

DEPARTMENT OF TRANSPORTATION  
OFFICE OF THE COMMISSIONER

**DECLARATORY RULING NO. 2000-01**  
**DRIVEWAY PERMITS**

I, Leon S. Kenison, commissioner of the department of transportation, do hereby issue this document as a declaratory ruling in order to provide guidance as to the specific applicability and implementation of RSA 236:13. Following the adoption of the Administrative Procedures Act, RSA 541-A, the department adopted administrative rules, Part Tra 302, which were in force between January 1, 1994 and January 1, 1999. By subsequent legislative enactment, the authority of the department to enact rules for administration of this statutory provision was exempted from the requirements of the administrative procedures act in accordance with RSA 541-A: 21 (g).

By ruling dated January 21, 1999, the text of former administrative rule Tra 302, entitled "Driveway Permits" was adopted by me as a declaratory ruling by reference, and has been used since that date by the staff of this department in the processing and issuance of driveway permits and other decisions regarding access control on the state highways.

This ruling modifies the text of Declaratory Ruling 99-01, and the attached provisions shall hereafter be used by the staff of the department in the processing and issuance of driveway permits and other decisions regarding access control on the state highways until further modified by subsequent action of the commissioner of the department of transportation.

Dated: March 10, 2000

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Leon S. Kenison  
Commissioner of Transportation

DEPARTMENT OF TRANSPORTATION  
OFFICE OF THE COMMISSIONER

Policy Relating to Driveways and Access to the State Highway System

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## Policy Relating to Driveways and Access to the State Highway System

Statutory Authority: RSA 21-L: 12, IX, and RSA 236:13

### **1. Purpose.**

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 highway;
- (e) Monitor the design and construction of driveway entrances and exits; and
- (f) Maintain compliance with RSA 236:13, effective July 1, 1971, as amended, the language of which is contained in Appendix III.

### **2. Scope.**

(a) The review of requests for issuance of a driveway permit is the responsibility of the commissioner of the department of transportation. This operational responsibility is delegated to the division of operations, bureau of turnpikes, and the bureau of highway maintenance and its district offices. All permits shall be issued in the name of the director of the division of administration and signed by the district engineer or the assistant district engineer.

(b) This policy shall be applicable to all alterations of existing driveways and proposed driveways to or from a state maintained highway. Unless otherwise noted, all sections of this policy shall concern regulation and administration of both new driveway installation and modification procedures that impact the state highway.

(c) All aspects of the proposed or permitted construction or modifications within the state highway shall conform to applicable department rules, standards and specifications.

(d) In cases where a permit is requested for a limited access highway as defined in RSA 230:44 and 45, the number of permanent points of access as specified in the acquisition documents on file at the bureau of right-of-way shall not be exceeded.

(e) In cases where an applicant is seeking a permit for a simple residential driveway, the applicant may shorten the permit process in accordance with section 5.

(f) Where entrances to state highways have been constructed after July 1, 1971 without benefit of a permit, or not constructed according to the permit issued, the entrances shall be considered non-conforming. Upon notification by the district engineer, the owner shall apply for a permit and make the necessary alterations as required by this policy.

(g) Compliance with this policy shall not relieve the applicant from the responsibility to comply with other federal, state or local ordinances, rules or regulations.

(h) In cases where a permit has been denied, the applicant may initiate the appeals process by submitting in writing a request for a hearing.

(i) Appendix I contains a list of highway districts and locations from which permit applications may be requested. Appendix II contains figures of typical driveway design standards for illustrative purposes, and standard conditions applicable to all permits. Appendix III contains a copy of the driveway statute, RSA 236:13 and Appendix IV contains a sample of a request for a wetland permit from the Department of Environmental Services.

### **3. Definitions.**

(a) "Algebraic difference" means the absolute value of the arithmetic difference between 2 grades in a driveway. For example, a driveway with one grade of +2% and a second grade of -3% would have an algebraic difference of 5%. The algebraic difference provides a numerical guideline for establishing maximum safe grade differentials.

(b) "All-season safe sight distance" means a line that encounters no visual obstruction between 2 points, each at a height of 1.14 meters or 3 feet 9 inches above the pavement, allowing for a snow windrow and/or seasonal changes. The line represents the line of sight between the operator of a vehicle using the driveway (point 1) and the operator of a vehicle approaching from either direction (point 2).

(c) "Alteration" means any work on a driveway including, but not limited to:

- (1) Paving and repaving;
- (2) Regrading;
- (3) Widening;
- (4) Changing its use;
- (5) Changes in existing drainage affecting the highway; and

(6) Reconstruction.

(d) "Applicant" means the owner, or authorized representative of the owner, of the property for which a driveway permit is sought.

(e) "Barrier island" means the land area, such as but not limited to raised or curbed areas, low shrubs, and grass, dividing one access point from another, for the purpose of preventing other access or for channelization.

(f) "Channelization" means the separation or regulation of traffic movements into definite paths of travel by use of traffic islands or pavement marking.

(g) "Commercial establishment" means any place at which business is regularly conducted.

(h) "Common Driveway" means an access point designed for use by 2 or more separate parcels of property, to be designed in accordance with the standards contained in Appendix II, Figure II and XVII.

(i) "Curb" means a raised edge of concrete, asphalt, granite or wood delineating a travel lane, parking area, shoulder, or edge of an island area.

(j) "Department" means the department of transportation of the State of New Hampshire.

(k) "District engineer" means the highway district engineer, the assistant district engineer, the turnpike administrator or assistant or any person so designated by any of the preceding.

(l) "Driveway" means any point of vehicular access, including public or private roads, to or from a state highway, regardless of how the driveway is configured within the property of the applicant.

(m) "Frontage" means the distance that a parcel of land has in common with a state highway. If the property fronts on two state highways, the amount of frontage shall not be added, but separately calculated for each highway.

(n) "Grade" means the inclination of a driveway, which is determined as the change in the vertical distance of the driveway to a corresponding horizontal distance. The grade is measured in % (percent) units. For example, a 1 meter rise in the driveway, referenced from the point of intersection with the state maintained highway over a horizontal distance of 25 meters, or a 2 foot rise in the driveway, referenced from the point of intersection with the state maintained highway, over a horizontal distance of 50 feet, would result in a driveway grade of +4%.

(o) "Industrial establishment" means any establishment designed for, or at which manufacturing, assembling, warehousing or fabricating of any kind is undertaken.

(p) "Level of service" means a measure of a road's utility which is expressed by category and is determined by designed vehicular speed and traffic volume as defined in the current edition of the Highway Capacity Manual, Special Report 209, published by the Transportation Research Board, National Research Council, Washington, D.C.

(q) "Lot of Record" means a parcel of land that was separately described and delineated by deed or on a locally approved subdivision plan recorded in the applicable registry of deeds on or before July 1, 1971, regardless of how a local municipality may define the term in its land use ordinances.

(r) "Major traffic generator" means any residential, commercial or industrial establishment that generates or is projected to generate traffic which significantly lowers or could adversely affect the current level of service of a state highway.

(s) "Major entrance" means any driveway that serves a commercial establishment, industrial establishment, shopping mall, subdivision, town road or a major traffic generator, to be designed in accordance with Appendix II, Figures II to VII inclusive and XVII to XXII inclusive.

(t) "Parcel" means a tract of land under single or common ownership, including any proposed commercial or industrial establishment or subdivision even though acquired by more than 1 conveyance or held nominally by more than 1 owner.

(u) "Residential driveway" means an access point designed to serve a dwelling, and includes an access point serving 2 or more parcels, which is called a common driveway, to be designed in accordance with Appendix II, Figure I, II, XVI, or XVII, as appropriate.

(v) "Right-of-way" means state-owned property, easements or other interests therein, dedicated to state highway purposes.

(w) "Right-of-way line" means the boundary line between the state right-of-way and the abutting parcel of land.

(x) "Shoulder" means that portion of the roadway, contiguous with the travel lane, designed for safety, to improve road capacity, and to provide lateral support of the base and surface courses of the roadway.

(y) "State Highway" or "Highway" means the entire area within the right-of-way of all state maintained class I and III highways as well as state maintained portions of class II highways, as defined in RSA 229:5.

(z) "Swale" means a shallow depression in the surface of the land of specified depth and distance from the travel lane, designed and constructed to drain surface waters.

#### **4. Application Procedure for Driveway Permits.**

(a) The driveway permit process begins with the submission of a completed "Application For Driveway Permit" form to the district engineer. The form is available at the locations shown in Appendix 1.

(b) The district engineer shall examine a submitted application within a reasonable period, not to exceed 60 days, and notify the applicant of any additional documents or information required to classify the application as complete.

(c) In the case of major entrances, an applicant shall submit a preliminary traffic impact study and conceptual design plan prior to submission of detailed design plans for the complete application. A preliminary review of the submitted information shall be conducted by the department, the purpose of which is to minimize engineering costs to applicants through the identification of engineering concerns and discussion of strategies to resolve such concerns.

(d) The district engineer shall review the application and any supporting documents or other information submitted, and shall issue a driveway permit or deny the application within a reasonable time, not to exceed 120 days. This review period shall begin upon receipt of a complete application, and shall not include time necessary for review of preliminary conceptual designs in the case of major entrances, or time necessary for an applicant to respond to department request(s) for additional documents or information needed to complete an application.

## **5. Application for Driveway Permit**

(a) All applications for driveway permits shall be printed legibly or typewritten on the form obtained from staff of the department.

(b) Complete applications shall contain the following:

- (1) The applicant's name, address and telephone number;
- (2) The contact person's name, address, and telephone number, if different from the applicant;
- (3) The number of driveways requested;
- (4) The location of the proposed driveways with respect to which side of the road, distance and compass direction to the nearest utility pole, indicating the pole number, or to a nearby landmark if there is no pole in the vicinity;
- (5) The name or route number of the state highway involved;
- (6) The name of the municipality in which the proposed driveway is located;
- (7) The type of driveway proposed and its anticipated use;
- (8) A sketch or plan of the property and adjacent highway, indicating north arrow, existing and proposed drives, town roads, town lines, or other readily identifiable features or landmarks;
- (9) The signature of the landowner; or a letter of authorization signed by the landowner authorizing another person to sign the application;
- (10) The date the application was signed, and;
- (11) The applicant shall state whether the property is under consideration by a local land use board for a subdivision, variance, special exception or site review approval. If yes, the applicant shall provide a copy of the subdivision plan or site review plan submitted to the local land use board. This requirement includes the affirmative duty to submit a copy of any revised plan or plans that are filed with the local land use board on or before the date of issuance of the driveway permit.

(c) In the case of permits for new driveways only, the applicant, in addition to the above requirements, shall provide the following information pertinent to access limitations as regulated in section 8:

- (1) The size of the property;
- (2) The subdivision history since July 1, 1971 of the parcel from which the applicant's land was subdivided, with copies of relevant plans and deeds; and
- (3) The municipal tax map property reference, and a copy of the municipal tax map showing the property and abutting properties with names and addresses of abutters.

(d) Upon receipt of an application for driveway permit, and if no additional information is requested for evaluation purposes, the district engineer shall review the permit application and issue or deny the permit in writing.

(e) The district engineer may waive any of the above requirements for good cause shown.

## **6. Application for Driveway Permit to Major Entrances.**

(a) If the district engineer determines that the proposed use will create a “major entrance” or be classed as a “major traffic generator”, the applicant shall not be granted a permit under section 5 above. The district engineer shall require the submission of additional information before evaluation of the effect of the proposed driveway on the highway.

(b) The additional information necessary to complete the application and as required by the district engineer may include, but shall not be limited to, any or all of the following:

- (1) Plans drawn to a scale of 1 cm = 250 cm or 500 cm, or 1 inch = 20 or 50 feet, that shall clearly indicate the character and extent of the proposed work; the scale to be specified by the district engineer;
- (2) Site plans with contour and elevation drawings of the unmodified land, and the land as proposed to be modified;
- (3) The location of all proposed and existing driveways on both sides of the highway to a distance sufficient to allow analysis for safety;
- (4) The alignment and grade of the highway to a distance sufficient to allow analysis for safety;
- (5) The layout of all proposed and existing modifications within the parcel;

- (6) The location of proposed and existing utility services including, but not limited to, water, sewerage, power, telephone, gas and lighting;
- (7) A description of all existing and proposed traffic control devices, to include manufacturer's performance standards of proposed materials, and the proposed locations for such devices. The applicant shall provide this information for a sufficient distance from the proposed drive to permit the district engineer to fully evaluate the effect of the drive on traffic control devices;
- (8) A description of all proposed barrier islands;
- (9) Driveway profiles drawn to scale in either metric or English scale units, as specified by the district engineer. Acceptable metric units used in combination are 1 cm = 250 cm horizontal, 1 cm = 50 cm vertical; or 1 cm = 500 cm horizontal, 1 cm = 100 cm vertical. Acceptable English units used in combination are 1 inch = 20 feet horizontal, 1 inch = 4 feet vertical; or 1 inch = 50 feet horizontal, 1 inch = 10 feet vertical;
- (10) Highway cross-sections drawn to either a horizontal and vertical scale of 1 cm = 50 cm, or 1 inch = 5 feet, or a horizontal and vertical scale of 1 cm = 100 cm, or 1 inch = 10 feet; as specified by the District Engineer;
- (11) Utility relocation plans;
- (12) Highway typical sections;
- (13) Deeds or easements necessary to provide additional right-of-way to accommodate required modifications, to provide access for installation, maintenance, repair, or reconstruction of traffic control devices, and to provide space for snow storage and utilities;
- (14) Lighting plans, drawn to a scale of 1 cm = 250 cm, or 1 inch = 20 feet, including maintenance agreements between the applicant and the power company;
- (15) Traffic signal specifications and plans drawn to a scale of 1 cm = 250 cm, or 1 inch = 20 feet, showing the identity of the designer and including any agreements between the applicant and the power company;
- (16) Pavement widening plans drawn to a metric scale of 1 cm = 250 cm or 1 cm = 500 cm, or an English scale of 1 inch = 20 or 50 feet;

(17) Traffic control plans for maintenance of traffic to be used during construction of the driveway and pavement widening; based on the appropriate section of the current Manual of Uniform Traffic Control Devices;

(18) Proposed and existing guardrail types and locations;

(19) All-season safe sight distance line shown on the plans required under (1), (2) (4), (9), and (10) above; and

(20) Separate pavement marking plan drawn to a metric scale of 1 cm = 250 cm, or 1 cm = 500 cm, or an English scale of 1 inch = 20 feet or 50 feet showing lane use, striping modifications, and manufacturer's performance standards for proposed marking materials. The applicant shall provide this information for a sufficient distance from the proposed drive to permit the district engineer to fully evaluate the effect of the proposed driveway on pavement makings.

(c) In some instances applicants seeking driveway permits are required to obtain Wetland Permits for driveway work that is within the right-of-way. When this type of situation exists, the following additional procedure shall be used.

(1) The applicant shall prepare wetland permit applications, with the Department being identified as a co-applicant. The district shall furnish the cover letter (see appendix IV);

(2) Wetland permit applications shall be signed by the applicant (or their engineering consultant) and by the district representative;

(3) Information regarding the wetlands permit application and the proposed impact on the highway right-of-way shall be forwarded to the department of transportation bureau of environment by the applicant through the district office;

(4) Substantial impacts to highway rights-of-way shall be reviewed with the director of the division of operations and authorized prior to grant of a driveway permit;

(5) The driveway permit shall include a condition that makes the applicant liable for compliance with any permit conditions or requirements that the wetlands board may impose; and

(6) Bond requirements and conditions, as described in section 14, shall be of sufficient amount to provide security for compliance with any conditions that might be imposed by the wetlands board, including monitoring of permit conditions for the specified period of time.

(d) In instances where the proposed driveway may impact highway drainage, the district engineer shall require a drainage report for the permit review process which shall include, but shall not be limited to, any or all of the following:

(1) The type of drainage methodology used, such as the Rational Method, SCSTR55 or SCSTR20;

(2) Plans and hydrology computations showing the existing and the proposed site conditions, indicating:

- a. Contours;
- b. Site layout;
- c. Watershed areas;
- d. Contributing off-site watershed areas; and
- e. Effects on adjacent properties;

(3) Plans showing locations, sizes, structural details, and invert elevations of the existing and proposed drainage structures including:

- a. Culverts;
- b. Underdrains;
- c. Ditches;
- d. Catch basins; and
- e. Detention ponds;

(4) If computer programs are used in the report, all input values shall be presented and clearly documented and all output summaries shall be made available upon request;

(5) Plans and details showing any necessary erosion control methods shall be presented;

(6) Copies of permits issued by federal and state agencies for site approvals shall be provided when requested by the district engineer; and

(7) An indication of how the applicant shall maintain or mitigate the site pre-condition flow rate.

(e) Drainage computations shall be based on 10 and 50-year storm events that shall include all interior drainage improvements and all state maintained structures/ditches that may be influenced by the development. If the impact upon state highway drainage is minor, the district engineer may authorize computations to be based on 10 and 25-year events.

(f) When post-condition flow rates exceed pre-condition flow rates, in any season, the additional flow must be retained and metered to match the pre-existing conditions, or the additional flow shall be addressed in some other manner approved by the district engineer.

(g) The need for and scope of a traffic impact study shall be determined at a "scoping" meeting attended by the applicant or its representative, the district engineer and other appropriate department personnel. The district engineer shall consider input from all attendees when determining the need for and scope of a traffic impact study.

(h) In instances when generated traffic could adversely affect level of service, the district engineer shall require a traffic impact study for the permit review process, which may include, but not be limited to, any or all of the following:

(1) Project description including:

- a. Location map;
- b. Surrounding area description;
- c. Area street network;
- d. Size and land use;
- e. Phasing; and
- f. Proposed modification(s) to the roadway;

(2) Existing roadway conditions within study area including:

- a. Geometrics;
- b. Traffic control devices;
- c. Speed limits;
- d. Sight distances;
- e. Pavement grades; and

f. Description of any planned roadway modifications in or near the study area;

(3) Existing traffic data including:

- a. 24-hour directional counts for at least 3 weekdays and 1 weekend on all state highways within the study area;
- b. Turning movement counts at all intersections during analysis periods;
- c. Vehicle classification data; and
- d. Peak hour factors, which shall be derived from 15 minute turning movement counts;

(4) Projected background traffic data including assumed growth rates and their bases, and trip generation data and their bases, for other proposed developments in the area;

(5) Project only trip generation rates including:

- a. Percent entering/exiting;
- b. Trips generated during each analysis period;
- c. A full weekday and a full weekend day;
- d. Trip category breakdown and basis for use, such as pass-by, diverted, or new; and
- e. Trip distribution and their bases;

(6) Traffic flow networks and capacity analysis for all analysis periods;

(7) Signal warrant volumes and analysis if a traffic signal is proposed;

(8) Summary of capacity analysis results for all analysis periods, including queuing analysis;

(9) Summary of proposed highway modifications; and

(10) An appendix including:

- a. Traffic data collected;

- b. Calculations for seasonal adjustments;
  - c. Growth rates;
  - d. Trip generation;
  - e. Trip distribution; and
  - f. Complete capacity analysis calculations and results.
- (i) Traffic volume data, both existing and projected, shall be analyzed for typical peak month conditions for the area.
- (j) Trip generation assumptions not based on ITE published rates shall be fully documented. Project trip generation and distribution shall be presented on a study area traffic flow network.
- (k) Adjustment factors, other than recommended default values, used in capacity analysis shall be fully documented.
- (l) The reports and plans shall be stamped by either an engineer or land surveyor, as appropriate, who holds a New Hampshire license granted pursuant to RSA Chapter 310-A.
- (m) Due to the nature and complexity of some proposed projects, it is possible that the need for all additional informational requirements will not be discovered at one time. However, every reasonable effort shall be made to inform the applicant as early as possible in the permit review process of what, if any, additional information has become necessary to fully review the request for a permit.
- (n) It is recognized that certain entrances may generate traffic that adversely affects the highway level of service for short duration. While it may be impractical to construct physical improvements to the highway to alleviate this, traffic control plans will be required which effectively deal with the increased traffic.

## **7. Issuance of Permits.**

- (a) A driveway construction permit shall be issued if the application and supporting information demonstrates that the safety of the traveling public can be adequately protected by:
- (1) The location of the driveway on the parcel;
  - (2) The drainage structures, traffic control devices, and channelization islands to be installed by the applicant;

(3) The establishment of line and grades to protect and promote highway drainage and permit a safe and controlled approach to the highway in all seasons of the year; and

(4) Any other term, condition or specification deemed necessary for the safety of the traveling public by the district engineer.

(b) The permit shall be issued in writing to the applicant, with a copy to the appropriate municipality, and contain the following information:

(1) The name of the issuing district;

(2) The specific location of the permitted driveway;

(3) The standard conditions applicable to all permits as contained in Appendix II;

(4) Any other term, condition, or specification deemed necessary by the district engineer for the safety of the traveling public; and

(5) The signature of the district engineer or assistant district engineer.

(c) The district engineer may require the applicant to record the permit, and any easement deeds received, at the applicant's own expense, in the appropriate county registry of deeds in order to provide notice to the public of special conditions attached to the permitted driveway.

(d) A driveway permit shall be denied if the applicant fails to submit information required by the district engineer to determine whether a permit shall be issued.

(e) A driveway permit shall be denied if the proposed driveway will cause an unreasonable hazard to the traveling public.

(f) The issuance or denial of a permit may be appealed by filing a request for an appeal hearing pursuant to this policy.

(g) Requests for an appeal hearing should be submitted in writing to:

State of New Hampshire  
Department of Transportation, P.O. Box 483  
Concord, N. H. 03302-0483  
Attention: Hearing Examiner

## **8. Driveway Limitations.**

(a) No more than 1 driveway shall be permitted to a single parcel of land or lot of record, on a single highway unless there is all season safe sight distance of 122 meters, or 400 feet in both directions along the highway. If the all-season safe sight distance cannot be obtained, and the driveway is not an unreasonable hazard to the traveling public, the single driveway shall be located at the safest point as determined by the district engineer.

(b) When frontage along the highway is 152 meters, or 500 feet or less, no more than 2 driveways to a single parcel of land or lot of record shall be permitted, so long as all season safe sight distance can be maintained for all driveways and there are no other significant safety risks that could endanger the traveling public.

(c) Except as provided in subsection (d), when frontage on a single parcel of land or lot of record does exceed 152 meters, or 500 feet, no more than 3 driveways or accesses shall be permitted. The construction of internal street systems or service roads outside the highway right of way shall be utilized, if practicable, to provide greater safety for the subdivision occupants as well as other highway users, and to maintain the level of service of the highway.

(d) The district engineer may grant exceptions to (c) above if warranted by unusual conditions. In determining whether an exception may be granted, the district engineer shall consider the following factors:

(1) Whether the literal enforcement of the policy will result in unnecessary hardship to the applicant, which hardship may be demonstrated by:

a. The presence of topographical features of the property which unreasonably restrict internal street access, such as mountains, ravines, lakes, rivers and wetlands;

b. Restrictive parcel area and depth which unreasonably constricts internal street access; or

c. Other unique characteristics such as frontages in excess of 305 meters, or 1000 feet or historic considerations; and

(2) Whether the grant of a driveway permit is consistent with the spirit and intent of this policy as expressed in the Purpose section above.

## **9. Right-of-Way Restrictions**

(a) Parking, loading, vending or servicing of vehicles shall not take place on the state highway or in the right of way.

(b) Items including, but not limited to, permanent or portable buildings, signs, lights, displays, fuel tanks or septic systems shall not be permitted on, over, or under the state highway or the right of way.

(c) Access to the state highway from the parcel other than by a permitted driveway(s) shall be prohibited by appropriate barrier islands, including natural landscaping.

#### **10. Driveway Characteristics and Distances.**

(a) Except as provided in (b) below, the maximum width of any driveway shall be 15.2 meters, or 50 feet measured parallel to the highway centerline at the right-of-way line.

(b) In the case of major entrances, the district engineer shall evaluate safety and capacity criteria to determine the width necessary for safe channelization of traffic. Major entrances designed in accordance with Appendix II, Figures II, III, VI, VII, XVII, XVIII, and XXI shall be considered a single access point to the state highway system.

(c) In rural areas a driveway shall not access a state highway within 61 meters, or 200 feet of the intersection of that highway with another road. In urban areas, a driveway shall not access a state highway within 30 meters, or 100 feet of the intersection of that highway with another road. In either case, no driveway shall encroach upon the curved section of the corner. The district engineer shall lower these requirements only if evaluation of sight distance, parcel size, or other relevant safety considerations warrant such modification.

(d) The intersection of the centerline of a driveway with the travel lane of a state maintained highway should form an angle as close as is practicable to 90 degrees but in no case shall be less than 60 degrees. Right turn only one way drives may be less than 60 degrees.

(e) The radius of a driveway at the point it meets the edge of pavement shall not extend beyond the applicant's frontage without written permission of the abutter.

(f) The district engineer shall consider factors including but not limited to the following in approving driveway grades:

(1) In rural areas grades shall be constructed downward from the highway surface at a grade of not more than 6 percent, for at least 1 car length of 6 meters, or 20 feet or to the existing ditch line, and shall slope up or down not more than 6 percent a further distance sufficient to accommodate expected vehicle storage;

(2) In urban areas the grade shall not be more than 6 percent up or down beyond the curb line a distance sufficient to accommodate expected vehicle storage;

(3) The slope of the highway cross-section shall also be taken into account; and

(4) Highway drainage shall not be impeded.

(g) In the driveway beyond the approach area referred to in (f) above, the maximum grade of any driveway for a major entrance shall be 8 percent; for all other driveways the maximum grade shall be 15 percent. The algebraic difference between any 2 adjacent grades in a driveway shall not exceed 10 percent. The district engineer shall consider grades in excess of the above if adequate provision is made for safety and the prevention of erosion problems during construction as well as after completion.

(h) Slopes on either side of a driveway shall be gradual enough to minimize the hazard to a vehicle leaving the state maintained highway for any reason.

## **11. Permits for Temporary Driveways**

(a) There are a variety of situations where a driveway is necessary to alleviate a temporary need to cross state right-of-way. Logging operations, utility maintenance and commercial/residential construction are examples.

(b) Temporary driveway permits shall have a stipulated time limit. When bonds are required, they shall be posted at 110% - 150% of the estimated cost to repair or restore potential damage to slopes, shoulders and pavement. Safety of the permittee and the traveling public is of primary concern, and the district engineer may on the permit require use of flaggers, signs, cones and other traffic control devices.

(1) Logging Operations - A permit and a bond shall be required. Exceptions to the permitting and bonding specifications may be granted if the access is through an existing permitted drive that can safely handle the trucking (this would include lot clearing where the access is the same as the permanent driveway and the permit has been approved by the District Engineer). Bonding may be waived if the applicant has consistently responded in an acceptable manner to the requirements of previous permits. In no case shall the actual logging operations be conducted within the State right-of-way.

(2) Construction/Heavy Vehicles - These operations shall be treated in the same manner as logging operations whenever the driveway is temporary in nature.

(3) Utility Maintenance or Service - Routine utility maintenance may be conducted within the right-of-way once the location has been approved by the district engineer. Written permits and bonding are not required.

(4) Signage – A black on orange “Trucks Entering” sign, of 36" by 36" dimension, with side road indicators, shall be erected by the permittee if the drive sight distance is less than 500 feet, or special circumstances, such as downgrades, are present. Specification sheets and typicals are to be provided with the drive application. If the operation is suspended for 30 or more days, the

signs are to be removed and reinstalled by the permittee when operations begin again. When erected, the signs are to be maintained by the permittee for quality and effectiveness, as determined by the district engineer.

(c) Permission shall not be granted for temporary operations by the district engineer in instances where the right of way is designated "limited or controlled access". Exceptions are allowed for utility maintenance for pre-existing utility crossings and for unusual circumstances to alleviate a hardship approved by the Commissioner and, where applicable, the Federal Highway Administration. Bonding, as described in section 14, is required.

## **12. Drainage.**

(a) All drainage features to be used in connection with construction shall be specified on the permit.

(b) All drainage features shall be installed as specified on the permit. The type of material, strength, length, size and cover required over drainage structures shall be in conformance with department specifications.

(c) In no case shall the permitted construction cause water to stand (pond) on the pavement, shoulders, or within the limits of the right-of-way.

(d) In the absence of a well defined ditch or a curb, a shallow depression or swale when approved by the district engineer is considered to be a drainage structure as specified in (b) above. This swale shall be constructed beyond the edge of the shoulder to accommodate drainage and the storage of snow.

(e) In cases where property development increases drainage runoff, such that existing structures in the highway are rendered inadequate or the increased runoff rate results in an impairment of design capacity, the applicant shall be required to provide improvements to drainage structures to accommodate that increased water runoff, and to secure drainage rights downstream.

## **13. Construction and Costs.**

(a) Unless construction begins within one year from the date of issue, the permit shall expire. The permit holder shall notify the district engineer in accordance with the permit prior to starting construction within the right-of-way.

(b) As a condition of the permit, the applicant, or its grantees, successors, or assigns, shall be required to construct or to pay for the cost of maintenance of traffic, the total cost of all driveway construction and alterations and any associated modifications that are made to the state maintained highway, and other affected property.

(c) A contractor approved by the department shall accomplish installation of required traffic signals and pavement markings.

(d) When highway construction or reconstruction is undertaken jointly by the state and another party, each party shall contribute to the cost of driveway alteration, modification or restoration in amounts appropriate under all surrounding circumstances. Such amounts shall be negotiated and agreed upon by the department and the other party.

(e) When the size and complexity of a driveway installation requires a department representative to monitor and inspect the project, the cost of such inspection and monitoring shall be invoiced to and paid for by the permittee.

(f) The permittee shall prohibit the general use of driveways by the public until such time as all the work has been completed and all the conditions of the permit have been met, unless the district engineer determines that the work not yet completed has no substantial impact on safety or drainage.

(g) As a condition of the permit, it is the responsibility of the permittee to notify the district engineer, propose design changes and request approval of alterations made necessary by:

- (1) Inconsistencies in design criteria noted on approved plans;
- (2) Errors or omissions in survey, plan preparation, or the like; or
- (3) Adverse conditions found in the field during construction.

(h) The district engineer may, as a condition of the permit, require the permittee to file plans with the department reflecting the elements of the driveway "as built" if the complexity of the installation, or the approved changes made in the field to the plan as originally permitted, warrant such action.

#### **14. Guarantee of Completion.**

(a) The district engineer shall require, for those driveway permits which have been so conditioned, a surety bond or letter of credit, payable to the State of New Hampshire, in an amount not less than 110% and not more than 150% of the approved estimate of cost for modifications, repairs or restoration of slopes, shoulders or pavement within the highway, from or on behalf of the applicant.

(b) The permittee shall be entitled to a release of the original surety performance bond or letter of credit upon receipt of all of the following:

- (1) A written request for release directed to the attention of the district engineer;

- (2) Completion of the modifications in accordance with the terms of the permit;
- (3) The tender of a surety bond or letter of credit in such amount as to secure the cost of repair for any failure of any modification made by the permit holder for a period of 2 years from the date of acceptance by the department; and
- (4) In the case of large projects where 2 or more distinct sections of highway or highways are to be modified, the district engineer may release a portion, but less than all, of the area from the obligation of the bond when modifications to that portion are complete.

(c) For those driveways which have been conditioned on the future installation of approved traffic control features, such as signals or additional lanes to control increased traffic volume and/or growth of the initial development, the applicant shall provide a surety bond or letter of credit sufficient to secure reasonably anticipated need for such features for a period until all such necessary devices are installed or 10 years from the date of acceptance of the construction by the department, whichever occurs first.

#### **15. Maintenance Responsibility.**

(a) The permittee, or its grantees, successors, and assigns served by a driveway shall be responsible for:

- (1) Maintenance of the driveway from the edge of the highway pavement or paved shoulder, if existing;
- (2) Maintenance of all approved and/or required upstream and downstream drainage alterations including but not limited to:
  - a. Pipe extensions;
  - b. Open ditches;
  - c. Swales and/or drainage systems, and
  - d. Detention ponds, with the exception of connecting catch basins, manholes or other specified structures at highway cross culverts;
- (3) All driveway pavement markings and all traffic control signs on the drive with the exception of the stop sign or yield sign; and
- (4) Operational costs of electric service for traffic signals and streetlights that are required by the permit.

(b) The department may maintain all modifications made to and within the highway including traffic signals which were required by the district engineer who issued the permit, unless such maintenance is the responsibility of a political subdivision or is specifically excluded as a condition of the permit. If maintenance responsibilities are allocated to the

department, the district engineer shall require as a condition of the permit that the applicant provide appropriate deeds reflecting conveyance of additional right of way or easement rights to assure that department personnel have full right to enter and access any structure or improvement to be maintained.

(c) The department may also specifically maintain the following drainage structures:

- (1) The driveway culverts carrying surface water in roadside ditches under driveways within the state highway, provided said driveway culverts were initially installed according to permit conditions;
- (2) Drainage systems within the highway limits, serving existing state highways, constructed for the purpose of controlling highway and surface water run-off; and
- (3) Catch basins, manholes or other specified connecting drainage structures constructed at the end of cross highway culverts or parallel culverts serving the state highway system.

#### **16. Permit Extension.**

(a) In the case where construction or modification has begun within 1 year from the date of issue but has not been completed within the year, the applicant shall apply for a permit extension prior to any further construction.

(b) The district engineer shall consider any changes that have occurred to the property and the surrounding area and modify the original permit if necessary, before issuing a permit extension.

#### **17. Permit Renewal.**

(a) In the case where construction or modification to a permitted driveway has not begun within 1 year from the date of issue, the permit shall expire and the applicant shall apply for a permit renewal prior to any construction.

(b) Requests for permit renewals shall:

- (1) Reference the permit number;
- (2) State whether all information contained in the original permit application is still current and accurate, and if not, what information has changed and how it has changed;
- (3) State whether there has been any change in the use of the land surrounding the subject property;

(4) State any other material facts or circumstances; and

(5) Provide proof of a valid performance bond, if such was required as a condition for the initial permit.

(c) The district engineer shall consider any changes that have occurred to the property or to the surrounding area and the intended use of the property, and then modify the original permit if necessary, before issuing a permit renewal or denying the renewal under Section 7.

### **18. Revocation or Suspension of Permit**

a) With Notice: If the terms and conditions of a permit are violated by a permit holder, and the district engineer finds that the violation does not constitute an immediate hazard to public health, safety or welfare, the district engineer shall give written notice via certified mail to the permit holder of an intention to suspend or revoke the permit, and a statement of the facts or conduct upon which the department intends to base its action. The notice of intent to suspend or revoke shall advise the permit holder of its right to contest the proposed action through an adjudicative proceeding held pursuant to RSA 541-A in the event that action is not taken to correct the deficiency described in the notice on or before the date specified in the notice for revocation.

(b) Without Notice: If the district engineer is advised of a violation of the terms or conditions of a permit which constitutes a danger to the public health, safety or welfare, the district engineer shall immediately suspend the permit without an opportunity for the permittee to be heard in advance of such suspension. This action, once communicated to the permittee, shall result in the immediate cessation of all work on the driveway or highway, with the exception of work required to restore the area to a safe and passable condition for motorists. The notice of suspension shall be in writing, and shall advise the permit holder of its right to contest the action through an adjudicative proceeding held pursuant to RSA 541-A. The notice shall be sent by certified mail, and may be served upon the permittee in hand by any person. Proof of such service shall be placed on a copy of the notice, to be retained in the records of the department.

(c) The department shall schedule a hearing upon the request of a permittee within 10 calendar days of the effective date of any suspension order made pursuant to (b), above, and within a reasonable time in all other cases, to allow the permit holder an opportunity to show compliance with the terms and conditions of the permit.

(d) Nothing in this section shall be construed to require the department to complete an administrative hearing process prior to contacting the department of justice for assistance, or to prevent the department from seeking remedies in a court of competent jurisdiction prior to completion of the administrative hearing process.

## **APPENDIX I**

### **HIGHWAY DISTRICTS**

#### **District 1:**

District Engineer  
641 Main Street  
Lancaster, NH 03584  
Tel: (603) 788-4641  
Loc: Rte 3, Lancaster, N.H.

#### **District 2:**

District Engineer  
P.O. Box 232  
Lebanon, NH 03766  
Tel: (603) 448-2654  
Loc: I-89, Exit 16, Enfield, N.H.

#### **District 3:**

District Engineer  
2 Sawmill Road  
Gilford, NH 03246  
Tel: (603) 524-6667  
Loc: 2 Sawmill Rd., Gilford, N.H.

#### **District 4:**

District Engineer  
19 Base Hill Rd.  
Swanzey, N.H. 03446-9998  
Tel: (603) 352-2302  
Loc: 19 Base Hill Rd. Swanzey, NH

#### **District 5:**

District Engineer  
P.O. Box 16476  
Hooksett, N.H. 03106-6476  
Tel: (603) 485-9526  
Loc: I-93, Exit 11, Hooksett, N.H.

#### **District 6:**

District Engineer  
P.O. Box 740  
Durham, NH 03824  
Tel: (603) 868-1133  
Loc: 271 Main Street  
Durham, N.H.

#### **Turnpikes:**

Turnpike Administrator  
P.O. Box 16418  
Hooksett, N.H. 03016-6418  
Tel: (603) 485-3806  
Loc: I-93, Exit 11, Hooksett, N.H.

## APPENDIX II

### TYPICAL DESIGN STANDARDS

This appendix includes typical design standards for various driveway/access situations. These typical designs are for illustrative purposes. Applicants may wish to use typical designs as guides; however, designs must be adapted to reflect specific circumstances. Requirements of site or safety may dictate different solutions that must receive concurrence from the district engineer. Applicants are referred to section 15 of this document for a description of the maintenance responsibilities borne by the state and applicants for driveway improvements, traffic control devices, and pavement markings.

#### **FIGURE: English Unit Measurements:**

- I. Residential Drive-Rural/Urban
- II. Common Drive-Rural/Urban
- III. Single Drives-Major Entrance-Rural/Urban
- IV. One-Way Drives-Major Entrance-Rural/Urban
- V. Two-Way Drives-Major Entrance-Rural/Urban
- VI. Divided Drive-Major Entrance-Rural/Urban
- VII. Alternate Major Entrance - Rural Urban
- VIII. Alternate Land Subdivision Plans
- IX. Typical Rural Drives in Cut and Fill Sections
- X. Typical Urban Drives in Cut and Fill Sections
- XI. Typical Acceleration-Deceleration Lanes for Right Turns
- XII. Typical By-Pass Shoulder
- XIII. Turning Template, Bus and Trailer Truck
- XIV. Turning Template, Single Unit and Passenger
- XV. Turning Template WB 60 and WB 62 Design Vehicle

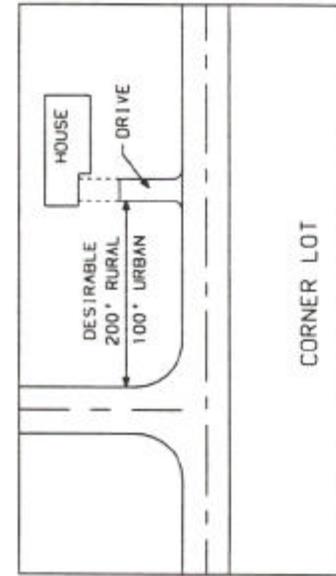
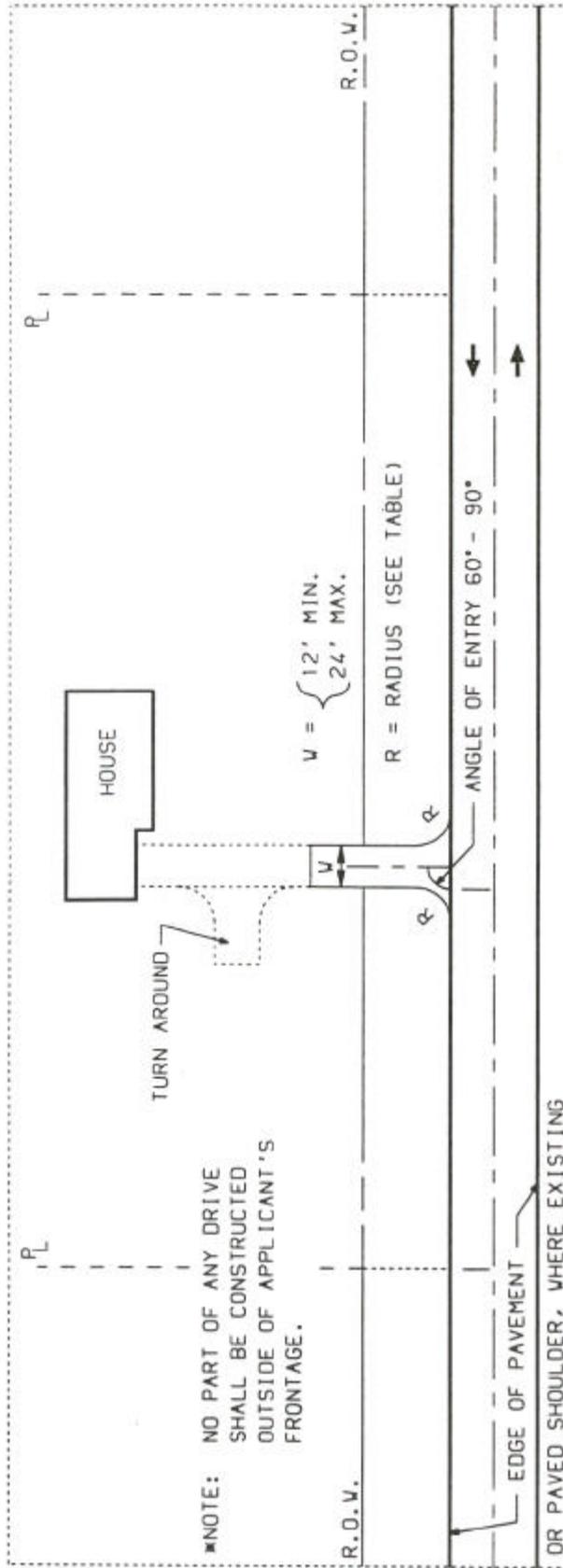
#### **Metric Unit Measurements**

- XVI. Residential Drive-Rural/Urban
- XVII. Common Drive-Rural/Urban
- XVIII. Single Drives-Major Entrance-Rural/Urban
- XIX. One-Way Drives-Major Entrance-Rural/Urban
- XX. Two-Way Drives-Major Entrance-Rural/Urban
- XXI. Divided Drive-Major Entrance-Rural/Urban
- XXII. Alternate Major Entrance - Rural Urban
- XXIII. Alternate Land Subdivision Plans
- XXIV. Typical Rural Drives in Cut and Fill Sections
- XXV. Typical Urban Drives in Cut and Fill Sections
- XXVI. Typical Acceleration-Deceleration Lanes for Right Turns
- XXVII. Typical By-Pass Shoulder

- XXVIII. Turning Template, Bus and Trailer Truck
- XXIX. Turning Template, Single Unit and Passenger
- XXX. Turning Template WB 60 and WB 62 Design Vehicle

STANDARD CONDITIONS OF DRIVEWAY PERMITS:

1. Failure to adhere to the standards and engineering drawings previously approved shall render this permit null and void.
2. Failure to start or complete construction of said facility within one calendar year of the date of this permit shall require application for permit extension or renewal in accordance with the Driveway Policy.
3. Facilities constructed in violation of the permit specifications or the Policy shall be corrected immediately upon notification by a Department representative, or the costs of removing or correcting said facility shall be fully borne by the owner.
4. The landowner shall indemnify and hold harmless the Department and its duly appointed agents and employees against any action for personal injury and/or property damage sustained by reason of the exercise of this permit.
5. No structures, including buildings, permanent or portable signs, lights, displays, fences, walls, etc. shall be permitted on, over, or under the highway right of way.
6. No parking, catering, or servicing shall be conducted within the highway right of way.
7. The applicant shall comply with all applicable ordinances and regulations of the municipality and other state agencies.



VALUES OF R (RURAL)

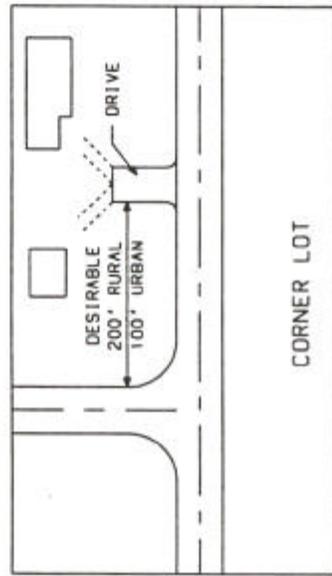
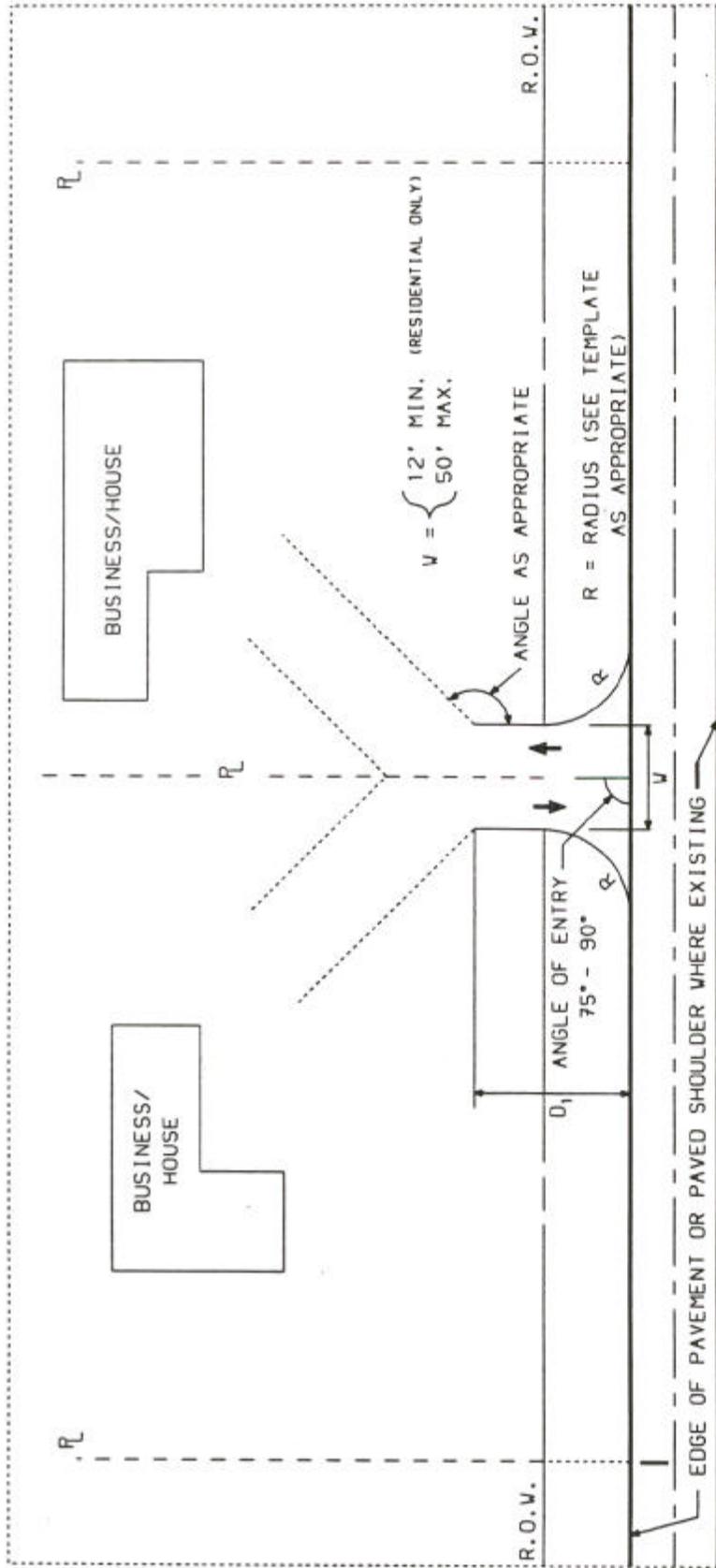
ANGLE OF ENTRY	V = DRIVE WIDTHS			
	12'	16'	18'	20'
90°	15'	10'	10'	5'
75°	20'	15'	10'	5'
60°	20'	20'	15'	5'

EVERY EFFORT SHOULD BE MADE TO CONSTRUCT NEW DRIVES AND TO REDIRECT EXISTING DRIVES TO AN ANGLE OF ENTRY OF 75° OR MORE

- 1) IN MOST CASES, URBAN R VALUES WILL BE LARGER
- 2) CURBING IF PRESENT, COULD BE FLARED TO FIT DRIVE, OR ENDED AS SHOWN ON FIGURE X

RESIDENTIAL DRIVE -- RURAL/URBAN

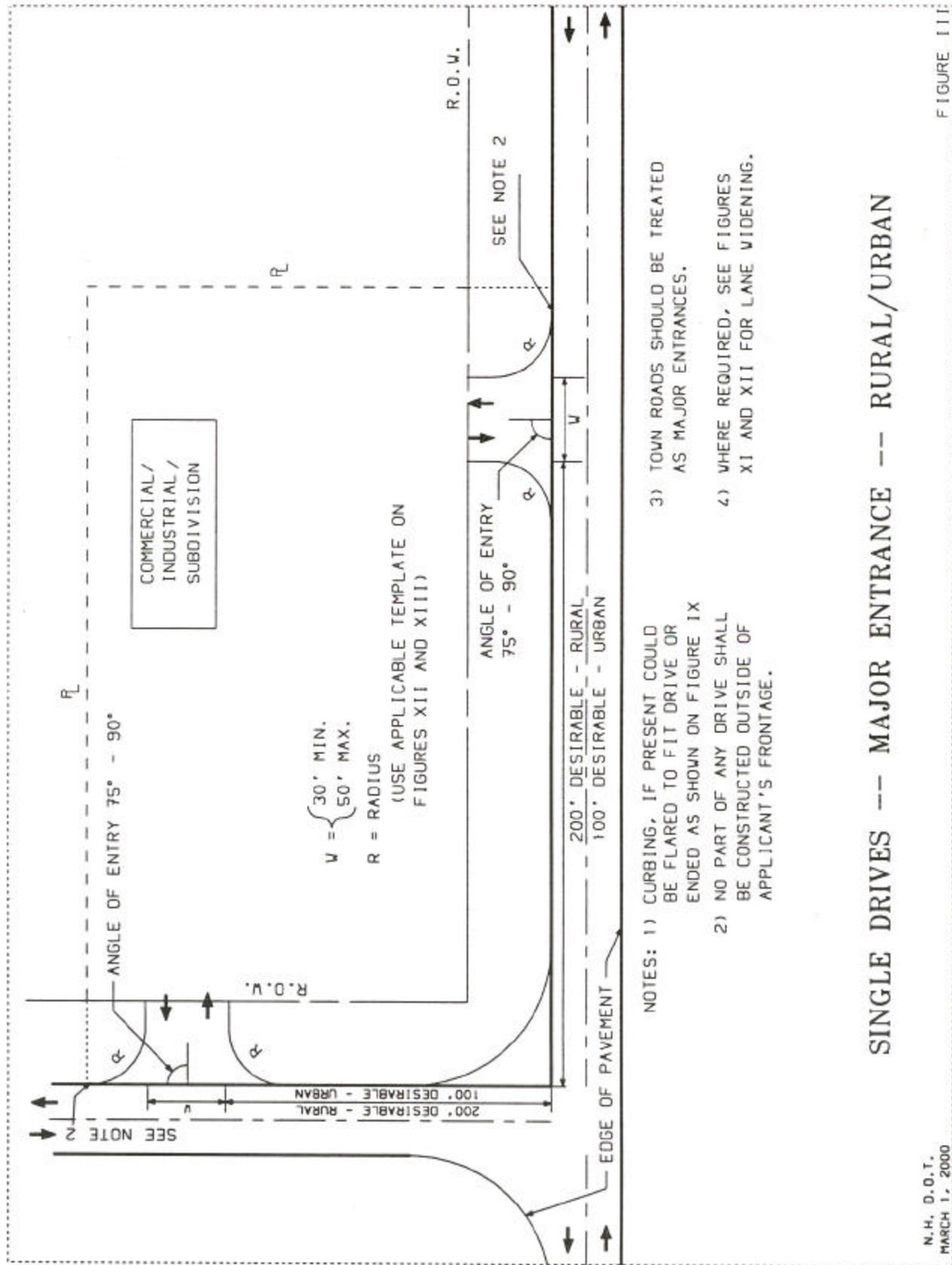
N.H. D.O.T.  
MARCH 1, 2000



- NOTES:
- 1)  $D_1$  DISTANCE VARIES - MINIMUM 30' OR R.O.V. LINE WHICH EVER IS GREATER. HIGHER TRAFFIC COUNT WILL NECESSITATE LARGER  $D_1$ .
  - 2) CURBING IF PRESENT, COULD BE FLARED TO FIT DRIVE OR ENDED AS SHOWN ON FIGURE X
  - 3) WHERE REQUIRED, SEE FIGURES XI AND XII FOR LANE WIDENING.
  - 4) COMMON DRIVES SHALL BE PAVED TO A POINT 20 FEET FROM THE EDGE OF THE STATE HIGHWAY IF PAVED.

**COMMON DRIVE - RESIDENTIAL OR MAJOR ENTRANCE - RURAL/URBAN**

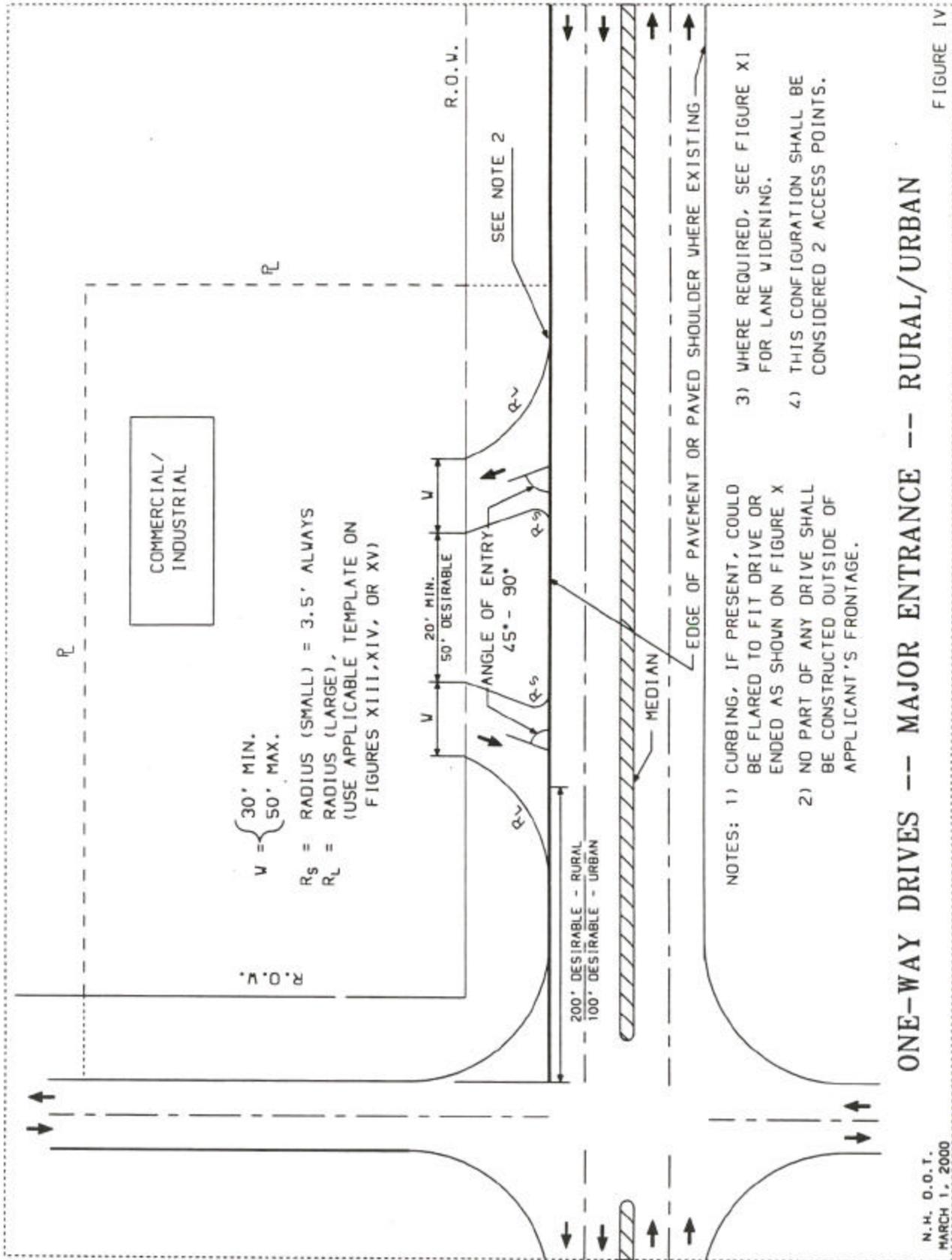
N.H. D.O.T.  
MARCH 1, 2000



SINGLE DRIVES -- MAJOR ENTRANCE -- RURAL/URBAN

N.H. D.O.T.  
MARCH 1, 2000

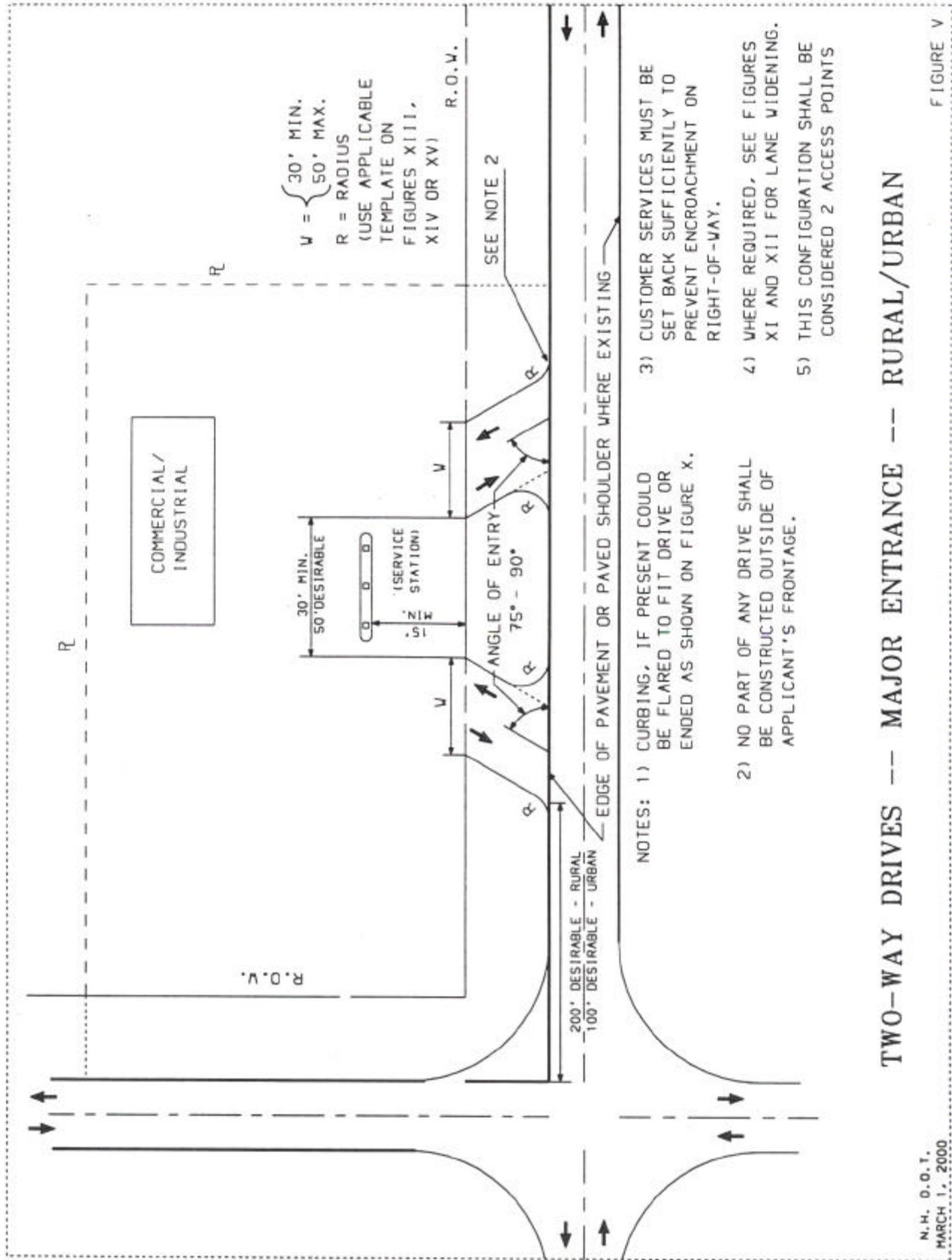
FIGURE III



ONE-WAY DRIVES -- MAJOR ENTRANCE -- RURAL/URBAN

N.H. D.O.T.  
MARCH 1, 2000

FIGURE IV



**TWO-WAY DRIVES -- MAJOR ENTRANCE -- RURAL/URBAN**

N.H. D.O.T.  
MARCH 1, 2000

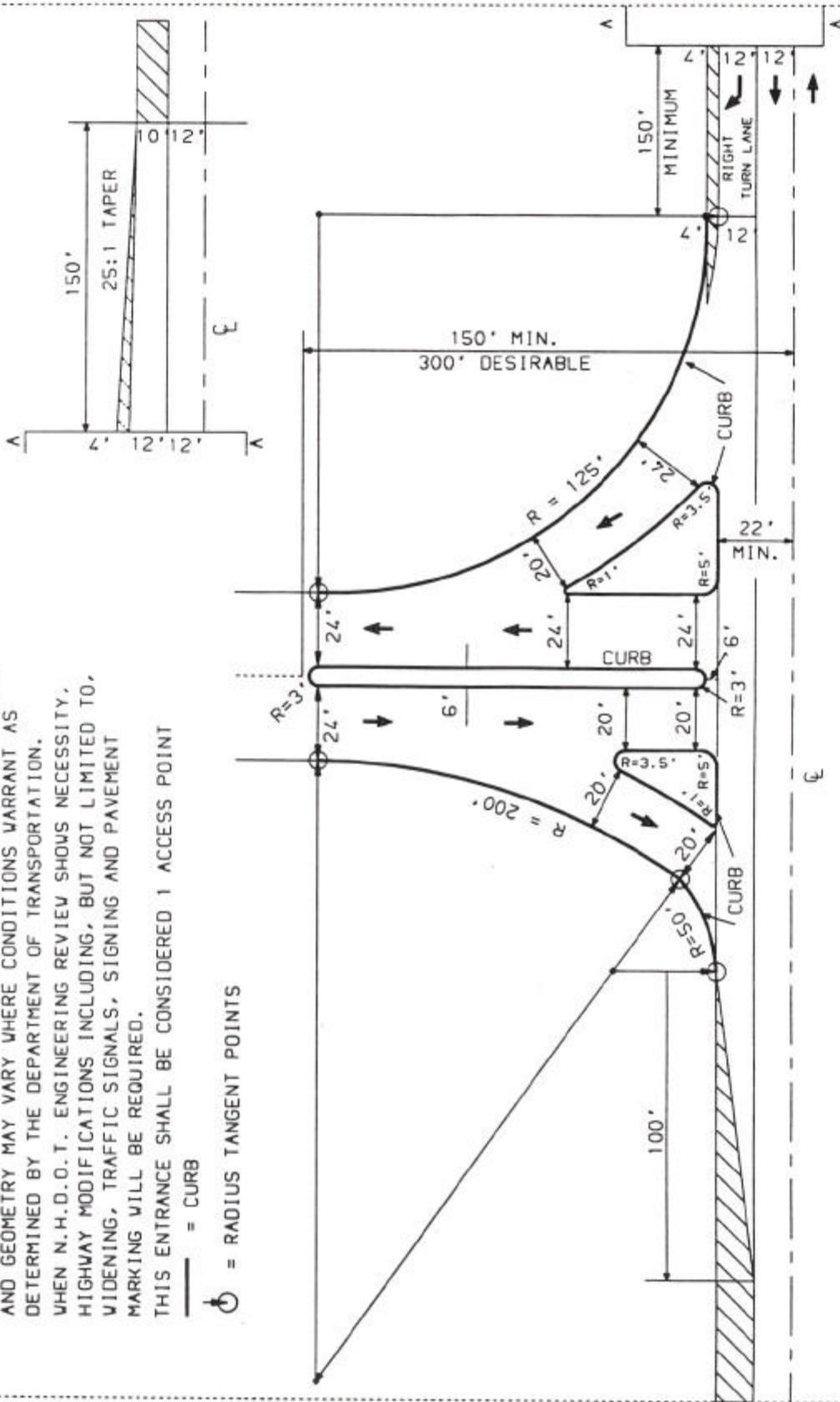
FIGURE V

NOTE: TRAFFIC SIGNAL REQUIREMENTS, PAVEMENT MARKING, SIGNS AND GEOMETRY MAY VARY WHERE CONDITIONS WARRANT AS DETERMINED BY THE DEPARTMENT OF TRANSPORTATION. WHEN N.H.D.O.T. ENGINEERING REVIEW SHOWS NECESSITY, HIGHWAY MODIFICATIONS INCLUDING, BUT NOT LIMITED TO, WIDENING, TRAFFIC SIGNALS, SIGNING AND PAVEMENT MARKING WILL BE REQUIRED.

THIS ENTRANCE SHALL BE CONSIDERED 1 ACCESS POINT

— = CURB

⊙ = RADIUS TANGENT POINTS



DIVIDED DRIVE -- MAJOR ENTRANCE -- RURAL/URBAN

N.H. D.O.T.  
MARCH 1, 2000

FIGURE VI

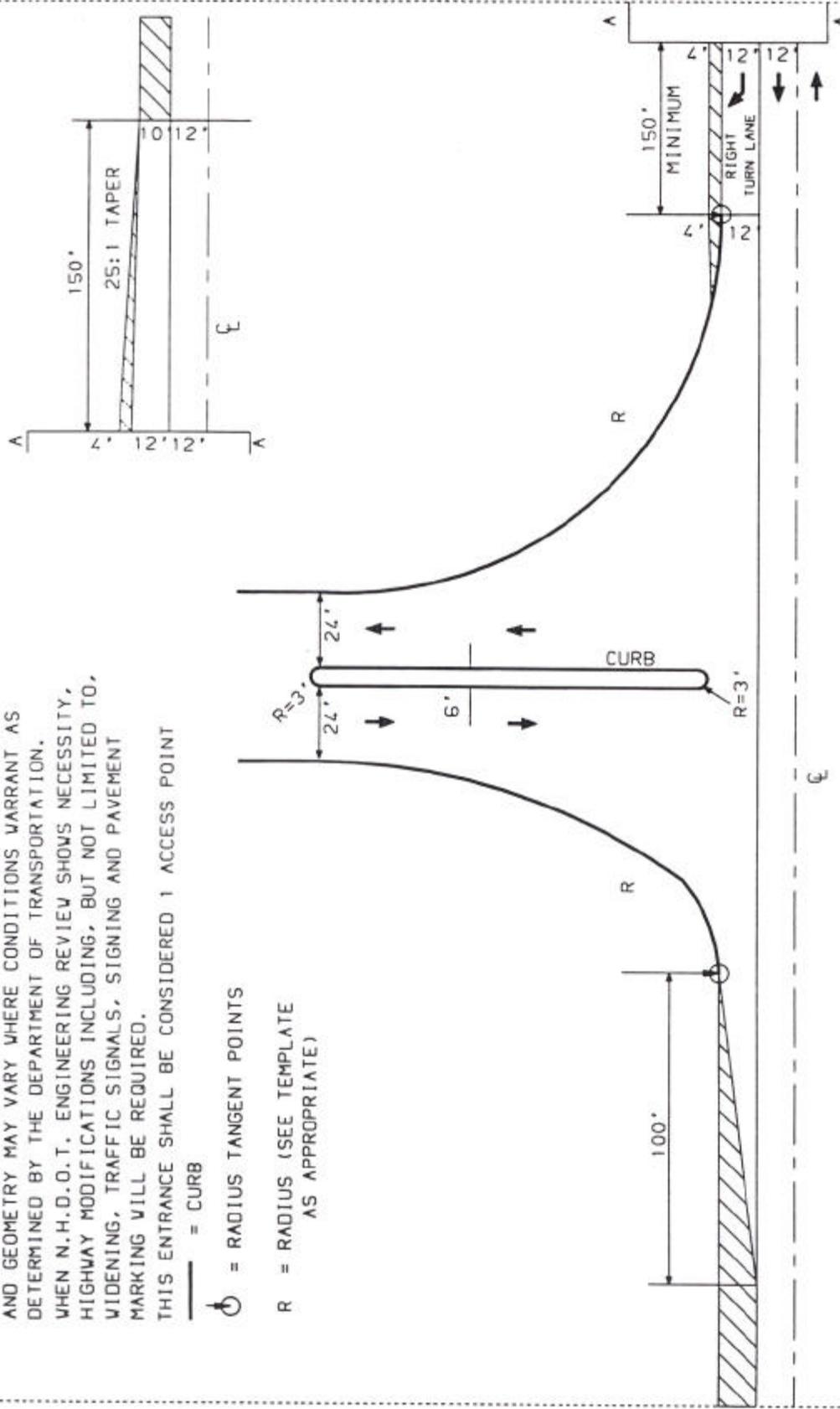
NOTE: TRAFFIC SIGNAL REQUIREMENTS, PAVEMENT MARKING, SIGNS AND GEOMETRY MAY VARY WHERE CONDITIONS WARRANT AS DETERMINED BY THE DEPARTMENT OF TRANSPORTATION. WHEN N.H.D.O.T. ENGINEERING REVIEW SHOWS NECESSITY, HIGHWAY MODIFICATIONS INCLUDING, BUT NOT LIMITED TO, WIDENING, TRAFFIC SIGNALS, SIGNING AND PAVEMENT MARKING WILL BE REQUIRED.

THIS ENTRANCE SHALL BE CONSIDERED 1 ACCESS POINT

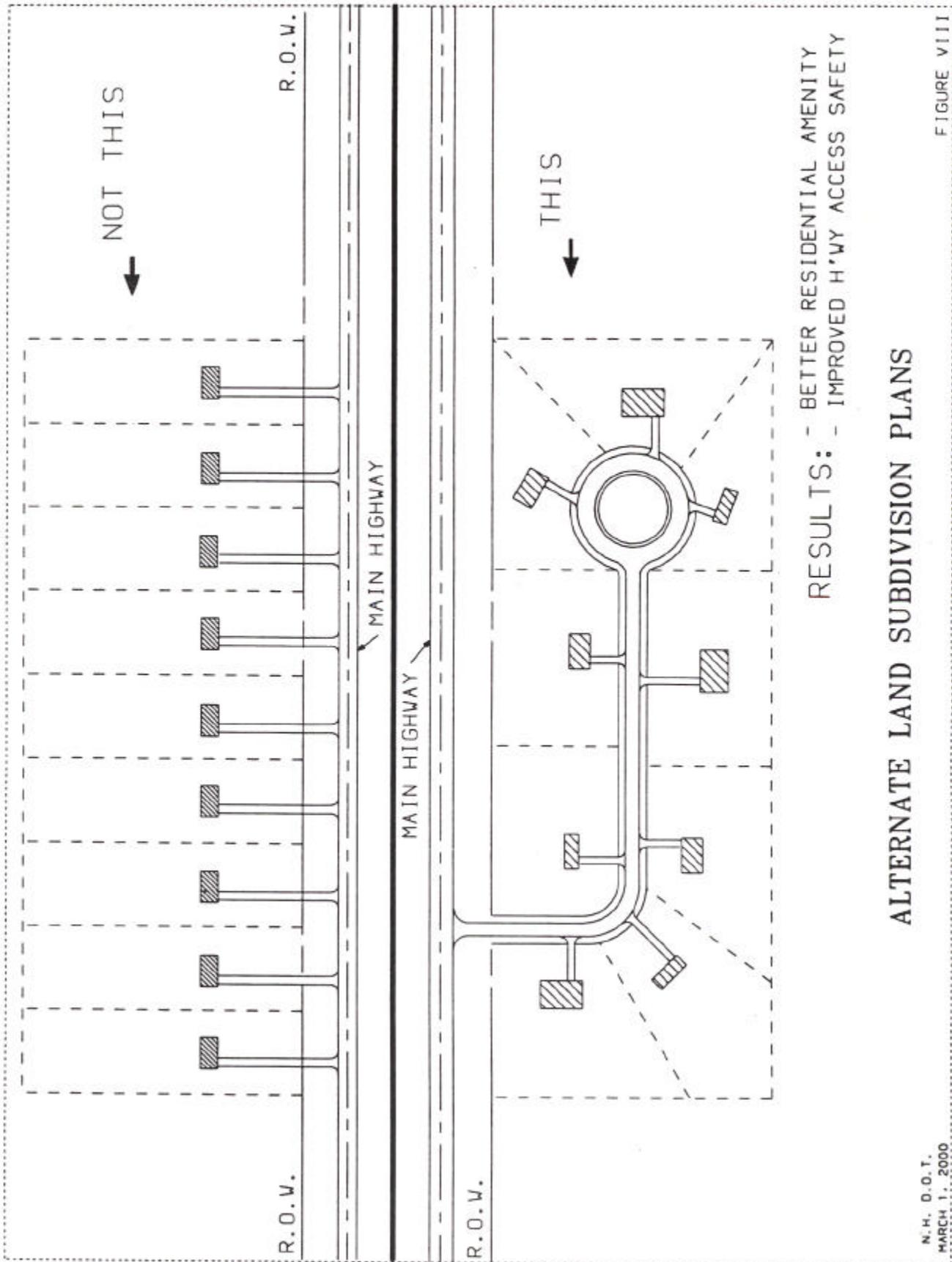
— = CURB

⊙ = RADIUS TANGENT POINTS

R = RADIUS (SEE TEMPLATE AS APPROPRIATE)



ALTERNATE MAJOR ENTRANCE --- RURAL/URBAN



NOT THIS

R.O.V.

MAIN HIGHWAY

MAIN HIGHWAY

R.O.V.

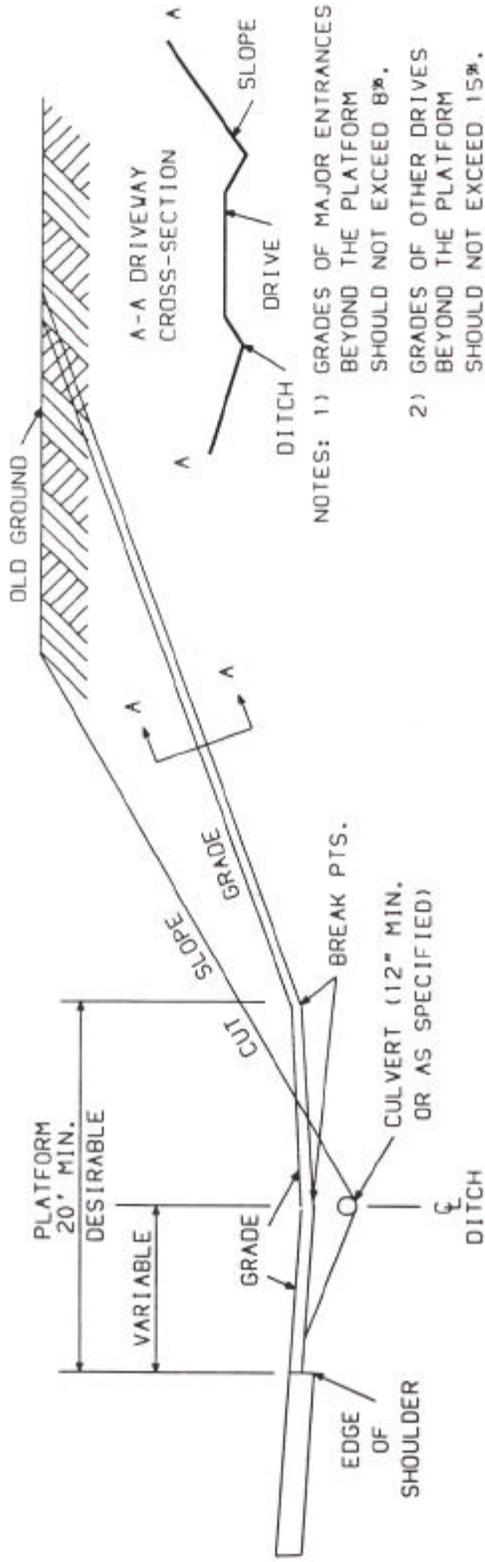
THIS

RESULTS: - BETTER RESIDENTIAL AMENITY  
 - IMPROVED H'WY ACCESS SAFETY

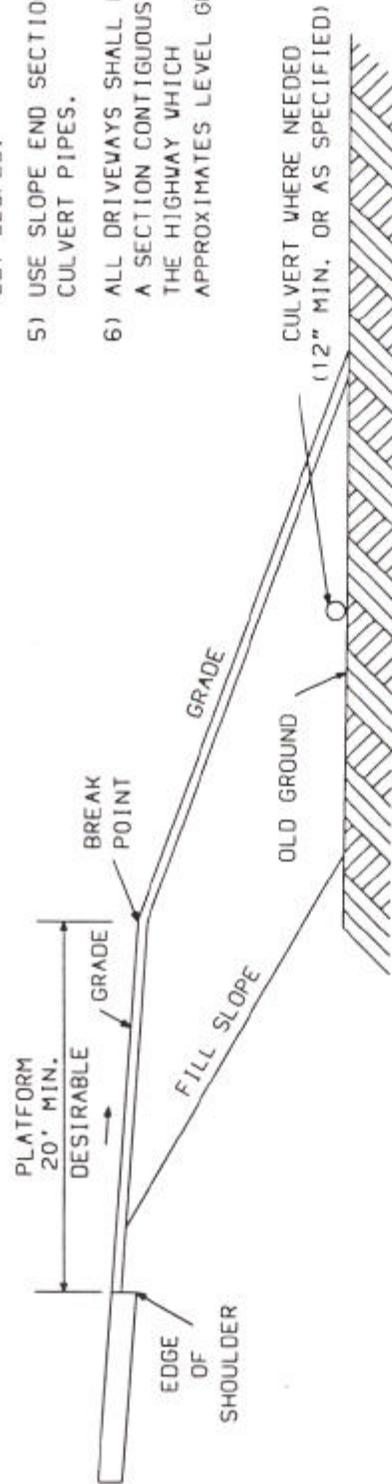
ALTERNATE LAND SUBDIVISION PLANS

N.H. D.O.T.  
 MARCH 1, 2000

FIGURE VIII



TYPICAL RURAL DRIVE IN CUT SECTION



TYPICAL RURAL DRIVE IN FILL SECTION

NOTES: 1) GRADES OF MAJOR ENTRANCES BEYOND THE PLATFORM SHOULD NOT EXCEED 8%.

2) GRADES OF OTHER DRIVES BEYOND THE PLATFORM SHOULD NOT EXCEED 15%.

3) THE ALGEBRAIC DIFFERENCE BETWEEN TWO ADJACENT GRADES SHOULD NOT EXCEED 10%.

4) DITCHES ARE RECOMMENDED FOR UNCURBED DRIVEWAYS IN CUT SLOPES.

5) USE SLOPE END SECTIONS ON CULVERT PIPES.

6) ALL DRIVEWAYS SHALL HAVE A SECTION CONTIGUOUS TO THE HIGHWAY WHICH APPROXIMATES LEVEL GROUND.

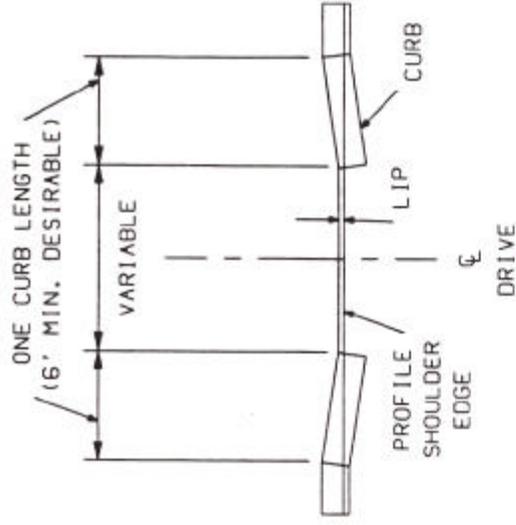
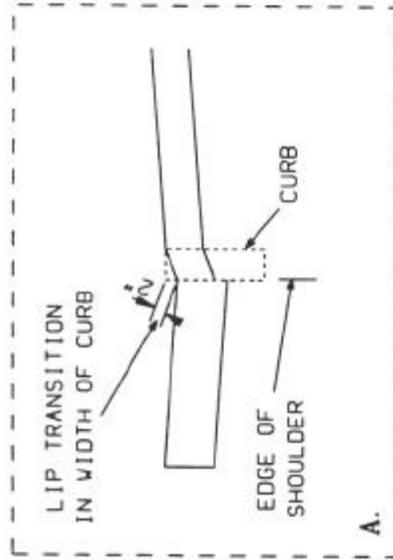
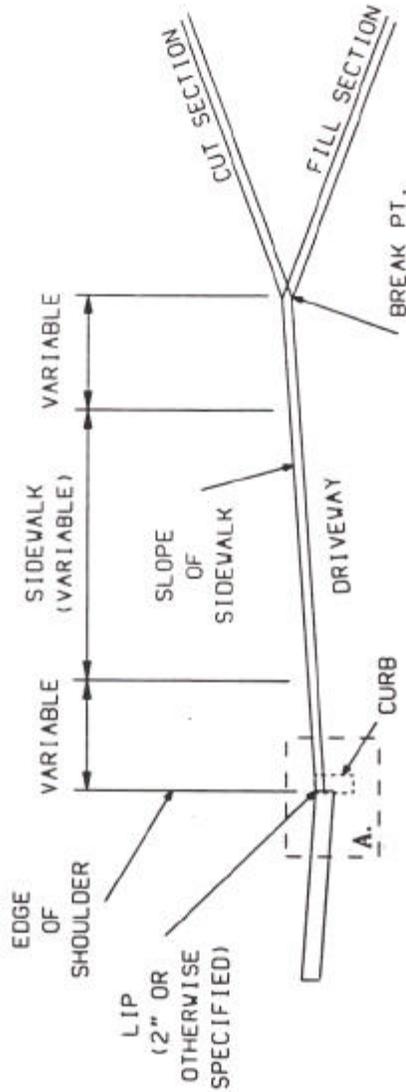
NOTES: 1) GRADES OF MAJOR ENTRANCES BEYOND THE PLATFORM SHOULD NOT EXCEED 8%.

2) GRADES OF OTHER DRIVES BEYOND THE PLATFORM SHOULD NOT EXCEED 15%.

3) THE ALGEBRAIC DIFFERENCE BETWEEN TWO ADJACENT GRADES SHOULD NOT EXCEED 10%.

4) ALL DRIVEWAYS SHALL HAVE A SECTION CONTIGUOUS TO THE HIGHWAY WHICH APPROXIMATES LEVEL GROUND.

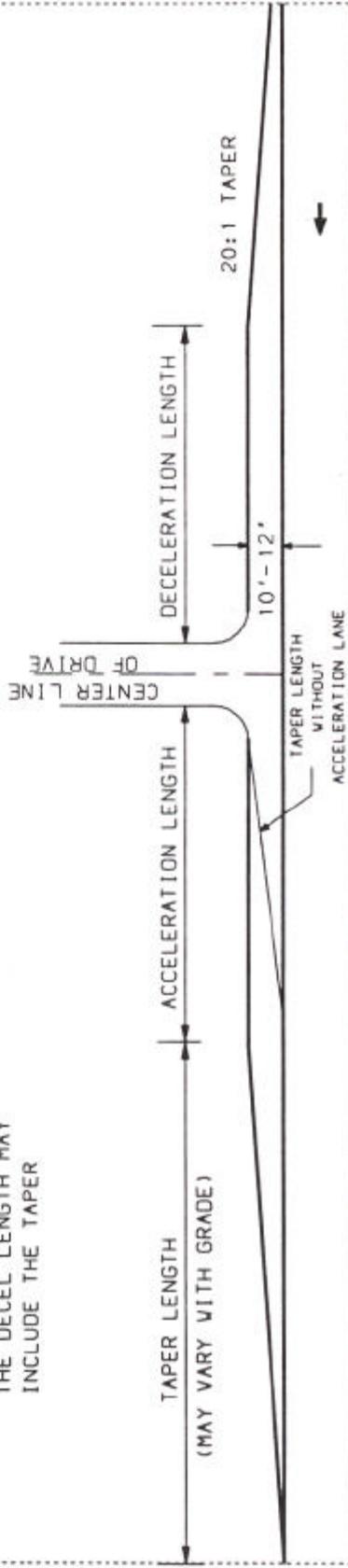
5) CURBING SHOULD BE FLARED TO FIT DRIVE RADIIF IF APPROPRIATE OR ENDED AS SHOWN BELOW.



END VIEW OF DRIVEWAY AT EDGE OF SHOULDER

TYPICAL URBAN DRIVE IN CUT/FILL SECTION

- NOTES: 1) TAPER AND ACCEL./DECEL LANES SHOULD HAVE A MINIMUM 1' SHOULDER, 4' PREFERRED
- 2) ACCELERATION LANE USED ONLY WHEN WARRANTED
- 3) IN SOME CIRCUMSTANCES, THE DECEL LENGTH MAY INCLUDE THE TAPER



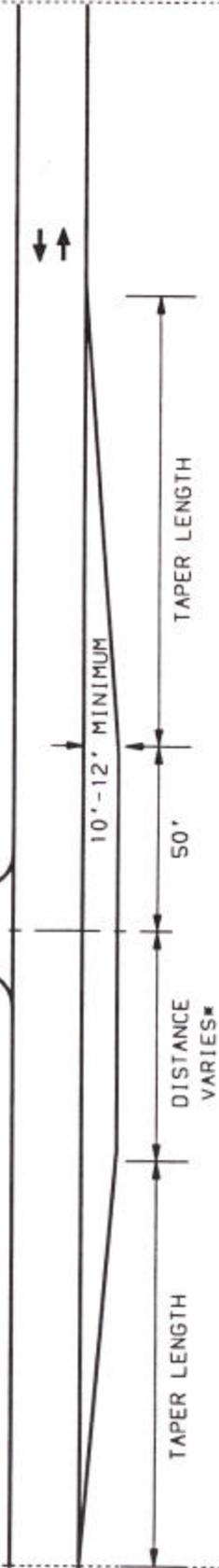
SPEED LIMIT	TAPER LENGTH FOR 10' SHOULDER	TAPER LENGTH FOR 12' SHOULDER	VEHICLE SPEED	ACCEL. LENGTH	VEHICLE SPEED	DECEL. LENGTH
55 MPH	550' MIN.	660' MIN.	0 - 30	190'	30 - 0	235'
50 MPH	500' MIN.	600' MIN.	0 - 40	380'	40 - 0	315'
45 MPH	450' MIN.	540' MIN.	0 - 50	760'	50 - 0	435'
40 MPH	400' MIN.	480' MIN.				
35 MPH	350' MIN.	420' MIN.				

REFERENCES: TAPER LENGTH -- MUTCD, PART VI  
 ACCEL-DECEL LENGTH -- AASHTO (GREEN BOOK)

## TYPICAL ACCELERATION - DECELERATION LANES FOR RIGHT TURNS

NOTE: TAPER AND BY-PASS SHOULDER SHOULD HAVE THE MINIMUM 1' SHOULDER, 4' PREFERRED.

CENTER LINE  
OF DRIVE



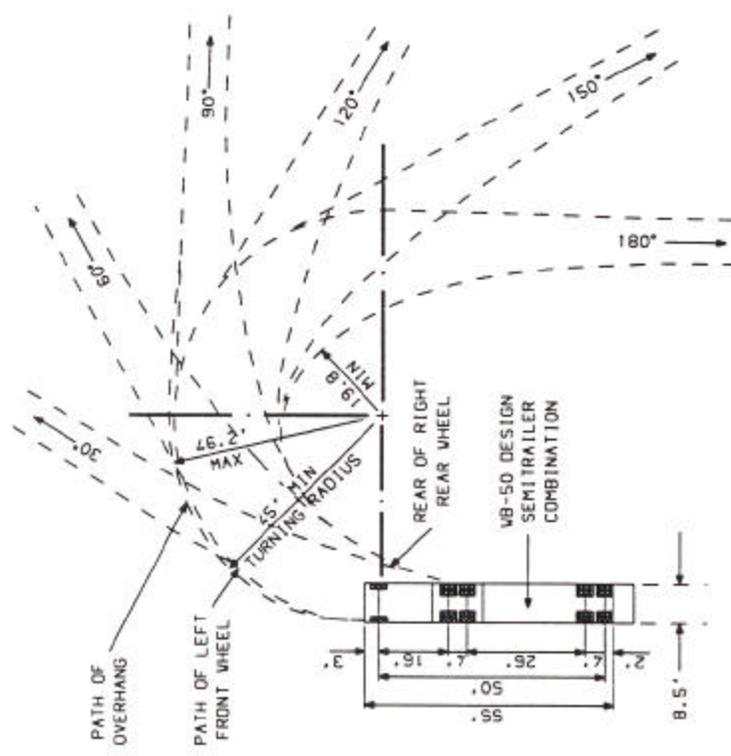
\* NOTE: DISTANCE VARIES BASED ON EXPECTED LEFT TURN DEMAND

SPEED	TAPER LENGTH FOR 10' SHOULDER	TAPER LENGTH FOR 12' SHOULDER
55 MPH	550' MIN.	660' MIN.
50 MPH	500' MIN.	600' MIN.
45 MPH	450' MIN.	540' MIN.
40 MPH	400' MIN.	480' MIN.
35 MPH	350' MIN.	420' MIN.

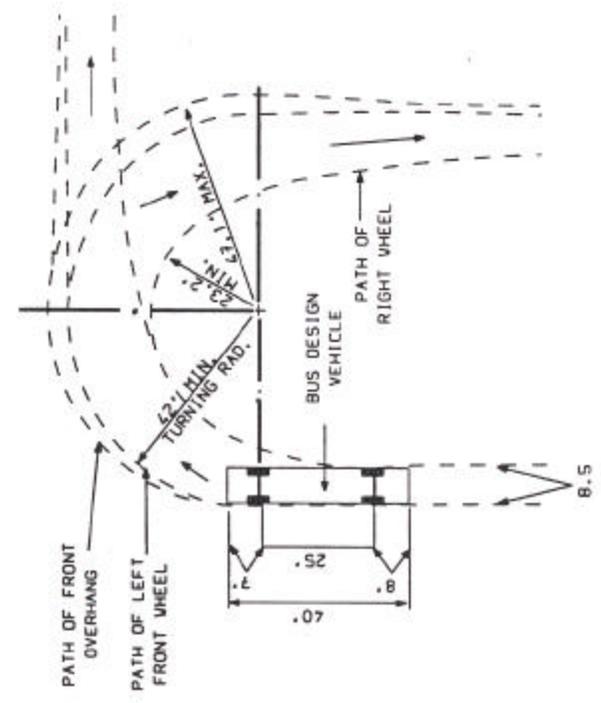
REFERENCE: MUTCD PART VI

### TYPICAL BY-PASS SHOULDER

N.H. D.O.T.  
MARCH 1, 2000



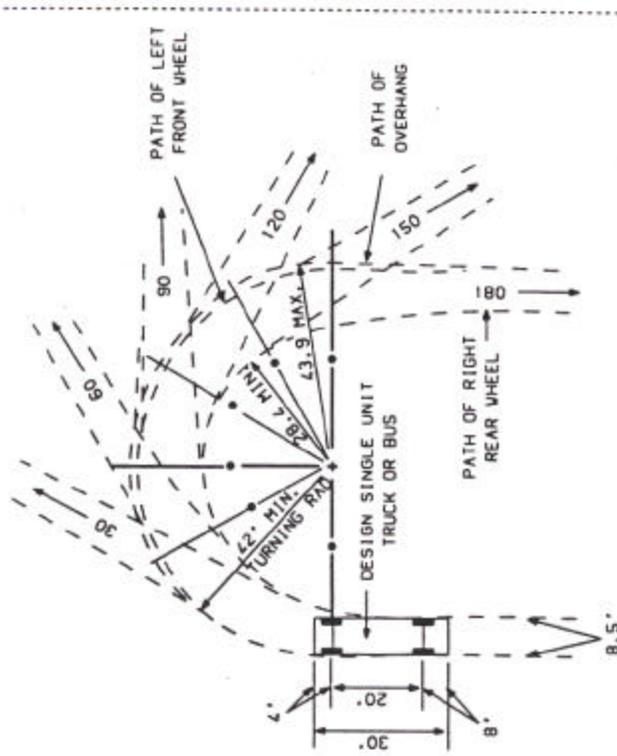
MINIMUM TURNING PATH  
WB-50 DESIGN VEHICLE



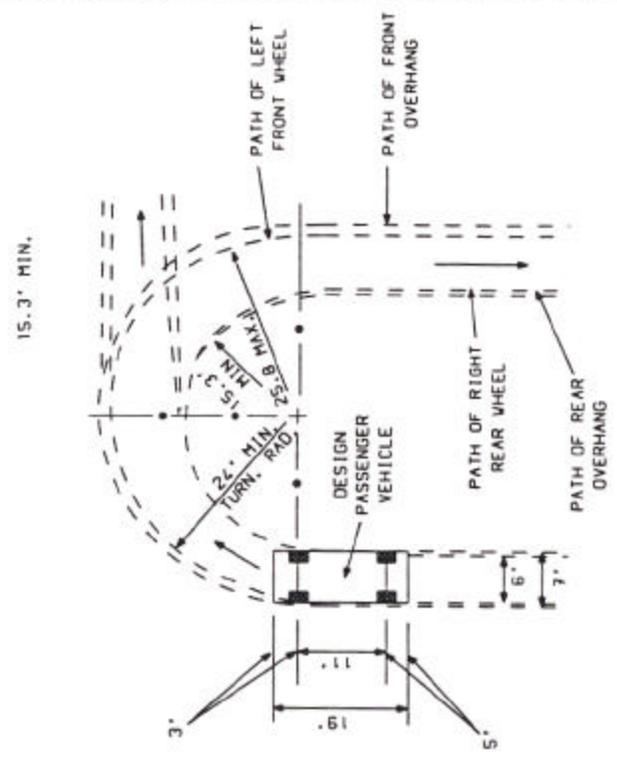
MINIMUM TURNING PATH FOR  
BUS DESIGN VEHICLE

TURNING TEMPLATE I

NOT TO SCALE



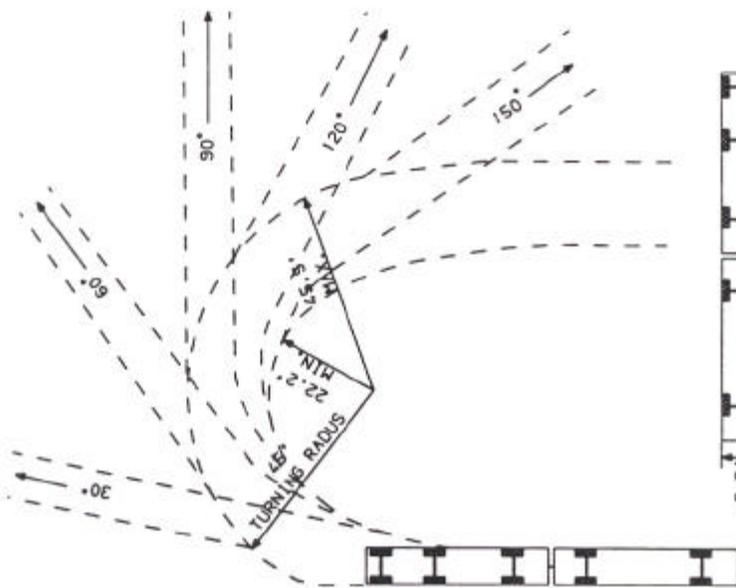
MINIMUM TURNING PATH FOR  
SU DESIGN VEHICLE



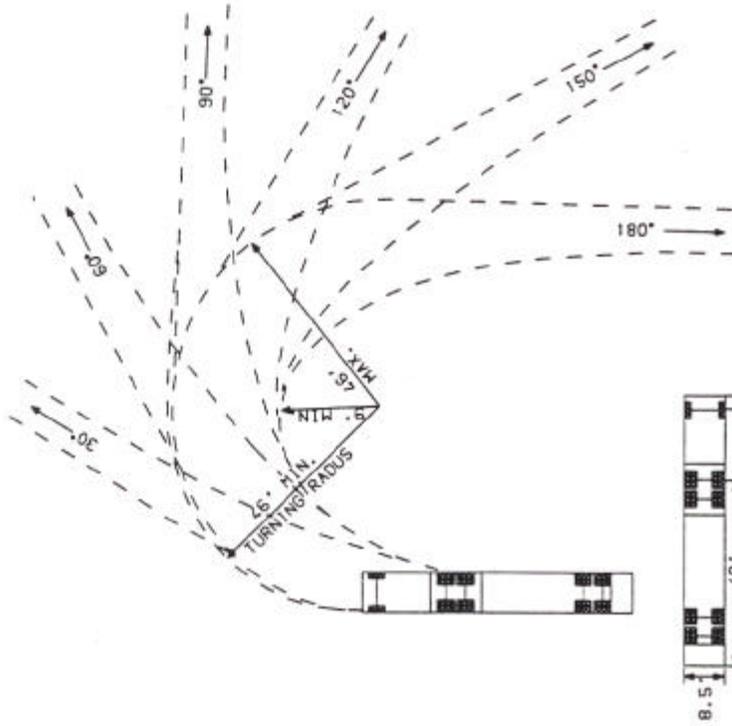
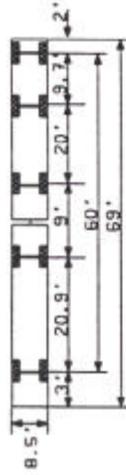
MINIMUM TURNING PATH FOR  
P DESIGN VEHICLE

## TURNING TEMPLATE II

NOT TO SCALE



MINIMUM TURNING PATH FOR  
WB-60 DESIGN VEHICLE



MINIMUM TURNING PATH FOR WB-62  
(INTERSTATE SEMITRAILER)\*

\*DESIGN VEHICLE WITH 48' TRAILER AS ADOPTED IN 1982  
SURFACE TRANSPORTATION ASSISTANCE ACT (STAA)

SOURCE: TEXAS STATE DEPARTMENT OF TRANSPORTATION

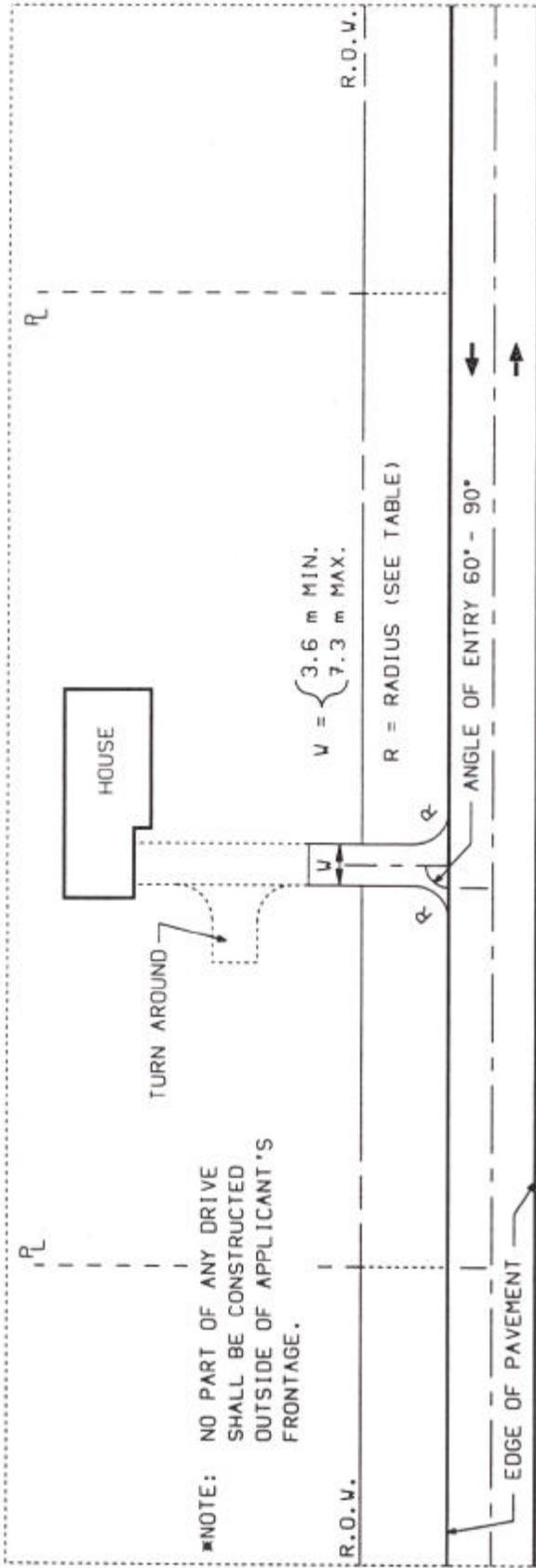
\*\*CALTRANS 50' TURNING RADIUS  
IS APPROVED FOR USE ALSO

### TURNING TEMPLATE III

NOT TO SCALE

N.H. D.O.T.  
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FIGURE XV



VALUES OF R (RURAL)

ANGLE OF ENTRY	W = DRIVE WIDTHS						
	90°	3.6 m	4.3 m	4.9 m	5.5 m	6.1 m	6.7 m
75°	4 m	3 m	3 m	1.5 m	1.5 m	1.5 m	1.5 m
60°	6.1 m	4.6 m	3 m	3 m	1.5 m	1.5 m	1.5 m
	6.1 m	6.1 m	4.6 m	4.6 m	3 m	1.5 m	1.5 m

EVERY EFFORT SHOULD BE MADE TO CONSTRUCT NEW DRIVES AND TO REDIRECT EXISTING DRIVES TO AN ANGLE OF ENTRY OF 75° OR MORE

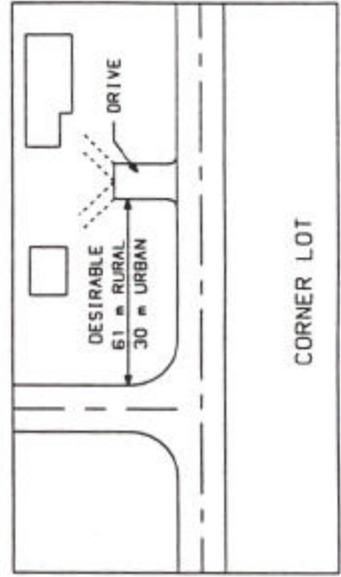
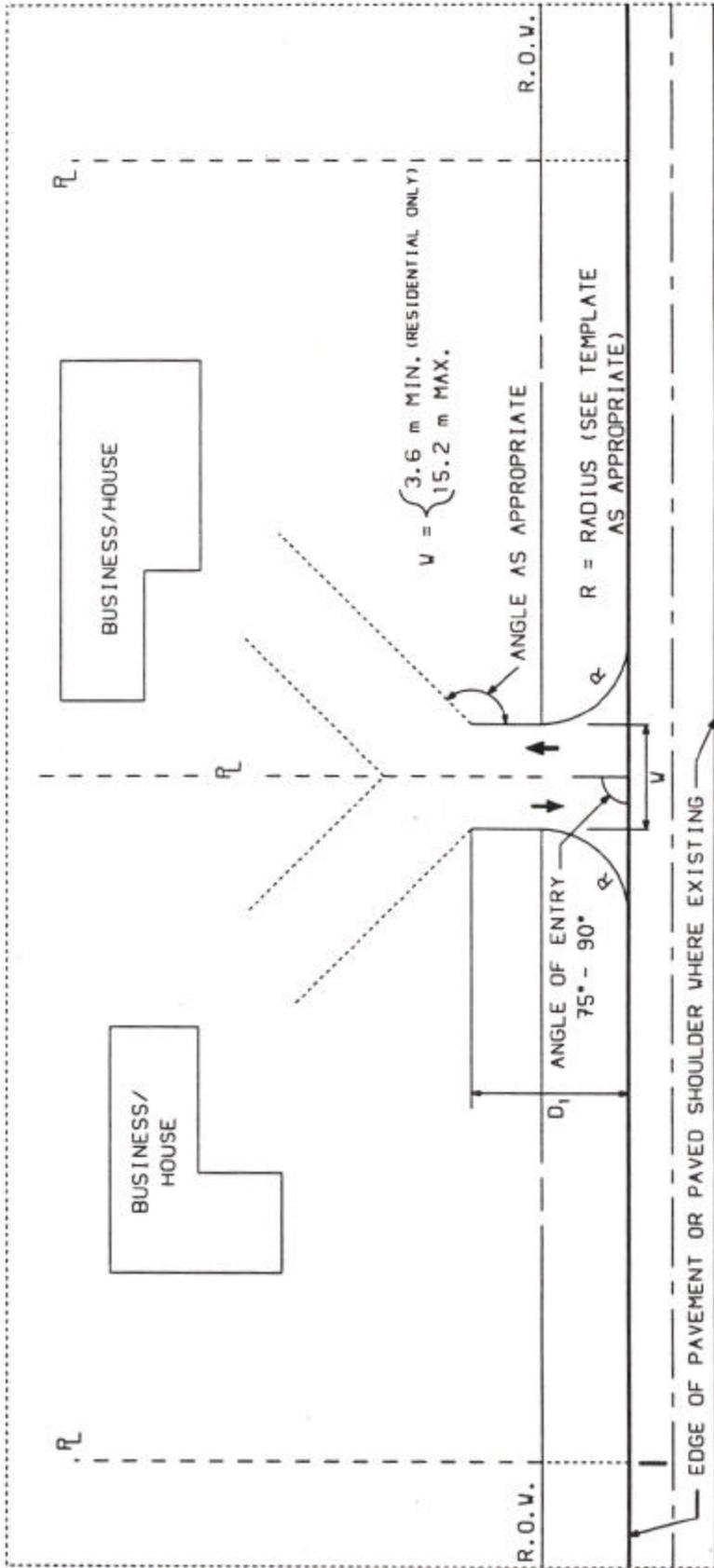
- 1) IN MOST CASES, URBAN R VALUES WILL BE LARGER
- 2) CURBING IF PRESENT, COULD BE FLARED TO FIT DRIVE, OR ENDED AS SHOWN ON FIGURE XXV

RESIDENTIAL DRIVE -- RURAL/URBAN

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FIGURE XVI

METRIC



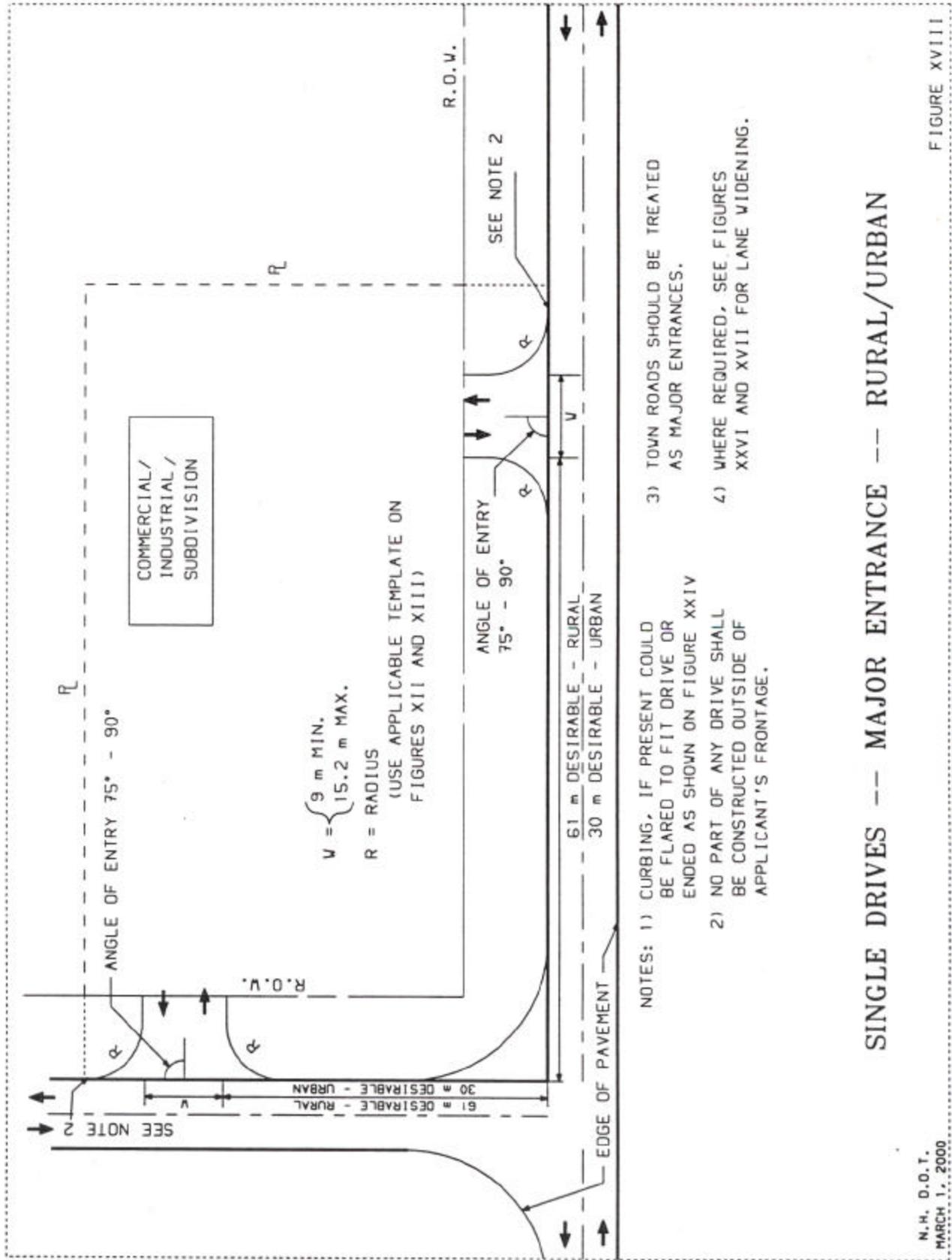
- NOTES:
- 1)  $D_1$  DISTANCE VARIES - MINIMUM 9 m OR R.O.V. LINE WHICH EVER IS GREATER. HIGHER TRAFFIC COUNT WILL NECESSITATE LARGER  $D_1$ .
  - 2) CURBING IF PRESENT, COULD BE FLARED TO FIT DRIVE OR ENDED AS SHOWN ON FIGURE XXV
  - 3) WHERE REQUIRED, SEE FIGURES XXVI AND XXVII FOR LANE WIDENING.
  - 4) COMMON DRIVES SHALL BE PAVED TO A POINT 6 m FROM THE EDGE OF THE STATE HIGHWAY IF PAVED.

**COMMON DRIVE - RESIDENTIAL OR MAJOR ENTRANCE - RURAL/URBAN**

N.H. D.O.T.  
MARCH 1, 2000

FIGURE XVII

**METRIC**

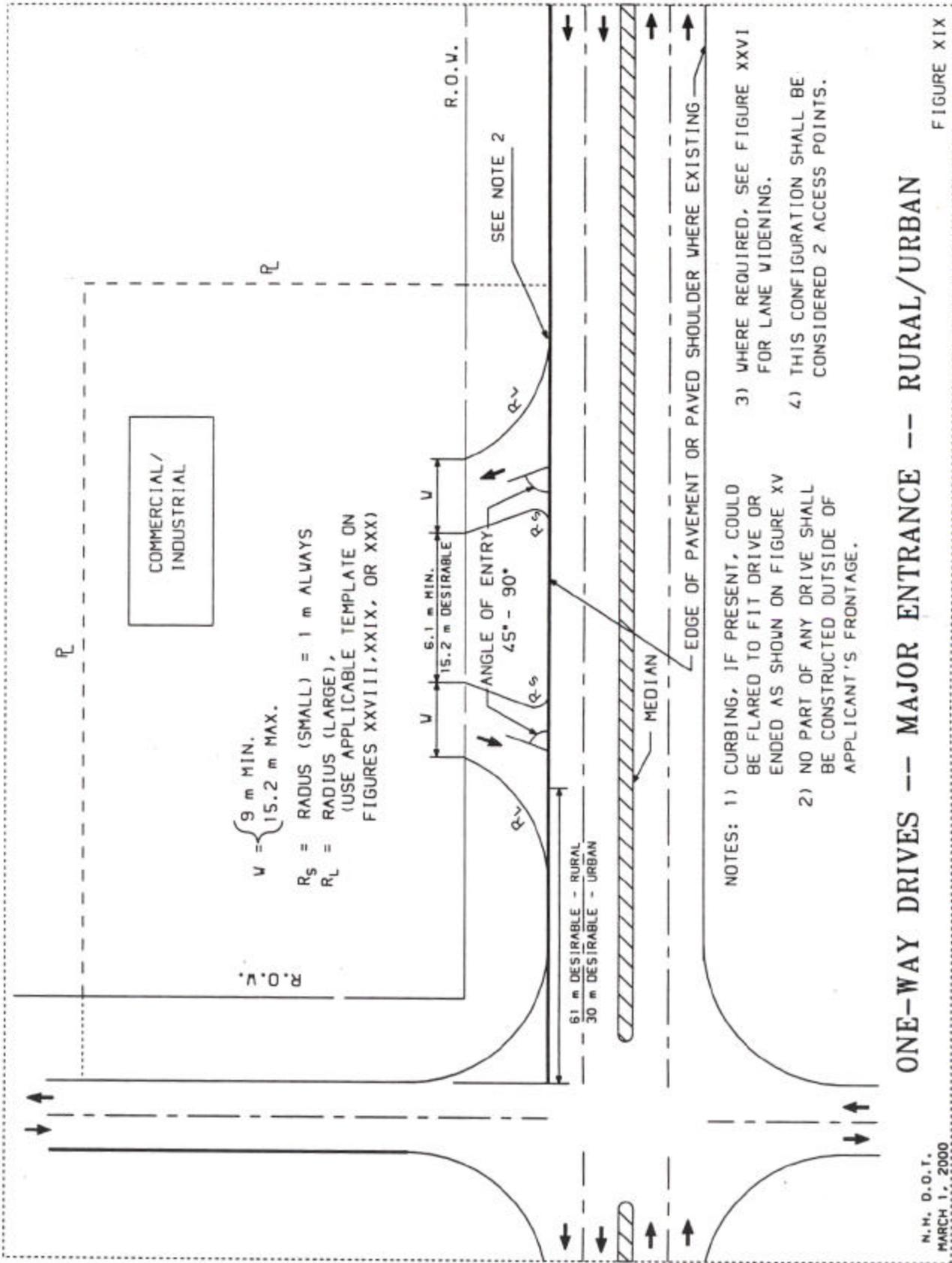


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FIGURE XVIII

SINGLE DRIVES -- MAJOR ENTRANCE -- RURAL/URBAN

**METRIC**

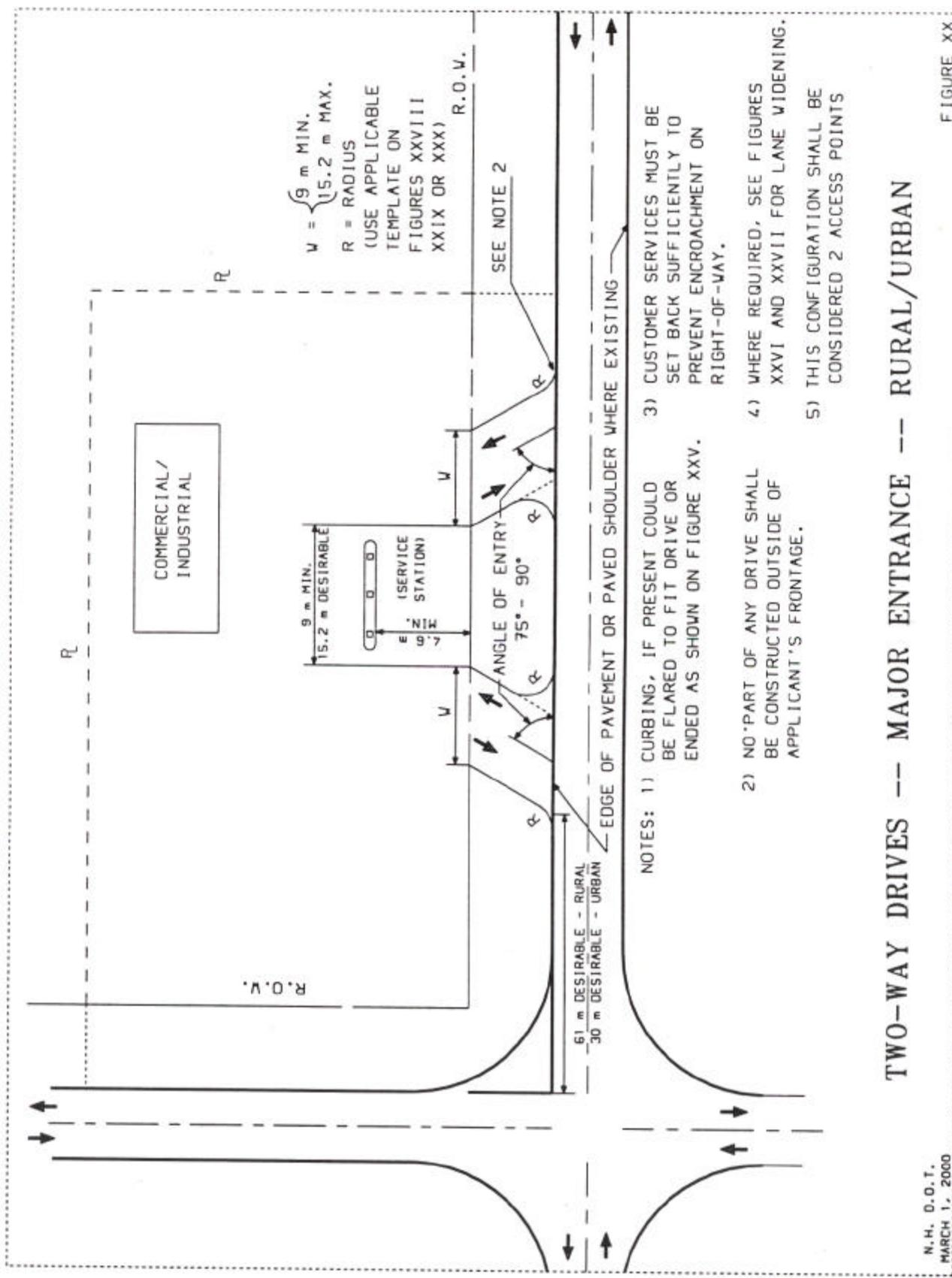


ONE-WAY DRIVES -- MAJOR ENTRANCE -- RURAL/URBAN

FIGURE XIX

N.H. D.O.T.  
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METRIC



TWO-WAY DRIVES -- MAJOR ENTRANCE -- RURAL/URBAN

FIGURE XX

N.H. D.O.T.  
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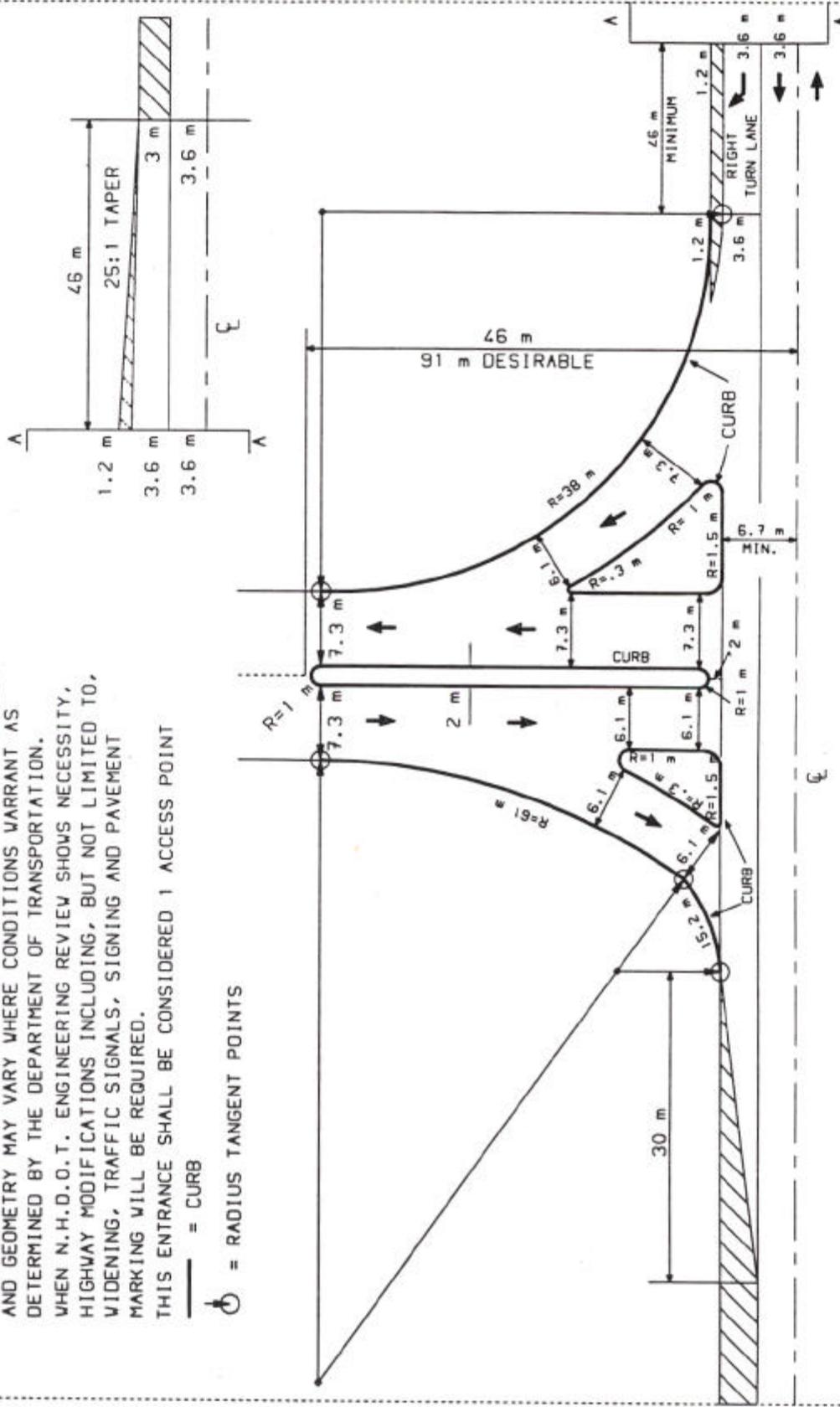


NOTE: TRAFFIC SIGNAL REQUIREMENTS, PAVEMENT MARKING, SIGNS AND GEOMETRY MAY VARY WHERE CONDITIONS WARRANT AS DETERMINED BY THE DEPARTMENT OF TRANSPORTATION. WHEN N.H.D.O.T. ENGINEERING REVIEW SHOWS NECESSITY, HIGHWAY MODIFICATIONS INCLUDING, BUT NOT LIMITED TO, WIDENING, TRAFFIC SIGNALS, SIGNING AND PAVEMENT MARKING WILL BE REQUIRED.

THIS ENTRANCE SHALL BE CONSIDERED 1 ACCESS POINT

— = CURB

⊙ = RADIUS TANGENT POINTS



DIVIDED DRIVE -- MAJOR ENTRANCE -- RURAL/URBAN

N.H. D.O.T.  
MARCH 1, 2000

FIGURE XXI

METRIC

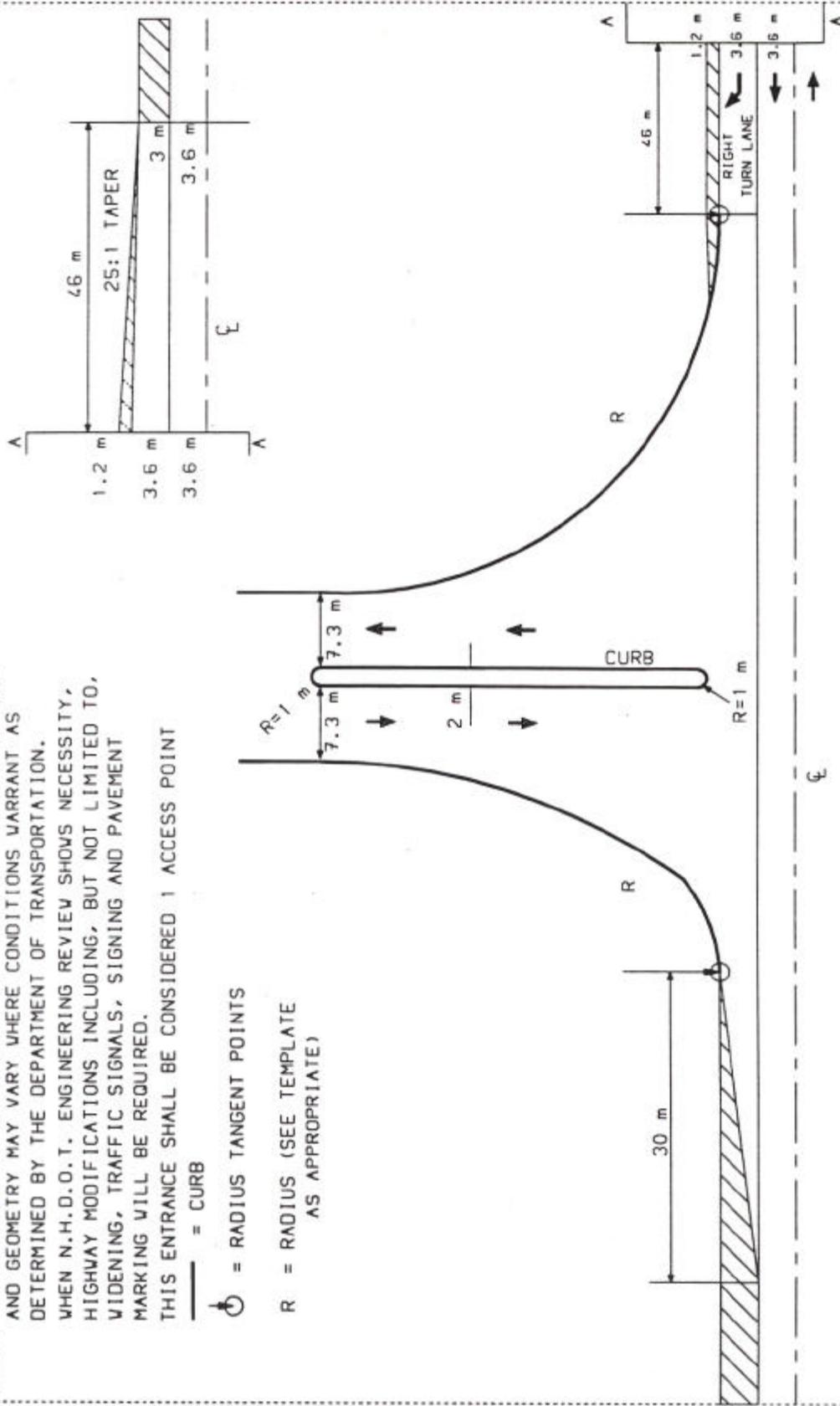
NOTE: TRAFFIC SIGNAL REQUIREMENTS, PAVEMENT MARKING, SIGNS AND GEOMETRY MAY VARY WHERE CONDITIONS WARRANT AS DETERMINED BY THE DEPARTMENT OF TRANSPORTATION. WHEN N.H.D.O.T. ENGINEERING REVIEW SHOWS NECESSITY, HIGHWAY MODIFICATIONS INCLUDING, BUT NOT LIMITED TO, WIDENING, TRAFFIC SIGNALS, SIGNING AND PAVEMENT MARKING WILL BE REQUIRED.

THIS ENTRANCE SHALL BE CONSIDERED 1 ACCESS POINT

— = CURB

⊙ = RADIUS TANGENT POINTS

R = RADIUS (SEE TEMPLATE AS APPROPRIATE)

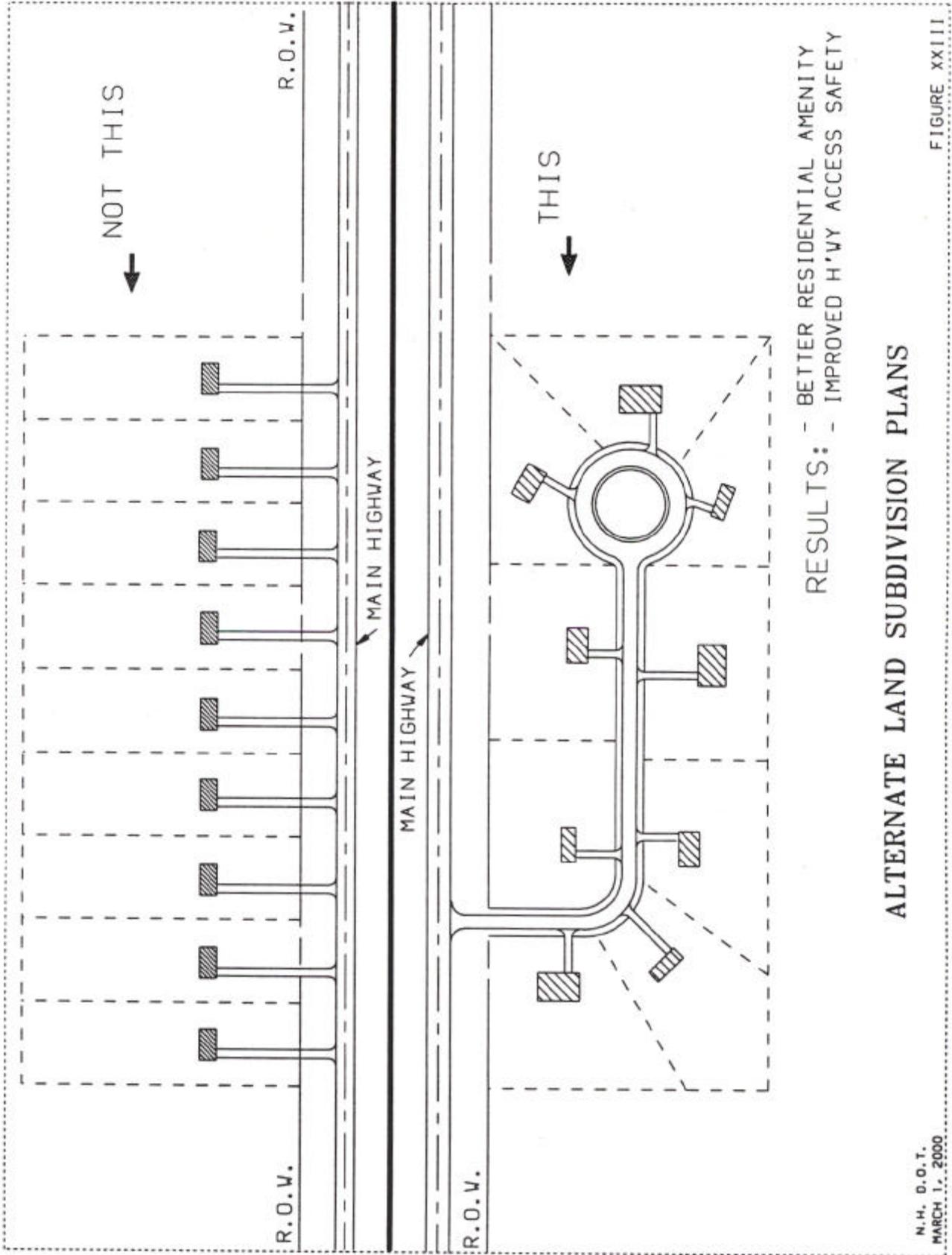


ALTERNATE MAJOR ENTRANCE -- RURAL/URBAN

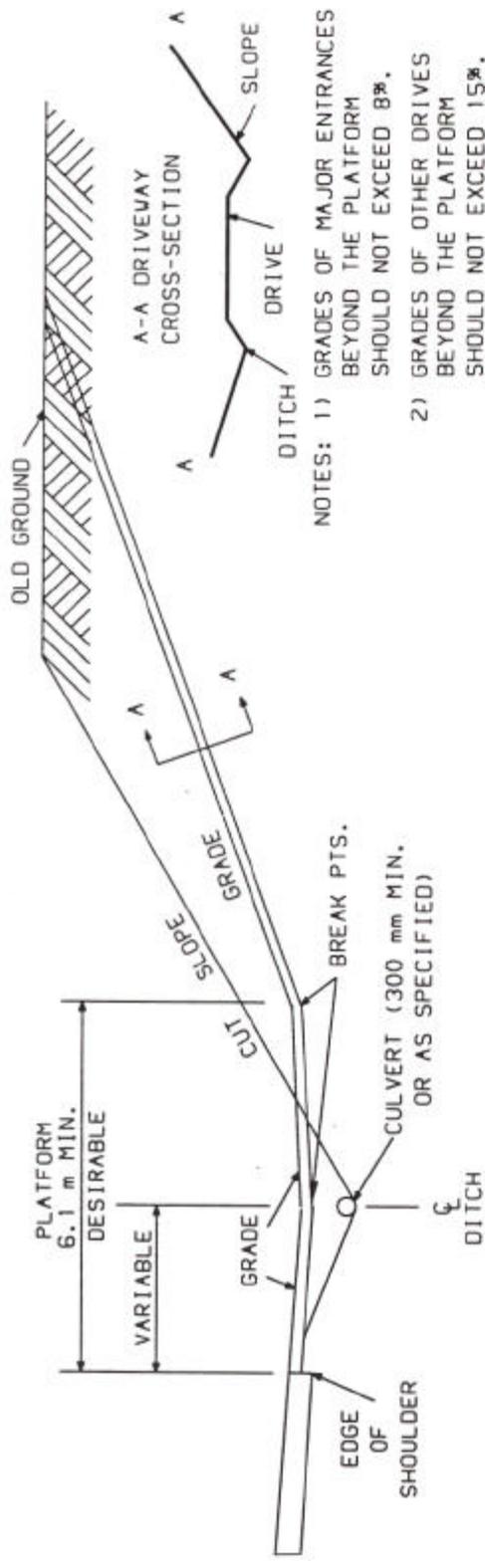
N.H. D.O.T.  
MARCH 1, 2000

FIGURE XXII

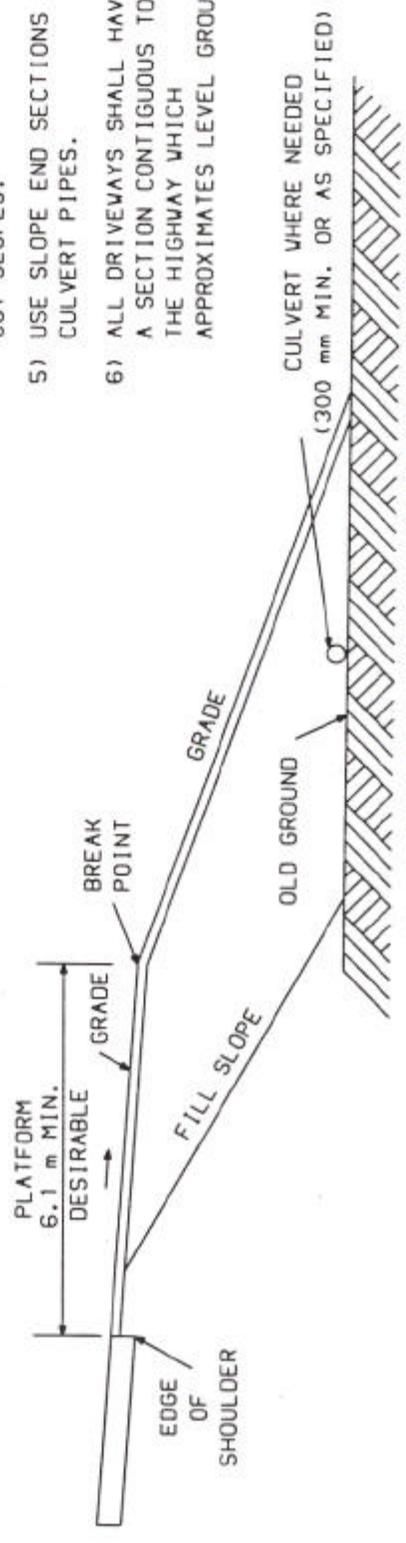
METRIC



**METRIC**



TYPICAL RURAL DRIVE IN CUT SECTION



TYPICAL RURAL DRIVE IN FILL SECTION

- NOTES:
- 1) GRADES OF MAJOR ENTRANCES BEYOND THE PLATFORM SHOULD NOT EXCEED 8%.
  - 2) GRADES OF OTHER DRIVES BEYOND THE PLATFORM SHOULD NOT EXCEED 15%.
  - 3) THE ALGEBRAIC DIFFERENCE BETWEEN TWO ADJACENT GRADES SHOULD NOT EXCEED 10%.
  - 4) DITCHES ARE RECOMMENDED FOR UNCURBED DRIVEWAYS IN CUT SLOPES.
  - 5) USE SLOPE END SECTIONS ON CULVERT PIPES.
  - 6) ALL DRIVEWAYS SHALL HAVE A SECTION CONTIGUOUS TO THE HIGHWAY WHICH APPROXIMATES LEVEL GROUND.

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FIGURE XXIV

**METRIC**

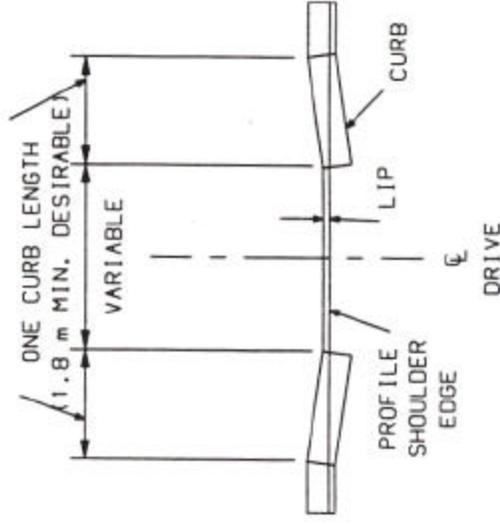
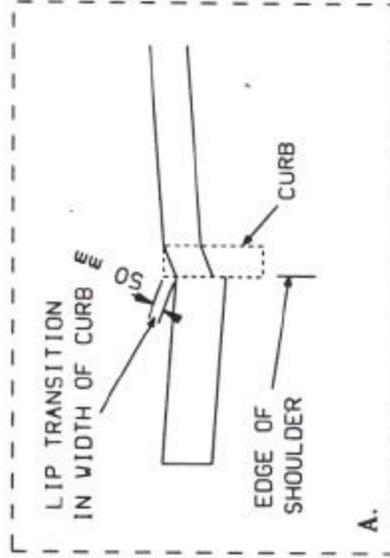
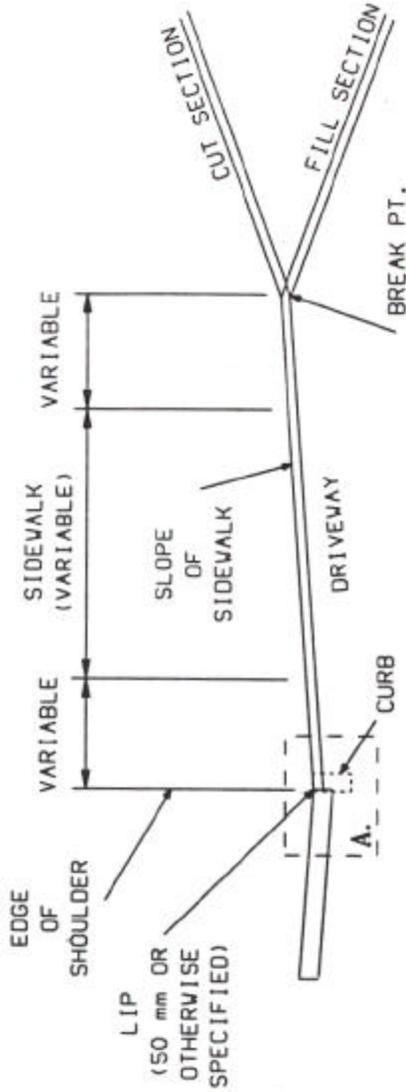
NOTES: 1) GRADES OF MAJOR ENTRANCES BEYOND THE PLATFORM SHOULD NOT EXCEED 8%.

2) GRADES OF OTHER DRIVES BEYOND THE PLATFORM SHOULD NOT EXCEED 15%.

3) THE ALGEBRAIC DIFFERENCE BETWEEN TWO ADJACENT GRADES SHOULD NOT EXCEED 10%.

4) ALL DRIVEWAYS SHALL HAVE A SECTION CONTIGUOUS TO THE HIGHWAY WHICH APPROXIMATES LEVEL GROUND.

5) CURBING SHOULD BE FLARED TO FIT DRIVE RADIIF IF APPROPRIATE OR ENDED AS SHOWN BELOW.

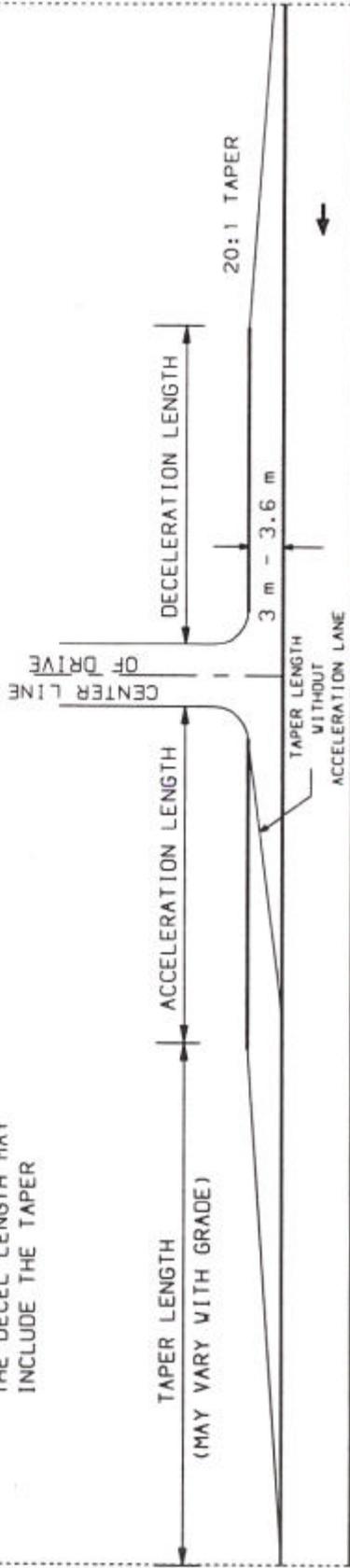


END VIEW OF DRIVEWAY AT EDGE OF SHOULDER

TYPICAL URBAN DRIVE IN CUT/FILL SECTION



- NOTES: 1) TAPER AND ACCEL./DECEL LANES SHOULD HAVE A MINIMUM .3 m SHOULDER, 1.2 m PREFERRED
- 2) ACCELERATION LANE USED ONLY WHEN WARRANTED
- 3) IN SOME CIRCUMSTANCES, THE DECEL LENGTH MAY INCLUDE THE TAPER



SPEED LIMIT	TAPER LENGTH FOR 3 m SHOULDER
55 MPH	167 m MIN.
50 MPH	152 m MIN.
45 MPH	137 m MIN.
40 MPH	122 m MIN.
35 MPH	107 m MIN.

TAPER LENGTH FOR 3.6 m SHOULDER
201 m MIN.
189 m MIN.
165 m MIN.
146 m MIN.
128 m MIN.

VEHICLE SPEED	ACCEL. LENGTH
0 - 30	58 m
0 - 40	116 m
0 - 50	232 m

VEHICLE SPEED	DECEL. LENGTH
30 - 0	72 m
40 - 0	96 m
50 - 0	133 m

REFERENCES: TAPER LENGTH -- MUTCO, PART VI  
 ACCEL-DECEL LENGTH -- AASHTO (GREEN BOOK)

## TYPICAL ACCELERATION - DECELERATION LANES FOR RIGHT TURNS

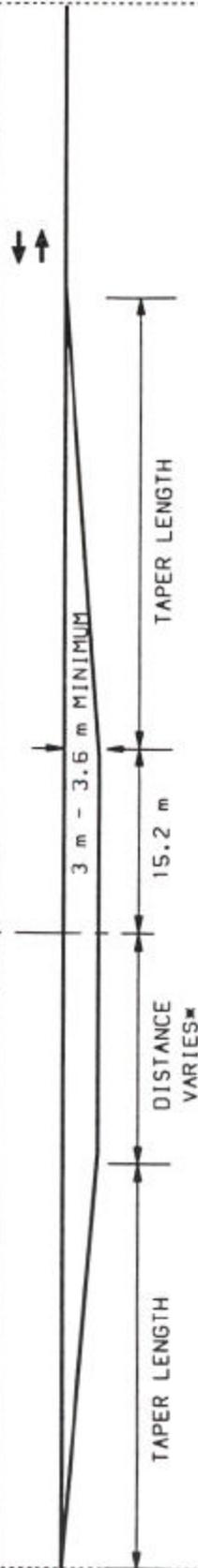
N.H. D.O.T.  
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FIGURE XXVI

**METRIC**

NOTE: TAPER AND BY-PASS SHOULDER SHOULD HAVE THE MINIMUM .3 m SHOULDER, 1.2 m PREFERRED.

CENTER LINE OF DRIVE



\* NOTE: DISTANCE VARIES BASED ON EXPECTED LEFT TURN DEMAND

SPEED	TAPER LENGTH FOR 3 m SHOULDER	TAPER LENGTH FOR 3.6 m SHOULDER
55 MPH	167 m MIN.	201 m MIN.
50 MPH	152 m MIN.	189 m MIN.
45 MPH	137 m MIN.	165 m MIN.
40 MPH	122 m MIN.	146 m MIN.
35 MPH	107 m MIN.	128 m MIN.

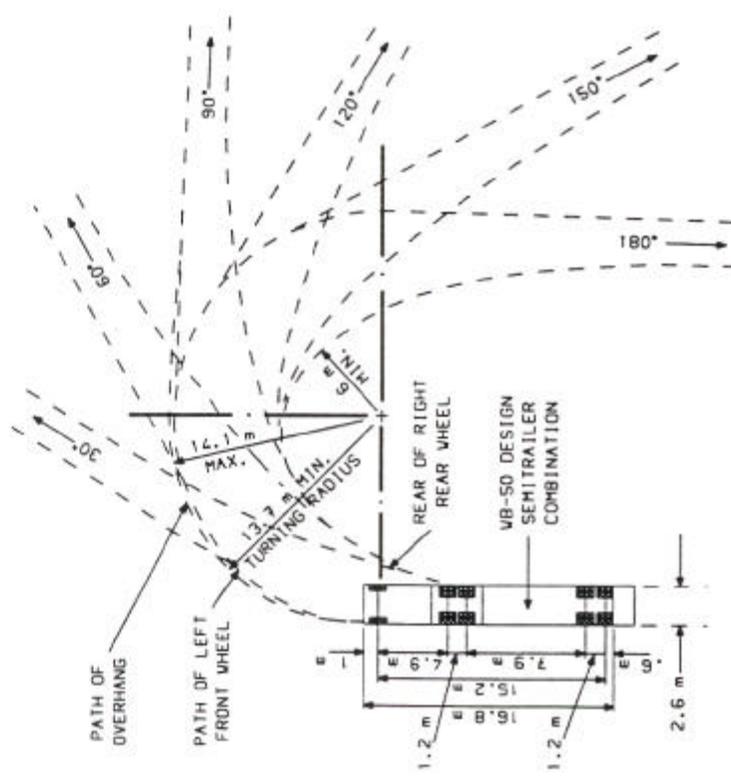
REFERENCE: MUTCD PART VI

### TYPICAL BY-PASS SHOULDER

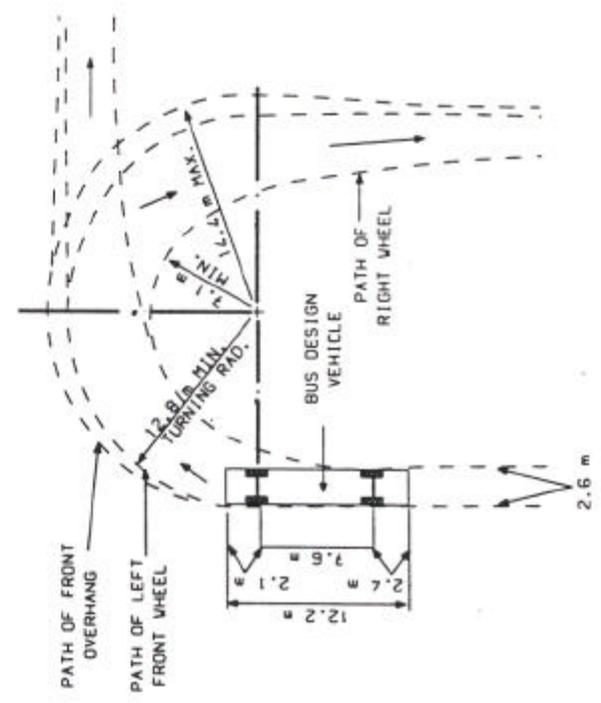
N.H. D.O.T.  
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FIGURE XXVII

**METRIC**



MINIMUM TURNING PATH  
WB-50 DESIGN VEHICLE



MINIMUM TURNING PATH FOR  
BUS DESIGN VEHICLE

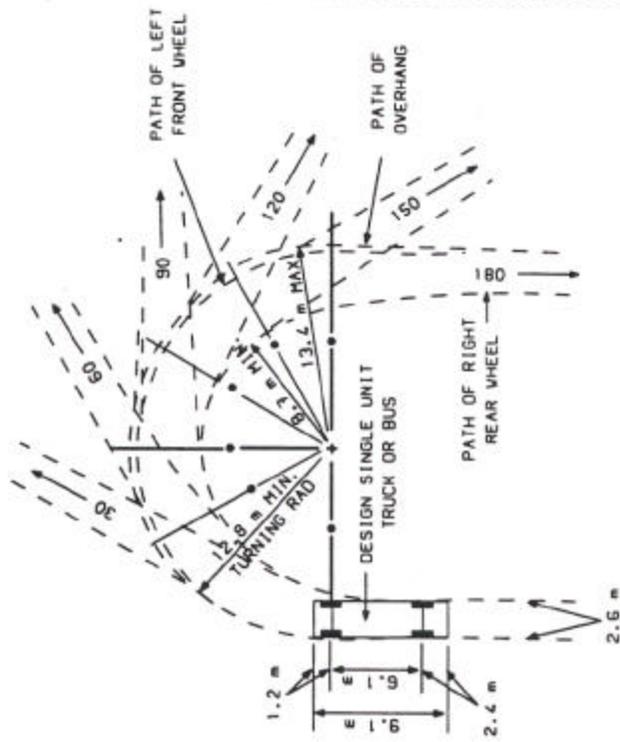
TURNING TEMPLATE I

NOT TO SCALE

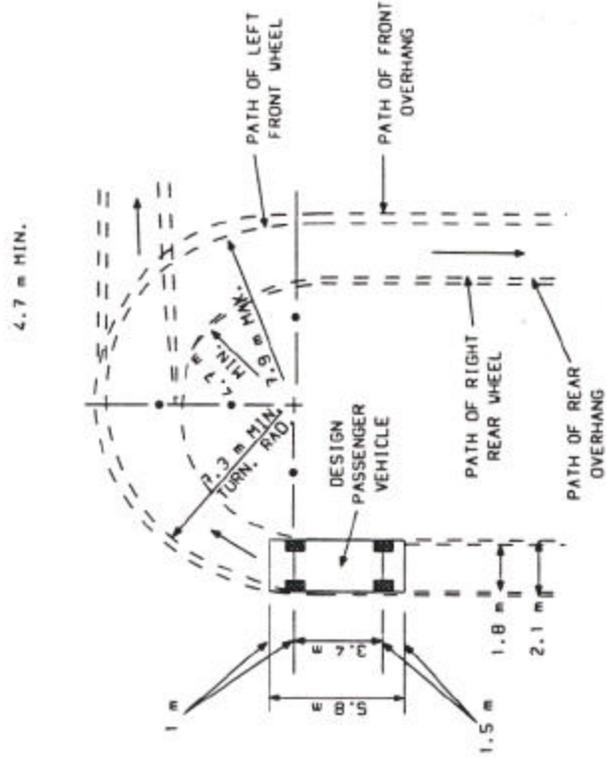
FIGURE XXVIII

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MINIMUM TURNING PATH FOR  
SU DESIGN VEHICLE



MINIMUM TURNING PATH FOR  
P DESIGN VEHICLE

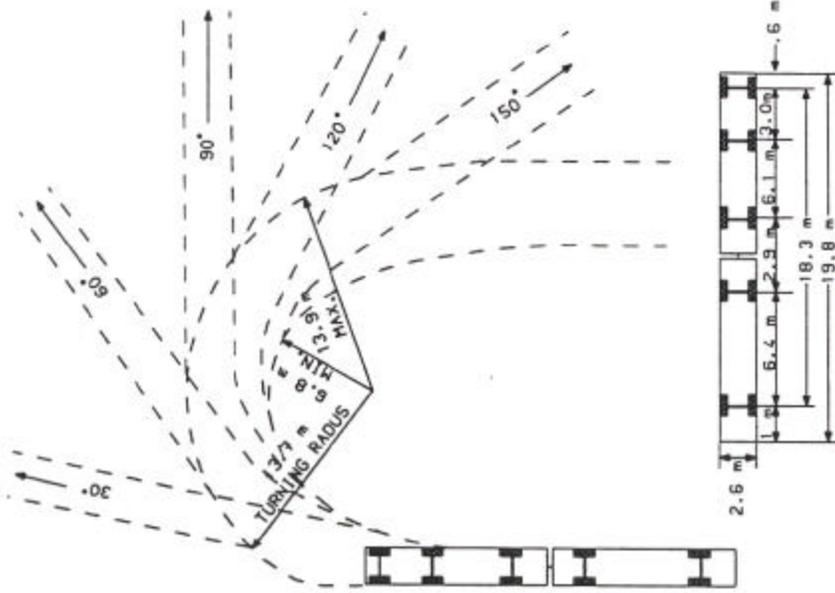
TURNING TEMPLATE II

NOT TO SCALE

N.H. D.O.T.  
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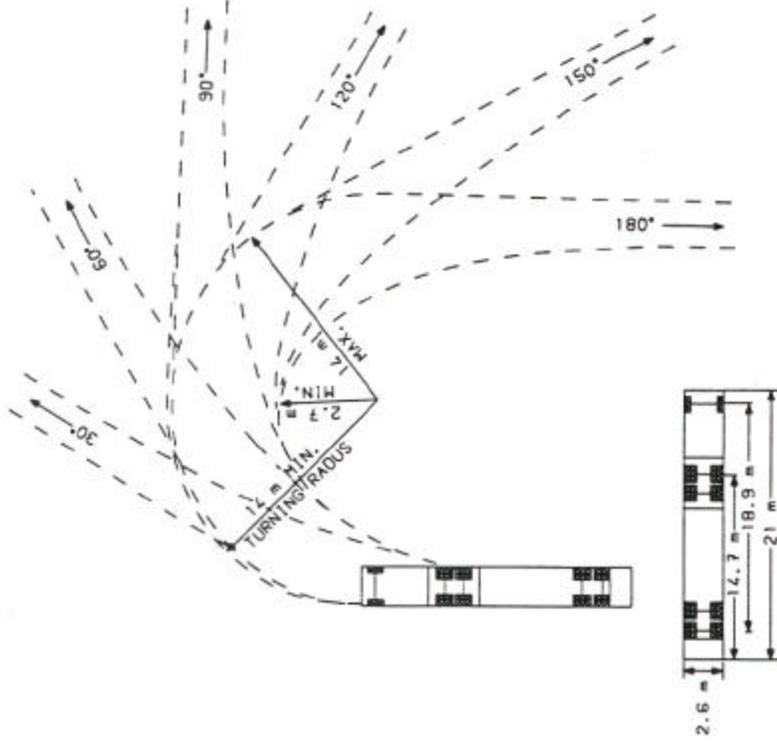
FIGURE XXIX

METRIC



MINIMUM TURNING PATH FOR  
WB-60 DESIGN VEHICLE

SOURCE: TEXAS STATE DEPARTMENT OF TRANSPORTATION



MINIMUM TURNING PATH FOR WB-62  
(INTERSTATE SEMITRAILER)\*

\*DESIGN VEHICLE WITH 14.6 m TRAILER AS ADOPTED IN 1982  
SURFACE TRANSPORTATION ASSISTANCE ACT (STAA)

\*CALTRANS 15 m TURNING RADIUS  
IS APPROVED FOR USE ALSO

### TURNING TEMPLATE III

NOT TO SCALE

N.H. D.O.T.  
MARCH 1, 2000

FIGURE XXX

**METRIC**

## **APPENDIX III**

### **DRIVEWAY STATUTE**

#### **RSA 236:13 Driveways and Other Accesses to the Public Way.**

I. It shall be unlawful to construct, or alter in any way that substantially affects the size or grade of, any driveway, entrance, exit, or approach within the limits of the right-of-way of any class I or class III highway or the state maintained portion of a class II highway that does not conform to the terms and specifications of a written permit issued by the commissioner of transportation.

II. Pursuant to this section, a written construction permit application must be obtained from and filed with the department of Transportation by any abutter affected by the provisions of paragraph I. Before any construction or alteration work is commenced; said permit application shall have been reviewed, and a construction permit issued by said department. Said permit shall:

(a) Describe the location of the driveway, entrance, exit, or approach. The location shall be selected to most adequately protect the safety of the traveling public.

(b) Describe any drainage structures, traffic control devices, and channelization islands to be installed by the abutter.

(c) Establish grades that adequately protect and promote highway drainage and permit a safe and controlled approach to the highway in all seasons of the year.

(d) Include any other terms and specifications necessary for the safety of the traveling public.

III. For access to a proposed commercial or industrial enterprise, or to a subdivision, all of which for the purposes of this section shall be considered a single parcel of land, even though acquired by more than one conveyance or held nominally by more than one owner:

(a) Said permit application shall be accompanied by engineering drawings showing information as set forth in paragraph II.

(b) Unless all season safe sight distance of 400 feet in both directions along the highway can be obtained, the commissioner shall not permit more than one access to a single parcel of land, and this access shall be at that location which the commissioner determines to be safest. The commissioner shall not give final approval for use of any additional access until it has been proven to him that the 400 foot all season safe sight distance has been provided.

(c) For the purposes of this section, all season safe sight distance is defined as a line which encounters no visual obstruction between 2 points, each at a height of 3 feet 9 inches above the pavement, and so located as to represent the critical line of sight between the operator of a vehicle using the access and the operator of a vehicle approaching from either direction.

IV. No construction permit shall allow:

(a) A driveway, entrance, exit, or approach to be constructed more than 50 feet in width, except that a driveway, entrance, exit, or approach may be flared beyond a width of 50 feet at its junction with the highway to accommodate the turning radius of vehicles expected to use the particular driveway, entrance, exit or approach.

(b) More than 2 driveways, entrances, exits or approaches from any one highway to any one parcel of land unless the frontage along the highway exceeds 500 feet.

V. The same powers concerning highways under their jurisdiction as are conferred upon the commissioner of transportation by paragraphs I, II, III and IV, shall be conferred upon the planning board in cities and towns wherein the planning board has been granted the power to regulate the subdivision of land as provided in RSA 674:35 and, they shall adopt such regulations as are necessary to carry out the provisions of this section.

VI. The commissioner of transportation or planning board shall retain continuing jurisdiction over the adequacy and safety of every existing driveway, entrance, exit, and approach to a highway, whether or not such access was constructed or installed pursuant to a permit under this section, and, unless the access is a public highway, the owners of property to which the access is appurtenant shall have continuing responsibility for the adequacy of the access and any grades, culverts, or other structures pertaining to such access, whether or not located within the public right of way. If any such access is or becomes a potential threat to the integrity of the highway or its surface, ditches, embankments, bridges, or other structures, or a hazard to the safety of the traveling public, by reason of siltation, flooding, erosion, frost action, vegetative growth, improper grade, or the failure of any culvert, traffic control device, drainage structure, or any other feature, the commissioner of transportation or planning board or their designee may issue an order to the landowner or other party responsible for such access to repair or remove such hazardous condition and to obtain any and all permits required therefore. The order shall describe the hazard, prescribe what corrective action or alteration in the location or configuration of such access shall be required, and set a reasonable time within which the action shall be completed. Such an order shall be sent by certified mail, and shall be enforceable to the same extent as a permit issued under this section. If the order is not complied with within the time prescribed, the commissioner or planning board or their designee may cause to be taken whatever action is necessary to protect the highway and the traveling public, and the owner or other responsible party shall be civilly liable to the state or municipality for its costs in taking such action.

**THE ABOVE STATUTE IS CURRENT TO THE DATE OF ISSUANCE OF THIS POLICY; THE CURRENT TEXT OF THE REVISED STATUTES ANNOTATED SHOULD BE CHECKED TO ASSURE THAT NO CHANGES HAVE OCCURRED IN THE TEXT OF THE LAW.**

**APPENDIX IV**

STATE OF NEW HAMPSHIRE  
INTER--DEPARTMENT COMMUNICATION

FROM: (District Engineer) DATE  
AT: (OFFICE) District

\_\_\_\_\_  
Department of Transportation

SUBJECT Dredge & Fill Application  
(Project Name/Numbers)

TO Department of Environmental Services Wetland Bureau  
6 Hazen Drive  
Concord, NH 03301

The enclosed application package is for a project in (name of city/town), sponsored by (name of sponsor). This project proposes to (describe action).

The dredge and fill involvement consists of \_\_\_\_ square meters, or \_\_\_\_\_ square feet of dredge impact, \_\_\_\_\_ square meters, or \_\_\_\_\_ square feet of fill impact and \_\_\_\_\_ square meters, or \_\_\_\_\_ square feet of total wetland impact.

The New Hampshire Department of Transportation is a co-applicant for this project because work occurs within our right-of-way and a driveway permit is required. However, all responsibility for the permit application and subsequent work to be performed by the project sponsor and/or his agents lies with the sponsor and/or his agents. This permit application was prepared by \_\_\_\_\_, consultant to the project sponsor.

The lead people to contact for this project are (name/telephone number of District representative) and (name/telephone number of sponsor representative).

This work is scheduled to begin on (date).