

## Appendix C: Iowa Code Relevant to Access Management

### Summary

Appendix C contains excerpts from two state documents pertaining to access management in Iowa: (1) Code of Iowa, 1997 Chapter 306A, and (2) the Iowa Primary Road Access Management Policy, July 1995. Chapter 306A of the Code of Iowa grants the authority to the Iowa DOT to control access on and acquire access rights to the state's highways. The Iowa Primary Road Access Management Policy implements Chapter 306A through rules and regulations promulgated by the Iowa DOT. These documents are provided to show what Iowa law allows in terms of access management and how the Iowa DOT manages access on state highways.

Local officials should refer to the actual Code of Iowa and consult with their agency's attorney when seeking legal advice.

### Code of Iowa, 1997: Chapter 306A

#### **306A.1 Declaration of policy.**

The legislature hereby finds, determines, and declares that this chapter is necessary for the immediate preservation of the public peace, health, and safety, and for the promotion of the general welfare.

#### **306A.2 Definition of a controlled-access facility.**

For the purposes of this chapter, a controlled-access facility is defined as a highway or street especially designed for through traffic, and over, from or to which owners or occupants of abutting land or other persons have no right or easement or only a controlled right or easement of access, light, air, or view by reason of the fact that their property abuts upon such controlled-access facility or for any other reason. Such highways or streets may be freeways open to use by all customary forms of street and highway traffic or they may be parkways from which trucks, buses, and other commercial vehicles shall be excluded.

#### **306A.3 Authority to establish controlled-access facilities---utility accommodation policy.**

Cities and highway authorities having jurisdiction and control over the highways of the state, as provided by chapter 306, acting alone or in cooperation with each other or with any federal, state, or local agency or any other state having authority to participate in the construction and maintenance of highways, are authorized to plan, designate, establish, regulate, vacate, alter, improve, maintain, and provide controlled-access facilities for public use if traffic conditions, present or future, will justify special facilities; provided, that within a city such authority shall be subject to municipal consent as may be provided by law. In addition to the specific powers granted in this chapter, cities and highway authorities shall have any additional authority vested in them relative to highways or streets within their respective jurisdictions. Cities and highway authorities may regulate, restrict, or prohibit the use of controlled-access facilities by various classes of vehicles or traffic in a manner consistent with section 306A.2.

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The department shall adopt rules, pursuant to chapter 17A, embodying a utility accommodation policy which imposes reasonable restrictions on placements occurring on or after the effective date of the rules, on primary road rights-of-way. The rules may require utilities to give notice to the department prior to installation of a utility system on a primary road right-of-way and obtain prior permission from the department for the proposed installation. The rules shall recognize emergency situations and the need for immediate installation of service extensions subject to the standards adopted by the department and the utilities board. The rules shall be no less stringent than the standards adopted by the utilities board pursuant to chapters 478, 479, 479A, and 479B. This paragraph shall not be construed as granting the department authority which has been expressly granted to the utilities board to determine the route of utility installations. If the department requires a utility company permit, the department shall be required to act upon the permit application within thirty days of its filing. In cases of federal-aid highway projects on nonprimary highways, the local authority with jurisdiction over the highway and the department shall comply with all federal regulations and statutes regarding utility accommodation.

### **306A.4 Design of controlled-access facility.**

Cities and highway authorities having jurisdiction and control over the highways of the state, as provided by chapter 306, are authorized to so design any controlled-access facility and to so regulate, restrict, or prohibit access as to best serve the traffic for which such facility is intended. In this connection such cities and highway authorities are authorized to divide and separate any controlled-access facility into separate roadways by the construction of raised curbs, central dividing sections, or other physical separations, or by designating such separate roadways by signs, markers, stripes, and other devices. No person shall have any right of ingress or egress to, from, or across controlled-access facilities to or from abutting lands, except at such designated points at which access may be permitted, upon such terms and conditions as may be specified from time to time.

### **306A.5 Acquisition of property and property rights.**

For the purposes of this chapter, cities and highway authorities having jurisdiction and control over the highways of the state, as provided by chapter 306, may acquire private or public property rights for controlled-access facilities and service roads, including rights of access, air, view, and light, by gift, devise, purchase, or condemnation in the same manner as such units are authorized by law to acquire such property or property rights in connection with highways and streets within their respective jurisdictions. All property rights acquired under this chapter shall be in fee simple. In connection with the acquisition of property or property rights for a controlled-access facility or portion of, or service road in connection with a controlled-access facility, the cities and highway authorities, in their discretion, may acquire an entire lot, block, or tract of land, if by so doing the interests of the public will be best served, even though the entire lot, block, or tract is not immediately needed for the right of way proper.

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No access rights to any highway shall be acquired by any authority having jurisdiction and control over the highways of this state by adverse possession or prescriptive right. No action heretofore or hereafter taken by any such authority shall form the basis for any claim of adverse possession of, or prescriptive right to any access rights by any such authority.

### **306A.6 New and existing facilities---grade-crossing eliminations.**

Cities and highway authorities having jurisdiction and control over the highways of the state, as provided by chapter 306 may designate and establish an existing street or highway as included within a controlled-access facility. The state or any of its subdivisions shall have authority to provide for the elimination of intersections at grade of controlled-access facilities with existing state and county roads, and city or village streets, by grade separation or service road, or by closing off such roads and streets at the right of way boundary line of such controlled-access facility, the provisions of sections 306.11 to 306.17 shall apply and govern the procedure for the closing of such road or street and the method of ascertaining damages sustained by any person as a consequence of such closing, provided, however, that the highway authority desiring the closing of such road or street shall conduct the hearing and carry out the procedure therefor and pay any damages, including any allowed on appeal, as a consequence thereof, any law to the contrary notwithstanding, and after the establishment of any controlled-access facility, no highway or street which is not part of said facility shall intersect the same at grade. No city or village street, county or state highway, or other public way shall be opened into or connected with any such controlled-access facility without the consent and previous approval of the highway authority in the state, county, city or village having jurisdiction over such controlled-access facility. Such consent and approval shall be given only if the public interest shall be served thereby.

### **306A.7 Authority of local units to consent.**

Cities and highway authorities having jurisdiction and control over the highways of the state, as provided by chapter 306 are authorized to enter into agreements with each other, or with the federal government, respecting the financing, planning, establishment, improvement, maintenance, use, regulation, or vacation of controlled-access facilities or other public ways in their respective jurisdictions, to facilitate the purposes of this chapter.

### **306A.8 Local service roads.**

In connection with the development of any controlled-access facility cities and highway authorities having jurisdiction and control over the highways of the state, as provided by chapter 306, are authorized to plan, designate, establish, use, regulate, alter, improve, maintain, and vacate local service roads and streets or to designate as local service roads and streets any existing road or street, and to exercise jurisdiction over service roads in the same manner as is authorized over controlled-access facilities under the terms of this chapter, if, in their opinion, such local service roads and streets are necessary or desirable. Such local service roads or streets shall be

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of appropriate design, and shall be separated from the controlled-access facility proper by means of all devices designated as necessary or desirable by the proper authority.

### **306A.9**

Repealed by 65 Acts, ch 259, § 1. See § 321.366.

### **306A.10 Notice to relocate--costs paid.**

Whenever the state department of transportation, city or county determines that relocation or removal of any utility facility now located in, over, along, or under any highway or street, is necessitated by the construction of a project on routes of the national system of interstate and defense highways including extensions within cities or on streets or highways resulting from interstate substitutions in a qualified metropolitan area under title 23, U.S.C., the utility owning or operating the facility shall relocate or remove the same in accordance with statutory notice. The costs of relocation or removal, including the costs of installation in a new location, shall be ascertained by the authority having jurisdiction over the project or as determined in condemnation proceedings for such purposes and may be paid from participating federal aid or other funds.

### **306A.11 What costs included.**

Cost of relocation or removal shall include the entire amount paid by such utility properly attributable to such relocation or removal except the cost of land or any rights or interest in land, after deducting therefrom any increase in the value of the new facility and any salvage value derived from the old facility.

### **306A.12 Limitation on reimbursement.**

A reimbursement shall not be made for any relocation or removal of facilities under this chapter unless funds to be provided by federal aid amount to at least eighty-five percent of each reimbursement payment.

### **306A.13 Definition.**

The term "utility" shall include all privately, publicly, municipally or co-operatively owned systems for supplying water, sewer, electric lights, street lights and traffic lights, gas, power, telegraph, telephone, transit, pipeline, heating plants, railroads and bridges, or the like service to the public or any part thereof if such system be authorized by law to use the streets or highways for the location of its facilities.

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### Iowa Primary Road Access Management Policy, July 1995

#### 761--112.1(306A) STATEMENT OF POLICY.

The efficiency and safety of a highway depend to a large extent upon the amount and character of interruptions to the movement of traffic. The primary cause of these interruptions is vehicular movements to and from businesses, residences, and other developments along the highway. Regulation and overall control of highway access are necessary to provide efficient and safe highway operation and to utilize the full potential of the highway investment.

Accordingly, the department hereby establishes rules for control of access to primary roads.

112.1(1) When applying these rules to a particular access situation, the department shall consider the following:

- (a) Safety to the traveling public.
- (b) Perpetuation of the traffic-carrying capacity of the highway.
- (c) The impact upon the economy of the state.
- (d) Protection of the rights of the traveling public and of property owners, including the rights of abutting property owners.

112.1(2) The department reserves the right to make exceptions to these rules where the exercise of sound and reasonable judgment indicates that the literal enforcement of the rules would cause an undue hardship to any interested party, the community or the state.

#### 761--112.2(306A) DEFINITIONS.

The following terms, when used in this chapter of rules, shall have the following meanings unless the context otherwise requires:

112.2(1) **Access.** A means of ingress or egress between a primary highway and abutting property or an intersecting local public road or street.

112.2(2) **Acquisition.** To receive title by gift, purchase or condemnation.

112.2(3) **Built-up area.** An area adjacent to a primary road that meets the following general criteria:

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- (a) The lots or area abutting the primary road does not have sufficient setback for the construction of a frontage road, and the development in depth precludes the establishment of a frontage-type road to the rear of the lots or area.
- (b) When a “built-up area” exists on one side of a primary road, the other side of the road is also considered to be “built-up” for the purpose of determining access requirements.

112.2(4) **Controlled access highway.** All primary highways are controlled access facilities.

112.2(5) **Department.** The Iowa department of transportation. Information and forms regarding primary road access control may be obtained from:

- (a) Maintenance Division, Iowa Department of Transportation, 800 Lincoln Way, Ames, Iowa 50010; telephone 515-239-1197.
- (b) The resident construction engineer, resident maintenance engineer or transportation center maintenance engineer assigned to the geographical area in which these rules are being applied to a particular access situation.

112.2(6) **Entrance.** A physical connection between a primary highway and abutting property or an intersecting local public road or street.

112.2(7) **Entrance type.** Entrances are divided into the following three classes according to their normal usage:

- (a) Type “A” entrance. An entrance developed to carry sporadic or continuous heavy concentrations of traffic. An entrance of this type would normally consist of multiple approach lanes and may incorporate a median. Possible examples: race tracks, large industrial plants, shopping centers, subdivisions, or amusement parks.
- (b) Type “B” entrance. An entrance developed to serve moderate traffic volumes. An entrance of this type would normally consist of one inbound and one outbound traffic lane. Possible examples: service stations, small businesses, drive-in banks, or light industrial plants.
- (c) Type “C” entrance. An entrance developed to serve light traffic volumes. The entrance would not normally accommodate simultaneous inbound and outbound vehicles. Possible examples: residential, farm or field entrances.

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### 112.2(8) **Entrance width determination.**

- (a) The width of an entrance with a radius return or with a flared taper within an urban-designed area shall be measured at a point 9.84 feet back from the primary highway curb. The curb opening may exceed the maximum allowable width of the entrance to accommodate the allowable radius or taper.
- (b) Entrance width within a rural-designed area shall be measured across the top of the entrance at the culvert line or at the location where a culvert would normally be placed.

112.2(9) **Fringe area.** A suburban-type area adjacent to a primary road that meets the following general criterion: The layout of the lots or area abutting the primary road, including intermittent or unrelated development, permits construction of a frontage road in front of, or a frontage-type road to the rear of, the development.

112.2(10) **Frontage.** The length along public road right-of-way of a single property tract. Corner property at an intersection of two public roads has separate frontage along each roadway.

112.2(11) **Frontage road.** A public road or street auxiliary to and usually located alongside and parallel to a primary highway for maintaining local road continuity and for control of access.

112.2(12) **Median.** The portion of a divided highway or divided entrance separating the traveled ways from opposing traffic. Medians may be depressed, raised or painted. Openings in the primary highway median to accommodate entrances are governed by the following:

- (a) New median openings should not be permitted except to accommodate intersecting local public roads or streets or large traffic generating facilities such as large shopping centers or industrial plants. Median openings may be permitted in these instances if satisfactorily justified and in the public interest.
- (b) If a median opening exists prior to the construction of a driveway or local public road or street, the opening may be modified to accommodate the turning movements of the traffic expected.
- (c) Costs incurred for adding or modifying median openings shall not be borne by the department.
- (d) The department reserves the right to close an existing median opening when the department deems it is necessary.

112.2(13) **Normal peak hour traffic.** The number of vehicles, based on the 30th highest hour, found to be entering and leaving an entrance during 60 consecutive minutes, excluding holidays.

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112.2(14) **Predetermined access location.** A location of access reserved for the adjacent property at the time access rights are acquired.

112.2(15) **Primary road or primary highway.** A road or street designated as a "primary road" in accordance with Iowa Code subsection 306.3(8). This definition includes primary road extensions in municipalities.

112.2(16) **Priority I highway.** A primary highway constructed as a fully controlled access facility. Access to the facility is allowed only at interchange locations.

112.2(17) **Priority II highway.** A primary highway constructed as a four-lane divided facility with a high degree of access control. Access to the facility is allowed only at interchanges and selected at-grade locations.

The minimum allowable spacing between access locations is 2,624 feet. Limiting primary highway access to existing public road intersections at intervals of 5,248 feet is preferable.

112.2(18) **Priority III highway.** A primary highway constructed as a two-lane facility, a two-lane facility within a four-lane right-of-way corridor, or a four-lane facility. Access to the facility is allowed at interchanges and at-grade locations.

The minimum allowable spacing between access locations is 984 feet in a rural-designed area and 656 feet in an urban-designed area. In a rural-designed area, spacing of 1,312 feet is preferable.

112.2(19) **Priority IV highway.** A primary highway constructed as a two-lane facility; however, the definition may include a four-lane facility in an urban area.

The minimum allowable spacing between access locations is 656 feet in a rural-designed area and 328 feet in an urban-designed area.

112.2(20) **Priority V highway.** A primary highway where access rights to it were acquired between 1956 and 1966, entrances were reserved at that time with no spacing limitations, and the department has subsequently determined that a higher degree of access control is desirable. The definition also includes a highway where access rights have not been acquired, but the department anticipates acquiring access rights in the future.

Entrances to the highway are generally restricted to one entrance for contiguous highway frontage not exceeding 984 feet, two entrances for contiguous highway frontage exceeding 984 feet but not exceeding 1,968 feet, and so on.

112.2(21) **Priority VI highway.** A primary highway where the acquisition of access rights or additional access rights is not anticipated. This definition may also include a highway where access rights were acquired between 1956 and 1966,



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entrances were reserved at that time with no spacing limitations, and the department has subsequently determined that restricting access to the facility is no longer necessary.

Access locations are approved based on safety and need.

112.2(22) **Ramp bifurcation.** The point where the baseline of the ramp intersects the centerline of the adjacent roadway.

112.2(23) **Recreational trail.** A trail established in conjunction with minimum AASHTO standards. A recreational trail may be established for biking, pedestrian, snowmobiling, cross-country skiing, or equestrian use.

112.2(24) **Right-of-way line.** The boundary line between the land acquired for or dedicated to public road use and the adjacent property.

112.2(25) **Rural area.** An area clearly not meeting the criteria set forth for a built-up or fringe area; rural area also includes agricultural land within the corporate limits of a city.

112.2(26) **Rural-designed area.** An area in which the predominant cross section accommodates surface drainage from the roadway and adjacent terrain via an open ditch.

112.2(27) **Shoulder.** The portion of a public road contiguous to the traveled way for the accommodation of disabled vehicles and for emergency use.

112.2(28) **Sight distance.** The distance of clear vision along a primary highway in each direction from any given point of access where a vehicle must stop before entering the highway.

- (a) Sight distance is based upon AASHTO stopping sight distance criteria. However, the height of an object is increased from 0.492 to 4.264 feet to acknowledge an approaching vehicle as the “object” of concern. Therefore, sight distance at an access location is measured from the driver's height of eye (3.5096 feet) to the height of an approaching vehicle (4.264 feet).
- (b) An access location should be established where desirable sight distance is available and shall not be authorized in a location providing less than minimum sight distance, as shown below.

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Posted Daytime Speed Limit (mph)	Desirable Sight Distance (feet)	Minimum Sight Distance (feet)
60	852.8	656
55	721.6	557.6
50	656	492
45	557.6	393.6
40	492	328
35	393.6	262.4
30	328	196.8

(c) On a four-lane divided primary highway where access is proposed at a location not to be served by a median crossover, sight distance shall be required only in the direction of the flow of traffic.

112.2(29) **Special access connection.** An access location authorized to the primary road system in an area where access rights were previously acquired. Special access connections shall be constructed in compliance with the rules for entrances.

112.2(30) **Turning lane.** An auxiliary lane, including taper areas, primarily for the deceleration or storage of vehicles leaving the through traffic lanes.

112.2(31) **Urban-designed area.** A built-up or fringe area in which the predominant cross section accommodates roadway surface drainage by means of a curbed roadway.

### 761--112.3(306A) GENERAL REQUIREMENTS FOR CONTROL OF ACCESS.

112.3(1) **Establishment of controlled access highway.** Access locations necessary for free and convenient access that exist at the time a primary highway is established are hereby approved if the department deems they are reasonably located.

112.3(2) **Frontage roads.** If a frontage road is open to public travel, access from the abutting property shall be to the frontage road.

(a) Access to frontage roads maintained by the department shall be authorized in accordance with rules 112.4(306A), 112.8(306A) and 112.9(306A).

(b) Access to frontage roads maintained by other governmental agencies shall conform to those agencies' access requirements.

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### 112.3(3) Enforcement of access control.

- (a) Fences. The department may construct and maintain fences or other appropriate physical separations within the primary highway right-of-way to effectively enforce and control access to the highway.
- (b) Unauthorized construction or modification of entrances. If an entrance is constructed or altered without the approval of the department or if the work is not completed in conformity with an approved permit or agreement, the department may notify the owner by certified mail of the violation and the need to restore the area to the standards which existed immediately prior to construction or alteration or advise of the changes necessary to conform. If after 20 days the changes have not been made, the department may make the necessary changes and immediately send a statement of the cost to the property owner. If within 30 days after sending the statement the cost is not paid, the department may institute proceedings in the district court system to collect the cost.
- (c) Written permission--right to inspect. A person must have written permission from the department via the specified permit or agreement before the person may construct or alter an entrance.
  - (i) The department reserves the right to inspect and approve any work performed within the right-of-way.
  - (ii) If the work is not performed as required by the permit or agreement, the department may revoke its permission and deny access until the conditions are corrected.
  - (iii) If the work performed does not conform to the department's specifications, the department may make the necessary changes, charge the costs to the party responsible and pursue other available remedies.

### 761--112.4(306A) GENERAL REQUIREMENTS FOR ENTRANCES WHERE ACCESS RIGHTS HAVE NOT BEEN ACQUIRED.

This rule establishes the general requirements for access to primary highways where access rights have not been acquired.

112.4(1) **Entrance permit**. Prior to the modification of an existing, or the construction of a new, entrance to a primary highway from abutting property or from a local public road or street, an application for a permit to construct an entrance, Form 640004, shall be submitted to and approved by the department.

- (a) The application shall be submitted to the appropriate resident maintenance engineer. However, if the primary highway is under construction, the application may be submitted to the appropriate resident construction engineer.

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- (b) The department shall be provided with a plan, drawing or sketch of the property or site to be served by the requested access. This may vary from a simple sketch in the case of a Type "C" entrance to a detailed plan in the case of a Type "A" entrance. See rule 112.5(306A) for further Type "A" entrance requirements.
- (c) The application shall be signed by the owner or owners of record. The signature(s) shall be notarized.
- (d) If the request is for a property within the corporate limits of a city, an authorized representative of the city must sign the application recommending approval. See subrule 112.4(5).
- (e) The application shall be approved or denied by the appropriate transportation center maintenance engineer. If it is denied, the applicant may request further review by resubmitting the application along with background information and an explanation of the need for access to the director of transportation.

### 112.4(2) **Construction or modification of entrances.**

- (a) All work performed on a primary highway under the terms of an entrance permit, Form 640004, shall comply with the conditions of the permit. These conditions include any accompanying plans, drawings, sketches, or other attachments to the permit. The permit holder or the permit holder's contractor shall have a copy of the permit available at the work site.
- (b) During the time an entrance is being constructed or modified, care must be taken to ensure the safety of the workers on the site and of the traveling public. The work shall be accomplished in a manner that will minimize interference with normal highway operations. Care must be taken during construction or modification of the entrance and development of the abutting property to avoid tracking mud or other material onto the primary highway.

112.4(3) **Construction costs.** Construction costs, including any costs incurred for modifying the existing primary highway as may be required by the entrance permit, shall not be borne by the department.

### 112.4(4) **Maintenance of entrances.**

- (a) Property owners having access to a primary highway shall be responsible for the maintenance of their entrances, from the outer shoulder line of the primary highway to the right-of-way line.
- (b) Drainage structures located within the primary highway right-of-way shall be maintained by the department except for concrete box culverts and bridges constructed by a permit holder under authority of an entrance permit. These structures shall be maintained by the permit holder.

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### 112.4(5) Primary road extensions.

- (a) On primary road extensions, the location and geometrics of entrances must meet local requirements within the limitations of this chapter, and entrance permit applications must be approved by authorized city officials before final action is taken by the department.
- (b) Applicants are responsible for ensuring compliance with local building codes, setback requirements, minimum lot sizes, density of buildings, provisions for adequate parking, and other local ordinances and regulations.
- (c) Entrance permits issued by the department apply to the construction of entrances within the primary highway right-of-way and do not release applicants from compliance with local ordinances and regulations. These requirements are not altered by the issuance of entrance permits. Applicants are responsible for obtaining the required local approvals and permits.
- (d) There shall be no encroachment onto the primary highway right-of-way. Signs shall not be placed on or overhang the right-of-way.

### 112.4(6) Entrance widths.

- (a) Type “A” entrances. Each case requires special study. See rule 112.5(306A).
- (b) Type “B” entrances.
  - (i) The minimum allowable width is 22.96 feet.
  - (ii) The maximum allowable width is 45.92 feet.
  - (iii) For one-way operation, the minimum allowable width is 13.12 feet and the maximum allowable width is 32.8 feet.
- (c) Type “C” entrances.
  - (i) The minimum allowable width is 16.4 feet.
  - (ii) The maximum allowable width is 32.8 feet.
  - (iii) If an entrance will serve more than one property, the minimum allowable width is 19.68 feet and the maximum allowable width is 36.08 feet.

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(d) City street and secondary road intersections. These shall comply with standards established by the department.

112.4(7) **Radius or flared returns**. Return radii or flared returns shall be determined by the predominant type of vehicle using the entrance.

Return radii for granular entrances shall be measured along the edge of the primary highway shoulder. Return radii for paved entrances shall be measured along the edge of the primary highway pavement.

(a) Type “A” entrances. Each case requires special study. See rule 112.5(306A).

(b) Type “B” entrances, rural-designed area, not paved.

- (i) For an entrance angle of 90 degrees to the centerline of the primary highway, the return radii shall not exceed 39.36 feet.
- (ii) For an entrance angle of 60 degrees to the centerline of the primary highway, the return radius of the obtuse angle shall not exceed 52.48 feet. The return radius of the acute angle shall not exceed 26.24 feet.
- (iii) For an entrance angle that is between 90 and 60 degrees, the maximum radii of the obtuse and acute angles shall be interpolated between the values given in subparagraphs (1) and (2) above and rounded to the nearest 6.56 feet.
- (iv) Entrance angles that are less than 60 degrees shall require department review to establish appropriate radii.

(c) Type “B” entrances, rural-designed area, paved.

- (i) For an entrance angle of 90 degrees to centerline of the primary highway, the return radii shall not exceed 52.48 feet.
- (ii) For an entrance angle of 60 degrees to the centerline of the primary highway, the return radius of the obtuse angle shall not exceed 59.04 feet. The return radius of the acute angle shall not exceed 26.24 feet.
- (iii) For an entrance angle that is between 90 and 60 degrees, the maximum radii of the obtuse and acute angles shall be interpolated between the values given in subparagraphs (1) and (2) above and rounded to the nearest 6.56 feet.

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- (iv) Entrance angles that are less than 60 degrees shall require department review to establish appropriate radii.
- (d) Type “B” entrances, urban-designed area, not paved.
  - (i) All Type “B” entrances within an urban-designed area shall be paved for a minimum distance of 9.84 feet back from the primary highway curb, as measured at 90 degrees to the centerline of the highway.
  - (ii) Return radii shall be in accordance with paragraph e below.
- (e) Type “B” entrances, urban-designed area, paved.
  - (i) The return radius shall equal the distance between the back of the curb and the front edge of the sidewalk, not to exceed 9.84 feet.
  - (ii) Where no sidewalk is present or anticipated, the maximum radius shall be 9.84 feet.
- (f) Type “C” entrances, rural-designed area, not paved.
  - (i) For an entrance angle of 60 to 90 degrees to the centerline of the primary highway, the return radii shall not exceed 13.12 feet for either the obtuse or acute angle.
  - (ii) Entrance angles that are less than 60 degrees shall require department review to establish appropriate radii.
- (g) Type “C” entrances, rural-designed area, paved.
  - (i) For an entrance angle of 60 to 90 degrees to the centerline of the primary highway, the return radii shall not exceed 19.68 feet.
  - (ii) Entrance angles that are less than 60 degrees shall require department review to establish appropriate radii.
  - (iii) If an existing entrance is being reconstructed, the returns may be replaced in kind.
- (h) Type “C” entrances, urban-designed area, paved or not paved. Entrances should be constructed with the same criteria as established for Type “B” entrances within an urban-designed area.

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- (i) Flared entrances, urban-designed area. In an urban-designed area, entrances may be constructed with flares rather than return radii. When used, the flare shall be constructed at a 2:1 ratio with the “2” value measured on a line parallel to the entrance centerline and the “1” value measured on a line perpendicular to the entrance centerline.

### 112.4(8) Entrance angle.

- (a) In general, the entrance angle shall be established as near to 90 degrees to the centerline of the primary highway as site conditions will allow.
- (b) Normally, the centerline of that part of an entrance lying within the right-of-way shall be at a right angle to the centerline of the primary highway for a minimum distance of 32.8 feet from the near edge of the highway pavement.
- (c) An entrance established for two-way operation for a service station or other development where two access points are authorized shall be 70 to 90 degrees to the centerline of the primary highway.
- (d) On a divided primary highway where two access locations are authorized for one-way operation, the “ingress” may be 45 to 60 degrees to the centerline of the primary highway and the “egress” may be 60 to 90 degrees to centerline of the highway.

### 112.4(9) Slope and cross section of entrances in rural-designed area.

- (a) The finished, surface elevation of an entrance over a culvert, or the location where a culvert would normally be placed, should be sloped away from the primary highway pavement, preferably an extension of the 4 percent shoulder slope, to prevent surface water from draining onto the highway pavement.
- (b) If an entrance requires drainage pipe, the entrance side slopes from highway shoulder to the entrance pipe shall be no steeper than 8:1 and from the entrance pipe to the right-of-way line shall be no steeper than 6:1. A smooth transition from the 8:1 to the 6:1 slope requirements shall be accomplished.
- (c) If an entrance does not require drainage pipe, the entrance side slopes from highway shoulder to the minimum clear zone distance shall be no steeper than 10:1, right-of-way width permitting. From the point of minimum clear zone to the right-of-way line, a smooth transition to a 6:1 slope is acceptable. The minimum clear zone distance shall be determined using the AASHTO Roadside Design Guide.
- (d) Upgrading only the surfacing material of an existing entrance will not require a change in existing side slopes.



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### 761--112.5(306A) ADDITIONAL ENTRANCE REQUIREMENTS FOR COMMERCIAL, INDUSTRIAL OR RESIDENTIAL DEVELOPMENTS.

This rule establishes additional requirements for Type “A” entrances serving commercial, industrial or residential developments.

#### 112.5(1) General.

- (a) The most important factors in developing an access plan for a commercial, industrial or residential development are a determination of the potential traffic generated by the site and the directional distribution of site-generated traffic on the major approach routes and proposed entrances serving the site. Entrances serving the site represent an important element in the efficiency and safety of the highway handling the site-generated traffic. To properly handle traffic from these entrances, the anticipated traffic volumes must be determined by the applicant and submitted to the department.
- (b) The location of entrances, particularly commercial entrances, is a critical factor in minimizing disruption to traffic and pedestrians. A site should be developed with an internal circulation pattern for traffic movements so that access to the site may be gained by a free flow of traffic from the primary road system. Parking stalls and pedestrian movements should be located away from the main entrance to the facility.
- (c) Adequate storage for vehicles must be provided on commercial and industrial sites so that vehicles do not wait on the highway to enter. Adequate storage space is a function of the demand volume, service time per facility, and the number of service facilities available. Service time is dependent upon the time required to maneuver into position and the time needed to obtain the service. The geometrics of the internal circulation pattern control a portion of the service time. The radii of internal curves should be as large as possible. Buildings on a site should be arranged to allow for the maximum storage available on the site for exiting traffic and situated so they will not disrupt the free flow of entering traffic.
- (d) A service station site should be designed to provide a minimum distance of 16.4 feet from the right-of-way line to the near edge of the pump island. No portion of the highway right-of-way shall be used for servicing vehicles.
- (e) When property is being developed, consideration must be given to locating the access directly opposite an existing commercial entrance or street intersection.
- (f) Comments from local authorities regarding the proposed development should be included in the application to allow the department to incorporate the input of local authorities into the final design of the entrance location. This input should refer to the zoning plan, land use plan, or metro-transportation plan.

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### 112.5(2) Shopping center and industrial access requests.

- (a) An entrance permit application for a shopping center or industrial development shall, when relevant to the development, include the following data in detail:
  - (i) Type and location of the proposed development.
  - (ii) Site plan.
  - (iii) Location of all proposed entrances, turning lanes on adjacent highways or streets, and internal traffic lanes and parking facilities within the development area. This information shall be sufficiently complete to allow determination of dimensions, the direction of traffic flow, and restrictions to traffic caused by plantings, curbing, medians, walls, signing, etc.
  - (iv) Detailed design of proposed highway pavement widenings, additional lane provisions, relocations, and other highway improvements considered necessary to the efficient operation of the proposed development.
  - (v) Proposed traffic signal locations.
  - (vi) Preliminary drainage data.
  - (vii) Gross leasable floor area in square feet.
  - (viii) Number of parking spaces.
  - (ix) Anticipated total daily trips inbound and outbound during an average 24-hour period for total site development. Special holiday shopping traffic shall not be used for this estimate.
  - (x) Estimated traffic volumes arriving and departing during the normal peak hour.
  - (xi) Estimated distribution of traffic via individual entrances for the normal peak hour.
  - (xii) Estimated distribution of traffic by percentage of total daily trips via major highways from origin to the development.
- (b) Reserved.

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### 112.5(3) Agreement supplementary to permit.

- (a) A major commercial development often involves a variety of special access requirements. In addition to the entrance permit, an agreement may be required to fit the particular situation, listing in detail the responsibilities of the applicant, the local governmental unit and the department. When applicable, the department shall draft an agreement and forward it to the applicant. The department shall not be responsible for any costs incurred as a result of the proposed development.
- (b) Upon receipt of the agreement, the applicant shall be responsible for obtaining the necessary signature approvals including those of appropriate local authorities and returning the agreement to the resident maintenance engineer.
- (c) The department shall notify the applicant when it has approved the agreement. No work shall be done within the primary highway right-of-way prior to this time. Any work completed without the prior approval of the department is a violation of Iowa Code section 319.14.

### 761--112.6(306A) DRAINAGE REQUIREMENTS.

This rule establishes drainage requirements for all locations where access is requested to the primary highway system.

- 112.6(1) Entrances must be constructed so that they do not adversely affect primary highway drainage or drainage of the adjacent property. The drainage and the stability of the highway subgrade must not be impaired by driveway construction or roadside development. In no case may the construction of an entrance cause water to flow across the primary highway pavement or pond on the shoulders or in the ditch, or result in erosion within the primary highway right-of-way limits.
- 112.6(2) Drainage collected by ditches, gutters or pipes on private property shall not be discharged into the primary highway drainage system unless expressly approved by the department. An applicant may be required to submit a drainage study to the department justifying the drainage system proposed and the pipe or sewer sizes to be used. The applicant shall not interfere with the natural course of drainage.
- 112.6(3) When the construction of an entrance necessitates crossing a highway ditch that has been constructed to carry drainage, a drainage structure shall be installed in the ditch by the applicant at the applicant's expense. The low point of the ditch shall dictate the location for culvert placement unless otherwise specified by the department. Under no circumstances shall existing ditches or gutters be filled without adequate alternate provisions for drainage.
  - (a) The resident maintenance engineer will assist in determining the size and length of culverts and aprons. A culvert shall be of adequate size to handle drainage, but in no case shall the culvert be less than 1.476 feet in diameter. Culvert pipe shall comply with departmental standard specifications as they exist at the time of installation.

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- (b) Length of culvert pipe shall be sufficient to accommodate the entrance slopes. The finished, surface elevation of an entrance over a culvert pipe, or the location where a culvert would normally be placed, should be sloped away from the primary highway pavement, preferably an extension of the 4 percent shoulder slope, to prevent surface water from draining onto the highway pavement.
- (c) Drainage structures located within the primary highway right-of-way shall be maintained by the department except for concrete box culverts and bridges constructed by a permit holder under authority of an entrance permit. These structures shall be maintained by the permit holder.

112.6(4) Where drainage is carried along an existing curb, the entrance shall be constructed with a rise in elevation of 0.492 to 0.738 feet from the street gutter at the entrance to a point 6.56 feet behind the gutter to prevent runoff from spilling onto private property. The flow line of the gutter through the entrance shall be restored. Where a curb is cut for the construction of an entrance, the entire curb and gutter section must be removed. Removal of only the raised portion of the curb and then paving over the broken section shall not be allowed.

761--112.7 Reserved.

### 761--112.8(306A) ACCESS TO PRIORITY V HIGHWAYS, RURAL AREAS.

This rule establishes requirements for access to Priority V highways in rural areas.

112.8(1) **General.** Where access rights have not been acquired, access is limited to one entrance for contiguous highway frontage not exceeding 984 feet, two entrances for contiguous highway frontage exceeding 984 feet but not exceeding 1,968 feet, and so on. Ownership on each side of the highway shall be considered as separate ownership. Except for the above-stated restrictions and those contained in subrules 112.8(2) and 112.8(3), no spacing distance restrictions shall be imposed. Additional entrances may be permitted when a single entrance will not provide adequate access due to topographic conditions.

#### 112.8(2) Access requirements near public road intersections.

- (a) A property abutting a primary road and a local public road or another primary road may be granted access to the primary road at a distance preferably no less than 328 feet from the intersection of the centerlines of the two roads.
- (b) At a “T” type intersection, access to the primary road may be located directly opposite the intersection.

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- (c) Access shall not be permitted onto a local public road within the primary road right-of-way limits. The centerline of an access onto a local public road shall be no closer than 164 feet to the near edge of the primary highway traveled way.

112.8(3) **Property lines.** The centerline of an entrance to the primary roadway shall be no closer than 52.48 feet to the property line as extended to intersect the roadway centerline at right angles. No portion of an entrance shall extend beyond the property line as extended unless the adjacent property owner has joined in the permit. An entrance to serve two properties abutting the primary road may be centered on the property line by mutual agreement between the property owners.

### 761--112.9(306A) ACCESS TO PRIORITY V HIGHWAYS, FRINGE OR BUILT-UP AREAS, AND PRIORITY VI HIGHWAYS, ALL AREAS.

This rule establishes requirements for access to Priority V highways in fringe or built-up areas, and access to Priority VI highways in rural, fringe, or built-up areas.

112.9(1) **General.** Property frontage may be granted access where needed to the primary road, provided safety and construction standards are satisfactory. In a rural area, a minimum distance of 32.8 feet between toes of slopes along the centerline of the ditch shall be maintained. In a fringe or built-up area, there shall be a minimum of 16.4 feet of curb maintained between near edges of curb drops when more than one access is allowed to a single highway frontage.

#### 112.9(2) Access requirements near public road intersections.

- (a) Rural area. Same as subrule 112.8(2).
- (b) Fringe or built-up area.
  - (i) The beginning of the curb drop for an entrance to a primary highway shall be no closer than 16.4 feet to an intersecting street's curb tangent point. No portion of the entrance along the primary highway shall extend beyond the property line extended or into a crosswalk.
  - (ii) The curb drop for an entrance to a street should be no closer than 16.4 feet to an intersecting primary highway's curb tangent point. No portion of the entrance along the intersecting street shall extend beyond the property line extended or into a crosswalk.
  - (iv) If an intersection does not have an existing or a planned curb and gutter to define the radius, the following assumptions shall be applied to the above requirements for determining the location of an entrance:

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- Minimum width of the traveled way of the primary highway is assumed to be 52.48 feet back to back of curbs.
- However, if the platted width of the primary highway right-of-way is less than 65.6 feet, the width of the traveled way is assumed to be 75 percent of the platted width.
- Minimum width of the traveled way of an intersecting local public road or street is assumed to be 30.832 feet back to back of curbs.

112.9(3) **Channelized intersection or divided highway.** When there is a median in a primary road or intersecting street, or both, the curb drop for an entrance to the primary road or intersecting street shall be determined as stated in subrule 112.9(2), except that at the beginning or end of the median, or at a median break, the nearest edge of the curb drop for the entrance shall be no closer than 19.68 feet to the end of the median as measured at right angles to the median. This does not apply to access centered on a median break.

112.9(4) **Median crossovers.**

- (a) When a divided primary highway has been constructed with a median, crossovers or median breaks shall not be permitted if there are frequent openings for local street intersections or traffic conditions do not make median breaks advisable. The layout of entrances to adjacent properties along the primary highway shall be designed to take advantage of existing or planned median crossovers.
- (b) When a crossover or median break is deemed necessary by the department as a result of traffic generated by a business or other development, the required improvements shall be constructed by the property owner as a part of a permit process. The department shall bear no part of the construction costs.
- (c) The permit authorizing a new crossover shall specify the exact location, design, and construction requirements. Any drainage facilities required by the construction shall be installed by the permit holder at the permit holder's expense.
- (d) The minimum width of a new median crossover is 39.36 feet. In a rural-designed area, the width of a median crossover shall be measured at the normal culvert line. In an urban-designed area, the width of a median crossover shall be measured parallel to the highway centerline between the curbed noses of the median.
- (e) Upon completion of construction of the improvements as provided by this subrule, the department shall assume ownership of the improvements and shall be responsible for their future maintenance.

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### 112.9(5) **Property lines.**

- (a) Rural area. Same as subrule 112.8(3).
- (b) Fringe or built-up area. The beginning of an entrance radius return or taper shall be no closer than 0.984 feet to the property line as extended on an interior lot line to intersect the primary road centerline at right angles. An entrance to serve two properties abutting the primary road may be centered on the property line by mutual agreement between the property owners.

112.9(6) Reserved.

761--112.10 Reserved.

### 761--112.11(306A) **POLICY ON ACQUISITION OF ACCESS RIGHTS.**

112.11(1) **General.** It is necessary that every effort be made to preserve the public investment in the primary highway system. Where efficiency of traffic movement is desired, this investment is preserved by acquiring the adjacent property's access rights and limiting or prohibiting direct access to the primary highway. This provides a safer environment for the highway user, increases the free and efficient movement of through traffic, and reduces highway accidents by minimizing the number of conflict points or entrances located along the highway.

112.11(2) **Project development.** During the initial stages of project development for a highway improvement project, the department shall determine if access rights to the primary highway will be acquired and the applicable access priority classification to be applied.

The department shall consider average daily traffic, proposed design features of the facility, terrain, the function of the particular section in relation to the total highway system, the commercial/industrial network of highways, service level, continuity of the system and sound engineering judgement.

### 112.11(3) **Access rights at at-grade intersections with city streets and secondary roads.**

When access rights to a primary highway are acquired, the department may also acquire access rights along a city street or secondary road where an at-grade intersection with the highway exists or is proposed. Access rights may be acquired along the city street or secondary road for a distance of 164 feet from the near edge of the primary highway traveled way.

### 112.11(4) **Access rights at at-grade primary intersections.**

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- (a) When access rights to a primary highway in a rural area are acquired, access rights may also be acquired along an intersecting at-grade primary highway for a minimum distance from the intersection of the centerlines of the two primary highways as follows:
  - (i) 164 feet when the intersecting primary highway carries less than 2,500 vehicles per day.
  - (ii) 328 feet when the intersecting primary highway carries 2,500 or more vehicles per day.
- (b) If the intersection is channelized, access rights shall be acquired and no access shall be permitted along the channelized primary highway for a minimum distance of 984 feet beyond the end of the median.

112.11(5) **Access rights along primary roads at interchanges.** Access rights shall be acquired along primary roads at interchange locations as follows:

- (a) For a two-lane undivided primary road through an interchange area, access rights shall be acquired and no access shall be permitted for a minimum distance of 656 feet beyond the point of ramp bifurcation in a rural or fringe area and 328 feet in a built-up area.
- (b) For a two-lane primary road having four or more divided lanes through an interchange area, access rights shall be acquired and no access shall be permitted for a minimum distance of 656 feet beyond the point of ramp bifurcation.
- (c) In a rural area, local public roads shall be relocated to a connecting point a minimum of 656 feet beyond the point of ramp bifurcation.
- (d) In a built-up area, local public roads shall be relocated to a connecting point a minimum of 328 feet beyond the point of ramp bifurcation.
- (e) When an interchange is constructed as a half-diamond or partial cloverleaf, access may be allowed directly opposite each ramp connection to the primary road.

112.11(6) **Access rights along secondary roads at interchanges.** Access rights shall be acquired at all interchange locations with secondary roads and no access shall be permitted along the secondary road for a minimum distance of 328 feet beyond the point of ramp bifurcation.



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112.11(7) **Access rights along city streets at interchanges.** Access rights shall be acquired at all interchange locations with city streets and no access shall be permitted along the city street for a minimum distance of 164 feet beyond the point of ramp bifurcation.

112.11(8) **Agreement with city or county.** When access rights are acquired along a city street or secondary road, an agreement shall be negotiated with the city or county stating that access rights shall be acquired by the department in the state's name or in the name of the city or county and the city or county shall not permit any third party to use the controlled portion of the street or road without the prior written consent of the maintenance division.

### 761--112.12(306A) **POLICY ON LOCATION OF PREDETERMINED ACCESS LOCATIONS.**

112.12(1) **General.** At the time access rights are acquired, existing entrances shall be removed or relocated to connect to predetermined access locations. These locations shall thereafter be defined as the adjacent properties' access locations.

- (a) The department shall be responsible for the construction of entrances at predetermined access locations, either as a part of the project or at a future date when requested by the property owners.
- (b) Any alteration or relocation of an access location shall require the written approval of the department, and the property owner shall be responsible for all costs incurred.

### 112.12(2) **Establishing predetermined access locations.**

- (a) The department, when reviewing the final design plans for a proposed project, shall designate access locations by:
  - (i) Reviewing the zoning and intended land use with city and county officials.
  - (ii) Conducting a field examination, giving consideration to information from city and county officials as well as sight distance availability, natural barriers, property lines and the development of future frontage roads.
- (b) Access locations not constructed as part of the project shall be designated on the construction plans.

112.12(3) **Spacing.** Spacing between predetermined access locations shall conform to the following requirements:

- (a) Priority I highway. Access is allowed only at interchange locations.
- (b) Priority II highway. 5,248 feet is desirable. 2,624 feet is the minimum.

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(c) Priority III highway.

- (i) Rural-designed area. 1,312 feet is desirable. 984 feet is the minimum.
- (ii) Urban-designed area. 656 feet is the minimum.

(d) Priority IV highway.

- (i) Rural-designed area. 656 feet is the minimum.
- (ii) Urban-designed area. 328 feet is the minimum.

112.12(4) **Entrances constructed after project completion.** An entrance constructed at a predetermined access location after completion of the highway project and at the department's expense shall, unless otherwise specified in the right-of-way contract or by the courts, be a granular surfaced entrance with a width not exceeding the maximum for a Type “B” entrance. The department may approve modifications, such as widening or paving the entrance. The cost of modifications are the responsibility of the property owner.

112.12(5) **Revision of access.** After an entrance has been constructed at a predetermined access location, no change in entrance type or location may be made unless a revision of access has been approved by the department. The property owner is responsible for the cost of altering or relocating the entrance.

- (a) A request for revision of access shall be submitted by the property owner to the resident maintenance engineer upon the appropriate application form furnished by the department.
- (b) The application shall be approved or denied by the maintenance division. If it is denied, the applicant may request further review by resubmitting the application along with background information and an explanation of the need for access to the director of transportation.

### 761--112.13(306A) **POLICY ON SPECIAL ACCESS CONNECTIONS WHERE ACCESS RIGHTS HAVE BEEN PREVIOUSLY ACQUIRED.**

112.13(1) **General.** An additional entrance to a property from which access rights have been previously acquired may be permitted only as a special access connection.

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- (a) An applicant for a special access connection should be aware the state of Iowa has previously acquired the rights of direct access to the primary highway from the applicant's highway frontage and, therefore, the applicant has no remaining right of additional direct access to the highway.

This acquisition of access rights is recorded in the local county courthouse and is a restriction placed upon the property.

- (b) The department realizes there may be locations where granting an entrance within an area where access rights were previously acquired may be consistent with the department's current rules.

In these special cases, the department may authorize a special access connection upon such terms and conditions as may be determined by the department.

- (c) In an area where access rights were acquired after July 1, 1966, an applicant may be required to reimburse the state for the increase in land value resulting from the new connection, as determined by a department appraisal.

### 112.13(2) **Application.**

- (a) A request for the establishment of a special access connection shall be submitted by the property owner to the resident maintenance engineer upon the appropriate application form furnished by the department.
- (b) The application shall be approved or denied by the maintenance division. If it is denied, the applicant may request further review by resubmitting the application along with background information and an explanation of the need for access to the director of transportation.

### 112.13(3) **Requirements.**

- (a) Whenever possible, a special access connection should be established as a joint access location to serve more than one property ownership.
- (b) A special access connection is a special permit for access and is not a permanent right of access to the highway.
- (c) The property owner shall be responsible for all costs incurred for the construction of the approved connection, including any required drainage structure.
- (d) A special access connection shall be recorded by the department in the county recorder's office and will be a restriction placed upon the property. All provisions of the special access connection shall be binding on successors or assigns of the applicant property owner.

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- (e) Special access connections shall be constructed in compliance with rules 112.4(306A), 112.5(306A) and 112.6(306A).
- (f) Spacing for special access connections shall conform to subrule 112.12(3) and shall be maintained on both sides of the highway.

### 761--112.14(306A) **RECREATIONAL TRAIL CONNECTIONS.**

This rule establishes requirements for access to the primary road system from recreational trails.

#### 112.14(1) **General.**

- (a) No access to a Priority I highway from a recreational trail is allowed.
- (b) Reserved.

#### 112.14(2) **Application.**

- (a) An application for access to a Priority II, III, or IV highway shall be submitted and processed in accordance with subrule 112.13(2).
- (b) An application for access to a Priority V or VI highway shall be submitted and processed in accordance with subrule 112.4(1).
- (c) The applicant shall submit with the application a detailed plan sufficient for departmental review. The plan shall include an appropriate recreational trail signing layout.
- (d) The applicant may contact the resident maintenance engineer for assistance in preparing the application.

#### 112.14(3) **Requirements.**

- (a) Spacing.
  - (i) Spacing for a Priority II, III or IV highway shall conform to subrule 112.12(3). It is preferable that an entrance provide access to adjacent properties as well as to the recreational trail.
  - (ii) Spacing for a Priority V or VI highway shall conform to rule 112.8(306A) or 112.9(306A) as applicable.

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- (b) Sight distance. Sight distance for a recreational trail connection shall conform to the desirable sight distance as listed in subrule 112.2(28).
- (c) Entrance width and radius return. The entrance width and radius return of a recreational trail connection shall conform to the design standards adopted for the Statewide Iowa Trails Plan.
- (d) Entrance angle. The entrance angle for a recreational trail connection shall be established as near to 90 degrees to the centerline of the primary highway as site conditions will allow.
- (e) Slope and cross section. The slope and cross section of a recreational trail connection shall conform to subrule 112.4(9).
- (f) Drainage. Drainage for a recreational trail connection shall conform to rule 112.6(306A).
- (g) Construction. The permit holder shall be responsible for constructing the recreational trail connection in compliance with the approved permit and at no cost to the department. The department reserves the right to inspect any work performed within the primary highway right-of-way. See subrule 112.3(3).
- (h) Maintenance. Maintenance responsibilities shall conform to subrule 112.4(4).

These rules are intended to implement Iowa Code sections 306.19, 306A.1 to 306A.8, and 319.14.