PROCESS FOR NEW OR REVISED INTERSTATE ACCESS

March 2002

IN IOWA





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INTERCHANGE JUSTIFICATION REPORT (IJR)

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I. Introduction

One of the most noticeable features of the Interstate Highway System is that under ideal conditions traffic on the system is a continuous flow. This flow is maintained through the control of access to the network. The procedure that local and state governments follow in order to add or alter access to the system is set by the Federal Highway Administration (FHWA).

The purpose of this document is to outline the process used in Iowa to add or revise existing access to the Interstate System in the state. This sets forth a method for creating Interchange Justification Reports (IJR), the actual documents that are submitted to FHWA in order to gain approval for any changes to access points on the Interstate Highway System in Iowa.

The following is from the February 11, 1998 Federal Register (FHWA Policy Statement).

Section 111 of title 23, U.S.C., provides that all agreements between the Secretary and the State highway department for the construction of projects on the Interstate System shall contain a clause providing that the State will not add any points of access to, or exit from, the project in addition to those approved by the Secretary in the plans for such project, without the prior approval of the Secretary. The Secretary has delegated the authority to administer 23 U.S.C. 111 to the Federal Highway Administrator pursuant to 49 CFR 1.48(b)(10). A formal policy statement including guidance for justifying and documenting the need for additional access to the existing sections of the Interstate System was published in the Federal Register on October 22, 1990 (55 FR 42670).

The above text clearly states that FHWA needs to approve all new or revised access points to the Interstate System prior to the development of a project to do so. A copy of the complete policy is attached to this report as Appendix A.

II. IJR Need/Requirements

An IJR must be prepared and approved for any new or revised access point to the Interstate network in Iowa, regardless of the funding source to be used to pay for it. For purposes of applying these IJR procedures, each entrance or exit point (including locked gate access) to the mainline is considered to be an access point. For example, a diamond interchange configuration has four access points.

Generally, revised access to an Interstate is considered to be a change in an existing interchange ramp configuration, even though the number of points of access may not change. Replacing one of the direct ramps of a diamond interchange with a loop, or changing a cloverleaf interchange into a fully directional interchange are examples of access revisions.

The following new or revised access points require FHWA approval under these procedures:

- New interstate-to-interstate interchange.
- Major modification of interstate-to-interstate interchange configuration; e.g., adding new ramp(s), abandoning/removing ramp(s), completing basic movements.
- New partial interchange or new ramps to-from a continuous frontage road, resulting in a partial interchange.
- New interstate-to-crossroad interchange.
- Modification of existing interstate-to-crossroad interchange configuration.
- Completion of basic movements at partial interchange.
- Locked gate access.
- Abandonment of ramps or interchanges.

On a case-by-case basis, minor modifications shall be reviewed with the District Engineer and FHWA, and file documentation shall be provided to all affected offices. An example of this would be capacity improvements and/or geometric modifications at side roads and/or ramp intersections.

III. IJR Development and Iowa DOT Approval Process

What follows is a 'walk through' of the framework for IJR development in Iowa. A flow chart detailing this same procedure is in Appendix B. The IJR process will be initiated by a Requesting Agency (city, county, state) and will conclude with Iowa DOT review, approval and submittal of the IJR document to FHWA for review and approval.

In general, the level of effort required to complete an IJR depends on the location on the Interstate System of the proposed access changes. In the FHWA Policy Statement this is addressed as follows:

The extent and format of the required justification and documentation should be developed jointly by the State highway agency and the FHWA to accommodate the operations of both agencies, and should also be consistent with the complexity and expected impact of the proposals. For example, information in support of isolated rural interchanges may not need to be as extensive as for a complex or potentially controversial interchange in an urban area. No specific documentation format or content is prescribed by this policy.

This is a key to the process in Iowa. In rural areas, an IJR may be prepared in less time, with less data collection. Any proposed changes in an urban area would naturally require more data collection, research and time to document. The time required to create an IJR can vary; rural IJRs can take from 2-12 months while urban IJRs can take even longer to complete. A table showing typical levels of effort required for different types of IJRs is shown in Appendix C.

The procedure for creating IJRs in Iowa is divided into two levels. The first level, Phase 1, guides a project from its onset (request from Requesting Agency) to the point where the work actually begins on the IJR document, e.g. data collection and drafting of the IJR.

The Phase 1 review helps to identify early problems and give guidance to the Requesting Agency before they commit to expending resources and funding for data collection and preliminary work on the document itself. The second level, Phase 2, would steer the project from the data collection and drafting process through Iowa DOT approval and submittal to FHWA.

Phase 1

The first step in this process is for a Letter of Request to be sent from the Requesting Agency to the District Engineer for the Iowa DOT District in which the proposed project is located. A map of Iowa DOT Districts and the District Office addresses and telephone numbers are shown in Appendix E. In order to qualify as a Requesting Agency, a requestor must have public road jurisdictional authority, i.e. cities, counties, state. At the state level, any state agency office can initiate a request to the District Engineer in which case the Iowa DOT becomes the Requesting Agency. The District Engineer forwards the request to the District Planner, who reviews the request to judge its completeness.

In order to be complete, a request needs to address the following issues:

- 1) Location
- 2) Purpose and need
- 3) Project development and construction schedule
- 4) Funding strategy
- 5) Logical termini of the project
- 6) Compatibility with the existing and future road network
- Coordination with and support from the local governments and/or the respective Metropolitan Planning Organization (MPO) and Regional Planning Affiliation (RPA)

From this point, the request is either judged to be complete or incomplete. If complete it may continue on; if it is decided that the request is lacking and needs more work it is routed back through the District Engineer back to the Requesting Agency, with an explanation of what additional information needs to be submitted.

With a complete request, the District Planner forms and chairs an Advisory Group. Members of the Advisory Group typically includes staff from:

- The DOT District Office
- The Requesting Agency
- Iowa DOT Office of Design

- Iowa DOT Office of Systems Planning
- Iowa DOT Office of Traffic and Safety
- Iowa DOT Office of Environmental Services
- FHWA
- MPOs/RPAs

Others may be included depending on the nature of the request. The Advisory Group will review the request, looking at how well it addresses the seven previously mentioned issues.

Out of this analysis, the Advisory Group evaluates the IJR request based upon three separate criteria. These are as follows:

- 1) Long Range Transportation Plan (LRTP)—Is this request consistent with a current corresponding MPO/RPA LRTP?
- Funding Plan—Are logical funding sources identified? (This is a basic listing of potential funding sources, there is no necessary commitment needed at this point).
- 3) Basic Concept and Design —Is this a feasible project?

If the request does not satisfactorily address all three criteria, the Advisory Group will provide a written response (forwarded through the District Engineer) to the Requesting Agency.

This allows the Requesting Agency to either discontinue the request or address the shortcomings and begin the Phase 1 review again. If the request does satisfy the Advisory Group, it continues on to the Phase 2 review.

Phase 2

A project's IJR at this point begins to take shape, as the necessary data collection and studies are undertaken. The key area of focus is meeting the FHWA criteria for IJRs, as described in the FHWA Policy Statement.

This phase requires a certain degree of communication between the Requesting Agency and the Advisory Group. It is important that the submittal to FHWA be as comprehensive as possible, especially when addressing the FHWA IJR criteria. The Advisory Group's main function here is to provide guidance and definition to the Requesting Agency. However, the group is available for consultation and progress review throughout the entire Phase 2 review. Feedback naturally focuses on two key areas, meeting the eight FHWA IJR criteria and identifying any potential environmental issues serious enough to modify or stop the project. Following review of the report, the Advisory Group sends the IJR back to the Requesting Agency if it needs more work. This is a written response forwarded through the District Engineer. If the IJR is satisfactory, the Requesting Agency formally submits the IJR to the District Engineer. At the discretion of the District Engineer, it may then be submitted to the Iowa DOT's Project Review committee for its review, and/or for information to the Transportation Commission.

The following is a list of the eight criteria and a discussion of what should be addressed in the responses:

1) FHWA policy states: The existing interchanges and/or local roads and streets in the corridor can neither provide the necessary access nor be improved to satisfactorily accommodate the design-year traffic demands while at the same time providing the access intended by the proposal.

It should be demonstrated that an access point will satisfy regional traffic needs and will not be a substitute for reasonable improvements or additions to the local municipal street, secondary road or primary highway system. The Interstate highway should function as a route carrying longer-distance interregional traffic and not be allowed to become a substitute for a well planned and developed local street and highway system designed to handle local traffic circulation.

If a new interchange or a new ramp is being considered, it should be demonstrated that existing or possible future roads or streets generally parallel to the Interstate facility could not be used in lieu of adding a new interchange or ramp(s), and provide the access intended by the proposal.

2) FHWA policy states: All reasonable alternatives for design options, location, and transportation system management type improvements (such as ramp metering, mass transit, and HOV facilities) have been assessed and provided for if currently justified, or provisions are included for accommodating such facilities if a future need is identified.

It should be demonstrated that all reasonable design alternatives (interchange configurations, ramp designs, etc.) have been assessed, all reasonable interchange locations were considered and assessed, and all non-design type alternative modal solutions, such as mass transit and other travel demand management type improvements have been assessed.

3) FHWA policy states: The proposed access point does not have a significant adverse impact on the safety and operation of the Interstate facility based on an analysis of current and future traffic. The operational analysis for existing conditions shall, particularly in urbanized areas, include an analysis of sections of Interstate to and including at least the first adjacent or proposed interchange on either side. Crossroads and other roads and streets shall be included in the analysis to the extent necessary to assure their ability to collect and distribute traffic to and from the interchange with new or revised access points.

The response to this criterion will in most cases be technical, consisting of traffic forecasts, capacity and operational analysis, and accident data and analysis. Extent and complexity of the analyses will vary, depending on the nature and location of the new or revised access. Responses will range from straightforward capacity analysis for a rural interchange, to a complex operational analysis for multiple system interchanges in an urban area using MPO travel demand models and traffic operations models. In urban areas, it may be necessary to carry out traffic analyses on a system-wide basis, expanding the traffic model to the point where traffic on the Interstate is undisturbed by the proposed access. The Advisory Group for each IJR will advise the Requesting Agency of the level of analysis needed for each IJR. A more detailed listing of potential requirements for responding to this criterion is described in Appendix D of this report.

4) FHWA policy states: The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" for special purpose access for transit vehicles, for HOVs, or into park and ride lots may be considered on a case-by-case basis. The proposed access will be designed to meet or exceed current standards for Federal-aid projects on the Interstate System.

With very few exceptions, all proposed new or revised interchanges shall provide for all turning movements. Exceptions will be determined on a case-by-case basis. Special purpose access for HOVs, transit vehicles, park and ride lots or locked gate access should be treated as special cases and the movements to be provided decided on a case-by-case basis.

5) FHWA policy states: The proposal considers and is consistent with local and regional land use and transportation plans. Prior to final approval, all requests for new or revised access must be consistent with the metropolitan and or statewide transportation plan, as appropriate, the applicable provisions of 23 CFR part 450 and transportation conformity requirements of 40 CFR parts 51 and 93.

The IJR must include a statement of consistency from the appropriate MPO and/or RPA, asserting that the proposed new or revised access considers and is consistent with their respective long-range land use and transportation plans. The request must include a discussion as to how the proposed new or revised access fits into the overall long-range plans for the area. Any proposal must be considered in view of currently known plans for transportation facilities and land use. This is especially important when several new or revised interchanges are anticipated.

6) FHWA policy states: In areas where the potential exists for future multiple interchange additions, all requests for new or revised access are supported by a comprehensive Interstate network study with recommendations that address all proposed and desired access within the context of a long-term plan.

If there are other future proposed new or revised interchanges adjacent to or in close proximity to the new or revised interchange being considered, all proposed changes in access should be analyzed as a system at the same time. In an urbanized area, the MPO traffic models should be used to conduct a comprehensive traffic study of the multiple interchanges being considered.

7) FHWA policy states: The request for a new or revised access generated by new or expanded development demonstrates appropriate coordination between the development and related or otherwise required transportation system improvements.

The ability of a proposed new or revised interchange to function as planned may depend on the implementation of related non-interstate improvements to the local transportation system. This may include, for example, construction or widening of connecting streets, parallel routes, intersection improvements including turn lanes and signalization, or other construction or traffic engineering projects necessary to make the added or revised access fully functional. State, city or county sponsors of new or revised interchange access requests are required to demonstrate coordination of the proposed new or revised interchange project with all such related projects. It should be demonstrated that the public or private entities responsible for construction of those related projects are fiscally capable of completing the projects in a timely manner.

8) FHWA policy states: The request for a new or revised access contains information relative to the planning requirements and the status of the environmental processing of the proposal.

Information relative to the status of the planning and National Environmental Policy Act (NEPA) processes with regard to the access request should be reported. This includes but is not limited to: anticipated schedule dates, public hearing dates, public support or opposition, recent activities, and future activities. It is expected that the NEPA process will be underway at this point.

Once work on an IJR progresses to the point where preliminary reports are produced, copies of these reports are sent to the District Planner. The Advisory Group is reconvened and the Requesting Agency's preliminary report is reviewed. Following that, the District Engineer formally submits the IJR to FHWA for approval.

IV. FHWA Approval

FHWA approvals for IJRs are conditional upon compliance with all applicable Federal rules and regulations including the NEPA process. Since FHWA approval constitutes a Federal action, NEPA guidelines must be followed for the development of the proposed or revised access. Following approval by the Iowa DOT and FHWA, NEPA procedures

must be accomplished as part of the normal project development process. The following is an excerpt from the FHWA Policy Statement:

All requests for new or revised access points on completed Interstate highways must be closely coordinated with the planning and environmental processes. The FHWA approval constitutes a Federal action, and as such, requires that the National Environmental Policy Act (NEPA) procedures be followed. The NEPA procedures will be accomplished as part of the normal project development process and as a condition of the access approval. This means the final approval of access cannot precede the completion of the NEPA process. To offer maximum flexibility, however, any proposed access points can be submitted in accordance with the delegation of authority for a determination of engineering and operational acceptability prior to completion of the NEPA process. In this manner, the State highway agency can determine if a proposal is acceptable for inclusion as an alternative in the environmental process. This policy in no way altars the current NEPA implementing procedures as contained in 23 CFR part 771.

IJRs may be approved at either the FHWA lowa Division Office level, or at the FHWA Washington DC Office level, depending on the type of access change being requested. The approval levels required for different requests are as follows.

FHWA lowa Division Office Level

The FHWA lowa Division Office gives IJR approval for the following types of Interstate access revisions:

- New interstate-to-crossroad interchange not located in a Transportation Management Area (TMA*)
- Modification of existing interstate-to-crossroad interchange configuration
- Completion of basic movements at existing partial interchanges
- Locked gate access
- Abandonment of ramps or interchanges

*A Transportation Management Area (TMA) is defined as an urbanized area with a current population of more than 200,000 people as determined by the latest decennial census, or other area when the TMA designation is requested by the Governor and the MPO (or affected local officials), and officially designated by the Administrators of the FHWA and the FTA. The following areas are TMAs in Iowa: Des Moines, Council Bluffs, and Davenport.

FHWA Washington DC Office Level

IJR review and approval is required from the FHWA Washington DC Office for specific major Interstate access requests, which are listed below. The IJR will be sent to the FHWA lowa Division Office for coordination with FHWA Washington DC Office. Advance coordination with the FHWA Washington DC Office might be necessary, and appropriate, on complex and/or controversial projects, especially during the project's environmental phase. In these cases, Iowa DOT should coordinate directly with the FHWA Iowa Division Office.

The FHWA Washington DC Office IJR approval is required for the following types of access:

- New interstate-to-interstate interchange
- Major modification of interstate-to-interstate interchange configuration
- New partial interchange or new ramps to/from continuous frontage road that create a partial interchange.
- New interstate-to-crossroad interchange located in a TMA

Life span of an IJR Approval (Shelf-life)

An IJR approval by FHWA may no longer be valid if either the project concept or the conditions in the area of the proposed new or revised access have changed. Conditions which could change might include—but are not limited to—an updated Long-Range Transportation Plan by the MPO, changes to the Interstate route beyond the location of the proposed access that could affect the operation of the proposed access, the introduction of unanticipated new traffic generators that impact traffic in the access area, or simply the passage of time requiring the analysis and inputs be verified or updated. If it is possible that any conditions have changed, the IJR requestor should contact the District Engineer to determine if a new IJR approval by FHWA is required.

V. Future Actions

Upon IJR approval by FHWA, future actions can be taken. The District Office will take the lead for Iowa DOT-initiated projects, or will monitor if the project is city- or county-initiated. Other actions include but are not limited to:

- Programming and funding
- Environmental documentation (note: the NEPA process must be completed prior to final design or right-of-way acquisition)
- Design
- FHWA project authorization
- Right-of-Way acquisition

VI. Appendices

APPENDIX A

FHWA Policy "Additional Interchanges to the Interstate System", published in the Federal Register, Vol. 63, No. 28, February 11, 1998, pp. 7045-7047. DEPARTMENT OF TRANSPORTATION Federal Highway Administration Additional Interchanges to the Interstate System AGENCY: Federal Highway Administration (FHWA), DOT. ACTION: Notice of policy statement.

SUMMARY: This document issues a revision of the FHWA policy statement regarding requests for added access to the existing Interstate system. The policy includes guidance for the justification and documentation needed for requests to add access (interchanges and ramps) to the existing Interstate System. The policy statement was originally issued in the Federal Register on October 22, 1990 (55 FR 42670).

DATES: The effective date of this policy is February 11, 1998.

SUPPLEMENTARY INFORMATION:

Background

Section 111 of title 23, U.S.C., provides that all agreements between the Secretary and the State highway department for the construction of projects on the Interstate System shall contain a clause providing that the State will not add any points of access to, or exit from, the project in addition to those approved by the Secretary in the plans for such project, without the prior approval of the Secretary. The Secretary has delegated the authority to administer 23 U.S.C. 111 to the Federal Highway Administrator pursuant to 49 CFR 1.48(b)(10). A formal policy statement including guidance for justifying and documenting the need for additional access to the existing sections of the Interstate System was published in the Federal Register on October 22, 1990 (55 FR 42670). The FHWA has adopted the AASHTO publication ``A Policy on Design Standards--Interstate System'' as its standard for projects on the Interstate System. This publication provides that access to the Interstate System shall be fully controlled by constructing grade separations at selected public crossroads and all railroad crossings.

Where interchanges with selected public crossroads are constructed, access control must extend the full length of ramps and terminals on the crossroad.

Summary of Changes

The changes in the policy statement are being made to reflect the planning requirements of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA, Pub. L. 102-240) as implemented in 23 CFR part 450, to clarify coordination between

the access request and environmental processes, and to update language at various locations.

The following specific revisions are made to the existing policy statement:

- An additional sentence is added to item 5 under ``Policy" that ensures requests for new or revised access are consistent with 23 CFR part 450 and 40 CFR parts 51 and 93.
- Text in item 5 pertaining to future interchange additions has been moved to item 6 because it covers a different subject.
- Item 6 is redesignated as item 7.
- A new item 8 is added so that those reviewing the access requests have the information necessary to process the request.
- The fifth paragraph under ``Application" is revised to clarify coordination with the environmental process.

The revised policy statement also includes various editorial changes to enhance clarity and readability. The revised policy statement is as follows:

Policy

It is in the national interest to maintain the Interstate System to provide the highest level of service in terms of safety and mobility. Adequate control of access is critical to providing such service. Therefore, new or revised access points to the existing Interstate System should meet the following requirements:

- 1) The existing interchanges and/or local roads and streets in the corridor can neither provide the necessary access nor be improved to satisfactorily accommodate the design-year traffic demands while at the same time providing the access intended by the proposal.
- 2) All reasonable alternatives for design options, location and transportation system management type improvements (such as ramp metering, mass transit, and HOV facilities) have been assessed and provided for if currently justified, or provisions are included for accommodating such facilities if a future need is identified.
- 3) The proposed access point does not have a significant adverse impact on the safety and operation of the Interstate facility based on an analysis of current and future traffic. The operational analysis for existing conditions shall, particularly in urbanized areas, include an analysis of sections of Interstate to and including at least the first adjacent existing or proposed interchange on either side. Crossroads and other roads and streets shall be included in the analysis to the extent necessary to assure their ability to collect and distribute traffic to and from the interchange with new or revised access points.
- 4) The proposed access connects to a public road only and will provide for all traffic movements. Less than ``full interchanges" for special purpose access for transit vehicles, for HOVs, or into park and ride lots may be considered on a case-by-case

basis. The proposed access will be designed to meet or exceed current standards for Federal-aid projects on the Interstate System.

- 5) The proposal considers and is consistent with local and regional land use and transportation plans. Prior to final approval, all requests for new or revised access must be consistent with the metropolitan and/or statewide transportation plan, as appropriate, the applicable provisions of 23 CFR part 450 and the transportation conformity requirements of 40 CFR parts 51 and 93.
- 6) In areas where the potential exists for future multiple interchange additions, all requests for new or revised access are supported by a comprehensive Interstate network study with recommendations that address all proposed and desired access within the context of a long-term plan.
- 7) The request for a new or revised access generated by new or expanded development demonstrates appropriate coordination between the development and related or otherwise required transportation system improvements.
- 8) The request for new or revised access contains information relative to the planning requirements and the status of the environmental processing of the proposal.

Application

This policy is applicable to new or revised access points to existing Interstate facilities regardless of the funding of the original construction or regardless of the funding for the new access points. This includes routes incorporated into the Interstate System under the provisions of 23 U.S.C. 139(a) or other legislation. Routes approved as a future part of the Interstate system under 23 U.S.C. 139(b) represent a special case because they are not yet a part of the Interstate system and the policy contained herein does not apply. However, since the intention to add the route to the Interstate system has been formalized by agreement, any proposed access points, regardless of funding, must be coordinated with the FHWA Division Office.

This policy is not applicable to toll roads incorporated into the Interstate System, except for segments where Federal funds have been expended, or where the toll road section has been added to the Interstate System under the provisions of 23 U.S.C. 139(a). For the purpose of applying this policy, each entrance or exit point, including ``locked gate" access, to the mainline is considered to be an access point. For example, a diamond interchange configuration has four access points.

Generally, revised access is considered to be a change in the interchange configuration even though the number of actual points of access may not change. For example, replacing one of the direct ramps of a diamond interchange with a loop, or changing a cloverleaf interchange into a fully directional interchange would be considered revised access for the purpose of applying this policy.

All requests for new or revised access points on completed Interstate highways must be closely coordinated with the planning and environmental processes. The FHWA approval constitutes a Federal action, and as such, requires that the National Environmental Policy Act (NEPA) procedures be followed. The NEPA procedures will be accomplished as part of the normal project development process and as a condition of the access approval. This means the final approval of access cannot precede the completion of the NEPA process. To offer maximum flexibility, however, any proposed access points can be submitted in accordance with the delegation of authority for a determination of engineering and operational acceptability prior to completion of the NEPA process. In this manner, the State highway agency can determine if a proposal is acceptable for inclusion as an alternative in the environmental process. This policy in no way altars the current NEPA implementing procedures as contained in 23 CFR part 771. Although the justification and documentation procedures described in this policy can be applied to access requests for non-Interstate interstates or other access controlled highways, they are not required. However, applicable Federal rules and regulations, including NEPA procedures, must be followed.

Implementation

The FHWA Division Office will ensure that all requests for new or revised access submitted by the State highway agency for FHWA consideration contain sufficient information to allow the FHWA to independently evaluate the request and ensure that all pertinent factors and alternatives have been appropriately considered. The extent and format of the required justification and documentation should be developed jointly by the State highway agency and the FHWA to accommodate the operations of both agencies, and should also be consistent with the complexity and expected impact of the proposals. For example, information in support of isolated rural interchanges may not need to be as extensive as for a complex or potentially controversial interchange in an urban area. No specific documentation format or content is prescribed by this policy.

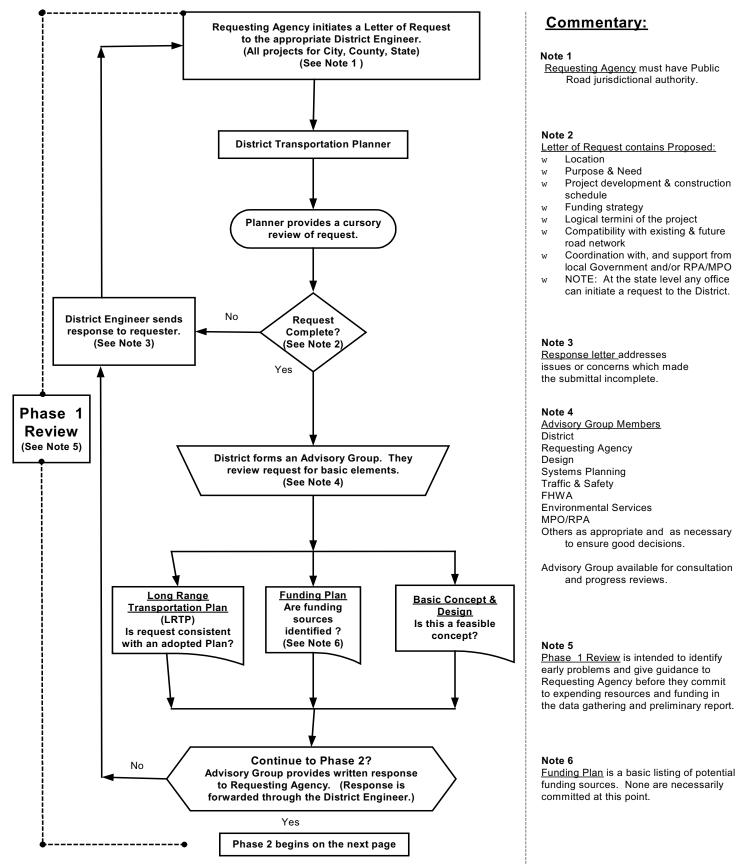
Policy Statement Impact

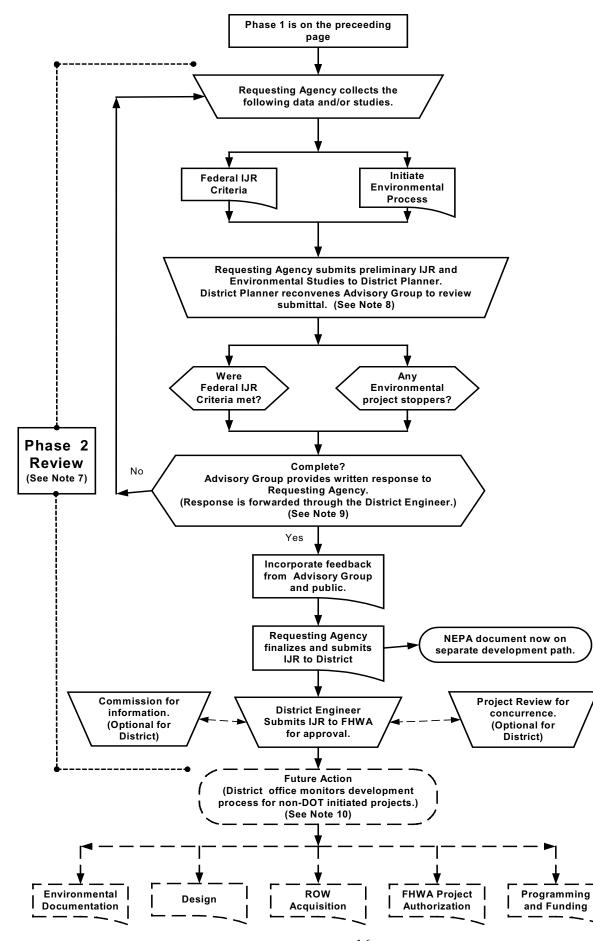
The policy statement, first published in the Federal Register on October 22, 1990 (55 FR 42670), describes the justification and documentation needed for requests to add or revise access to the existing Interstate System. The revisions made by this publication of the policy statement reflect the planning requirements of the ISTEA as implemented in 23 CFR part 450, clarify coordination between the access request and environmental processes, and update language at various locations. The States will have to take these factors into consideration when making future requests for new or revised access points, but the overall effort necessary for developing the request will not be significantly increased.

Authority: 23 U.S.C. 315; 49 CFR 1.48. Issued: February 4, 1998. Kenneth R. Wykle, Administrator, Federal Highway Administration. [FR Doc. 98-3460 Filed 2-10-98; 8:45 am] BILLING CODE 4910-22-P

Interchange Justification Report (IJR)

Process to Add or Modify an interchange on the Interstate System in Iowa





Commentary:

Note 7

<u>Phase 2 Review</u> is to gather necessary support data and develop a draft IJR.

Note 8

Advisory Group Response is to give guidance and definition to Requesting Agency as to what is expected from the data gathering and preliminary design phase.

Note 9

<u>Fatal flaws</u> would be identified at this point based typically on the following criteria.

<u>Federal IJR Criteria</u> 63 FR 7045-7047 Feb. 11, 1998

Environmental Clearances 23 CFR 450, 650, 710, 771, 772, 777 36 CFR 60, 61, 800 40 CFR 50, 93, 210, 1500 16 USC 407(f) 42 USC 7509 Executive Order 12898 (1994) Iowa Code 314.23, .24 ASTM E1527, E1903

Note 10

EHWA approval of the Environmental Documentation, Design and ROW phases are required prior to construction.

<u>FHWA approval of the</u> <u>NEPA process must</u> <u>precede these phases.</u> **APPENDIX C**

Level of effort by IJR type

			Types of IJR's			
Т	ype of Study	Rural		Urban (**)		
Category	Sub-Category	New	Modified	New	Modified	
1. Location						
	Purpose & Need	Х	Х	Х	Х	
	Compatible w/LRTP	Х		Х		
	Land-Use (Existing & Future)	Х	Х	Х	Х	
	Street and Road System	V	V	V	V	
	(Existing & Future)	Х	Х	Х	Х	
2. Traffic Operations						
	Traffic Forecast: Design Year (A)	Х	Х	Х	Х	
	Level of Service: Design Year (A)	Х	Х	Х	Х	
	Systems Analysis (Computer Modeling)			Х	X (B)	
	Highway Capacity Manual	Х	Х		Х	
3. Traffic Safety						
	Crash History (Location Specific)		Х		Х	
	Crash Rates (System)		Х		Х	
	Safety Benefits	Х	Х	Х	Х	
4. Environmental						
	Air Quality Study			Х	Х	
	Noise Study			Х	Х	
	T & E Study	Х	Х	Х	Х	
	Archaeology - 106	Х	Х	Х	Х	
	Architecture - 106	Х	Х	Х	Х	
	Wetland Impacts	Х	Х	Х	Х	
	Regulated Materials	Х	Х	Х	Х	
	4 & 6 (f) Impacts	Х	Х	Х	Х	
	Farm Land Impacts	Х	Х	Х	Х	
. Engineering Feasibility						
	ROW Impacts & Needs	Х	Х	Х	Х	
	Alignment	Х	Х	Х	Х	
	Sight Distance	Х	Х	Х	Х	
	Roadway X-Section	Х	Х	Х	Х	
	Drainage	Х	Х	Х	Х	
	Utility Accommodations	Х	Х	Х	Х	
	Multi-Modal Accommodations	Х	Х	Х	Х	
	Estimated Cost	Х	Х	Х	Х	

(X) Denotes need for evaluation.

(A) May also involve Traffic Forecasts and/or LOS for opening-day on a case-by-case basis as established by Advisory Group.

(B) Computer Modeling may be required depending on level or complexity of modification.

(**) "Urban" is defined as interchanges within an urban area boundary (UAB) with > 50,000 population.

APPENDIX D

Detailed guidance for response to FHWA Criterion 3

Operational analysis should be conducted that sufficiently demonstrates that the impact of the new or revised access will not be unacceptably detrimental to traffic operations on the Interstate facility. For consistency, the current Transportation Research Board (TRB) "Highway Capacity Manual" (HCM) analysis procedures should be used. The analysis should be extended along the mainline to include as many existing and future interchanges as necessary to establish the extent and scope of the impacts. This is critical in urban areas that may have relatively closely spaced interchanges (i.e., interchanges spaced at less than 3.2 km or 2 miles apart). The operational analysis should be conducted for a Design Year, which is at least 20 years after the date of construction of the proposed new or revised interchange project.

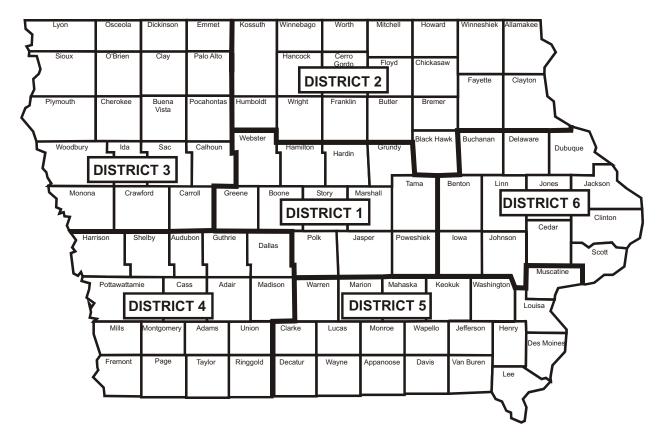
The operational analysis should typically include the following information as applicable:

1) Interchange Maps: Scaled drawings of the design elements of the existing and revised interchanges, including (as applicable):

- Project limits, adjacent interchange(s), added ramps, removed ramps, relocated ramp gores, interchange configuration, travel lanes and shoulder widths, ramp radii, mainline and ramp grades, acceleration lane lengths, deceleration lane lengths, taper lengths, auxiliary lane lengths, "taper" or "parallel" type exit ramps, truck climbing lane(s), auxiliary/operational lane(s), and collector/distributor road(s). Also, a description of the terrain type; either qualitative (level, rolling, mountainous) or quantitative (percent, grade, and length).
- All presently known pertinent engineering design details of the proposed change. Design exceptions from current Iowa DOT Design Manual and AASHTO standards shall be clearly identified.
- Another diagram should be provided showing the traffic volumes for all turning movements as well as mainline, ramp, and local road traffic volumes. Identify current and design year ADT and DHV. Provide AM and PM peak hour traffic if appropriate. Percent of trucks for movements should be included.

- 2) Highway Capacity Analysis: The current TRB Highway Capacity Manual (HCM) or traffic operations modeling software such as CORSIM should be used as appropriate. A narrative of the assumptions used and reasons for any changes in the software default values should be included. An acceptable analysis for determining engineering acceptability and feasibility will need to be determined jointly by the IJR Advisory group. The engineering analysis shall include, but not be limited to, the following:
- Existing Peak Hour Volumes: Plan view map, with ramps and Interstate through lanes labeled with existing "AM Peak Hour" and "PM Peak Hour" volumes.
- Design Year No Build Peak Hour Volumes: Plan view map, with ramps and Interstate through lanes labeled with the Design Year No-Build "AM Peak Hour" and "PM Peak Hour" volumes.
- Design Year Build Peak Hour Volumes: Plan view map, with ramps and Interstate through lanes labeled with the Design Year Build "AM Peak Hour" and "PM Peak Hour" volumes.
- Summary Of Operational Analysis: Preferably, a table listing the "Interstate LOS", "Ramp LOS", "Weave LOS", and "Non-Weave LOS" for the corresponding existing AM/PM, design year no-build AM/PM, and design year Build AM/PM for all necessary interstate on-ramps, off-ramps, and through lanes.
- Basic Interstate Segments Analyses of Existing Conditions: Preferably, program outputs from the latest release of the Highway Capacity Software (HCS), for all adjacent interstate segments.
- Basic Interstate Segments Analyses of the Design Year No Build Conditions.
- Basic Interstate Segments Analyses of the Design Year Build Conditions.
- Ramp Junction Analyses of the Existing Conditions.
- Ramp Junction Analyses (including Queue Analysis) of the Design Year No Build Conditions.
- Ramp Junction Analyses (including Queue Analysis) of the Design Year Build Conditions.
- Weave Area Analyses of the Existing Conditions as applicable.
- Weave Area Analyses of the Design Year No Build Conditions as applicable.
- Weave Area Analyses of the Design Year Build Conditions as applicable.

APPENDIX E



District	Address	Telephone
1	1020 S. 4 th Street Ames IA 50010	515-239-1635
2	P.O. Box 741 Mason City, IA 50402-0741	641-423-7584
3	P.O. Box 987 Sioux City, IA 51102-0987	712-276-1451
4	P.O. Box 406 Atlantic, IA 50022	712-243-3355
5	P.O. Box 587 Fairfield, IA 52556-0587	641-472-4171
6	P.O. Box 3150 Cedar Rapids, IA 52406-3150	319-364-0235