

**FEDERAL HIGHWAY ADMINISTRATION  
FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

FOR

Interstate 90 Exit 406 Interchange  
Brandon, South Dakota

Minnehaha County  
South Dakota

November 2019

Submitted Pursuant to 42 U.S.C 4332(2) (c)  
By the  
U.S. Department of Transportation  
Federal Highway Administration  
and  
South Dakota Department of Transportation

Submitted by:



Joanne Hight  
Environmental Engineer Manager  
SD Dept. of Transportation  
700 East Broadway  
Pierre, SD 57501

**Joanne  
Hight** Digitally signed  
by Joanne Hight  
Date: 2019.11.13  
15:53:46 -06'00'

Date

Approved by:

 Tom Lehmkuhl  
2019.11.15 14:09:01 -06'00'

Tom Lehmkuhl  
Environmental Engineer, South Dakota Division  
Federal Highway Administration  
116 East Dakota  
Pierre, SD 57501

11/15/2019

Date

## Table of Contents

I.	Introduction .....	1
II.	Description of the Proposed Project.....	1
	a. Project Purpose and Needs .....	3
	b. Alternatives Considered.....	3
III.	Preferred Alternative.....	4
IV.	Coordination and Public Involvement.....	10
	a. Agency and Tribal Coordination .....	10
	b. Public Participation .....	10
V.	Summary of Mitigation/Commitments .....	11
VI.	FHWA Decision .....	18
	APPENDIX A – Public Comments and Responses .....	A-1

## I. Introduction

The Federal Highway Administration (FHWA) has determined that in accordance with 23 CFR § 771.119 and § 771.121, the Interstate 90 Exit 406 project will not have a significant impact on the human or natural environment. This Finding of No Significant Impact (FONSI) for the Proposed Action is based on the Environmental Assessment (EA) signed by FHWA on August 28, 2019 and made available to stakeholders, agencies, and the public for a 30-day comment period. A Public Meeting was held on September 18, 2019 to discuss the EA and provide the public an opportunity to comment on the project.

A summary of agency and public comments received during the comment period is included in this FONSI. No significant agency or public comments were received that necessitate the revisions to the document; therefore, the document will not be republished. This EA has been independently evaluated by the FHWA, who has determined that it accurately discusses the need, purpose, alternatives, environmental resources, and impacts of the Project and appropriate mitigation measures. The EA and referenced reports provide sufficient evidence for determining that an Environmental Impact Statement (EIS) is not required. The EA and supporting documents are incorporated by reference into this document.

The Project was developed in accordance with the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's (CEQ's) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §1500-1508) and the corresponding regulations and guidelines of the U.S. Department of Transportation (USDOT) and (FHWA).

## II. Description of the Proposed Project

Interstate 90 (I-90) Exit 406 is located on the northern end of the City of Brandon in Minnehaha County (see **Figure 1**, Project Location and Study Area). Brandon (population 9,923 in the US Census 2016 estimate) is approximately 6 miles east of Sioux Falls. **Figure 1** shows the Study Area designated for the EA.

The study area includes the I-90 Exit 406 Interchange and areas within the surrounding transportation system. This includes the I-90 Exit 406 Interchange, and roadway corridors as follows: the I-90 corridor between the Burlington Northern Santa Fe (BNSF) railroad crossing to the west and Split Rock Creek bridges to the east, and the local street network along the South Dakota Highway 11 (SD 11) / Splitrock Boulevard (Splitrock Blvd) corridor between Redwood Boulevard / 261<sup>st</sup> Street (Redwood Blvd) to the south and ending at Hemlock Boulevard / 260<sup>th</sup> Street (Hemlock Blvd) to the north. These corridor endpoints formed the logical termini for the EA.

Figure 1. Project Location and Study Area



In order to provide capacity for future traffic demands, the South Dakota Department of Transportation (SDDOT) in 2010 conducted a “Decennial Interstate Corridor Study.” The study evaluated interchange needs across South Dakota and identified the I-90 Exit 406 interchange as a Mid Range Improvement priority. This bridge was constructed in 1960. A low slump dense concrete (LSDC) overlay was placed in 1985. The bridge is not considered structurally deficient

at this time. However, the bridge and LSDC overlay were determined by the SDDOT Office of Bridge Design to be at the end of their service life. Replacement of the bridge is proposed before any major rehabilitation work is necessary. A Study Advisory Team, comprised of representatives from FHWA, SDDOT, Sioux Falls Metropolitan Planning Organization (MPO), and Brandon has formed to lead the effort for development of the Interchange Modification Justification Report (IMJR) and this EA. The SDDOT intends to begin construction of the I-90 Exit 406 interchange within federal fiscal years 2022-2025.

### **a. Project Purpose and Needs**

The “Purpose” defines the primary intended transportation objective and related goals to be achieved by a proposed transportation improvement.

The purpose of the Project is to reconstruct the I-90 Exit 406 Interchange to meet current design standards. Several design deficiencies were noted for this interchange in the 2010 Decennial Interstate Corridor Study. Ultimately, improvements to the I-90 Exit 406 interchange were identified as a project need in the 2010 study. Other goals intended to be achieved by the proposed project include safety improvements and greater efficiency of the transportation system along the I-90 interstate corridor and Splitrock Blvd.

A “Need” is a condition sought to be relieved. The project Need proves that the problem exists and provides data that support the Project Purpose. The Project Need guides the decision-making process throughout this document. As described in more detail in the EA, the needs that will be addressed through reconstruction of the I-90 Exit 406 interchange include:

- **Geometric deficiencies** – Based on current SDDOT design standards, several project elements including ramps, shoulders, slopes, and intersection spacing do not meet the design standard.
- **Transportation congestion** – Forecasts for traffic growth indicate that current congestion challenges at the ramp intersections will become worse, with long queues, lengthy delays, and poor level of service in the AM and PM peak periods at both interchange ramp intersections.
- **Traffic operations** – Multiple commercial and residential drives directly access Splitrock Blvd. This is especially problematic south of the I-90 Exit 406 interchange, where the existing lane configuration creates operations challenges.
- **Safety** – The project area includes locations where the crash rate exceeds the critical rate, a key identifier of safety problems. In particular, the segment of Splitrock Blvd including the eastbound ramp intersection south to Ash Street, and the merge areas – on I-90 (both east and west of the interchange), have shown crash rates above the critical rate.

### **b. Alternatives Considered**

The EA and its supporting documentation describe the full range of alternatives considered for this project. This initial range of interchange alternatives included versions of standard diamond, folded diamond, single point urban, and diverging diamond interchange types. A total of eleven Build Alternatives were in the initial range of interchange alternatives for consideration. Along with these interchange options were a range of corridor options for SD11/Splitrock Boulevard.

Alternatives carried through the initial screening for further refinement and analysis (and documented in the IMJR) included the following:

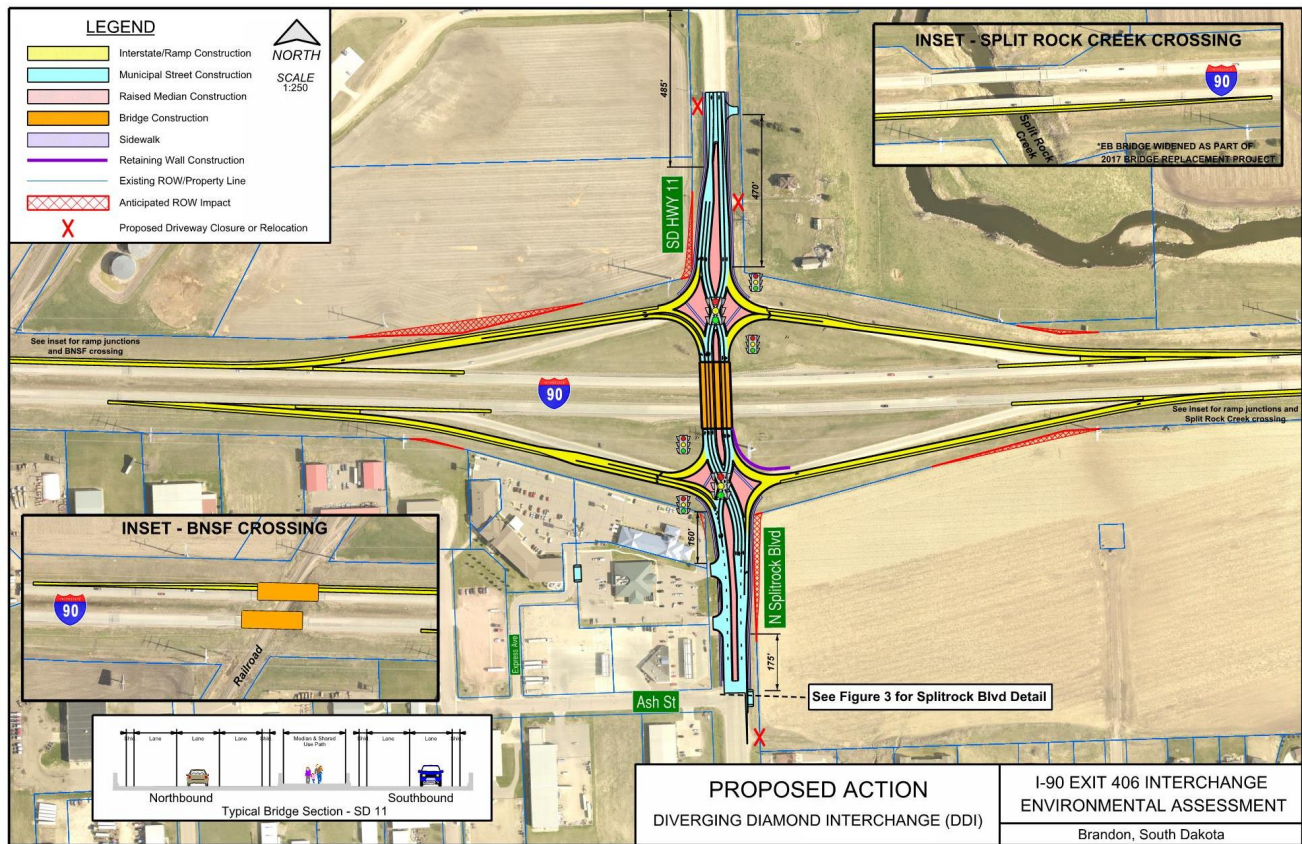
- No-Build Alternative
- Interchange Build Alternatives
  - Standard Diamond Interchange
  - Standard Diamond Interchange (shifted west)
  - Standard Diamond Interchange with roundabouts (shifted west)
  - Diverging Diamond Interchange (DDI)
- SD 11/Splitrock Boulevard Corridor Build Alternatives
  - South of the I-90 Interchange
    - 5-Lane Undivided (existing condition, with modification to select accesses)
    - 4-Lane Divided
  - North of the I-90 Interchange
    - 3-Lane Undivided (existing condition)

### III. Preferred Alternative

The Proposed Action is to replace the existing I-90 Exit 406 Interchange and make additional improvements to the Splitrock Blvd corridor from Ash Street, the southern end point of a new interchange, to Redwood Blvd. North of the new interchange, no improvements will be made beyond those required to tie the new interchange into the existing Splitrock Blvd corridor. As part of the improvements, the exit and entrance ramps for the interchange will be lengthened to meet current SDDOT design standards.

As indicated in the IMJR, the preferred interchange type is a Diverging Diamond Interchange (DDI) design with a bridge deck accommodating a five-lane cross-section and a sheltered median/shared bike path for pedestrians and other non-motorized users. This alternative is best able to meet the project purpose and need factors identified for this study area while also minimizing environmental impacts. See **Figure 2** for an image of the proposed DDI design. The DDI design features a signalized cross-over of Splitrock Blvd road lanes at each of the ramp terminal locations in order to provide unsignalized left turns onto the freeway entrance ramps. This design is advantageous for the northbound Splitrock Blvd-to-westbound I-90 movement, one that has historically been a source of congestion in this project area. The new interchange will be shifted to the west (relative to the existing interchange bridge over I-90) in order to allow construction to occur while maintaining traffic. While temporary lane closures may occur as part of construction, traffic operations through this interchange will be maintained throughout construction of the Proposed Action.

Figure 2. I-90 Exit 406 Interchange Proposed Action



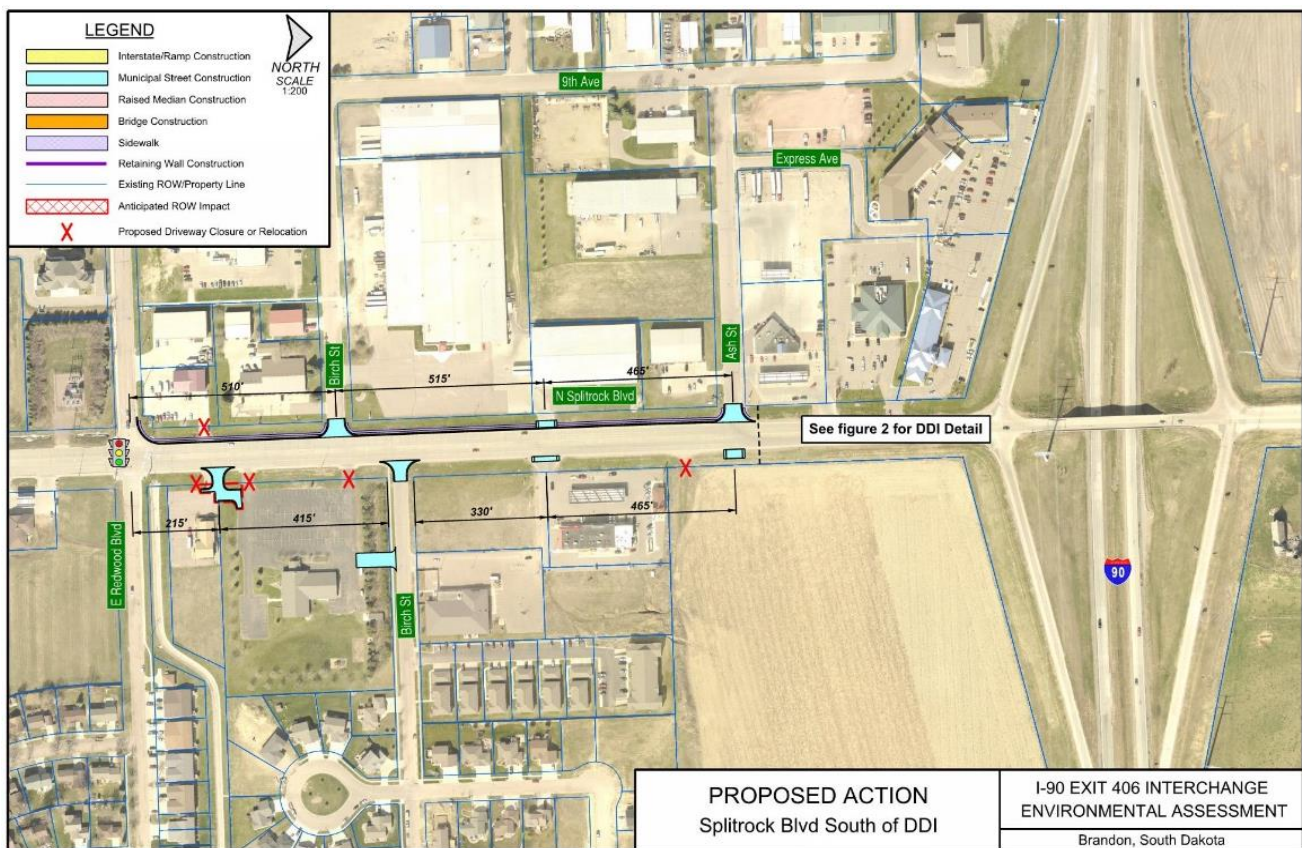
Because the exit and entrance ramps will be lengthened, the I-90 bridges over BNSF railroad (west of the interchange) will also be replaced. This improvement would be necessary with any of the identified interchange alternatives, and was therefore not a deciding factor in the selection of a preferred alternative. The bridges over Splitrock Creek (east of the interchange) were recently improved by SDDOT; the improvements provided sufficient capacity for the ramp lengthening so as to avoid any additional improvements as a result of this Proposed Action. Because the Proposed Action has been developed in consideration of these and similar features, it is considered to have “independent utility.” That is the Proposed Action is not anticipated to create the need for additional improvements within or outside of the study area. It is a standalone project.

Associated with design and fundamental to proper operations of the new interchange, a median is added on Splitrock Blvd between the eastbound I-90 exit ramp terminus and Ash Street. Within this same segment of Splitrock Blvd, two existing access points on the west side of Splitrock Blvd will remain open. However, these two accesses will become right-in/right-out access due to the inclusion of the median. Northbound traffic on Splitrock Blvd destined for businesses located on the west side of the road will now use the Ash Street intersection for access. The Ash Street intersection will remain an unsignalized, full-access intersection. Similarly, on the north side of I-

90 two existing accesses will be closed as part of the project due to the location of the interchange median and signalized intersection at the westbound I-90 ramp terminus.

The southern segment of this project corridor (between Redwood Blvd and Ash Street) will remain unchanged in terms of the existing five-lane cross-section. The median associated with the DDI interchange stops at the Ash Street intersection, which minimizes impacts to the remaining southern segment of Splitrock Blvd corridor and makes this the environmentally preferred alternative. Changes to the corridor will include the construction of a sidewalk on the west side of Splitrock Blvd from Redwood Blvd to the DDI. In addition to the modification of accesses described above, five other access locations south of Ash Street will be closed or consolidated as part of the project. Access to the affected properties will be maintained through various measures: by way of an existing access that is unchanged, the creation of a consolidated access serving two properties, or moving access so that an existing side street serves as the access or enables creation of access from the side street instead of Splitrock Blvd. **Figure 3** provides an overview of this segment of the project.

**Figure 3. Splitrock Boulevard Proposed Action**





North of the DDI interchange, no changes will be made to the Splitrock Blvd corridor once the new interchange roadway ties into the existing roadway and the DDI sidewalk ties into the roadway shoulder. North of the DDI, the existing roadway with shoulder accommodates multi-modal pedestrian and bicycle uses. Connectivity to existing sidewalks is available in the residential area of Corson south of Hemlock Blvd. No changes to the Hemlock Blvd intersection at the north terminus of the corridor are proposed.

The social, economic, and environmental impacts associated with the Proposed Action were evaluated in the EA.

The preferred alternative will have no effect on the following resources:

- Environmental Justice
- Section 4(f) Publicly owned Parks, Recreational Resources, Wildlife, and Waterfowl Refuges
- Section 6(f) Resources
- Vegetation, Fish, & Wildlife
- Threatened and Endangered Species (See agency coordination correspondence in Appendix E of EA)
- Visual Resources/Aesthetics
- Hazardous Materials

**Table 1** summarizes the remaining resources associated with the preferred alternative.

**Table 1. Impacts Associated with the Preferred Alternative**

Resource	Summary of Impacts
<b>Air Quality</b>	Neighboring areas could be exposed to construction-related fugitive dust and construction equipment emissions during construction of the project.
<b>Farmlands</b>	Approximately 0.66 acres of farmland would be impacted by the project. Of this area, 0.38 acres is within soil map units identified as prime farmland and 0.28 acres is within soil map units identified as not prime farmland. Approximately 1.92 acres of farmland would be temporarily impacted by construction easements. The areas would be returned to farmland after construction is completed.
<b>Floodplains</b>	Permanent fill of 2.1 acres of 100-year floodplain would occur from the construction of the Proposed Action. The fill would occur adjacent to the eastbound entrance ramp to I-90. The floodplain impacts are to mapped Zone A and Zone AE floodplains. The Proposed Action would have no impact to the floodway.
<b>Water Quality</b>	The Proposed Action will result in a net increase in impervious surface of 178,000 square feet (4.1 acres), a 45% increase in impervious surface in the study area. The increase is from expanded bridge lanes, creation of medians, longer ramps, sidewalks and curb and gutter. The project design will include stabilization in conformance with the SDDOT Road Design Manual.

Resource	Summary of Impacts
<b>Wetlands/Waters of the US (WOUS)</b>	Permanent impacts to approximately 0.325 acres of wetlands would occur. The impacted wetlands include impacts to 0.195 acres of ditch wetlands considered to be Preamble Waters- artificial wetlands, irrigation, ditches, ponds or lakes, ornamental bodies, and water filled depressions created in dry land –and were determined not to be WOUS in the AJD. A 0.130-acre wetland in the existing right-of-way was determined to be associated with a prairie pothole wetland and is considered a WOUS. Temporary impacts to 0.150 acres of farmed wetland will occur. Those temporarily impacted lands will return to crop rotation after construction.
<b>Habitat and Wildlife</b>	Bridge demolition has the potential to impact bat and migratory bird roosting areas. However, the BNSF bridges at the west end of the project area and the SD11 bridge are similarly constructed, have smooth concrete underneath the roadway, and do not have transverse or or parallel crevices, boxes, or beams used by bats and migratory birds (United States Fish and Wildlife Service (USFWS) Programmatic Biological Opinion, 2018).
<b>Historic and Archaeological Resources</b>	A review of the Level III survey by the South Dakota State Historic Preservation Office (SHPO) concurred with the no historic properties affected determination. However, SHPO included three stipulations in its concurrence letter (see Section V. Summary of Mitigation/Commitments)
<b>Section 4(f) Historic Resources</b>	No permanent impacts to Section 4(f) Historic Resources would occur if the Preferred Alternative is implemented and SHPO stipulations mentioned above are used during construction.
<b>Land Use</b>	Minor land use impacts would occur from conversion of approximately 0.66 acre of farmland to maintained ROW.
<b>Right-of-Way (ROW)</b>	Approximately 0.69 acres of new ROW would be impacted by the proposed action. The ROW impacts would require partial acquisitions of five parcels. The largest parcel acquisition is 0.39 acres of a 16.05-acre agricultural parcel. No relocations are anticipated for the project. Temporary easements on private property may be required for construction access.
<b>Bicyclists and Pedestrians</b>	Bicycle and Pedestrian facilities would be improved from the construction of a walkable median on the new bridge and a new sidewalk on the west side of Splitrock Blvd.

Resource	Summary of Impacts
<b>Economic Resources</b>	<p>No permanent impacts to economic resources would occur because of the Proposed Action.</p> <p>Access from a public street will be maintained to all existing businesses. However, access points will change for some businesses. Three driveway accesses south of I-90 on SD 11/Splitrock will be closed.</p> <p>The construction of a median south of the interchange to Ash Street will remove left turn access for northbound SD 11/Splitrock Blvd traffic at two existing business access points on the west side of the highway. The Proposed Action includes construction of a new parking lot entry behind one of the west side businesses to retain access to businesses via Ash Street and Express Avenue.</p> <p>Access to all existing businesses will be maintained during construction. However, access points could be restricted or rerouted during construction requiring customers and employees to identify the new temporary access points.</p>
<b>Utilities</b>	<p>No permanent impacts to utilities would occur if the Proposed Action is implemented. Temporary impacts to public utilities may occur during construction. These impacts would be similar to normal construction or reconstruction utility relocations. No disruption of services is expected to occur.</p> <p>Note: the high-voltage transmission lines, and their associated towers, running parallel to I-90 through this corridor represent important constraints to construction of the Proposed Action. Impacts to these resources are not anticipated, as any loss of service through these lines could impact thousands of Xcel Energy customers.</p>
<b>Public Facilities and Services</b>	<p>The Proposed Action would relieve traffic congestion and improve response times for emergency services.</p>
<b>Noise</b>	<p>Traffic noise analysis determined no receivers would be considered impacted by increases in traffic noise. Temporary increases from road and bridge construction and equipment would occur.</p>
<b>Secondary and Cumulative Impacts</b>	<p>Implementation of the Proposed Action is consistent with the long-term planning proposals included in the 2035 Comprehensive Plan for Brandon (Plan), enabling development consistent with community objectives and regulation.</p>
<b>Visual Resources/ Aesthetics</b>	<p>No substantive impacts will occur in the project area, as the corridor generally remains in place, and Splitrock Blvd. retains the five-lane cross section. The new interchange bridge will be wider, with a westward shift, so views of and from the bridge will be more apparent than at the existing narrow bridge.</p>
<b>Hazardous Materials</b>	<p>No impacts are anticipated due to the limited changes made in the Splitrock Blvd. corridor. Environmental commitments for response are in place should contaminated soils be encountered during construction.</p>

## V. Coordination and Public Involvement

As indicated in the EA and supporting documentation, SDDOT coordinated with Federal, State, local agencies, and tribes during the development of the EA.

### **a. Agency and Tribal Coordination**

Federal and State agencies that were consulted regarding the Proposed Action include:

- United States Army Corps of Engineers
- United States Fish and Wildlife Service
- South Dakota State Historic Preservation Office
- South Dakota Department of Environment and Natural Resources
- South Dakota Department of Game, Fish, and Parks
- South Dakota Division of Parks and Recreation

The EA summarizes agency responses to project coordination efforts, with supporting documentation provided in Appendix E of the EA.

In 2016, the SDDOT prepared and sent early coordination letters to eight American Indian Tribes that may have an interest in the initiation of this EA. The tribal parties that were consulted regarding the Proposed Action are:

- Flandreau Santee Sioux Tribe
- Lower Brule Sioux Tribe
- Ponca Tribe of Nebraska
- Standing Rock Sioux Tribe
- Sisseton-Wahpeton Oyate
- Mandan, Hidatsa and Arikara Nation (Three Affiliated Tribes)
- Yankton Sioux Tribe
- Chippewa Cree Tribe

No letters were received in response to the invitation for comments.

### **b. Public Participation**

Public meetings were held on August 9, 2016 and January 23, 2017 in development of project studies and determination of a recommended alternative for the project. After publication of the EA for public viewing, a Public Information Meeting was held on September 18, 2019 for public comment on the Proposed Action.

The public was able to comment through three different methods:

- Verbal questions and comments received during and following the presentation provided at the public information meeting.
- Comment forms received during and after the public information meeting.
- Contacting the SDDOT or Consultant Project Managers, Steve Gramm or Ben White.

Public comments received at the public meeting and during the public comment period (which closed on October 4, 2019) are summarized in **Appendix A**.

## VI. Summary of Mitigation/Commitments

The preferred alternative has avoided or minimized impacts to environmental resources to the extent practicable. For those unavoidable impacts, mitigation measures and commitments were proposed in the EA. The measures are summarized below in Table 2 and will be implemented as part of this Project. For additional reference, the EA included an Environmental Commitments Checklist (ECC) for incorporation into Section A Plan Notes that will appear as part of the final construction plans. Appendix A of the EA includes both a draft of the ECC and of the Section A Plan Notes. Appropriate permits will also be secured prior to construction activities, which are listed immediately after Table 2.

**Table 2. Mitigation Measures and Commitments**

Mitigation Category	Impact	Mitigation Commitment	Timing/ Phase that Mitigation will be Implemented
Air Quality	Construction-related emissions and dust.	Standard SDDOT BMP's are included in all SDDOT construction contract provision including implementation of all Federal, State, and local air quality requirements. No further mitigation will be implemented.	Construction
Farmlands	Farmland totaling 0.66 acres will be converted from agricultural use to ROW as a result of interchange construction. Of this area, 0.38 acres is prime farmland and 0.28 not prime farmland. Completion of NRCS Form AD-1006 showed an impact rating of 109 points.	No further coordination is necessary for impact ratings less than 160 points.	Design

Mitigation Category	Impact	Mitigation Commitment	Timing/ Phase that Mitigation will be Implemented
Floodplains	Backwater floodplain fill.	A hydraulic analysis and a Floodplain Development permit will be obtained from Minnehaha County by the SDDOT. Floodplain permit conditions will be incorporated into the project plans, if necessary. With no floodway impacts, a "no rise" certification is not required.	Design
Federally Threatened, Endangered, and Protected species	Discovery of Bald Eagle nest within one mile of the project site	If a bald eagle nest is observed within one mile of the project site, the SDDOT Project Engineer shall be notified immediately in order to initiate consultation with the SDDOT Environmental Office for an appropriate course of action.	Construction
Water Quality	Runoff during construction and any point source discharges from dewatering activities during construction.	<p>In accordance with South Dakota Department of Environment and Natural Resource's (SDDENR) general permit for stormwater discharge, a Storm Water Pollution Prevention Plan (SWPPP) will be included in the construction contract and implemented during construction to reduce or eliminate impacts due to erosion and sedimentation.</p> <p>Contractor will obtain necessary permits and adhere to equipment usage requirements prior to any water extraction activities if water withdrawals are needed for construction. (Commitment C)</p> <p>If construction dewatering is required, the Contractor shall obtain the General Permit for Temporary Discharge Activities from the SDDENR Surface Water Program. The Contractor shall provide a copy of the approved permit to the Project Engineer. (Commitment D)</p>	Design and Construction

Mitigation Category	Impact	Mitigation Commitment	Timing/ Phase that Mitigation will be Implemented
Wetlands and other Waters of the U.S.	<p>0.130-acre of jurisdictional wetland in the existing ROW converted to upland ROW.</p> <p>Additionally, 0.195 acres of Preamble Waters – ditches created in upland and not considered jurisdictional waters – will be impacted.</p> <p>Temporary impacts to approximately 0.150 acres of farmed prairie pothole wetlands.</p>	<p>A 404 permit will be obtained from the USACE. The project is anticipated to be covered by a Nationwide Permit 14 for wetland impacts less than 0.5 acres.</p> <p>Wetland credits will be obtained through a wetland bank. The appropriate wetland mitigation option and the number of credits will be established through the 404 permitting process.</p> <p>Avoidance of wetlands and temporary impact areas will be described in project plans.</p> <p>The temporary impacts will occur within farmed prairie pothole wetland area and will be returned to crop rotation after the proposed action is completed.</p> <p>An Approved Jurisdictional Determination (AJD) for wetlands within the project area was issued on 11/27/17. The AJD is valid until 11/27/22. Additional coordination with the USACE will be required if permitting is not secured before the expiration date.</p> <p>The Contractor will notify the Project Engineer if additional easement is needed to complete work adjacent to any wetland. The Contractor will also be responsible for obtaining a Section 404 Permit for any dredge, excavation, or fill activities associated with material sources, storage areas, waste sites, and Contractor work sites outside the plan work limits that affect wetlands, floodplains, or waters of the United States. (Commitment A, Commitment N)</p>	Design and Construction

<b>Mitigation Category</b>	<b>Impact</b>	<b>Mitigation Commitment</b>	<b>Timing/ Phase that Mitigation will be Implemented</b>
<p>Historic and Archaeological Resources &amp; Section 4(f) Historic Resources</p>	<p>Inadvertant discovery of unidentified archaeological resources during construction.</p>	<p>Should the inadvertent discovery of possible archaeological materials or human remains occur, standard federal, state, or local provisions will be followed to protect, report, investigate, and evaluate the discovery.</p> <p>Fencing will be placed at the edge of the construction limits within the area of the avoidance areas identified as ESS. Fenced location will be shown on the plans in a manner that will not reveal the specific location but will ensure site is protected (i.e. avoidance area bubble).</p> <p>The locations of the ESS need to be accommodated during design to ensure SHPOs three stipulations in its concurrence letter are met and its No Historic Properties finding is maintained : 1) The ESS outside of the project's APE is to be treated as a potentially eligible site, with temporary fencing placed to ensure that ground-disturbing activities do not extend beyond the existing ROW, 2) Stipulation that the I-90 construction activities remain within the identified APE such that identified ESS are not disturbed, and 3) Activity occurring outside of the APE identified in the Level III survey, including staging areas, will require additional review for historic properties. (Commitment I, Commitment Q)</p> <p>For all contractor earth-disturbing activities that occur outside of the areas designated as ESS in plans, contractor shall arrange and pay for a cultural resources investigation of those lands.</p>	<p>Design and Construction</p>



Mitigation Category	Impact	Mitigation Commitment	Timing/ Phase that Mitigation will be Implemented
Land Use	0.66 acres of agricultural land converted from agricultural to highway ROW.	Avoidance and minimization of property acquisitions was considered during selection of proposed action and will be further considered during the design process to minimize impacts to the greatest extent possible. Public opposition to minor conversions was not identified during the public involvement process.	ROW
Right-of-Way	Partial acquisition or easement on five parcels.	<p>For any person(s) whose real property interests may be impacted by this project, the acquisition of those property interests will fully comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). The Uniform Act is a federally-mandated program that applies to all acquisitions of real property resulting from Federal or federally-assisted projects. All impacted owners will be provided notification of the intent to acquire an interest in their property including a written offer letter of just compensation specifically describing those property interests.</p> <p>No displacements are required for the Proposed Action.</p> <p>Temporary easements on private property required for construction must be consistent with other mitigation and permitting commitments related to resources describe in this table.</p>	ROW
Economic Resources	Access to commercial businesses along SD 11/Splitrock Blvd and industrial areas.	Access will be maintained to businesses during construction. Access signs indicating individual businesses by name will be included in construction signage. Construction will be phased to minimize traffic congestion impacts and overall time of construction in the study area. After construction, all existing businesses will remain accessible from a public street as a result of the Proposed Action.	Construction

<b>Mitigation Category</b>	<b>Impact</b>	<b>Mitigation Commitment</b>	<b>Timing/ Phase that Mitigation will be Implemented</b>
Utilities	Relocating utilities where necessary to construct interchange.	Existing utilities may need to be moved or placed in temporary conduit, but no disruption of service is proposed or anticipated. Coordination with the utility companies is required during design.	Construction
Public Facilities and Services	Temporary impacts from lane or access closures or congestion on the SD 11/Splitrock Blvd bridge over I-90.	The existing SD 11/Splitrock Blvd bridge and at least one traffic lane north and south of the bridge will remain open during construction at all times.	Construction
Noise	Temporary increases in noise would occur from construction.	<p>To address temporary noise increases due to construction, mitigation measures will be incorporated into the construction contract.</p> <p>Equipment exhaust systems will be in good working order.</p> <p>When possible, construction will be completed in hours that are least disturbing to the general public. If night work is anticipated, a noise variance permit will be required from the City of Brandon.</p>	Construction

Mitigation Category	Impact	Mitigation Commitment	Timing/ Phase that Mitigation will be Implemented
Hazardous Materials/ Waste	Discovery of hazardous materials during construction.	<p>A driveway closure located on a parcel is identified as an REC in the Phase I ESA. The REC is #33 Vogel Motors Auto Repair and is listed as a REC because of auto repair and storage tanks at the site. Gas stations have also been identified as nearby RECs (#30, 35, and 36), which are common locations for petroleum-contaminated soils. If contamination is identified at these RECs or elsewhere during construction the Project Engineer will notify SDDENR to determine possible contamination. SDDOT will assess the property and develop a remediation plan, as necessary. (Commitment L)</p> <p>An estimate of the potential volume of contaminated material excavation will be included in the estimate of quantities for construction. An appropriate disposal site will be identified in the plan. Waste disposal is not allowed within public right-of-way.</p>	Design and Construction

The following permits are likely to be required prior to construction, but this list may change during design:

- USACE 404 Permit
- SDDENR General Permit for Stormwater Discharges Associated with Construction
- Minnehaha County Flood Plain Permit
- SDDENR Temporary Discharge Permit

The EA document included a City of Brandon Noise Variance Permit among the list of permits “likely” to be required prior to construction. The potential need for this permit is uncertain, and to be determined during construction, as the contractor works with SDDOT to identify a work schedule. As described in Table 2 above, there is a commitment in place to conduct construction activities during hours that are least disturbing to the public. Therefore, the City of Brandon Noise Variance Permit has been removed from the list of likely permits at this time.

## **VII. FHWA Decision**

FHWA has reviewed all of the relevant documents and materials as well as all comments from the public, agencies, and tribes received during the development of the EA. Based upon FHWA independent review and analysis, we find that the EA analyzed and considered all the relevant potential environmental impacts and issues.

Based upon our review and consideration of the analysis and evaluation contained in the EA; and after careful consideration of all social, economic and environmental factors and mitigation of construction impacts; and considering input from the public involvement process and agency coordination; FHWA hereby approves the issuance of a Finding of No Significant Impact (FONSI) for the Interstate 90 Exit 406 Interchange project. FHWA further approves the Proposed Action as the preferred alternative for the Project. The preferred alternative will best fulfill the purpose and need for the project, meet the goals identified for the project, and minimize impacts social, economic, and environmental resources.

Regarding mitigation and commitments, FHWA will ensure all commitments outlined above will be fulfilled by the SDDOT and the City of Brandon as set out specifically in the EA. SDDOT and the City of Brandon are required to ensure that local, state, and federal permit agencies and conditions are met and otherwise complied with.

## APPENDIX A – Public Comments and Responses

The following is a summary of the questions and comments received during the public comment period for the I-90 Exit 406 EA, which closed on October 4, 2019. Project team responses to the comments are provided where needed.

- I. Verbal questions and comments received during the Open House.
  - Several questions were received regarding the operations of a Diverging Diamond Interchange (DDI).
    - Responses varied depending on the nature of the question. However, the noteworthy advantage of a DDI interchange configuration is the provision of safer and more efficient left turning movements (such as the northbound SD11 turn on to westbound I-90).
  - Comments about the right turn from eastbound I-90 exit ramp to southbound SD11 noted concerns about safety at this location; and interest in how right turns will be handled on the new interchange.
    - The turn noted has been identified in the project study as a safety concern due to operational and crash history. With the DDI configuration, a signal specific to that turning movement will be installed to control the intersection.
  - When will this project be constructed and how long will it take?
    - The project is scheduled to begin construction in 2023 and is anticipated to extend no less than two construction seasons.
  - Will the bridge stay open during construction?
    - Yes, the interchange is expected to remain functioning through the large majority of the construction period. Short-term closures (on the order of hours or days) may be required in order to complete certain elements of the project.
  - How will the gas station and restaurant between the interchange ramp and Ash Street be accessed?
    - They will have right-in/right-out access for southbound SD11 traffic. Vehicles coming from northbound SD11 will likely access these business by turning on to Ash Street and then, if necessary, taking Express Avenue to arrive at access to these properties.
  - Why is there a raised median on Ash Street?
    - The median (located north of Ash Street) is a necessary component of the DDI interchange in order for it to operate as intended.
  - What will be the speed limit?
    - Speed limit is not expected to change, however it will be reviewed as part of the detailed design of the project (currently underway by SDDOT).
  - When will traffic signals be installed?
    - Traffic signals are inherent to the design of a DDI, however the SD11 intersection at Ash Street will remain unsignalized. Traffic forecasts do not show the intersection meeting “warrants” for a signal. SDDOT conducts periodic reviews of intersection operations to review for the need to install a signal.

- Will the wind towers that are shipped out from Marmen be able to maneuver through the interchange?
  - One of the advantages of this interchange configuration is that it can accommodate long truck-trailer combinations like those with wind towers. As described in the EA, one of the factors that caused the elimination of roundabouts from the project corridor was the ability to accommodate large trucks.
  
- II. Written comments received during the comment period (ended October 4, 2019)
  - The owner of Tailgators restaurant expressed concern about semi-trucks being able to get to his property through the Express Avenue road, in addition to concerns about losing parking spaces and reduced safety due to the new route.
    - Express Avenue is a City of Brandon roadway designed to provide access to the hotels west of SD11. It does represent a change in traffic patterns, but is not expected to result in identifiable safety issues. SDDOT real estate representatives will be working with impacted property owners to discuss options for compensation if applicable.
  - The owner of Tailgators noted the need for breaks in the SD11 median in order to allow left turns from northbound SD11 into his property. The closure of this access appears unwarranted for the majority of the day.
    - The median is considered a fundamental feature in the design and operation of a DDI. Breaks in the median would risk continued safety concerns and failure of the interchange to operate in the manner intended by SDDOT.
  - The owner of Tailgators suggested a road access to west side businesses would provide more benefit than a sidewalk.
    - Early alternatives analysis did consider the feasibility of adding a frontage road to the west side of SD11. The project team determined the impacts of such an addition would be too substantial to warrant further consideration of that option.
  - A resident asked whether southbound traffic on SD11 would be permitted to make a U-Turn at the Ash Street intersection.
    - Current city ordinances allow for a U-Turn at unsignalized intersections. The Proposed Action does not include a signal at Ash Street; therefore a U-Turn would be permitted.
  
- III. Comments received by Project Managers
  - CHS property representatives wanted to know if the interchange would remain open during construction. They also noted a willingness to allow use of their property in the northwest quadrant of the interchange for construction staging.
    - The interchange is expected to remain open to traffic operations for the large majority of the construction period. Comment noted.