

Exit 51

- 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.**

Exit 51 is being relocated as part of a larger project to improve the alignment and geometrics of Interstate 90 mainline. Necessary access or the inability of the existing interchange to accommodate design year traffic are not issues for the change in access request.

- 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.**

All reasonable alternatives were considered. Exhibit A shows the options initially considered.

Based on public input and written comments received after hearings held in August 2000 and July 2001, the Department of Transportation has selected a plan to reconstruct I-90 at Black Hawk. The new design will flatten the S curves on the main lanes of the interstate and a new diamond interchange will be constructed southeast of the existing Exit 51 on property formerly owned by the SD Cement Plant, replacing the current split interchange. Two pairs of bridges that presently cross the DM&E Railroad and SD79 will be replaced by a multi-plate structure. The Mill Road Bridge over I-90 will also be eliminated. See Exhibit B.

An improved service road will provide access for people living north of the new interchange. A signalized intersection will be considered where the current service road and SD79 intersect the new cross road, just north of the intersection of Peaceful Pines Road and SD79. A new railroad crossing, aligned with the proposed interchange, will replace the existing crossing at Mill Road. Homes and businesses on Mill Road west of I-90 will access the new cross road via a new private approach. Options are being considered to accommodate traffic along a new service road east of the interchange.

Initial plans are to begin surveying in the fall of 2001 with design to be completed by 2003. Landowner meetings will be held with each owner along the route during this process. The Department will contact landowners in the future. In addition to the Exit 51 reconstruction project, two I-90 paving projects, from mile marker 50 to 57, are scheduled for 2004-06.

- 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.**

Analysis of the accident history at the Exit 51 interchange revealed no safety deficiencies at the interchange. However, the standard diamond configuration is likely to benefit overall traffic safety at the interchange. The existing Exit 51 configuration requires drivers to navigate a combination of directional ramps and a ½ diamond interchange to complete their trip through the interchange. The installation of a standard diamond interchange would simplify vehicle maneuvers through the interchange. The improvements to the mainline alignment and geometrics will improve safety and operational concerns, particularly during winter snow and ice events

The installation of a standard diamond interchange at Exit 51 would accommodate interchange traffic movements at two unsignalized ramp terminal intersections. The proposed standard diamond interchange is expected to accommodate projected Year 2010 and 2020 traffic volumes without requiring installation of traffic signals at the ramp terminal intersections. The interchange is projected to operate at LOS B based on projected Year 2010 and Year 2020 traffic volumes.

It is anticipated that there will be no increase in traffic as the result of the new interchange. Current local roads will continue to adequately collect and distribute the projected traffic.

There will be no impact on adjacent interchanges as the closest interchange to the west is 3 miles and the closest interchange to the east is 4 miles.

- 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, or HOV’s or into park and ride lots may be considered on a case by case basis. The proposed access will be designated to meet or exceed current standards for Federal-aid projects on the Interstate system.**

The proposed interchange relocation will connect only to public roads and will improve traffic movements by replacing a partial interchange with a full-diamond interchange. The proposed interchange will meet 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.

The South Dakota Department of Transportation has coordinated this project with all local units of government responsible for local land use planning. The project is consistent with the statewide transportation plan and is listed in the Statewide Transportation Improvement Plan.

- 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 in the context of a long-term plan.**

A recent completed Interstate Corridor Study found that a diamond interchange and improved alignment will provide more than adequate access and there will be no need for additional interchanges along this segment of the corridor

- 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.**

This request for relocation of the interchange is to improve the operations of the Interstate mainline and is not generated by new or expanded development but coordination with the proper planning authorities has occurred.

- 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.**

The proposed interchange relocation has been coordinated through the planning process and is included in the Statewide Transportation Improvement Program. The environmental review of the project has begun and we ask that the interchange relocation request be approved conditionally contingent on completion of the environmental review.

Exhibit A
Exit 51 Reconstruction Options

Option	Description	+’s	-’s	Estimated Cost (millions)
1	Revise I-90 curves/new on ramp	<ul style="list-style-type: none"> • I-90 curves improved • New on ramp in I-90 tangent • Improved service road 	<ul style="list-style-type: none"> • Divided interchange • Off ramp unchanged • I-90 bridges unchanged • Relocate 2 homes • Black Hawk well disturbed 	\$15.9
2	Revise I-90 curves	<ul style="list-style-type: none"> • I-90 curves improved • Black Hawk well not disturbed 	<ul style="list-style-type: none"> • Divided interchange • On and off ramps unchanged • I-90 bridges unchanged • Relocate 1 home 	\$12.7
3	Option 1 w/single point interchange	<ul style="list-style-type: none"> • I-90 curves improved • Existing on ramp eliminated • Improved service roads 	<ul style="list-style-type: none"> • Existing off ramp unchanged • I-90 bridges unchanged • Relocate 1 home • Black Hawk well disturbed 	\$22.3
4	Diamond interchange east of I-90	<ul style="list-style-type: none"> • Existing on and off ramps eliminated • I-90 bridges abandoned 	<ul style="list-style-type: none"> • More development west of interchange • Relocate 4 homes, 1 farm, and 1 campground 	\$27.0
5	Exit 52 diamond interchange	<ul style="list-style-type: none"> • Black Hawk direct access to I-90 	<ul style="list-style-type: none"> • I-90 curves and bridges unchanged • Rebuild 2 Mill Rd bridges over I-90 • 2 ramp bridges required • Upgrade Mill Rd to 4 lanes • Cross traffic uses at grade railroad crossing • Relocate 3 homes 	\$21.6
6	Like Option 2 w/single point interchange	<ul style="list-style-type: none"> • I-90 curves improved • Existing on ramp eliminated • Improved service roads • Black Hawk well not disturbed 	<ul style="list-style-type: none"> • Existing off ramp unchanged • I-90 bridges unchanged • Relocate 1 home 	\$20.8