

5) What state highway are you requesting access from?	6) What side of the highway ❑ N ❑ S ❑ E ❑ W
7) How many feet is the proposed access from the nearest mile post? _____ feet (circle: N S E W) from: _____	How many feet is the proposed access from the nearest cross street? _____ feet (circle: N S E W) from: _____

8) Check here if you are requesting a
❑ new access ❑ temporary access ❑ improvement to existing access ❑ change in access use ❑ removal of access

9) What is the approximate date you intend to begin construction?

10) Do you have knowledge of any State Highway access permits serving this property, or adjacent properties in which you have a property interest.
❑ no ❑ yes, if yes - what are the permit number(s)?: and/or, permit date:

11) Does the property owner own or have any interests in any adjacent property?
❑ no ❑ yes, if yes - please describe:

12) Are there other existing or dedicated public streets, roads, highways or access easements bordering or within the property?
❑ no ❑ yes, if yes - list them on your plans and indicate the proposed and existing access points.

13) If you are requesting commercial or industrial access please indicate the types and number of businesses and provide the floor area square footage of each.

business	square footage	business	square footage

14) If you are requesting agricultural field access - how many acres will the access serve?

15) If you are requesting residential developement access, what is the type (single family, apartment, townhouse) and number of units?

type	number of units	type	number of units

16) Provide the following vehicle count estimates for vehicles that will use the access. Leaving the property then returning is two counts. Indicate if your counts are
❑ peak hour volumes or ❑ average daily volumes.

# of passenger cars and light trucks	# of multi unit trucks	# of other vehicles
# of single unit vehicles in excess of 30 ft.	# of farm vehicles (field equipment)	**Total count of all vehicles**

17) Check with the issuing authority to determine which of the following documents are required to complete the review of your application.
(plans should be no larger than 24" x 36")

a) Highway and driveway plan profile.
b) Drainage plan showing impact to the highway right-of-way.
c) Map and letters detailing utility locations before and after development in and along the right-of-way.
d) Subdivision, zoning, or development plan.
e) Property map indicating other access, bordering roads and streets.
f) Proposed access design
g) Parcel and ownership maps including easements.
h) Signing and striping plans.
i) Traffic control plan.
j) Proof of liability insurance.

If an access permit is issued to you it will state the terms and conditions for its use. Any changes in the use of the permitted access not consistent with the terms and conditions listed on the permit may be considered a violation of the permit.

The applicant declares under penalty of perjury in the second degree, and any other applicable state or federal laws, that all information provided on this form and submitted attachments are to the best of their knowledge true and complete.

Applicants signature	Date

If the applicant is not the owner of the property, we require this application also to be signed by the property owner or their legally authorized representative (or other acceptable written evidence). This signature shall constitute agreement with this application by all owners-of-interest unless stated in writing. If a permit is authorized, the property owner will be listed as the permittee.

Property owner signature	Date

Previous editions may be used until supplies are exhausted

CDOT Form #137 9/96

DRAFT CONCEPT

CDOT Highway Access Approach Internal Processing Sheet	Highway Location
	County
	Municipality
Permittee/Development name Consultant Name	Application Date Est. Due date
Development/Access use	Access Type New, Change, temp
Expected Traffic Volume	

Consider, Collect, Investigate and Review the following as needed and if applies

Most recent construction project reference	Most recent Right of way acquisition reference
Developer Plans submitted? What is potential buildout?	Is there access control by deed?
Detailed Drainage report needed?	Field Review Scheduled / Completed
Traffic Impact Study Needed?	Will this impact a traffic signal or need a signal
Does the scale require review by Region Traffic Engineer Intersection, or >100 per day	Sent to HQ? Received Back?
Was there an earlier Subdivision or zoning review associated with this request.	Zoning
Local Government Contacted? Their Comments?	Owner Contacted
Construction Traffic Control Plan needed?	Environmental Clearances
New or relocation of traffic control devices needed	Any structures (engineering)
Comments from Maintenance	

Completion of Permit Form	Completion of Denial Letter
Select Terms and Conditions	Letter with explanation
Prepare Transmittal cover	Contact applicant
Transmit to Permittee	

Concept Form, Rough Draft, 4/11/2000

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

Application for Highway Access Permit - South Dakota Department of Transportation

Permit Application (to be completed by applicant).

Instructions: Please contact the South Dakota Department of Transportation office named at the bottom of this form to determine what supporting documents must accompany this application. Please submit a separate application and supporting documentation for each access requested. Attach a sketch of the proposed access or approach change. Attach additional sheets as necessary. Please print or type.

Property Owner: Name(s): Mailing Address: City, State, Zip Daytime Phone:	**Applicant (if different from Owner):** Name(s): Mailing Address: City, State, Zip Daytime Phone:
Property to be Served by Approach: County: Section: Township: Range: Or Subdivision: Block/Lot: Street Address: City:	**State Highway to be Accessed by Approach:** State Highway Number: Access would be _____ feet (north, south, east or west) from _____ (nearest cross street).
Land Use of Property to be Served (check one): Agricultural: acres served _____ Business: type _____ total square footage of buildings:____ number of employees _____ Residential: number of single-family dwellings _____, or number of multi-family dwellings _____. Other: describe _____	Type of Permit Requested (check one) New approach Change in use Temporary access Improve existing access Relocate existing access Remove existing access

Local Government Reviews:

County: Comments: Concurrence signature:_____Date:_____	**Municipality:** Comments: Concurrence signature:_____ Date:_____

Estimated Date of Construction:

I, the undersigned, request permission to construct or modify an access approach subject to the rules and regulations set forth in SDCL 70:09.

Signature of Applicant: **Date:___/___/___**

Permit Decision (to be completed by SDDOT).

Supporting Materials Required:

(Required)		(Received)
	Access Approach Design	
	Vicinity Map	
	Traffic Volumes	
	Three Copies of Site Plan	
	Traffic Control Plan	
	Proof of Liability Insurance	
	Detailed Development Plan	
	Drainage Plan	
	Traffic Impact Study	
	Revegetation Plan	
	Other _____	

Received by SDDOT: Date:___/___/___

Application Fee $_____Received

Decision: (to be made after Application Review)

Access Approved
Access Approved with Variance: _____

_____
Access Denied

Terms and Conditions of Approval (or Reason for Denial)
Permit Expiration Date: ___/___/__

SDDOT Area Engineer Signature: **Date: ___/___/___**	South Dakota Department of Transportation Pierre Area 104 S. Garfield Pierre, SD 57501 Phone: 773-5294

SDDOT Highway Access Permit Application Review Sheet (to be completed by SDDOT)

Highway Access Classification: (check one)

Expressway
Free Flow Urban
Intermediate Urban
Urban Business
Urban Fringe
Rural

Highway _____
MRM + Displacement ____+____
Left ☐ **Right** ☐
Average Daily Traffic _____
Accidents (three years)_____

Highway Alignment to Left of Access **(as seen when standing on access)**		**Highway Alignment to Right of Access** (as seen when standing on access)	
Straight	**Stopping Sight Distance: _____ ft.**	Straight	Stopping Sight Distance: _____ ft.
Turns left	Entering Sight Distance: _____ ft.	Turns left	Entering Sight Distance: _____ ft.
Turns right	Posted Speed Limit: _____ mph	Turns right	Posted Speed Limit _____ mph
Flat	0-3% grade	Flat	0-3% grade
Slopes up	3-5% grade	Slopes up	3-5 % grade
Slopes down	>5% grade	Slopes down	>5% grade

Significant Design and Potential Impact Considerations (check all that apply and explain checked items):

Sidewalks or Bike Paths	Surface Drainage	Distance to Nearby Streets, Both Directions
Curb & Gutter	Drainage Structures	Distance to Nearby Driveways, Both Directions
On-Street Parking	Major Structures	Others Streets with Access or Available Access
Shoulder Width	Guard Rail	Traffic Control Devices or Relocation Needed
Historical Resources	Above-Ground Utilities	Median Crossovers
	Railroad Tracks	

Explain impact on design:

SDDOT Region Traffic Engineer Review:
Comments:

Signature: _____ date: ___/___/___

SDDOT Access Management Review
Comments:

Signature: _____ date: ___/___/___

APPROACH DESIGN SKETCH

List Attachments:
Driveway details
Culvert details
Mailbox details
Fencing details
Cattle guard
Sidewalk details
Median crossovers
Recreation paths
Rail crossings
Auxiliary lanes
Storm sewer
Pavement
Curb & gutter
Traffic Control
Sign/signal/marking
Other

SDDOT Review Performed by: **Date: ___/___/___**

Access Approach Construction Inspection Form
South Dakota Department of Transportation

To: (person who will conduct field inspection)	After completion, return form to person/office:
address	
address	
Address/zip	

The assigned field inspector is to complete this form for each newly completed access and return the form as noted in the upper right. This form is to confirm installation of an access. If during construction, the inspector should determine problems, such as poor traffic control, materials, or failure to adhere to the permit, they are to order the problems corrected, work may be shut down if necessary, and/or area office contacted for direction. All construction shall be completed within 45 days unless extension granted in writing by Area Engineer.

Permittee name and phone:

Access location:	Permit number:
Local jurisdiction:	Permit issue date:
SDDOT Area:	Permit construction began: _____ Permit construction ended: _____ Permit extension granted: _____

This access has been constructed in reasonable conformance with the issued access permit:
Inspector signature _____ Date _____

This access has NOT been constructed in reasonable conformance with the issued access permit:
Inspector signature _____ Date _____

Items not in conformance or inspector comments:

Form MT-32 6/96

NEW JERSEY DEPARTMENT OF TRANSPORTATION

DRIVEWAY ACCESS PERMIT APPLICATION

Application No.	
Control Section	
Amount Received	
Check No.	
Date Received	

Department Use Only

******Please Print or Type******

APPLICANT: _____
(Name of Lot Owner)

_____
(Street)

_____
(City) (State) (Zip Code)

( ) _____
(Phone Number)

LOCATION: BLOCK: _____ LOT: _____

MUNICIPALITY: _____ COUNTY: _____

DESCRIPTION: Between _____ And

_____

THE TYPE OF PERMIT REQUESTED IS: *(CHECK ONE):*

*Submit to the **REGIONAL MAINTENANCE OFFICE**:*

( ) Single Family Residential
( ) Combined Residence and Business
( ) Government Driveway
( ) Minor

*Submit to the **BUREAU OF MAJOR ACCESS PERMITS**:*

( ) Major
( ) Major with Planning Review
( ) Concept Review

THIS PERMIT REQUEST INCLUDES:
(Check those that apply.)

( ) Lot Consolidation
( ) Lot Subdivision
( ) Drainage
( ) Curb
( ) Sidewalk

PLEASE FILL IN THE FOLLOWING INFORMATION:

1) ROUTE: _____ 2) SUFFIX: _____ 3) MILEPOST: _____ 4) DIRECTION _____

5) LIST THE DEVELOPMENT THE ACCESS WILL SERVE:

LAND USE TYPE	LAND USE SIZE	EXISTING OR PROPOSED

6) TOTAL SIZE OF DEVELOPMENT THE ACCESS WILL SERVE _____

7) IS THE LOT A CORNER LOT? (YES OR NO) _____

IF YES, IS THE INTERSECTING ROAD ALSO A STATE HIGHWAY? _____

8) IS A TRAFFIC SIGNAL INVOLVED AT THE LOT? (YES OR NO) _____

9) IS THE LOT SHARING ACCESS WITH A NEIGHBORING LOT? (YES OR NO) _____

IF YES, SHARING ACCESS WITH LOT ON WHICH SIDE? _____

10) HOW MANY TWO-WAY DRIVEWAYS ARE REQUESTED? _____

(ON DIVIDED HIGHWAYS 2, ONE-WAY DRIVEWAYS MAY BE SUBSTITUTED FOR 1, TWO-WAY DRIVEWAY)

11) WHAT SIZE IS THE LOT (TO HUNDREDTHS OF ACRE)? _____ ACRES

12) WILL THE LOT BE SERVED BY ALTERNATIVE ACCESS? (YES OR NO) _____

13) IF YES, WHAT IS THE PERCENTAGE OF TRAFFIC USING THE ALTERNATIVE ACCESS? _____

14) DOES THE DEPARTMENT OWN ANY DENIAL OF ACCESS ALONG THE LOT FRONTAGE? (YES OR NO) _____

IF YES, IS IT ON THE LEFT OR RIGHT SIDE OF THE LOT, WHEN FACING THE LOT? _____

FOR HOW MANY FEET? _____ FEET

15 HOW MANY FEET OF FRONTAGE DOES THE LOT HAVE ON THE STATE HIGHWAY? _____ FEET

16) LOOKING AT THIS LOT FROM THE HIGHWAY, WHAT ARE THE FRONTAGES OF THE NEIGHBORING LOTS WITHIN 330' AND ARE THE LOTS SINGLE FAMILY RESIDENTIAL?

LEFT: _____ FEET YES OR NO: _____ RIGHT: _____ FEET YES OR NO: _____

LEFT: _____ FEET YES OR NO: _____ RIGHT: _____ FEET YES OR NO: _____

(NOTE: Not applicable if this application is for a single family residential lot)

17) HAVE YOU ATTACHED AN AFFIDAVIT FOR ANY AFFORDABLE HOUSING ON THE LOT? (YES OR NO) _____

Please provide the information for those items that have parentheses under your application type.

APPLICATION CHECKLIST

For Applicant's Use *For Dept. Use*

N.J.A.C. 16:47 –	SINGLE FAMILY RESIDENTIAL/ RESIDENCE & BUSINESS 4.9	OTHER MINOR TRAFFIC GENERATORS 4.10	MAJOR 4.12	MAJOR WITH PLANNING REVIEW 4.14	CONCEPT REVIEW 4.16	
1. Lot location map.	--	( )	( )	( )	( )	( )
2. Copy of tax map.	( )	( )	( )	( )	( )	( )
3. Right of way line from Department desirable typical section	( )	( )	( )	( )	( )	( )
4. Topography showing all highway features within 500 feet of the lot frontage on both sides of undivided highways and one side of divided highways.	--	( )	( )	( )	--	( )
5. Setback and location of structures.	( )	( )	( )	( )	--	( )
6. Curb: existing & proposed.	( )	( )	( )	( )	--	( )
7. Sidewalks: existing & proposed.	( )	( )	( )	( )	--	( )
8. Trees within Department right of way.	( )	( )	( )	( )	--	( )
9. Signs.	( )	( )	( )	( )	--	( )
10. Utility Poles.	--	( )	( )	( )	--	( )
11. Highway electrical installations.	( )	( )	( )	( )	--	( )
12. Locations of all lot driveways -- existing and proposed.	( )	( )	( )	( )	( )	( )
13. Locations of nearest driveway on adjacent lots, including type of operation using adjacent driveways.	--	--	--	( )	--	( )
14. Driveway/street width.	( )	( )	( )	( )	( )	( )
15. Driveway/street alignment with respect to the highway.	( )	( )	( )	( )	( )	( )
16. Curbline openings.	( )	( )	( )	( )	( )	( )
17. Edge clearance.	( )	( )	( )	( )	--	( )
18. Type of driveway/street.	( )	( )	( )	( )	( )	( )
19. Contours - existing & proposed.	--	( )	( )	( )	--	( )
20. Corner clearance.	( )	( )	( )	( )	--	( )
21. Driveway/street & island radii.	--	( )	( )	( )	--	( )
22. Estimated 24-hour & highway peak-hour traffic count for the lot & access point.	( )	( )	( )	( )	( )	( )
23. Number of lanes on the highway.	--	( )	( )	( )	( )	( )
24. Speed-change lanes (acceleration, deceleration, left-turn).	--	( )	( )	( )	( )	( )
25. Lane and shoulder widths.	--	( )	( )	( )	( )	( )
26. Typical highway pavement sections.	--	( )	( )	( )	( )	( )
27. Location of centerline on undivided highways and median on divided highways.	--	( )	( )	( )	( )	( )
28. Location of existing median openings on divided highways.	--	( )	( )	( )	( )	( )
29. Location of existing driveways on opposite side of undivided highways.	--	( )	( )	( )	( )	( )

For Applicant's Use *For Dept. Use*

N.J.A.C. 16:47 --	SINGLE FAMILY RESIDENTIAL/ RESIDENCE & BUSINESS 4.9	OTHER MINOR TRAFFIC GENERATORS 4.10	MAJOR 4.12	MAJOR WITH PLANNING REVIEW 4.14	CONCEPT REVIEW 4.16	
30. Dimensions from the lot line to the edge of pavement.	--	( )	( )	( )	( )	( )
31. Number of new units for residential units; rooms for hotels & motels; square footage for retail, office or warehouse; or appropriate unit of measure for other land uses.	--	( )	( )	( )	( )	( )
32. Parking facilities & internal traffic circulation.	--	--	( )	( )	( )	( )
33. Traffic patterns: existing & proposed.	--	( )	( )	( )	( )	( )
34. Highway traffic striping: existing & proposed.	--	( )	( )	( )	--	( )
35. Construction details.	--	( )	( )	( )	--	( )
36. Type of vehicles anticipated.	--	--	( )	( )	--	( )
37. Attachments to Department drainage system: existing and proposed.	--	--	( )	( )	--	( )
38. Drainage calculations: existing and proposed.	--	--	( )	( )	--	( )
39. Changes to existing traffic signals.	--	--	( )	( )	( )	( )
40. New traffic signals & MUTCD warrant numbers.	--	--	( )	( )	( )	( )
41. Proposed lot & highway transportation improvements.	--	--	--	( )	--	( )
42. Length of lot frontage along highway.	( )	( )	( )	( )	( )	( )
43. Distance to nearest traffic signal if less than 250 ft.- preceding (in feet), following (in feet).	( )	( )	--	--	--	( )
44. Distance to nearest traffic signal if less than 500 ft. - preceding (in feet), following (in feet).	--	--	( )	--	--	( )
45. Distance to nearest traffic signal - preceding (in feet), following (in feet).	--	--	--	( )	--	( )
46. Zoning designation for lot.	( )	( )	( )	( )	( )	( )
47. Waivers requested	( )	( )	( )	( )	( )	( )
48. Copies of transmittals of duplicate applications to the municipal clerk & county planning board.	--	--	( )	( )	( )	( )
49. Location of any access easement on the lot.	( )	( )	( )	( )	( )	( )
50. Applicability of Pinelands Act.	( )	( )	( )	( )	( )	( )
51. Justification for exceptions to design standards.	( )	( )	--	--	--	( )
52. Proposed use and size of buildings	--	--	--	--	( )	( )
53. Detailed plan or sketch : scale 1 in. = 30 ft. or 1 in. = 50 feet (Plan sheets shall not exceed 24 by 36 inches). Number of sets.	( ) 6	( ) 6	( ) 7	( ) 7	--	( )
54. Submitted plan sets 1 in. = 100 feet or 1 in. = 50 feet (Plan sheets shall not exceed 24 by 36 inches). Number of sets.	--	--	--	--	( ) 9	( )
55. Traffic impact studies, include TIS if concept review requires a planning review. Number of copies.	--	--	--	( ) 3	( ) 3	( )
56. A copy of current deed for the lot.	( )	( )	( )	( )	( )	( )

PLEASE SUBMIT ONLY THE APPLICATION FEE WITH THIS APPLICATION.
SUBMIT CHECK OR MONEY ORDER, PAYABLE TO:

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CASH WILL NOT BE ACCEPTED
FEES ARE NOT REFUNDABLE

FEES:

APPLICATION TYPE	APPLICATION FEE EACH LOT	PERMIT FEE EACH LOT	RENEWAL FEE EACH LOT
SINGLE FAMILY RESIDENTIAL DRIVEWAY	$ 35.00	$ 15.00	$ 15.00
RESIDENCE AND BUSINESS DRIVEWAY	75.00	25.00	25.00
GOVERNMENT DRIVEWAY	150.00	500.00	250.00
MINOR	265.00	85.00	85.00
MAJOR	3,750.00	1,250.00	250.00
MAJOR WITH PLANNING REVIEW	9,000.00	3,000.00	250.00
CONCEPT REVIEW	500.00	----------	---------

FEES FOR LOW AND MODERATE INCOME HOUSING ONLY

FOR APPLICATIONS WITH LOW AND MODERATE INCOME HOUSING, THE APPLICANT SHOULD SUBMIT AN AFFIDAVIT FROM THE MUNICIPAL APPROVING AUTHORITY WITH THIS APPLICATION, CERTIFYING TO THE DEPARTMENT THAT THE DEVELOPMENT CONTAINS AT LEAST 10 PERCENT SET-ASIDE FOR LOW AND MODERATE INCOME HOUSING PURSUANT TO THE FAIR HOUSING ACT P. L. 1985, c.222 (N.J.S.A.52:27D-301 ET SEQ.) OR COURT SETTLEMENT AS PER N.J.A.C. 16:41-2 ET SEQ. THE DEPARTMENT, UPON APPROVAL OF ACCESS, WILL REDUCE THE PERMIT FEE BY 10 PERCENT OF THE TOTAL APPLICATION AND PERMIT FEES COMBINED. THE RENEWAL FEES ARE NOT SUBJECT TO REDUCTION.

APPLICATION TYPE	APPLICATION FEE	PERMIT FEE	RENEWAL FEE
MINOR	SAME AS ABOVE	$ 50.00	$ 85.00
MAJOR	SAME AS ABOVE	750.00	250.00
MAJOR WITH PLANNING REVIEW	SAME AS ABOVE	1,800.00	250.00

THE DEPARTMENT WILL NOT ACCEPT THIS APPLICATION IF IT IS NOT SIGNED.

IF THE SIGNATURE BELOW IS AN AUTHORIZED REPRESENTATIVE OF THE LOT OWNER, PLEASE ATTACH A COMPLETED POWER OF ATTORNEY FORM.

AUTHORIZED REPRESENTATIVE_____

(Name of Lot Owner)

_____

(Street)

_____

(City) (State) (Zip Code) (Phone Number)

ENCLOSED IS THE $_____APPLICATION FEE.

I CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE. I AM AWARE THAT IF ANY OF THE ABOVE INFORMATION IS FALSE, I AM SUBJECT TO PUNISHMENT. I AGREE NOT TO PERFORM ANY WORK WITHIN STATE RIGHT OF WAY UNLESS IT IS AUTHORIZED BY A PERMIT ISSUED BY THE DEPARTMENT. THE APPLICANT ALSO AUTHORIZES THE DEPARTMENT REPRESENTATIVES TO ENTER UPON THE LOT FOR THE PURPOSE OF PERFORMING A SITE INVESTIGATION. FURTHERMORE, THERE ARE NO OBJECTIONS IN PARKING OF A DEPARTMENT VEHICLE ON THE LOT IF NECESSARY WHILE TAKING FIELD MEASUREMENTS AND OTHER DATA.

_____ _____

(Signature of owner or authorized representative) (Print or type your title)

_____ _____

(Print or type your name) (Date)

THE TRANSPORTATION RESEARCH BOARD is a unit of the National Research Council, a private, nonprofit institution that provides independent advice on scientific and technical issues under a congressional charter. The Research Council is the principal operating arm of the National Academy of Sciences and the National Academy of Engineering.

The mission of the Transportation Research Board is to promote innovation and progress in transportation by stimulating and conducting research, facilitating the dissemination of information, and encouraging the implementation of research findings. The Board's varied activities annually draw on approximately 4,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

The National Academy of Sciences is a nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Upon the authority of the charter granted to it by the Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters. Dr. Bruce Alberts is president of the National Academy of Sciences.

The National Academy of Engineering was established in 1964, under the charter of the National Academy of Sciences, as a parallel organization of outstanding engineers. It is autonomous in its administration and in the selection of its members, sharing with the National Academy of Sciences the responsibility for advising the federal government. The National Academy of Engineering also sponsors engineering programs aimed at meeting national needs, encouraging education and research, and recognizes the superior achievements of engineers. Dr. William A.Wulf is president of the National Academy of Engineering.

The Institute of Medicine was established in 1970 by the National Academy of Sciences to secure the services of eminent members of appropriate professions in the examination of policy matters pertaining to the health of the public. The Institute acts under the responsibility given to the National Academy of Sciences, by its congressional charter to be an adviser to the federal government and, upon its own initiative, to identify issues of medical care, research, and education. Dr. Harvey V. Fineberg is president of the Institute of Medicine.

The National Research Council was organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and advising the federal government. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities. The Council is administered jointly by both Academies and the Institute of Medicine. Dr. Bruce Alberts and Dr. William A. Wulf are chairman and vice chairman, respectively, of the National Research Council.