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Assessment of Techniques for Corridor Preservation in South Dakota

**Study SD2001-11-F
Final Report**

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16. Abstract <p>This report presents the results and recommendations of an assessment of techniques for corridor preservation in South Dakota. Corridor preservation has become an important issue for South Dakota's transportation planning and project delivery process. As the state's population grows, the demand for improved transportation infrastructure increases. To protect potential transportation corridors from increasing developmental pressures and to preserve these alignments for future use, corridor preservation techniques must be applied.</p> <p>The report provides a comprehensive assessment of available corridor preservation tools and offers guidance for application of these tools within South Dakota's legal environment and practical framework. This report serves as a reference for developing an effective corridor preservation plan for improvement projects throughout South Dakota's transportation system. It will be a useful document for transportation planners, engineers, environmental and right of way staff, along with private utility providers and local government planners and decision makers. The report:</p> <ul style="list-style-type: none">• Provides an assessment of the strengths and weaknesses of current statutes, regulations, ordinances, policies, and procedures employed to acquire property interests necessary for constructing and preserving the function of transportation corridors.• Recommends a "toolkit" of practical, best practice techniques – including statutes, regulations, ordinances, policies, and procedures – that state and local agencies in South Dakota can use to more effectively manage property interests.• Recommends and assesses the associated resource requirements of changes to agency organization, institutional roles, policies, and procedures that will improve public agencies' ability to preserve the function of transportation corridors.• Assesses the benefits, resource needs, and other costs to public agencies and private interests of systematic corridor preservation. <p>Broad-based stakeholder understanding of the benefits of an improved corridor preservation approach formed an important element of the project.</p>			
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Corridor Preservation in South Dakota**

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Executive Summary



This executive summary presents the results and recommendations of an assessment of techniques for corridor preservation in South Dakota.

A. Introduction

Corridor preservation has become an important issue for South Dakota. As the State's population and economy grow, the demand for improved transportation infrastructure increases. To protect potential transportation corridors from increasing developmental pressures and to preserve these alignments for future use, corridor preservation techniques must be applied. This report provides a comprehensive assessment of the benefits from corridor preservation, available corridor preservation tools, and offers practical guidance for application of these tools in South Dakota.

This report serves as a reference for developing an effective corridor preservation plan for improvement projects throughout South Dakota's transportation system. It will be of assistance to transportation planners, engineers, environmental and right of way staff, along with private utility providers and local government planners and decision-makers.

1. Objectives

The principal objective of the assessment of techniques for corridor preservation in South Dakota is to provide the South Dakota Department of Transportation (SDDOT) with the policies, tools, and multijurisdictional support required to establish an active approach to corridor preservation. The purpose of the review is to recommend policies, tools and procedures that will:

- Reflect the diversity of transportation conditions in South Dakota.
- Address South Dakota's institutional and policy environment.
- Explain the benefits – develop the economic justification for corridor preservation.
- Navigate federal and state funding constraints.
- Draw creatively on lessons learned in other states.
- Assess what can be accomplished within the existing statutory authority and determine if any changes to state law are necessary.
- Communicate the purpose and benefits of corridor preservation.
- Set institutional/organizational roles and responsibilities.

The objectives of the study as specified in the project’s scope of work are listed in Exhibit E-1 below:

Exhibit E-1 Project Objectives

1. To assess the strengths and weaknesses of current statutes, regulations, ordinances, policies, and procedures employed to acquire property interests necessary for constructing and preserving the function of transportation corridors.
2. To recommend a “toolkit” of practical, best practice techniques – including statutes, regulations, ordinances, policies, and procedures – that state and local agencies in South Dakota can use to more effectively manage property interests.
3. To recommend and assess the associated resource requirements of changes to agency organization, institutional roles, policies, and procedures that will improve public agencies’ ability to preserve the function of transportation corridors.
4. To assess the benefits, resource needs, and other costs to public agencies and private interests of systematic corridor preservation.

Achievement of these objectives required the development of materials that can communicate the benefits of improved corridor preservation practices and foster the cooperation of state, regional, and local interests. Broad based stakeholder understanding of the benefits of corridor preservation was also an important success factor for the project.

2. Study Tasks

The project objectives were addressed through a number of tasks. The tasks specified in the original request for proposals are listed and the steps taken to perform them described.

Task 1. Meet with the project's technical panel to review the project's scope and work plan.

The consultant project manager and the lead technical analyst met with the technical panel to identify their priorities and objectives for the project.

Task 2. Through interviews with public officials, landowners, and developers, and through reviews of historical records, characterize the financial impacts on public and private entities of SDDOT’s current corridor preservation practices.

The availability of data from which to quantify the impacts on project costs was assessed including the schedules and design outcomes from current procedures and practices. The quantification addressed increased property acquisition costs that arise when developed land is acquired.

Task 3. Identify and analyze the strengths and weaknesses of applicable statutes, regulations, ordinances, policies, and procedures governing acquisition and property interests employed for corridor preservation and utility relocation at the state and local levels.

Fact-finding interviews were conducted with SDDOT employees and local jurisdictions to identify and analyze the strengths and weaknesses of state laws, local ordinances, and other regulations governing the acquisition of property interests.

Task 4. Arrange and conduct regional workshops with public officials, developers, and utilities to identify issues and concerns regarding development, utility relocation, and management of transportation corridors.

Four well attended regional workshops were conducted with stakeholders involved in or with an interest in corridor preservation. Issues and concerns regarding corridor preservation were discussed, as well as the applicability of various corridor preservation approaches for South Dakota. Four workshops were also held with SDDOT region offices.

Task 5. Describe and evaluate the applicability to South Dakota of methods employed in other states for corridor preservation and utility easements.

A review of the authority, tools, procedures, and business practices used in other states was conducted to determine which have the potential to improve South Dakota practice.

Task 6. Submit a technical memorandum describing the results of Tasks 1–5 and outlining concepts for strengthening South Dakota’s corridor preservation practices for approval of the project’s technical panel.

A technical memorandum was issued outlining the strengths, weaknesses, and applicability of various corridor preservation techniques for South Dakota. The ability of the techniques to work within the existing legal framework of the State formed part of the analysis.

Task 7. Recommend a comprehensive and detailed set of tools that can be employed at the state and local level for corridor preservation and utility relocation, and recommend institutional and process-related changes needed to effectively employ these tools.

“Tool kit” components were evaluated based on criteria to ensure applicability to South Dakota. Potential implementation approaches were identified along with the responsibilities and estimated the level of effort necessary to initiate and sustain the new approaches.

Task 8. Assess the benefits and costs associated with systematic application of the recommended tools for corridor preservation and utility relocation.

Case study analysis was conducted in certain corridors to quantify the increased property-related costs arising from right of way acquisition and utility relocation for projects taking place areas with changing land uses.

Task 9. By October 1, 2001 identify and define action issues that should be addressed in South Dakota's 2002 legislative session.

A technical memorandum which outlined the direction for recommendations and addressed legislative action issues was prepared and presented to the Technical Panel.

Task 10. Prepare documents that can be used for education and outreach to state and local agencies, developers, business interests, and the public at large.

A sample brochure on corridor preservation has been prepared and can be used to support implementation. In addition, several case studies were prepared.

Task 11. Prepare a final report and executive summary of the research methodology, findings, conclusions, and recommendations.

A draft final report and executive summary were submitted to the Technical Panel for review and subsequently finalized based on comments received.

Task 12. Make an executive presentation to the SDDOT Research Review Board at the conclusion of the project.

An executive presentation was made to SDDOT's Research Review Board.

3. Methodology

The following work steps were taken:

- Conducted fact-finding interviews with SDDOT employees and local jurisdictions to identify state laws, local ordinances, and other regulations governing the acquisition of property interests. Determined how federal law and rules are interpreted and applied in the project delivery process in South Dakota.
- Conducted interviews and round-table meetings with SDDOT employees involved in project delivery to assess the current procedures, obtain their perspective on the strengths and weaknesses of current procedures, determine organizational roles and responsibilities, and identify actual practices. This included preconstruction, right of way managers and agents, and region personnel, among others.
- Assessed the availability of data from which to quantify the impacts on project costs, schedules, and design outcomes from current procedures and practices.

The quantification addressed increased property acquisition costs that arise when developed land is acquired.

- Conducted a review of the authority, tools, procedures, and business practices used in other states that have the potential to improve South Dakota practice.
- Evaluated “tool kit” components based on criteria that will ensure that they are applicable to South Dakota.
- Through the involvement of different SDDOT disciplines and managers, issue identification interviews, and by conducting workshops, ensured that the recommended approach is understood, acceptable, and ready to implement.
- Identified potential implementation approaches and responsibilities. Estimated the level of effort necessary to initiate new approaches and then to sustain the approaches.

B. Recommendations

This section provides a summary of the study recommendations. The recommendations, if implemented, will provide the South Dakota Department of Transportation with the policies, tools, and multijurisdictional support required to establish an active approach to corridor preservation.

Recommendation 1: Adopt Corridor Preservation Policy

- Provide a consistent statewide approach to the management and preservation of key corridors on the state highway system.
- Protect the public’s investment in the highway system by preserving and enhancing its functional integrity through effective corridor planning and access management.
- Coordinate with local jurisdictions to ensure that preservation is addressed early in decisions affecting the development process.
- Improve coordination with utilities companies and integrate utility needs with corridor plans.
- Provide advocacy, educational, and technical assistance to promote corridor preservation practices among local jurisdictions.
- Establish corridor plans working with local units of government.

Recommendation 2: Establish Corridor Preservation Planning Procedures that Specify Preservation Corridors and Formalize SDDOT’s Plan

- Identify and designate priority corridors based on technically warranted expansion needs and other criteria:
 - Capacity and/or safety issues affecting the corridor.
 - Importance of the corridor.
 - Immediacy of development.
 - Risk of foreclosing options.
 - Opportunity to prevent loss of the corridor.
 - Strength of local government support.
- For future new alignments, conduct feasibility/location studies as a “bridge” between planning and project development.
- Establish a funding mechanism for corridor management planning and advanced property acquisition actions.

Recommendation 3: Map Target Corridors for Protection

- Recommended Option: Mapping as an internal and external communication tool.
- Future Option #1: Mapping as a development notification tool.
- Future Option #2: Mapping as a tool to impose setbacks and development moratorium for state highway preservation corridors.

Recommendation 4: Utilize Early Acquisition, Less Than Fee Simple, and Other Techniques to Protect Corridors Prior to Programming in the STIP

- Utilize TEA-21 Early Acquisition provisions.
- Acquire less than fee simple interests and other rights where feasible:
 - Purchase of development rights.
 - Options.
 - Letter of agreement.
 - Right of first refusal.
- Promote other innovative acquisition approaches:
 - Donations.
 - Contributions by local government units.
 - Property exchange.
 - Access solutions.
- Identify opportunities to integrate early acquisition and other corridor preservation approaches into SDDOT’s project delivery process reengineering effort.

Recommendation 5: Develop Procedures for Performing Right Right of Way Acquisition Earlier for Programmed Projects

- Position right of way function for proactive corridor preservation.
- Maximize use of Federal Highways Administration (FHWA) protective purchase authority.
- Utilize early acquisition of total takes where possible.

Recommendation 6: Establish/Assign Duties for Proactive Corridor Preservation Approach

- Establish a corridor preservation committee.
- Establish regional corridor manager positions.

Recommendation 7: As Part of Corridor Preservation Planning Inform, Educate, Communicate and Cooperate with Local Jurisdictions, Landowners, Developers, and Utilities

- Communicate corridor preservation objectives, identified through the corridor planning process, with all stakeholders early and throughout the process.
 - Seek local commitment to achieve corridor preservation goals.
 - Prepare corridor preservation plans.
 - Coordinate with utilities throughout the corridor planning and development process.
- Work with landowners and developers to promote corridor preservation goals.

Recommendation 8: Apply Environmental Review Best Practices for Corridor Preservation

- Planning level environmental review.
- Staging of the environmental process.
- Coordination with resource agencies.

Recommendation 9: Consider Future Legislation to Strengthen Corridor Preservation Authority

- Legislative clarification on necessity.
- Legislation to support mapping.
- Moratorium on section-line road vacation.
- Confer with the FHWA to clarify policy.

C. Corridor Preservation in South Dakota

Corridor preservation focuses primarily on proactive right of way preservation programs and strategies to ensure that acquisition of property rights along highway corridors occurs well in advance of capital improvement design concepts. Addressing property needs early in the project development process reduces construction delays and right of way costs. Earlier property acquisition can also reduce utility relocation delays by securing permissions and allowing utilities to accomplish relocation prior to construction.

1. Definition of Corridor Preservation

The American Association of State Highway and Transportation Officials (AASHTO) defines corridor preservation as “a concept utilizing the coordinated application of various measures to obtain control of or otherwise protect the right of way for a planned transportation facility.” (AASHTO, 1990.) Public authorities may use a number of different techniques to protect the capacity of existing corridors, to protect planned corridors from inconsistent development, and to preserve intact transportation or utility corridors that are or may be abandoned. These actions all fall under the category of corridor preservation.

2. Importance of Corridor Preservation for South Dakota

Corridor preservation has become an important issue for South Dakota’s transportation planning and project delivery process. As the State’s population grows, the demand for improved transportation infrastructure increases. To protect potential transportation corridors from increasing developmental pressures and to preserve these alignments for future use, corridor preservation techniques must be applied.

Corridor preservation addresses several important transportation planning and project delivery issues in South Dakota including:

- The importance of exchanging information so that landowners, developers, engineers, utility providers, and planners understand the future needs for developing corridors.
- The need for preserving arterial capacity and the need to preserve right of way in transportation corridors in those parts of the State experiencing economic and population growth.
- The need to minimize future displacement, relocation, and disruption of buildings and other structures.
- The desire to minimize irregular land parcels and uneconomic remnants.
- The desire to minimize disruption of private utilities and public works.

- The need to develop urban and rural areas consistent with planning documents, zoning laws, and subdivision regulations.

3. Current Practices

a. Planning level

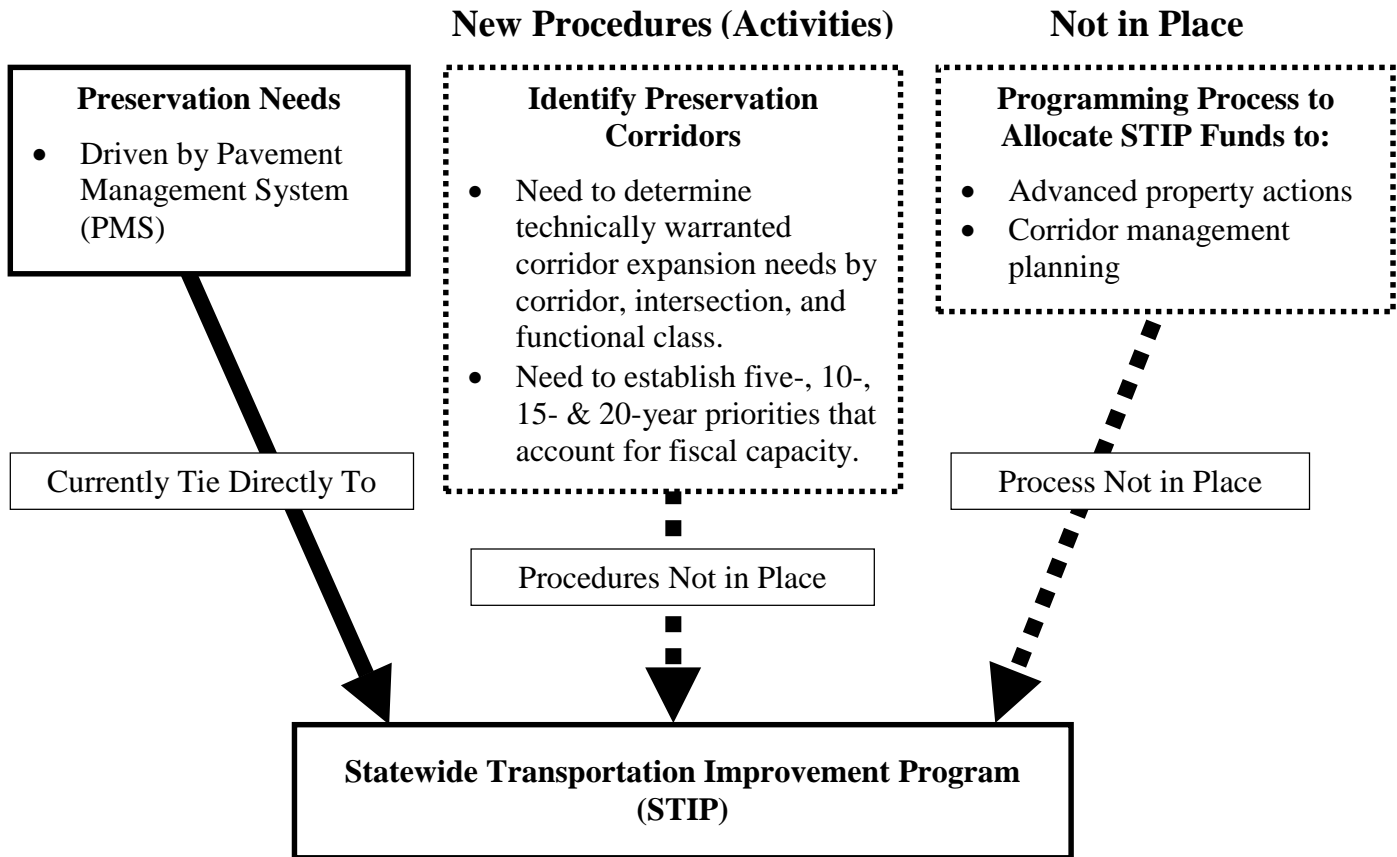
- SDDOT does not currently identify corridor development needs as part of an ongoing process.
- Capacity needs have historically been addressed on an “as needed basis” as opposed to a process involving long-term demand forecasting, and corridor planning and preservation.
- A Pavement Management System (PMS) is used to identify and prioritize preservation treatments to existing highways in the State and these projects feed directly into the Statewide Transportation Improvement Program (STIP).

Shifting to a systematic corridor preservation approach will necessitate the following planning level changes in how SDDOT conducts business:

- A proactive corridor preservation approach at SDDOT will require the designation of expansion corridors for preservation.
- Coordination with local planning efforts.
- Corridor preservation at SDDOT will require funding for corridor management planning and advanced property acquisition actions.

This issue is depicted in Exhibit E-1.

Exhibit E-1: New Processes and Procedures Required for a Proactive Corridor Preservation Program in South Dakota



b. Project level

- SDDOT follows a traditional pattern for departments of transportation nationally in the structure of its project development process. Right of Way actions are concentrated in the later stage of project development, with appraisal, appraisal review, negotiations, condemnation and relocation taking place after development of the design plans.
- Our analysis identifies opportunities to integrate early acquisition and other corridor preservation approaches into SDDOT’s project delivery process reengineering effort.

c. Coordination with utilities

- Utility companies do not have the same priorities and are not subject to the same regulatory controls as SDDOT concerning acquisition of property.
- The utility company may choose to relocate within SDDOT right of way or may instead decide to purchase property rights from adjoiners at its own expense and relocate outside the Department's right of way.
- SDDOT and utilities may have common interest in cooperating to undertake advanced acquisition.

The more information that utility companies know about the "future plan" for highway expansion and new alignments, the better they can coordinate and ensure on-time project delivery.

d. Fit with access management

In partnership with local jurisdictions, SDDOT undertook a study of access management that developed recommendations and provided tools to strengthen access management in South Dakota. The study found that access management offers an important tool for preserving the function of highway corridors. This implementation will provide strong support for corridor preservation.

4. Legal Authority

a. State authority

SDDOT has taken a conservative position in the application of State statute Section 31-19-2 on the Resolution of Necessity in which final construction plans are submitted with the resolution declaring the necessity for land acquisition. This practice has placed land acquisition just prior to construction and is not conducive to early property acquisition efforts to support corridor preservation.

State departments of transportation that have implemented proactive corridor preservation programs have found that planning documents at a lesser degree of development have been upheld by the courts as demonstrating necessity. It should be noted that this issue applies only in the case of non-willing sellers.

b. Local authority

Counties and municipalities have the power to regulate development and intensity of land use within their jurisdictions using their police power.

SDDOT must rely on city and county planners to implement State corridor preservation programs using local police power.

D. Costs of Current Practices

Long range highway corridor preservation has the dual advantages of:

- Limiting development on land that would ultimately be used for highways (and which development would have to be compensated for in eminent domain proceedings).
- Acquiring crucial land rights in the highway corridor at times when those rights are likely to be much less expensive than later.

Both of these advantages can result in significant financial savings in right of way acquisition costs to SDDOT. Right of Way cost savings can then be applied to other or additional projects.

In addition to direct right of way cost savings to SDDOT through corridor preservation efforts, there are other potential savings to the Department, local governments, property owners and developers, and utility companies. These savings can be realized through:

- Minimizing displacement impacts to businesses and residents.
- Reducing disruption to the natural environment.
- Minimizing disruption of private utilities and public works.
- Developing urban and rural areas consistent with planning documents, zoning laws, and subdivision regulations.

1. Aggregate Level Analysis

The study included research that quantified the range of cost savings SDDOT could yield through corridor preservation. Right of Way costs at SDDOT have averaged \$5.3 million per year over the five-year period from 1997 through 2001, while utility costs have averaged \$2.4 million over the same period.

- **Analysis of long range right of way needs and costs for interstate interchanges based on the SDDOT Corridor Study – Phase II.** To illustrate potential cost savings from corridor preservation, the study evaluated the benefits from early acquisition of land that will be required for interstate interchange modernization/construction to accommodate growth. This case study showed that going from the current level of developed land, estimated to be approximately 15 percent, to 25 percent of land developed results in a \$3.3 million increase in right of way costs in current dollars. From the current level of development to 50 percent of the land developed would result in a \$9.9 million increase in land costs in current dollars. The impacts of the analysis are even more dramatic if inflation is taken into account. In this case the increase from current development to 25 percent development raises right of way costs from \$3.3 million in current dollars

to \$17.8 million in ten years if an annual inflation rate of three percent is assumed.

2. Case Study Approach to Costs and Benefits

A case study approach on specific corridors was undertaken to examine the costs and benefits of corridor preservation in South Dakota. This included:

- **Analysis of right of way needs and costs for SD115 – Sioux Falls South City Limits to Harrisburg Corner.** A similar analysis to the interstate interchange case study was undertaken for planned reconstruction of South Dakota Highway 115 from Sioux Falls South City limits to Harrisburg corner to demonstrate the impact of development on right of way costs. The analysis shows that each two acre increase in the amount of developed land on the northern 2.0 miles and southern 2.5 miles of the project will result in a \$108,900 and \$39,204 current dollar increase in right of way costs respectively. Again, the result is more dramatic if inflation is accounted for.
- **Case studies presented at corridor preservation workshops held in Rapid City, Pierre, Aberdeen, and Mitchell.** Several case studies were presented at the corridor preservation workshops held in Rapid City, Pierre, Aberdeen, and Mitchell. These case studies provide useful qualitative evaluations of the benefits of corridor preservation. For example, a study of the Southeast Connector in Rapid City revealed that land settlement prices have been very high due to development and knowledge of the transportation project. Of the 187 acres that will be required for the project, 167 have been appraised. The appraised amount for the 167 acres is \$5.4 million whereas the settlement amount is \$8.3 million.

3. Stakeholder Support for Proactive Corridor Preservation

In order to incorporate input from the public and SDDOT region staff, four well attended workshops were held in Rapid City, Pierre, Aberdeen, and Mitchell in September and October of 2001. The workshops were conducted to determine perspectives on the importance of improving corridor preservation practices in South Dakota.

Following are some of the key themes which arose from the workshops:

- There is interest in the State taking a leadership role in corridor preservation.
- Workshop participants universally agreed that SDDOT should extend its planning efforts beyond five years to be more proactive and to identify future capacity projects.
- SDDOT should do more advance fee simple right of way purchase to support corridor preservation.

- The purchase of options and easements may work in rural areas where land values are lower and there is limited development pressure.
- Some counties might consider ordinances for setbacks.
- Many workshop attendees suggested that right of way actions could begin earlier as part of normal project development.
- There is strong interest in improving communication and coordination with utility companies.
- Cities and counties are interested in aiding corridor preservation efforts through the use of local land use controls.
- State, city, and county planners need to communicate their plans with each other and with utilities and land developers.
- Official maps are probably most valuable tool for communicating the plan for the State's transportation system.

E. Corridor Preservation Techniques Applicable to South Dakota

A comprehensive review of available corridor preservation tools and techniques was conducted based on an examination of approaches used by other state departments of transportation.

The tools and techniques fall under the following major categories:

- Corridor identification and planning approaches.
- Techniques for early property acquisition.
- Techniques to acquire less than fee-simple property rights.
- Land use regulation techniques.

Guidance was offered for applicability of these tools within South Dakota's existing legal and institutional framework.

1. Corridor Identification and Planning Approaches

The following summarizes corridor identification and planning techniques.

Technique	Description	Applicability to South Dakota
Corridors identified and designated through long range planning	Many states identify and designate protection corridors through long range planning efforts, in many cases linked to the federal requirement to produce a statewide long range transportation plan.	Currently SDDOT projects are identified based on the Pavement Management System (PMS), with capacity issues addressed as they become critical. Long range planning to identify and designate corridors would require longer range planning beyond the five-year Statewide Transportation Improvement Program (STIP). The identification of corridors for future expansion should be integrated with planning by local governments and Metropolitan Planning Organizations (MPOs).
Corridors selected on an individual project basis	Some states that do not have a program to identify and designate corridors for protection instead select corridors on an individual project basis.	While some states have been successful at conducting corridor preservation efforts on an individual project basis, the difficulty of overcoming the lack of an overall cohesive plan are often greater than the flexibility gained by lack of a formal program.
Corridors adopted under a Map Act	A transportation corridor Official Map Act allows local governments and the state to file a corridor for protection in order to preserve future right of way for priority highway projects. A Map Act allows cities to adopt an official map for this purpose.	Official mapping, either as a corridor development notification and/or moratorium tool would require enabling legislation in South Dakota. However, using maps purely as an information and communication tool would not require legislative change but would require undertaking the necessary long-term capacity planning to develop maps of future expansion corridors.

Formalizing corridor preservation at SDDOT will require funding for corridor management, planning, and advanced property acquisition actions. These activities will need to be programmed in the STIP, or otherwise be funded as a budget item. Some property actions can be federalized once a project agreement is established (for example, early acquisition); however, state funds must be available to purchase and carry the property until a project agreement is established and the funds reimbursed.

2. Techniques for Early Property Acquisition

The following summarizes techniques for acquiring property at an earlier stage in the project delivery process.

Technique	Description	Applicability to South Dakota
Protective Purchase	Advance acquisition of one or a limited number of properties to prevent imminent development or increased cost.	South Dakota presently acquires property through protective purchase, but not on a programmatic basis. Protective purchase has potential for greater use in the state. A process of identifying the circumstances of imminent development or increased cost would need to be developed in order to use protective purchase on a wider scale.
Hardship Acquisition	Advance acquisition of one or a limited number of properties to relieve distress circumstances relating to health, safety, financial hardship or inability to sell because of public knowledge of the pending project.	Hardship acquisition likely has limited value for corridor preservation in South Dakota. For a hardship acquisition to be initiated requires owners to advise SDDOT of a specific hardship circumstance. This technique may be useful on an opportunity basis but not programmatically as a corridor preservation method.
Early Acquisition	Property acquisition before federal approval of project. State DOT may apply value of early acquired property to state share of project cost after federal project agreement.	Early acquisition (Section 1301 of TEA-21) has not been used by SDDOT. State involvement in land use planning and up front funding requirements may be issues in the decision not to use this acquisition technique. This technique has potential for use in South Dakota and should be explored.
Early Acquisition of Total Takes	Design division identifies definite acquisitions early, such as properties that are on all alignments which will be considered in planning and environmental studies. Right of Way focuses on acquiring rights on targeted parcels.	Early acquisition of total takes has low potential for corridor preservation in South Dakota. The requirement that the properties are on all alignments that will be considered in planning is often a restricting factor in application of this acquisition technique.
Donations	Donations of real estate property rights are used by many states in varying degrees to purchase right of way. The limiting factors on federal projects are that owners must be advised of their right to have property appraised and to be paid fair market value. Also, coercive tactics are prohibited in requesting donations.	SDDOT now accepts donations, if offered, and usually after advising the owner of the right to have the property appraised and the right to receive compensation. The benefits of donation are not well understood by property owners. The potential for use under a corridor preservation program may be improved if there were expanded public information.

3. Techniques to Acquire Less Than Fee-Simple Property Rights

The following summarizes techniques to acquire less than fee-simple property rights as part of an advance acquisition strategy.

Technique	Description	Applicability to South Dakota
Options	Options are generally contracts that give the agency the right to purchase the property at a later date. "Right of first refusal" gives the public agency the first chance to purchase the property if and when the landowner decides to sell.	South Dakota has used right of first refusal on a limited basis. This technique has potential for greater use in corridor preservation.
Purchase of Development Rights (Easements)	Easements are a method through which the state or other government agency can purchase a landowner's development rights to a parcel. Under this agreement, the landowner retains title to the land, but is not allowed to develop it or make significant improvements.	The purchase of restrictive easements is worthy of further consideration as a corridor preservation method in South Dakota; however there may be legislative obstacles. SDDOT is limited by statute to purchase only land required for the transportation project.
Property Exchange	Highway agencies control rights to real estate which are not needed for transportation use. These rights might be used to exchange with owners to maximize total property value and utility, or the value of other property, while protecting transportation corridors from incompatible use.	Property exchanges have been done in South Dakota on a very limited basis with property already owned by the Department. This technique does have practical potential for broader use; however the legal authority would have to be clarified.
Access Management Regulation	The DOT negotiates access alternatives that will satisfy access management and corridor protection objectives, and optimize after value and utility of remaining property.	South Dakota is developing its access management program. There is potential for coordinating access management with property acquisition to advance corridor preservation.

4. Land Use Regulation Techniques

The following summarizes the land use regulation techniques that local jurisdictions can exercise to support corridor preservation.

Technique	Description	Applicability to South Dakota
Setback Regulations	Setback regulations prohibit construction of any building or large structure within a certain distance of a landowner’s property line, and are designed to promote aesthetic qualities and public safety.	Setback requirements have potential applications in reserving land for future highway expansion in South Dakota. They are most useful along routes where minimal additional right of way will be required. Widespread use of setback regulations in corridor preservation is most likely not feasible. If such regulations do not require large tracts of land and if interim uses are allowed, limited application of setback requirements may be useful in preserving right of way for future highway widening.
Site Plan Review and Subdivision Controls	As part of their land use regulation powers, local governments are allowed to oversee the subdivision and development process so that growth occurs in a manner that assures adequate infrastructure and access.	Site plan reviews and subdivision controls can be most useful to corridor preservation efforts when large-scale developments are involved. Landowners with large amounts of property may be more inclined and more able to compromise and cooperate with corridor preservation efforts. Compromise and cooperation are key because taking of property issues arise if compliance with corridor preservation objectives is required for development approval.
Conditional Use Permits and Interim Uses	In most counties and municipalities, procedures exist for landowners to apply for variances and exceptions to local land use regulations. One particular type of variance with applications to corridor preservation programs is the conditional use permit, which allows a particular land use as an exception to existing zoning regulations.	Interim uses are attractive for highway routes that are some years away from construction. If funding is not available to acquire key parcels, low-intensity interim uses can preserve the right of way in an undeveloped state. This can reduce the need for expensive condemnation and acquisition of developed parcels immediately prior to construction.
Dedications and Exactions	Requires dedication of property rights that will protect corridor in return for access that will optimize property value (and comply with access management rules).	Dedications and exactions have high potential use in combination with access management in South Dakota. This method is necessarily tied to a local permitting authority and will be most effective in urban situations where land faces development pressures.
Transfer of Development Rights and Density Transfers	Government entities can provide incentives for developers and landowners to participate in corridor preservation programs using the transfer of development rights and density transfers.	Transfer of development rights and density transfers would only be applicable if high growth urban areas of South Dakota. This method relies on local government cooperation and can be difficult to administer.

Technique	Description	Applicability to South Dakota
Zoning Ordinances	In terms of corridor preservation, zoning ordinances are not corridor preservation tools, but do allow local government agencies to regulate intensity of land use. While land cannot be “zoned” for a highway, zoning ordinances allow local agencies to preserve land in an undeveloped state for later construction of new or expansion of existing transportation corridors.	Zoning ordinances can be used to encourage low-intensity land use and thereby promote corridor preservation activities; however there is little zoning in South Dakota.

F. Environmental Issues in Corridor Preservation

In order to conduct corridor preservation activities without jeopardizing future federal funding, changes in the project development process may be necessary. Corridor preservation along proposed future alignments may be conducted many years before funding becomes available and construction begins. Under most current practices, completion of an Environmental Impact Statement (EIS) or other detailed environmental review is undertaken only after funding is secured and the construction is within a few years of commencement. In order to make corridor preservation efforts successful within the framework of existing environmental regulations, two best practice approaches can be used:

- **Emphasis on greater planning level environmental review.** To ensure future eligibility for federal funding, some environmental review should take place before corridor preservation activities are undertaken. This work should most likely take place at the planning stage as future transportation needs are analyzed and identified. Sufficient analysis should be conducted to select a suitable alignment.
- **Staging of the environmental process.** The second method of reconciling environmental requirements with corridor preservation objectives is to complete the environmental process in stages. This method differs from the planning-level environmental review in that the official NEPA compliance process is started at the corridor planning stage. Sufficient steps are taken to select a preferred alignment and secure preliminary environmental approval for that alignment.

In addition, early collaboration with resource agencies at the state and federal level can be one of the most effective methods of selecting a preferred corridor alternative that minimizes environmental impacts.

I. Introduction



This report presents the results and recommendations of an assessment of techniques for corridor preservation in South Dakota. Corridor preservation has become an important issue for South Dakota's transportation planning and project delivery process. As the State's population and economy grow, the demand for improved transportation infrastructure increases. To protect potential transportation corridors from increasing developmental pressures and to preserve these alignments for future use, corridor preservation techniques must be applied. This report provides a comprehensive assessment of the benefits from corridor preservation and available corridor preservation tools, and offers practical guidance for the application of these tools in South Dakota.

This report serves as a reference for developing an effective corridor preservation plan for improvement projects throughout South Dakota's transportation system. It will be a useful document for transportation planners, engineers, environmental and right of way staff, along with private utility providers and local government planners and decision-makers.

A. Background and Purpose

Corridor preservation focuses primarily on proactive right of way preservation programs and strategies to ensure that acquisition of property rights along highway corridors occurs well in advance of capital improvement design concepts. Addressing property needs early in the project development process reduces construction delays and right of way costs. Earlier property acquisition can also reduce utility relocation delays by securing permissions and allowing utilities to accomplish relocation prior to construction.

Corridor preservation requires that property interest requirements be identified earlier in the planning or project development process than currently and that a mechanism exists to determine the conditions under which early acquisition and protection of property rights is appropriate. A multijurisdictional approach is required so that state statutes and local ordinances support a proactive corridor preservation approach. Tools and procedures are required to determine the level of design detail needed to prove necessity for corridor preservation, to ensure that the public consultation and environmental processes are addressed, and to ensure that all feasible alternatives are considered.

The principal purpose of this assessment of techniques for corridor preservation in South Dakota is to provide the South Dakota Department of Transportation (SDDOT) with the policies, tools, and multijurisdictional support required to establish an active approach to corridor preservation. This study draws on research and experience in other states to develop the economic justification for corridor preservation of South Dakota's principal transportation corridors.

The policies, tools, and multijurisdictional support developed through the study are intended to address the following important corridor preservation goals:

- **Preserving existing infrastructure investments.** Corridor preservation preserves the capability of highways to perform the function that they were built for. It also includes preserving the capability to add capacity in these corridors to meet future travel demand.
- **Establishing a proactive planning level approach to right of way management.** SDDOT has not formally employed corridor planning or corridor preservation as a strategy for preserving the capability to meet future travel demand growth and to maintain the functionality of existing corridors.
- **Reducing right of way acquisition costs.** As development encroaches on transportation corridors that need to be expanded or developed in the future, the costs of property for right of way increase dramatically. When SDDOT owns right of way or other property rights based on earlier rural land uses, the costs are much less.
- **Reducing delivery time, risks, and costs arising from project delays.** Property acquisition is a key element in project delivery. Further, when combined with the environmental process, it introduces considerable uncertainty and risk to construction project schedules and budgets.
- **Avoiding environmental impacts.** The use of corridor preservation may result in avoiding environmental impact by protecting a location choice that otherwise would be removed from consideration due to increased cost or dislocation.
- **Providing consistency and predictability regarding corridor management.** At present, in corridors that are experiencing or likely to experience growth and developmental pressures, right of way and corridor management decisions are made on a case by case basis, rather than by consistently applying a comprehensive policy or corridor management planning approach.
- **Improving coordination with local government.** Effective corridor management, a key component of successful corridor preservation in South Dakota, involves the systematic coordination between state and local jurisdictions in affected corridors.
- **Coordinating and implementing South Dakota's access management initiatives.** SDDOT in partnership with local jurisdictions has been strengthening access management policies and procedures. This implementation will provide strong support for corridor preservation.

1. Objectives

The principal objective of the assessment of techniques for corridor preservation in South Dakota is to provide SDDOT with the policies, tools, and multijurisdictional support required to establish a proactive approach to corridor preservation. The purpose of the review is to recommend policies, tools and procedures that will:

- **Reflect the diversity of transportation conditions in South Dakota.** There are large differences in transportation conditions and stakeholder issues among the regions in South Dakota.
- **Address South Dakota's institutional and policy environment.** A strong technical argument can be made for enhancing corridor preservation in South Dakota's higher volume corridors. However, a careful and deliberate approach that addresses institutional and policy concerns is essential.
- **Explain the benefits – develop the economic justification for corridor preservation.** New highways and reconstruction are now very expensive and can involve lengthy contentious planning and public processes. This project, by demonstrating potential financial benefits, can establish the basis for SDDOT to use corridor preservation as a cost-effective tool.
- **Navigate federal and state funding constraints.** There are a number of barriers to implementing a corridor preservation program. These include federal constraints relating to the requirements of the environmental process and funding for right of way acquisition during project delivery.
- **Draw creatively on lessons learned in other states.** It is important that we learn from experience elsewhere and focus on which approaches have been most successful in meeting corridor preservation goals.
- **Assess what can be accomplished under the existing legal authority.** An important starting point for the project is to determine exactly what can and cannot be accomplished using existing statutory authority and rule-making ability.
- **Communicate the purpose and benefits of corridor preservation.** The implementation of corridor preservation recommendations will require increased stakeholder understanding of what corridor preservation is, the benefits, and what it would look like in practice.
- **Set institutional/organizational roles and responsibilities.** Corridor preservation at SDDOT will require the cross-functional participation from planning, programming, right of way, preconstruction, and the involvement of region offices and local jurisdictions.

The objectives of the study as specified in the project's scope of work are listed in Exhibit I-1: Project Objectives on the following page.

Exhibit I–1: Project Objectives

1. To assess the strengths and weaknesses of current statutes, regulations, ordinances, policies, and procedures employed to acquire property interests necessary for constructing and preserving the function of transportation corridors.
2. To recommend a “toolkit” of practical, best practice techniques – including statutes, regulations, ordinances, policies, and procedures – that State and local agencies in South Dakota can use to more effectively manage property interests.
3. To recommend and assess the associated resource requirements of changes to agency organization, institutional roles, policies, and procedures that will improve public agencies’ ability to preserve the function of transportation corridors.
4. To assess the benefits, resource needs, and other costs to public agencies and private interests of systematic corridor preservation.

Achievement of these goals requires the development of materials that can communicate the benefits of improved corridor preservation and foster the cooperation of state, regional, and local interests. Broad-based stakeholder understanding of the benefits from improved corridor preservation practices was also an important success factor for the project.

2. Study tasks

The project objectives were addressed through a number of tasks. The tasks specified in the original request for proposals are listed and the steps taken to perform them described.

Task 1. Meet with the project’s technical panel to review the project’s scope and work plan.

The consultant project manager and the lead technical analyst met with the technical panel to identify their priorities and objectives for the project.

Task 2. Through interviews with public officials, landowners, and developers, and through reviews of historical records, characterize the financial impacts on public and private entities of SDDOT’s current corridor preservation practices.

The availability of data from which to quantify the impacts on project costs was assessed including the schedules and design outcomes from current procedures and practices. The quantification addressed increased property acquisition costs that arise when developed land is acquired.

Task 3. Identify and analyze the strengths and weaknesses of applicable statutes, regulations, ordinances, policies, and procedures governing acquisition and property interests employed for corridor preservation and utility relocation at the state and local levels.

Fact-finding interviews were conducted with SDDOT employees and local jurisdictions to identify and analyze the strengths and weaknesses of state laws, local ordinances, and other regulations governing the acquisition of property interests.

Task 4. Arrange and conduct regional workshops with public officials, developers, and utilities to identify issues and concerns regarding development, utility relocation, and management of transportation corridors.

Four well-attended regional workshops were conducted with stakeholders involved in or with an interest in corridor preservation. Issues and concerns regarding corridor preservation were discussed, as well as the applicability of various corridor preservation approaches for South Dakota. Four workshops were also held with SDDOT region offices.

Task 5. Describe and evaluate the applicability to South Dakota of methods employed in other states for corridor preservation and utility easements.

A review of the authority, tools, procedures, and business practices used in other states was conducted to determine which have the potential to improve South Dakota practice.

Task 6. Submit a technical memorandum describing the results of Tasks 1–5 and outlining concepts for strengthening South Dakota’s corridor preservation practices for approval of the project’s technical panel.

A technical memorandum was issued outlining the strengths, weaknesses, and applicability of various corridor preservation techniques for South Dakota. The ability of the techniques to work within the existing legal framework of the State formed part of the analysis.

Task 7. Recommend a comprehensive and detailed set of tools that can be employed at the state and local level for corridor preservation and utility relocation, and recommend institutional and process-related changes needed to effectively employ these tools.

“Tool kit” components were evaluated based on criteria to ensure applicability to South Dakota. Potential implementation approaches were identified along with the responsibilities and estimated the level of effort necessary to initiate and sustain the new approaches.

Task 8. Assess the benefits and costs associated with the systematic application of the recommended tools for corridor preservation and utility relocation.

Case study analysis was conducted in certain corridors to quantify the increased property-related costs arising from right of way acquisition and utility relocation for projects taking place areas with changing land uses.

Task 9. By October 1, 2001 identify and define action issues that should be addressed in South Dakota's 2002 legislative session.

A technical memorandum that outlined the direction for recommendations and addressed legislative action issues was prepared and presented to the Technical Panel.

Task 10. Prepare documents that can be used for education and outreach to state and local agencies, developers, business interests, and the public at large.

A sample brochure on corridor preservation has been prepared and can be used to support implementation. In addition, several case studies were prepared.

Task 11. Prepare a final report and executive summary of the research methodology, findings, conclusions, and recommendations.

A draft final report and executive summary were submitted to the Technical Panel for review and subsequently finalized based on comments received.

Task 12. Make an executive presentation to the SDDOT Research Review Board at the conclusion of the project.

An executive presentation was made to SDDOT's Research Review Board.

B. Methodology

The methodology followed is summarized below:

1. Assess the strengths and weaknesses of current statutes, regulations, ordinances, policies, and procedures

Our research plan accomplished this objective through the following steps:

- Conducted fact-finding interviews with SDDOT employees and local jurisdictions to identify state laws, local ordinances, and other regulations governing the acquisition of property interests.
- Determined how federal law and rules are interpreted and applied in the project delivery process in South Dakota.
- Conducted interviews and round-table meetings with SDDOT employees involved in project delivery to document the current procedures, obtain their perspective on the strengths and weaknesses of current procedures, determine

organizational roles and responsibilities, and identify actual practices. This included preconstruction, right of way managers and agents, and regional personnel, among others.

- Assessed the availability of data from which to quantify the impacts on project costs, schedules, and design outcomes from current procedures and practices. The quantification addressed increased property acquisition costs that arise when developed land is acquired.
- Analyzed the results of the analysis of current procedures, practices and outcomes to provide input to address the other study objectives.
- Through the involvement of different SDDOT disciplines and managers, issue identification interviews, and by conducting workshops, ensured that the recommended approach is understood, acceptable, and ready to implement.

2. Recommend a “Tool Kit” of practical, best-practice techniques – including statutes, regulations, ordinances, policies, and procedures – for state and local agencies

Our research plan accomplished this objective through the following steps:

- Conducted a review of the authority, tools, procedures, and business practices used in other states that have the potential to improve South Dakota practice.
- Built on the survey and Synthesis Study 292: *Innovative Practices to Reduce Delivery Time for Right of Way in Project Development* conducted by O.R. Colan Associates¹ and prior surveys conducted by Dye Management Group, Inc. and Urbitran Associates, Inc.
- Evaluated “tool kit” components based on criteria that will ensure that they are applicable to South Dakota.
- Recognized that many of South Dakota’s cities and counties have limited staff resources and need practical tools applicable to them.

3. Recommend and assess the associated resource requirements of changes to agency organization, institutional roles, policies, and procedures

The different elements of the “tool kit” require various changes and involve costs to initiate and maintain. This objective involved identifying implementation roles, responsibilities, and approaches and then determining the resources required for implementation.

¹ *Innovative Practices to Reduce Delivery Time for Right of Way in Project Development: A Synthesis of Highway Practice*. National Cooperative Highway Research Program, Synthesis 292. Transportation Research Board–National Research Council. National Academy Press, 2000.

The following steps were undertaken to accomplish this objective:

- Identified potential implementation approaches and responsibilities.
- Estimated the level of effort necessary to initiate new approaches and then to sustain the approaches.
- Provided some level of prioritization because implementation will be resource constrained.

4. Assess the benefits, resource needs, and other costs of systematic corridor preservation

This objective was accomplished through the following steps:

- Identified and analyzed the costs of not changing current practices.
- Conducted case study analysis in certain corridors to quantify the increased property-related costs arising from right of way acquisition and utility relocation for projects taking place areas with changing land uses.
- Estimated the up-front costs of proactive property acquisition.

C. Organization of Work Products

The main body of this report is organized into the following chapters:

- II. Recommendations.** The recommended tool kit presented in this chapter will, if implemented, provide SDDOT with the policies, tools, and multijurisdictional support required to establish an active approach to corridor preservation.
- III. Corridor Preservation in South Dakota.** This chapter presents background to the project and current practices as they relate to planning, project delivery, utilities, and access management. Legal authority for corridor preservation and stakeholder support is also addressed.
- IV. Costs of Current Practices.** This chapter introduces the range of costs to be considered when evaluating the merits of corridor preservation, provides an aggregate level analysis of right of way and utility relocation costs and activities, and presents a case study approach to costs and benefits.
- V. Planning and Programmatic Approaches to Corridor Preservation.** This chapter provides an overview of processes used in 11 other states for identifying and planning corridors, as well as programmatic approaches for preserving and funding the identified corridors for future development.

VI. Corridor-Level Preservation Techniques Applicable to South Dakota. This chapter provides a comprehensive review of available corridor-level preservation tools and offers guidance for the application of these tools within South Dakota's existing legal environment and resources available to the implementing agencies.

VII. Environmental Issues in Corridor Preservation. This chapter addresses the important issue of environmental clearance for corridor preservation efforts and presents some practical approaches.

VIII. Intergovernmental Coordination and Public Involvement. This chapter outlines strategies for coordination, cooperation, and consultation amongst all stakeholders to ensure a successful corridor preservation program for South Dakota.

Each of these sections presents the findings and recommendations developed through the assessment of techniques for corridor preservation in South Dakota.

Appendix A: Glossary of Important Terms Relating to Corridor Preservation. This appendix presents useful definitions for common corridor preservation terminology.

Appendix B: Informational Workshops on Corridor Preservation. This appendix summarizes the results of four public and four SDDOT workshops held in Rapid City, Pierre, Aberdeen, and Mitchell in September and October of 2001.

Appendix C: Model Corridor Preservation Memorandum of Understanding with Local Jurisdictions. This appendix provides a model of what the Department could use to formalize corridor preservation efforts with local governments.

Appendix D: Draft Corridor Preservation Brochure. This appendix presents an example draft brochure that could be used as part of a communication strategy for implementation.

II. Recommendations



This chapter presents the project recommendations. These recommendations provide SDDOT with policies, tools, and multijurisdictional support required to establish an active approach to corridor preservation.

A. Recommendation 1: Adopt Corridor Preservation Policy

It is recommended that the South Dakota Department of Transportation adopt new corridor preservation policy. The recommendations specify the State's policy interest in preserving and protecting the State's transportation corridors that face development or expansion pressure currently or in the future. The intent is to provide a clear statement of policy goals for preservation of the highway corridors. These policies can provide guidance to SDDOT employees, local units of government, developers, and the general public on the desired level of corridor preservation.

1. Policy: Provide a consistent statewide approach to the management and preservation of key corridors on the state highway system

This policy recommends that SDDOT, in corridors that are experiencing or likely to experience growth and developmental pressures, make right of way and corridor management decisions by consistently applying a comprehensive policy or corridor management planning approach.

2. Policy: Protect the public's investment in the highway system by preserving and enhancing its functional integrity through effective corridor planning and access management

SDDOT in partnership with local jurisdictions has been strengthening access management policies and procedures. The Department's modern access management practices will provide a systematic means of balancing access needs from abutting properties with its responsibilities to ensure safe, efficient, and cost effective transportation for the traveling public. This implementation will provide strong support for corridor preservation.

3. Policy: Coordinate with local jurisdictions to ensure that preservation is addressed early in decisions affecting the development process

Local governments' land use decision-making goes through the development review process, sub-division review, site plan review, zoning, utility location, and other processes, which can impact on the functional integrity of transportation corridors.

Corridor management that involves the systematic coordination between state and local jurisdictions in affected corridors will be a key component of successful corridor preservation in South Dakota.

4. Policy: Improve coordination with utilities companies and integrate utility needs with corridor plans

This policy recognizes that early coordination and involvement of utilities is important to the development of corridor preservation strategies. Transportation corridor planning must consider service needs, facility requirements, the capital commitment, and construction resources that utilities will invest in the transportation corridor. Utilities are seen as having common interests with the transportation agency in protecting corridors. They, too, need to plan their facilities as far in advance as possible.

5. Policy: Provide advocacy, educational, and technical assistance to promote corridor preservation practices among local jurisdictions

This policy recognizes the importance of SDDOT's coordination with local units of government and provision of technical assistance to increase understanding of the benefits of the State's corridor preservation policy. The assistance will explain corridor preservation objectives and how local units of government can help to preserve corridors through their land use decisions.

6. Policy: Establish corridor plans working with local units of government

This policy recommends establishing corridor preservation plans in key corridors, with recommendations for their implementation. Their feasibility and effectiveness may vary for different situations or locations. For these reasons, it is necessary to develop protection strategies specific to each corridor and circumstance. These strategies should be developed in coordination with local government officials and documented in an official corridor preservation plan.

B. Recommendation 2: Establish Corridor Preservation Planning Procedures that Specify Preservation Corridors and Formalize SDDOT's Plan

Designating future highway expansion corridors for preservation will identify SDDOT's expansion needs. This will provide SDDOT and other jurisdictions a planning, communication, and coordination tool that identifies corridors in which highways will need expanding. The Department will be able to promote important corridor preservation goals, such as improving communication and coordination with local jurisdictions, landowners, developers, and utilities by undertaking planning activities to designate future expansion corridors for preservation.

1. Identify and designate priority corridors based on technically warranted expansion needs and other criteria

Corridors that require protection should be identified based on technical capacity and/or safety analysis along with other criteria to ensure that the Department's corridor preservation goals are accomplished. Some considerations for designating future expansion corridors for preservation are presented below:

- **Capacity and/or safety issues affecting the corridor.** Long-term traffic forecasting (beyond five years) is needed to determine areas of future deficiency from both a capacity and a safety perspective. This analysis should be the principal driver in the selection of corridors for preservation. Needs analysis should be conducted as part of the long-range statewide planning process to identify these preservation corridors. The process should consider five-year, 10-year, 15-year, and 20-year preservation corridors, for example, and designate potential preservation corridors by corridor, intersection, and functional class. It should be performed in coordination with local jurisdictions to account for land use plans and development trends.
- **Importance of the corridor.** Corridor planning should consider the importance of the corridor(s) to the system needed to serve South Dakota's development pattern over the next, five, ten, fifteen, twenty years. This will involve examining the periodic traffic projections and analysis of future deficiencies recommended above, continued monitoring of regional population and economic projections, and keeping track of major development proposals (public and private), project approvals, and construction permits within the affected communities.
- **Immediacy of development.** This is a second task for a monitoring system. It requires firm links between SDDOT, Metropolitan Planning Organization (MPO), and local development review agencies responsible for processing zoning and subdivision permits. Rapid land value increases in the vicinity of a corridor as the result of speculation or development may soon make right of way acquisition both costly and difficult. If there is a clear and present danger that land for the right of way will soon be developed or will present severe cost constraints at ultimate acquisition, SDDOT should give serious consideration to early protective action.
- **Risk of foreclosing options.** Loss of land for transportation use is one important issue. The consequences of a poorly performing transportation system on the area's economic prosperity, to environmental protection, and community stability should be considered. If development occurs in a designated corridor, then options for right of way relatively free of environmental sensitivities may be foreclosed. Economic concerns figure prominently as well, and the economic impact of not producing the facility as conceived must be assessed. Risk should

be weighed where any other alternative would generate greater displacement of developed businesses and residents.

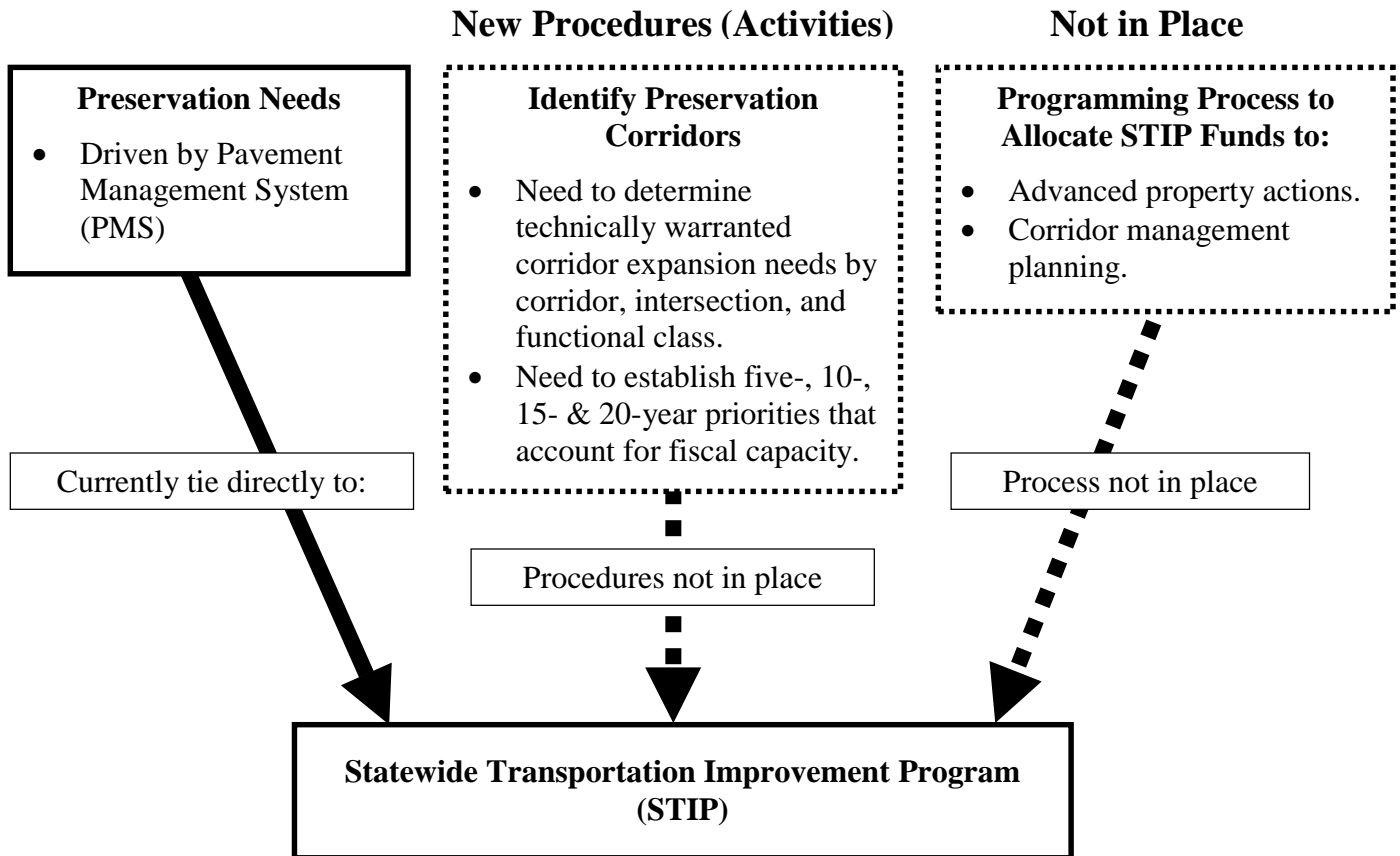
- **Opportunity to prevent loss of the corridor.** Another factor to weigh is the relative cost-effectiveness of protective action. Most states have concluded that the primary opportunity for preservation lies in corridors whose surroundings are designated for development but are still at a stage where much vacant or agricultural land exists, and may attract developers seeking regulatory approval who can be induced/required to cooperate in dedicating or, at least, reserving right of way.
- **Strength of local government support.** One of the important lessons learned from other states is the absolute necessity for local community cooperation and involvement in the corridor preservation process. The SDDOT can not be successful without local jurisdiction participation. Corridor preservation works only if the affected jurisdictions are full parties to the effort. Except for its powers to purchase (limited by available capital funds) and approve or deny access permits, SDDOT lacks most of the tools available to local jurisdictions. These include authority to regulate land use and development and the negotiating leverage this authority confers. Community support from elected officials, planning and development review agencies, and citizens is a prerequisite for successful corridor preservation projects. Before deciding to proceed with corridor preservation action, the assessment of such support, or its potential, is one of the most important evaluations for SDDOT to make.

The identification of corridors for future expansion should be integrated with access planning by local governments and MPOs. An emerging issue is the necessity to coordinate with county governments beyond the two-mile urban area boundaries to achieve overall goals for preservation of particular corridors.

The designation of expansion corridors for preservation should have some fiscal constraint. The methodology developed needs to reflect what expansion corridors can be developed within reasonable fiscal expectations for the future. The Department needs to focus on those corridors that will be developed in the near to long term. This will be determined by state highway planning priorities and funding.

To implement this recommendation, longer range planning beyond the five-year Statewide Transportation Improvement Program (STIP) is required to address corridor preservation. It further requires SDDOT to enhance its statewide planning and STIP process to define expansion/new capacity needs and program corridor preservation activities. This issue is depicted in Exhibit II-1. Statewide forecasting of traffic volumes which incorporates land use plans, development trends, and other socioeconomic and demographic factors is one of the most important determinants for selecting the corridors to preserve and enhance. This type of forecasting should be undertaken in coordination with local jurisdictions to ensure that knowledge of local issues is incorporated in the forecasting effort.

Exhibit II–1: Identification, Planning, and Programming of Corridor Expansion Needs



Once preservation corridors have been identified, they should be mapped as discussed in Recommendation 3. Mapping will serve as an effective internal and external tool to communicate the Department’s plan for preservation corridors and coordinate with local government, developers, and utility companies.

2. For future new alignments, conduct feasibility/location studies as a “bridge” between planning and project development

In some situations, it may be possible to determine that a future new transportation corridor needs protecting, how it should be protected, and when it should be protected, using only that information typically available from the transportation planning process. In many situations, however, additional detail will be needed. This detail can be developed through the use of feasibility studies to bridge the gap between planning and project development. These details are necessary to determine:

- Whether it is, in fact, feasible from an engineering and environmental standpoint to put the proposed facility in the corridor indicated.
- The range of optional alignments on which the facility could be located and to what degree they are threatened by development.

The engineering and environmental issues must be considered jointly, because each affects the other, and either can render the proposed improvement infeasible. All issues do not have to be resolved on the potential alignments but, enough detail must be developed to determine that the issues are resolvable and the alignments usable.²

Given the recommended statewide forecasting of traffic volumes, it may be possible to determine that future new transportation corridors need protecting ten or more years in advance of construction. It may be desirable to initiate feasibility/location studies as early as ten years in advance construction, using the recommended staged environmental review approach in Recommendation 8.

3. Establish a funding and programming mechanism for corridor management planning and advanced property acquisition actions

Formalizing corridor preservation at SDDOT will require funding for corridor management planning and advanced property acquisition actions. These activities will need to be programmed in the STIP, or otherwise be funded as a budget item. Some property actions can be federalized once a project agreement is established (for example, early acquisition), however, state funds must be available to purchase and carry the property until a project agreement is established and the funds reimbursed. In addition, funding to proceed with any less than fee simple actions to obtain property rights will require a funding source.

The Department's State Planning & Research (SP&R) funds are a logical source for conducting corridor planning activities such as statewide forecasting of traffic volumes, corridor plans, and feasibility/location studies. Funds for early property actions (state funds used prior to a federal project agreement) and funding to proceed with any less than fee simple actions will likely require a different source.

C. Recommendation 3: Map Target Corridors for Protection

Once corridors for future expansion are identified, based on the recommendations above, they should be placed on maps for internal and public information. These maps would designate which corridors will be the focus of the expansion program. Separate maps could

² The New Mexico Department of Transportation has prepared a detailed manual on the preparation of location studies called *Location Study Procedures: A Guidebook for Alignment and Corridor Studies*, August 2000. This is a valuable resource for preparation of these types of studies. The report is available on the Worldwide Web at: <http://www.nmshtd.state.nm.us/general/PDE/default.htm>.

be developed for five-year, 10-year, 15-year, and 20-year preservation corridors, for example, to designate preservation corridors by corridor, intersection, and functional class.

The concept of mapping can take various forms as follows:

- The maps can be used purely as an information and communication tool.
- The maps can be used as a tool that requires local jurisdictions to inform SDDOT of development requests.
- The maps can be used as a tool for local governments to impose setbacks and a development moratorium along the preservation corridor during the project development phase.

The latter options would require enabling legislation. Whether corridor maps are used as an information and communication tool, or have stronger authority, it is important that the maps do not set unrealistic expectations of what the Department can deliver. The maps will be made public and, therefore, will be viewed as the future plan. For maps that relate to new corridors or expanded corridors fifteen years or more in the future, the Department will want to make it clear that they represent its intentions and not necessarily what will happen with certainty (i.e., what the Department hopes to achieve subject to funding, environmental review, and so on). Maps that are five and 10 years in the future should be portrayed as representing a higher level of expectation of advancing.

As part of an overall proactive corridor management approach, the Department should combine corridor preservation mapping with its access control maps currently being prepared.

Three different options for preparing corridor maps are presented below, based on increasing levels of authority.

1. Recommended Option: Mapping as an internal and external communication tool

A map designating which corridors will be the focus of the expansion program can provide a means through which the Department could promote corridor preservation activities at the State level. The map would provide the public notice highway expansion plans, and also promote public involvement and coordination with local government, property owners, developers, and utilities in the transportation planning process.

No enabling legislation is required to produce maps indicating future system expansion plans. It must be made clear, however, that they represent the intended actions by the Department for existing corridors and that any future new alignments mapped have been through the required public consultation and environmental review steps.

2. Future Option #1: Mapping as a development notification tool

An extension of the use of a map designating future corridors for expansion and future new alignments would be to obtain an administrative rule requiring that SDDOT be notified of any new land recording (consolidation, platting, etc.) along a preserved corridor. This would allow the Department to react and respond to development requests. SDDOT is already working with local jurisdictions to review development plans on abutting land. In Wisconsin, this type of rule was coupled with a Statewide mandate that localities conduct corridor studies to identify priority corridors and address preservation issues. These studies have largely emphasized access control and management as a tool to implementing corridor preservation. Wisconsin relies on local plans that designate access control and management to prioritize and implement their corridor preservation efforts.

3. Future Option #2: Mapping as a tool to impose setbacks and development moratorium for state highway preservation corridors

This option is one form of “official mapping” or “map of reservation.” Statutory authority for filing maps of reservation must be specifically granted to a transportation agency by the state legislature. Public hearings must be conducted before a map can be filed, and maps are generally only valid for a few years. This makes the use of maps in long-term preservation activities difficult. Although maps can be filed at the state level, they must also be adopted on general plans at the local level, and local authorities must be willing to refer development applications to the state for review.

Where existing and future preservation corridors have been officially mapped, the map will often establish setbacks for new structures. This is a way to ensure that incompatible development be controlled within required future right of way limits.

Official maps do not prevent development, but do provide a moratorium or grace period during which transportation agencies must commit to acquisition of property in question or allow development to proceed. This also provides a period for negotiation of an acceptable site plan with the developer that will permit development while still accommodating transportation facility.

Perhaps the most significant limitation to the use of official maps or maps of reservation is the potential for “taking” of property claims. If a map severely limits a landowner’s use of his property for an extended period of time, an unlawful taking may occur. In addition, the designation of a parcel for use as future highway right of way may depress the value of a landowner’s property or make the land difficult to sell, which present potential taking of property concerns. Since no compensation is paid to affected property owners at the time a map is filed, corridor mapping may be found to violate due process laws. In general, courts have held that maps of reservation are acceptable as long as:

- They are valid for a limited time.
- The designation serves a valid public purpose.
- Maps are based on comprehensive planning and coordinated with local master plans.
- Reasonable interim uses are allowed.
- Procedures for acquisition are provided to back up maps and alleviate hardship to property owners.
- Development is allowed to proceed if the state chooses not to acquire the property.

While meeting these guidelines will not prevent claims of unlawful taking, they may provide some legal support if challenges arise.

D. Recommendation 4: Utilize Early Acquisition, Less Than Fee Simple, and Other Techniques to Protect Corridors Prior to Programming in the STIP

The Department may be able to achieve significant project cost savings and prevent incompatible development by utilizing the FHWA early acquisition provision and employing less than fee simple and other techniques to obtain property rights. If these actions can be taken before an individual project is programmed in the STIP the potential for increased cost savings and minimization of incompatible development is increased. This of course would require that some project scoping be conducted to identify the corridor project limits with some level of confidence.

Decisions involving early acquisition of property, whether the full fee simple title or lesser interests described later, must be initiated early in the planning process and coordinated carefully through planning, project development, environmental, and right of way activities. Early property acquisition decisions cannot be effectively made by the right of way section unless the planning and project development processes have addressed basic issues such as expected and probable project right of way limits, and typical design, among others.

1. Utilize TEA-21 early acquisition provisions

Property acquisition costs incurred by a state before executing a federal project agreement are eligible for use as either a credit for the non-federal share of project cost or reimbursement for acquisition as a project cost under certain conditions outlined below:

a. Credit for the non-federal share of project cost

A state may acquire real property before FHWA authorizes project acquisition. The cost can not be federally reimbursed, but South Dakota may apply the cost to the non-federal share of project cost if the following conditions are met:

- Property is acquired in compliance with South Dakota statutes.
- The property is not of a type described in 23 USC 138. These are commonly referred to as “4f” property and include land from a public park, recreation area, wildlife and waterfowl refuge or a historic site of national, state or local significance.
- Acquisition and related relocation is performed in compliance with the Uniform Relocation and Real Property Acquisition Policies Act of 1970 (as amended).
- Acquisition is in compliance with the requirements of Title VI of the Civil Rights Act of 1964.
- FHWA concurs that the acquisition did not influence the environmental assessment for the project, including the need to construct the project or the project design or location.

The amount of the credit will be the cost of the early acquired property unless FHWA determines there has been a significant lapse of time, or increases in real estate values between the date of acquisition and the date of credit. If either of these conditions apply the amount of the credit may be the current fair market value at the time of the credit as supported by a real estate appraisal. In a corridor experiencing rapid development, SDDOT may in fact realize a capital gain, further leveraging state funds.

b. Reimbursement for acquisition as a project cost

If the early acquisition (acquired before FHWA project authorization to acquire) meets the above requirements, and in addition meets the following requirements, the acquisition will be reimbursable as a project cost (normal federal aid pro rata reimbursement):

- The State of South Dakota has a mandatory, comprehensive and coordinated land use, environmental and transportation planning process under State law and the acquisition is certified by the Governor before that acquisition as consistent with the State Plans per 23 USC 108(c)(2)(C).
- The acquisition is certified in advance by the Governor as being in compliance with the State transportation planning process required by 23 USC 135.

- The State (South Dakota) must obtain concurrence from the EPA in the environmental determination in 1.5 above.

Very few states, including South Dakota, have mandatory comprehensive land use planning under state law, and no states were identified as using the early acquisition credit provisions for reimbursement for acquisition as a project cost. Several states have, however, met the requirements for credit for the non-federal share of project cost. This provision should be explored to the maximum extent by SDDOT.

FHWA has not provided detailed guidance or interpretation of the TEA-21 provision on mandatory comprehensive land use planning. If South Dakota statutes regarding planning are in any respect complementary to the federal provisions, there may be a basis for exploring use of the early acquisition to obtain reimbursement for acquisition as a project cost with FHWA.

2. Acquire less than fee simple interests and other property rights where feasible

Purchase of property by fee simple title has certain disadvantages including:

- High capital costs.
- National Environmental Policy Act (NEPA) compliance and public hearings required unless categorical exclusion (CE) is in effect.
- Property management concerns.

To avoid some of the disadvantages associated with acquisition of fee simple title in advance of actual construction need, some departments of transportation have experimented with the acquisition of lesser interests, primarily in the nature of easements and purchase of rights such as options to purchase. SDDOT has had little experience with the application of these techniques; however, some counties in the state have purchased easements.

The core task of the right of way function within SDDOT is to acquire all of the property rights necessary for construction, operation, and maintenance of the highway facility. This normally requires acquisition of the full “bundle” of rights represented by unencumbered fee simple interest. However, protection of a highway corridor from incompatible development does not normally require acquisition of fee simple interest. It is good public policy to acquire only rights minimally necessary to protect the corridor for the time period needed for the project to develop. This is least burdensome on the owner, has least affect on potential development, and is least costly to the State. It is also least likely to be perceived as a prior commitment by the agency to a project location under study.

A potential advantage to SDDOT of less than fee simple corridor preservation methods is that the presumed low cost allows effective use of state funds for protective measures before federal acquisition is authorized. Subsequent full acquisition of property needed for right of way may be reimbursable. This should be explored with FHWA under various project circumstances.

The topic of easements as a corridor preservation approach was discussed at an October 16, 2001 national teleconference sponsored by Center for Transportation and the Environment at North Carolina State University. Comments from panelists from Florida, California, Wisconsin, and Oregon DOTs indicated this approach is not used for corridor preservation in these states. Florida's experience is that courts have awarded a high percent of full fee value for acquisition of easements. This has deterred use as a corridor preservation method.

SDDOT has authority to acquire property for future use and may acquire excess lands (Right of Way Manual Part A, 1.29). The Department acquires temporary and permanent easements for special highway needs. These are the basic authorities needed to acquire various protective easements. Following are several forms of less than fee property interests that should be considered as contributing to corridor preservation:

a. Purchase of development rights

The purchase development rights (preventive easement) is a targeted technique preventing property development not compatible with future transportation plans. This method can be designed to impose the least restriction on use of the property, and its cost is limited to the value of the restriction. Development rights may be purchased as a permanent easement pending the acquisition of full property rights or a temporary preventive easement may be acquired, that will expire at a determined time or event (such as selection of an alternative alignment).

Purchase of development rights is used by conservation organizations to protect land containing natural or cultural resources from incompatible use.³ An easement is purchased that allows the owner (or successors in title) any legal use of the property except as set forth as being injurious to the protected resource.

Purchase of development rights is not widely used by state departments of transportation as a corridor preservation technique. However, New Hampshire has enabling legislation that authorizes purchase of temporary development

³ The National Park Service Web site: <http://www2.cr.nps.gov/tps/tax/easement.htm> provides information on preservation easements.

The US Fish and Wildlife Service Web site <http://www.r6.fws.gov/pfw/r6p8b.htm> provides information on conservation easements.

restriction on property for up to 10 years. North Carolina has a similar provision that includes creation of a map of reservation.

A restraint on purchase of development rights for corridor preservation may arise from a preference to use police power authority to restrict development. States may perceive an erosion of this authority if they are paying for a right they consider not compensatory. Also, states are used to purchasing property needed for right of way in fee simple (the total package of property rights). Some states may believe they need legislative authority to purchase development rights prior to purchasing the total fee interest.

Purchase of restrictive easements is worthy of further consideration as a corridor preservation method for SDDOT. This approach has already proved useful by other states for protection of wetlands and other natural resources, and for scenic enhancement. There are many examples of public agencies' successful use of protective easements as discussed above.

b. Letter of agreement

A property owner may agree with the purpose of an easement restricting development for a period of time, but may be unwilling to convey a recordable easement. An easement may be perceived as a negative affect on marketability, or might concern parties that have a minor interest in the property. An owner may not want a public record of a conveyance of property rights. Under these circumstances an owner may be willing to enter an agreement with SDDOT that would not convey property rights. Such agreement would be at least an expression of intent by the owner. It may or may not be legally enforceable as a contract. The agreement may address special concerns of the parties. For instance, it might provide that SDDOT be notified in advance of the property being offered for sale, or provide that the agreement would be voided on a sale of the property.

The letter agreement may be useful if other more restrictive control measures cannot be agreed with an owner who generally supports a planned highway improvement. It might be secured at very low or no cost. Nebraska is reported in the FHWA May 2000 survey as relying on localities to negotiate such agreements with developers to preserve right of way.

c. Right of first refusal

The first refusal right obligates the property owner to offer the property for sale first to the holder of the right, at a price and on terms that are the same or better than will be offered to other parties. The property could be freely marketed once the right owner has declined the offer. The right of first refusal is a very attractive means of preventing use that would occur subsequent to property

transfer. SDDOT might use the Right of First Refusal in combination with the protective purchase provision in 23 CFR 710.503. In this way the first refusal right could be secured before the property is eligible under federal rules for reimbursement as a protective purchase (refer to 2A above). At the time the right matures to an offer project development may have advanced to a point to allow federal reimbursement.

The conveyance of a right of first refusal is minimally restrictive on the property owner. Thus it may be readily acquired at a reasonable cost.

d. Options

An option is a right to purchase an interest in real estate at specified price within a designated time period. It commits the parties to the terms of the transaction before the sale of real estate is completed. Private real estate developers extensively use options to commit the prospective seller for a relatively small payment while issues of zoning or financing are settled.

Options are seldom used in federal government land acquisition. In 1998 the Federal Aviation Administration performed a study of potential use of real estate options as directed by Congress. This question was addressed: *Can private sector use of land options be employed in the public sector to secure property before ownership is needed for construction of federally funded airport development?* The report concluded to a limited potential for securing right to acquire at a fixed price in an area of active development or speculation.

In spite of the limited utility of options in airport programs, the use of options deserves a closer consideration by SDDOT for highway corridor preservation. The method allows public funds to be leveraged, involves minimal risk, and is a flexible tool. The terms of an option are custom drafted to meet the needs and concerns of the buyer and the seller.

3. Promote other innovative acquisition approaches

SDDOT can help achieve corridor preservation goals through the use of innovative approaches to right of way acquisition including donations, contributions by local government units, property exchange, and access solutions.

a. Donations

Federal rules permit SDDOT to accept donations of property at any time it can legally do so under State law. However, federal funding in the project costs require assurance that the donation does not influence the environmental process and that there be project compliance with regulations relating to relocation, 4f, historic preservation and resource agency permitting. Also, federal regulations

(23 CFR 710.505(a) require that the agency advise potential donors of the right to receive just compensation and have the property appraised.

Property owners may be receptive to requests for donations early in corridor planning, as well as later, for several reasons. The value of the donated property may offset taxable income under federal and state tax laws. The owners may benefit from reduced property tax assessments. Owners may wish to facilitate a transportation improvement that will benefit remaining property, or the community at large.

Title 23 U.S. Code Section 323 permits credit of the value of donated property to the state share of project cost. There are detailed conditions in Section 323 that apply to this provision. This is a powerful incentive for states to secure donations.

An independent professional appraisal is needed to support any tax deduction, and the cost of the appraisal to the property owner may be a barrier to owner agreement to donate. IRS and state tax agencies may not accept an agency secured appraisal as being independent and unbiased. However, the State of South Dakota may offer to reimburse the owner's cost of securing an independent appraisal.

It is SDDOT general policy, as expressed in the Right of Way Manual D-1.47, not to request property donations. Further, the Manual relates that State legislature approval is required for any gift of real property, which costs the State more than \$1,000 in any one fiscal year. Thus SDDOT is not well positioned under existing policy or State law to benefit from the private donation credit provisions of 23 USC 323.

b. Contributions by local government units

TEA-21 created the new Section 1301(e) of 23 USC. This allows states to credit the fair market value of local government contributions of property to the state share of project cost. This credit is not applicable to lands originally acquired with any form of federal financial assistance, or to lands presently in use as operating right of way. While this is not a direct corridor protection measure, it provides flexibility to leverage state transportation funding, and encourages early identification and commitment of locally owned property. SDDOT may find benefit in actively promulgating this provision to local governments.

c. Property exchange

The Department may control real estate not needed for transportation use that is adjacent to a property designated for corridor preservation. This includes surplus property, uneconomic remnants, highway right of way airspace, and property acquired for materials, storage or service facilities. The excess property may be

on a road bordering the property, but not on the controlled corridor. Such property might be used to exchange with owners to maximize total property value and utility while protecting the designated transportation corridor. For instance, a large landholder in the state may have need for small piece to complete a land assembly, or qualify the prosperity for a zoning approval.

Another use of the property exchange is for an agency to cooperate with an owner to purchase needed land, or access rights from an adjoiner to cure or offset prospective damage from a future highway acquisition.

d. Access solutions

The quality of access to adjoining roads is a critical concern to most commercial property owners. Under appropriate circumstances SDDOT might use access enhancement to trade or compensate an owner for reserving a corridor. This would be confined to access measures that improve traffic operations and safety as well as the value and utility to the benefited owner.

The New York State Department of Transportation (NYSDOT) works with local governments on access management to protect right of way for future local roads or bypasses. NYSDOT supports local government in rezoning and expanding the functionality of its roads by looking at the impact of state roads on localities and the implications of local traffic on cities.

E. Recommendation 5: Develop Procedures for Performing Right of Way Acquisition Earlier for Programmed Projects

The Department can avoid incompatible development and increased land costs by performing right of way acquisition earlier for programmed projects. In addition, performing right of way acquisition earlier for programmed projects provides potential further benefits by streamlining and reducing project delivery time since right of way activities are currently conducted in the last year of the project development period.

1. Position right of way function for proactive corridor preservation

SDDOT should consider a more flexible and selective approach to acquisition that is less dependent on the completion of final design plans. Criteria could be established under the corridor preservation concept for acquisition before final design under a defined range of circumstances, such as:

- Probable total takes.
- Low risk partial takes.
- Accept, or solicit, voluntary donations.

- Solicit voluntary development setback agreements.
- Actively identify critical parcels for early acquisitions.

Effective corridor preservation requires that the project development functions share information and define roles earlier in the process, and that right of way becomes involved in early project development or planning stage, depending on the form of corridor protection. This approach should be designed and implemented as part of the work SDDOT is currently undertaking to redesign the project delivery process.

Opportune points in the Department's process for consideration of corridor preservation include:

- The early planning stage based on results of the recommended statewide forecasting of traffic volumes.
- The initial project scoping stage if it is clear that certain parcels will be affected regardless of final alignment.
- During preliminary design once a preferred alignment is established.
- At any time during project development when there is knowledge of a zoning change request, building permit application, property sale, or development interests.

Currently, South Dakota begins active right of way acquisition at completion of final right of way plans. This is approximately nine months before the project is ready for advertisement and 18 months after start of project development activity (PCEMS Network M Flowchart 8/21/97). This is a typical placement of the right of way function in states that follow a sequential project development process. The project is "handed off" to the next function at critical control points. It is noted that SDDOT conducts a landowner meeting during the final design stage at which owner concerns and information can be considered in final plan development.

If SDDOT is to preserve corridors through the advance acquisition of key parcels before completion of final right of way plans, right of way managers will need to act on opportunities when they are identified. Specific "trigger points" would alert right of way to become involved. This might be notification by a local planning agency of a zoning change request, or building permit application, or knowledge of a recent sale, or interest by private parties in land assembly.

The Department may undertake corridor preservation at the program planning stage. This would involve right of way in protective measures before preliminary design is initiated. Any acquisitions of property rights would be based on a template or standard cross section for the class of highway anticipated. Right of Way should be involved with planning, environment and design to determine the type of rights acquired, the mode of contact with owners, and any limitations for environmental or permitting concerns. Acquisition of easements or the other non fee simple interest method discussed in Section 2F would be most appropriate at this stage.

2. Maximize use of FHWA protective purchase authority

Protective purchase, as defined in federal regulations at 23 CFR 710.503, is the acquisition of one or a limited number of parcels in advance of full project environmental approval in order to prevent imminent development and increased costs on the preferred location. Federal protective purchase authority can provide a useful tool to purchase key parcels. It allows SDDOT to take the initiative to acquire property on information such as application for zoning change that would lead to development incompatible with planned highway right of way needs.

FHWA federal aid funds can be used for protective purchase under the following prerequisites:

- The project must be on an approved STIP.
- Public involvement must have been conducted.
- A preferred alternative must be identified.

In spite of these limitations, protective purchase is useful to enable purchase of one to several parcels sooner than is possible under normal rules. Sometimes only a few parcels on a project corridor present a significant cost risk to the Department. Protective purchase can be used to acquire these perhaps up to a year in advance of normal acquisition activity.

SDDOT could use protective purchase without the above federal limitations if it purchases property solely with state funds. However, the Department would remain responsible for the use of protective purchase in a manner compliant with environmental, historic preservation, 4f (parks and recreational land), and Uniform Relocation Act requirements.

The following are measures South Dakota might consider for more effective use of protective purchase with full federal reimbursement:

- Revise Part D, Section 1.49, of the SDDOT Right of Way Manual to allow a more proactive use of protective purchase. The restriction to “unusual or emergency” situations was, but is no longer, a federal requirement.
- Section 1.49 of the SDDOT Right of Way Manual suggests use for categorical exclusion (CE) projects only. This is not a federal requirement, and the provision might be modified or deleted to enable broader use.
- Coordinate with local planning agencies to identify critical parcels as early as possible. Properties that have active applications for zoning action, or building permits might be targeted for consideration for protective purchase.
- Identify a preferred project location as early in the environmental process as possible. It is not necessary to secure formal location approval. The environmental process might be “tiered” to reach an early decision on project

purpose, need and alignment, after which parcels could be protectively acquired. Design specific impacts would be considered in a subsequent phase.

States that report use of protective purchase as a corridor preservation method include Arizona, California, Connecticut, Delaware, Florida, Michigan, North Carolina, Oklahoma, Texas, Utah, Washington and Wisconsin. However, its effectiveness has been as a tool for a small number of parcels, rather than as a strategy upon which to base a corridor preservation program. The above-discussed prerequisites for federal reimbursement lead many states to advance acquire property with state funding.

3. Utilize early acquisition of total takes where possible

Right of Way can be protected early in project development by acquiring parcels that will be total takes irrespective of later design decisions. On new location projects, parcels that are on or near the centerline, or that are otherwise sure total takes, may be advance acquired. This permits right of way acquisition to advance in parallel with detailed design and reduce the overall time in project development.

Highway agencies that advance acquire total takes, or centerline parcels, must have resolved potential environmental concerns about the prior pre-selection of a highway alignment. There appears to be no legislative constraint to the use of early acquisition of total takes, however the requirement that the properties are on all alignments that will be considered in planning is often a restricting factor.

F. Recommendation 6: Establish & Assign Duties for a Proactive Corridor Preservation Approach

The implementation of a proactive corridor preservation program at SDDOT will involve change in the work performed across SDDOT's functions and regions. Successful implementation will require a large number of employees being educated about SDDOT's corridor preservation objectives, new corridor preservation procedures, and their application. Change of this type needs very careful management.

SDDOT needs to clearly define roles, responsibility, and accountability for implementation of a proactive corridor preservation program. This involves establishing the internal management structure for addressing issues such as designation of preservation corridors, funding corridor management activities, and initiating property actions or less than fee simple strategies.

In addition to positioning SDDOT's right of way function for corridor preservation, as outlined in Recommendation 5, two important recommendations to position the Department organizationally for a proactive corridor preservation program are:

- Establish Corridor Management Committee.

- Establish Regional Corridor Manager Positions.

Implementation of these two recommendations will be necessary to provide the management oversight and regional planning and corridor management expertise to ensure a successful corridor preservation program at SDDOT.

1. Establish a Corridor Management Committee

A Corridor Management Committee is recommended to provide support and oversight for corridor preservation efforts in South Dakota, including policy development, technical guidance, and funding/resourcing decisions. In addition, SDDOT should consider whether it is most effective to incorporate the current access management committee into this committee or a subcommittee of it.

Exhibit II-2 presents recommended membership and responsibilities for the Corridor Management Committee. The current Access Management Committee’s membership could likely be augmented to form the Corridor Preservation Committee.

Exhibit II-2: Corridor Preservation Committee Membership and Responsibilities

Corridor Preservation Committee	
Recommended Membership	Roles and Responsibilities
<ul style="list-style-type: none"> • Director, Division of Planning and Engineering • Recommended Regional Corridor Managers • Road Design Engineering Specialist • Statewide Planning and Programming • Right of Way and Utility Specialists • Legal Counsel • Access Management Specialist • FHWA Representatives • Environmental Specialist • Public Involvement Specialist 	<ul style="list-style-type: none"> • Provide policy-level support for corridor preservation. • Oversee organizational changes necessary to support corridor preservation, including development of training materials, documents, etc.. • Approve designation of specific corridors for preservation (based on recommendation from Regional Corridor managers). • Determine funding sources and options for corridor management planning and preservation actions. • Ensure compliance with legal and environmental regulations for all corridor preservation efforts.

2. Establish Regional Corridor Manager positions

In order to operationalize a proactive corridor preservation program in South Dakota, it is recommended that Regional Corridor Manager positions be established. This function would provide day-to-day support for corridor preservation, including communication, planning and on-going corridor management.

One of the central themes that arose from the public workshops on corridor preservation was the need for regional focus and effort allocated to long-term corridor planning, local government coordination, and corridor management. This person would be a single point of contact for regional corridor preservation activities and function as a liaison with local government agencies. Two key roles of the recommended regional corridor managers would be serving as a technical resource on corridor preservation techniques and providing education on corridor preservation to regional staff and the public. The regional corridor managers would oversee active corridor preservation efforts in the region, including coordination of access management initiatives.

Initially, it is recommended that regional corridor manager positions be established in the Rapid City and Mitchell Regions. Based on research conducted for this study, these two regions have the most pressing corridor preservation issues, primarily stemming from rapid growth in the Rapid City and Sioux Falls areas. This is not to say that there are not corridor preservation issues in the Pierre and Aberdeen Regions. However, given the constraints on funding for new positions, establishing two regional corridor manager positions to “ramp up” corridor preservation efforts in the State is a practical alternative. These regional corridor managers could provide support to the other regions until such time as additional corridor management positions could be justified.

Exhibit II-3 presents the on-going, medium-term, and long-term duties that the regional corridor managers would undertake to support a proactive corridor preservation program in South Dakota. On-going duties would occur as part of daily or weekly activities, medium-term duties would occur perhaps monthly or quarterly, and long-term duties might occur only once or twice a year.

Exhibit II–3: Duties for Regional Corridor Managers

Regional Corridor Managers		
On-Going Duties	Medium-Term Duties	Long-Term Duties
<ul style="list-style-type: none"> • Regular coordination with local government, MPOs, and local jurisdiction to ensure communication and coordination of corridor preservation activities. • Supports statewide expansion corridor identification and preservation. • Oversee corridor preservation activities on active corridor projects by coordinating with right of way, planning, and environmental functions. • Coordinate with access management specialist on access management issues. • Provide corridor preservation support for other regions as needed. • Respond to public questions on corridor development. 	<ul style="list-style-type: none"> • Initiate location studies, public consultation, and environmental review activities for new protection corridors. • Provide training on corridor preservation techniques to regional staff. • Prepare educational materials and conduct presentations to stakeholders and the public on the benefits of corridor preservation. • Attend Corridor Preservation Committee meetings. 	<ul style="list-style-type: none"> • Undertake capacity forecasting including future land use analysis to identify long term capacity needs and potential corridors for preservation. • In consultation with local agencies, recommend key corridors for preservation to the Corridor Preservation Committee. • Update corridor preservation procedures based on continual monitoring of best practices elsewhere.

Given the importance of contact and relationships with local governments, Area Managers may be well positioned to assume some or all of the duties of Regional Corridor Managers. The issue is one of being able to dedicate adequate time to the duties required. Area managers have the advantage of pre-existing relationships and communication channels with local governments.

G. Recommendation 7: As Part of Corridor Preservation Planning Inform, Educate, Communicate and Cooperate with Local Jurisdictions, Landowners, Developers, and Utilities

The exchange of information is paramount to successful planning – especially when it comes to planning the future needs for developing transportation corridors. An effective corridor preservation program will ensure that landowners, developers, engineers, utility providers, and planners understand the future needs within a transportation corridor area and that plans are complementary.

1. Communicate corridor preservation objectives, identified through statewide corridor specific planning, with all stakeholders early and throughout the process

An effective statewide corridor preservation program will ensure that stakeholders understand the future needs within a transportation corridor area, and that plans are complementary.

A properly structured public consultation approach will be one effective mechanism to work with landowners and developers, as well as forming closer working relationships with cities and counties who are knowledgeable of development issues and have regular contact with landowners and developers.

It may be helpful for the Department to engage in informal face to face meetings with individual property owners along a corridor, as early as possible once the corridor is identified as a future expansion area. The purpose would be to learn the intentions, needs, priorities, and concerns of each owner with regard to their property. It is important to do it before any project is announced so that the atmosphere is not clouded by defensive instincts.

2. Seek local commitment to achieve corridor preservation goals

Effective corridor preservation requires that the local jurisdictions in which a transportation corridor is located cooperate with the Department, which ultimately purchases rights-of-way and constructs state highway facilities. Local planning organizations can and should be a major partner in corridor preservation efforts. They must be convinced of the need for, and benefits of, corridor preservation and will need to be educated regarding the intent and the nature of preservation actions.

For corridor preservation to be effective, the Department must also rely on local jurisdiction planning agencies to apply the tools available to them to prevent development from taking place within needed rights-of-way. Many of the right of way preservation techniques discussed in this report are more readily available to local jurisdictions than state transportation agencies. The Department must rely on the

cooperation of the local jurisdictions in using these techniques if every parcel that is threatened by development is not to be purchased outright as soon as development is proposed.

Working with local jurisdictions to secure setback ordinances could have broad application. Generally, setback ordinances have been sustained in constitutional tests if the public purpose underlying the regulation is valid. Setback ordinances must be reasonably related to the preservation and promotion of the public health, safety, and welfare and may not be arbitrarily or capriciously applied. Purposes that have been found to be constitutionally valid include:

- Separation from the noise of the street.
- Promotion of safety for pedestrians, drivers, and occupants of structures along the street.
- Improving the attractiveness of residential environments.
- Securing the availability of light and air.

3. Prepare corridor preservation plans

The preparation of corridor preservation plans is recommended to serve as a detailed summary of available corridor preservation methods, with recommendations and precautions for their implementation. The corridor preservation tools presented in this report are extensive and diverse. Their feasibility and effectiveness may vary for different situations or locations. For these reasons, it is necessary to develop protection strategies specific to each corridor and circumstance. These strategies should be developed through collaboration with state and local government officials and documented in an official corridor preservation plan.

A corridor preservation plan is a planning-level document summarizing future needs, affected properties, and preservation methods to be used along highway corridors targeted for future improvement or construction. The corridor preservation plan would be intended to tailor a protection strategy to a specific corridor using any of the tools presented in this report. Such a plan would identify the proposed alignment and typical right of way section for a new or improved highway corridor. These designations would be sufficiently detailed as to identify affected parcels of land and property owners. The preservation plan would then summarize the protection strategy for the corridor, identifying tools most suitable for use along the corridor. In addition, specific parcels or segments to be preserved using each tool would be identified. Implementation of such a preservation plan tailored to the specific circumstances and location of an individual corridor would provide a guide for policy makers and a clear direction for corridor preservation activities. Threat of legal challenge may be reduced, and preservation activities can proceed more smoothly.

It would be useful for the Department to commission a corridor plan on an active corridor project as a way to move forward with implementation of a proactive corridor preservation approach. This would not only be useful for corridor preservation purposes on the corridor, but would also be instructive to the Department. Lessons learned from undertaking an initial corridor plan could be applied to future projects and would provide momentum to the implementation. SD115 from Sioux Falls south city limits to Harrisburg Corner would be a good candidate for a corridor plan. This segment, one of the case study examples in Section IV, is scheduled for expansion in 2006 and is beginning to face development pressures from residential subdivisions with neighborhood commercial uses.

Corridor preservation plans should be developed jointly by state and local officials during the concept development stage of a project. Initial concerns should be addressed and agreements made between state and local groups that specify how preservation activities will be implemented. Municipalities may pledge to use their police powers to preserve right of way for future state highways, while state transportation officials may agree to provide state funds to support local preservation through acquisition of key parcels where necessary. These and other specific agreements may be detailed in the written corridor preservation plan. Such early collaboration may improve working relationships between individuals and facilitate later cooperation between state and local entities. Such continued cooperation is vital to the success of any corridor preservation program. Preparation of corridor preservation plans at an early stage is therefore recommended in order for South Dakota preservation programs to be conducted efficiently and effectively.

Some state departments of transportation have developed memorandums of understanding (MOUs) with local jurisdictions to formalize cooperative efforts to achieve corridor preservation goals. Appendix C provides a model corridor preservation memorandum of understanding with local jurisdictions as an example of what the Department could use to formalize corridor preservation efforts with local governments.

4. Coordinate with utilities throughout the corridor planning and development process

The workshops and public consultation efforts conducted as part of this study have highlighted the desire of utility providers to work closely with SDDOT to improve coordination and reduce unnecessary utility relocation costs. Actions that have been identified to accomplish this include:

- Provision of adequate utility easements in DOT right of way.
- Including utility design as part of project development.
- Tighter standards and monitoring of utilities placed in DOT right of way to avoid placement conflicts across different utilities.

- Joint property negotiations where utilities are located on easements outside of DOT right of way.
- Use of setbacks to ensure the availability of adequate right of way for utilities.
- Preservation of rail bed right of way for possible utility corridors.

By coordinating more closely with utility providers to reduce project relocation costs, the Department will be able to use available funds for other uses such as the acquisition of property and/or property rights to support corridor preservation goals.

Corridors with adjacent horizontal installation of utilities present special challenges in corridor preservation. Utilities do not have the same priorities, they are not subject to the same regulatory controls as SDDOT concerning acquisition of property. In South Dakota, coordination between SDDOT and affected utilities is pursuant to terms of project specific agreement. The utility generally commits to completion of its right of way work to meet a project schedule. Utilities acquire property rights necessary for relocation of their facilities independent from any SDDOT acquisition on the same project.

Although forms of title, and property acquisition methods differ, SDDOT and utilities may have a common interest in cooperating to undertake advance acquisition. A unified acquisition program might achieve this. Either SDDOT or utility staff would perform acquisition, including all owner contacts. This would require cross training to assure that utility staff comply with South Dakota and federal law and procedures. Corresponding training or orientation would be needed for SDDOT staff if it were to be the acquiring agency. Unified acquisition offers several potential benefits. It conserves staff resources, precludes duplicative contacts with owners, and simplifies project scheduling. Unified acquisition might be performed on a trial basis for advance acquisition of options or easements, and expanded to more general program use if it is successful.

In order to formalize cooperation and coordination between the Department and utility companies to achieve corridor preservation goals the concept of “franchise agreements” may be a useful tool. Utility companies currently enter what is called a franchise agreement with local governments to establish the parameters for service, decision-making process, and other agreements. A similar type of agreement established between the Department and utility companies could specify communication and decision-making mechanisms, construction guidelines, and common goals for corridor preservation.

5. Work with landowners and developers to promote corridor preservation goals

The Department may often find itself in a position where the most effective way to preserve a corridor is to work together with the property owners or developers who would otherwise develop the right of way. This approach is more applicable in certain circumstances than others, but it has the potential for large cost savings when developers can be convinced that it is in their best interests to set aside rights-of-way,

or even, in some instances, to build a portion of the ultimate transportation improvement.

Generally, the success of a private development is tied to the accessibility that is afforded the property that is to be developed. Developers often recognize that the success of their development will depend upon improved roadway access, therefore, they are willing to cooperate. Responsible developers also recognize that they will have to deal with state and local planning agencies for years to come and want to cooperate in order to keep a good working relationship with these approval agencies.

H. Recommendation 8: Apply Environmental Review Best Practices for Corridor Preservation

To conduct corridor preservation activities without jeopardizing future federal funding changes in the project development process may be necessary. The following consideration should be addressed as part of SDDOT's current work to redesign the project delivery process. Corridor preservation along proposed future alignments may be conducted many years before funding becomes available and construction begins. Under most current practices, completion of an EIS or other detailed environmental review is undertaken only after funding is secured and the construction is within a few years of commencement. To make corridor preservation efforts successful within the framework of existing environmental regulations, two best practice approaches can be used:

- Emphasis on greater planning level environmental review.
- Staging of the environmental process.

In addition, early collaboration with resource agencies at the state and federal level can be one of the most effective methods of selecting a preferred corridor alternative that minimizes environmental impacts.

1. Planning-level environmental review

To ensure future eligibility for federal funding, some environmental review should take place before corridor preservation activities are undertaken. This work should most likely take place at the planning stage as future transportation needs are analyzed and identified. Sufficient analysis should be conducted to select a suitable alignment. A basic inventory of environmental resources along the proposed corridor could be conducted in cooperation with SDDOT planning and environmental staff. A preferred alignment could then be selected that would avoid environmentally sensitive areas wherever possible. Preservation activities could then be focused on this preferred corridor.

Planning-level environmental work is not intended to obtain final project clearances or to definitively identify the preferred alignment. Above all, this level of review at the early stages is intended to prevent incorporation of "fatal flaws" into corridor

preservation activities. This means that sufficient review should take place to ensure that SDDOT programs are not preserving land that will not ultimately receive environmental clearance. Planning level environmental review should be sufficiently detailed to assist in selecting an alignment that avoids environmentally sensitive locations. SDDOT officials can then proceed with the confidence that preservation programs are not protecting property that cannot be used for highway construction.

2. Staging of the environmental process

The second method of reconciling environmental requirements with corridor preservation objectives is to complete the environmental process in stages. This method differs from planning-level environmental review in that the official NEPA compliance process is started at the corridor planning stage. Sufficient steps are taken to select a preferred alignment and secure preliminary environmental approval for that alignment. For major highway projects, this would most likely involve completion of a Draft Environmental Impact Statement (DEIS). This DEIS would include an alternative analysis, environmental resource inventory, and public involvement process. Adoption of the DEIS would allow corridor preservation activities to commence with confidence that federal funding would not be jeopardized.⁴ Limited advanced acquisition may be easier to justify if SDDOT was assured of later federal approval and participation.

Completion of a DEIS in the early stages of highway planning may provide SDDOT with greater assurance of later federal support and subsequently reduce the risk of investing state funds in corridor preservation activities. Other costs may increase, however. Environmental documents and associated approvals are only valid for three to five years. If construction is not underway, the environmental review process must be repeated and new approvals obtained. For long term corridor preservation, completion of a DEIS at the planning stages would not be cost-effective. If construction is 10 to 20 years away, the DEIS completed at the planning stage would have to be reviewed and updated. Repetition of such environmental work can be expensive. For this reason, early completion of a DEIS may not be feasible in all preservation projects. The risk of preserving right of way without a DEIS must be balanced against the potential cost of having to repeat the environmental review process prior to construction.

3. Coordination with resource agencies

Early collaboration with resource agencies at the state and federal levels can be one of the most effective methods of selecting a preferred corridor alternative that minimizes environmental impacts. If interaction and cooperation occurs early in the planning process, an environmentally friendly corridor alignment can be selected. This reduces

⁴ For example, completion of a DEIS can be used to gain right of entry for doing archeological analysis for the environmental assessment and protect the property from development.

the potential for conflict between resource agencies and transportation officials later in the project development process.

Other state transportation agencies that have tried to involve federal and state resource agencies early in the process have reported some resistance. This may be due in part to different agendas. As stated by Rivkin Associates in the manual *Corridor Preservation: Case Studies and Analysis Factors in Decision-Making*, transportation agencies seek to build and develop, while resource agencies seek to preserve and maintain the status quo.⁵ Other difficulties may be due to the project timetable itself. Resource agencies may view time spent in consultation on transportation corridors many years away from construction as trivial or not worthwhile. Whatever the reason for reluctance or difficulty, early coordination with resource agencies in alternative selection can make ultimate NEPA compliance much easier and reduce later project delays. Agencies such as the Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service should be involved early in corridor planning.

I. Recommendation 9: Consider Legislation to Strengthen Corridor Preservation Authority if Warranted by Barriers Encountered in Implementing Project Recommendations

While no specific requirements for legislative change have been identified to implement the study recommendations, if SDDOT encounters barriers that arise due to lack of statutory authority, the following are possible areas where strengthened legislation could better facilitate corridor preservation goals:

1. Legislative clarification on necessity

Any legislative change that would specify lesser levels of design development as proof of necessity to facilitate land acquisition or less than fee simple actions, for example capacity planning analysis, location studies, and/or typical highway cross sections, would be beneficial to corridor preservation efforts.

The Department has taken a conservative position in the application of State Statute Section 31-19-2 on the “resolution of necessity” in which final construction plans are submitted with the resolution declaring the necessity for land acquisition. This practice has placed land acquisition just prior to construction and is not conducive to early property acquisition efforts to support corridor preservation.

While § 31-19-2 has never been challenged, and is not a constraint for the case of willing sellers, specific legislative direction to guide corridor preservation would provide further support for the program (i.e., specifying that capacity planning analysis, location studies, and/or typical highway cross sections provide adequate definition of necessity).

⁵ Rivkin Associates, 1996.

In addition, clarification that land acquired for highway purposes can include land acquired for utilities would allow SDDOT to acquire sufficient utility easements to meet today's needs, especially in urban areas.

2. Moratorium on section-line road vacation

To maintain section-line road right of way for future transportation and/or utility corridors, it may be in the State's interest to implement a moratorium on State Statute Section 31-8-3: *Vacation or change of location of highways*.

3. Confer with the FHWA to clarify policy

SDDOT should coordinate with FHWA before implementing any corridor preservation approach. Also, federal clarification of law and policy is needed on the following points:

- Requirement of 23 USC 108(c)(2)(C) with regard to federal credit for early acquisition needs clarification. Legal review of the requirement for "mandatory comprehensive and coordinated land use, environment and transportation planning process under State law" may lend itself to an interpretation that would enable South Dakota to use early acquisition credits for acquisition as a project cost.
- Use of corridor preservation may result in avoiding environmental impact by protecting a location choice that otherwise would be removed from consideration due to increased cost or dislocation. Demonstration of this might justify property protection costs such as development easements for environmentally sensitive areas.

III. Corridor Preservation in South Dakota



This chapter presents background and the analytical basis to the project recommendations. The chapter includes an overview of corridor preservation and its importance to the State and current practices as they relate to planning, project delivery, utilities, and access management. The current legal authority for corridor preservation is also addressed.

A. Project Background

The principal problems addressed by this study arise from the pattern of growth, development, and changing transportation demands that South Dakota has experienced in recent years. While South Dakota's development may be at a slower pace than in some other states, the outcome is the same. There is a steady degradation in the function of key highway corridors as the abutting land develops. The land increases in value and becomes used for non-agricultural purposes. This in turn increases the costs, complexity, and delivery time of transportation projects designed to address the consequences of growth. There are a number of actions open to state and local government to preserve transportation corridors.

This study provides SDDOT with the policies, tools, and multijurisdictional support required to establish an active approach to corridor preservation. This study draws on research and experience in other states to develop the economic justification for corridor preservation of South Dakota's principal transportation corridors.

Corridor preservation policies, plans, and tools evaluated and developed through this study have the potential for:

- Preserving existing infrastructure investments.
- Establishing a proactive planning level approach to right of way management.
- Reducing the right of way acquisition costs.
- Reducing barriers to the efficient future development of South Dakota's highways.
- Providing consistency and predictability regarding corridor management.
- Improving coordination with local government.
- Coordinating and implementing South Dakota's Access Management initiatives.
- Reducing delivery time, risks, and cost of property acquisition during project delivery.

B. Corridor Preservation Overview

Corridor preservation focuses primarily on proactive right of way preservation programs and strategies to ensure that acquisition of property rights along highway corridors occurs well in advance of capital improvement design concepts. Addressing property needs early in the project development process reduces construction delays and right of way costs. Earlier property acquisition can also reduce utility relocation delays by securing permissions and allowing utilities to accomplish relocation prior to construction.

1. Definition of corridor preservation

The term “corridor” is defined by the American Association of State Highway and Transportation Officials (AASHTO), as “a strip of land between two termini within which traffic, topography, environment, and other characteristics are evaluated for transportation purposes.” A corridor includes not only the land occupied (or to be occupied) by a transportation facility, but land that may be needed for expanding that facility or for controlling access to it.

When the term “corridor” is used in transportation planning, it is not a property interest but rather a planning concept. When a transportation facility is in the early stages of planning, a corridor may be identified merely by its endpoints and several alternative paths. Hence, when public authorities first identify a corridor, they may hold no property interests in land within it. As the plan proceeds, public authorities may acquire necessary property interests as part of their efforts to preserve or protect the corridor for future transportation use.

AASHTO defines corridor preservation as “a concept utilizing the coordinated application of various measures to obtain control of or otherwise protect the right of way for a planned transportation facility.” (AASHTO, 1990.) Public authorities may use a number of different techniques to protect the capacity of existing corridors, to protect planned corridors from inconsistent development, and to preserve intact transportation or utility corridors that are or may be abandoned. These actions all fall under the category of corridor preservation.

2. Importance of corridor preservation for South Dakota

Corridor preservation addresses several important transportation planning and project delivery issues in South Dakota including:

- **The importance of exchanging information so that landowners, developers, engineers, utility providers, and planners understand the future needs for developing corridors.**

The exchange of information is paramount to successful planning, especially when planning the future needs for developing transportation corridors. An

effective corridor preservation program will ensure that landowners, developers, engineers, utility providers, and planners in South Dakota understand the future needs within a transportation corridor area and that plans are complementary.

- **The need for preserving arterial capacity and the need to preserve right of way in transportation corridors.**

Corridor preservation includes the use of access management techniques to preserve the capacity of existing corridors. It also includes techniques to preserve right of way along South Dakota's growing transportation corridors so that arterial capacity can be added before it becomes cost prohibitive.

- **The need to minimize future displacement, relocation, and disruption of buildings and other structures.**

Long-term corridor planning and the preservation of right of way along growing transportation corridors helps to minimize incompatible development and avoid future displacement, relocation, and disruption of buildings and other structures. This is a benefit not only to state and local government, but also to landowners and citizens of the State.

- **The desire to minimize irregular land parcels and uneconomic remnants.**

By planning and preserving right of way well in advance of construction, decisions can be made to help minimize irregular land parcels and uneconomic land remnants. For example, easements or development rights could be purchased for only affected portions of property, rather than the purchase of an entire parcel of land. This can benefit both landowners and public agencies in South Dakota.

- **The desire to minimize disruption of private utilities and public works.**

Corridor preservation planning allows utilities and public works providers to know future plans for the transportation corridor and make location decisions accordingly. This will help avoid placement of utilities where they will need to be moved when the corridor is developed. It will also allow utility providers and public agencies to plan and negotiate right of way in a coordinated manner.

- **The need to develop urban and rural areas consistent with planning documents, laws, and subdivision regulations.**

Corridor preservation planning helps to ensure that a consistent vision is established for a transportation corridor so that incompatible development can be avoided. Effective corridor preservation will result in development along a transportation corridor that is consistent with area planning documents, any zoning laws, and subdivision regulations.

C. Current Practices

SDDOT's planning and project delivery practices, and local jurisdiction's development review practices, will require change to implement a proactive corridor preservation program. SDDOT's current work implementing a modern access management approach will further support for corridor preservation.

1. Planning level

Transportation systems planning is conducted on a Statewide basis by SDDOT's Office of Planning and Programs and on a more local level in urban areas of 50,000 population or more by Metropolitan Planning Organizations (MPOs). The process produces a long range transportation plan, and a five-year transportation improvement program called the Statewide Transportation Improvement Program (STIP) which includes an annualized listing of specific improvement projects. In urbanized areas, the process is referred to as the "3C" Process, in reference to the Federal requirement that the planning process be "continuing, cooperative, and comprehensive."⁶

The purpose of the long range transportation plan, called the *South Dakota Statewide Intermodal Long Range Plan*, prepared by SDDOT's Office of Planning and Programs is described as:

"... to guide decision-making, to monitor transportation challenges and opportunities, to strengthen beneficial intermodal relationships, and to ensure that projects reflect fiscal and political reality. Instead of completing a detailed [20-year] forecast of needed transportation projects and assume it is correct, this plan will guide annual decision-making for the Statewide Transportation Improvement Program (STIP), which is a five year list of transportation projects scheduled for completion."

The STIP is a staged listing of specific projects that may include engineering and right of way acquisition in addition to construction. Inclusion of the former provides for projects that will not be constructed until several years beyond the program's stated time frame. Like many states, South Dakota places high priority on preservation of its existing highway system. A Pavement Management System (PMS) is used to identify and prioritize preservation treatments to existing highways in the State and these projects are incorporated into the STIP. This planning process does not evaluate and define long-range corridor expansion needs. Capacity needs have historically been addressed on an "as needed basis" as opposed to a process involving long-term demand forecasting, and corridor planning and preservation.

⁶ (23 U.S.C. 134)

a. New procedures

A systematic corridor preservation approach will necessitate the following planning level changes in how SDDOT conducts business:

- **A proactive corridor preservation approach at SDDOT will require the designation of expansion corridors for preservation.** This process should consider 5-year, 10-year, 15-year, and 20-year preservation corridors, for example, and designate preservation corridors by corridor, intersection, and functional class and should have some fiscal constraint. Needs analysis should be conducted as part of the long-range statewide planning process to identify these preservation corridors. The methodology developed needs to address which expansion corridors can be developed within reasonable fiscal expectations for the future. There will be no benefit to the Department of creating expectations for corridor expansion that cannot be met.
- **Coordination with local planning efforts.** The identification of corridors for future expansion should coordinate with transportation and land use planning by local governments and Metropolitan Planning Organizations (MPOs). An emerging issue is the necessity to coordinate with county governments beyond the two-mile urban area boundaries to achieve overall goals for preservation of particular corridors.
- **Formalizing corridor preservation at SDDOT will require funding for corridor management planning and advanced property acquisition actions.** These activities will need to be programmed in the STIP, or otherwise be funded as a budget item.

2. Project level

SDDOT follows a traditional pattern for departments of transportation nationally in the structure of its project development process. Projects are developed sequentially through planning, environmental assessment, preliminary engineering and design. The coordination and inputs of each function contribute to development of an approved location and a final design. SDDOT is in the process of reengineering the project delivery process. This effort can provide the opportunity for considering some of the process improvements identified in this report.

SDDOT's right of way actions are concentrated in the later stage of project development, with appraisal, appraisal review, negotiations, condemnation and relocation taking place after development of the design plans. Only preliminary title work precedes final design as it provides input for development of right of way plats and plans.

The right of way role is more sequential and self-contained than the other project development functions. Its work is initiated by a "handing off" of final project right of

way plats and plans. The focus of the Right of Way Division is directed towards delivery of necessary property rights to support project construction.

While some states have adapted a more integrated and earlier role for right of way in project development, SDDOT's structure follows the prevalent model for state transportation agencies. The sequential structure and late stage placement enables precise acquisition of property needed for the project. Excess takings are avoided, and need for late supplemental acquisition to accommodate plan changes is minimized. Also, issues of pre-selection of an alignment by early right of way acquisition do not complicate environmental approvals.

b. New procedures

Perhaps the first step in developing a successful corridor preservation program is increasing interaction and cooperation between SDDOT divisions. As a minimum, selection of preferred alignments and acceptable alternatives should be completed jointly between planning, design, right of way, and environmental staff. Planning personnel may be charged with identifying future highway needs as part of the long range planning and the Statewide Transportation Improvement Program (STIP). Right of Way personnel may assume the responsibility of inventorying existing land uses and ownership within proposed future transportation corridors. Design is responsible for specifying required right of way widths. Environmental staffers may serve as liaisons between resource agencies and the Department, and may also identify environmentally sensitive areas within or adjacent to proposed highway corridors. Alignment decisions can then be made that minimize potential environmental impacts.

There are activities related to corridor preservation that are not being undertaken by right of way, which, if done, would reduce costs to the Department. Effective corridor preservation will involve right of way outside its present placement in the SDDOT project development process to accomplish the following tasks and objectives:

- Enable acquisition of property rights during project planning and before completion of project plans.
- Implement a partial property right acquisition techniques, in addition to acquisition of fee simple interest, that is now the primary property interest acquired
- Perform early property owner contacts to determine intentions for development, and concerns and interests with regard to potential adjacent highway development.
- Develop an effective process for minimizing acquisition of excess property, or disposing of excess property interests acquired in the course of corridor preservation.

- Coordinate with planning and environment to assure that corridor preservation advances Departmental goals involving these functions.
- Develop communication methods and skills to build amicable relationships with affected owners, and secure voluntary participation in corridor preservation.

3. Utilities

Corridors with adjacent horizontal installation of utilities present special challenges in corridor preservation. Utility companies do not have the same priorities and are not subject to the same regulatory controls as SDDOT concerning acquisition of property. In South Dakota, coordination between DOT and affected utilities is pursuant to the terms of project specific agreements. The utility generally commits to completion of its right of way work to meet a project schedule.

Utility companies that wish to install their infrastructure parallel to State highways currently have a choice of locating within the SDDOT right of way or independently purchasing property or property rights to locate adjacent to SDDOT right of way. Two basic rules on the cost of relocating utilities to facilitate highway expansion govern utility providers in South Dakota:

- If the utility is on its own property (fee title or easement) and must relocate to accommodate highway widening, SDDOT will reimburse the utility's actual cost.
- If the utility occupies highway right of way (by agreement or permit) and must relocate because the highway is expanded, the utility is required to relocate without SDDOT reimbursement.

In the later case, the utility company may choose to relocate within the SDDOT right of way or may instead decide to purchase property rights from adjoiners at its own expense and relocate outside the DOT right of way. In this event, and in the former case above, the utility company acquires the real property it needs, independent of SDDOT right of way acquisition.

a. New procedures

Although forms of title and property acquisition methods differ, SDDOT and utilities may have common interest in cooperating to undertake advanced acquisition. A unified acquisition program might achieve this. Either SDDOT or utility staff would perform acquisition including all owner contacts. This would require cross-training to assure that utility staff comply with South Dakota and Federal law and procedures. Corresponding training or orientation would be needed for SDDOT staff if it were to be the acquiring agency. Unified acquisition offers several potential benefits. It conserves staff resources, precludes duplicate contacts with owners, and simplifies project scheduling. Unified acquisition might

be performed on a trial basis for advance acquisition of options or easements and expanded to more general program use if it is successful.

Utility companies undertake strategic planning and long-term capacity planning as an integral part of their business. Utility providers are also greatly affected when SDDOT builds new facilities and/or expands existing facilities. To this extent, the more information that utility companies know about the “future plan” for highway expansion and new alignments, the better they can coordinate and ensure on-time project delivery. Early information on DOT project plans is important for utility providers to meet relocation schedules.

With regard to future planning for utilities, two issues/opportunities identified through the public consultation process warrant further consideration by SDDOT. The first is the existence of abandoned railway rights of way that are owned by the Department. These could be preserved as potentially future corridors for trails, bike paths, and utilities. The Rails-to-Trails Conservancy Program provides technical assistance and resources gained through successful rail-to-trail conservation projects in the United States.⁷

The second issue with regard to future planning for utilities is the vacation of county section-line roads. State statute Section 31-18-3: *Vacation or change of location of highways* allows the board of county commissioners to vacate section-line highways in certain cases. Landowners sometimes request vacation to keep people away from their adjacent property. The vacation of section-line roads eliminates the right of way for utility use and potential future transportation corridors.

4. Fit with access management

In partnership with local jurisdictions, SDDOT undertook a study of access management that developed recommendations and provided tools to strengthen access management in South Dakota. The study found that access management offers an important tool for preserving the function of highway corridors. This implementation will provide strong support for corridor preservation. The study also recommended that access management be implemented as part of an overall corridor management approach in key corridors.

Corridor management planning which will include techniques recommended by this study can provide a mechanism for systematically planning and ensuring:

- The level of access management that should be achieved.
- The allowable access, spacing and design criteria for the various highway classes.

⁷ Rails-to-Trails Conservancy Program: <http://www.railtrails.org>

- Partnership and commitment by different levels of government in specific corridor management plans.

D. Legal Authority

This section presents an overview of the legal framework that currently governs corridor preservation in South Dakota. The consultant team has investigated the relevant statutes and case law. This material represents the understanding of the reviewers concerning the laws of South Dakota but does not represent a legal opinion.

1. State authority

a. Eminent domain

Acquisition of property rights for highways, even over the objection of private landowners, is permissible under State and federal constitutions, which allow governmental taking of private land if the taking is for public purposes and just compensation is paid. These takings are achieved when the property rights are “condemned” under exercise of the governmental entity’s “eminent domain” power. Sometimes a taking is deemed to occur when some form of land use regulation falls so heavily on private property that most of its value is suppressed. Under current federal “takings” law, such a taking caused by excessive land use regulation is also compensatory, as if the property interest had been taken directly by eminent domain power.

b. Resolution of necessity

The most important State statute that affects SDDOT’s ability to undertake corridor preservation actions is Section 31-19-2 on the Resolution of Necessity as follows:

31-19-2. Resolution of necessity -- Recordation and filing. Before acquiring land or material for rights-of-way and borrow pit, either by purchase or condemnation, the Department of Transportation shall by resolution declare the necessity for acquiring the land or material and file a copy of the resolution with the office of right of way in the Department of Transportation.

The Department has taken a conservative position in the application of § 31-19-2 in which final construction plans are submitted with the resolution declaring the necessity for land acquisition. This practice has placed land acquisition just prior to construction and is not conducive to early property acquisition efforts to support corridor preservation. Through this conservative approach, excess takings are avoided, and need for late supplemental acquisition to accommodate plan changes is minimized. Also, issues of the prior selection of an alignment by

early right of way acquisition do not complicate environmental approvals. The resolution of necessity has never been tested in the courts in South Dakota.

- **New procedures**

SDDOT's conservative approach to necessity is consistent with the approach taken by many other state departments of transportation. However, those state departments of transportation that have implemented proactive corridor preservation programs, such as Nebraska, North Carolina, New Mexico, and Iowa, have found that planning documents at a lesser degree of development have been upheld by the courts as demonstrating necessity.⁸ This includes, in particular, planning documents demonstrating capacity needs along with concept design studies and/or typical section footprints, which establish general project boundaries.

Property acquisition based on less than final plans increases the likelihood of excess takings and late supplemental acquisition to accommodate plan changes. States that have acquired property using concept studies have found that they can often sell back remnants and/or the cost savings through early acquisition more than offsets the cost of the excess land acquired.

It appears that there are alternatives to the conservative approach taken by SDDOT with regard to § 31-19-2. It should be noted that in the case of willing sellers, SDDOT could negotiate fee simple or less than fee simple agreements with less than final plans and continue a conservative approach for non-willing sellers. This may be a practical solution as condemnation takes place late in the project delivery process by its very nature.

- c. **Police power**

Police power is the ability of the State to control activities and property for the public health, welfare, and safety. The State acts to prevent activities that are determined to be detrimental to the general public. Police power actions by the State are numerous and diverse. They range from enforcement of driving laws, to banking, to public health at restaurants, and many more. Some police power actions come directly from statute, while others come from rule and regulation.

A key aspect of police power is that it does not require the payment of compensation to regulated parties when used in a reasonable manner. A simple example would be speed laws. While it may be more efficient for a motorist to drive very fast without stopping or slowing, government may require speed limits, and stop signs which a police officer may enforce, without compensation to the motorist even though the delay in travel may come at an increased cost to

⁸ *Corridor Preservation: Case Studies and Analysis Factors in Decision-Making*. Federal Highway Administration: Prepared by Rivkin Associates, 2000.

the motorist. State and local governments may set building standards, fire codes and other controlling regulations. However, while these regulations impact the value of property and business expenses, they are not compensatory to the persons who incur the costs of obeying the requirements. Land-use zoning is a police power established in the early part of this century. A local government uses police power when it prevents a hog-farm from locating in a residential neighborhood on the basis that the overall public good (the right to be protected from nuisances) is superior to the rights of the owner to have a hog-farm within the residential area.

2. Local authority

Land use regulation and other exercises of police power can play an important role in corridor preservation programs. In South Dakota, as in many other states, local government entities are given the authority to regulate the intensity of development and types of land use within their jurisdictions as part of their police power. This can play an important part in corridor preservation programs. When properly applied, land use controls can hold land necessary for future transportation corridors out of development until needed for highway construction. This can generally be accomplished without significant initial capital investment, which is particularly attractive to state transportation agencies that seek to preserve future transportation options while working with limited financial resources.

Counties and municipalities have the power to regulate development and intensity of land use within their jurisdictions using their police power. In South Dakota, as in most states, state government does not possess this land use regulation authority. SDDOT must therefore rely on city and county planners to support state corridor preservation programs using local police power. The primary tools for regulating land use are local zoning ordinances, setback regulations, site plan review and subdivision controls, and conditional use permits and allowable interim uses. These techniques are discussed in detail in Chapter V: Corridor-Preservation Techniques Applicable to South Dakota.

IV. Costs of Current Practices



This chapter introduces the range of costs to be considered when evaluating the merits of corridor preservation, provides an aggregate level analysis of right of way and utility relocation costs and activities, and presents case studies that demonstrate how South Dakota can benefit from corridor preservation.

A. Introduction

Successful corridor preservation can result in significant financial savings in right of way acquisition costs to SDDOT. Right of Way cost savings can then be applied to other/additional projects. This chapter presents the results of research that indicates the magnitude of these savings.

In addition to direct right of way cost savings to SDDOT through corridor preservation efforts, there are other potential savings to the Department, local governments, property owners and developers, and utility companies. These savings can be realized through:

- **Minimizing displacement impacts to businesses and residents.** Corridor preservation efforts reduce, within the rights-of-way for future transportation corridors, costs arising from the displacement of households and businesses. By planning and preserving right of way well in advance of construction, decisions can be made to help minimize irregular land parcels and uneconomic land remnants.
- **Reducing disruption to the natural environment.** Presuming that sufficient studies have been conducted to determine the most environmentally acceptable route as the target for preservation, less disruption to the natural environment, historic resources, etc., can be anticipated. Any required mitigation measures can be planned, and in many cases even implemented, well in advance of construction.
- **Minimizing disruption of private utilities and public works.** Corridor preservation planning allows utilities and public works providers to know future plans for the transportation corridor and make location decisions accordingly. This will help avoid placement of utilities where they will need to be moved when the corridor is developed. It will also allow utility providers and public agencies to plan and negotiate right of way in a coordinated manner.
- **Developing urban and rural areas consistent with planning documents, zoning laws, and subdivision regulations.** Corridor preservation planning helps to ensure that a consistent vision is established for a transportation corridor so that incompatible development can be avoided. Effective corridor preservation will result in development along a transportation corridor that is consistent with area planning documents, zoning laws, and subdivision regulations.

B. Aggregate Expenditures

Of the potential cost savings through corridor preservation efforts presented in the previous section, those that can be directly realized by SDDOT are savings in right of way acquisition costs and utility relocation costs.

Exhibit IV–1 presents SDDOT’s right of way, utility relocation, preliminary engineering, construction engineering, and construction costs from 1997 through 2001. Expenditures on right of way and utility relocation costs are also presented graphically in Exhibit IV–2.

Exhibit IV–1: Right of Way, Utility Relocation, Preliminary Engineering, Construction Engineering, and Construction Expenditures (\$ Millions)¹.

State Fiscal Year	Right of Way	Utility Relocation	Preliminary Engineering	Construction Engineering	Construction Costs	Right of Way and Utilities as a % of Construction
2001	\$8.5 M ²	\$1.3 M	\$10.5 M	\$13.4 M	\$293.1 M	3.3%
2000	6.5 ³	3.6	9.1	10.0	234.1	4.3%
1999	5.0	1.6	9.1	8.4	189.2	3.5%
1998	3.9	3.3	7.2	9.2	210.0	3.4%
1997	6.9	2.0	7.3	7.9	158.8	5.6%
<i>Average</i>	<i>5.3</i>	<i>2.4</i>	<i>8.6</i>	<i>9.8</i>	<i>217.0</i>	<i>4.0%</i>

Source: South Dakota Department of Transportation – Division of Planning/Engineering.

Notes:

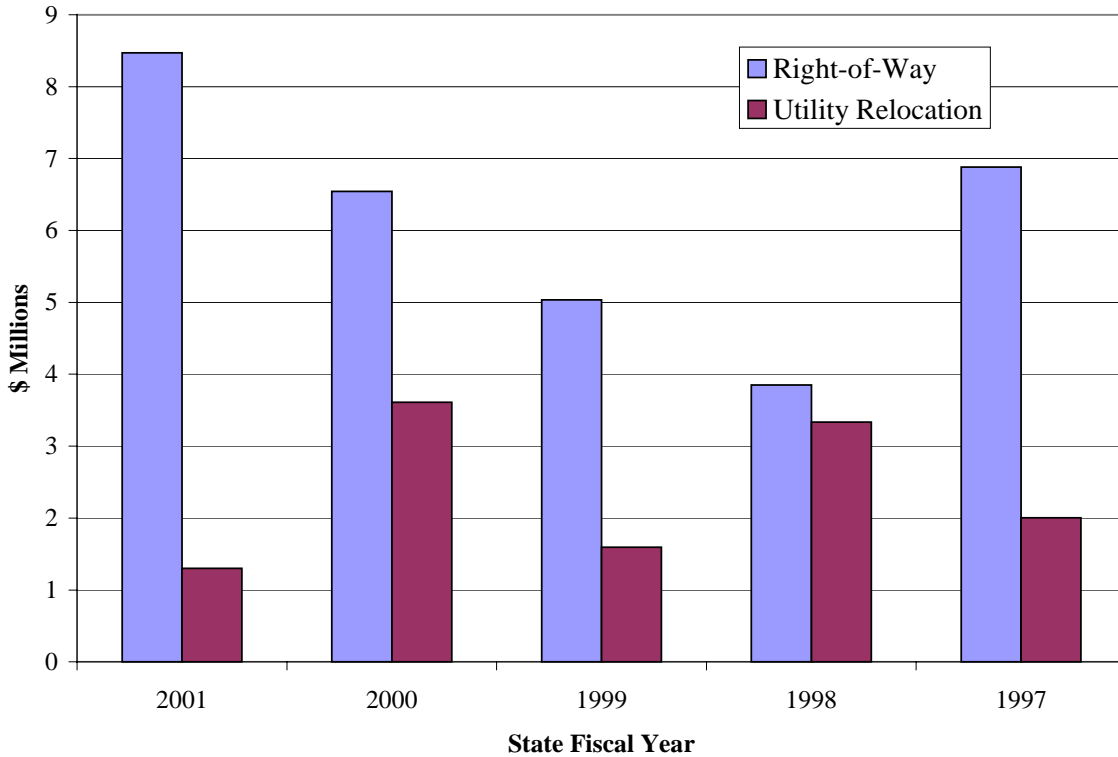
¹ Not adjusted for inflation.

² Fiscal year 2001 right of way costs do not include \$7,249,375 for relocation of the Sioux Falls Area Complex.

³ Fiscal year 2000 right of way costs do not include \$1,749,668 for relocation of the Sioux Falls Area Complex.

Exhibit IV–1 shows that right of way expenditures at SDDOT have averaged \$5.3 million per year over the five-year period, while utility costs have averaged \$2.4 million. Combined, right of way and utility costs are comparable to preliminary engineering costs and on average represent approximately four percent of construction costs. Any cost savings in right of way and utility costs can then be applied to other/additional projects.

Exhibit IV–2: Expenditures on Right of Way and Utility Relocation



Source: South Dakota Department of Transportation – Division of Planning/Engineering.

Notes:

Fiscal year 2001 right of way costs do not include \$7,249,375 for relocation of the Sioux Falls Area Complex.

Fiscal year 2000 right of way costs do not include \$1,749,668 for relocation of the Sioux Falls Area Complex.

Exhibit IV–3 presents additional right of way and utility relocation details.

Exhibit IV–3: Right of Way and Utility Relocation Details

State Fiscal Year	Number of Right of Way Parcels	Number of Owners	Number of Relocation Claims	Utility Notifications	Companies Needing Adjustment
2001	1027	690	127	176	104
2000	757	498	67	357	222
1999	566	429	95	412	228
1998	358	239	97	294	134
1997	649	388	77	450	229
<i>Average</i>	<i>671</i>	<i>450</i>	<i>93</i>	<i>338</i>	<i>183</i>

Source: South Dakota Department of Transportation – Division of Planning/Engineering.

Exhibit IV–3 shows that an average of 671 right of way parcels per year have been acquired over the five-year period, affecting an average of 450 property owners and resulting in an average of 93 relocation claims. An average of 338 utility notifications were issued over the five-year period resulting in an average of 183 cases per year in which installed utilities required adjustment by a utility company.

SDDOT employees felt that there has been a trend toward increasing numbers and costs of right of way parcels acquired. While this does bear validity for 2000-2001, it does not appear to be a trend.

C. System Level and Case Study Analysis of Costs and Benefits

A combination of system level and case study approach was undertaken to examine the costs and benefits of corridor preservation in South Dakota. This included:

- An analysis of long range right of way needs and costs for interstate interchanges based on the SDDOT Corridor Study – Phase II.
- An analysis of right of way needs and costs for SD115 – Sioux Falls South City Limits to Harrisburg Corner.
- Case studies presented at corridor preservation workshops held in Rapid City, Pierre, Aberdeen, and Mitchell.

The findings from the analysis are presented in this section.

1. Long range property needs for interstate interchanges

To illustrate potential costs savings from corridor preservation, the study evaluated the benefits from early acquisition of land that will be required for interstate interchange modernization/construction to accommodate growth. This analysis found that for the 15 interchanges that will require expansion, going from the current level of developed land, estimated to be approximately 15 percent, to 25 percent of land developed, results in a \$3.3 million increase in right of way costs in current dollars. From the current level of development to 50 percent of the land developed would result in a \$9.9 million increase in land costs in current dollars. The impacts of the analysis are even more dramatic if inflation is taken into account. In this case, the increase from current development to 25 percent development raises right of way costs from \$3.3 million in current dollars to \$17.8 million in ten years if an annual inflation rate of three percent is assumed.

In 2000 SDDOT conducted an analysis to identify statewide future interstate interchange improvement needs. The study was conducted in two phases. Phase I included a review of the roadway geometrics, accident history, the forecasting of traffic volumes for the years 2010 and 2020 and the evaluation of existing and future levels of service at the interchanges within the study corridors.

As a result of the findings from the Phase I report, a total of 26 interchanges were identified for further analysis. The primary objectives of the Phase II study, completed in February 2001, was to identify improvements that will accommodate the future traffic volumes and address system deficiencies. Phase II consisted of the development of geometric layouts of these interchanges, and a review of the projected traffic operations associated with the interchange design. Recommended improvements include such items as the number of lanes required, intersection channelization, and traffic control improvements. A capacity analysis to determine the level of service on the mainline, ramps, and connecting arterials was also conducted.

In addition to the geometric configuration of the proposed interchange improvements, an estimate of the right of way requirements to construct the improvements was provided. These estimates were used in this study to perform an analysis of the costs of right of way based on the current level of development at each interchange location, and several scenarios for future levels of development.

The interchanges evaluated in the Phase II study are listed in Exhibit IV-4.

Exhibit IV–4: Interchanges Evaluated in SDDOT Interstate Corridor Study – Phase II

Interstate	Exit	Description
Interstate 90	10	US 85 North, Spearfish
Interstate 90	44	Bethlehem Road, Piedmont
Interstate 90	46	Elk Creek Road, Piedmont
Interstate 90	48	Stagebarn Canyon, Piedmont
Interstate 90	51	Black Hawk Road (SD79), Black Hawk
Interstate 90	55	Deadwood Avenue (SD445), Rapid City
Interstate 90	59	LaCrosse Street, Rapid City
Interstate 90	60	East North Street (US16B), Rapid City
Interstate 90	61	Elk Vale Road (SD437), Rapid City
Interstate 90	332	SD37, Mitchell
Interstate 90	395	Marion Road, Sioux Falls
Interstate 90	396	I-29/I-90 Interchange, Sioux Falls
Interstate 90	399	Cliff Avenue, Sioux Falls
Interstate 90	400	I-229/I-90 Interchange, Sioux Falls
Interstate 29	2	SD105, North Sioux City
Interstate 29	4	McCook Lake, North Sioux City
Interstate 29	79	12 th Street (SD42), Sioux Falls
Interstate 29	80	Madison Street, Sioux Falls
Interstate 29	81	Russell/Maple, Sioux Falls
Interstate 29	82	Benson Road, Sioux Falls
Interstate 29	129	County Road 26, Brookings
Interstate 29	132	US14, Brookings
Interstate 29	177	US212, Watertown
Interstate 229	3	Minnesota Avenue, Sioux Falls
Interstate 229	5	26 th Street, Sioux Falls
Interstate 229	7	Rice Street, Sioux Falls

Of these 26 interchanges, eight had no right of way requirements as part of the upgrades specified in the Phase II study. For this reason they are not included in the analysis below. These interchanges are:

Interstate	Exit	Description
Interstate 90	59	LaCrosse Street, Rapid City
Interstate 90	332	SD37, Mitchell
Interstate 90	399	Cliff Avenue, Sioux Falls
Interstate 29	2	SD105, North Sioux City
Interstate 29	79	12 th Street (SD42), Sioux Falls
Interstate 29	177	US212, Watertown
Interstate 229	3	Minnesota Avenue, Sioux Falls
Interstate 229	7	Rice Street, Sioux Falls

Three other interchanges were also excluded from the analysis as there is no undeveloped land remaining at the interchange locations. These are:

Interstate	Exit	Description
Interstate 90	55	Deadwood Avenue (SD445), Rapid City
Interstate 90	60	East North Street (US16B), Rapid City
Interstate 90	61	Elk Vale Road (SD437), Rapid City

Base line data for the remaining 15 interchanges used for the case study analysis is presented in Exhibit IV-5. The percentage of developed versus undeveloped land was estimated through the use of aerial photographs provided in the Phase II study. Estimates of the cost of developed versus undeveloped land at each interchange location were provided by SDDOT district right of way staff.

Exhibit IV–5: Interstate Interchange Case Study – Baseline Data

Interchange	Estimated Construction Cost ¹	Maximum Right of Way Acres Required ²	Estimated Percentage of Acres Developed ³	Estimated Acres Developed	Estimated Acres Undeveloped	Estimated Developed Land Cost (\$/Sq.Ft.) ⁴	Estimated Undeveloped Land Cost (\$/Sq.Ft.) ⁴	Estimated Total Developed Land Cost (Current \$)	Estimated Total Undeveloped Land Cost (Current \$)
I-90:Exit 10	2,600,000	9.0	0.25	2.25	6.75	4.00	1.00	392,040	294,030
I-90:Exit 44	700,000	6.2	0.10	0.62	5.58	2.00	0.60	54,014	145,839
I-90:Exit 46	1,600,000	7.5	0.10	0.75	6.75	2.00	0.60	65,340	176,418
I-90:Exit 48	400,000	1.8	0.10	0.18	1.62	2.00	0.60	15,682	42,340
I-90:Exit 51	20,300,000	55.0	0.10	5.50	49.50	6.00	1.00	1,437,480	2,156,220
I-90:Exit 395	7,100,000	51.1	0.10	5.11	45.99	4.00	3.00	890,366	6,009,973
I-90:Exit 396	11,300,000	29.1	0.10	2.91	26.19	4.00	3.00	507,038	3,422,509
I-90:Exit 400	6,700,000	29.5	0.10	2.95	26.55	4.00	3.00	514,008	3,469,554
I-29:Exit 4	6,060,000	32.0	0.20	6.40	25.60	3.00	2.00	836,352	2,230,272
I-29:Exit 80	7,130,000	3.7	0.10	0.37	3.33	5.00	3.00	80,586	435,164
I-29:Exit 81	11,500,000	40.3	0.20	8.06	32.24	5.00	3.00	1,755,468	4,213,123
I-29:Exit 82	10,540,000	2.2	0.10	0.22	1.98	4.00	2.00	38,333	172,498
I-29:Exit 129	5,630,000	32.2	0.10	3.22	28.98	5.00	4.00	701,316	5,049,475
I-29:Exit 132	6,665,000	13.2	0.10	1.32	11.88	5.00	4.00	287,496	2,069,971
I-229:Exit 5	5,670,000	1.5	0.20	0.30	1.20	3.00	2.00	39,204	104,544
Totals	103,895,000	314.3		40.16	274.14			7,614,724	29,991,931
Estimated Total Right of Way Costs at Current Level of Development									37,606,929

Dye Management Group, Inc. Analysis

Notes:

- (1) Based on estimates provided in the SDDOT Interstate Corridor Study – Phase II.
- (2) In some cases, the Phase II study provided multiple interchange improvement options based on alternate configurations. For the purposes of this analysis, the option that required the most right of way acres was selected.
- (3) Estimates based on analysis of aerial photographs provided in the Phase II study.
- (4) Estimates provided by SDDOT Right of Way staff.

Exhibit IV–6 below presents an analysis of right of way costs for the 15 interchanges studied based on different levels of development.

Exhibit IV–6: Interstate Interchange Case Study – Estimated Right of Way Costs for Alternate Level of Development Scenarios

Development Scenario	Estimated Acres of Developed Land	Estimated Acres of Undeveloped Land	Estimated Costs for Developed Land (\$ Millions Current)	Estimated Costs for Undeveloped Land (\$ Millions Current)	Estimated Total Costs (\$ Millions Current)
Current Level of Development*	40	274	\$7.6 M	\$30 M	\$37.6 M
25 Percent of Land Developed	78	236	15.2	25.7	40.9
50 Percent of Land Developed	157	157	30.3	17.2	47.5
75 Percent of Land Developed	236	78	45.5	8.6	54.1
100 Percent of Land Developed	314	0	60.6	0	60.6

Dye Management Group, Inc. Analysis

* Based on the analysis of aerial photos provided by the Phase II study, approximately 15 percent of the land at the interchanges studied is currently developed.

As the analysis in Exhibit IV–6 shows, an increase in the amount of land that is developed at interstate interchange locations has a significant impact on right of way costs. Going from the current level of developed land, estimated to be approximately 15 percent, to 25 percent of land developed results in a \$3.3 million increase in right of way costs in current dollars. From the current level of development to 50 percent of the land developed would result in a \$9.9 million increase in land costs in current dollars.

The impacts of the above analysis are even more dramatic if the time value of money is taken into account. This impacts the analysis in two ways:

- First, the impact of inflation, combined with increases in the level of development, make purchase of right of way even more onerous in the future.
- Second, money saved purchasing right of way early before development takes place will be worth more in the future if invested.

Assuming an annual inflation rate of three percent the same increase in development would result in a \$17.8 million increase in right of way costs in ten years. The above analysis clearly demonstrates the benefits of corridor preservation efforts that work to control the level of development and/or promote acquisition of property at a lower price before development takes place.

2. SD115 – Sioux Falls south city limits to Harrisburg Corner

A similar analysis to that conducted on the interstate interchanges was undertaken for the planned reconstruction of South Dakota Highway 115, from Sioux Falls South City limits to Harrisburg corner, to demonstrate the impact of development on right of way costs. The analysis shows that each two acre increase in the amount of developed land on the northern 2.0 miles and southern 2.5 miles of the project will result in \$108,900 and \$39,204 current dollar increases in right of way costs respectively. Again, the result is more dramatic if inflation is accounted for. These costs represent only property acquisition and do not include an estimate of costs for providing alternative access through frontage roads and intersections. It would be difficult to estimate these costs as they would be negotiated with individual property owners.

SD115 is scheduled for reconstruction in 2006 in conjunction with the planned southern expansion of Sioux Falls. The corridor is currently rural, with scattered small businesses and residences along the highway. Residential subdivisions, with neighborhood commercial uses, are expected to develop in the northern mile of the project within the next 10 years. The total length of reconstruction is 3.4 miles and is currently estimated at \$9.166 million. The reconstructed roadway may be similar to the cross-section used in the project immediately to the north – a divided four-lane roadway with access controls and turn lanes at selected locations. SDDOT and local governments are considering preparing an access plan prior to design.

Exhibit IV–7: Subdivision Frontage Road Paralleling SD115



Exhibit IV–8 presents baseline data on developed and undeveloped acres affected and associated property costs for the SD115 reconstruction project.

Exhibit IV–8: SD115 Reconstruction Project – Baseline Data

	Estimated Acres Developed*	Estimated Acres Undeveloped *	Estimated Developed Land Cost (\$/Sq.Ft.)*	Estimated Undeveloped Land Cost (\$/Sq.Ft.)*	Baseline Right of Way Cost (Current \$)
Northern 2.0 Miles	2	25.5	2.00	0.75	\$ 1,007,325
Southern 2.5 Miles	6	32.3	0.75	0.3	\$ 618,116

Dye Management Group, Inc. Analysis

* Estimates provided by SDDOT district right of way staff.

Exhibit IV–9 below presents an analysis of right of way costs for the SD115 reconstruction project based on several scenarios of increases in the amount of land that is developed along the corridor.

Exhibit IV–9: SD115 Reconstruction Project – Estimated Right of Way Costs for Alternate Level of Development Scenarios

Northern 2.0 Miles					
Acres Developed	2 acres <i>Current Level</i>	4 acres	6 acres	8 acres	10 acres
Acres Undeveloped	25.5 acres <i>Current Level</i>	23.5 acres	21.5 acres	19.5 acres	17.5 acres
Estimated Right of Way Costs (Current \$)	\$ 1,007,325	\$ 1,116,225	\$ 1,225,125	\$ 1,334,025	\$ 1,442,925

Southern 2.5 Miles					
Acres Developed	6 acres <i>Current Level</i>	8 acres	10 acres	12 acres	14 acres
Acres Undeveloped	32.3 acres <i>Current Level</i>	30.3 acres	28.3 acres	26.3 acres	24.3 acres
Estimated Right of Way Costs (Current \$)	\$ 618,116	\$ 657,320	\$ 696,524	\$ 735,728	\$ 774,932

Dye Management Group, Inc. Analysis

The analysis in Exhibit IV–9 clearly demonstrates that corridor preservation efforts to control the level of development and/or promote acquisition of property at a lower price before development takes place will result in significant savings to SDDOT. Again, this analysis is in current dollars so it does not take into account inflation. Accounting for inflation would make the results even more pronounced when developed property is acquired several years in the future.

3. Case studies presented at workshops

Several case studies were presented at corridor preservation workshops held in Rapid City, Pierre, Aberdeen, and Mitchell. These case studies provide useful qualitative evaluations of the benefits of corridor preservation. Sixteen case studies were presented at the workshops; however seven are summarized for the purposes of this report.

a. Aberdeen US281 truck bypass

Category: Corridor preservation as good practice for ongoing projects.

Example: Reducing displacement of businesses and residences.

Prepared by: Larry Afdahl, Aberdeen Region Engineer, SDDOT

Demonstrates:

- By acquiring right of way in a timely manner, fewer businesses and residences will be displaced.
- By improving communication and coordination, corridor preservation techniques can result in more timely project development.
- Traffic congestion will be minimized by the implementation of new access management guidelines.

Location Description: US281 truck bypass connects US281 going south from Aberdeen to US281, two miles north of the City. The bypass runs through a retail lumberyard, then crosses over 15 railroad tracks. The last one-half mile runs through newly purchased land that is currently being developed into homes and businesses.

Case Study Details: SDDOT plans to add a two-mile long truck bypass to US281, providing a direct connection from US281 going south from Aberdeen at the Starlight Truck Stop to US281, two miles north of the City. It will redirect trucks away from downtown, thus alleviating downtown traffic congestion and providing a more direct route for trucks. At the present, traffic on US281 going through downtown is heavily congested, averaging 19,000 vehicles per day with approximately 1000-plus trucks per day. The downtown US12/US281 intersection has a very limited radius; therefore it is difficult for southbound to westbound trucks to navigate. When SDDOT completes this new truck bypass, the City will take over what is presently US281 downtown.

Exhibit IV–10: US281 Bypass Bisecting Keeley Lumber Yard



Corridor preservation practices can help reduce relocation issues. For this case study the local church, lumberyard, and utility lines provide good examples.

The church had plans to build a new building on the north side of Aberdeen prior to learning that the truck bypass would bisect the church property. A few years ago, the church tried to sell their property to SDDOT in order to use that money to purchase a different building site. This could not be done because of the existing right of way limitations at SDDOT. The church's only other alternative was to sell the property to a local business. The new business immediately started to develop the site for commercial use. This resulted in very high right of way costs for SDDOT when it finally had to purchase the property.

US12 runs through the local lumberyard, causing several planning complications. The bypass divides the property; thus forcing the owners to change access points. SDDOT decided to purchase the lumberyard, but that proved to be costly due to the business's close proximity to the City.

Several power lines, rural water, natural gas lines, etc. have been in place for years before bypass alignment was decided. Moving them proved not only to be costly, but time-consuming.

b. SD20 truck bypass at Watertown

Category: Corridor preservation aiding in future development.

Example: Minimizing social and economic impacts.

Prepared by: Larry Afdahl, Aberdeen Region Engineer, SDDOT

Demonstrates:

- City government can assist with corridor preservation goals.
- Advance acquisition and right of way can reduce relocation delays and costs in a rapidly developing area.
- Practicing corridor preservation techniques can help to facilitate better communication and coordination between utility companies and the SDDOT.

Location Description: The Watertown connection extends from the I-29/US 81 Interchange west to SD20 near the airport and industrial park northwest of Watertown between the City and Lake Kampeska. The surrounding area is mostly farmland.

Exhibit IV–11: East End of Project, Close to Historic House and Power Lines



Case Study Details: The City of Watertown’s primary concern is the increased traffic volume that is a result of the rapidly growing rate of the City. Watertown is increasing, both in size as well as economically. There is currently an ongoing project to develop truck bypass SD20, so that it will divert truck traffic away from 14th Avenue, which runs through a residential area, on the north side of town. US 212, which runs along the south side of Watertown, is also very congested.

There are many issues in Watertown that corridor preservation can help to alleviate, mainly purchasing right of way in order to preserve the corridor for future development. The City of Watertown is responsible for buying right of way and is protecting the corridor by prohibiting development along the corridor until right of way has been secured. This is the primary direction for residential development in Watertown and expected to make a significant difference in right of way costs.

Watertown and its surrounding areas are mostly farmland, which is prime for residential track development. In order for the City to maintain its growth, lanes must be added to highways to avoid congestion. However, developing roadways presents a problem for the utility companies, who have already established their lines to serve the community. One major utility issue with the SD20 truck bypass is that there is an overhead power line on one side of the east mile of this segment. Moving the line will be very costly.

c. East Side Corridor - Sioux Falls

- Category:** Corridor preservation aiding in future development.
- Example:** Improvements through transportation planning.
Minimizing social and economic impacts.
- Prepared by:** Jeff Schmitt, Planner – City of Sioux Falls
Rick Laughlin, Access Management Specialist, SDDOT
- Demonstrates:**
- City government can assist with corridor preservation goals.
 - Advance acquisition and right of way can reduce relocation delays and costs in a rapidly developing area.
 - Pre-planning future right of way and utility lines will minimize the percentage of displacement among businesses and residences.

Location Description: The East Side Corridor is the 25-mile segment between Highway 11 and County Road 106, known as the East Side Corridor of Sioux Falls. Most of the surrounding area is farmland.

**Exhibit IV–12: East Side Corridor:
Looking South Along Powderhouse Road to SD42**



Case Study Details: According to the 2025 Growth Projections Report, the population of the Sioux Falls area will almost double, if not, triple in size. It is expected that most of the surrounding farmland will be developed into commercial or residential land. This means that the Eastside Corridor will be located in the middle of a city by 2025, thus increasing the traffic volume that currently runs through that area. Approximately 25 percent of the surrounding population commutes into the City.

At the moment, the primary need for corridor preservation is to alleviate traffic pressure and to aid in the planning for corridor improvement and expansion. The City of Sioux Falls has undertaken extensive planning efforts to develop the East Side Corridor and ensure that development along the corridor is not incompatible with future plans. Corridor preservation can facilitate better communication between SDDOT and the community, allowing SDDOT to reveal, in advance, development plans such as access points, right of way, etc. This will allow SDDOT, utility companies and the community to work together in developing the area.

d. US18 in Canton - Lincoln County

- Category:** Corridor preservation in a rural area.
- Example:** Lack of expansion options because of encroaching development.
- Prepared by:** Jeff Senst, Sioux Falls Area Engineer, SDDOT
- Demonstrates:**
- Facilitating economic growth and development of the community by expanding US18 to accommodate more commuter traffic.
 - Reduce displacement of businesses and residences through the use of setbacks.
 - Ensuring better communication between the community and SDDOT.

Location Description: Established in the late 1800s, Canton is a small farming town with a population of approximately 2,500. US18 runs east and west through the middle of town, which is known as the business district. US18 is also the only access to the town's grain elevator.

Exhibit IV–13: SD18 in Canton - Looking East from Town Square



Case Study Facts: Corridor preservation is crucial in Canton. It is clear that US18 needs to be expanded to meet the growing needs of the City, but poor planning and unforeseen rapid growth impedes future development options. One major example is the downtown business district. Not only are there insufficient setbacks (buildings are very close to the street), but there is traffic congestion as well. Traffic on US18 is mostly commercial, generated by the freight trucks driving to and from the grain elevator. Freight trucks tend to wait on the shoulder if the line grows too long, which hinders the companies in the business district.

Expansion of US18 will be complicated because there is limited right of way as well as encroachment issues. This case study provides an example of where increased use of setbacks could help reduce displacement costs by limiting encroachment of development along transportation corridors.

e. SD1804 from north of the Oahe Dam

- Category:** Corridor preservation in a rural area.
- Example:** Substandard highway with limited right of way.
- Prepared by:** Tim Bjorneberg, Roadway Design Engineer, SDDOT
- Demonstrates:**
- Reduce displacement of businesses and residences through the use corridor preservation techniques.
 - Ensuring better communication between the community and SDDOT.

Location Description: This case study focuses on SD1804 from north of the Oahe Dam north to the Hughes/Sully County Line (Spring Creek Road). The surrounding area is mostly farmland, with very little residential development. SD1804 at Spring Creek has several sharp curves, thus creating a potentially hazardous section for large freight trucks to maneuver through.

Case Study Details: The primary problems of SD1804 are the sharp curves and the limited right of way. The current right of way width on SD1804 is 100 feet with 26 feet of roadbed width. Traffic volume averages approximately 750 ADT per year, but seasonal recreational traffic increases dramatically during the summer and fall. Increasing the shoulder width could alleviate safety concerns, since emergency stops can be hazardous. The intersecting road at the Spring Creek Road needs a turning lane; to do so requires the highway alignment to be changed so that the turn lane is not located on a curve. Corridor preservation is needed not only to widen the road shoulders and realign the highway, but also to avoid future displacement issues. The realignment of SD1804 will encroach on property that is being developed in the near future.

Exhibit IV-14: SD 1804 North of US 14



f. Southeast Connector, Rapid City

- Category:** Corridor preservation aiding in future development.
- Example:** Encroaching development leading to increased project costs.
- Prepared by:** Todd Seaman, Rapid City Region Engineer, SDDOT
Joel Jundt, Rapid City Operations Engineer, SDDOT
- Demonstrates:**
- Corridor planning and advanced acquisition can reduce project costs and prevent encroaching development.
 - City government can assist with corridor preservation goals.
 - Ensuring better communication between the community and SDDOT.

Location Description: Located outside of downtown Rapid City, the Southeast Connector is a four-lane highway with two interchanges linking I-90 (Elk Vale Interchange) and SD79, and tentatively SD44. The surrounding area is mostly undeveloped farmland with the occasional building encroaching the highway.

Exhibit IV–15: Proposed Location for New Interchange at Southeast Connector and SD44



Case Study Facts: The construction of the Southeast Connector was originally a \$5 million project, but the price has risen dramatically to \$36-40 million. Land settlement prices have been very high due to development and knowledge of the transportation project. Of the 187 acres that will be required for the project, 167 have been appraised. The appraised amount for the 167 acres is \$5.4 million, whereas the settlement amount is \$8.3 million. At this point in the project, control of access has been purchased, which has helped to maintain traffic at 45 mph.

Corridor preservation can help this project to accomplish its goals. It is imperative that the project continue and that right of way is purchased as soon as possible, since right of way costs are rising steadily and land developers are moving in. Corridor preservation can secure the proper right of way as well as enough land to finish the project.

g. I-90 Milepost 46 to 55

Category: Encroaching development leading to increased project costs.

Example: State interstate highway example.

Prepared by: Todd Seaman, Rapid City Region Engineer, SDDOT
Joel Gengler, Road Design Engineer, SDDOT

Demonstrates:

- Correcting the horizontal curvature between milepost 46 to 55 on I-90 and establishing setbacks will improve safety.
- Minimize displacement of businesses and residences through the acquisition of property or property rights.

Location Description: Milepost 46 to 55 on I-90 is an older section of the highway with particularly sharp S-curves both eastbound and westbound near milepost 51. The service road at milepost 46 looking eastbound forks into two sharp curves with not much leeway in between. The surrounding land is developing, with a few residential neighborhoods and businesses encroaching on the existing right of way. Utility lines, such as electric and phone lines, run along the side of the road in some areas, such as Exit 51 and Exit 46.

Exhibit IV–16: I-90 S-Curves at Milepost 51 Looking Eastbound



Case Study Facts: The main concern for SDDOT is that the horizontal curvature on I-90 from milepost 46 to 55 is too sharp. The Department has been unable to correct the problem due to the booming residential and commercial development. Landowners are purchasing undeveloped land at a rapid pace, thus making it difficult for SDDOT to do any work on the highway. Landowners must be willing to sell in order for SDDOT to obtain advanced acquisition and eventually, right of way. Construction is tentatively set for 2003 and right of way costs are expected to be significant.

D. Stakeholder Support for Proactive Corridor Preservation

In order to incorporate input from the public and SDDOT region staff, four well attended workshops were held in Rapid City, Pierre, Aberdeen, and Mitchell in September and October of 2001. The workshops were conducted to determine perspectives on the importance of improving corridor preservation practices in South Dakota. The morning public meetings included city and county planners, superintendents, and commissioners, as well as utility companies, developers, and consultants and engineers. Separate meetings were held for SDDOT staff in the afternoon, although many staff also attended the public meetings.

At the workshops, a presentation was given to provide background for the project, provide an overview of corridor preservation techniques, and present several local case study examples of where corridor preservation had been applied or should be applied. Much of the time was spent receiving feedback from participants on the applicability of the various corridor preservation techniques and discussing opportunities and issues with implementing a more proactive corridor preservation program in South Dakota. Feedback forms were used as another method to elicit stakeholder input.

The feedback and comments received at the workshops demonstrated strong stakeholder support for expanded corridor preservation efforts in South Dakota. The following is a summary of the themes which arose from the workshops:

1. Support for SDDOT leadership to preserve corridors

There is interest in the State taking a leadership role for corridor preservation. This includes:

- Support for an official mapping concept to communicate the Department's plan for expansion of existing transportation corridors and development of new facilities.
- Support for legislative change if needed to facilitate an expanded corridor preservation program – if the benefits warrant such legislative change.
- Support for an increased role of the State in reviewing or limiting property improvements along growth corridors.

Workshop participants also recognized the importance of SDDOT coordinating any expanded corridor preservation efforts with its new access management program.

2. Long range planning

Workshop participants universally agreed that SDDOT should extend its planning efforts beyond five years and needs to identify proactively future capacity projects. The central themes were:

- The current program is driven by the Pavement Management System (PMS). A method is needed to identify capacity driven needs.
- There is a need to forecast land use and identify corridors likely to experience development and to determine right of way requirements for expansion needs.
- SDDOT regions need a focus for long range planning and corridor preservation to provide a point of contact with local jurisdictions, the public, developers, and utility companies regarding what is planned.

3. Application of corridor preservation techniques

Workshop attendees expressed opinions on the applicability of various corridor preservation techniques. Some of the consistent comments included:

- SDDOT should do more advance fee simple right of way purchase to support corridor preservation.
- Tools like dedications and exactions and transfer of development rights will only work in urban areas where development pressures exist.
- It is difficult to affect change on existing corridors through local regulatory powers unless there is new development.
- The purchase of options and easements may work in rural areas where land values are lower and there is limited development pressure.
- Some counties might consider ordinances for setbacks.

4. Corridor preservation and project delivery

Many workshop attendees suggested that right of way actions could begin earlier as part of normal project development. Themes included:

- There is a need to begin corridor preservation and right of way action earlier in project development. Under the current system a project must be programmed before right of way can be purchased.

- The right of way system of acquisition may need updating. Currently, plans are complete before they are turned over to right of way. Corridor preservation requires changing this practice so that generalized footprints and concept designs can be used.

5. Coordination with utilities

The workshops were well attended by representatives from utility companies. The comments and feedback expressed strong interest in improving communication and coordination with utility companies. The consistent comments included:

- There is a need for utilities and developers to have predictability and know “what the plan is” for growth corridors.
- Utilities and SDDOT should negotiate and buy right of way at the same time.
- Early scoping does not include utilities but probably should. Reducing utility relocation fees can allow the Department to fit another program/project into the cycle.
- SDDOT should acquire adequate utility easements to support today’s utility needs when acquiring right of way.
- As-built plans for utilities would be helpful.

6. Communication and coordination with local government

One of the central themes from the workshops was the importance of communication and coordination with local government. Consistent comments included:

- Cities and counties are interested in aiding corridor preservation efforts through the use of local land use controls.
- State, city, and county planners need to communicate their plans with each other and with utilities and land developers.
- Official maps are probably most valuable tool for communicating the plan for the State’s transportation system.

Complete results from the corridor preservation workshops are presented in Appendix B of this report. The appendix includes a summary of issues raised at each workshop location and results from the feedback forms filled out by each workshop attendee.

V. Corridor Preservation Techniques Applicable to South Dakota



This chapter provides a comprehensive review of available corridor preservation tools and techniques based on an examination of approaches used by other state departments of transportation.

The tools and techniques presented in this chapter fall under the following major categories:

- Corridor identification and planning approaches
- Techniques for early property acquisition
- Techniques to acquire less than fee-simple property rights
- Land-use regulation techniques

Guidance is offered for the applicability of these tools to South Dakota.

A. Introduction

Corridor preservation requires that property interest requirements be identified earlier in the planning or project development process and that a mechanism exists to determine the conditions under which early acquisition and protection of property rights is appropriate. A multijurisdictional approach is required so that state statutes and local ordinances support a proactive corridor preservation approach. Tools and procedures are required to determine the level of design detail needed to prove necessity for corridor preservation, to ensure that the public consultation and environmental processes are addressed, and to ensure that all feasible alternatives are considered.

The use of innovative property acquisition methods has been encouraged by relaxation of federal property acquisition regulatory requirements. Formerly, federal regulations and their interpretations emphasized national uniformity, acquisition only after highway design is complete, and a fixation on settling at appraised value. These concepts do not encourage use of corridor preservation, which requires early acquisition of varied types of property interests to meet anticipated transportation needs. The values now in dominance are timely delivery of right of way, search for and adoption of acquisition “best practices”, early initiation of acquisition, and use of real world negotiations rather than “take it or leave it” one price policy.

The corridor preservation techniques presented in this chapter were evaluated based on their applicability within South Dakota’s existing legal environment and institutional framework. Examination of the benefits and limitations includes:

- Responsibility (level of government)
- Success of application in other states
- Costs
- Likelihood of legal challenges (for example “takings” issues)
- Organizational and institutional practicality in South Dakota

B. Corridor Identification and Planning Approaches

The identifying and planning of corridors for preservation allows the state to prioritize and focus its efforts on those corridors that have been selected by transportation officials for preservation.

There are three basic ways that transportation corridors are identified and designated for protection:

- Corridors identified and designated through long range planning and the statewide plan.
- Corridors selected on an individual project basis.
- Corridors adopted under a Map Act.

Approaches used by other states to fund property acquisition for corridor preservation are also addressed in this section.

1. Corridors identified and designated through long range planning

Many states identify and designate protection corridors through long range planning efforts, in many cases linked to the federal requirement to produce a statewide long range transportation plan.

Corridors Identified and Designated through Long Range Planning	
Benefits	Limitations
<ul style="list-style-type: none"> • This method encourages coordination between the state department of transportation, local jurisdictions, and developers early in the planning process. • This method allows for consistent development in designated growth areas. • The recommended course of action for protecting corridors or segments is balanced against the interests of the affected property owners. 	<ul style="list-style-type: none"> • Cooperation between the state department of transportation and local jurisdictions is critical because local government has the authority to manage land use. • It is important that local agencies have a shared vision with the state department of transportation for corridor preservation. • The general public may not understand that corridor preservation is part of an overall process. • It is important to identify parcels that come up for sale within critical corridor areas and approve projects as quickly as possible.

a. Idaho

In Idaho, the state transportation board adopted a resolution to initiate corridor planning. Corridor plans are designed to define the purpose and need and prepare projects for entry into the Statewide Transportation Improvement Program (STIP) or other implementation strategies.

Regionally located planners in Idaho undertake the following corridor planning process which consists of the following nine steps:

- Develop a corridor work plan and public participation plan.
- Research existing conditions of the transportation system.
- Document existing and projected environmental and land use conditions in the corridor area.
- Analyze the projected future (20-year) travel demand and performance in the corridor.
- Establish purpose and need, and the relative importance of corridor needs through project goals.
- Generate alternatives to meet the corridor goals.
- Identify feasible alternatives by first evaluating all alternatives.

- Use comparative analysis to further evaluate alternatives and generate a preferred list.
- Review material gathered from the previous steps and assemble components into the corridor plan document.

b. Delaware

In Delaware, corridor plans are developed and approved within each municipality and corridors in the state are selected by the state department of transportation to become a part of the *Corridor Capacity Preservation Program*. The law requires that these nominated corridors be adopted under Delaware's *Statewide Long Range Transportation Plan*. The *Statewide Long Range Transportation Plan* is modified as other corridors are identified and selected for preservation.

c. Kansas

Corridors can also be identified for preservation through a legislatively mandated process that designates the corridors on local district plans, as practiced in Kansas. This type of corridor preservation program exists as a subset of the state's Corridor Management Program. The program requires that localities designate corridors as input for the development of plans by the state.

The four-step process for identification of the corridors is:

- The district engineer designates the corridor on the District Transportation Plan.
- A Memorandum of Understanding (MOU) agreement is signed between the state department of transportation and local officials to protect and manage the corridor.
- Full-scale corridor master plans are developed jointly between the local district and the state department of transportation.
- Application for approval of projects is made against other corridor projects in the state.

In Kansas, corridors are designated as a protected corridor for reasons including population centers served, traffic volumes, adjacent land use (development growth and traffic generators), and safety record (accident history).

d. Minnesota

In Minnesota, the *Interregional Corridor Study* was undertaken by the state department of transportation to identify important economic corridors in the state. The *Interregional Corridor System Plan* was adopted and incorporated into the 1997 *Statewide Transportation Plan*. Development of the Interregional Corridor System Plan allowed a better understanding of preservation needs on the principal arterial system. No legislation exists for corridor preservation, however the program establishes high priority corridors for preservation, funding, and expansion.

An Interregional Corridor Steering Committee was formed that included the Minnesota Department of Transportation (MnDOT), Minnesota Planning, and Minnesota Department of Natural Resources. Public outreach was conducted throughout the development of the corridor plan to gather input from different regions of the state. Participants included city and county officials, Chamber of Commerce, selected businesses, regional development agencies, and other transportation interests.

The process for identifying corridors consists of a six-step process:

- *Develop Regional Trade Center (RTC) hierarchy.* A model was used to rank the importance of regional trade centers. The model used population and the number and diversity of businesses in an area to rank the centers for “Level 0” to “Level 3”. “Level 0” includes the Twin Cities metro area and “Level 3” is considered a full shopping center. The model will also show changes in the local economy.
- *Corridor Evaluation.* Individual highway segments were ranked according to average annual daily traffic (AADT), traffic trends, projected population changes, and RTC rankings.
- *Priority Corridors.* Individual highway segments were combined into corridors that connected regional trade centers based on criteria such as National Highway System designation, intermodal connectivity, etc.
- *Performance Measures.* Performance targets were set up to measure the capacity and efficiency of the corridors. These include speed limits, number of signals, and level of congestion.
- *Improvement Strategies.* Demand management and design strategies were identified to address performance deficiencies.
- *Investment Strategies.* Investment strategies were developed for corridor segments that were found to perform below target levels. Currently seven interregional corridors have been selected for corridor management studies because they are under performing.

The Minnesota legislature issued \$459 million in funding to be used over a period of three years to fund projects developed on the Interregional Corridor System Plan. The funding covered interregional corridors and their connections, transit, and bottleneck elimination in metropolitan areas.

e. Applicability to South Dakota

Identifying and designating corridors through long range planning is applicable to South Dakota but would require a shift in how planning is currently undertaken. This is detailed in the project recommendations.

2. Corridors selected on an individual project basis

Some states that do not have a statewide program to identify and designate corridors for protection, select corridors on an individual project basis.

Corridors Selected on an Individual Project Basis	
Benefits	Limitations
<ul style="list-style-type: none"> • Corridor preservation tools can be applied to control development and sprawl. • Fewer resources are required than with a formal program. • There are no restrictions on the length of a corridor – a corridor can consist of five to ten mile segments or an entire 20 to 30 miles. 	<ul style="list-style-type: none"> • Corridor preservation should be a defined program. The tools may be in place but they are not part of an overall cohesive plan. • It is not always clear how corridors are selected and projects determined. • There is often a lack of understanding and participation in rural areas because efforts are ad hoc.

a. Wisconsin

In Wisconsin a formal program for corridor preservation does not exist, however, State law enables the state department of transportation to practice corridor preservation on a project-by-project basis. Five different legislative statutes allow the Wisconsin Department of Transportation (WisDOT) to preserve its corridors and to restrict access to its corridors through the purchase of land.

The statutes supporting corridor preservation include the following:

- 84-25. Controlled-access highways. No more than 1,500 miles of highway shall be designated as controlled-access highways.

- 84-295. Freeway and expressways (mapping).
- 86-073. Review of and denial of permit.
- 84-09. Acquisition of lands and interests therein.
- Trans 233. Specifies the requirement that a developer must follow when dividing land abutting a State Trunk or Connecting Highway. Under this rule, all land divisions (and assemblages) of abutting properties must be reviewed by the state department of transportation (through the Transportation District Offices) for compliance with the requirements.

Trans 233 was established to manage the effects of land development on adjacent state highways by:

- Managing the number of access points onto the facility from the new development.
- Ensuring that the development is appropriately set back from the highways.
- Requiring reliance on internal public streets rather than private driveway access onto the highway.

Funding by the state department of transportation is needed for Statutes 84-09 and 84-295 only. Both 84-295 and 84-25 require a public hearing. Statute 84-295 has only been used once and 84-25 is used infrequently because it is limited to 1500 miles. Statutes 84-09, Trans 233, and 86-073 are used routinely: Trans 233 has approximately 250 reviews per year per district (there are eight districts in the state).

b. Maryland

In Maryland corridors are selected on a project-by-project basis by a corridor preservation team established by the Corridor Preservation Program. The corridor preservation team meets once a month to provide an updated status of prospective property that might come up for sale along corridors that are likely for future expansion. The corridor preservation team is made up of:

- Regional planners (provide liaison between local stakeholders and elected officials).
- Access permit division (counties regulate permits).
- Right of Way division (conduct actual purchasing of property).

In Maryland, the state department of transportation tries to purchase property along transportation corridors if there is a change in the use of the property or the property goes up for sale. Dedication and reservation of land ordinances are

considered if future right of way needs are known. At a minimum, local building ordinances require an adequate setback of structures.

The State Highway Administration (SHA) encourages local jurisdictions to participate in selective land use planning and development of local support for roadways. Local governments do the following to support corridor preservation in Maryland:

- Develop master plans of highways with emphasis on protecting state primary highway corridors.
- Develop local zoning ordinances that require dedications/reservation of land when future right of way needs are known.
- Develop local roadways to enhance land access and provide auxiliary support for the primary highway corridors.
- Require setback of structures through local building ordinances to minimize right-of-way cost.
- Purchase strategically located properties.
- Coordinate local planning and development approval processes with the SHA.

The state has set up primary funding areas (including highways, schools, etc.) which are areas set aside for development. The state will not permit development outside of these primary areas. As part of the transportation master plan, a Construction Consolidation program (six-year program) includes funding for the purchase of right of way along a corridor in order to preserve the corridor.

c. Applicability to South Dakota

While some states have been successful at conducting corridor preservation efforts on an individual project basis, the difficulty of overcoming the lack of an overall cohesive plan are often greater than the flexibility gained by lack of a formal program.

3. Corridors adopted under a Map Act

A transportation corridor Official Map Act allows local governments and the state to file a corridor for protection in order to preserve future right of way for priority highway projects. A Map Act allows cities to adopt an official map for this purpose.

Corridors Adopted Under a Map Act	
Benefits	Limitations
<ul style="list-style-type: none"> • Can promote orderly development. • Preserves foreclosure of alternatives due to development. • Encourages community involvement. • Property owners will often cooperate and agree to build away from the corridor if it is known that a corridor is under protection. 	<ul style="list-style-type: none"> • Reservation period must be short. • Prohibition of development raises potential taking-of-property issues. • Would require specific statutory authority. • Requires coordination with local comprehensive and general plans. • It is vital that permitting agencies follow through with the process.

a. North Carolina

In North Carolina, the General Assembly provided the state department of transportation and local governments the authority to adopt and establish Transportation Corridor Official Maps. Projects may be included on the official map provided at least a portion of the corridor project has been included in a current transportation improvement program (TIP) or in a comprehensive plan and capital improvement plan that is ten years duration or less. Landowners receive an 80 percent reduction in their property taxes for any land included on the official map.

The Map Act may be used for a thoroughfare plan in a rapidly growing area if there are no funds and the development well into the future. An environmental screening is then conducted prior to undertaking preliminary design. The Transportation Corridor Official Map establishes 300 feet or right of way. Once the map is developed a public hearing is held. Next the official map is recorded with the register of deeds. Thereafter, the city or state has one year to begin preliminary engineering or environmental studies on mapped corridors or the map is invalidated for that corridor.

Cities may deny building permits and subdivision requests within mapped corridors but the city or state must purchase the affected right of way within three years following the development application or the restrictions become void. The three-year reservation period begins with the request by the property owner for a building permit or subdivision approval on property located within an Official Map alignment. Before the expiration of the three-year reservation period, the property may be considered for advance acquisition due to hardship. After three years, the property must be acquired or they are issued a permit and development

plans are allowed to proceed. Protective purchase procedures may be required if the reservation period expires before right of way acquisition. Amendments to the Official Map will require new maps, a new public hearing, and adopted amendments.

Property owners affected by an Official Map may petition for a variance. A variance can only be granted if the property owner demonstrates that (1) even with the tax benefits authorized under the statute, no reasonable return may be earned from the land, and (2) the statute results in practical difficulties or unnecessary hardships. Under certain circumstances, the property may be recommended for advance acquisition based on hardship.

Selection to be an official map is limited to those major control access facilities when pressure from development is existing or anticipated, especially where not mapping a corridor will lead to expensive costs in the future or could potentially limit highway alternatives.

Candidates for corridor maps must have environmental studies either completed or anticipated within two years of adoption. If environmental studies have not been started and an official map designation is necessary, environmental screenings of alternative alignments should be conducted. Design Maps show preliminary right of way boundaries, while Recording Maps show the proposed alignment and existing property boundaries.

Another technique requires that the locality contact the state department of transportation for approval if development is planned within preserved corridors. This is practiced in both Iowa and Nebraska. This technique causes the corridor preservation program to be directly related to the issuing of building permits by local agencies. Local jurisdictions are required to contact the state department of transportation if permits are sought for a building, land use change, or land subdivision with the designated corridors, and notify the state department of transportation of any development planned near designated corridors.

b. Nebraska and Iowa

In Iowa, the local jurisdiction must contact the state department of transportation if one of the following applies: a building permit is sought for a structure or improvement that will cost more than \$25,000, a land use change, and a land subdivision. Former property owners can rent or lease the property from the state department of transportation for a short period of time until it is needed for construction. The state department of transportation will begin acquiring properties once a route for a new highway has been selected and approved.

In Nebraska, permits for construction along the alignment must be submitted to the state department of transportation if the permit for construction is over \$1,000. If it conflicts with the right of way, the state may have to acquire the

property. The department of transportation has 60 days to either accept or reject the request. If it is rejected, the department of transportation has 180 days to acquire the property. Acquiring the property can include appraising it and making the offer or filing condemnation. However, the state will not purchase the land until a project exists.

c. Wisconsin

Legislation in Wisconsin is similar to Nebraska's in that there is an administrative rule mandating that any new land recording (consolidation, platting, etc.) along a preserved corridor must be approved by the state. But coupled with this rule is a statewide mandate that localities conduct corridor studies to identify priority corridors and address preservation issues. These studies have largely emphasized access control and management as a tool to implementing corridor preservation. In other words, Wisconsin relies on local plans that designate access control and management to prioritize and implement their corridor preservation efforts.

d. Applicability to South Dakota

Official mapping, either as a corridor development notification and/or moratorium tool would require enabling legislation in South Dakota. However, using maps purely as an information and communication tool would not require legislative change but would require undertaking the necessary long-term capacity planning to develop maps of future expansion corridors.

4. Funding property acquisition for corridor preservation

FHWA notes in its May 2000 survey, "Most States noted that legal and monetary constraints are among the leading limitations on implementing corridor preservation". There are some constraints on the ability to use federal funds for corridor preservation. Reimbursement of advance acquisition is limited to "one or a limited number" of parcels under imminent threat of development, but only if acquired after a preferred location is established and public involvement conducted. Early acquisition (before federal project agreement) is constrained by a land use-planning prerequisite to which few States can conform.

Most agencies that acquire real property in advance of project need, do so with State funds. There are a number of states that have dedicated funding for corridor preservation as indicated below:

- **Florida.** State has bonding authority to fund advance acquisition. Over \$700 million has been committed at the current time.

- **Utah.** A tax on short-term vehicle rentals is dedicated to advance acquisition. As of 2000 this tax has yielded over \$7 million.
 - **Washington.** The state legislature established a \$10 million revolving fund for corridor preservation. It has enabled voluntary advance acquisition of critical parcels but has not been used on an entire corridor to avoid location pre selection issues.
 - **Michigan.** The state established a \$20 million revolving loan fund that is used for advance acquisition and hardship acquisition.
 - **California.** The state allocated \$25 million from rental, lease, and sale of land owned by the department of transportation to preserve corridors.
 - **Arizona.** A \$.005 gas sales tax was established in 1985 to pay for advance acquisition. In addition the department of transportation has utilized an Infrastructure Bank authorized by ISTEPA and TEA-21 for strategic purchases.
 - **Delaware.** Funding was set aside in the capital improvements budget to purchase access rights, acquire land, or negotiate with developers.
- a. **Applicability to South Dakota**

Formalizing corridor preservation at SDDOT will require funding for corridor management planning and advanced property acquisition actions. These activities will need to be programmed in the STIP, or otherwise be funded as a budget item using state funds. Some property actions can be federalized once a project agreement is established (for example, early acquisition); however, state funds must be available to purchase and carry the property until a project agreement is established and the funds reimbursed.

C. Techniques for Early Property Acquisition

Acquisition of full property rights, or fee-simple acquisition, is the simplest and most easily implemented corridor preservation technique. State or local government entities purchase properties needed for future transportation corridors outright, gaining full title to the land and complete control over its use. This preservation method has the fewest institutional complications, but it also requires the most substantial capital outlay. For this and other reasons, fee-simple property acquisition for transportation projects in South Dakota has generally been limited to small, discrete parcels rather than full-scale right of way purchase. Fee-simple acquisition can be done for corridor preservation purposes within existing state legislation for willing sellers. Demonstration of “necessity” is at question for condemnation cases.

Protective purchase, hardship acquisition, early acquisition, early acquisition of total takes, and donations, are fee-simple variations that are discussed in detail below.

1. Protective purchase

A state transportation agency may request the Federal Highway Administration (FHWA) to reimburse the advance purchase of a limited number of parcels to prevent imminent development or increased cost. The protective acquisition may be performed before final environmental approval, however, certain prerequisites must be met. The prerequisites are:

- The project must be on an approved State Transportation Improvement Plan (STIP)
- The state must have met public involvement requirements.
- Any parcel requiring 4f (parks and recreational facilities) determinations are excluded.

Assurance that advance purchase will not influence the environmental assessment, including need to construct the project or the specific location, is also required.

Preservation Technique: Protective Purchase	
Benefits	Limitations
<ul style="list-style-type: none"> • SDDOT has full title and controls property. • FHWA will reimburse advance purchase of a limited number of parcels to prevent imminent development or increased cost. • Protective acquisition may be performed before final environmental approval, however, certain prerequisites must be met. 	<ul style="list-style-type: none"> • Regulatory limitations prevent its use as an exclusive or formal method of corridor preservation. • The “imminent development” and “limited number of parcels” requirements confine it to use on an exception, rather than programmatic basis even under liberal interpretation of these terms. • The public participation and STIP requirements confine use to corridors advanced in the formal location approval process.

Protective purchase, once rarely used, is now used regularly in some states to purchase critical parcels. Several factors account for this trend. The criterion “imminent development” is not defined in regulations or law, and may therefore be applied to a wide range of potential development situations as a State determines is appropriate. The restriction to a “limited number” of parcels also allows for flexibility in application. Moreover, protective purchase has not, in practice, been shown to cause

pre-selection of highway location and thus there is not significant opposition to its use on environmental grounds.

The FHWA May 2000 survey of States Government Practices reported eight states that use advance acquisition (includes protective purchase and hardship acquisition) as a corridor preservation technique. They are Arizona, Connecticut, Delaware, Michigan, North Carolina, Oklahoma, Texas, and Utah. Most listed states use advance acquisition as a means to achieve some benefits of corridor protection in absence of a formal corridor preservation program.

Protective purchase is a useful means to advance acquire, but the regulatory limitations prevent its use as an exclusive or formal method of corridor preservation. The “imminent development” and “limited number of parcels” requirements confine it to use on an exception, rather than programmatic basis even under liberal interpretation of these terms. The public participation and STIP requirements confine use to corridors advanced in the formal location approval process.

a. Applicability to South Dakota

South Dakota presently acquires protectively, but not on a programmatic basis. Protective purchase has potential for greater use in the state. A process of identifying the circumstances of imminent development or increased cost would need to be developed in order to use protective purchase on a wider scale. Region engineers sometimes bring information that initiates a protective purchase. An awareness of the protective purchase provision among local agencies and SDDOT personnel in project development, design and planning would make expanded use more likely.

2. Hardship acquisition

Hardship acquisition allows a department of transportation to relieve a distressed owner when a property can not be sold on the private market because of public knowledge of a pending highway project. Owner distress includes need to sell because of health, safety, financial hardship or other personal circumstance. A typical situation is that an owner appeals to the department of transportation to acquire because of a job transfer to another city. Although a hardship acquisition must have property owner relief as a primary purpose, its use can contribute to a state’s corridor preservation strategy.

Preservation Technique: Hardship Acquisition	
Benefits	Limitations
<ul style="list-style-type: none"> • SDDOT has full title and controls property. • FHWA will reimburse SDDOT for hardship acquisition. • Hardship acquisition may be performed before final environmental approval. 	<ul style="list-style-type: none"> • Subject to the same project development preconditions as apply to protective purchase. • Requires owners to advise SDDOT of a specific hardship circumstance. • May be useful on an opportunity basis but not programmatically as a corridor preservation method.

The use of hardship advance acquisition is subject to the same project development preconditions (STIP, public involvement and location pre-selection assurance) as apply to protective purchase.

Notwithstanding limitations on use, hardship acquisition is reported in the May 2000 FHWA Survey as contributing to corridor preservation in Connecticut, Michigan, North Carolina, Utah and Texas. Utah, Michigan and Connecticut have legislative enactments as described below (quotes are from the Survey).

a. Utah

The Utah legislature authorized project wide use and special funding. While the legislation addresses hardships, it also had the effect of protecting the corridor from increased cost and development incompatible with the planned highway.

“The state has one new law that addresses hardship cases. It is motivated by the state’s plan to acquire property along US 89. The state had an EIS and was ready to start development, but no funding was available, thus creating a hardship for the property owners who could not sell their homes. The legislation authorizes state funding of the acquisition of hardship cases through a tax on rental cars”

b. Michigan

Michigan also reported special programmatic funding of hardship and protective purchase:

“Michigan ... established a revolving loan fund (a combination of state and federal funds) that is used for advance acquisition and hardship purchases. This fund is tapped into regularly to buy critical parcels as they become available”.

c. Connecticut

Connecticut indicated a legislative authorization of advance acquisition, including for hardship but did not provide funding:

“The law also allows the state to make advance acquisitions if funding is available. The legislation was passed in response to land use pressures and to alleviate hardships placed on property owners from fear of eminent domain.”

d. Applicability to South Dakota

Hardship acquisition likely has limited value for corridor preservation in South Dakota. For a hardship acquisition to be initiated, owners must advise SDDOT of a specific hardship circumstance. This technique may be useful on an opportunistic basis but not programmatically as a corridor preservation method.

3. Early acquisition

States may credit the value of real property acquired before Federal approval of a project to the state share of the project cost. This provision of TEA-21, Section 1301 (23 USC 108), expands applicability of previous legislation (ISTEA), which limited full state share credit to donated property only. Alternatively, states may claim reimbursement for early acquisition of real property at the rate of federal participation in project cost. This was a provision carried over from ISTEA.

Preservation Technique: Early Acquisition	
Benefits	Limitations
<ul style="list-style-type: none"> • SDDOT has full title and controls property. • States may credit the value of real property acquired before Federal approval of a project to the State share of the project cost. • States may claim reimbursement for early acquisition of real property at the rate of federal participation in project cost. 	<ul style="list-style-type: none"> • The early acquisition must not, in retrospect, have influenced the construction of the project or decision on its location. • State must have a comprehensive and coordinated land use, environment and transportation planning process under state law for federal participation as project cost.

TEA-21, Section 1301 supports corridor preservation because it provides new opportunity for full recovery of costs with the credit to state share provision. The credit may be either the current fair market value, or the historic acquisition cost. This will permit a state to realize inflationary increase in value during its holding period. However, the credit must exclude any increase in value attributable to the proposed project.

While Section 1301 encourages corridor preservation, there are some restrictions on use and limits on the benefits derived. The early acquisition must not, in retrospect, have influenced the construction of the project or decision on its location. All provisions (acquisition and relocation) of the Uniform Relocation Assistance and Real Property Acquisition Policies Act must have been followed in the initial acquisition. The state or local agency acquiring the property must pay acquisition and holding costs until the credit at the time the property is incorporated into the project right of way.

The most limiting requirement is in 23 USC 108c(2)C, that the state must have a comprehensive and coordinated land use, environment and transportation planning process under state law and the acquisition is certified by the Governor as consistent with the state plans.

To date, only Pennsylvania local agencies are indicated as using the early acquisition credit provisions. The planning prerequisites may be the restraining factor.

a. Applicability to South Dakota

Early acquisition (Section 1301 of TEA-21) has not been used by SDDOT. State involvement in land use planning and up front funding requirements may be issues in the decision not to use this acquisition technique. This technique has potential for wider application to support corridor preservation in South Dakota.

4. Early acquisition of total takes

Right of Way acquisition can be accelerated by identifying parcels that will need to be acquired without regard to design decisions. On new location projects, parcels that are on or near the centerline, or that are otherwise sure total takes, may be advance acquired. This permits right of way acquisition to advance in parallel with detailed design and reduce the overall time in project development.

Preservation Technique: Early Acquisition of Total Takes	
Benefits	Limitations
<ul style="list-style-type: none"> • Acquisition can be accelerated by identifying parcels that will need to be acquired without regard to design decisions. 	<ul style="list-style-type: none"> • Must have resolved potential environmental concerns about pre selection of a highway alignment. • Not itself a corridor preservation technique because it is applied during, rather than before, project development.

Highway agencies that acquire total takes or centerline parcels in advance of design have must have resolved potential environmental concerns about pre selection of a highway alignment.

Centerline, or total take acquisition is not itself a corridor preservation technique because it is applied during, rather than before, project development. However its use is an indicator of the acceptability of targeted acquisition or land use commitments that are tools of corridor preservation.

a. Applicability to South Dakota

Early acquisition of total takes has low potential for corridor preservation in South Dakota. The requirement that the properties are on all alignments that will be considered in planning is often a restricting factor in application of this acquisition technique.

5. Donations

Donations of real estate property rights are used by many states in varying degree to purchase right of way. The limiting factors on federal projects are that owners must be advised of their right to have property appraised and to be paid fair market value. Also, coercive tactics are prohibited in requesting donations.

Preservation Technique: Donations	
Benefits	Limitations
<ul style="list-style-type: none"> • The incentive for donations is the tax benefits that they accrue to the owner, the potential enhancement to remaining property arising from the proposed project, and a desire of owners to contribute to the general welfare of the community. • The potential for use under a corridor preservation program may be improved if there were expanded public information. 	<ul style="list-style-type: none"> • Owners must be advised of their right to have property appraised and to be paid fair market value. • A limiting factor in use of donations has been the issue of equity among owners on a project. • Donations are most likely to be granted when the part acquired is land only and does not damage the present or proposed use of the property.

The incentive for donations is the tax benefits that they accrue to the owner, the potential enhancement to remaining property arising from the proposed project, and a desire of owners to contribute to the general welfare of the community.

A limiting factor in use of donations has been the issue of equity among owners on a project. An owner may agree to a donation on presentation by an agency agent, but be unhappy with that decision on learning that neighbors received compensation. Unsophisticated owners are vulnerable to feeling misguided in a decision to donate, even with abundant caution by the agency not to mislead or coerce the donation. Some agencies adopt a passive position on donations. They appraise and make fair market value offers on all acquisitions and only accept donations if they are initiated by the owner.

Donations have a potential role in corridor preservation. The request for donation can be made without the pressure of a project construction schedule, leaving more time for the owner to consider the request. The agency can canvas all property owners on the corridor on the same basis. Owners can benefit from an immediate tax benefit rather than await a future acquisition with uncertain and deferred compensation.

Donations are most likely to be granted when the part acquired is land only and does not damage the present or proposed use of the property. An independent professional appraisal is needed to support any tax deduction, and the cost of the appraisal to the property owner may be a barrier to owner agreement to donate. The IRS and state tax agencies may not accept an agency secured appraisal as being independent and unbiased. However the state may offer to reimburse the owner's cost of securing an independent appraisal.

a. Applicability to South Dakota

SDDOT now accepts donations if offered, and after advising the owner of the right to have the property appraised and the right to receive compensation. The benefits of donation are not well understood by property owners. The potential for use under a corridor preservation program may be improved if there were expanded public information.

D. Techniques to Acquire Less Than Fee-Simple Property Rights

Purchase of property by fee simple title has certain disadvantages including high capital costs, requirements for NEPA compliance and public hearings unless Categorical Exclusion (CE) is in effect, and property management concerns. In order to avoid some of the disadvantages associated with acquisition of fee simple title in advance of actual construction need, some departments of transportation have experimented with the acquisition of lesser interests, primarily in the nature of easements and purchase of rights such as options to purchase.

Techniques presented in this section are:

- Options.
- Purchase of development rights (easements).
- Property exchange.
- Access management regulation.

1. Options

An option is a right to purchase an interest in real estate at specified price within a designated time period. It commits the parties to the terms of the transaction before the sale of real estate is completed. Options are used extensively by private real estate developers and investors. Option agreements can commit the prospective seller for a relatively small payment, while the buyer determines if the property will be suitable for intended use, or financing is available. Frequently options are purchased pending a favorable zoning decision, or location of a new highway.

Preservation Technique: Options	
Benefits	Limitations
<ul style="list-style-type: none"> • Land remains in private ownership until needed, remaining on local tax rolls and relieving the state of property management responsibility. • Initial capital investment is much lower than that of fee-simple acquisition. 	<ul style="list-style-type: none"> • If the property is never acquired for transportation use within the term of the agreement, the initial government investment is lost. • In order to preserve corridors on a long-term basis, options may have to be renewed several times prior to outright acquisition, further increasing capital costs.

Options are seldom used in federal government land acquisition. In 1998, the Federal Aviation Administration (FAA) performed a study of potential use of real estate options as directed by Congress. The question was addressed: can private sector use of land options be employed in the public sector to secure property before ownership is needed for construction of federally funded airport development. The report concluded that there is limited potential for securing right to acquire at a fixed price in areas of active development or speculation.

In spite of the limited utility of options in airport programs, the use of options deserves a closer consideration for highway corridor preservation. The method allows public funds to be leveraged, involves minimal risk, and is a flexible tool. The terms of an option are custom drafted to meet the needs and concerns of the buyer and the seller. The legal authority of SDDOT to use options would need to be determined.

A form of option deserving particular consideration is the “right of first refusal”. This imposes minimal restriction on the property owner. It therefore may be more acceptable to owners and could be purchased at less cost by the agency. The first refusal right obligates the property owner to offer the property for sale first to the option holder at price and other terms that are the same as will be offered to other parties on refusal of the holder.

a. Applicability to South Dakota

South Dakota has used right of first refusal on limited basis. This technique has potential for greater use in corridor preservation.

2. Purchase of development rights (easements)

The purchase development rights is a targeted technique of preventing property development not compatible with future transportation plans. This method can be designed to impose the least restriction on use of the property, and cost is thus limited to the value of the restriction. Development rights may be purchased as a permanent easement pending the acquisition of full property rights (fee-simple interest), or a temporary preventive easement may be acquired, that will expire at a predetermined time or event (such as selection of an alternative alignment).

Preservation Technique: Purchase of Development Rights (Easements)	
Benefits	Limitations
<ul style="list-style-type: none"> • Cost is generally less than that of fee-simple acquisition. • Land stays in private ownership, remaining on the tax rolls and eliminating the need for the state to develop property management programs. • It does not appear that purchases of development easements raise the same environmental and federal-aid concerns as fee-simple acquisition, because the state will not obtain outright title to the land. 	<ul style="list-style-type: none"> • In rapidly growing areas the cost of acquiring development rights can often approach that of fee-simple acquisition. • If the property in question is never used for a transportation corridor, it may be difficult for SDDOT to recoup its cost of the development easement, resulting in lost investment of public funds.

Purchase of development rights is often used by conservation organizations to protect land and natural resources from incompatible use development. An easement is purchased that allows the owner (or successors in title) any legal use of the property except as specifically set forth as being injurious to the protected resource.

Purchase of development rights is not widely used by states as a corridor preservation technique. However New Hampshire and North Carolina have legislation to this end. The New Hampshire department of transportation has authority to buy a temporary development restriction on the property that can wholly or partially restrict development on the corridor for ten years. North Carolina has a similar provision that includes creation of a map of reservation as follows from the May 2000 FHWA Survey:

“The Map Act, passed in late 1980s, authorizes the state and cities to file a corridor for protection. Once filed, any request for development along that corridor can be delayed for up to three years. The local agency must negotiate an agreement with the developer or acquire the property within three years.”

A restraint on the purchase of development rights for corridor preservation may arise from a preference to use police power authority to restrict development. States may perceive an erosion of this authority if they are paying for a right they consider not compensatory. Also, states are used to purchasing property needed for right of way in fee-simple (the total package of property rights). Some States may believe they need legislative authority to purchase development rights prior to purchasing the total fee interest.

The purchase of restrictive easements has proved useful by departments of transportation in other states for protection of wetlands and other natural resources, and for scenic enhancement. There are many examples of public agencies successful use of protective easements as discussed above.

a. Applicability to South Dakota

The purchase of restrictive easements is worthy of further consideration as a corridor preservation method in South Dakota; however, there may be legislative obstacles. SDDOT is limited by statute to purchase only land required for the transportation project.

3. Property exchange

Property exchange is a type of transfer of development rights. Highway agencies control rights to real estate which are not needed for transportation use. This includes surplus property, highway right of way airspace, and property rights acquired for materials, storage or service and maintenance facilities etc. These rights might be used to exchange with owners to maximize total property value and utility, or the value of other property, while protecting transportation corridors from incompatible use. For instance, a large landholder in the state may have need for small pieces to complete an assembly, or qualify the property for a zoning approval.

Preservation Technique: Property Exchange	
Benefits	Limitations
<ul style="list-style-type: none"> • Property already owned by SDDOT can be exchanged with landowners to maximize total property value and utility while protecting transportation corridors from incompatible use. • SDDOT may be able to cooperate with an owner to cure or offset prospective damage from a future highway acquisition. 	<ul style="list-style-type: none"> • The use of property rights for exchange is potentially a useful approach to corridor preservation, although limited to circumstantial opportunities. • Many states are precluded by law from purchasing property outside the right of way limits.

Another use of the property exchange is for an agency to cooperate with an owner to purchase needed land, or access rights from an adjoiner to cure or offset prospective damage from a future highway acquisition.

Many states are precluded by law from purchasing property outside the right of way limits. This would severely limit property exchange to surplus property owned by the agency. The use of property rights for exchange is potentially a useful approach to corridor preservation, although limited to circumstantial opportunities. For example, a department of transportation could agree to provide a developer land needed to complete an assembly in exchange for a development layout that accommodates a future highway design.

Required statutory authority could be structured to protect the rights of third parties. For instance, a law might authorize the department of transportation to make off right of way purchases for exchange by amicable agreement only. Use of eminent domain would be prohibited, and exchanges would be authorized only when specifically determined to be in the interest of the state.

a. Applicability to South Dakota

Property exchanges have been done in South Dakota on a very limited basis with property already owned by the Department. This technique does have practical potential for broader use, however the legal authority would have to be clarified.

4. Access management regulation

Corridor preservation programs are designed to help meet future transportation needs by preserving land for future highway use. By preserving capacity of existing highways, future needs for additional highway construction can be reduced. Access management along existing routes protects the capacity of these highways by limiting curb cuts and driveway access. Frontage roads are constructed to meet local circulation needs and provide access to private property. This reduces friction on highways created by entering vehicles and promotes through movement of traffic, delaying the need for new highway construction.

Preservation Technique: Access Management Regulation	
Benefits	Limitations
<ul style="list-style-type: none"> • South Dakota has effective new access management approach. • Minimal capital investment. • Delays need for construction of new facilities. 	<ul style="list-style-type: none"> • Existing, nonconforming accesses cannot be eliminated without compensation. • Flexibility in program is necessary • Coordination of local street networks with state standards is necessary • Reasonable access is a property right subject to takings clause.

Access management programs are increasingly used by states to protect highway capacity and improve mobility and safety on existing highway systems. Generally, programs restrict adjoining property to what is considered “reasonable” access to the road system. This keeps access management within the scope of a police power and there is usually no property “taking” that is compensatory under law of eminent domain.

Some states extend access management into the realm of taking of private property for public use. This requires payment of just compensation in the same manner as acquisition for highway construction. An advantage of access management that includes taking of compensatory property right is that more options are available to exercise control of access.

Access management programs can be supportive of corridor preservation because access is a major controlling influence on land use and utility. Access points can be sited and configured to guide the utilization of a site in a way that will be compatible with highway corridor plans. Access management is a type of statewide permitting authority.⁹ As such it can be structured to include the use of exactions to secure dedication of property rights needed for future transportation needs.

Access management can be most effective in contributing to corridor preservation when it is defined to include a broad range of access options and alternatives. In this way there may be opportunity to use access as a curative influence to compensate for use limitations imposed for corridor preservation. The department of transportation can negotiate access (within program limits) and corridor protection to address the most important owner concerns. In this way the interests of both parties can be advanced.

⁹ For example, South Dakota Codified Law Section 11-3-12.1 requires approval of access to a street or highway as a prerequisite to filing a plat.

Maine and New York reported consideration of access management to achieve corridor preservation objectives, although these states do not have a formal corridor preservation program.

The Maine legislature initiated an East-West Highway study that would expand two-lane highways to four-lanes across the state. The study found that the demand would not warrant present tax expenditure. Instead, the report recommended that the state pursue corridor preservation through access management, right of way acquisition, and limited access.

In New York the department of transportation works with local governments on access management to protect right of way for future local roads or bypasses. NYSDOT supports local government in rezoning and expanding the functionality of its roads by looking at the impact of state roads on localities and the implications of local traffic on cities. New York also helps develop a transportation agenda that is consistent across government levels.

a. Applicability to South Dakota

South Dakota is implementing a modern access management program. There is high potential for coordinating access management with corridor acquisition to advance the goals of both programs.

E. Land Use Regulation Techniques

Land use regulation and other exercises of police power play an important role in corridor preservation programs. In South Dakota, as in many other states, local government entities are given the authority to regulate the intensity of development and the types of land use within their jurisdictions as part of their police power. This can play an important part in corridor preservation programs. When properly applied, land use controls can hold land necessary for future transportation corridors out of development until needed for construction. This can generally be accomplished without significant initial capital investment, which is particularly attractive to state transportation agencies that seek to preserve future transportation options while working with limited financial resources.

A primary objective of corridor preservation is to limit development within future transportation corridors. Ultimate acquisition costs are much less if land can be preserved as agricultural land or open space. Counties and municipalities have the power to regulate development and intensity of land use within their jurisdictions using their police power. The primary tool for regulating land use is the local zoning ordinance, although other exercises of police power are useful in corridor preservation programs.

This section examines the use of police power in corridor preservation programs, and includes the following major topics:

- Setback regulations.
- Site plan review and subdivision controls.
- Conditional use permits and allowable interim uses.
- Dedications and exactions.
- Transfer of development rights and density transfers.
- Zoning ordinances.

1. Setback regulations

Building setback requirements are another land use control with potential applications to corridor preservation. Setback regulations prohibit construction of any building or large structure within a certain distance of a landowner’s property line, and are designed to promote aesthetic qualities and public safety. Although setback requirements do not have specific applications in preservation of future transportation corridors, they can be used to reserve necessary right of way to widen existing streets and highways.

Preservation Technique: Setback Regulations	
Benefits	Limitations
<ul style="list-style-type: none"> • By requiring adequate building setbacks along major routes, local jurisdictions can help the state to reserve future right of way with minimal capital investment. • Title to this land is not transferred, and the property remains on the local tax rolls until acquired prior to construction. 	<ul style="list-style-type: none"> • Public safety is the primary reason for setback requirements. Reserving highway right of way for future expansion can be viewed as an inappropriate use of police power. • The same taking of property issues discussed in relation to zoning ordinances apply to setback requirements as well.

a. Applicability to South Dakota

Setback requirements have potential applications in reserving land for future highway expansion in South Dakota. They are most likely useful along routes where minimal additional right of way will be required. Widespread use of setback regulations in corridor preservation is most likely not feasible. If such regulations do not require large tracts of land and if interim uses are allowed, limited application of setback requirements may be useful in preserving right of way for future highway widening.

2. Site plan review and subdivision controls

As part of their land use regulation powers, local governments are allowed to oversee the subdivision and development process so that growth occurs in a manner that assures adequate infrastructure and access. Many counties and municipalities require approval of final site plans prior to construction as part of their discretionary police powers. These processes provide additional opportunities for corridor preservation.

Preservation Technique: Site Plan Review and Subdivision Controls	
Benefits	Limitations
<ul style="list-style-type: none"> • The site plan review and subdivision approval processes are part of the discretionary land use regulation authority given to local governments. • Local governments can negotiate with developers to create site plans and subdivision layouts that provide adequate setbacks or open space for future transportation needs. • The use of “clustering” is particularly attractive because it can provide necessary open space while still allowing landowners to receive the full development value of their property. 	<ul style="list-style-type: none"> • Landowners are entitled to the full use of their land as outlined in the zoning ordinance that applies to their property. As a result, site plans must generally be approved if all legal requirements have been met, regardless of the impact on potential highway corridors. • While the site plan review and subdivision approval processes do provide for interaction between the public and private sectors, cooperation of developers is necessary for this technique to be of use in corridor preservation • Taking of property issues can arise if site plan adjustments or “clustering” are required as conditions of development approval.

b. Applicability to South Dakota

Site plan reviews and subdivision controls can be most useful to corridor preservation efforts when large-scale developments are involved. Landowners with large amounts of property may be more inclined and more able to compromise and cooperate with corridor preservation efforts. Compromise and cooperation are keys because taking of property issues arise if compliance with corridor preservation objectives is required for development approval.

3. Conditional use permits and interim uses

In most counties and municipalities, procedures exist for landowners to apply for variances and exceptions to local land use regulations. These exceptions are generally granted by a board of adjustments. One particular type of variance with applications to corridor preservation programs is the conditional use permit, which allows a particular land use as an exception to existing zoning regulations. These conditional uses are generally regulated by strict conditions, and they operate for a limited time. Interim uses are a form of conditional use permit that is attractive in corridor preservation. Land within transportation corridors can be used for agriculture, parking lots, or other low-intensity uses until such time as needed for the transportation facility.

Preservation Technique: Conditional Use Permits and Interim Uses	
Benefits	Limitations
<ul style="list-style-type: none"> • Conditional use permits and interim uses are valuable in corridor preservation programs because they preserve land in an undeveloped state while still allowing landowners economically viable use of their property. • The state does not have to acquire full title to the property until needed for highway construction, and the land therefore remains on local tax rolls until that time. • Acceptable interim uses also provide the landowner with the full benefits of property ownership, thereby reducing the potential for unlawful “taking”. 	<ul style="list-style-type: none"> • Conditional use permits must clearly specify the type of land use allowed and the term of permitted use in order to ensure that the needed property will be available when needed for a transportation facility. • This requires long range planning at the state level and close coordination between SDDOT and local planning commissions and boards of adjustment. • Cooperation of landowners is necessary because limiting land use through conditional use permits may deprive landowners of a portion of their property rights. Courts may then hold that compensation must be paid.

a. Applicability to South Dakota

Interim uses are attractive for highway routes that are some years away from construction. If funding is not available to acquire key parcels, low-intensity interim uses can preserve the right of way in an undeveloped state. This can reduce the need for expensive condemnation and acquisition of developed parcels immediately prior to construction.

4. Dedications and exactions

Dedications and exactions are an exercise of police power, generally used by local governments. A dedication or exaction is an impact fee paid with land instead of cash. These forms of impact fees are paid by or assessed to a developer in exchange for development approval, such as a zoning change or approval of a conditional use permit. In general, a dedication is land donated by the developer in lieu of cash payments, while an exaction is a *required* donation that cannot be substituted with cash payments. Dedications and exactions are means through which government entities obtain land necessary to construct highways needed to serve new developments without the substantial capital costs associated with fee-simple acquisition.

Preservation Technique: Dedications and Exactions	
Benefits	Limitations
<ul style="list-style-type: none"> • Reduces capital costs of acquisition. • Attributes partial cost of new highways to new developments that create the costs. • Prevents development by transferring title. 	<ul style="list-style-type: none"> • Rational nexus or reasonable relationship must be met. • SDDOT must rely on local government to assess and collect fees. • Standard criteria must be developed and careful traffic studies are required. • Generally used for local circulation streets as opposed to regional highways. • Requires increased administration at local level.

Generally a dedication or exaction is an easement for a public purpose granted by a property owner to an agency as condition for a desired regulatory decision. For example, a zoning authority may condition a subdivision approval on the developer dedicating certain land for recreational space, streets, or sidewalks.

State highway agencies, until recently, have had limited real property regulatory powers and thus dedications and exactions have not been of used. Regulation over property has been limited to rules and permits controlling outdoor advertising and junkyards, and enforcing access control on freeways. South Dakota's use of access management opens a possible role for exactions.

Access management asserts SDDOT's right to regulate location, spacing and design of private entrances, and related traffic control facilities, thus protecting public investment in highway mobility and capacity. If a property can be benefited by certain access facilities dedications and exactions may be a tool for assuring the public also

benefits from the enhancement. The owner may for instance be required to commit to a certain development setback, or parking facilities, or limit on intensity of development.

a. Applicability to South Dakota

Dedications and exactions have high potential use in combination with access management in South Dakota. This method is necessarily tied to a local permitting authority and will be most effective in urban situations where land faces development pressures.

5. Transfer of development rights and density transfers

Government entities can provide incentives for developers and landowners to participate in corridor preservation programs using the transfer of development rights and density transfers. These are two related techniques that preserve undeveloped land within highway corridors while still allowing the landowner to receive the full benefits of developing his property. With density transfers, a landowner is allowed to use “clustering” to develop the portion of his property outside the highway corridor at a higher intensity, resulting in the same number of units that would have been allowed on the entire property in absence of the highway corridor. With transfer of development rights, a landowner is allowed to develop a separate piece of property at the same density that would have been allowed on the parcel now reserved for transportation use.

Preservation Technique: Transfer of Development Rights and Density Transfers	
Benefits	Limitations
<ul style="list-style-type: none"> • No initial capital investment. • Preserves future right of way in undeveloped state. • Landowner retains full benefits of property ownership. 	<ul style="list-style-type: none"> • Difficulties in administration. • SDDOT must rely on local government cooperation. • May require additional staff at local level.

a. Applicability to South Dakota

Transfer of development rights and density transfers would only be applicable in high growth urban areas of South Dakota. This method relies on local government cooperation and can be difficult to administer.

6. Zoning ordinances

Local zoning ordinances are the primary control over land use. The South Dakota state constitution gives local governments the power to regulate land use to protect the public health, safety, and welfare. In terms of corridor preservation, zoning ordinances are not corridor preservation tools, but do allow local government agencies to regulate intensity of land use. While land cannot be “zoned” for a highway, zoning ordinances allow local agencies to preserve land in an undeveloped state for later construction of new or expansion of existing transportation corridors. This reduces future acquisition costs and assures that the necessary transportation infrastructure can be constructed to keep pace with growth and development.

Preservation Technique: Zoning Ordinances	
Benefits	Limitations
<ul style="list-style-type: none"> • Land can potentially be reserved in an undeveloped state without substantial capital investment. • By maintaining low-intensity land uses such as agricultural or low-density residential zones, open space can be preserved for corridors. This reduces future land-acquisition costs and prevents the foreclosure of alignment options. 	<ul style="list-style-type: none"> • Constitutional due process laws state that people cannot be deprived of their property without payment of just compensation. • Two types of zoning can raise taking of property problems in corridor preservation programs: down-zoning and zoning with acquisitory intent.

The use of zoning ordinances to promote corridor preservation does have restrictions. Constitutional due process laws state that people cannot be deprived of their property without payment of just compensation. This constitutes an unlawful taking of property. Two types of zoning can raise taking of property problems in corridor preservation programs: down-zoning and zoning with acquisitory intent.

Down-zoning occurs when land is reclassified from a more intensive use to a less intensive use, such as going from commercial to agricultural. This can create taking of property problems if property is down-zoned solely to preserve a transportation corridor. Similar problems can also occur if a landowner’s request for a zoning change to a more intensive use is denied merely on the basis of corridor preservation objectives. In such instances, unlawful taking of a landowner’s property rights may occur, and compensation must be paid.

Zoning with acquisitory intent means that zoning ordinances are applied with the primary objective of reducing property values prior to acquisition of key parcels. If a

down-zoning occurs or a request for up-zoning is denied in order to reduce costs of acquisition, courts may find that zoning with acquisitory intent has occurred. This will again require payment of compensation.

a. Applicability to South Dakota

While not an actual preservation tool, zoning ordinances can be successfully used in corridor preservation programs. Property within future highway right of way cannot be specifically classified as “transportation use” within local zoning regulations; however, zoning ordinances can be used to regulate intensity of land use. In general, courts may reject zoning applications that appear to be based solely on corridor preservation objectives, that single out individual parcels or property owners, or that are applied arbitrarily or by “piecemeal”. The intent of zoning for property within transportation corridors should be intended to promote low-intensity land use, should be applied in harmony with the community general plan, and should be based on uniform planning criteria. Within these legal restrictions, zoning ordinances can be used to encourage low-intensity land use and thereby promote corridor preservation activities in South Dakota.

7. Other major issues with land use regulation

While land use controls are relatively cost-effective corridor preservation tools, two major obstacles must be overcome. First, the state must receive the full support and cooperation of local governments, for these entities must exercise their police power in order to implement preservation programs. Second, SDDOT must work with counties and municipalities to help them understand ways in which police power can be used to promote corridor preservation without this regulation approaching a taking of property.

In South Dakota and most other states, land use regulation authority rests with local governments. The state is responsible for planning, designing, and constructing major highways, and has police power for such things as control of access and establishing safety standards. Zoning ordinances, setback requirements, subdivision controls, and other land use regulations are administered at the local level. For this reason, SDDOT must depend on county and municipal authorities to administer state corridor preservation programs. Communication and cooperation between these groups becomes essential. SDDOT must convince local government entities of the need for corridor preservation and the benefits that can be achieved by reserving open space for future highway corridors.

Local governments are often hesitant to exercise their police power to implement state corridor preservation programs because they are wary of legal challenges. Although land use regulation is a power granted to local governments for the purpose of promoting public health, safety, and welfare, extensive regulation has been viewed as a taking by the courts for which compensation must be paid.

According to Mandelker and Blaesser, the U.S. Supreme Court has identified a two-part taking test. In past decisions, the court has found that a taking has occurred if land use regulation does not advance a legitimate governmental interest or if that regulation denies a property owner all economically viable use of his or her property (Mandelker & Blaesser, 1996). In general, taking claims can be reduced if land use regulation is based on an adopted community general plan and if regulation meets requirements of the traditional “nexus” test.¹⁰

Corridor preservation is worthwhile to state and local entities in the long term because preservation of open space reduces the costs of new or expanded routes, and these highway corridors provide necessary infrastructure for development of additional land. The enhancement of important transportation corridors supports long term economic development by providing needed highway capacity. Without that capacity the long-term tax is not maintained or enhanced. Corridor preservation minimizes public expense and increases economic efficiency by reducing relocation or demolition of development that could have taken place in other more secure locations, which is also a benefit to maintaining the long term tax base.

¹⁰ This refers to a decision made by the Supreme Court regarding exactions and other methods used by local governments to obtain public benefits from private land developers without exercising eminent domain authority. In *Nollan v. California Coastal Commission* (1988), the Court held that the State’s requirement, that the developer dedicate a public access easement across the beach as a condition to obtaining a permit for development of a beachfront house, comprised an unlawful taking. *Nollan* requires that there be an “essential nexus” or substantial relationship between the purpose of the exaction and the purpose that would be served by prohibiting the proposed development.

VI. Environmental Issues in Corridor Preservation



Corridor preservation practices are generally viewed as environmentally friendly activities although environmental regulations can limit available methods for preserving highway corridors. This chapter addresses the important issue of environmental clearance for corridor preservation efforts and presents some practical approaches.

A. Introduction

Environmental issues and compliance requirements can be a significant barrier to corridor preservation programs. Securing environmental clearances for a project may take several years, during which time development may foreclose desirable alternatives. Major topics of this chapter include the following:

- The National Environmental Policy Act (NEPA) and associated constraints.
- Methods for overcoming NEPA constraints.
- Planning level environmental work.
- Other methods (Categorical Exclusions (CE), Environmental Assessment (EA), and Draft Environmental Impact Statement (DEIS)).
- Coordination with resource agencies.

By reserving open space for future highway corridors away from environmentally sensitive areas, impacts can be minimized. Transportation agencies will not be forced to choose whether to construct through wetlands or other sensitive areas or to not build at all.

FHWA encourages states to “consider corridor preservation in long range transportation planning.” In spite of this directive and even though corridor preservation activities are generally environmentally friendly actions, federal environmental regulations pose some of the most significant restrictions on available preservation methods.

B. Effects of NEPA

Nearly all state transportation projects in South Dakota and every other state, including corridor preservation, are completed with federal financial assistance. USDOT and FHWA regulations stipulate that in order to be eligible for federal assistance, project development and completion must be completed in accordance with all federal regulations, particularly environmental guidelines and civil rights protection policies. Some of these federal regulations are contained in the following statutes:

- The National Environmental Policy Act

- The Clean Air Act
- The Federal Water Pollution Control Act
- The Endangered Species Act
- The Historic Preservation Act
- The Fish and Wildlife Conservation Act
- The Safe Drinking Water Act
- Section 4(f) of the Department of Transportation Act of 1966
- Title VI of the Civil Rights Act
- The Uniform Relocation Act

The National Environmental Policy Act (NEPA) poses perhaps the most significant environmental constraints on corridor preservation programs. NEPA is designed to protect streams, lakes, wetlands, parks, wilderness, and other environmentally sensitive areas from damage due to modern development. NEPA requirements can limit available preservation methods and add significant length to project timetables. The most significant environmental requirements apply to preservation methods associated with land acquisition. While police power measures can generally be implemented prior to NEPA compliance, with few exceptions federal funds cannot be used for advanced right of way acquisition along future highway corridors until environmental clearance has been granted through a Record of Decision (ROD). While state funds can potentially be used to preserve corridors prior to official NEPA compliance, some risk is involved in such undertakings. This section examines the types of environmental clearances required on federal aid projects and the effects of NEPA regulations on land acquisition at both the federal and state levels.

1. Basic types of environmental clearance

Under federal regulations, land for future highway right of way cannot be purchased until full NEPA compliance has been obtained. This compliance can be obtained in one of three ways. The type of environmental clearance required is generally dependent of the scope of potential impacts. On some major transportation projects, environmental clearance involves completion of a full-scale environmental impact statement (EIS). This generally involves detailed environmental study that culminates in a Record of Decision (ROD). Such a study may find that the proposed project will not create a significant environmental impact, or that potential impacts will be adequately mitigated. Preparation of an EIS may take several years. Such a timetable is not conducive to corridor preservation activities, which must often be implemented relatively quickly to prevent the foreclosure of alternative alignment options.

Environmental effects of projects that are expected to have less significant impact can be analyzed under a Categorical Exclusion (CE). Filing of a CE indicates that no significant impacts are expected. In the past, SDDOT has been able to undertake most

projects under a CE, except in environmentally sensitive areas such as the Black Hills. However, in recent years this has not always been the case, and is likely to be even less so in the future. A CE eliminates the need for an EIS and allows land acquisition to proceed. A CE can generally be completed much quicker than a full-scale EIS. If the potential environmental impacts of a proposed project are unclear, an Environmental Assessment (EA) is required. This preliminary study analyzes impacts of a proposed project. If the EA results in a Finding of No Significant Impact (FONSI), the project can proceed. If potentially significant impacts are discovered, an EIS and resulting ROD is needed. Some level of environmental clearance is required before land acquisition can begin, and the necessary study can add time and delay the implementation of corridor preservation measures.

2. Federal requirements

a. Hardship and protective buying

Federal regulations stipulate that full-scale right of way acquisition cannot begin until environmental clearance is received. Limited property acquisition within proposed highway corridors can be completed under two exceptions which allow for: (1) hardship; and (2) protective buying. Federal regulations further stipulate that such actions can only be undertaken after a preferred alignment has been selected and public hearings have been held. Courts have held that a transfer of title of property from private holding to state control does not create a significant environmental impact. As a result, acquisition of key parcels to alleviate hardship to property owners or to prevent foreclosure of desirable alternatives can be completed under provisions of a Categorical Exclusion (CE). SDDOT can acquire discrete parcels within proposed corridors prior to full NEPA compliance through hardship and protective buying provisions.

b. Risk of irretrievable commitment

FHWA guidelines also specify that no “irretrievable commitment of resources” take place prior to NEPA compliance as defined by a Record of Decision. As noted, however, limited property acquisition can begin under provisions of a CE. FHWA and the courts have generally held that purchase of discrete parcels of land within proposed corridors under a CE does not constitute an “irretrievable commitment of resources,” since such property can merely be sold on the open market if priorities change or the preferred alignment is relocated. This is an important provision that allows protective buying to prevent foreclosure of alignment options.

c. Integrity of environmental review

One additional federal requirement affects advanced acquisition under hardship or protective buying. Whether federal or state funds are used to acquire property, such actions cannot affect project decisions or be allowed to bias the environmental review process. This means that state-owned land on one proposed alignment cannot influence the selection of a preferred alignment or consideration of the “no-build” alternative. As with the question of an irretrievable commitment of resources, limited advanced acquisition has been viewed in court as “environmentally neutral.” Since land acquired early in the project development process can simply be sold if priorities or alignments change, such acquisitions should not influence project decisions or bias the environmental process.

3. State concerns

a. State-funded acquisition

While advanced right of way acquisition using state funds can be completed prior to NEPA compliance, most state agencies are hesitant to commit public money before NEPA compliance has been achieved. Most state transportation projects are completed using 80/20 federal versus state funding. SDDOT and other state departments of transportation are reluctant to commit state resources to a project until they are assured of federal participation. In addition, there are competing claims on State funds for projects that have a federal agreement established. For this reason, limited acquisition on the state level is not widely used. In some cases, however, corridor preservation may be sufficiently important to justify such expenditures. Real estate in South Dakota’s current market is expected to continually increase in value and substantial cost savings can be realized by protecting preferred alignments from encroaching development. Limited advanced acquisition to promote corridor preservation is therefore recognized as a sound investment of public funds.

b. Effects of TEA-21

A new provision contained in the Transportation Equity Act for the 21st Century (TEA-21) also makes advanced acquisition of right of way using state funds more feasible in corridor preservation. While the federal revolving right of way fund was eliminated under TEA-21, new provisions allow that the value of property legally acquired by a state and later incorporated into a federal aid project can be used as a portion of the state’s project funding share. Certain conditions must be met for this clause to apply. Most notably, acquisition must occur in compliance with the Uniform Relocation Act and Title VI of the Civil Rights Act. These acts expand on constitutional rights that no one may be deprived of their property without due process of law or rightful compensation.

c. Eminent domain power

Some transportation officials at the federal and state levels may feel that eminent domain power granted to SDDOT by the state legislature can be the best tool in minimizing environmental impacts. When these potential impacts are studied during the environmental review phase, three steps are proposed for reducing project impacts on environmentally sensitive areas. These steps include the following:

- Avoidance
- Minimization
- Mitigation

Corridor preservation programs seek to protect feasible highway alignments away from environmentally sensitive areas. These alignment alternatives are chosen to minimize potential environmental impacts. Due to the eminent domain power possessed by the state, developed property can be condemned and acquired for transportation use. In the view of some transportation officials, avoiding all impacts at high project cost may be better than constructing a highway through some environmentally sensitive areas at a lower cost. Eminent domain power possessed by SDDOT can therefore be viewed as a tool to avoid all environmental impacts in transportation projects. This approach may substantially increase project costs. Compromises must be made in order to balance environmental interests and project costs in corridor preservation strategies. If this occurs, corridor preservation will continue to be viewed as an environmentally friendly process.

d. Exercise of police power

While advanced right of way acquisition at both the state and federal levels is subject to substantial statutory constraints, courts have generally held that police power measures can be safely used to reserve right of way prior to completion of the NEPA process. As a result, less than fee simple alternatives such as land use regulation and negotiation of voluntary agreements should be used to accomplish corridor preservation wherever possible. Advanced right of way acquisition should then be used only when other preservation methods have been exhausted. This approach will preserve the integrity of the environmental review process and reduce the initial capital investment of corridor preservation programs.

C. Balancing Environmental Interests and Highway Needs

In order to conduct corridor preservation activities without jeopardizing future federal funding, a shift in the project development process may be necessary. Corridor preservation along proposed future alignments may be conducted many years before funding becomes available and construction begins. Under most current practices, completion of an EIS or other detailed environmental review is undertaken only after funding is secured and the construction is within a few years of commencement. In order to make corridor preservation efforts successful within the framework of existing environmental regulations, two best practice approaches can be used:

- **Emphasis on greater planning level environmental review.** To ensure future eligibility for federal funding, some environmental review should take place before corridor preservation activities are undertaken. This work should most likely take place at the planning stage as future transportation needs are analyzed and identified. Sufficient analysis should be conducted to select a suitable alignment.
- **Staging of the environmental process.** The second method of reconciling environmental requirements with corridor preservation objectives is to complete the environmental process in stages. This method differs from planning-level environmental review in that the official NEPA compliance process is started at the corridor planning stage. Sufficient steps are taken to select a preferred alignment and secure preliminary environmental approval for that alignment.

In addition, early collaboration with resource agencies at the state and federal level can be one of the most effective methods of selecting a preferred corridor alternative that minimizes environmental impacts.

Details on the recommended approaches to planning level environmental review, staging of the environmental process, and coordination with resource agencies is presented in Chapter II: Recommendations.

VII. Intergovernmental Coordination and Public Involvement



Cooperation and coordination between federal, state, and local government entities and the private sector are important components of a successful corridor preservation program. This chapter outlines strategies for coordination, cooperation, and consultation amongst all stakeholders to ensure a successful corridor preservation program for South Dakota.

A. Introduction

A successful corridor preservation program requires cooperation and coordination between the public and private sectors. Federal, state, and local government entities are also involved in preservation programs in one way or another. In order to develop an effective preservation program, coordination and cooperation between these different groups is absolutely essential. This chapter includes the following major topics:

- Cooperation between SDDOT divisions and regions
- Coordination with local government authorities
- Consultation with resource agencies
- Public involvement and interaction
- Preparation of corridor preservation plans

The key role that each of these relationships plays in corridor preservation is outlined, and suggestions for encouraging cooperation are presented. Recommendations for preparation of corridor preservation plans are also addressed.

B. Cooperation between SDDOT Divisions and Regions

Corridor preservation involves interaction between different divisions within SDDOT. Perhaps the first step in developing a successful corridor preservation program is increasing interaction and cooperation across SDDOT functions. As a minimum, selection of preferred alignments and acceptable alternatives should be completed jointly between planning, design, right of way, and environmental staff. Planning personnel may be charged with identifying future highway needs as part of the long range planning and the Statewide Transportation Improvement Program (STIP). Right of Way personnel may assume the responsibility of inventorying existing land uses and ownership within proposed future transportation corridors. Design is responsible for specifying required right of way widths. Environmental staffers may serve as liaisons between resource agencies and the Department, and may also identify environmentally sensitive areas within or adjacent to

proposed highway corridors. Alignment decisions can then be made that minimize potential environmental impacts.

While coordination between SDDOT divisions and regions is essential at the planning stage, collaboration throughout the project development process must continue. As priorities, funding, and improvement needs change, additional corridors may be needed and different preservation strategies may be implemented. In order to properly implement corridor preservation strategies within SDDOT and encourage continual interaction between divisions and regions, establishment of a Corridor Preservation Committee should be considered. Such a committee would be composed of representatives from the Planning, Design, Right of Way, and Environmental Divisions at a minimum, with additional representation as needed. This committee may be charged with overseeing SDDOT's corridor preservation program and encouraging cooperation between all divisions and regions in the Department in accomplishing preservation objectives.

C. Coordination with Local Government Authorities

Corridor preservation requires substantial interaction between state and local government entities. As outlined in previous chapters, all land use regulation powers available for use in corridor preservation reside at the local level. Developer negotiations also occur at the local level. While the state does have the authority to conduct preservation using advanced right of way acquisition, funding constraints make this preservation measure of limited use on a statewide scale. SDDOT does possess the authority to regulate access along State highways, but political pressures at the local level can make this preservation measure difficult to implement without local assistance. Simply put, if support and cooperation of counties and municipalities cannot be obtained, corridor preservation activities will not succeed.

To encourage local participation in preservation activities, early involvement should be emphasized. Local government entities may have different priorities and agendas than those of SDDOT. Counties and cities may be hesitant to exercise their police power on behalf of the state out of fear of legal challenge. Local planners may simply prefer the additional tax base new development creates over reserving land for new highways. SDDOT and local government entities must develop a common vision if corridor preservation is to succeed.

Corridor preservation can be viewed as a state activity that will not succeed without local support. Local governments in South Dakota possess land use regulation powers that are vital to corridor preservation programs. They must be willing to exercise these and other powers to support state preservation programs. Similarly, the state must support local entities by backing up their interests in preservation programs. Local governments have shown hesitancy to participate in corridor preservation programs because of the fear of legal challenge or financial liability. State authorities must reassure local officials that state support of local preservation methods can be relied upon during such occurrences. Such state support may take the form of legal assistance or simple financial backing. As an example, SDDOT may promise to purchase parcels within proposed highway corridors when land use regulation fails or is challenged in court.

To facilitate cooperation between SDDOT and local authorities, substantial involvement of Metropolitan Planning Organizations (MPOs) is recommended. In South Dakota, organizations such as the South Dakota Association of Counties and South Dakota Planners Association, and others exist in part to promote cooperation in regional planning activities. These entities could fulfill a vital role in corridor preservation programs. MPOs could serve as mediators, coordinating the transportation needs of SDDOT with the concerns raised by local entities. SDDOT could then preserve necessary highway corridors by securing local cooperation to protect alignments that serve the needs of the state and local governments. By coordinating such activities, Metropolitan Planning Organizations can become a key player in the success of urban area corridor preservation activities.

A properly implemented corridor preservation program can benefit both state and local interests. The enhancement of important transportation corridors supports long term economic development by providing needed highway capacity. Without that capacity the long term tax is not maintained or enhanced. Early involvement and frequent interaction between state and local officials must occur. Metropolitan Planning Organizations can facilitate this interaction in the urban areas and promote necessary cooperation between groups. The burden lies on SDDOT to identify future highway needs, propose acceptable alternatives, and enlist local support. Good working relationships with local authorities must be cultivated by SDDOT transportation officials; however, corridor preservation activities will not succeed without local support and participation from a political and practical standpoint.

D. Consultation with Resource Agencies

As outlined in a previous chapter on environmental issues and constraints, coordination with resource agencies can be essential in corridor preservation programs, especially for complex expansion and/or new alignment projects. While many of the issues related to resource agency involvement are discussed in Chapter VI, early consultation with these agencies is vital. As noted, interaction with environmental resource agencies at the planning stage can streamline the NEPA compliance process and reduce project delays at later stages. FHWA recommends such early involvement so that resource agencies can identify environmentally sensitive areas during the selection of a preferred alternative, rather than merely providing negative comments on a completed EIS document. This early interaction also reduces the risk of investing public funds and conducting preservation activities to protect land that will not be approved for ultimate construction. In this manner, “fatal flaws” are avoided in preservation activities. Simply put, cooperation early in the process can reduce later delays, minimize incorporation of fatal flaws, and ensure that corridor preservation is an environmentally friendly process.

E. Public Involvement and Interaction

As noted earlier, corridor preservation is impossible from a practical standpoint without local government support. It may be impossible from a political standpoint without public support. Negotiation of voluntary agreements with landowners and developers is a key tool in preservation programs. If the support of local residents for preservation activities does not exist, these agreements cannot be established, and more capital intensive preservation methods may have to be implemented. Therefore to support corridor preservation, SDDOT officials must take a proactive approach in the area of public relations.

As with resource agencies, early citizen involvement may be the most effective method of obtaining public support for transportation projects. If citizens are given the opportunity to understand the reasons for future highway construction and participate in the alignment selection process, public opposition in later stages may be reduced. Public involvement must therefore be encouraged at the transportation planning stage. SDDOT currently conducts public involvement throughout the state to give citizens an opportunity to examine future improvement plans and provide input. These programs could be used to explain South Dakota's corridor preservation program to local residents, including the factors affecting needs for new highway construction, location of proposed future corridors, and the benefits of preservation activities.

Current federal regulations require that public hearings be held before any advanced acquisition of right of way begins, including hardship or protective buying. However, public involvement at the early stages of transportation planning may be most effective in enlisting citizen support of preservation programs. One of the oft-quoted phrases in public management is, "*If citizens feel they are involved in the government process, they will usually accept the product.*" Early and frequent involvement is therefore important in gaining public support for preservation activities. This support, while not technically required, is essential to the political success of state corridor preservation programs.

F. Preparation of Corridor Preservation Plans

The preparation of corridor preservation plans is recommended to serve as a detailed summary of available corridor preservation methods, with recommendations and precautions for their implementation. The corridor preservation tools presented in this report are extensive and diverse. Their feasibility and effectiveness may vary for different situations or locations. For these reasons, it is necessary to develop protection strategies specific to each corridor and circumstance. These strategies should be developed through collaboration with state and local government officials and documented in an official corridor preservation plan. More detail on the recommended approach to corridor preservation plans is presented in Chapter II: Recommendations.

Appendix A: Glossary of Important Terms Relating to Corridor Preservation



Access Management: The protecting of the capacity of existing routes and systems either by limiting access to them (such as by restricting curb cuts) or by protecting adjacent land needed to widen or improve existing highways in anticipation of increased use.

Comprehensive Plan: A statement of the goals and objectives for the future development of a community. The comprehensive plan usually contains sections or “elements” on land use, community facilities, transportation and housing. The plan also contains a map that translates the goals and policies of the plan into land use designations indicating where different types of public and private development should be located. Together, the planning policies and map provide a basis for decisions on land use in the land use regulation process.

Corridor: The path or proposed path of a transportation facility that already exists or may be built in the future. A corridor may include not only the land occupied (or to be occupied) by a transportation facility but also any other land that may be needed for expanding a transportation facility or for controlling access to it.

Corridor Preservation or Protection: The techniques that public authorities may use to protect the capacity of existing corridors, to protect planned corridors from inconsistent development or to preserve intact transportation or utility corridors that are or may be abandoned, such as abandoned railroad rights of way. The purposes of corridor preservation or protection include minimizing or avoiding adverse environmental, social or economic impacts; reducing displacement; preventing the foreclosure of desirable location choices for transportation facilities; allowing for the orderly assessment of impacts flowing from the construction of such facilities; permitting orderly project development; and reducing construction costs. The tools of corridor preservation or protection fall into three general categories: acquiring property rights in land within a corridor; regulating the use of such land; and negotiating with owners of such land for its preservation in an unimproved condition.

Corridor Protection Restriction: A deeded conservation restriction which conveys to the government the right to wholly or partially prohibit development within a corridor for a stated maximum period of time, typically up to 10 years, but it could be longer.

Dedication: A property owner’s conveyance of land or of an easement in land to the public for its use, and the public’s acceptance of that land or easement. Dedications may be among the exactions imposed on developers by subdivision ordinances which, as a prerequisite to the approval of any proposed subdivision of land, require that developers dedicate transportation and utility rights of way to serve the subdivided lots. Unless they serve the specific needs of proposed subdivisions, however, dedications that are uncompensated may be unconstitutional takings. For example, a subdivider’s uncompensated dedication of land to widen an adjacent

highway would probably constitute a taking. A street-widening dedication in exchange for a density transfer may, however, be constitutional.

Density Transfer: The assignment of development density credits attributable to a proprietor's land within a corridor to that proprietor's contiguous lands outside it, in exchange for the proprietor's dedication of the land in the corridor to the public.

Development: The subdividing of land, the construction of improvements, expansions or additions, or any other action that will appreciably increase the value of and the future acquisition cost of land.

Development Easement: A temporary or permanent property interest in developing or developable land, which interest a governmental entity may purchase to protect land in transportation corridors from development. Because the development easement is a lesser interest in land than an estate in fee simple, the development easement may cost less to buy.

Development Permit: This includes any building permit, zoning permit, subdivision approval, rezoning, certification, special exception, variance, or other official action of local government which permits the development of land.

Eminent Domain (or Condemnation): The power of federal, state or local governments to take private property for public purposes; a power constitutionally limited by the requirement that government pay just compensation to the owner of the property taken.

Environmental Impact Statement (EIS): A detailed statement on the environmental consequences of proposed governmental actions as well as alternatives to proposed governmental actions.

Exaction: A mandatory contribution by a developer, including the dedication of property, whereby the developer bears the costs of infrastructure improvements made necessary by the development.

Highway Platting: Developers' voluntary creation of separate lots for right of way where developers expect public authorities eventually to purchase those lots.

Impact (or Facility) Fee: A fee imposed by government on developers to recover costs of infrastructure improvements which their developments make necessary. Like dedications, impact fees are constitutionally valid only insofar as they recover costs directly attributable to the development.

Land Use: The development that has occurred on the land, that is proposed by a developer on the land, or that is permitted on the land under an adopted comprehensive plan, land development regulations, or land development codes.

Metropolitan Planning Organization (MPO): Established by the Federal Highway Act of 1973 to coordinate highway and transit planning on a regional or metropolitan scale in urban areas with populations above 50,000, and to coordinate the efforts of local planning agencies.

Official Map or Map of Reservation: A map drawn up by local or state authorities and usually recorded in county recording offices that shows actual and proposed rights-of-way and/or centerline alignments and setbacks for streets and highways, restricts development in those rights of way or between those setbacks, and allows authorities time to purchase reserved land. Filing of such a map for record may constitute an assertion that the governmental entity has “taken” rights to land shown on the map.

Reservation: The designation of a proposed highway’s or street’s right of way, either on an official map or on a subdivision plat approved under a subdivision ordinance, in order to prevent development within the reserved right of way.

Reservation Easement: Rights in real property, acquired by the state for the purpose of assuming the availability of the property for future transportation needs and to prevent the landowner from using the property by a landowner in a way that is inconsistent with that need.

Right of Way: A party’s property right to pass over the land of another; an easement, or land that is occupied by a transportation facility such as a railroad, or that may be needed for a proposed transportation facility.

Setback: A zoning requirement that buildings be a certain distance from property boundary lines or streets.

Subdivision Ordinances: Local ordinances, enacted pursuant to state enabling legislation, regulating the subdivision and platting of land into lots and blocks and roads, usually for residential development.

Taking: An act or regulation, either by exercise of eminent domain or other police power, whereby government puts private property to public use or for a public purpose limits use of private property, and which actions may require compensation to be paid to private property owners.

Transferable Development Right (TDR): A government created and marketable right to develop land, which owners of undeveloped land in transportation corridors may sell or retain for their own use on other parcels.

Transportation Corridor Management: The coordinated planning of designated future transportation corridors by land use planning and regulation within or adjacent to the corridor, promoting orderly growth and maintaining the integrity of the corridor.

Transportation Facility: A general term designating any means of transportation and the uses and improvements of land that they require.

Appendix B: Informational Workshops on Corridor Preservation



A. Introduction

In order to incorporate input from the public and SDDOT region staff, four workshops were held around the State in September and October of 2001. Separate meetings were held for SDDOT staff and the public, although many staff also attended the public meetings.

The public meetings included city and county planners, superintendents, and commissioners, as well as utility companies, developers, and consultants and engineers. The meetings were held in the following locations:

Rapid City	September 19, 2001	9:30am – Noon 1pm – 2:30pm	Public SDDOT Staff
Pierre	September 20, 2001	9:30am – Noon 1pm – 2:30pm	Public SDDOT Staff
Aberdeen	October 9, 2001	9:30am – Noon 1pm – 2:30pm	Public SDDOT Staff
Mitchell	October 10, 2001	9:30am – Noon 1pm – 2:30pm	Public SDDOT Staff

B. Rapid City Workshop

1. Attendance

City Government – 9	Utilities – 7
County Government – 1	Developers/Property Owners – 0
Other Government – 6	Consultants/Engineers – 2
SDDOT – 4	Total: 29

2. Issues raised

- Need to extend planning well beyond five years. Need a way to identify future capacity projects – currently only addressed when pavement condition is poor.
 - Need to forecast land use and identify pressure corridors – right of way requirements for expansion needs.
 - Program driven by pavement management – need method to identify capacity driven needs.
 - Need resources for long term planning in the region.
 - Need for utilities and developers to have predictability and know “what the plan is” for growth corridors.
- It is easier for cities to implement setbacks during the platting/subdivision process but not for existing properties.
 - It is difficult to affect change on existing corridors through local regulatory powers unless there is new development.
 - Developers need detail – they see access as negotiation point.
- Purchase of options may work in fringe areas.
- Some counties might consider ordinances for setbacks, others not.
- Taxation issues around some corridor preservation techniques (for example easements and setbacks).
- Utilities and SDDOT should negotiate and buy right of way at the same time.
- Need a process for putting away funding for advance right of way acquisition.
 - SDDOT does not have the money to purchase advanced right of way without federal funding.
 - May be environmental issues with early acquisition – lack of design details.
- Need to begin corridor preservation and right of way action earlier – currently project must be programmed before right of way can be purchased.

3. Conclusions

- SDDOT should conduct planning beyond the five-year construction program to identify growth corridors and apply corridor preservation techniques.
- SDDOT should do more advance fee-simple right of way purchase to support corridor preservation.

- There is interest in the state taking leadership role for corridor preservation.
 - Support for official mapping concept.
 - Support legislative change if benefits warrant it.
 - Support increased role of the State in reviewing or limiting improvement for growth corridors.
- Right of Way process once in design can be improved – should begin earlier, will speed project delivery.
- Someone in the region should be involved with long range planning and corridor preservation to provide a point of contact for regarding what is planned.
- Need to coordinate with access management.

C. Pierre Workshop

1. Attendance

City Government – 4	Utilities – 8
County Government – 3	Developers/Property Owners – 0
Other Government – 4	Consultants/Engineers – 0
SDDOT – 14	Total: 33

2. Issues raised

- Longer range plan that specifies expansion plans beyond existing right of way is needed (much discussion of this point). Need for more than the five-year construction plan.
- Predictability needed in right of way process – utilities desire predictability.
- Ability to be proactive and fund right of way in key areas valuable tool for DOT to use when opportunities arise for purchase.
- Utilities issues:
 - Should be further back for construction or put on both sides.
 - As-built plans for utilities would be helpful (how they really went in).
 - When right of way is wide enough there are merits to having utilities in DOT right of way.
 - DOT and utility joint negotiation with property owners is superior.

- Issue for the location of utilities if SDDOT were to purchase an easement – change in responsibility for utility to pay relocation costs.
- Interest in setbacks:
 - Issues on taxation for setbacks or easements if property is not usable (may have to be less).
- Need some way of beginning work, for example survey, on preservation corridors – normally cannot start work until a project is in the STIP.
- Local governments, counties, DOT region/area offices need to know corridor preservation concepts but overall corridor preservation plan, rules, and regulations need to be coordinated centrally.
- Funding is an issue – do not want to spend money for something that may not happen.

3. Conclusions

- Corridor preservation is less of an issue in Pierre Region since the region is mostly rural:
 - Growth issues mainly in City of Pierre.
 - Access management issues dominate growth issues elsewhere in the region.
- Some corridor preservation techniques are not applicable where there is little development (exactions, transfer of development rights, etc.).
- See benefits of purchasing right of way earlier to speed up the project delivery process.
- Need two-way dialogue, better communication between jurisdictions on development/expansion plans – coordinate with access management.
- Opportunities identified for improving project delivery procedures to involve and address right of way and utilities earlier in the process:
 - Involving utilities early in project delivery process is very beneficial (for example, utility involvement in landowners’ meetings works well).

D. Aberdeen Workshop

1. Attendance

City Government – 3	Utilities – 1
County Government – 1	Developers/Property Owners – 0
Other Government – 0	Consultants/Engineers – 0
SDDOT – 6	Total: 11

2. Issues raised

- Overall general theme was the importance of the Department to “be ahead of the game” in planning and communicating corridor expansion needs.
- Examples were given during a roundtable discussion in response to the workshop presentation on available tools and techniques of corridor preservation:
 - In Aberdeen, the growth rate is not high enough to warrant the use of dedications, exactions, and transfer of development rights.
 - Cities and counties do have the ability through setback requirements to regulate and essentially aid corridor preservation. This would require coordination between State and local government.
 - City of Aberdeen is interested in setback requirements as long as parameters are clear.
- There should be some way to protect a corridor prior to project being programmed in the STIP.
- Right of Way system of acquisition may need updating. Currently, plans are 90 percent complete before they are turned over to right of way. However, plans must be completed at least to the point where project limits are reasonably defined. If this is done early, then it will be possible to use corridor preservation techniques as soon as possible
- Elsewhere, concept studies are used to bridge the gap between planning and project delivery. This would gain a year or two in terms of application of corridor preservation techniques.
- The Department should identify “hot corridors.” Do a study that includes preliminary design up to 10 years prior to letting the project.
- Early scoping does not include utilities, but probably should. Reducing utility relocation fees can allow the Department to fit another program/project into the cycle.

- City is not currently purchasing options or easements.
- Developer incentives and agreements might be able to be used on a case-by-case basis.
- Official maps or maps of reservation would be useful as a communication tool, but state has avoided control of land use.
- Timing and communication issues can be applied to all reconstruction projects with regards to utilities, buying land, planning, etc. Not just exclusive to corridor preservation.
- In rural areas, most of the projects involve rebuilding of existing highways as part of the regular STIP process (as opposed to large corridor type projects). The Department needs to make a better effort of planning for these projects, which is tied to corridor preservation concepts (such as earlier property acquisition, beginning the environmental process earlier, etc.).

3. Conclusions

- A coordinated approach to corridor preservation amongst state and local governments and knowing the future plan for corridor development are critical to success.
- Maps should be developed for future expansion corridors. This will aid utilities in their planning.
- There is not enough room for utilities in the existing right of way. Possible solution is to specify setbacks if there was a way to establish a corridor as a legal entity.
- If looking at setbacks, ensure they are sufficient for the realities of today's utilities.

E. Mitchell Workshop

1. Attendance

City Government – 9

County Government – 1

Other Government – 2

SDDOT – 6

Utilities – 7

Developers/Property Owners – 3

Consultants/Engineers – 5

Total: 33

2. Issues raised

- Utility companies are interested in learning how to cooperate with SDDOT and the City.
- City planners interested in communicating their plans with utilities and land developers. Cities would be interested in helping with local land use controls.
- Land developers and engineers are interested in working together to minimize utility relocation and protect their interests.
- City of Sioux Falls is trying to negotiate with developers up front and has used dedications and exactions.
- Setbacks that apply in the region are mainly for snow loading beside the road (150-ft. north and west and 170-ft. south and east). If there was a set standard for corridor preservation, then setbacks along county roads could be increased.
- Street design should include utilities. It is preferable to have sufficient right of way so that they are not placed under pavement.
- Setbacks may not protect area for utilities in urban areas because of trees, landscaping, etc.
- Lincoln County has purchased highway easements. When they need to relocate utilities, then another easement must be purchased. This can result in the City or County having to contend with several easements.
- Developer incentives and agreements are used in Sioux Falls. They are willing to talk to the land developers and property owners up front and arrive at agreeable access and setback provisions.
- Official maps or maps of reservation are probably most valuable for communicating plan for the State's transportation system.
- May be an opportunity to use railroad right of ways that are no longer used for rail purposes. States and local entities can "moth-ball" for future corridor use. Could establish a place as a corridor for utilities, etc.
- Setbacks and other local ordinances to support corridor preservation are not useful if variances are easily obtained.

3. Conclusions

- The Department needs to approach new developers early on to talk about issues, goals, impacts on other highways, social/economic impacts, and future developments.
 - This requires good communication and coordination between local and State governments.
 - Mapping as a notification tool may be one answer.

- Sioux Falls has the capability and staffing to reach and communicate with the public and elected officials about corridor preservation, but other cities and towns may lack resources.
- It is important to have a vision or plan for future corridor development – most businesses/property owners will be focused on their own individual interests and not an overall corridor vision.
- Public involvement from the very beginning is critical for corridor preservation.
 - Helps avoid negativity and potential conflict.
- It would help if SDDOT were to acquire adequate utility easements when acquiring right of way.

F. Responses to Feedback Forms

1. Were you familiar with the concepts of corridor preservation prior to this workshop?

Of the 93 respondents, 33 percent said “no,” 67 percent said “yes,” and zero percent had no response.

Written Comments:

- Yes, somewhat: Did not know that utilities were not really part of the planning in where they were to be located along the right of way.
- No: My job is to build the highway projects; therefore, the planning of the corridor has already taken place.
- Yes: A few of the concepts were new, or I was less familiar with them.
- Yes: But not all types [were reviewed] in the workshop.
- Yes: In several instances we have been granted permits to place buried facilities in DOT right of way.
- Yes: I had not considered the need for corridor expansion prior to this meeting.
- Yes: Work needs to be done to increase corridor authority to utilize some of these concepts at the State level.
- Yes: Limited exposure. Had experience with concept through Aberdeen Bypass project, but concept did not get implemented. (Federal Highway purchase restrictions involved.)
- Yes: Good variety of options. The “tool box” may need to utilize several of them or even all of them in one form or another.

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- Yes: But limited knowledge.
- Yes: Concept I had. How to obtain corridor preservation was fairly new to me, especially some of the options.
- Yes: Not fully, as this is really more of a concept that is talked about more in Metro areas.
- Yes: Just the basics.
- Yes: Good discussion on how to apply in South Dakota.
- Yes: Eastside corridor/Westside corridor.
- No: Only generally familiar with concepts discussed here.
- Yes: Somewhat familiar.
- Yes: This was a good discussion. These sessions across the State will bring together most of the people involved in corridor planning as it exists today.
- Yes: Good discussion and input. Need to get this information out to the public citizens and developers.
- Yes: Only know that the concept existed.
- Yes: The state, cities, and local governments need to proceed to establish good corridor preservation practices.

2. Do you understand corridor preservation better having attended the workshop?

Of the 93 respondents, one percent said “no,” 99 percent said “yes,” and zero percent had no response.

Written Comments:

- Yes: There is a huge need for advance planning for corridor preservation and everyone needs to be aware of it.
- Yes: Broadened understanding of what all should be considered in corridor management.
- Yes: I developed a better insight into different approaches used, such as maps of reservation.
- Yes: We are glad to hear that there will be at least an attempt to better manage granted access to DOT corridors.
- Yes: More examples needed.
- Yes: Several techniques are interesting concepts.
- Yes: Great background info.

- Yes: I learned about additional options/methods.
- Yes: Got to hear other interested groups' and agencies' concerns. Exposed to broad spectrum of options and ideas.
- Yes: This workshop gives a direction that we should be taking.
- Yes: I found it to be really enlightening.
- Yes: The group identified several possible problems and it seems that earlier identification of projects would help.
- Yes: I've been made more aware of the options available to facilitate better corridor preservation.
- Yes: But still have a lot to learn.
- Yes: Good real life examples backed by good technical overview.
- Yes: Better understanding of diverse concerns in planning.
- Yes: Issues I was unfamiliar with were discussed.
- Yes: I think I understand the different techniques available in order to preserve a corridor.
- Yes: As it pertains to specific projects.
- Yes: Good discussion/roundtable. I liked the mix of attendees.
- Yes: Need legislation to assist us in this mission.

3. Is there any other information on corridor preservation that would be useful to you?

Of the 93 respondents, 34 percent said "no," 51 percent said "yes," and 15 percent had no response.

Written Comments:

- Yes: Specific legal process for acquisition of rights-of-way for future use.
- Yes: Other case studies would be useful [especially] those that help convince landowners/developers of the benefits [of corridor preservation].
- Yes: More information on developed urban conditions – perhaps a case study.
- Yes: Please keep me updated on what the SDDOT does for future corridor preservation work, new ideas, etc.
- Yes: Examples of successes in other states/locations; strategies used, etc.
- Yes: More detail on what has been used, good and bad, in other mid-west states (beyond that offered during presentation).

- Yes: What, if any, restrictions may be instituted regarding utilities being placed in the DOT corridors?
- Yes: I am doing a project on access management; any information on that is very helpful.
- Yes: What planning and land use issues arise and what ordinances/procedures should cities implement to implement corridor preservation?
- Yes: What are regulating authorities in other jurisdictions doing? What are they doing to revise legislation/authority?
- Yes: The plans from DOT in a timely manner for the future.
- Yes: More emphasis on long-range planning.
- Maps of desired corridors we feel we need preservation on.
- Criteria that would be used to identify the corridors and recommended process to preserve them. Identify SDDOT resources available to help local governments understand the process.
- State DOT must keep city and county informed as to outlook and changes if they want them to help keep corridor open.
- Long range plan (20 years out) information from DOT on highway projects to help local communities identify future conflicts between local transportation and state transportation plans.
- Further study on who pays for line moves in rural areas.
- Yes: Examples of where the techniques of preservation have been used.
- Yes: How do you balance corridor management and still accommodate local business development? Business development often occurs in the city or state with the least initial cost. Business by necessity is profit driven.
- Yes: What are other states/counties/municipalities doing? How successful are they?
- Yes: How will these corridors be identified and established?
- Yes: What other states/municipalities are doing (besides acquisition)?
- Yes: There was no discussion on the future concerns for multimodal use of the corridor and how multimodal facilities impact transportation and development.
- Yes: Use of rail banking – preservation of railroad right of way corridor for future use.
- Yes: An ability to preserve or identify a corridor with limited cash.
- Yes: Provide information as to successes or failures. What techniques work best throughout the country? The more urbanized areas of the country should have learned many lessons that we could adopt.

- Yes: How SDDOT and local governments can approach and involve property owners and developers to work together to achieve corridor preservation and access management.

4. Which corridor preservation technique do you think would be most applicable in your area?

Exhibits B-1 through B-4 present aggregate survey results ranking various corridor preservation techniques for public attendees and for SDDOT staff.

Table B -1: Aggregate Survey Results for Corridor Preservation Techniques (Count) – Public Attendees

Technique	Very Applicable	Applicable	Somewhat Applicable	Not Applicable	Don't Know	No Response	Total
a. Fee-simple acquisitions	21	16	10	3	8	7	65
b. Donations and exactions	8	20	12	8	9	8	65
c. Zoning and land use controls	30	13	7	3	5	7	65
d. Transfer of density/development rights	4	11	23	5	14	8	65
e. Purchase of options and easements	19	20	11	3	6	6	65
f. Developer/landowner agreements	16	20	12	0	7	10	65
g. Official maps	27	16	10	2	5	5	65
h. Access management	28	18	7	0	4	8	65

**Table B -2: Aggregate Survey Results for
 Corridor Preservation Techniques (Percent) – Public Attendees**

Technique	Very Applicable	Applicable	Somewhat Applicable	Not Applicable	Don't Know	No Response	Total
a. Fee-simple acquisitions	32%	25%	15%	5%	12%	11%	100%
b. Donations and exactions	12%	31%	18%	12%	14%	12%	100%
c. Zoning and land use controls	46%	20%	11%	5%	8%	11%	100%
d. Transfer of density/development rights	6%	17%	35%	8%	22%	12%	100%
e. Purchase of options and easements	29%	31%	17%	5%	9%	9%	100%
f. Developer/landowner agreements	25%	31%	18%	0%	11%	15%	100%
g. Official maps	42%	25%	15%	3%	8%	8%	100%
h. Access management	43%	28%	11%	0%	6%	12%	100%

**Table B -3: Aggregate Survey Results for
 Corridor Preservation Techniques (Count) – SDDOT Staff**

Technique	Very Applicable	Applicable	Somewhat Applicable	Not Applicable	Don't Know	No Response	Total
a. Fee-simple acquisitions	19	5	3	0	1	0	28
b. Donations and exactions	2	9	11	2	3	1	28
c. Zoning and land use controls	12	9	5	2	0	0	28
d. Transfer of density/development rights	2	7	8	5	6	0	28
e. Purchase of options and easements	13	8	5	1	1	0	28
f. Developer/landowner agreements	4	12	8	1	3	0	28
g. Official maps	13	7	5	1	1	1	28
h. Access management	27	1	0	0	0	0	28

**Table B -4: Aggregate Survey Results for
 Corridor Preservation Techniques (Percent) – SDDOT Staff**

Technique	Very Applicable	Applicable	Somewhat Applicable	Not Applicable	Don't Know	No Response	Total
a. Fee-simple acquisitions	68%	18%	11%	0%	4%	0%	100%
b. Donations and exactions	7%	32%	39%	7%	11%	4%	100%
c. Zoning and land use controls	43%	32%	18%	7%	0%	0%	100%
d. Transfer of density/development rights	7%	25%	29%	18%	21%	0%	100%
e. Purchase of options and easements	46%	29%	18%	4%	4%	0%	100%
f. Developer/landowner agreements	14%	43%	29%	4%	11%	0%	100%
g. Official maps	46%	25%	18%	4%	4%	4%	100%
h. Access management	96%	4%	0%	0%	0%	0%	100%

5. How important do you think it is that SDDOT moves ahead with the following policies?

Exhibits B-5 through B-8 present aggregate survey results ranking various corridor preservation policies for public attendees and for SDDOT staff.

**Table B-5: Aggregate Survey Results for
 Corridor Preservation Policies (Count) – Public Attendees**

Technique	Very Applicable	Applicable	Somewhat Applicable	Not Applicable	Don't Know	No Response	Total
a. Advance legislation to strengthen authority for corridor preservation	31	20	10	0	1	3	65
b. Protect the public's investment in the highway system by preserving its functional integrity	28	24	7	1	1	4	65
c. Provide a consistent statewide approach to the management and preservation of key corridors on the state highway system	24	29	6	0	1	5	65
d. Coordinate with local jurisdictions to ensure that or preservation is addressed early in decisions affecting the development process	44	14	2	1	1	3	65
e. Improve coordination with utilities companies and integrate utility needs with corridor plans	37	21	3	1	1	2	65
f. Provide advocacy, educational and technical assistance to promote corridor preservation practices among local jurisdictions	28	23	9	1	1	3	65
g. Undertake proactive corridor preservation through coordination with local units of government on corridor management, the purchase of access rights, and other investments	31	22	5	0	2	5	65
h. Provide tools and assistance to local governments to provide corridor preservation	34	21	4	0	1	5	65
i. Establish corridor plans working with local units of government	37	17	5	0	1	5	65

**Table B-6: Aggregate Survey Results for
 Corridor Preservation Policies (Percent) – Public Attendees**

Technique	Very Applicable	Applicable	Somewhat Applicable	Not Applicable	Don't Know	No Response	Total
a. Advance legislation to strengthen authority for corridor preservation	48%	31%	15%	0%	2%	5%	100%
b. Protect the public's investment in the highway system by preserving its functional integrity	43%	37%	11%	2%	2%	6%	100%
c. Provide a consistent statewide approach to the management and preservation of key corridors on the state highway system	37%	45%	9%	0%	2%	8%	100%
d. Coordinate with local jurisdictions to ensure that or preservation is addressed early in decisions affecting the development process	68%	22%	3%	2%	2%	5%	100%
e. Improve coordination with utilities companies and integrate utility needs with corridor plans	57%	32%	5%	2%	2%	3%	100%
f. Provide advocacy, educational and technical assistance to promote corridor preservation practices among local jurisdictions	43%	35%	14%	2%	2%	5%	100%
g. Undertake proactive corridor preservation through coordination with local units of government on corridor management, the purchase of access rights, and other investments	48%	34%	8%	0%	3%	8%	100%
h. Provide tools and assistance to local governments to provide corridor preservation	52%	32%	6%	0%	2%	8%	100%
i. Establish corridor plans working with local units of government	57%	26%	8%	0%	2%	8%	100%

**Table B-7: Aggregate Survey Results for
 Corridor Preservation Polices (Count) – SDDOT Staff**

Technique	Very Applicable	Applicable	Somewhat Applicable	Not Applicable	Don't Know	No Response	Total
a. Advance legislation to strengthen authority for corridor preservation	15	12	1	0	0	0	28
b. Protect the public's investment in the highway system by preserving its functional integrity	22	6	0	0	0	0	28
c. Provide a consistent statewide approach to the management and preservation of key corridors on the state highway system	16	12	0	0	0	0	28
d. Coordinate with local jurisdictions to ensure that corridor preservation is addressed early in decisions affecting the development process	20	8	0	0	0	0	28
e. Improve coordination with utilities companies and integrate utility needs with corridor plans	18	10	0	0	0	0	28
f. Provide advocacy, educational and technical assistance to promote corridor preservation practices among local jurisdictions	11	15	2	0	0	0	28
g. Undertake proactive corridor preservation through coordination with local units of government on corridor management, the purchase of access rights, and other investments	17	8	1	0	2	0	28
h. Provide tools and assistance to local governments to provide corridor preservation	13	10	5	0	0	0	28
i. Establish corridor plans working with local units of government	19	8	1	0	0	0	28

**Table B-8: Aggregate Survey Results for
 Corridor Preservation Policies (Percent) – SDDOT Staff**

Technique	Very Applicable	Applicable	Somewhat Applicable	Not Applicable	Don't Know	No Response	Total
a. Advance legislation to strengthen authority for corridor preservation	54%	43%	4%	0%	0%	0%	100%
b. Protect the public's investment in the highway system by preserving its functional integrity	79%	21%	0%	0%	0%	0%	100%
c. Provide a consistent statewide approach to the management and preservation of key corridors on the state highway system	57%	43%	0%	0%	0%	0%	100%
d. Coordinate with local jurisdictions to ensure that corridor preservation is addressed early in decisions affecting the development process	71%	29%	0%	0%	0%	0%	100%
e. Improve coordination with utilities companies and integrate utility needs with corridor plans	64%	36%	0%	0%	0%	0%	100%
f. Provide advocacy, educational and technical assistance to promote corridor preservation practices among local jurisdictions	39%	54%	7%	0%	0%	0%	100%
g. Undertake proactive corridor preservation through coordination with local units of government on corridor management, the purchase of access rights, and other investments	61%	29%	4%	0%	7%	0%	100%
h. Provide tools and assistance to local governments to provide corridor preservation	46%	36%	18%	0%	0%	0%	100%
i. Establish corridor plans working with local units of government	68%	29%	4%	0%	0%	0%	100%

6. Do you think that SDDOT should work to reduce the cost of transportation projects and prevent inconsistent development along transportation corridors through the use of corridor preservation techniques?

Written Comments:

- Yes: The more money we save in buying right of way, the more we have left to build the facility. Access Management will save us money.
- Yes: SDDOT needs to continue to develop better long-range planning techniques.
- Yes: Consistent practices statewide will help make everyone's job easier.
- Yes: This will eliminate the future problem of displacement of residential and commercial property.
- Yes: Preservation should include [the] entire state highway system.
- Yes: Utilities should share a joint ditch, wherein they share a common trench where practical/feasible.
- Yes: We can then spend more money on roadways versus right of way.
- Yes: Best use of tax dollars.
- Yes: Qualified that business development must also be near the traffic volume. Four cents of every sale at a business goes to the state.
- Yes: Work along with utilities to coordinate both activities as cost-effective as possible.
- Yes: These techniques should also apply to more than just corridors.
- Yes: Is this only along state routes, or assistance along county highways?
- Yes: Need public involvement up front.
- Yes: Doing it now is cheaper than doing it later.
- Yes: Construction funding is limited, it is a good idea to spend a little money up front that may save significant dollars in the future.

7. Can you think of any barriers to expanding corridor preservation?

Written Comments:

- Getting developers, landowners, and policy makers to understand and buy into some of the concepts. Advantages need to be proven.
- Cost, public assistance.

- Public perception of increased bureaucracy.
- Need to have coordination between private landowners and government agencies.
- Landowners' and developers' concerns.
- Laws and regulations.
- Development pressure – landowner perception that “more access” is better.
- Individual landowners or developers along corridors generally are uninterested in the corridor issues as opposed to their development plans – too many compromises often result due to appeals to legislative/political authority.
- Lack of knowledge and understanding by the general public.
- Right of Way process seems [too] cumbersome.
- Utilities will always be a problem as areas are developed, but corridor preservation is a tool to minimize those impacts.
- Perception of using money to purchase “future” right of way when other highway locations have poor pavements.
- Lack of adequate understanding by the public regarding use of public funds versus “patch the chuckhole.”
- Landowners rights.
- Landowners resistance. Existing structures or other uses. Utility placements.
- Landowners' perception of importance and value of direct access onto major streets and highways.
- Private property rights, long-term planning, local politics.
- Private property, owners' rights – treat everyone fairly and consistently.
- Education of elected officials.
- Slow land development.
- Need legislative authority to identify and preserve rights-of-way for future needs.
- Political and developer interests.
- Government body/commission failure to proactively support these planning efforts.
- Not listening to the public.
- Public acceptance, lack of knowledge.
- Getting ahead of development enough to preserve corridor.
- Cost, knowledge of concept by all concerned.
- Need to work closely with local government to improve corridor preservation.

- Funding – legislation.
- Unwilling property owners.
- Difficult to work politically with different local entities.
- [Agricultural] preservation versus development options and opportunities.
- Public understanding of the planning and engineering process.
- Taking issues.
- Federal environmental requirements.
- Education of public, resources to provide assistance.
- Yes, we are a rural state, many individuals see this as government controlling their land use and affecting the value of their property.
- Lack of adequate funding to purchase the corridors.
- Not knowing the preliminary design far enough in advance to preserve a corridor.
- Too rapid growth.
- We need to educate the public on the benefits that can be achieved through corridor preservation and access management.

8. What benefits of corridor preservation are the most important?

Written Comments:

- Cost savings, safety, and function of roadways.
- Ability to improve, with least cost.
- The ability to expand for future use.
- Operation levels of existing corridors intended to move traffic from one point to another (arterials).
- Preservation of existing capacity, and ability to readily increase capacity.
- Decreased expenses [as well as] construction and maintenance costs to taxpayers.
- Most importantly, to preserve flow of traffic.
- Decreased long-term project costs.
- Minimize residential and commercial impacts and displacements, which can cloud future projects.
- Save dollars, lessen disruption.
- Ensure continued viability of safe, efficient road network with no future re-work because of no planning for future.

- Cost to the public for total project.
- Guaranteeing future capacity of roadways. Preserving room for placement of utilities within this corridor.
- Safety of traveling public (access management). Reduction in expansion costs.
- All parts of the process developing to build/construct a better road.
- Reduced displacements when development does occur.
- Cost savings, orderly development, protection of individuals.
- Efficient growth – minimizing unplanned impacts on residences and businesses.
- Reconstruction/widening cost/ease of construction – limited width of corridors and scattered utilities, all raise construction difficulty and cost.
- Best use of resources.
- Preserving safety and capacity of roadways.
- Cost – flexibility to design.
- Savings – better highway traffic system.
- Future expansion at a cheaper cost.
- Benefits received through access management and future planning for utilities.
- Cost, consistency across the state – less cost now. Will benefit future project costs.
- In urban areas, cost of property acquisitions will be reduced.
- Utility sub-corridors would greatly facilitate construction and speed up project development.
- Advanced planning of highways to lower the cost of right of way and construction.
- Completion of I-804 through Potter and Walworth Counties should have been planned for and “preserved.” Travel through this area for the upcoming Lewis and Clark Bicentennial would benefit from the completion of this project.
- Purchase land rights so landowner cannot build in this area.
- Preserving existing investments in our highways.
- Preventing residential and commercial developments within areas of highway expansion.
- Keeping the function of the roadway as intended.
- Efficient use of funds – more money for roads, less spent on obtaining right of way.

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- Communication with all local governments involved.
- Traffic flow is very important, but so is business. Good methods of planning and communication between the government entities can serve the highway and public business.
- Making sure no entities end up encroaching on any future corridor plans. This creates additional expenses and delays when an encroachment occurs.
- Improved traffic flow. Proper development along a transportation corridor.
- Provide for more efficient development – reduce costs for land acquisition.
- Keeping utilities and buildings back far enough where improvement to transportation facilities can be made easier and more cost-effective.
- Protecting public investment in the state highway system.
- Foresight to reduce future costs.
- Highway integrity.
- Reduce costs in the long run, developing a transportation system that allows for local development along a desired route, rather than building a route to get to the development.
- Cost savings.
- Making plans more clear – communicating them.
- Traffic safety.
- Land use development
- Economic development.
- Proper planning of growth: transportation, land use, and utilities.
- Prevent future conflicts with landowners, utilities, developers, etc.
- The ability to provide safe and convenient transportation system.
- Orderly growth – safe and proper traffic movement.
- Help with future planning for utilities and others that use the right of way.
- Limited access to busy streets/highways.
- Reducing future costs of transportation upgrades.
- Big benefit is with proper corridor preservation, the transportation system is maintained for its intended purpose.
- Access management.
- Reduce cost of future transportation right of way purchase.
- Avoidance of future conflicting interests, expense of relocating, retrofitting.

- Saving taxpayer dollars, and promoting safe transportation corridors.
- Keeping private infrastructure out of a needed corridor.
- Consistent and quality neighborhoods and business areas.
- To provide an effective, efficient and safe transportation system that will provide good access to adjacent property owners.

9. Other comments?

Written Comments:

- Good workshop. Important issue!
- We need to get our thinking out beyond five years – the tools exist, i.e., GIS/land use planning.
- A longer time period for future planning is needed – 10 to 20 years, rather than five to 10 years.
- SDDOT should strive to better manage the utility corridors permitted to utility companies to ensure that the corridor space is not wasted.
- Good workshop – more visual/examples of success stories – pitfalls need to be shared.
- We need to set the corridors for all highway and utility use.
- Long overdue problem for serious attention.
- It is extremely difficult to get the needed coordination and time commitment for all parties: city, county, state, planning organizations, private landowners, utilities, etc. Corridor preservation will not happen without this.
- Good start – need to make sure DOT staff have adequate training to implement the proposed processes.
- Suggest that DOT bring into their planning process for all highway projects a consultation meeting with local governments to review the localities transportation plan (within their communities comprehensive plan) to see how local road plans may impact state’s plans and vice versa.
- Cooperation between city, county, and state governments in dealing with preservation is very important.
- This is basically new to me. I’ve worked with transportation, but mostly tribal roads and this is a new area for me. This is very interesting and it gave me a lot to think about.
- You need to recognize a retail business needs high volumes of traffic for recognition. Access needs to be provided. Some “corridors” in SD are through

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the heart of business districts and need to be relocated. Development is good for state and city tax base.

- Need to work together to get information out well in advance of projects.
- Good workshop.
- It seems cooperation between SDDOT and local government (zoning boards, plan commissions, etc.) would benefit all involved.
- From a utility viewpoint, any proposed new facilities should be brought to SDDOT to see if it conflicts with any future plans.
- I think steps should be taken that will force communication with DOT when work/development is taking place adjacent to public right of way.
- This is a good concept, but can see it being a challenge to get all parties involved working together, especially the locals who probably have a special interest in mind.
- Good job and appreciate the workshop/would appreciate more. Perhaps incorporation with the South Dakota Municipal League or county commission meetings.
- Happy to see this strong team to address these issues. Great job on access management. Good to see you expand on previous successes.
- If nothing else, attendees need to work with stakeholders up front and find out issues with project scope, then start to look at project options.
- Many of these issues were interesting to learn and try to understand; however, in my position I do not deal with all these issues. Good presentation to those who it would pertain. Thank you!
- Good discussion, good presentation.
- This workshop has been very beneficial in introducing corridor preservation concerns to me.
- DOT should obtain right of way for utilities.
- As in any organization, communication is key.
- This all works for future development, something needs to be accomplished to speed up the process of moving utilities to a secure location for speeding up construction.
- State needs to acquire utility easements along with land.
- Corridor preservation – good concept – difficult to do.
- Why can't the State install the utilities on new projects and rent access/use to the utility companies? Then, the State would have control where the utility goes and generate revenue to pay for the utility installation and maintenance.

Appendix C: Model Corridor Preservation Memorandum of Understanding with Local Jurisdictions



The South Dakota Department of Transportation (SDDOT), XX County (County), and the City of XX (City) wish to express common interests and goals in the management of critical transportation corridors. A partnership is entered into by SDDOT, County, and City to identify critical corridors and to identify common interests and goals in the management, preservation, and enhancement of these critical corridors. This partnership will be supported as needed by entering into agreements for projects to retrofit or otherwise improve critical corridors. The partners can reasonably expect mutually identified interests and goals to be upheld and implemented by one another. The partners agree to share information, resources, and decision making in the management, preservation, and enhancement of critical corridors.

The first critical transportation corridor selected for this partnership consists of a segment of the XX highway in XX county. The segment begins at...and proceeds...to terminate... This critical transportation corridor will be referred to as the XX Corridor.

The purpose of this partnership is to enhance the management of the public investment in transportation by improving safety and traffic operations and encouraging uniformity in the management, preservation, and enhancement of critical transportation corridors. Corridor management techniques will be utilized to provide for reasonable access for abutting landowners while simultaneously preserving the flow of traffic in terms of safety, capacity, and speed. To accomplish this, it may be necessary to eliminate/remove an access, consolidate access points, utilize alternate access, or require the private construction of access roads off public right of way. In addition to these options, access rights or additional rights-of-way may be obtained to help preserve the functional integrity of a critical corridor or accommodate future construction. The goals of this partnership are to ensure the integrity of critical corridors, support overall economic development, safeguard the environment, and balance the needs of the public highway system against the interests of individual property owners.

The interests of individual property owners are recognized under the law. These interests are not, however, paramount. The traveling public has rights to a safe and efficient public highway system and to efficient expenditure of public funds. Thus, the partners have a responsibility to regulate access and preserve and enhance corridors arising from their duty to administer and maintain the public highway system. When access is sought, the partners will consider current existing access, access alternatives to direct access to the highway, and engineering factors pertaining to the safe movement of traffic in determining what is reasonable. When conditions indicating the need for corridor preservation are identified, the partners will consider such factors as the rate of development, travel demand, environmental factors, and efficient use of resources in determining the most appropriate course of action.

By implementing one or a combination of corridor management techniques, vehicle conflicts can be minimized, safety and traffic operations can be improved, delays reduced, and major capital expenditures postponed or eliminated. The key to successful management, preservation, and enhancement of critical corridors and to meeting goals lies in direct and reliable communication and information and in the sharing of resources and decision making between the partners.

The partners agree to utilize the principles of corridor management and to share information, resources and decision making to assist one another in the management of the XX Corridor. Agreed this XX day of XX, (year) by:

South Dakota Department of
Transportation
State Transportation Engineer

XX County
County Commissioner

XX City
Mayor

Appendix D: Draft Corridor Preservation Brochure



New Corridor Preservation Policy

This publication explains the importance of improving preservation practices on key transportation corridors in South Dakota. It provides SDDOT employees, local governments, developers, utility providers, business owners, and the general public with

information about SDDOT's improved approach to managing key corridors in the state. Our new policy and approach will result in considerable savings that we can use to advance more projects.

What is Corridor Preservation?

Corridor preservation is a concept utilizing the coordinated application of various measures to maintain and enhance the efficient function of an existing transportation corridor and/or obtain control of or otherwise protect the right of way for a planned transportation facility. When corridor preservation involves protecting the right of way for a planned transportation facility, corridor preservation techniques should be applied as early as possible after the transportation corridor is identified either along a new alignment, or along an existing facility.

Corridor preservation is accomplished through one or more of the following approaches:

1. The acquisition of property or property rights.
2. Action by State and/or local governments in the exercise of reasonable government regulation.
3. Arrangements with property owners to preserve property in an unimproved condition.

Goal of Corridor Preservation:

Maintain and enhance the function of an existing transportation corridor and/or obtain control of or otherwise protect the right of way for a planned transportation facility.

Why is Corridor Preservation important to South Dakota?

Corridor preservation has become an important issue for South Dakota's transportation planning and project delivery process. As the state's population grows, the demand for improved transportation

infrastructure increases. To protect potential transportation corridors from increasing developmental pressures and to preserve these alignments for future use, corridor preservation techniques must be applied.

Corridor preservation addresses the following important planning issues:

- **The importance of exchanging information so that landowners, developers, engineers, utility providers, and planners understand the future needs for developing corridors.** An effective corridor preservation program will ensure that landowners, developers, engineers, utility providers, and planners understand the future needs within a transportation corridor area and that plans are complementary.
- **The need for preserving arterial capacity and the need to preserve right of way in growing corridors.** Corridor preservation includes the use of access management techniques to preserve the capacity of existing corridors. It also includes techniques to preserve right of way along growing transportation corridors so that arterial capacity can be added before it becomes cost prohibitive.
- **The need to minimize future displacement, relocation, and disruption of buildings and other structures.** Long term corridor planning and the preservation of right of way along growing transportation corridors helps to minimize incompatible development and avoid future displacement, relocation, and disruption of buildings and other structures.
- **The desire to minimize irregular land parcels and uneconomic remnants.** By planning and preserving right of way well in advance of construction decisions can be made to help minimize irregular land parcels and uneconomic land remnants.
- **The desire to minimize disruption of private utilities and public works.** Corridor preservation planning allows utilities and public works providers to know future plans for the transportation corridor and make location decisions accordingly.
- **The need to develop urban and rural areas consistent with planning documents, zoning laws, and subdivision regulations.** Effective corridor preservation will result in development along a transportation corridor that is consistent with area planning documents, zoning laws, and subdivision regulations.

Planning for the Future:

A comprehensive corridor preservation program will serve as a method for managing the growth and improvement of South Dakota's transportation infrastructure, allowing future transportation demands to be accommodated at a reasonable cost and with minimal environmental impact.

What are the Benefits of Corridor Preservation?

Three main benefits support corridor preservation in South Dakota:

- Reduces the cost of transportation projects.
- More efficient and predictable project delivery.
- Promotes economic development and long term viability of the tax base.

Reduces the cost of transportation projects.

Corridor preservation reduces construction delays and right of way acquisition costs by addressing property rights issues in advance of the projects. The advance planning will minimize displacement costs of households and businesses in the right of way area.

Corridor preservation allows for cost savings through more efficient use of highway infrastructure. It ensures the efficiency of major highways by maintaining their capacity and quality of service, thereby reducing the need for major widening of existing roads or construction of replacement roads.

Corridor preservation protections against increased costs that development in the right of way usually entails. It can also reduce utility relocation delays by securing permissions and allowing utilities to accomplish relocation prior to construction.

Corridor Preservation Minimizes Costs:

In 2000, right of way costs were \$8.3 million. Utility relocation costs were \$2.1 million. Reducing these costs allows frees up funds for other activities.

More efficient and predictable project delivery.

Efficient project delivery can be measured by the delivery of projects within the scope, on schedule, and in budget. Among the largest variables that impact this are the environmental process, right of way acquisition, and utility relocation. Proactive corridor preservation that plans for property needs as a corridor is developed can improve the efficiency of project delivery. This allows for more rapid availability of right of way when construction funds are available.

Early development of a proactive right of way preservation program and strategy helps

to minimize environmental, social and economic impacts. Early planning helps prevent inconsistent development in the projects that are developed in different time periods. This allows transportation and land use development to work in conjunction and expand more effectively.

Early development employing corridor preservation techniques can help to prevent foreclosure of desirable location options. This helps to reduce uncertainty that long-term transportation needs can be met without undue constraint or delay because right of way acquisition can be made

quickly. Early development also tends to reduce impacts to the natural environment and historic sites because necessary changes and/or mitigation have taken place in advance of construction.

Corridor preservation preserves the efficiency of major highways by maintaining their capacity and quality of service, thereby reducing the need for major widening of existing roads or construction of replacement roads. Access management is a key component of corridor preservation.

Promotes economic development and long term viability of the tax base.

The enhancement of important transportation corridors supports long term economic development by providing needed highway capacity. Without that capacity the long term tax is not maintained or enhanced. Corridor preservation minimizes public expense and increases economic efficiency by reducing relocation or demolition of development that could have taken place in other more secure locations, which is also a *SDDOT's New Corridor Preservation Policy*:

- Provide a consistent statewide approach to the management and preservation of key corridors on the state highway system.
- Protect the public's investment in the highway system by preserving and enhancing its functional integrity.
- Coordinate with local jurisdictions to ensure that or preservation is addressed early in decisions affecting the development process.

Corridor Preservation Helps Minimize or Avoid Environmental, Social, and Economic Impacts:

Early planning helps prevent inconsistent development in the projects that are developed in different time periods. This allows transportation and land use development to work in conjunction and expand more effectively.

benefit to maintaining the long term tax base.

Corridor Preservation Helps Promote Economic Development:

Beneficiaries of corridor preservation include the traveling public, State and local government, businesses, residents, land developers, taxpayers, and the environment.

- Improve coordination with utilities companies and integrate utility needs with corridor plans.
- Provide advocacy, educational and technical assistance to promote corridor preservation practices among local jurisdictions.
- Establish corridor plans working with local units of government.

FINAL REPORT

What we are doing to implement this policy:

- Explaining why corridor preservation is important to us all.
- Establishing corridor preservation as a priority in planning, programming, and project development.
- Providing a “toolkit” of practical, best practice techniques we can use to more effectively manage property interests.
- Working with local government.
- Planning ahead and communicating the “plan” for key corridors in South Dakota.

For more information contact:
