



## 4. ENVIRONMENTAL ANALYSIS

Environmental analysis covers much of the human and natural environment, addressing natural, physical, cultural, and community resources. SDDOT analyzes the current condition of resources to understand the potential impact that proposed transportation improvements may have on them. The procedures for analyzing impacts to the resources are set forth in Chapter 4, including aquatic resources, threatened and endangered species, historical and archeological resources, Section 4(f) resources, Section 6(f) resources, economic and social analysis, and other resources.

Environmental analysis is documented in several methods throughout the process. These may include, but are not limited to, the Categorical Exclusion (CE) Checklist and Environmental Commitments Checklist (ECC), Environmental Assessment (EA), and Environmental Impact Statement (EIS). The resource analyses are used to identify the direct, indirect, and cumulative impacts of proposed transportation improvements. The level of analysis of any given resource depends on the type and location of a transportation project. For example, if a repair and maintenance project has no potential for significant impacts, a review of the impact to environmental resources may be a review of key elements and documentation in a CE Checklist. However, if a project is a structure replacement involving waters of the United States (U.S.) in Topeka shiner habitat, then more in-depth study and documentation would be required to ensure appropriate

environmental commitments are identified and implemented for the project.

Chapter 4 provides understanding of the procedures required at any level of environmental analysis in the planning of transportation projects.

### 4.1 ATLAS Overview

ATLAS is an environmental tracking system that facilitates the environmental process for SDDOT projects. The program is a web-based application that streamlines environmental project management and coordination. ATLAS is currently only available for projects that are CEs. Features of ATLAS include the following:

- ▶ Automatically imports the project description from SDDOT's Concept to Contract (C2C) database.
- ▶ Allows project figures (created separately from ATLAS) to be uploaded and attached to the project.
- ▶ Allows for defining the class of action for the project.
- ▶ Simplifies resource agency coordination by generating letters, identifying appropriate contact information for tribal and agency coordination based on project location, and automatically sending out electronic letters through email once South Dakota Department of Transportation (SDDOT) staff have approved. ATLAS generates letters for Tribal Historic Preservation Office (THPO) and/or Tribal Chairman; Archaeological Research Center (ARC); State Historic Preservation Office (SHPO); South Dakota Department of Agriculture and Natural Resources (SDDANR); South Dakota

Game, Fish & Parks (SDGFP); and U.S. Fish & Wildlife Service (USFWS).

- ▶ Tracks coordination with resource agencies and other stakeholders.
- ▶ Allows for overseeing environmental commitments and levels of completion for project phases.
- ▶ Links to Project Schedule, Project Management Software, and Bid Letting.
- ▶ Generates a CE checklist that is partially completed based on the information input into ATLAS.

ATLAS is specific to SDDOT projects. SDDOT may also assign consultant(s) to specific projects in ATLAS, who can then assist in completing coordination and requirements identified by ATLAS.

The ATLAS login is available on the SDDOT website at <https://apps.sd.gov/HN52EnvironTrkSys/Account/Login>



## 4.2 Aquatic Resources

All aquatic resources in South Dakota fall into one of two categories: waters of the U.S. or

waters of the state. According to the Clean Water Act (CWA), waters are regulated in the following ways:

1. Obtain permit for dredge or fill material from U.S. Army Corps of Engineers (USACE) or the state agency, as appropriate (Section 404),
2. National Pollutant Discharge Elimination System (NPDES) permit and other discharge permits are to be acquired from the U.S. Environmental Protection Agency (USEPA) or SDDANR (Section 402),
3. Water quality certification is required from state water resource agency, or for projects impacting tribal lands from the USEPA (Section 401), and
4. All projects shall be consistent with the state nonpoint source pollution management program (Section 319). Wetlands are afforded additional federal protection under Executive Order 11990. Federal-action and Federal-aid projects are subject to Executive Order 11990 and the CWA.

Aquatic resources that are considered “jurisdictional” are subject to regulatory requirements set forth with Section 404 of the CWA. At the time of writing, South Dakota is following the Pre-2015 Regulatory Regime consistent with the *Sackett* Decision. It is recommended to visit the USEPA website for the latest definition of the waters of the U.S.: <https://www.epa.gov/wotus>. The CWA additionally requires that each state develop standards for their aquatic resources to ensure the beneficial uses are protected. South Dakota has developed surface water quality standards for all waters of the state. If water resources are determined to be non-jurisdictional, then the regulatory requirements are subject to guidance set forth by the state.

SDDOT's implementation of the CWA, Executive Order 11990, and other federal and state policies are presented in the most current South Dakota Drainage Manual (SDDOT, 2022b) and in the SDDOT Water Quality Enhancement Program Design Manual (*WQEPDM*, which is an undated document but was referenced in 2025 for this Environmental Procedures Manual (EPM) Update.)

The South Dakota *Drainage Manual* is accessible here: <https://dot.sd.gov/doing-business/engineering-design-services/forms-manuals/>

The South Dakota *WQEPDM* is accessible here: <https://dotfiles.sd.gov/wqep/WQEPM.pdf>

The *Drainage Manual* contains detailed guidance on evaluation and documentation for aquatic resources. The *WQEPDM* consolidates EPA and SDDANR regulations and DOT design policies, standards, and recommended procedures to ensure water quality. The guidance manuals apply to all SDDOT and SDDOT-administered projects, even if there is no federal participation.

The environmental analysis of aquatic resources encompasses many types of resources that may be encountered in the planning, construction, and maintenance of transportation projects. This section discusses the types of aquatic resources and the procedures to follow to ensure that SDDOT is meeting its environmental commitments. The aquatic resources discussion includes waters of the U.S.; wetlands; erosion, sediment and storm water management; and wild and scenic rivers.

#### 4.2.1 Streams and Waters of the U.S.

When proposed transportation projects have the potential to impact aquatic resources, the first consideration is avoidance of construction activities within the identified aquatic resource, unless there is no practicable alternative. SDDOT Environmental Project Coordinator (EPC) works with the design staff to seek alternatives in construction techniques to avoid aquatic resources; however, if avoidance is not possible, permitting requirements are considered to ensure compliance with environmental laws and regulations.

These actions are driven by the CWA, the purpose of which is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters through the prevention, reduction, and elimination of pollution. The USEPA, acting through the USACE, has authority to permit the discharge of dredged or fill material in waters of the U.S. under Section 404 of the CWA, and permit work and the placement of structures in navigable waters of the U.S. under Sections 9 and 10 of the Rivers and Harbors Act of 1899 (USACE, 2007).

As presented in the *USACE Jurisdictional Determination Form Instructional Guidebook* (USACE, 2007), the USACE performs a step-by-step analysis to determine whether a water/wetland is found to be waters of the U.S. and subject to permitting under either the CWA or the Rivers and Harbors Act. The result of the analysis is known as a Jurisdictional Determination (JD). Information on wetlands planning and permitting is found in **Section 4.2.2.**

**Pre-2015 Regulatory Regime Consistent with *Sackett* Definition:**

The term **waters of the United States** means:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
  - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
  - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

**Waters of the United States** do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA. 40 CFR 230.3(s).

**Waters of the State** are all waters within the jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the state.

**Jurisdictional determination (JD)** means a written USACE determination that a wetland and/or water body is subject to regulatory jurisdiction under Section 404 of the CWA (33 USC 1344) or a written determination that a water body is subject to regulatory jurisdiction under Section 9 or 10 of the Rivers and Harbors Act of 1899 (33 USC 401 et seq.). Additionally, the term includes a written reverification of expired JDs and a written reverification of JDs where new information has become available that may affect the previously written determination. For example, such geographic JDs may include, but are not limited to, one or more of the following determinations: the presence or absence of wetlands; the location(s) of the wetland boundary, ordinary high-water mark, mean high water mark, and/or high tide line; interstate commerce nexus for isolated waters; and adjacency of wetlands to other waters of the U.S. All JDs will be in writing and will be identified as either preliminary or approved. JDs do not include determinations that a particular activity requires a [Department of the Army] permit. (33 CFR 331.2).

**Pre-2015 Regulatory Regime Consistent with Sackett Definition (Continued):**

**Preamble waters** include artificial wetlands, irrigation, ditches, ponds or lakes, ornamental bodies, and water filled depressions created in upland, that generally are not considered to be waters of the U.S. These features typically occur in uplands but because of some type of construction (e.g., roadway) they no longer drain and allow water to pool followed by development of wetland soils and vegetation. *Authorization:* In addition to the CWA (33 CFR 328.3[a]), several court decisions and considerations for the MBTA and ESA have provided the legal framework for consideration of waters of the U.S. The SDDOT and the FHWA are still guided by 23 CFR 777 and Executive Order 11990, which directs the agencies to avoid new construction in wetlands unless there is no practicable alternative.

USACE has constructed many Civil Works projects (e.g., levee construction, dam operations, reservoir management) across the U.S. through the Civil Works program to provide the nation with quality and responsive management of aquatic resources. Congress mandates under Section 408 (33 U.S. Code (USC) 408) that any use or alteration of a Civil Works project by another party is subject to the approval of the USACE to ensure that these projects continue to provide the intended benefits to the public. Under Section 408 the USACE may grant permission for another party to alter a Civil Works project upon a determination that the alteration proposed will not be injurious to the public interest and will not impair the usefulness of the Civil Works project (e.g., flood risk management). The USACE is required to review the requested

modification for engineering, environmental, legal and safety issues.

The USACE also maintains review authority for lands transferred to the State via Title VI of the Water Resource Development Act of 1999, “Title VI lands”.

The USACE has published Engineering Circular 1165-2-2020 providing guidelines for Section 408 reviews and Regulatory Guidance Letter 110.2.5, Land Development Guidance at Corps Reservoir Projects, which provides guidelines for USACE real estate reviews. When the preliminary gradeline has been developed for a project, the Environmental Office coordinates a pre-application meeting with the USACE Omaha District Section 408 Coordinator or USACE local project Natural Resource Conservation Specialist. Information necessary to complete the final USACE application is provided to the Road and Bridge Design Offices including the USACE zones requiring cut/fill balance and required hydraulic modeling. Upon completion of the environmental certification/approval and final plans the Environmental Office submits Section 408 reviews to the USACE Omaha District Section 408 Coordinator or real-estate reviews to the local project Natural Resource Specialist for initial “Completeness Review”, USACE Review and Decision. The USACE is required to issue a Final Decision Notification within 90 days of receiving a complete application.

#### 4.2.2 Wetlands and Other Waters of the U.S.

Protecting wetlands in the planning, construction, and maintenance of transportation projects is important for managing water quality and habitat for fish and wildlife. This section defines key terms in wetlands evaluation, introduces the authorities

for wetlands management, and presents an introduction of wetland environmental commitments. The process by which the SDDOT manages wetlands is shown on **Figure 10**, is summarized in **Table 8**, and is described in further detail throughout this section. More information can be found in the most current *South Dakota Drainage Manual* (SDDOT, 2022b) and in the *SDDOT (WQEPDM*, which is an undated document but was referenced in 2025 for this EPM Update.) Relevant regulations are cited at the end of the section for further reading.

The South Dakota *Drainage Manual* is accessible here: <https://dot.sd.gov/doing-business/engineering-design-services/forms-manuals/>

The South Dakota WQEPDM is accessible here: <https://dotfiles.sd.gov/wqep/WQEPM.pdf>

Figure 10. Aquatic Resources Process

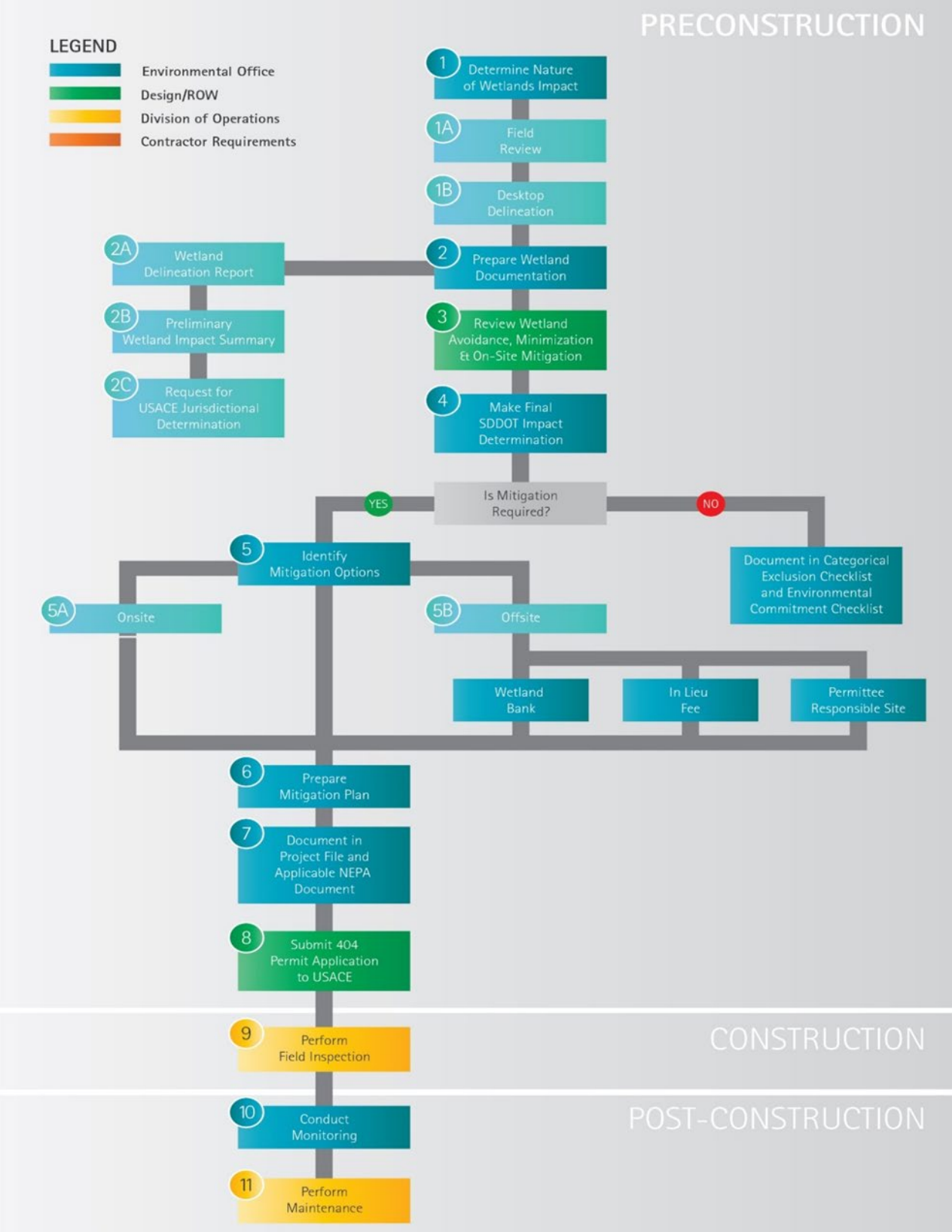


Table 8. Steps in the Aquatic Resources Process

| Step                                                                                         | Participant(s)                                                               | Result(s)                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pre-construction</b>                                                                      |                                                                              |                                                                                                                                                                                                                      |
| 1. Determine nature of aquatic resource (stream and wetland) impact through a desktop survey | EPC                                                                          | Determination of information sufficiency to characterize wetland criteria<br><u>Sufficient information</u> : Prepare Aquatic Resources Impact Summary<br><u>Insufficient information</u> : Conduct field review (1A) |
| 1A. Field review                                                                             | EPC, Wetlands Coordinator or retained consultant                             | Wetlands Delineation Report, Contract for Delineation Work                                                                                                                                                           |
| 1B. Desktop Delineation                                                                      | EPC, Wetlands Coordinator or retained consultant                             | Aquatic Resources Impact figures and table                                                                                                                                                                           |
| 2. Prepare wetland documentation                                                             | EPC, Wetlands Coordinator or retained consultant                             | See Steps 2A, 2B, and 2C                                                                                                                                                                                             |
| 2A. Prepare Wetland Delineation Report                                                       | EPC, Wetlands Coordinator or retained consultant                             | Wetland Delineation Report. CSV File                                                                                                                                                                                 |
| 2B. Prepare Preliminary Aquatic Resources Summary                                            | EPC, Wetlands Coordinator                                                    | Preliminary Aquatic Resources Impact Summary, Shapefile or .dgn                                                                                                                                                      |
| 2C. Request USACE Jurisdictional Determination                                               | EPC, Wetlands Coordinator, USACE                                             | Jurisdictional determination                                                                                                                                                                                         |
| 3. Review resource avoidance, minimization, and on-site mitigation                           | EPC, Wetlands Coordinator, design staff                                      | CSV email, Preliminary Aquatic Resources Summary                                                                                                                                                                     |
| 4A. Make final SDDOT impact determination – Mitigation is not required                       | EPC, Wetlands Coordinator, retained consultant, FHWA or USACE as appropriate | If mitigation is not required, CE Checklist and ECC.                                                                                                                                                                 |
| 4B. Make final SDDOT impact determination – Mitigation is required                           | EPC, Wetlands Coordinator, retained consultant, FHWA or USACE as appropriate | If mitigation is required, Statewide wetland finding (<0.1 acre impact) or Individual Wetlands Finding (>1 acre impact)                                                                                              |
| 5. Identify mitigation options                                                               | EPC, Wetlands Coordinator or retained consultant                             | See Steps 5A and 5B                                                                                                                                                                                                  |
| 5A. On-site                                                                                  | EPC, Design/ROW, Wetlands Coordinator                                        | Additional ROW needs; same PCN                                                                                                                                                                                       |
| 5B. Off-site                                                                                 | EPC, Design/ROW, Wetlands Coordinator                                        | Additional ROW needs; same PCN                                                                                                                                                                                       |
| 5B.1 Wetland Bank                                                                            | EPC, Wetlands Coordinator, Bank Owner                                        | Contract with 3 <sup>rd</sup> Party Provider or Purchase Agreement                                                                                                                                                   |
| 5B.2 In-lieu fee                                                                             | EPC, Wetlands Coordinator, In-lieu Fee Coordinator                           | Contract With 3 <sup>rd</sup> Party Provider or Purchase Agreement                                                                                                                                                   |
| 5B.3 Permittee Responsible Site                                                              | EPC, Design/ROW, Wetlands Coordinator                                        | Contract with Consultant to complete or in house design, additional ROW needs; same PCN                                                                                                                              |
| 6. Prepare Mitigation Plan                                                                   | Retained consultant, Wetlands Coordinator, Design                            | Mitigation Plan                                                                                                                                                                                                      |

| Step                                                                           | Participant(s)                                                         | Result(s)                                                                                                                                |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 7. Document in project file and applicable NEPA document                       | EPC, retained consultant                                               | Project file, CE Checklist and ECC, EA/FONSI, EIS/ROD, copy of Section A Plan Notes (if applicable) incorporate in Final Plan set        |
| 8. Submit 404 permit application                                               | EPC, retained consultant, Environmental Office 404 Coordinator USACE   | 404 permit application package; documentation of final exhibits provided to USACE/FHWA identifying completion of compensatory mitigation |
| <b>Construction</b>                                                            |                                                                        |                                                                                                                                          |
| 9. Perform field inspection (for on/off site permittee responsible mitigation) | Project Engineer, EPC, Wetlands Coordinator and/or retained consultant | Correspondence as needed                                                                                                                 |
| <b>Post-construction</b>                                                       |                                                                        |                                                                                                                                          |
| 10. Conduct monitoring (for on/off site permittee responsible mitigation)      | EPC, Wetlands Coordinator, retained consultant                         | Monitoring Report and documentation of construction findings in project file                                                             |
| 11. Perform maintenance (for on/off site permittee responsible mitigation)     | SDDOT Maintenance Shops, retained consultant                           | Maintenance                                                                                                                              |

Notes: CE – Categorical Exclusion, CSV – Comma-separated Values, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FHWA – Federal Highway Administration, NEPA – National Environmental Policy Act, PCN – Project Control Number, FONSI – Finding of No Significant Impact, ROD – Record of Decision, ROW – Right of Way, USACE – U.S. Army Corps of Engineers

The potential for impacts on wetlands is an important starting point for the aquatic resources review. Various types of wetlands are located within the state's geological and ecological regions. Wetlands across South Dakota's landscape function to store water, transform nutrients, grow living matter, and provide a diversity of wetland plants. In performing these functions, wetlands provide social, economic, and environmental benefits.

Wetlands can serve to slow down water flows, reducing immediate impacts of heavy rains and runoff. They also can improve water quality to streams and rivers by filtering runoff as water moves across the landscape and through the wetlands. Wetlands can host unique flora and fauna in the ecosystems found in the transition

between land and water. Many species of birds such as ducks, geese, hawks, wading and songbirds require functioning wetlands during adult and juvenile life stages (U.S. Geological Survey [USGS], 1996).



SDDOT seeks to avoid, minimize, and mitigate any impacts to aquatic resources as a direct or indirect result of proposed transportation construction projects. This section describes the procedures to ensure compliance with applicable federal and state laws and regulations.

The USACE Nationwide Permit provisions define a stream bed as the substrate of the stream channel between the ordinary highwater marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary highwater marks, are not considered part of the stream bed.

### *Overview of Wetlands and Other Waters of the U.S. in the Project Planning Process*

The Wetland and Other Waters of the U.S. section of the Environmental Screening Report is intended to identify wetlands and waters of the U.S. in the planning study area and determine if the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, a field delineation is not necessary. Review of wetlands and waters of the U.S. in the planning area shall occur through desktop review of online tools such as preliminary survey, aerial photography, USGS quadrangle maps, the National Wetlands

Inventory, NRCS soils and land cover maps, and available previous wetland delineation data.

**Existing Conditions** – Wetlands and other waters of the U.S. that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field delineation efforts. The wetland and waters of the U.S. desktop review information will need to be supplemented with a wetland delineation during the NEPA phase. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented. If waters of the U.S., including wetlands, in the study area are under the

#### **Common Definitions:**

**Wetlands** are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (40 CFR Part 230.3 [t]). *Authorization:* Wetlands are regulated under Sections 401 and 404 of the CWA and implemented by the USACE, SDDANR, and the USEPA, depending on the type of permit required. The USEPA provides oversight with the power to veto decisions by the USACE. Wetlands also are afforded protection under Federal Executive Order 11990, USDOT Order 5660.1A, and other directives.

jurisdiction of the USACE, impacts would likely be permitted under a USACE Section 404

permit. Only the USACE has the authority to make final determinations regarding JD, permitting, and mitigation.

### *Overview of Wetlands and Other Waters of the U.S. in the Project Development and Delivery Process*

When a transportation project is proposed, the Environmental Manager/Environmental Engineer reviews the potential impacts on wetlands in the project area during the completion of the preliminary Class of Action determination. If there is an indication of a potential impact, an EPC is assigned an approved scope to conduct further evaluation.

In accordance with federal laws and regulations, SDDOT is required to avoid wetland impacts, or where avoidance is not practical, to minimize impacts to the greatest extent practical. Special emphasis is placed on avoiding impacts on high-quality wetlands, including those wetlands with known or potential endangered species support functions. When the objectives of a transportation project cannot be met without significant adverse impacts on wetlands adjacent to the project, a wetland mitigation plan is prepared, detailing how affected wetland functions will be compensated. Guidance on wetland mitigation, maintenance, and restoration can be found in Chapter 8, *Wetland Creation and Restoration*, in the *SDDOT Drainage Manual* (SDDOT, 2022).

The *SDDOT Drainage Manual* is accessible here: <https://dot.sd.gov/doing-business/engineering-design-services/forms-manuals/>

SDDOT and the FHWA have worked together to develop a Statewide Finding Regarding Wetlands (FHWA and SDDOT, 2018) for transportation improvement projects classified

as a CE, streamlining the methodology to determine avoidance, minimization, and mitigation measures. With this document in place, actions that are deemed “not significant” by the finding and that meet the applicable criteria are not required to develop an individual wetland finding.



### *Wetlands Process Description*

#### **1. Determine Nature of Wetlands Impact**

Additional information on the Statewide Wetlands Finding can be found in the Applicable Laws, Regulations, and Guidance section or at: <https://dot.sd.gov/media/b328de89/StatewideWetlandFinding.pdf>

Upon receipt of the Approved Scope, the EPC conducts a desktop review to determine the extent of wetlands, if a desktop review was not previously conducted. A desktop review is completed for projects that will include scour protection, and pipe and box culvert work. Desktop reviews are considered to be sufficient for routine determinations for which information is available to characterize the vegetation, hydrology, and soils. A wetland summary (i.e. Wetland Delineation Report) is prepared from the information obtained during the desktop review.

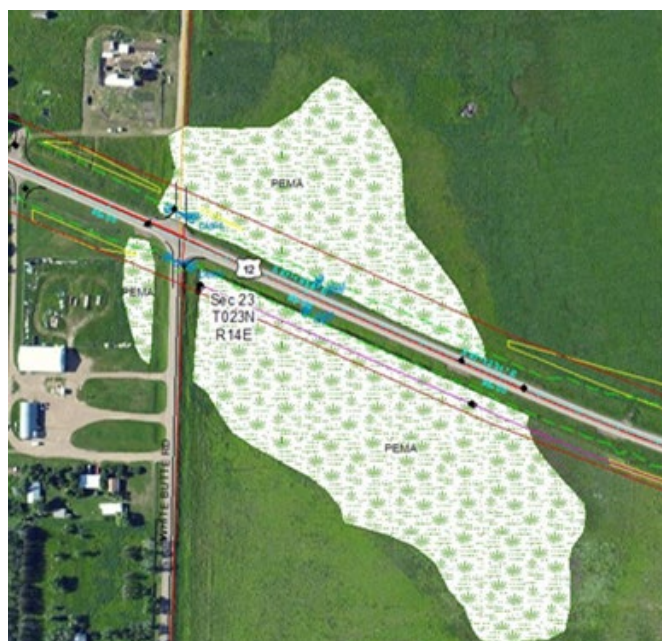
A desktop review is generally deemed not sufficient for projects that will include shoulder

widening or grading, where the project will involve substantial earthwork and a potentially significant impact to aquatic resources. The EPC will consult the Wetlands Coordinator to gather additional information and to request a wetland delineation based on the *Wetlands Delineation Manual* (USACE Environmental Laboratory, 1987) to be conducted either by SDDOT personnel or a retained consultant.

Unless an area has been altered or is a rare natural situation, positive indicators of all three of the following characteristics must be present for an area to be a wetland.

- ▶ **Vegetation**—Wetland vegetation consists of plants that require saturated soils to survive and plants that gain a competitive advantage over others because they can tolerate prolonged wet soil conditions.
- ▶ **Soil**—Hydric soils develop in conditions where soil oxygen is or was limited by the presence of water for periods of the growing season. By examining the soil, one can determine if hydric indicators are present.
- ▶ **Hydrology**—The presence of water, either above the soil surface or within the soil, but near the surface (12 to 18 inches below the soil surface, depending on the soil type) for a sufficient period of the year.
- ▶ **1A. Field Review**—Consists of a wetland delineation, conducted by the Wetlands Coordinator or a retained consultant. If a consultant conducts the field review, the Wetlands Coordinator and/or the Consultant Manager prepares a scope of work and follows contracting guidelines as set forth by SDDOT for the selection of a qualified consultant. A field review may be completed for single structures such as bridges, box culverts, and culvert replacements and is typically completed for

larger scale projects such as shoulder-widening, grading, and roadway alignment projects and projects for which the footprint of the road is being increased. The result of the field review is the wetland delineation to be used in the Preliminary Wetland Impact Summary. All wetland determinations and delineations are conducted in accordance with the USACE 1987 *Wetlands Delineation Manual* and appropriate Supplements: Great Plains Region, Mid-West Region, or Western Mountains, Valleys, and Coast Region. The *SDDOT – Environmental Office (EO), Wetland Delineations & Reporting Scope of Work* (SDDOT, 2023e) for consultants is provided to the consultant upon being awarded the project.



## 2. Prepare Wetland Documentation

The Wetlands Coordinator or retained consultant prepares and compiles the following information, as applicable:

- ▶ **2A. Wetland Delineation Report**—All wetlands in the study area are identified based on the desktop and/or field review.

The report includes a written description with sufficient detail to adequately characterize the study area and all delineated aquatic features, along with a map identifying wetlands within the study area. A detailed description of the information required for the Wetland Delineation Report is provided in the *SDDOT – EO, Wetland Delineations & Reporting Scope of Work* for consultants (SDDOT, 2023e). The revised Wetland Delineation Report Template will be provided to consultants by SDDOT. Water/Wetland Summary Tables will also be prepared by the consultant and provided to SDDOT to allow for the compiling of the Section A Plan notes. The Wetland Delineation Report is provided to the EPC. The CSV file of the delineation includes information that is then incorporated into the topography file for the project.

► **2B. Preliminary Wetland Impact**

**Summary**—A written description of the impacted wetlands and the number of acres impacted is provided and is supported by a geographic information system (GIS) graphic overlay of preliminary work limits within the study area. The EPC, Wetlands Coordinator or the retained consultant will make the preliminary impact determination. If needed, at the request of the Wetlands Coordinator and/or Consultant Manager, a consultant will make the preliminary impact determination using design files provided by the SDDOT. The Preliminary Wetland Impact Summary is provided to the EPC.

- ◆ The USACE Mitigation Rule dictates that a functional assessment should be provided when appropriate, such as:
  - ◆ Hydrogeomorphic (HGM) Approach.

HGM analysis was traditionally performed for all projects east of the Missouri River; however, the HGM analysis is no longer required in advance of the wetland impact determination and/or Approved Jurisdictional Determination. If HGM is ultimately deemed necessary, it will only be performed for the impacted wetlands that fall under USACE jurisdiction.

◆ Floristic Quality Index (FQI)

For projects west of the Missouri River, FQI must be performed for the delineated wetland features and is required for any wetlands that extend beyond the SDDOT ROW.

**2C. Request USACE Jurisdictional**

**Determination**—The EPC, Wetlands Coordinator, or retained consultant sends a request to the USACE along with the Wetland Delineation Report and the project scope via email to

[SDRegulatoryMailbox@usace.army.mil](mailto:SDRegulatoryMailbox@usace.army.mil).

The determination identifies the wetlands

All information that outlines the standard operating procedures currently used by the USACE for conducting JDs and documenting practices to support approved JDs can be found on the USACE website: <https://www.nwo.usace.army.mil/Missions/Regulatory-Program/>.

in question as waters of the U.S. or waters of the state. This indicates if coordination should be continued with USACE or with FHWA. The USACE provides a JD for the project, which is added to the project file.

### 3. Review Wetland Avoidance, Minimization, and On-site Mitigation

The Wetlands Coordinator will send the Wetlands Delineation Report to the EPC. The Wetlands Coordinator will send a CSV email to the Responsible Manager and FHWA that includes the Preliminary Wetland Impact Summary to identify wetlands for avoidance, minimization, and mitigation during establishment of the cut/fill limits. Design staff will work with the Wetlands Coordinator to identify the alternative that avoids and minimizes impacts on wetlands to the extent possible.

Design staff will adjust the preliminary cut/fill limits and send an email to the Wetlands Coordinator that includes the wetland impacts deemed unavoidable.

### 4. Make Final SDDOT Impact Determination

Road Design will provide the EPC, Wetlands Coordinator, or the retained consultant with the final cut/fill limits that are incorporated into the design.

The final wetland impact determination qualifies the temporary or permanent wetland impacts based on the following:

- ▶ Temporary impacts include wetlands that will revert to the same soil, vegetation, and water regime after construction is complete (e.g., fill placed on existing slope; excavation within a wetland that will not drain the wetland or impact hydrology or change the wetland class; fill placed in a wetland that is completely removed to original contour, also known as temporary fill).
- ▶ Permanent impacts include unavoidable wetland impacts that convert the wetland area to non-wetland (e.g., fill converting wetland to upland; fill beyond the existing

toe of slope; excavation or impounding water converting wetland to deep water (> 2.0 meters [6.6 feet]) changing the wetland class; draining an existing wetland by lowering the natural outlet elevation; reducing the wetland size or hydrology inside or outside the existing right of way (ROW) to any degree; and placement of fill that changes the elevation. The duration of the project is also considered and may require coordination with the USACE.

The EPC and the Wetlands Coordinator determines if the SDDOT/FHWA Statewide Finding Regarding Wetlands or Individual Wetland Finding applies:

- ▶ **Statewide Finding Regarding Wetlands** applies to projects where the following criteria are met: It is determined there is no practicable alternative to the proposed construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.
  - ◆ The project is a federally-funded action;
  - ◆ The project is a CE under NEPA in accordance with 23 Code of Federal Regulation (CFR) 771 and follows the current Programmatic Agreement between the FHWA and the SDDOT regarding the DOT's process for determining CEs;
  - ◆ The project is a transportation construction activity as defined within this document;
  - ◆ The project requires a permanent loss of less than 1.0 acre of wetland and each project will provide for replacement of permanent wetland impacts greater than 0.1 acre per discrete aquatic resource with an equivalent wetland function and value;

- ◆ Projects constructed under this Finding include all practicable measures to minimize harm to wetlands;
- ◆ The project will fully restore temporary wetland impacts to a condition (i.e. function-for-function replacement or better) that existed prior to the project within the established service area;
- ◆ The project has been coordinated with the Resource Agencies, and they have not expressed concerns over the proposed project action to wetlands; and
- ◆ The project meets the terms of a USACE Nationwide Permit.

- ▶ **Individual Wetland Finding** applies for projects where any one or more of the criteria above cannot be met. This requires communication with FHWA and USACE throughout the remainder of the wetland process to ensure that both agencies are aware of and agree to the finding.

The result of the final wetland impact determination will indicate whether mitigation is required. If no mitigation is required, it will be documented in the project file and applicable NEPA document (EA, EIS, CE Checklist, and ECC). The project's Responsible Manager (as designated in C2C or Primavera) receives a copy of the ECC (if applicable) to include notes in the Construction Plans. If mitigation is required, the process continues with Step 5 and the CE and ECC will not be completed until Step 7.

The Wetlands Coordinator sends a tech memo to the EPC and FHWA so that the CE and ECC (if applicable) can be filled out. The wetland determination is documented in the Wetlands Tracking Ledger by the Wetlands Coordinator.

## 5. Identify Mitigation Options

In coordination with Design/ROW, the EPC, Wetlands Coordinator, and/or retained consultant will identify mitigation options and determine whether on-site or off-site mitigation will occur.

- ▶ **5A. On-site Mitigation**—Design/ROW will identify mitigation sites located along the construction corridor. This option may require an additional easement. The original PCN will be used for on-site mitigation. The design will be modified to incorporate the required on-site mitigation.
- ▶ **5B. Off-site Mitigation**—There are three options for off-site mitigation according to mitigation hierarchy: Wetland Bank; In-lieu fee; and Permittee Responsible Site. In coordination with Design/ROW, the EPC, Wetlands Coordinator, and/or the retained consultant will select the option that meets the USACE mitigation criteria and project goals. All these options require an easement, revision to the Statewide Transportation Improvement Program (STIP) to include a new PCN, preparation of internal form DOT 121, preparation of NEPA documentation (CE, EA, EIS) as appropriate, and a Mitigation Plan.
  - ◆ **Wetland Bank**—If the off-site mitigation uses a wetland bank option, the EPC negotiates the terms of the banking activity. The SDDOT is in the process of developing a wetland bank system and GIS database.
  - ◆ **In-lieu Fee**—If the off-site mitigation uses an in-lieu fee option, the Wetland Coordinator negotiates the fee and coordinates with the in-lieu fee coordinators to make the payment.
  - ◆ **Permittee Responsible Site**—If the off-site mitigation option is a new site, a

new PCN, as needed, will be issued. Either an easement or purchase of property will be required. The EPC works with the Wetland Coordinator and Project Development staff to develop a new PCN.

If a Wetland Bank or In-Lieu Fee is used, the USACE will document this use in their Regulatory In-Lieu Fee & Bank Information Tracking System (RIBITS) online database.

**RIBITS** is a web-based application developed by the USACE with support from the U.S. Environmental Protection Agency and USFWS. USACE and USFWS use RIBITS to provide information on mitigation and conservation banking activities, including bank locations, service areas, credit type and availability, ledgers, and supporting documentation.  
<https://ribits.ops.usace.army.mil/ords/f?p=107:2:.....>

The type of mitigation used to replace impacted areas is important to consider. Mitigation ratios are identified in the *SDDOT Statewide Umbrella Mitigation Bank, Mitigation Banking Instrument* (SDDOT, 2020). Ratios may vary but should not be below the following listed ratios (**Table 9** and **Table 10**).

**Table 9. Wetland Credit Production Using Acre-to-Acre Credit Production**

| Type of Mitigation     | Ratio A | Ratio B |
|------------------------|---------|---------|
| Restoration            | 1:1     | 1.5:1   |
| Enhancement            | 3:1     | 4:1     |
| Establishment          | 1:1     | 2:1     |
| Protection/Maintenance | 10:1    | 10:1    |
| Buffer                 | 4:1     | 4:1     |

**Table 10. Wetland Credit Production Using a Functional Lift Credit Production**

| Type of Mitigation     | Ratio A | Ratio B |
|------------------------|---------|---------|
| Restoration            | 1:1     | 1.5:1   |
| Enhancement            | 1:1     | 1.5:1   |
| Establishment          | 1:1     | 1.5:1   |
| Protection/Maintenance | 10:1    | 10:1    |
| Buffer                 | N/A     | N/A     |

Typically, ratio determinations should be based on the following conditions:

**Condition 1 (Ratio A)**

- The Site has met its success criteria.
- The Site, in its entirety, can demonstrate overall watershed benefits.

**Condition 2 (Ratio B) (out-of-kind or approved out of primary service area. Ratio is slightly higher to account for temporal loss except for Protection and Maintenance and buffer ratios)**

- The Site has not met its success criteria, but the Interagency Review Team has approved the release of pre-certified credits (no more than 30 percent of the total bank).
- Primary function of the Site's wetland is less or significantly different from the impacted wetlands (that is, out-of-kind or diminished functional capacity).

Based on the guidelines, a wetland that is newly established (i.e. created) and met its success criteria will have a 2:1 mitigation ratio. This means that for every 1 acre of wetland affected during construction, 2 acres of wetland will have to be developed. The protection of existing wetlands has a ratio of 10:1; for each acre of impacted wetland on the construction site, 10 acres will have to be protected by

purchasing existing wetlands. The type of mitigation selected may depend on available properties and what enhancements, establishment, or restoration can take place on that property.

## **6. Prepare Mitigation Plan**

For unavoidable impacts on wetlands, the consultant or the Wetlands Coordinator will prepare a Mitigation Plan in accordance with USACE guidelines. The Mitigation Plan, which has attached to it the Wetlands Delineation Report, Functional Analysis, wetland permanent easement agreement, and plat will be provided to the EO 404 Coordinator to be submitted to USACE as part of the Section 404 permit application.

## **7. Document Wetlands Mitigation in Project File and Applicable NEPA Document**

EPC and/or retained consultant will document in the project file and applicable NEPA document (EA/EIS, CE Checklist, and ECC) the need for a 404 permit; the mitigation required, including total impacted wetland acreage, permanent and temporary, total compensatory wetlands needed; and a summation of how mitigation will be accomplished. EPC documents whether a Statewide Wetland Finding applies or whether an Individual Wetland Finding applies along with the date FHWA approved the Individual Wetland Finding. Design receives a copy of ECC (if applicable) for indication of the project-specific Section A Plan Notes, Commitment A and Commitment N – 404, to incorporate into final construction plans.

Before the project is sent to bid letting, the EPC will coordinate with the Road Design office to determine that final plans have been received and to ensure all environmental commitments have been captured within the final plan.

## **8. Submit 404 Permit Application**

EPC will provide the applicable wetland data to the EO 404 Coordinator for the Section 404 permit application. SDDOT projects typically fall under the following USACE permits:

- ▶ **Nationwide Permits**—Nationwide permits are a type of General Permit and represent authorizations that have been issued by regulation (33 CFR 330) for certain specified activities nationwide. If certain conditions are met, the specified activities can take place without the need for an individual or regional permit.
- ▶ **Individual permits**—A standard individual permit is one that has been processed through the public interest review procedures, including public notice and receipt of comments. The standard individual permit is issued using ENG Form 1721.

All documentation should be completed prior to submitting the information to the USACE. A CE will be approved or certified before the 404 permit is finalized. The EO 404 Coordinator will compile the information and submit it to USACE, Omaha District, South Dakota Regulatory Office.

## **9. Perform Field Inspection**

During construction, the Project Engineer will ensure that the Contractor adheres to all plans and specifications. Following construction, the EPC, Wetlands Coordinator and/or retained consultant will confirm that the wetland mitigation has been completed in accordance with the as-built plans and begin baseline monitoring. If construction deficiencies are identified, the Wetlands Coordinator will report to the EO and corrective actions will take place.



## 10. Conduct Monitoring

In accordance with the USACE Guidance for Compensatory Mitigation document, once the construction project and the associated compensatory wetland mitigation is complete, annual monitoring will be conducted by a retained consultant during the first growing season following construction, in accordance with the Section 404 permit. The monitoring period must be sufficient to demonstrate that the compensatory mitigation project has met performance standards. Active intervention for replanting or other management activities may be necessary in the first years. Annual monitoring and reporting should be completed for the wetland until the USACE determines that the wetland has “optimized” and is able to fully function without further action. The USACE will then provide documentation that the wetland has “optimized” and annual reports will no longer be necessary.

Monitoring Reports are submitted annually to USACE for all jurisdictional wetlands and to FHWA for all wetlands. The Monitoring Report will be prepared in accordance with the *SDDOT Wetland Mitigation Monitoring & Reporting Scope of Services* (SDDOT, 2023e). The Scope of Services also includes a checklist that details all items needed for a submittal to be considered complete by the SDDOT.

Additional information for Minimum Monitoring Requirements for Compensatory Mitigation Projects can be gathered from the USACE Regulatory Guidance Letter No. 08-03

<https://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl08-03.pdf>

## 11. Perform Maintenance

The SDDOT’s EO will work with the maintenance shops to ensure that the wetland mitigation sites are receiving the appropriate annual maintenance. Particular maintenance activities may include removal of invasive species, mowing, prescribed burning, or other permit requirements. For the first 5 years, the maintenance activities will be reported in the Monitoring Report, which will be submitted annually to the USACE and FHWA and documented in the project file.

### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to wetlands are presented by agency, with executive orders presented first.

### *Executive Orders*

**Protection of Wetlands (Executive Order 11990)**—Executive Order 11990, issued in 1977, created policies that direct federal actions to avoid, to the extent possible, the long- and short-term, adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

Executive Order 11990 requires each agency to develop procedures for federal actions whose impact is not significant enough to require the preparation of an EIS under Section 102(2) (c) of the NEPA, as amended.

## Federal Highway Administration

**Mitigation of Impacts to Wetlands and Natural Habitat (23 CFR 777)**—These regulations direct the policy and procedures used by FHWA on the Federal Lands Highway Program regarding the evaluation and mitigation of adverse environmental impacts on wetlands and natural habitat resulting from federal-aid projects. These policies and procedures are applied by FHWA to projects to the extent such application is deemed appropriate by the FHWA.

The Statewide Finding regarding wetlands for South Dakota Federal-aid Highway Projects is available here:  
<https://dot.sd.gov/media/b328de89/StatewideWetlandFinding.pdf>

**Statewide Finding by FHWA and SDDOT, Regarding Wetlands for South Dakota Federal-aid Highway Projects**—SDDOT and FHWA developed a Statewide Finding Regarding Wetlands for transportation improvement projects, classified as a CE. The finding satisfies the requirements of Executive Order 11990, Protection of Wetlands, and USDOT Order 5660.1A, Preservation of the Nation's Wetlands. Those wetland impacts on CE projects meeting the applicability criteria stated below have been determined not significant and will not require preparation of an Individual Wetland Finding. An Individual Wetland Finding will be prepared for all other projects that involve wetland impacts.

**FHWA Technical Advisory T 6640.8A**—The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides the following guidance for addressing wetland impacts in environmental documents:

**Wetland Determination:** Wetlands should be identified by using the definition of 33

CFR 328.3(b) (issued on November 13, 1986), which requires the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Exhibits should be provided that show wetlands in the project impact area in relation to the alternatives. In evaluating the importance of the wetlands, the analysis should consider such factors as: (1) the primary functions of the wetlands (e.g., flood control, wildlife habitat, and groundwater recharge), (2) the relative importance of these functions to the total wetland resource of the area, and (3) other factors, such as uniqueness, that may contribute to the wetland's importance.

In determining the wetland impact, the analysis should show the project's effects on the stability and quality of the wetland(s). This analysis should consider the short- and long-term effects on the wetlands and the importance of any loss such as: (1) flood-control capacity, (2) shoreline anchorage potential, (3) water-pollution abatement capacity, and (4) fish and wildlife habitat value. The methodology developed by FHWA and described in reports numbered FHWA-IP-82-23 and FHWA IP-82-24, *A Method for Wetland Functional Assessment Volumes I and II*, is recommended for use in conducting this analysis. Knowing the importance of the wetlands involved and the degree of the impact, the Highway Administration and the FHWA will be in a better position to determine the mitigation efforts necessary to minimize harm to these wetlands. Mitigation measures that should be considered include preservation and improvement of existing wetlands and creation of new wetlands (consistent with 23 CFR 777).

## U.S. Army Corps of Engineers

**Wetlands Delineation Manual and Regional Supplements and Websites**—USACE issued the *Wetlands Delineation Manual* in 1987 that defined the approach for identifying and delineating wetlands for purposes of implementing Section 404 of the CWA (USACE Environmental Laboratory, 1987). From 2007 to 2012, USACE issued 10 regional supplements (version 2.0) that provide technical guidance on evaluating the wetland hydrology, hydric soils, and wetland vegetation. These manuals are mandatory for performing wetland determination and delineation. In South Dakota, the regional supplements to reference include the Wetlands Delineation Manual for the Western Mountains, Valleys, and Coast Range and for the Great Plains region.

A regional wetland indicator plant list is associated with each regional supplement. USACE is responsible for maintaining the wetland plant database and issuing updates on the status of wetland plants.

The regional lists and information on wetland vegetation occur on the USACE National Wetland Plant List (NWPL) website. <https://wetland-plants.sec.usace.army.mil/>

**Permits for Dredged or Fill Material (33 USC 1344)**—Section 404 of the CWA establishes a program for regulating the discharge of dredged and fill material into waters of the U.S., including wetlands. Implementing regulations for USACE and USEPA are found in 33 CFR 320-330 and 40 CFR 230-233, respectively.

**Compensatory Mitigation for Losses of Aquatic Resources (33 CFR 332)**—33 CFR 332 issued by the USACE and the USEPA amends 33 CFR 325, 33 CFR 332, and 40 CFR 230. This part

establishes the standards and criteria for the use of all types of compensatory mitigation, including on-site and off-site permittee-responsible mitigation, mitigation banks, and in-lieu fee mitigation to offset unavoidable impacts on waters of the U.S. authorized through the issuance of Department of the Army permits pursuant to Section 404 of the CWA (33 USC 1344) and/or Sections 9 or 10 of the Rivers and Harbors Act of 1899 (33 USC 401, 403).

The objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts on waters of the U.S. authorized by USACE permits. The rule is intended to improve planning, implementing, and managing compensatory mitigation projects. It stresses a watershed approach for selecting mitigation sites and requires measurable and enforceable ecological performance standards and regular monitoring for all types of compensation. The rule also provides guidance on how to create a complete compensatory mitigation plan, including assurances for the long-term protection of the site and its finances and the identification of those responsible for specific project tasks.

**Regulatory Guidance Letter Number 16-01**—On October 31, 2016, USACE issued a Regulatory Guidance Letter updating the explanation of the difference between an approved JD and preliminary JD to help implement Section 404 of the CWA and Sections 9 and 10 of the Rivers and Harbors Act of 1899. The letter also addressed when an approved JD is required and when a landowner, permit applicant, or other affected party can decline to request and obtain an approved JD and elect to use a preliminary JD instead. Regulatory Guidance Letter 16-02 supersedes Regulatory Guidance Letters 07-01 and 08-02.

**Revised Definition of “Waters of the U.S.” (33 CFR Part 328)**— On November 18, 2021, the EPA and USACE (“the agencies”) announced the signing of a proposed rule to revise the definition of “waters of the U.S.” The agencies propose to put back into place the pre-2015 definition of waters of the U.S. , updated to reflect consideration of Supreme Court decisions. The purpose of this change was to create a stable definition of waters of the U.S. while the agencies continue to consult with states, tribes, local governments, and a broad array of stakeholders in both the current implementation and future regulatory actions.

#### U.S. Department of Transportation

**Preservation of the Nation’s Wetlands (USDOT Order 5660.1A)**—USDOT Order 5660.1A implements Executive Order 11990 and requires that transportation facilities and projects be planned, constructed, and operated to ensure the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable, and establishes procedures for implementing the policy. Economic, environmental, and other factors must be considered in developing alternatives.

#### U.S. Environmental Protection Agency

**USEPA Water: Wetlands Website**—USEPA hosts a website that provides information on wetlands; waters of the U.S.; jurisdiction, laws and regulations; wetland monitoring and assessment; and more.

On January 15, 2015, USEPA released the availability of the final report of the *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*. This final report presents a review and synthesis of relevant peer-reviewed scientific literature that will inform upcoming joint USEPA/USACE rule-

making to enhance protection of the chemical, physical, and biological integrity of the nation’s waters by clarifying the jurisdiction of the CWA.

#### U.S. Fish and Wildlife Service

##### **Classification of Wetlands and Deepwater**

**Habitats of the U.S.**—In 1979, USFWS published the Classification of Wetlands and Deepwater Habitats, which provided a national classification system and is used as the basis for categorizing wetlands, including the NWI. This classification is also referred to as the Cowardin system or classification.

**National Wetlands Inventory Website**—USFWS hosts an NWI website that provides information on wetlands and the NWI. The NWI produces wetlands maps and geospatial wetland data for the U.S. NWI maps are available on-line through the Wetland Mapper.

#### U.S. Geological Survey

##### **National Wetlands Research Center Website**—

USGS hosts the National Wetlands Research Center website. The National Wetlands Research Center develops and disseminates scientific research on the ecology, values, management, and restoration of wetlands, coastal habitats, and associated plant and animal communities.

#### U.S. Supreme Court Decisions

##### **U.S. Supreme Court’s Decision in Rapanos vs.**

**U.S. & Carabell vs. U.S.**—Both the Rapanos and Carabell cases resulted in the USEPA and the USACE redefining how they determine jurisdiction over potential waters of the U.S. Following these court cases, the agencies released a memorandum (June 6, 2007) regarding new procedures for JDs. The agencies followed this with a superseding memorandum (December 2, 2008) that further refined and defined new procedures for JDs. The decision

affirmed USACE jurisdiction over the following waters:

- ▶ Traditional navigable waters
- ▶ Wetlands adjacent to traditional navigable waters
- ▶ Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months)
- ▶ Wetlands that directly abut such tributaries

#### **U.S. Supreme Court’s Decision in Solid Waste Agency of Northern Cook County vs. USACE—**

The USACE interpretation was that the use of isolated, non-navigable intrastate waters by migratory birds was sufficient basis for asserting jurisdiction. The Solid Waste Agency of Northern Cook County ruling negated that isolated waters (intrastate waters with no connection to any navigable waters) were not subject to USACE authority under the CWA.

#### **Headwaters Inc. vs Talent Irrigation District—**

As part of the 2001 court decision, the Talent Irrigation District disputed that irrigation canals were navigable waters. The Ninth Circuit Court concluded that the canals are navigable waters because they exchange water with streams and other natural bodies of water. The court determined that the irrigation canals are tributaries because they are streams that contribute their flow to a larger stream or other body of water. Under the CWA, tributaries are considered waters of the U.S. The Ninth Circuit rejected Talent Irrigation District’s argument that irrigation canals are isolated waters because they have closed waste gates that form a closed system. The court determined that irrigation canals are intermittent streams because they exchange water with natural

streams. Under the CWA, intermittent streams qualify as waters of the U.S.

**Pascua Yaqui Tribe. vs U.S. Environmental Protection Agency** — On August 30, 2021, the U.S. District Court for the District of Arizona in *Pasqua Yaqui Tribe v. EPA*, Case No. 4:20-cv-00266, vacated the EPA and USACE 2020 Navigable Waters Protection Rule (“NWPR”) redefining jurisdictional “Waters of the U.S.” under the Clean Water Act CWA. The district court found “fundamental, substantive flaws that cannot be cured without revising or replacing the NWPR’s definition” and accordingly remanded and vacated the rule. This ruling returned the current waters of the U.S. definition to the 2019 Rules.



South Dakota Department of Transportation

**South Dakota Drainage Manual** (SDDOT, 2022b) —This manual has been developed to provide guidance to SDDOT and consultant personnel performing drainage investigations and preparing hydraulic designs for SDDOT and local projects. The manual is intended to comply with all State and Federal laws, statutes, and regulations. It presents SDDOT criteria, practices, and procedures on the hydraulic design of drainage appurtenances. Chapter 8 addresses wetland hydrology.

### 4.2.3 Erosion, Sediment, and Stormwater Management

Managing stormwater runoff protects water quality by minimizing the discharge of potential pollutants into South Dakota waterways. This section defines key terms related to stormwater management, defines the authorities involved with stormwater management, and describes best management practices (BMPs) to minimize erosion and sediment loading to nearby streams and lakes. The process by which SDDOT manages stormwater is shown on **Figure 11**, summarized in **Table 11**, and described in further detail throughout this section. More information can be found in SDDOT's WQEPDM and SDDOT's *Drainage Manual* (SDDOT, 2022b). Relevant regulations and manuals are cited at the end of the section for further reading.

The South Dakota *Drainage Manual* is accessible here: <https://dot.sd.gov/doing-business/engineering-design-services/forms-manuals/>

The South Dakota WQEPDM is accessible here: <https://dotfiles.sd.gov/wqep/WQEPDM.pdf>

Water quality standards are mandated by the CWA and designate the uses for each water body, set criteria to protect those uses, and establish provisions to protect the water from pollutants. South Dakota has developed surface water quality standards and defined beneficial uses for all the lakes and streams in the state to protect the public health and welfare of the people of the state and enhance the quality of water.

South Dakota regulates stormwater to reduce the amount of pollutants entering aquatic systems as a result of runoff from industrial facilities, construction sites, and urban areas.

Stormwater runoff occurs when rain or snowmelt flows over the ground at a rate higher than it can infiltrate into the ground. Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into surface waters. Common pollutants from construction sites in stormwater are sediments and the constituents contained within.

Under the NPDES, the SDDANR has been delegated authority to regulate the amount of pollution that enters waters of the U.S. to protect the beneficial uses of all streams and lakes; and to issue different relevant permits. The U.S. Environmental Protection Agency (USEPA) retains authority for the issuance of construction General Permits on Indian reservations.

Figure 11. Erosion, Sediment, and Stormwater Management Process

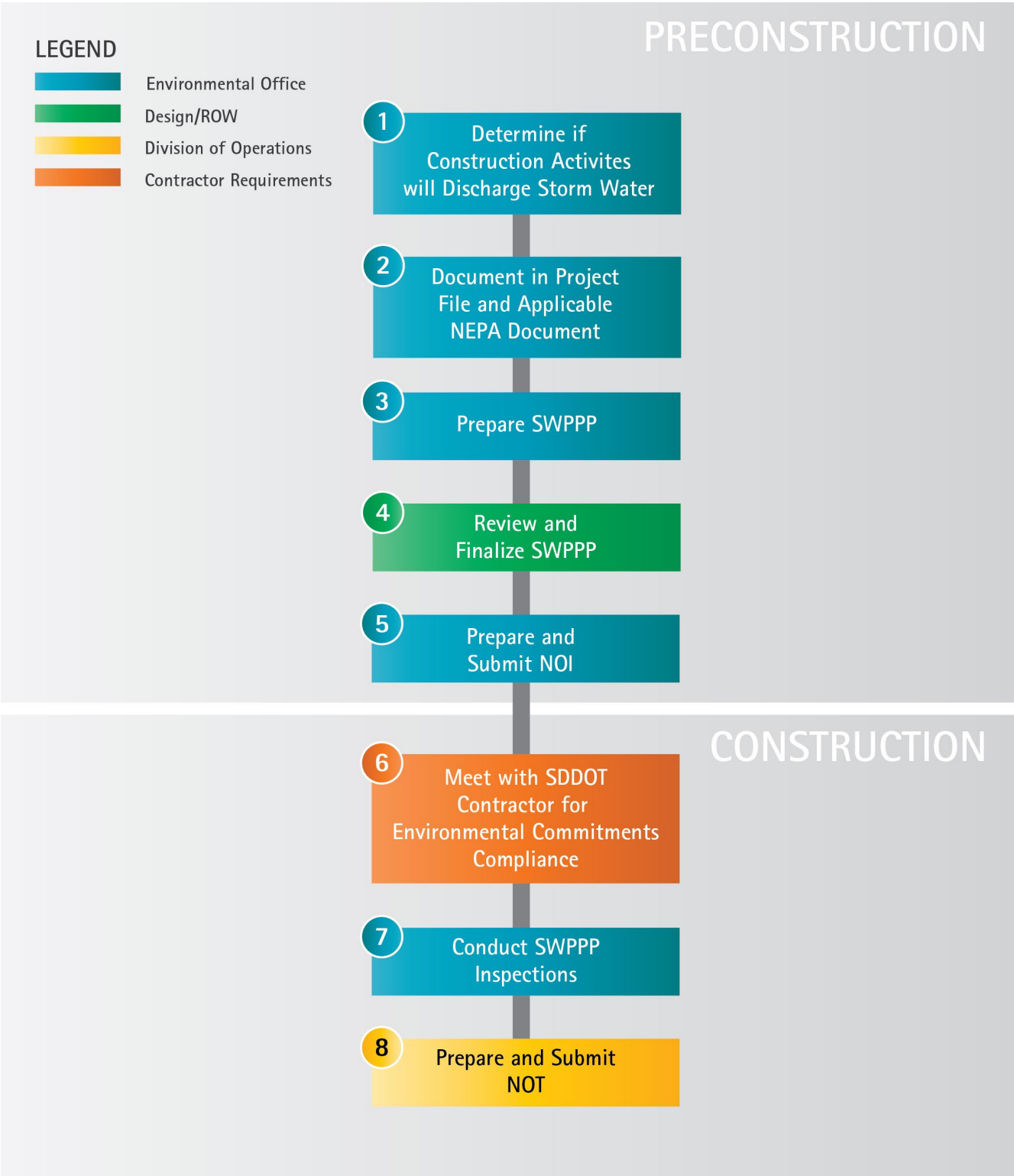


Table 11. Steps in the Erosion, Sediment, and Stormwater Management Process

| Step                                                              | Participant/s                                                 | Result(s)                                                                                                                         |
|-------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                            |                                                               |                                                                                                                                   |
| 1. Determine if construction activities will discharge stormwater | EPC, SDDANR, Stormwater Coordinator                           | Determination for preparation of stormwater General Permit                                                                        |
| 2. Document in project file and applicable NEPA document          | EPC                                                           | Project file, CE Checklist and ECC, EA/FONSI, EIS/ROD, copy of Section A Plan Notes (if applicable) incorporate in Final Plan set |
| 3. Prepare SWPPP                                                  | Design/ROW Landscape Architect                                | Draft SWPPP                                                                                                                       |
| 4. Review and finalize SWPPP                                      | Review: Project Engineer, Area Office, Stormwater Coordinator | Approved SWPPP                                                                                                                    |
|                                                                   | Finalize: Design/ROW                                          | Completed Section A Plan Notes                                                                                                    |
| <b>Construction</b>                                               |                                                               |                                                                                                                                   |
| 5. Prepare and submit NOI                                         | Stormwater Coordinator                                        | NOI                                                                                                                               |
| 6. Meet with SDDOT for EC Compliance                              | Contractor                                                    | Form DOT-272                                                                                                                      |
| 7. Conduct SWPPP Inspections                                      | Project Engineer                                              | Inspection Report DOT 298, signed Contractor Certification Form                                                                   |
| 8. Prepare and submit NOT                                         | Project Engineer                                              | NOT, submit to SDDANR and document in C2C                                                                                         |

Notes: C2C – Concept to Contract, CE Checklist – Categorical Exclusion Checklists, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FONSI – Finding of No Significant Impact, NOI – Notice of Intent, NOT – Notice of Termination, ROD – Record of Decision, ROW – Right of Way, SDDANR – South Dakota Department of Agriculture and Natural Resources, SWPPP– Stormwater Pollution Prevention Plan

### Common Definitions:

**Best management practices (BMPs)** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the U.S. Examples of BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage (40 CFR 122.2). Examples can be found in the SDDOT Manual, listed at the end of this section.

**Point source** means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged (40 CFR 122.2).

**Pollutant** means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 USC 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water (40 CFR 122.2).

**Stormwater** means stormwater runoff, snowmelt runoff, and surface runoff and drainage (40 CFR 122.26[b][13]).

**Stormwater Pollution Prevention Plan** identifies potential sources of stormwater pollution at a construction site and specifies structural and non-structural controls that will be in place to minimize negative impacts caused by stormwater discharges associated with construction activity. The purpose of these controls is to minimize erosion and run-off of pollutants and sediment (SDDANR General Permit for Stormwater Discharges Associated with Construction Activities, SDR100000).

### Authorization:

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters.

In 1987, under the Water Quality Act, Congress amended the CWA to require implementation of a comprehensive national program for addressing stormwater discharges. 40 CFR Parts 122, 123, and 124 implement the NPDES program under Sections 318, 404, and 405 for the CWA, which covers basic U.S. Environmental Protection Agency permitting requirements, including administering approved state programs.

South Dakota has been delegated the authority to implement the NPDES program, and SDDANR is the permitting authority.

One type of NPDES permit is a stormwater discharge permit. SDDANR manages stormwater discharges through its General Permit Program, entitled SDDANR Stormwater Permitting Program. The permit application is an NOI for one of four types of stormwater discharge: construction activities, industrial activities, MS4s, and temporary discharges and dewatering. The two types of permits are known as:

► **Phase I permits**—for stormwater discharges from many priority sources, including MS4s serving a population of more than 100,000, industrial activity, or construction sites that disturb 5 or more acres.

► **Phase II permits**—for discharges not covered under Phase I, such as small MS4s, construction sites of 1 to 5 acres, and industrial facilities owned or operated by small MS4s. For South Dakota, Phase II permits include small MS4s at state and interstate highways, rights-of-way (ROWs), and thoroughfares (including streets, roads, structures, maintenance facilities, service areas, and rest areas).

SDDOT falls under the Phase II permitting program and applies for construction permits for all projects with 1 acre or more of land disturbance and projects that are directly adjacent to water bodies, regardless of disturbed acreage. Permit applicants are required to develop an SWPPP detailing the BMPs that will reduce or eliminate any possible water quality impacts, due to erosion and sedimentation. BMPs include physical, structural, and/or managerial practices that, when used singly or in combination, prevent or reduce pollution of stormwater. Further SDDOT guidance on managing stormwater runoff is included in the SDDOT Drainage Manual (SDDOT, 2022b) and the WQEPDM. These manuals apply to all SDDOT and SDDOT administered projects.

The South Dakota *Drainage Manual* is accessible here: <https://dot.sd.gov/doing-business/engineering-design-services/forms-manuals/>

The South Dakota WQEPDM is accessible here: <https://dotfiles.sd.gov/wqep/WQEPM.pdf>

### *Overview of SDDOT Water Quality and Stormwater Management in the Project Planning Process*

Stormwater and Water Quality is included in the Water Resources Section of the Environmental Screening Report, which is intended to identify stormwater management and water quality areas in the planning study area and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, a limited desktop review is conducted to determine potential impacts to

water quality and stormwater drainage paths in the planning study area.

**Existing Conditions** – Stormwater management and water quality areas that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential Impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field investigation efforts. The water quality and stormwater management permitting requirements identified during the project planning process will need to be supplemented during the NEPA phase. In addition, design modification to avoid impacts as well as potential mitigation options should be presented.

### *Overview of SDDOT Water Quality and Stormwater Management in the Project Development and Delivery Process*

SDDOT is committed to constructing transportation projects in a manner necessary to preserve and protect South Dakota's water resources and works closely with SDDANR to comply with all federal and state laws and regulations. This includes designing, inspecting, and enforcing stormwater pollution prevention measures for all SDDOT construction projects.

When a transportation project is proposed, the potential impacts on water quality and stormwater discharge in the project area are reviewed by the Environmental Supervisor or Environmental Engineer during the completion of the preliminary class of action determination. If there is an indication of a potential impact on water resources or a potential for stormwater discharge from

construction activity, an EPC is assigned to conduct further evaluation.

Construction activities disturbing one or more acres must have coverage under South Dakota's General Permit Authorizing Stormwater Discharges Associated with Construction Activities (General Permit). This includes construction support activities and construction sites that are part of a larger common plan of development or projects being done in phases. If the total area of the plan is over one acre, a permit is required for the duration of the project.

Construction activities include but are not limited to:

- ▶ Clearing, grading, or excavation;
- ▶ Road or access road construction;
- ▶ Construction of residential, commercial, and industrial buildings or property;
- ▶ Installing cable lines, phone lines, and pipelines (excluding oil/gas pipelines); and,
- ▶ Demolition activities.

Construction support activities are construction related activities that specifically support your construction site and are included in your site's acreage. This includes but is not limited to:

- ▶ Concrete or asphalt batch plants;
- ▶ Equipment staging yards;
- ▶ Materials storage areas;
- ▶ Excavated material disposal areas; and/or Borrow areas.

As noted, SDDOT procedures for projects involving water quality and stormwater impacts are illustrated on **Figure 11**, summarized in **Table 11**, and further described throughout this section.

## *Erosion, Sediment, and Stormwater Process Description*

### **1. Determine if Construction Activities will Discharge Stormwater**

Upon receipt of the Approved Scope, the EPC consults with the Stormwater Coordinator to further examine the information available to determine if stormwater discharge into water resources is anticipated in the project area. Examples of tools for this desktop review include websites such as USGS, NWI, aerial photography, and GIS.

Also, the Stormwater Coordinator routinely checks the Advertisement of Highway Bid Letting, reviews individual project plan cover sheets to determine if permits are required for construction.

**The EPC prepares and submits a letter to SDDANR to identify impacts on water resources and documents this information in the applicable NEPA documents and project files. SDDANR responds and provides comments relevant to the project area.**

#### **Document in Project File and Applicable NEPA Document**

The EPC documents SDDANR correspondence in the project file and applicable NEPA document (CE, EA, or EIS). The ECC identifies the name of the waterbody and construction practices for temporary dewatering activities which the EPC uses to fill out Section A Plan Notes for Commitment E and SWPPP in Section D and sends to Design/ROW.

### **3. Prepare Stormwater Pollution Prevention Plan**

Design/ROW Landscape Architect prepares a SWPPP, including the associated BMPs to ensure compliance with the requirements of both SDDANR and USEPA General Permits for stormwater discharge.



#### **4. Review and Finalize Stormwater Pollution Prevention Plan**

The Stormwater Coordinator, other PD staff as assigned, and area offices review and provides comments to SWPPP preparers. Design/ROW updates the SWPPP to incorporate comments and make adjustments if the project design has changed after the preparation of the SWPPP.

#### **5. Prepare and Submit Notice of Intent**

The Stormwater Coordinator prepares the NOI using SDDANR Form 2112LD v1 for construction activities. For projects on reservations, the Stormwater Coordinator submits the NOI using EPA's electronic NOI (eNOI) system through the Central Data Exchange website. First time users will need to register with the EPA's eNOI system to submit NOI's to SDDANR or USEPA at least 15 days prior to beginning construction; it must be approved prior to the start of construction. The approved NOI is documented in the stormwater tracking database, project file, and filed in the Stormwater Coordinator's folder.

#### **6. Meet with SDDOT for Environmental Commitments Compliance**

At the preconstruction meeting, the Contractor will prepare and submit for the SDDOT approval Form DOT-272. Construction cannot begin until all requirements are met.

If water is to be transferred or moved from one place to another during construction activities, a temporary (dewatering) permit and dewatering plan are required and amended into the SWPPP and NOI. Temporary dewatering permits are prepared by the Contractor and can include cofferdams, diversions, and the re-routing of streams.

A Contractor Certification Form is required when a Contractor will have day-to-day responsibility for sediment and control measures. It is submitted to SDDANR prior to the preconstruction meeting.

#### **7. Conduct Stormwater Pollution Prevention Plan Inspections**

The SWPPP should be revised and kept up to date during the construction of the project. Any site changes made in erosion and sediment control methods are noted on the SWPPP and drawings.

*Temporary Discharges* are applied for by the Contractor and apply to construction temporary discharge activities within the State. The water discharged must be relatively uncontaminated and must not cause violation of the South Dakota State Water Quality Standards. A typical construction activity under this General Permit is dewatering.

During construction, the Project Engineer conducts inspections of the site for compliance with the SWPPP and General Permit. The construction site must be inspected every 7 days. SWPPP Inspections are recorded on the DOT-298 form (SWPPP Inspection Form) located on the SDDOT website and maintained for inspection by SDDANR or USEPA as requested. The SWPPP inspection is signed by both a SDDOT representative and the contractor. The SWPPP inspection form provides the necessary backup information for

the notes made on the drawings and ensures compliance with the General Permit.

Additionally, the Stormwater Coordinator performs field audits randomly during construction to verify compliance with the General Permit.

## **8. Prepare and Submit Notice of Termination**

Once the Project Engineer verifies that the conditions of the SWPPP have been met and the checklist and certifications are complete, the Project Engineer prepares a SDDANR Notice of Termination (NOT). For projects on a reservation, EPA NPDES Form 3510-13 NOT is used. Erosion, Sediment and Stormwater Laws, Regulations, and Guidance

### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to stormwater management are presented by agency, with executive orders presented first.

### *South Dakota Department of Transportation Resources*

**Erosion and Sediment Control and Stormwater Management Manual**—This manual discusses the principles of stormwater management, BMPs, SWPPPs, Work sequencing, dewatering and construction site inspections.

**Construction Field Manual**—This manual is to assist field personnel with establishing and maintaining construction site compliance with the 2004 South Dakota *Standard Spec Book – Division II* and the General Permit for Stormwater Discharges Associated with Construction Activities.

**Erosion and Sediment Control Stormwater Management Pocket Guide**—This field guide was developed to assist field personnel with establishing and maintaining construction site compliance with the 2004 South Dakota

Standard Spec Book – Division II and the General Permit for Stormwater Discharges Associated with Construction Activities.

**Water Quality Enhancement Program Manual** (SDDOT, 2023d) —This manual was developed to consolidate USEPA and SDDANR regulations, DOT design policies, standards and recommended procedures to ensure water quality.

**Earthwork**—This manual was intended as a reference guide during the performance of duties by the Earthwork Inspector.

### *Federal Highway Administration*

**FHWA Technical Advisory T 6640.8A**—The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance for addressing water quality, water body modification, and stormwater in environmental documents.

- ▶ **Water Quality**—The technical advisory recommends summaries of coordination with state and local water quality agencies and descriptions of ambient water-quality conditions. It should address the potential of adverse impacts from road runoff and nonpoint pollution sources on sensitive water resources and mitigation measures to reduce water-quality impacts. If drinking water supplies can be impacted, there should be an assessment of the potential to impact surface water and groundwater supplies.
- ▶ **Water Body Modification**—For each alternative under-detailed study, the draft environmental document should contain exhibits and discussions identifying the location and extent of water-body modifications (e.g., impoundment, relocation, channel deepening, filling). The use of the stream or body of water for

recreation, water supply, or other purposes should be identified. Impacts on fish and wildlife resulting from the loss degradation, or modification of aquatic or terrestrial habitat should also be discussed. The results of coordination with appropriate federal, state and local agencies should be documented in the draft environmental document (e.g., coordination with USFWS under the Fish and Wildlife Coordination Act of 1958).

#### U.S. Geological Survey

**South Dakota Water Science Center Website—** This website hosted by USGS provides information on South Dakota’s rivers, streams, water quality, groundwater, and other topics.

**National Streamflow Information Program Website—** This website hosted by USGS provides streamflow information and information for meeting local, state, regional, and national needs.

#### U.S. Environmental Protection Agency

**Identification of Areas with Insufficient Controls; Maximum Daily Load; Certain Effluent Limitations Revision (33 UCS 313[d])—** Section 303(d) of the CWA, establishes requirements and procedures for identifying impaired waters and implementing total maximum daily loads that are necessary for achieving applicable water quality standards. Implementing regulations are found in 40 CFR 130.7, Total Maximum Daily Loads and Individual Water Quality-Based Effluent Limitations.

**National Pollutant Discharge Elimination System (33 USC 1342)—** Section 402 of the CWA authorizes USEPA to administer a program for permitting point source discharges of pollutants (including those from stormwater conveyance structures and/or disturbed areas).

It allows USEPA to determine effluent limitations and conditions to meet the objectives for water pollution prevention and control. The primary USEPA regulations for implementing Section 402 occur in 40 CFR Parts 122-125.

#### Stormwater Discharges from Construction

**Activities Website—** The NPDES stormwater program requires construction site operators engaged in clearing, grading, and excavating activities that disturb 1 acre or more, including smaller sites in a larger common plan of development or sale to obtain coverage under an NPDES permit for their stormwater discharges. In South Dakota, USEPA is the permitting authority to issue an NPDES on only Native American lands. This website hosted by USEPA provides information regarding stormwater and construction.

#### Stormwater Discharges from Municipal

**Separate Storm Sewer Systems Website—** The website hosted by USEPA provides information on the NPDES permitting process for MS4s.

#### 4.2.4 Floodplains

Protecting floodplains in the planning, construction, and maintenance of transportation projects is important for managing water quality and surface water levels resulting from flooding. Regulatory Floodplains are designated areas that are subject to inundation by the 1-percent-annual-chance (100-year) flood event. A regulatory floodway indicates the area of the channel or river and adjacent land areas that must be reserved to discharge the base flood (100-year) without cumulatively increasing the water surface elevations more than a designated height.

This section defines key terms in floodplains evaluation, introduces the authorities for

floodplains management, and presents an introduction of floodplains environmental commitments. Relevant regulations are cited at the end of the section for further reading.

### *Overview of SDDOT Floodplains in the Project Planning Process*

Floodplains are included in the Water Resources Section of the Environmental Screening Report, which is intended to identify floodways and floodplains in the planning study area and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, review of existing floodplains in the planning area shall occur through desktop review of online tools including the Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer in ArcGIS.

**Existing Conditions** – Floodplains that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential Impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field investigation efforts. Describe how the planning data may need to be supplemented during the NEPA phase. In addition, design modification to avoid impacts as well as potential mitigation options should be presented.

### *Overview of SDDOT Floodplains in the Project Development and Delivery Process*

SDDOT evaluates the potential footprint of the alternative for all transportation projects to ensure that they would not encroach on or alter 100-year (base) floodplains and cause

future flooding or other adverse impacts to SDDOT assets and to adjacent private and public properties.

The floodplain evaluation should be completed when alternatives for the proposed action are first being designed and developed. Baseline information about floodplains should be obtained and addressed before initiating the NEPA process.

When a transportation project is proposed, the potential impacts on floodplains in the project area are reviewed by the Bridge Office Hydraulics Engineer and review is coordinated with the Environmental Manager or Environmental Engineer during the completion of the preliminary class of action determination. If there is an indication of a potential impact on floodplains from construction activity, the Bridge Office Hydraulics Engineer completes reviews, analysis, and coordination according to Chapter 17, Permits/Certifications of the South Dakota Drainage Manual.

Additional references to floodplains procedures can be found in the South Dakota Drainage Manual (SDDOT, 2022b).

The South Dakota *Drainage Manual* is accessible here: <https://dot.sd.gov/doing-business/engineering-design-services/forms-manuals/>

### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to floodplains are presented by agency, with executive orders presented first.

#### **Executive Orders**

**Floodplain Management (Executive Order 11988)** – Executive order 11988, issued in 1977,

requires all federal-aid projects must make diligent efforts to avoid support of incompatible floodplain development; minimize the impact of highway actions that adversely affect the base floodplain; and restore and preserve the natural and beneficial floodplain services.

**Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (Executive Order 13690) – Executive order 13690**, issued in January 2015, improves the resilience of communities and federal assets against the impacts of flooding. It requires agencies to prepare for and protect federally funded buildings and projects from flood risks

#### Federal Highway Administration

**National Flood Insurance Act (23 CFR 650, Subpart A)** - The intent of the statement, "as appropriate, a risk analysis or assessment," in section 23 CFR 650.115(a)(1) is to allow judgment as to the detail of design studies. Where site conditions or structural requirements substantially limit practicable design alternatives, the conventional hydraulic analysis coupled with a risk assessment should meet the requirements of the design standards. Where site conditions permit a range of design alternatives and flood losses are anticipated, an abbreviated or partial risk analysis may be appropriate. We would anticipate that use of the full scale detailed economic (risk) analysis as described in Hydraulic Engineering Circular

The National Wild and Scenic Rivers System hosts a website that provides information on the National Wild and Scenic Rivers System, including designated rivers and study rivers located within the 48 contiguous states. <https://www.rivers.gov/>

number 17 would not be necessary for normal stream crossings, but would apply to unusual, complex or high cost encroachments involving flood losses.

#### Federal Emergency Management Agency (FEMA)

**National Flood insurance Program (NFIP) –** NFIP is managed by the FEMA and is delivered to the public by a network of more than 50 insurance companies and the NFIP Direct. Designs should be consistent with the standards/criteria of the NFIP.

#### 4.2.5 Wild and Scenic Rivers

Protecting wild and scenic rivers in the planning, construction, and maintenance of transportation projects is important for preserving certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. South Dakota has approximately 9,513 miles of river, of which 93 miles are designated as wild & scenic—less than 1% of the state's river miles. Two segments of the Missouri River in South Dakota are designated as part of the National Wild and Scenic Rivers system. The two segments of the Missouri River are from Gavins Point Dam, South Dakota, downstream to Ponca State Park, Nebraska; and from Fort Randall Dam downstream to the Lewis and Clark Lake backwaters.

This section defines key terms in wild and scenic rivers evaluation, introduces the authorities for wild and scenic rivers management, and presents an introduction of wild and scenic river environmental commitments. Relevant regulations are cited at the end of the section for further reading.

### *Overview of SDDOT Wild and Scenic Rivers in the Project Planning Process*

The Wild and Scenic Rivers section in the Environmental Screening Report is intended to identify wild and scenic rivers in the planning study area and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, the presence or absence of wild and scenic designated rivers in the study area shall be identified.

**Existing Conditions** – Wild and scenic rivers that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field investigation efforts. During the NEPA phase, the wild and scenic designation will be verified, as well as any new or pending changes to preservation requirements. In addition, design modification to avoid impacts as well as potential mitigation options should be presented.

### *Overview of SDDOT Wild and Scenic Rivers in the Project Development and Delivery Process*

SDDOT is committed to constructing transportation projects in a manner necessary to safeguard the special character of South Dakota's wild and scenic rivers and work with the U.S. Department of Interior National Park Service (NPS) to comply with all federal laws and regulations. As the managing agency, the NPS is responsible for ensuring that the provisions of the National Wild and Scenic Rivers Act are met. The National Wild and Scenic Rivers System was created by Congress to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. When a river is added to the National System, it is given a classification – wild, scenic or recreational. Wild and scenic rivers are designated specially for their free-flowing condition, water quality, and outstandingly remarkable values.

The procedures for SDDOT for projects involving wild and scenic river impacts are described below:

Before an alternative involving the use of a wild and scenic river can be selected, avoidance alternatives and minimization measures must be considered. Avoidance alternatives are those that totally avoid the wild and scenic river while meeting the defined project needs; minimization measures are efforts to eliminate adverse effects of a project on the wild and scenic river and promote beneficial effects. Minimization measures may include mitigation, which is compensation for impacts that cannot be avoided.

## Evaluation of the Proposed Project

As the managing agency, the NPS is responsible for ensuring that the provisions of the National Wild and Scenic Rivers Act are met. The Secretary of the Interior, through the NPS, is responsible for making Section 7(a) Evaluations and Determinations. Section 7(a) of the Wild and Scenic Rivers Act affords substantial protection to rivers included in the System and states in part:

*No department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration.*

Equally important is Section 10(a) of the WSRA (16 U.S.C. 1281(a)). Considered the non-degradation and enhancement policy, Section 10(a) of the Wild and Scenic Rivers Act states the following:

*Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with the public use and enjoyment of these values*

The NPS determines whether or not a project will have a direct and adverse effect on the wild and scenic river outstandingly remarkable values statement.

## Applicable Laws, Regulations, and Guidance

Laws, regulations, and guidance relevant to wild and scenic rivers are presented by agency, with executive orders presented first.

**Wild and Scenic Rivers (36 CFR 297)**—This part of the CFR implements the provisions of 16 USC 1278 for designated wild and scenic rivers and study rivers that are administered by the U.S. Forest Service (USFS). It contains definitions, compliance requirements for federal agency projects, and requirements of environmental analyses.

**Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (23 CFR 774)**—The regulations in 23 CFR 774 include provisions addressing Section 4(f) applicability to wild and scenic rivers.

**Wild and Scenic Rivers, Restrictions on Water Resources Projects (16 USC 1278)**—The Federal Energy Regulatory Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (41 Stat. 1063), as amended (16 USC 791a et seq.) that would affect the free-flowing characteristics of a wild and scenic river. No license, permit, or authorization can be issued without notice to the secretary responsible for administering the river (i.e., the Secretary of Interior for the NPS, USFWS, Bureau of Land Management, and the Secretary of Agriculture for USFS) and a determination that the project will not have a direct and adverse effect on the values that created the designation. It also restricts federal agencies from assisting with loans and grants.

## Federal Highway Administration

**FHWA Policy Guidance for Wild and Scenic Rivers**—FHWA memorandum dated October 3, 1980, clarifies guidance for compliance with the Wild and Scenic Rivers Act for proposed transportation projects.

**FHWA Section 4(f) Policy Paper**—The FHWA Section 4(f) Policy Paper of July 20, 2012,

supplements FHWA's regulations governing the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites for federal highway projects. It contains some guidance on the applicability of Section 4(f) to designated wild and scenic rivers and study rivers.

**The FHWA Technical Advisory T 6640.8A**—The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance for addressing effects on a designated wild and scenic river and study river. The guidance states that the environmental document should accomplish the following:

- ▶ Identify early coordination undertaken with the agency responsible for managing the listed or study river (i.e., NPS, USFWS, Bureau of Land Management, or USFS)
- ▶ Identify, for each alternative under consideration, the potential adverse effects on the natural, cultural, and recreational values of the listed or study river
- ▶ Reflect consultation with the managing agency on avoiding or mitigating the impacts (23 CFR 771.123[c])
- ▶ Identify measures that will be included in the preferred alternative to avoid or mitigate adverse impacts.

The guidance also states that publicly owned waters of designated wild and scenic rivers are protected by Section 4(f) and public lands adjacent to a wild and scenic river may be subject to Section 4(f) protection. The guidance recommends coordination with adopted or proposed management plans for a listed river to determine the applicability of Section 4(f).

## 4.3 Threatened and Endangered Species, Migratory Birds, and Eagles

NEPA requires the identification and assessment of reasonable alternatives that will avoid and minimize adverse effects on the quality of the human environment, which includes species and habitats protected under the Endangered Species Act (ESA), the Migratory Bird Treaty Act (MBTA), and the Bald and Golden Eagle Protection Act (BGEPA). SDDOT Wildlife Biologists are involved in all stages of project development, evaluating potential adverse impacts and recommending impact avoidance or minimization measures.

Protecting threatened and endangered species in the planning, construction, and maintenance of transportation projects is an important step in complying with the ESA. The remainder of this section defines key terms used in the protection of threatened and endangered species and their habitat, the applicable authorities, and the environmental commitments established for highway projects, especially those involving stream crossings. The process by which SDDOT evaluates impacts on potential federal and state-listed threatened and endangered species is shown on **Figure 12**, summarized in **Table 12**, and described in further detail throughout this section. Relevant regulations are cited at the end of the section for further reading.

The MBTA is one of the nation's oldest and most significant environmental laws, in effect since 1918. The MBTA makes it unlawful to take, import, export, possess, sell, purchase, or barter any migratory bird, with the exception of the taking of game birds during established hunting seasons. The law also applies to feathers, eggs, nests, and products made from

migratory birds. The migratory birds that are covered are found in 50 CFR 10.3. The USFWS Birds of Conservation Concern list identifies birds that are potentially threatened by disturbance and construction. To minimize the likelihood of adverse impacts to migratory birds, USFWS recommends that construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged. This law is of particular concern when birds nest on bridges, signs, lights, or other highway structures. If migratory birds would be negatively impacted by a SDDOT project, this information must be disclosed in the NEPA process and appropriate mitigation considered. During the preconstruction meeting it is the contractor's responsibility to schedule construction to accommodate the conducting of avian surveys and submitting the necessary documentation for the project file.

The bald eagle was delisted under the ESA in 2007 and removed from South Dakota's

threatened list in 2015. Golden eagles have never been listed as threatened or endangered. Both the bald eagle and golden eagle are protected under the MBTA, but the BGEPA affords them additional federal protection by making it unlawful to "disturb" an eagle without the proper permit. To avoid potential disturbance to bald eagles, the National Bald Eagle Management Guidelines provide recommendations that will likely avoid take for a list of activities, and SDGFP provides similar guidance in the state management plan. Further information on bald and golden eagle management guidelines is available at the USFWS eagle management website. If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the EO for an appropriate course of action. SDDOT will determine if a buffer is recommended by USFWS for the construction activities, as well as the recommended buffer width. Documentation of adherence to recommended buffers will be maintained in the project file.

Figure 12. Threatened and Endangered Species Process Diagram

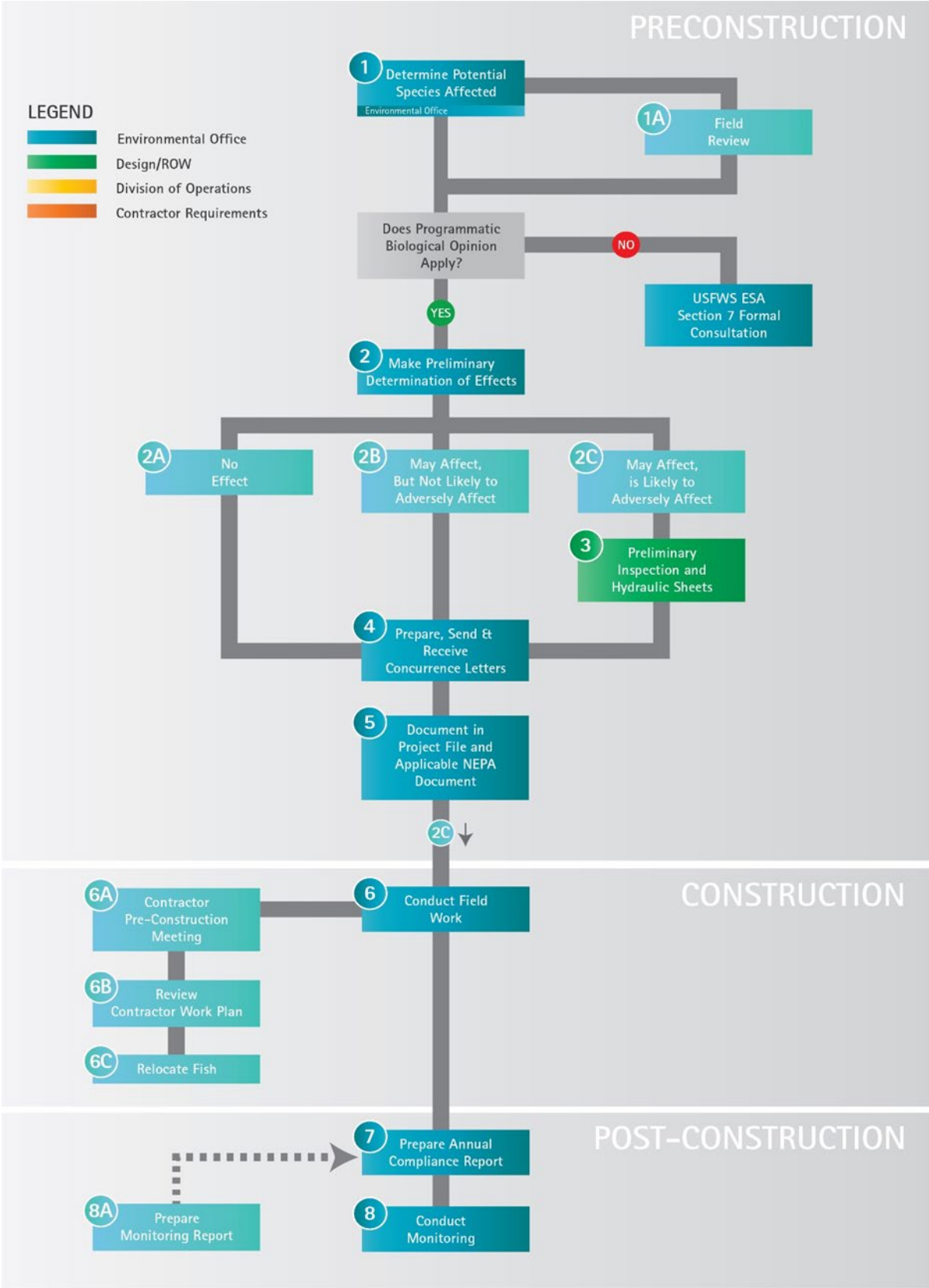


Table 12. Steps in the Threatened and Endangered Species Process

| Step                                                     | Participant(s)                                                                                             | Result(s)                                                                                                                                                                        |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                   |                                                                                                            |                                                                                                                                                                                  |
| 1. Determine potential species affected                  | EPC, SDGFP                                                                                                 | SDGFP ERT report document in Environmental Project Tracking Database                                                                                                             |
| 1A. Field review                                         | EPC, Wildlife Biologist                                                                                    | Photo documentation of site                                                                                                                                                      |
| 2. Make preliminary determination of effect              | EPC                                                                                                        | Preliminary determination in steps 2A, 2B, 2C                                                                                                                                    |
| 2A. "No effect"                                          | EPC                                                                                                        | Preliminary determination, USFWS concurrence letter                                                                                                                              |
| 2B. "May affect, not likely to adversely affect"         | EPC                                                                                                        | Preliminary determination for Least Tern, Whooping Crane, Topeka Shiner, and American Burying Beetle, USFWS concurrence letter                                                   |
| 2C. "May affect, is likely to adversely affect"          | EPC, Wildlife Biologist, USFWS                                                                             | Preliminary determination, concurrence letter and Biological Assessment                                                                                                          |
| 3. Conduct preliminary inspection and hydraulic sheets   | Bridge Design or Local Government Assistance Consultant                                                    | Preliminary assessment and hydraulic sheets                                                                                                                                      |
| 4. Prepare, send, and receive concurrence letter         | EPC, USFWS                                                                                                 | Concurrence letter, document in Environmental Project Tracking Database                                                                                                          |
| 5. Document in project file and applicable NEPA document | EPC                                                                                                        | Project file, Environmental Tracking Database, CE Checklist and ECC, EA/FONSI, EIS, ROD, Copy of Section A Plan Notes (if applicable) to Design to incorporate in Final Plan set |
| <b>Construction</b>                                      |                                                                                                            |                                                                                                                                                                                  |
| 6. Conduct field work                                    | Wildlife Biologist                                                                                         | See steps 6A, 6B, 6C                                                                                                                                                             |
| 6A. Review contractor plans                              | Review contractor plans                                                                                    | Work                                                                                                                                                                             |
| 6B. Preconstruction meeting                              | Review contractor plans Wildlife Biologist, Area Engineer, Project Engineer, Contractor, and Subcontractor | Preconstruction meeting checklist, Environmental Needs Form                                                                                                                      |
| 6C. Relocate fish                                        | Wildlife Biologist                                                                                         | Project Reporting Form                                                                                                                                                           |

| Step                                 | Participant(s)                  | Result(s)                         |
|--------------------------------------|---------------------------------|-----------------------------------|
| <b>Post-construction</b>             |                                 |                                   |
| 7. Prepare Annual Compliance Report  | Wildlife Biologist, FHWA, USFWS | Annual Compliance Report          |
| 8. Conduct structure monitoring      | Wildlife Biologist              | Fish Passage Assessment Worksheet |
| 8A. Prepare Annual Monitoring Report | Wildlife Biologist, FHWA, USFWS | Annual Monitoring Report          |

Notes: BO – Biological Opinion, CE – Categorical Exclusion, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FHWA – Federal Highway Administration, FONSI – Finding of No Significant Impact, ROD – Record of Decision, SDGFP – South Dakota Game, Fish & Parks, ERT – SDGFP Environmental Review Tool, USFWS – U.S. Fish and Wildlife Service

#### Common Definitions:

**Threatened** means a species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. (50 CFR Part 402.02)

**Endangered** means a species is in danger of extinction throughout all or a significant portion of its range. Species includes any species or subspecies of fish, wildlife, or plant, and any distinct population segment of any vertebrate species that interbreeds when mature. (50 CFR Part 402.02)

**Take** means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct. (16 U.S. Code § 1532(19))

**Incidental take** refers to takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the federal agency or applicant. (50 CFR Part 402.02)

**Biological opinion** refers to a document stating the opinion of the USFWS or National Oceanic and Atmospheric Administration Fisheries on whether a federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. (50 CFR Part 402.02).

In South Dakota, there are 18 species listed federally as threatened or endangered, under the ESA, as shown in **Table 13**. USFWS provides a list of species by county and a list of threatened and endangered species for specific areas can also be accessed by requesting an Official Species List through the USFWS Information for Planning and Conservation (IPaC) system.

The SDGFP Commission promulgates a list of animal species that are determined to be endangered or threatened within the State of South Dakota (SDCL 34A-8). Twenty-one additional species are listed as threatened or endangered by the state, as shown in **Table 14**. Note that the Pallid sturgeon, Shovelnose sturgeon, Topeka shiner, Eskimo curlew, Piping Plover, Whooping Crane, Rufa Red Knot, and Black-footed ferret are both federally and state-listed. SDGFP provides a list by county of state and federally listed threatened, endangered, and candidate species documented in South Dakota.

**Authorization:**

The ESA was enacted by Congress in 1973. Under the ESA, the federal government has the responsibility to protect endangered species, threatened species and critical habitat. It is administered by the Department of the Interior (USFWS) and the Commerce Department's National Marine Fisheries Service. USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of the National Marine Fisheries Service are mainly marine wildlife.

Section 7 of the ESA requires federal agencies to use their legal authorities to promote the conservation purposes of the ESA and to consult with USFWS, as appropriate, to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat.

Section 9 discusses acts that are prohibited with respect to any listed endangered species, including the take of any listed species or the violation of any regulation pertaining to any listed species.

The ESA also requires the designation of "critical habitat" for listed species when "prudent and determinable." Critical habitat includes geographic areas that contain the physical or biological features that are essential to the conservation of the species and that may need special management or protection. Critical habitat designations affect only federal agency actions or federally funded or permitted activities. Federal agencies are required to avoid "destruction" or "adverse modification" of designated critical habitat (USFWS ESA Basics [www.fws.gov/endangered/](http://www.fws.gov/endangered/)).

Environmental Screening Report is intended to identify protected species in the planning study area and determine the project's potential impacts and mitigation to those resources.

**Methodology** – USFWS provides a list of species by county and a list of threatened and endangered species for specific areas can also be accessed by requesting an Official Species List through the USFWS Information for Planning and Conservation (IPaC) system. South Dakota Game Fish & Parks provides a list of state listed Threatened and Endangered Species. Sensitive sites for eagles and other raptors as well as areas of wildlife/ fish concerns should be identified for the study area.

### *Overview of Threatened and Endangered Species, Migratory Birds, and Eagles in the Project Planning Process*

The Threatened and Endangered Species, Migratory Birds, and Eagles section of the

Table 13. Federally Listed Species in South Dakota

| Group         | Species/Listing Name                                                 | Status   |
|---------------|----------------------------------------------------------------------|----------|
| Mammals       | Black-footed Ferret ( <i>Mustela nigripes</i> )                      | LE       |
|               | Northern Long-eared Bat ( <i>Myotis septentrionalis</i> )            | LE       |
|               | Gray Wolf ( <i>Canus lupus</i> )                                     | LE       |
|               | Piping Plover ( <i>Charadrius melodus</i> )                          | LT       |
|               | Rufa Red Knot ( <i>Calidris canutus rufa</i> )                       | LT       |
|               | Whooping Crane ( <i>Grus americana</i> )                             | LE       |
|               | Eskimo Curlew ( <i>Numenius borealis</i> )                           | LE       |
| Fishes        | Pallid Sturgeon ( <i>Scaphirhynchus albus</i> )                      | LE       |
|               | Shovelnose Sturgeon ( <i>Scaphirhynchus platyrhynchus</i> )          | LT (S/A) |
|               | Topeka Shiner ( <i>Notropis topeka</i> )                             | LE       |
| Invertebrates | American Burying Beetle ( <i>Nicrophorus americanus</i> )            | LT       |
|               | Rusty-patched Bumblebee ( <i>Bombus affinis</i> )                    | LE       |
|               | Dakota Skipper ( <i>Hesperia dacotae</i> )                           | LT       |
|               | Higgins Eye (pearlymussel) ( <i>Lampsilis higginsii</i> )            | LE       |
|               | Poweshiek skipperling ( <i>Oarisma poweshiek</i> )                   | LE       |
|               | Scaleshell Mussel ( <i>Leptodea leptodon</i> )                       | LE       |
| Plants        | Leedy's Roseroot ( <i>Rhodiola integrifolia</i> ssp. <i>leedyi</i> ) | LT       |
|               | Western Prairie Fringed Orchid ( <i>Platanthera praeclara</i> )      | LT       |

Notes: LE – Federally endangered, LT – Federally threatened, LT (S/A) – Federally threatened due to similarity of appearance to a federally threatened species.

Source: USFWS 2025a, USFWS 2025b

Information from USFWS about Federally listed threatened and endangered species is available here: <https://ipac.ecosphere.fws.gov/> and <https://www.fws.gov/office/south-dakota-ecological-services/species>

Table 14. South Dakota Listed Species

| Group                         | Species/Listing Name                                    | Status |
|-------------------------------|---------------------------------------------------------|--------|
| Mammals                       | Black-footed Ferret ( <i>Mustela nigripes</i> )         | SE     |
|                               | Swift Fox ( <i>Vulpes velox</i> )                       | ST     |
| Birds                         | American Dipper ( <i>Cinclus mexicanus</i> )            | ST     |
|                               | Eskimo Curlew ( <i>Numenius borealis</i> )              | SE     |
|                               | Least Tern ( <i>Sternula antillarum</i> )               | SE     |
|                               | Osprey ( <i>Pandion haliaetus</i> )                     | ST     |
|                               | Peregrine falcon ( <i>Falco peregrinus</i> )            | ST     |
|                               | Piping plover ( <i>Charadrius melodus</i> )             | ST     |
|                               | Whooping crane ( <i>Grus Americana</i> )                | SE     |
| Reptiles<br>and<br>Amphibians | Eastern hognose snake ( <i>Heterodon platirhinos</i> )  | ST     |
|                               | False map turtle ( <i>Graptemys pseudogeographica</i> ) | ST     |
|                               | Lined snake ( <i>Tropidoclonion lineatum</i> )          | SE     |
| Fishes                        | Banded killifish ( <i>Fundulus diaphanous</i> )         | SE     |
|                               | Blacknose shiner ( <i>Notropis heterolepis</i> )        | SE     |
|                               | Finescale dace ( <i>Chrosomus neogaeus</i> )            | SE     |
|                               | Longnose sucker ( <i>Catostomus catostomus</i> )        | ST     |
|                               | Northern pearl dace ( <i>Margariscus nachtriebi</i> )   | ST     |
|                               | Northern redbelly dace ( <i>Chrosomus eos</i> )         | ST     |
|                               | Pallid sturgeon ( <i>Scaphirhynchus albus</i> )         | SE     |
|                               | Sicklefin chub ( <i>Macrhybopsis meeki</i> )            | SE     |
|                               | Sturgeon chub ( <i>Macrhybopsis gelida</i> )            | ST     |

Notes: SE – State endangered, ST – State threatened

Source: SDGFP, 2025

Information from SDGFP about state listed threatened and endangered species is available here: <https://gfp.sd.gov/threatened-endangered/>

**Existing Conditions** – Protected species that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts. Existing conditions for the general physical setting and hydrology, habitats, special-status species, and migratory birds and eagles should also be described.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for site reconnaissance efforts and anticipated consultations with the USFWS and CPW. Describe how planning data may need to be supplemented during the NEPA phase. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

### *Overview of Threatened and Endangered Species, Migratory Birds, and Eagles in the Project Development and Delivery Process*

As transportation projects are evaluated, the goal is to make sure actions are in compliance with federal and state law and not likely to jeopardize the continued existence of listed species. When a transportation project is proposed, the potential impacts on federally and state-listed threatened and endangered species are reviewed by the Environmental Manager/Environmental Engineer during the completion of the preliminary Class of Action determination. If there is an indication of a potential impact, an EPC is assigned an Approved Scope to conduct further evaluation.

Coordination with SDGFP is integral in identifying potential impacts to state-listed species. In **Table 14** the species listed as threatened or endangered by the state of South

Dakota will be identified through submission of project coordination directly into SDGFP's Environmental Review Tool (ERT):

<https://ert.gfp.sd.gov/>. SDGFP will then identify the potential for impacts to any state listed species. If further action is required to ensure habitat degradation is limited, the EPC will work with staff at SDGFP to avoid and minimize the potential for impacts or activities that might result in a "take."



Topeka Shiner seined from a SDDOT project in 2004. (SDDOT)

Compliance with Section 7 of the ESA is required for nearly all transportation projects because most are partially funded by the FHWA and/or require the obtainment of a permit under Section 404 of the CWA for dredge and fill activities within waters of the U.S. To streamline Section 7 consultation for transportation projects, USFWS has developed two programmatic consultations that apply to transportation projects in South Dakota. SDDOT may rely on these programmatic consultations and associated BO for conducting Section 7 consultation with USFWS for certain projects that: (1) cross streams within the range of Topeka shiner or American burying beetle, or (2) are within the range of the Northern Long-eared Bat. By standardizing interagency policies, programmatic consultation is intended to increase the consistency of project design and review and reduce consultation time while also contributing meaningfully to the conservation of threatened and endangered species. Further detail is provided below for both programmatic consultations.

Programmatic consultation does not substitute for an individual project consultation under section 7 of the ESA unless SDDOT determines that only the covered species would be affected, and all project activities would comply with the reasonable and prudent measures in the BO. Transportation projects not covered by the scope of either BO that could potentially impact a listed species or listed species habitat (e.g., scour protection or channel armoring) require individual Section 7 consultation of the ESA (informal or formal). If a project requires formal consultation for other listed species or designated critical habitats, USFWS will verify project consistency with the programmatic BOs within a project-specific BO that addresses all adversely affected species/critical habitats, to which the standard consultation procedures and timeline (135 calendar days) would apply.

In accordance with federal and state regulations and policies, SDDOT follows procedures for projects involving threatened and endangered species as illustrated on **Figure 12**, summarized in **Table 12**, and further described throughout this section.

### *Programmatic Consultation for Stream Crossings*

In 2008, USFWS issued the current Programmatic BO for Stream Crossing Projects Administered/Funded by FHWA and SDDOT to guide construction activities in stream crossings. USFWS determined that stream crossings by SDDOT projects likely to adversely affect the American burying beetle and Topeka Shiner, and provided guidance for highway construction activities that could affect them. The previous BO (2004) contained detailed terms and conditions that were drawn from SDDOT's Special Provision for Construction Practices in Streams Inhabited by the Topeka

shiner (effective February 11, 2004). It was later determined that not all measures were feasible and USFWS reissued the BO in consideration of new information (2008).

In May 2010, SDDOT revised the Special Provision for Construction Practices in Streams Inhabited by the Topeka Shiner. This document outlines requisite conditions to be implemented to minimize the impact of stream-crossing construction on the Topeka shiner. Examples of the construction requirements include monitoring water turbidity as well as installing and maintaining BMPs for erosion and sediment control. The Special Provision includes guidelines for fish rescue/relocation, de-watering and water extraction, temporary work platforms, removal of structures and obstructions, temporary diversion channels, preconstruction meetings, and Contractor work plans.

The BO includes all FHWA/SDDOT crossings of waterways in South Dakota, except those that cross the Missouri River; these crossings are consulted on individually. Projects include stream-crossing replacements, maintenance, emergency stream crossing, and water withdrawal. A majority of the projects involve physical disturbance to a stream-crossing below the 2-year flow (Q2) elevation and those that withdraw water from streams for construction purposes.

The BO determined that there would be no effect stemming from stream crossing or water withdrawal projects for all federally listed species, except for the least tern, whooping crane, Topeka shiner, and American burying beetle. Some species require additional information, surveys, or actions to ensure no adverse effects. The requirements are summarized in **Table 15**.

Table 15. Summary of the Programmatic BO for Stream Crossings

| Determination                              | Species*                                                                                                                                                                                                                         | Additional Requirements                                                                   |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| No effect                                  | Dakota Skipper<br>Piping Plover<br>Eskimo Curlew<br>Black-footed Ferret<br>Pallid Sturgeon<br>Western Prairie Fringed Orchid<br>Scaleshell Mussel<br>Higgins eye Pearlymussel<br>Monarch Butterfly<br>Suckley's Cuckoo Bumblebee | None                                                                                      |
|                                            | Least Tern                                                                                                                                                                                                                       | Coordinate with USFWS if individuals or habitat are identified within 0.5 mile of project |
|                                            | Black-footed Ferret                                                                                                                                                                                                              | Coordinate with USFWS if work will occur in/near occupied areas                           |
| May affect, not likely to adversely affect | Least Tern                                                                                                                                                                                                                       | Surveys required on Cheyenne River Projects                                               |
|                                            | Whooping Crane                                                                                                                                                                                                                   | Notify USFWS of any sightings, and cease activities and avoid harassment                  |
| May affect, is likely to adversely affect  | Topeka Shiner                                                                                                                                                                                                                    | Found in James, Big Sioux, and Vermillion Watersheds                                      |
|                                            | American Burying Beetle                                                                                                                                                                                                          | See incidental take statement (Range known in Bennett, Gregory, Tripp, and Todd counties) |

Notes: USFWS – U.S. Fish and Wildlife Service

\*Species not included in the BO will require consultation with USFWS to determine effects.

The BO further set forth terms and conditions for the implementation of reasonable and prudent measures that are incorporated into Incidental Take Statements for the Topeka Shiner and American Burying Beetle to ensure compliance with the ESA. For the Topeka Shiner, the reasonable and prudent measures are related to the following:

- ▶ Habitat fragmentation/fish passage
- ▶ Minimization of fish mortality
- ▶ Sediment and erosion control and minimization of construction footprint
- ▶ Monitoring
- ▶ Training
- ▶ Reporting
- ▶ Incorporation of new scientific information

***Reasonable and prudent measures (50 CFR 402.02)***  
are actions that USFWS or NOAA Fisheries believes necessary or appropriate to minimize the impacts (the amount or extent) of incidental take caused by an action that was subject to consultation.

For the American Burying Beetle, the reasonable and prudent measures are related to the following:

- ▶ Minimization of construction footprint impacts
- ▶ Training
- ▶ Reporting
- ▶ Application of new scientific information

The BO requires SDDOT to report annually on construction activities affecting the Topeka Shiner and American Burying Beetle from January to December of each year, reporting on the implementation and effectiveness of the terms and conditions of the reasonable and prudent measures.

### Programmatic Consultation for Northern Long-eared Bat

Due to severe declines and continued spread of the disease, the ESA listed the Northern Long-eared Bat as threatened in April 2015 and uplisted the NLEB to Endangered on March 31, 2023. Because many SDDOT projects would have either no effect on, or would not likely adversely affect the federally endangered Northern Long-eared Bat, FHWA, FRA, and FTA entered into an interagency agreement with USFWS to develop a programmatic consultation process and conservation strategy. USFWS released a programmatic BO in 2016 and updated the BO in 2018 and December 2024. Rather than prohibiting all adverse effects within the species' range, the programmatic consultation enables transportation projects to proceed with appropriate conservation and mitigation

measures, while safeguarding the species under the ESA.

Under this programmatic consultation, SDDOT must determine the effect of project actions on the Northern Long-eared Bat and Tricolored Bat, which is a candidate species for listing included in the 2024 programmatic consultation (see Step 2 below). USFWS has included an Assisted Determination Key in the IPaC System as a means of identifying a project's effect determination under the BO and electronically submitting that determination to USFWS. Projects that would not affect the species can proceed without further delays. Projects with insignificant effects on Northern Long-eared Bat and/or Tricolored Bat are considered "not likely to adversely affect," and may include projects at sites with confirmed absence of the species, or activities that involve maintenance of existing facilities that do not directly remove or alter bat habitat. Projects that may affect the Northern Long-eared Bat and/or Tricolored Bat must implement action-specific avoidance and mitigation measures to ensure that impacts have been mitigated to the point of insignificant or discountable effect and allow the project to reach a "may affect, not likely to adversely affect" determination. For example, in projects where lighting could be disruptive to the Northern Long-eared Bat and/or Tricolored Bat, the programmatic consultation establishes two avoidance and mitigation measures: (1) temporary lighting should be directed away from suitable habitat during the active season; and (2) permanent lighting should use downward-facing lens lights and should direct lighting away from suitable habitat. For further information about this programmatic consultation, see the USFWS User's Guide for the Programmatic Biological Opinion/Conference Opinion for Transportation Projects in the Range of the Indiana Bat, Northern Long-Eared Bat, and Tricolored Bat.

Link: <https://www.fws.gov/media/users-guide-appendices-e-range-wide-programmatic-consultation-indiana-bat-and-northern-long-eared-Bat>

### *Threatened and Endangered Process Description*

#### **1. Determine Potential Species Affected**

Upon receipt of the Approved Scope, the EPC conducts a desktop review to determine the likelihood of the presence of a listed or proposed species and/or suitable habitat within the project area. During the review, consideration for bald eagle nesting sites within 1-mile of the project and any fields that have potential to provide nesting locations for migratory birds should be reviewed, and information on any state listed species should be incorporated into the review of the project area. The desktop review includes information from the USFWS Pierre Ecological Services Field Office, SDDOT GIS layers, and aerial photography.



Structure field inspection to determine if aquatic species may be affected by replacement. (SDDOT)

The EPC submits a request for review to SDGFP via their Environmental Review Tool (ERT) to identify the potential for state-listed species in the project area. This review and coordination provides documentation of species and/or critical habitat, a determination of whether a field review should be conducted, and if the

programmatic BOs apply. If the BOs do not apply, USFWS Section 7 consultation is conducted following guidelines in the USFWS Consultation Handbook or the USFWS Section 7 Consultation Technical Assistance website. If the programmatic BOs apply, the EPC makes a preliminary determination of effect from the data collected.

- ▶ **1A. Field Review**—The field review is used to determine the likelihood of the presence of a species and/or suitable habitat and to gain a clearer understanding of the stream habitat, condition, and adjacent land use. The field review helps determine the level of effect. For example, if the adjacent land use and instream habitat are poor or the field investigation identifies a lack of connection to a stream, the determination could be a “no effect” even if the structure to be replaced is in the statewide range for the species. Similar for the American Burying Beetle, if the location of a proposed road widening project does not anticipate impacting habitat as designated in the programmatic BOs, a “no effect” or “may affect, not likely to adversely affect” determination could be made. The rationale for the effect determination must be detailed in the concurrence letter to USFWS (Step 4). Field reviews often produce photo documentation of the visit.

#### **2. Make Preliminary Determination of Effect**

Based on the desktop or field review, the EPC determines whether the proposed action may affect listed species or critical habitat in accordance with the USFWS *Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act* (USFWS, 1998).

Link: <https://www.fws.gov/media/endangered-species-consultation-handbook-procedures-conducting-consultation-and-conference>

- ▶ **2A. No Effect**—Based on the data collected in the desktop or field review, the EPC determines that listed species will not be affected, directly or indirectly. The information collected in Step 1 supports the preliminary determination of “no effect” for the concurrence letter in Step 4.
- ▶ **2B. May Affect, Not Likely to Adversely Affect**—Based on the data collected in the desktop or field review, the EPC determines that all effects for listed species are beneficial, insignificant, or discountable. The information collected in Step 1 supports the “may affect, not likely to affect” determination for the concurrence letter in Step 4.
- ▶ **2C. May Affect, Is Likely to Adversely Affect**—Based on the desktop and/or field review, the EPC determines that the listed species are likely to be exposed to the actions and are likely to result in “take” or adverse effects. The EPC uses Step 1 data to prepare a biological assessment that is appended to the concurrence letter in Step 4. The Wildlife Biologist reviews the biological assessment. The biological assessment documents SDDOT’s conclusions and rationale regarding the effects of its actions on protected resources. SDDOT’s biological assessment Form includes (a) a project description, (b) eligibility for inclusion under the programmatic BOs, (c) effects to listed species, (d) implementation of Special Provisions, (e) preliminary description of fish passage design criteria and project footprint, and (f) conservation recommendations.

**Biological assessment** refers to information prepared by or under the direction of an action agency to determine whether a proposed action (major construction activity) is likely to affect listed and proposed species and designated and proposed critical habitat that may be present in the project action area, including the evaluation of potential effects of the action on such species and habitat. The outcome of the biological assessment determines whether formal consultation or a conference is necessary.

### 3. Preliminary Design Inspection and Hydraulic Sheets

Bridge design or local government assistance consultants submit a preliminary design inspection and prepare hydraulic sheets for structures that will be replaced. The EPC will review the fish passage designs and hydraulic sheets to determine if any adjustments are necessary for compliance under the Topeka Shiner Special Provision.

Data from the hydraulic sheets will be used to complete the biological assessment.

### 4. Prepare, Send and Receive Concurrence Letter

The EPC prepares and sends a letter of potential impacts to USFWS for concurrence. SDDOT uses four types of concurrence letter templates. The EPC documents the letter in the Environmental Project Tracking Database.

The **Special Provision** for Construction Practices in Streams Inhabited by the Topeka Shiner (2010) provides conditions that must be implemented to minimize the impact of stream-crossing construction on the Topeka Shiner. Failure to implement the conditions may result in violation of the Endangered Species Act.

1. **Coordination Letter 1**—No Effect and May Affect, Not Likely to Adversely Affect letter is

prepared when there will be no impact to listed species, all determinations excluding the Topeka Shiner, American Burying Beetle, and Northern Long-eared Bat align with the programmatic BO determinations.

2. **Coordination Letter 2**—Informal Consultation letter is prepared when the project falls outside the parameters of the programmatic BOs. A biological assessment is required.
3. **Coordination Letter 3**—Prepared when the programmatic BOs apply, but minimal impacts on the stream channel will occur. A biological assessment is required and should be reviewed by the Wildlife Biologist prior to sending it to USFWS.
4. **Coordination Letter 4**—Prepared when the programmatic BOs apply, and a stream crossing structure is being constructed. A biological assessment will be completed, reviewed by the Wildlife Biologist, and included in the coordination letter to USFWS.

Attachments to the coordination letters include (1) a project summary from C2C; (2) a location map from ArcPro or Plan Set, biological assessment, if required; and (3) hydraulic data sheets (if structure is located within Topeka shiner's range).

The EPC will document the receipt of the concurrence letter in the Environmental Project Tracking Database and will address any comments in the response letter.

## **5. Document in Project File and Applicable NEPA Document**

The EPC will document the final determination of effect in the project file and applicable NEPA document (CEs, EA, or EIS) based on the response letter from USFWS, including if the federally

listed species apply to the programmatic BOs. The EPC will request inclusion of Commitments B1-5 for the Threatened and Endangered Species and Commitment F for season work restriction for fisheries in the plan notes or special provisions. The commitments included in Section A Plan Notes, based on determinations for each species in the ECC (if applicable), will be sent to Design for inclusion in the Final Plan set.



Stream diversion on a Turner County project. Culverts with a 60-inch diameter were used to divert the creek around the project area. (SDDOT)

## **6. Conduct Field Work**

The Wildlife Biologist conducts field work for implementation of the Special Provision for the Topeka Shiner, including preconstruction meetings, review of Contractor work plans, and fish seining (when required).

- ▶ **6A. Review Construction Work Plan**—The Contractor provides work plans to the Engineer. The Engineer sends the plans to the Wildlife Biologist for review and approval on projects involving temporary water barriers, cofferdams, and diversion channels (including de-watering and pumped effluent). The Wildlife Biologist provides recommended changes to the Engineer, who incorporates them into the Final Contractor Work Plan. No work shall proceed without the approval of the Contractor Work Plan by the Engineer and Wildlife Biologist.
- ▶ **6B. Contractor Preconstruction Meeting**— A preconstruction meeting is held with ROW,

the Contractor, Subcontractors, Project Engineer, and Wildlife Biologist to ensure that the conditions of the Special Provision and all environmental permits are clearly understood. A Construction Plan for Work in Topeka Shiner Streams is completed by the contractor then reviewed/approved by the Wildlife Biologist before the preconstruction meeting. During the meeting, the Wildlife Biologist and Engineer will indicate which plan notes have been included based on determinations for each species in the review plans for stockpile placements, handling, storage, and disposal of excavated material. This review ensures the Contractor and Project Engineer are aware of environmentally sensitive resources, turbidity standards, requirements of the Section 404 permit, and other required permits. The review also makes the Wildlife Biologist aware that the Contractor will be dewatering, have fish relocated, using temporary works, and have proper sediment and erosion controls in place. Other environmental commitments or plan notes should be pointed out as necessary to the Contractor and Project Engineer.

The **Construction Work Plan** includes a drawing and written description of the process for constructing the stream diversion channel, including blockage of natural channel and dewatering.

- ▶ **6C. Relocate Fish**—Contractors are required to give a 48-hour notice to the Wildlife Biologist before the Contractor is ready to have fish removed from the project area and dewatering can occur. The Wildlife Biologist will review the site to be seined upon arrival, check the water depth, any construction activities that are occurring in the area, and verify a water pump is present with the

required screens to prevent fish from getting entrained. The Wildlife Biologist uses seine nets to collect fish for release into the remaining portions of the stream. The Wildlife Biologist may utilize the assistance of personnel employed by the Contractor or sub-contractor if no other SDDOT staff are available to assist with seining. Fish seining is not to be conducted in winter ice-over conditions or in temperatures under 32 degrees Fahrenheit. Fish species and the number of fish is recorded. Seining continues until no more new species are identified or the number of fish netted is no longer significant based on professional judgment. The Wildlife Biologist documents fish seining activity in the Project Reporting Form and reports it in the Annual Compliance Report in Step 8.



SDDOT Wildlife Biologist and Wetland Coordinator seining a project for the presence of Topeka Shiner. (SDDOT)

The Project Reporting Form includes project-specific information as well as description of stream habitat, diversion channel information, BMPs for erosion control, fish removal, other impacts on endangered species (nesting), and conservation recommendations.

## 7. Prepare Annual Compliance Report

The Wildlife Biologist prepares and submits an Annual Compliance Report to USFWS and FHWA

documenting compliance with the programmatic BO, BMPs and observations during construction of transportation projects with a “May Affect, Is Likely to Adversely Affect” determination for a species. The Annual Compliance Report includes all Project Reporting Forms and documents all construction activities completed during the calendar year for projects that had the potential to adversely affect the Topeka Shiner or American Burying Beetle. The Wildlife Biologist tracks fish passage projects in an Excel spreadsheet for future monitoring in post-construction years 1, 3, and 5, at a minimum. (Note: Year 1 is the first field season following the completion of construction.)

## **8. Conduct Monitoring**

Following completion of a construction project that adversely affects the Topeka Shiner or the American Burying Beetle, the Wildlife Biologist conducts monitoring on the effectiveness of fish passage biannually for 5 years, or as requested by USFWS, in accordance with guidelines for projects impacting the Topeka Shiner or other fishery resources. The information is documented in the Fish Passage Assessment Worksheet and reported in the Annual Monitoring Report, which is submitted with the Annual Compliance Report to USFWS and FHWA.

Fish passage guidelines include requirements that culverts are designed in a manner that does not impact fish movement. Culverts are required to be sunk below the stream flow line to allow the development of natural channel features, allow for sediment deposition, and prevent restrictions to fish movement.

- ▶ **8A. Annual Monitoring Report**—The Wildlife Biologist prepares the Annual Monitoring Report to document the assessment of fish passage in years 1, 3, and 5, at a minimum. The Monitoring Report is submitted to USFWS and FHWA at the same time as the

Annual Compliance Report. If noncompliance or concerns arise throughout project construction and monitoring, USFWS, FHWA, or the Wildlife Biologist may determine more frequent monitoring is required.

## *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to threatened and endangered species are presented by agency, with executive orders presented first.

### *Federal Highway Administration*

#### **Endangered Species Act, Formal Programmatic Section 7 Consultation, Programmatic Biological Opinion, Stream-Crossing Projects**

##### **Administered/Funded by SDDOT and FHWA,**

##### **Revised August 2008**—FHWA and SDDOT

initiated formal consultation with USFWS under Section 7 of the ESA on January 5, 2004, via submittal of a biological assessment. A programmatic BO that covers all endangered species known to exist in South Dakota was issued by USFWS on April 28, 2004. It includes all FHWA/SDDOT crossings of waterways in South Dakota, except for those over the Missouri River (which are consulted on individually). Most projects involve physical disturbance to a stream crossing below the 2-year flow elevation and those that withdraw water from streams for construction purposes. The document provides guidance for the construction activities impacting endangered species and may provide mandatory terms and conditions to be implemented at stream-crossing projects impacting the Topeka Shiner.

The programmatic BO requires SDDOT to submit to the USFWS by March 1 of each year, a report on the impact of stream-crossing construction activities on endangered species during the previous year. Principal objectives of this

document are to report on the implementation of term and conditions and conservation measures and to evaluate the effectiveness of the term and conditions that are implemented to minimize the impact of incidental take on the Topeka Shiner.

**Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-eared Bat, Revised February 2018**—This programmatic consultation streamlines the process for transportation projects and negates the need for project-level effect analyses and individual consultations with the USFWS, reducing the timeline for project approval from months, or even years, to 30 days or less. SDDOT is to either complete the Assisted Determination Key using the IPaC System or send a Project Submittal Form to the appropriate USFWS Field Office. Two tiers of review apply to transportation projects depending on the severity of impacts to the species. For projects with a “no effect” or “may affect, is not likely to adversely affect” determination, the USFWS has 14 days to review the project and notify SDDOT if they determine the project does not meet the criteria for that determination. If SDDOT is not so notified, they may proceed under the programmatic consultation. For projects with a “may affect, is likely to adversely affect,” USFWS is to respond within 30 days to SDDOT to: (1) verify that all applicable conservation measures are included in the project proposal; (2) verify that the project is consistent with the programmatic sideboards for covered project; and (3) identify any project-specific monitoring and reporting requirements, consistent with the monitoring and reporting requirements for the program as a whole.

**User’s Guide for the Programmatic Biological Opinion/Conference Opinion for Transportation Projects in the Range of the Indiana Bat,**

**Northern Long-Eared Bat, and Tricolored Bat, Version 6.0, December 2024**—This document provides guidance for the implementation of the 2024 range-wide programmatic consultation for the Indiana Bat, Northern Long-eared Bat, and Tricolored Bat. This user guide provides a summary of the scope the programmatic consultation by describing the actions appropriate to its use and key decision points during an effects analysis. It defines standard operating procedures for project(s) submission, review and tracking of the range-wide programmatic consultation. Included as appendices are: (1) the recommended IPaC Assisted Determination Key; (2) a project submittal form for transportation agencies to submit project-level information to USFWS; (3) a summary of avoidance and minimization measures to be implemented, as applicable, to reduce the potential effects of projects within the scope of the range-wide programmatic consultation; (4) a bridge/abandoned structure assessment guidance and form to determine if any bat species are likely using bridges/structures, and a form for documenting and submitting a site-specific bridge/abandoned structure assessment; and (5) a post-assessment discovery of bats at bridge/structure form to report incidental take of bats that may occur during construction of bridge activities.

**Environmental Review Toolkit, ESA Webtool—Glossary**—This Web tool provides a glossary of key terms often encountered when researching and writing biological assessments. In addition, USFWS also maintains a helpful glossary of key terms related to the ESA.

**FHWA Technical Advisory T 6640.8A**—The FHWA Technical Advisory T6640.8A, dated October 30, 1987, provides guidance for addressing impacts on threatened and endangered species. These guidelines should be followed if a species is

present in a project area that is not covered under the current Programmatic Agreement. These steps include:

- ▶ **Informational Gathering**—The State Highway Agency must obtain information from USFWS to determine the presence or absence of listed and proposed threatened or endangered species and designated and proposed critical habitat in the proposed project area (50 CFR 402.12[c]). The information may be (1) a published geographical list of such species or critical habitat; (2) a project-specific notification of a list of such species or critical habitat; or (3) substantiated information from other credible sources. Where the information is obtained from a published geographical list, the reasons why this would satisfy the coordination with the Department of the Interior should be explained. If there are no species or critical habitat in the proposed project area, the ESA requirements have been met. The results of this coordination should be included in the draft environmental document.
- ▶ **Proposed Species/Proposed Critical Habitat**—When a proposed species or a proposed critical habitat may be present in the proposed project area, an evaluation or, if appropriate, a biological assessment is made on the potential impacts to identify whether any such species or critical habitat are likely to be adversely affected by the project. Informal consultation with USFWS should be undertaken during the evaluation. The draft environmental document should include exhibits showing the location of the species or habitat, summarize the evaluation and potential impacts, identify proposed mitigation measures, and provide evidence of coordination with USFWS.

If the project is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat, the State Highway Agency in consultation with FHWA must confer with USFWS to attempt to resolve potential conflicts by avoiding, minimizing, or reducing the project impacts (50 CFR 402.10[a]). If the preferred alternative is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat, a conference with USFWS must be held to assist in identifying and resolving potential conflicts. To the fullest extent possible, the final environmental document needs to summarize the results of the conference and identify reasonable and prudent alternatives to avoid jeopardy to such proposed species or critical habitat. If no alternatives exist, the final environmental document should explain the reasons why and identify any proposed mitigation measures to minimize adverse effects.

- ▶ **Listed Species/Designated Critical Habitat**—When a listed species or a designated critical habitat may be present in the proposed project area, a biological assessment must be prepared to identify any such species or habitat that are likely to be adversely affected by the proposed project (50 CFR 402.12). Informal consultation should be undertaken or, if desirable, a conference held with USFWS and/or the National Marine Fisheries Service during preparation of the biological assessment. The draft environmental document should summarize the following data from the biological assessment:
  - ◆ The species distribution, habitat needs, and other biological requirements
  - ◆ The affected areas of the proposed project

- ◆ Possible impacts on the species, including opinions of recognized experts on the species at issue
- ◆ Measures to avoid or minimize adverse impacts
- ◆ Results of consultation with USFWS

In selecting an alternative, jeopardy to a listed species or the destruction or adverse modification of designated critical habitat must be avoided (50 CFR 402.01[a]). If the biological assessment indicates that there are no listed species or critical habitat present that are likely to be adversely affected by the preferred alternative, the final environmental document should provide evidence of concurrence by USFWS and identify any proposed mitigation for the preferred alternative.

If the results of the biological assessment or consultation with USFWS show that the preferred alternative is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat, to the fullest extent possible, the final environmental document needs to contain: (1) a summary of the biological assessment (2) a summary of the steps taken, including alternatives or measures evaluated and conferences and consultations held to resolve the project's conflicts with the listed species or critical habitat; (3) a copy of the BO; (4) a request for an exemption from the ESA; (5) the results of the exemption request; and (6) a statement that (if the exemption is denied) the action is not eligible for federal funding.

## State of South Dakota

**Chapter 34A-8. Endangered and Threatened Species**—On the basis of determinations pursuant SDCL 34A-8, the SDGFP promulgates a list of those species of wildlife that are determined to be endangered or threatened

within the state. SDGFP makes these determinations based on the best scientific, commercial, and other data available and after consultation, as appropriate, with federal agencies, other interested state agencies, other states having a common interest in the species, and interested persons and organizations

### **State of South Dakota Department of Transportation, Special Provision for Construction Practices in Stream-crossing Inhabited by the Topeka Shiner (May 10, 2010)**

—Special provisions were developed for construction on streams inhabited by or likely to be inhabited by, the Topeka shiner. The Topeka Shiner is a small pool-dwelling minnow that is found in prairie streams of the lower Missouri River Basin and upper Mississippi River Basin. In South Dakota, the Topeka shiner has been found in about 40 streams in the James River, Big Sioux River, and Vermillion River Watersheds. The Topeka Shiner currently retains its historic distribution and is locally abundant in South Dakota; however, population trends are unclear. Most stream-crossing projects constructed in the James River, Big Sioux River, and Vermillion River Basins may impact the Topeka Shiner.

**South Dakota Game Fish and Parks, South Dakota Natural Heritage Program**—The South Dakota Natural Heritage Program is part of SDGFP. The website provides links to acquiring data that is useful for evaluating threatened, endangered, and rare plant and animal species for proposed projects.

**South Dakota Game Fish and Parks, Environmental Review Tool**— an interactive resource for conservation planning and environmental review by SDGFP. This site provides access to information on biological diversity, protected lands and other natural resources for conservation planning purposes. It

also allows users to submit projects for review of potential impacts to rare, state or federal listed species and their habitats in South Dakota.

U.S. Fish and Wildlife Service

**Endangered Species (16 USC 1531-1541)—**

Codifies the provisions of the ESA of 1973, as amended. Section 7 of the Act (16 USC 1536) requires federal agencies proposing major construction activities to complete a biological assessment to determine the effects of the proposed action on listed and proposed threatened and endangered species. A major construction activity is defined as “a construction project (or other undertaking having similar physical impacts), which is a major federal action significantly affecting the quality of the human environment as referred to in the NEPA.” If a biological assessment is not required, then the federal agency is required to review its proposed activities to determine whether listed species may be affected. If such a determination is made, formal consultation with USFWS is required.

**Regulations 50 CFR 17, Endangered and Threatened Wildlife and Plants, and 50 CFR 402, Interagency Cooperation-Endangered Species Act of 1973, as Amended—**

Contain the primary implementing rules for the ESA. The regulations for permitting “incidental taking” of listed species are contained in 50 CFR 17. In accordance with 16 USC 1532(19), take means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.”

**USFWS Mountain-Prairie Region “Endangered Species Program” Website—**This USFWS website provides current information on the status, biology, and ecology of threatened, endangered, proposed, and candidate species in Region 6 of USFWS. It provides information at the region, state, county, and species level.

**USFWS Endangered Species Glossary—**The glossary is intended to define key words but does not necessarily provide a legal definition or thorough description.

**Migratory Birds (16 USC 701-715)—**The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the USFWS Migratory Bird Office. Despite its age, the MBTA suffers from statutory ambiguity and unpredictable enforcement. The prohibitions under the MBTA are narrower than the prohibitions of the ESA and generally do not apply to habitat. Courts vary widely in how they interpret liability under the MBTA, and USFWS has broad discretion in how it chooses to enforce the MBTA.

**Bald and Golden Eagles (16 USC 668-668c)—**The BGEPA makes it illegal to take, possess, sell, purchase, barter, or transport any bald or golden eagle, alive or dead, or any part, nest, or egg thereof. “Take” includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb (50 CFR 22.3). Under the BGEPA, USFWS may issue limited permits to incidentally “take” eagles (e.g., injury, interfering with breeding, feeding, or causing nest abandonment). In 2009, USFWS promulgated regulations that established incidental take permitting, which authorizes non-purposeful take (disturbance, injury, or killing) of eagles where the take is incidental to an otherwise lawful activity. Those regulations were revised in 2016 to better facilitate the issuance of longer-term, programmatic permits that cover any unintended eagle take.

## 4.4 Wildlife Habitat and Movement

South Dakota's transportation system cuts across the habitat of many native wildlife species. When these paths cross, collisions can occur, and in greater numbers than most people realize. Wildlife-vehicle collisions in South Dakota account for more than 25% of all crashes. Over 60% of these crashes occur on SDDOT-administered roadways. It is estimated that on average 20,000 large ungulates are lost to vehicle collisions throughout the state each year. The evaluation of wildlife habitat and movement with the objective of identifying wildlife-highway conflict areas where targeted mitigation could have the greatest impacts on reducing wildlife-vehicle collisions and enabling wildlife movement. Fewer wildlife-vehicle collisions not only translate to fewer human injuries, fatalities and reductions in property damage but also a cost saving for SDDOT, individual motorists, insurance companies, and society at large and, finally, fewer wildlife mortalities and healthier wildlife populations.

### *Overview of Wildlife Habitat and Movement in the Project Planning Process*

The Wildlife Habitat and Movement section of the Environmental Screening Report is intended to identify wildlife-vehicle collision hotspots and habitat linkage zones at a planning level.

**Methodology** – South Dakota Game Fish & Parks provides a list of areas of wildlife/fish concerns, and the South Dakota Department of Public Safety maintains a database that includes wildlife-vehicle collision data. Hotspots for wildlife-vehicle collisions (or priority locations) on a regional scale, as well as habitat linkage zones should be identified. A planning level approach includes large spatial-scale considerations of the

larger landscape and regional wildlife corridor network.

The South Dakota Department of Game, Fish and Parks has prepared a South Dakota Wildlife Action plan that assesses the health of South Dakota's fish and wildlife and associated habitats.  
<https://gfp.sd.gov/wildlife-action-plan/>

#### **Common Definitions:**

**Wildlife-vehicle collision** hotspots are locations with high incidence of wildlife-vehicle collisions.

**Habitat linkage zones** are zones that link areas with core habitat for selected species. Depending on the species, the number and size of the habitat patches, and the connectivity between these patches, a certain minimum level of wildlife movements between the individual habitat patches can be vital for the long-term survival probability of fragmented populations (FHWA, 2008).

**Existing Conditions** – Selected species that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts. Existing conditions for the general physical setting and wildlife habitat and movement should also be described. Wildlife crossing should not lead to ecological “dead-ends” or “cul-de-sacs,” where wildlife have nowhere to go to, but must link to a larger regional landscape and habitat complex that allows them to disperse, move freely, and meet their daily and life requisites.

**Next Steps** – A summary of the next steps for the future projects shall describe how planning data may need to be supplemented during the NEPA phase. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

### *Overview of Wildlife Habitat and Movement in the Project Development and Delivery Process*

Project-level wildlife habitat and movement is at a smaller scale than planning-level analyses. The project-level approach is concerned with proximate objectives – such as those within the transportation corridor and occasionally lands adjacent to it. A project-level focus may not necessarily consider how the wildlife crossing structures fit into the larger landscape and regional wildlife corridor network. Because of the mobility of fish and wildlife, the habits and behaviors of potentially impacted species need to be described in greater detail, as well as their populations and habitats. To provide sufficient information to enable a thorough assessment of project impacts, information must be known for each species present, such as:

- ▶ Migration behavior
- ▶ Known migration routes and timing
- ▶ Breeding locations, behaviors, timing, and cycle length
- ▶ Rearing periods for young
- ▶ Particular habitat uses for particular life cycles
- ▶ Factors that limit the species population
- ▶ Areas of contiguous habitat

Once data have been collected on the fish and wildlife species documented or likely to be present in the project area, map their likely distribution relative to project components. For many species, this is best done by evaluating them in assemblages that use a common habitat or land cover type. Greater specificity in the assessment of impacts can be gained by assessing how particular species use their habitat and how the project will impact the habitat. Identifying the types of impacts that should be

considered can best be understood through a series of examples.

Once impacts to fish and wildlife species have been thoroughly identified, they should be avoided to the maximum extent possible. Mitigation measures that enable passage of fish and wildlife to more successfully cross the road will help to avoid wildlife-vehicle collisions.

Many examples of mitigation measures are presented on the FHWA Wildlife Program website. These measures should be implemented to minimize project impacts whenever feasible.

<https://highways.dot.gov/federal-lands/programs/wildlife-crossings>

## 4.5 Historic, Archaeological, and Cultural Resources

A multitude of federal and state laws, rules, and regulations dictate that SDDOT's project development process takes into consideration historic, archeological, and cultural resources that may be affected by a proposed transportation project. Examples of Federal laws include Section 4(f) of the USDOT Act, the Archaeological Resources Protection Act, the National Historic Preservation Act, and the Native American Graves Protection and Repatriation Act.

South Dakota state codified laws include SDCL 1-19A-11.1 Preservation of Historic Sites and as well as other state laws relating to preservation or discovery of human remains (SDCL 34-27-25, 34-27-28 and 34-27-31). SDCL 1-19A-11.1 specifically applies to SDDOT projects that do not involve any federal funding or licensing. Applicable laws, regulations, and guidance are cited at the end of this section.

## *Section 106 of the National Historic Preservation Act of 1966*

Section 106 of the NHPA, as amended, guides the process of considering the effects of federal undertakings on historic properties. As such, Section 106 applies to federal agencies and to projects that are carried out with federal financial assistance; or those requiring a federal permit, license, or approval.



Native American Tipi designed for several rest areas in South Dakota is the only property in SD excluded from the Interstate Exemption (SDDOT).

Section 106 seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation among the agency officials and other parties with an interest in the effects of the undertaking on historic properties. This section defines key terms used in the protection of historic properties, introduces the applicable authorities, and describes the environmental commitments established for compliance with Section 106.

SDDOT, working on behalf of the FHWA, must comply with Section 106. SDDOT completes Section 106 coordination according to the, *The Programmatic Agreement Among The Federal*

### **Common Definitions:**

**Historic property** means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria.

**The Area of Potential Effect (APE)** is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

**Undertaking** means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license, or approval.

**Consultation** means the process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 process. The Secretary's "Standards and Guidelines for Federal Agency Preservation Programs pursuant to the National Historic Preservation Act" provide further guidance on consultation.

**The term eligible for inclusion** in the NRHP includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the NRHP criteria.

**Memorandum of agreement** means the document that records the terms and conditions agreed upon to resolve the adverse effects of an undertaking upon historic properties.

Note: All definitions are cited at 36 CFR § 800.16.

*Highway Administration, The South Dakota State Historic Preservation Officer, The Advisory Council On Historic Preservation, and The South Dakota Department of Transportation Regarding The Federal Aid Highway Program in South Dakota* (Section 106 PA). The Section 106 PA allows SDDOT to work on behalf of FHWA. The process by which SDDOT complies with Section 106 is illustrated on **Figure 13**, summarized in **Table 16**, and described in further detail throughout this section. Relevant regulations are cited at the end of the section for further reading.

**Authorization:** Section 106 of the NHPA (54 USC 306108) requires federal agencies to consider the effects of their actions on historic properties and afford the ACHP a reasonable opportunity to comment on such undertakings.

The regulations that implement Section 106, Protection of Historic Properties (36 CFR §800), encourage agencies to plan Section 106 consultations in coordination with other requirements of other statutes, as applicable, such as NEPA.

Section 106 of NHPA requires federal agencies to consider the effects of their action on historic properties. NHPA created the ACHP and authorized to issue regulations governing the implementation of Section 106. These regulations are set forth in 36 CFR Part 800. Other federal and state laws, rules, and regulations require the project development process take into consideration historic, archeological, and cultural resources that may be affected by a proposed transportation project. Examples include Section 4(f) of the USDOT Act, Archaeological Resources Protection Act, and Native American Graves Protection and Repatriation Act. South Dakota state codified laws include SDCL1-19A-11.1 Preservation of Historic Sites and as well as others state laws relating to preservation or discovery of human

remains. Applicable laws, regulations, and guidance are cited at the end of this section.

**What is a historic property?** “Historic property” means any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places maintained by the Secretary of the Interior (NPS). This term includes artifacts, records, and material remains that are related to and located within such properties. Properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined eligible for inclusion in the National Register. [36 C.F.R. § 800.16(l)(1)].

The Section 106 process is conducted in conjunction with other environmental considerations for projects. The Council on Environmental Quality (CEQ) and the ACHP encourage integration of the NEPA process with other environmental reviews, such as Section 106 of NHPA. SDDOT will work closely with the SHPO/THPO to coordinate efforts that may be required under both NEPA and NHPA.

**What is a cultural resource?** Effects considered under NEPA include cultural and historic. [40 C.F.R. § 1508.8] The term “cultural resources” covers a wider range of resources than “historic properties,” such as sacred sites, archeological sites not eligible for the National Register of Historic Places, and archeological collections.

### *Overview of Historic, Archeological, and Cultural Resources in the Project Planning Process*

The Cultural Resources section of the Environmental Screening Report is intended to identify Historic, Archeological, and other Cultural Resources in the planning study area

and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, performing a cultural resources survey is not necessary. A letter should be sent to the Archaeological Research Center (ARC) requesting a records search to identify historic properties within the planning study area. Review of ARC-identified properties and other age-eligible properties in the planning study area shall occur through desktop review of online tools including preliminary survey, aerial photography, USGS quadrangle maps, county property assessor databases, Sanborn maps, and available survey data.

A Paleontological survey is not necessary as part of an Environmental Screening Report. There are no laws within South Dakota requiring the review of paleontological resources as a part of the NEPA process. If during the coordination process it is brought up with the land managing agency, paleontological resources should be considered. Additionally, paleontological resources must be taken into account if they are identified as components of cultural resources or Traditional Cultural Properties.

**Existing Conditions** – Historic, Archeological, and other Cultural Resources that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field survey efforts and Section 106 review, including the evaluation of identified potential historic resources for NRHP eligibility to determine historic status. As with many resources, the historic status and eligibility of a resource can change over time. For instance, a planning project may not have identified a resource, but if the NEPA is delayed, resources

could become age-eligible and thus require assessment of their historic status. It is expected that information developed during the Planning Phase of a project be verified and supplemented, as appropriate, in the NEPA Phase.

In addition, design modifications to avoid, minimize, or mitigate impacts to known and potential historic resources should be presented. Consultation and coordination with Tribal Nations with a cultural or geographic connection to the planning study area should be recommended, and continued coordination should occur. Overview of Historic, Archeological, and Cultural Resources in the Project Development and Delivery Process.

The Section 106 process seeks to incorporate historic preservation principles into project planning through consultation between a federal agency and other parties with an interest in the effects of the federal agency's action on historic properties. Section 106 consultation involves four steps: (1) initiate the process, (2) identify historic properties that could be affected by the undertaking, (3) assess the undertaking's potential effects to such properties, (4) seek ways to avoid, minimize or mitigate any adverse effects to historic properties. The procedures for SDDOT projects involving historic, archeological and cultural resources are illustrated in **Figure 13**, summarized in **Table 16**, and are further described in the narrative in the next section.

The entire process begins with a broad outreach by SDDOT to agencies, Tribes, local governments and federal agencies with a possible interest in the historic properties in the APE for the proposed undertaking. Specific parties with interest in the Section 106 process include the SHPO and federally recognized Indian Tribes, represented by THPOs or appropriate Tribal leadership. Section 106 requires that SDDOT allow SHPO/THPO the opportunity to comment on the proposed transportation project and consult with federally recognized Tribes

when undertakings have the potential to affect properties on Tribal lands or properties of religious and cultural significance located on non-Tribal lands.

Generally, the Section 106 process is a series of consultations between SDDOT and the SHPO or THPO, and other consulting parties identified during the consultation process. If there is disagreement at any step of the process, FHWA is asked to make a decision. FHWA may in turn ask the ACHP for a decision on disagreements regarding project effects. Disagreements regarding eligibility may be appealed to the Keeper of the National Register of Historic Places for a final decision.

The 2015 Stewardship and Oversight of the Federal-aid Highway Program Agreement, between SDDOT and FHWA, authorizes SDDOT to assume specific project approvals but does not delegate the FHWA's decision-making authority. However, at any time, the state may request that FHWA get involved in any specific project or issue regardless of the delegations in this Agreement.

Figure 13. Section 106 Process

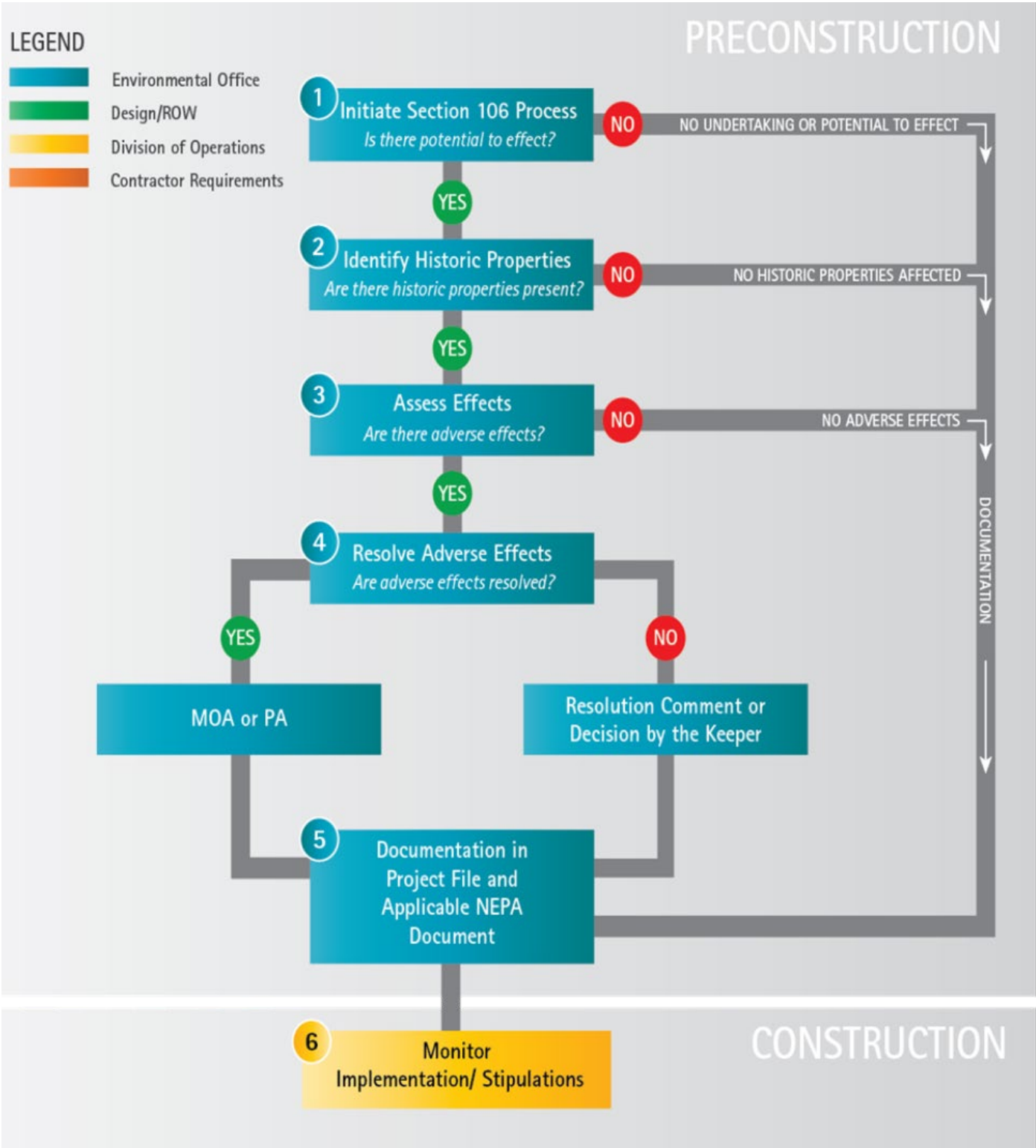


Table 16. Steps in the SDDOT Section 106 Process

| Step                                                                                                                              | Participant(s)                                                                                                                                  | Result(s)                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                                                                                            |                                                                                                                                                 |                                                                                                                                                 |
| 1. Initiate Section 106 process.                                                                                                  | EPC, ARC, Tribes/THPOs, SHPO                                                                                                                    | APE Determination, Identification of appropriate consulting parties, Coordination Letter(s), Environmental Project Tracking Database            |
| 2. Identify historic properties                                                                                                   | EPC, ARC, SHPO/THPO, Tribes, Consulting Parties, BIA, Local Historic Preservation Commissions, NPS, Certified Local Government programs, public | Record Search or Cultural Resources Survey, Tribal Response Letters, SHPO/THPO consultation of effects, Environmental Project Tracking Database |
| 3. Assess adverse effects                                                                                                         | EPC, SHPO/THPO, ACHP, Consulting Parties                                                                                                        | SHPO/THPO Concurrence, e-106 Form (adverse effect), project file                                                                                |
| 4. Resolve adverse effects<br>4a. <i>MOA or Programmatic Agreement</i><br>4b. <i>Resolution Comment or Decision by the Keeper</i> | EPC, SHPO/THPO, FHWA, ACHP (if involved), Consulting Parties                                                                                    | Memorandum of Agreement or Programmatic Agreement, ACHP Comment (if unresolved adverse effects)                                                 |
| 5. Document in project file and applicable NEPA document                                                                          | EPC, FHWA                                                                                                                                       | Project file, CE Checklist and ECC, EA/FONSI, EIS/ROD, copy of Section A Plan Notes (if applicable) to Design to incorporate in Final Plan set  |
| <b>Construction</b>                                                                                                               |                                                                                                                                                 |                                                                                                                                                 |
| 6. Monitor implementation (MOA/Programmatic Agreement)                                                                            | EPC, Project Engineer, ARC, THPO, and/or Tribal Monitor, Contractor                                                                             | Documentation of construction findings in project file                                                                                          |

Notes: ACHP – Advisory Council on Historic Preservation, APE – Area of Potential Effect, ARC – State Archeological Research Center, BIA – Bureau of Indian Affairs, CE – Categorical Exclusion, EA – Environmental Assessment, ECC – Environmental Commitment Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FHWA – Federal Highway Administration, FONSI - Finding of No Significant Impact, ROD – Record of Decision, MOA – Memorandum of Agreement, SHPO – State Historic Preservation Office, THPO – Tribal Historic Preservation Office

## *SDDOT's Process for Compliance with Section 106*

### **1. Initiate the Section 106 Process (36 CFR § 800.3)**

If a project is federally funded and the undertaking has the potential to affect historic properties, it is subject to Section 106 of the NHPA. Once the determination is made that the proposed action is a federal undertaking (confirmed through inclusion in the STIP) and has the potential to cause effect, the EPC identifies either the SHPO or THPO, if project is located on tribal lands. The EPC will prepare coordination letters to the ARC, federally recognized Tribes, Certified Local Governments (Local Historic Preservation Commissions), and resource agencies to determine the potential for effect, describing the project, and identifying contacts and consulting parties for Section 106 consultation. The EPC will document consultation letters in the project file and Environmental Project Tracking Database.

If it is determined there is no undertaking, or that the undertaking is a type of activity that has no potential to affect historic properties, Section 106 obligations are finished. If historic properties may be affected by the action, the EPC will consult with the SHPO or THPO and Tribes to identify the APE.

Adverse Effect – undertaking that may alter, directly or indirectly, any of the characteristics of a historic property in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

### **2. Identify Historic Properties (36 CFR 800.4)**

Under Section 106, SDDOT needs to consider the effect of an undertaking on any historic property (including unevaluated sites), which is any property that is included in, or eligible for inclusion in, the NRHP. SDDOT must identify and evaluate the eligibility of those resources for

inclusion in the NRHP. SDDOT uses Secretary of the Interior-qualified professionals to identify historic properties.

NRHP criteria for evaluation include the quality of significance in American history, architecture, archeology, engineering, and culture that is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. Additionally, to be eligible for the NRHP, a resource must be significant under one or more of the following criteria:

- ▶ **Criterion A:** Association with events that have made a significant contribution to the broad patterns of our history
- ▶ **Criterion B:** Association with the lives of persons significant in our past
- ▶ **Criterion C:** Embodiment of the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- ▶ **Criterion D:** Has yielded, or is likely to yield, information important in history or prehistory (this generally is understood to refer to archeological significance) [36 CFR 60.4]

The criteria considerations provide further guidance on the eligibility of resources that are less than 50 years of age, cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, and properties primarily commemorative in nature (NRHP Criteria for Evaluation).

SDDOT determines the nature and level of effort required for the identification of historic properties. Historic properties may include

Traditional Cultural Properties (TCP) or properties of religious or cultural significance. Tribes possess special expertise in identifying and assessing these properties.

The EPC sends a letter to the ARC requesting a records search or cultural resource survey to identify historic properties within the APE. If the ARC is unavailable, a [qualified preservation consultant](#) may conduct the survey and prepare the cultural resources survey report. If necessary, the EPC also requests an architectural or historic structure survey. The survey work is conducted in compliance with the [South Dakota Guidelines for Compliance with the National Historic Preservation Act and South Dakota Codified Law 1-19A-11.1](#). If cultural resources are identified during the survey, the cultural resources survey report makes a recommended determination of eligibility of those resources. SDDOT, on behalf of FHWA, must make an official determination. The EPC consults with the identified consulting parties and SHPO or THPO, depending on whether the project is on Tribal lands.

To be considered *eligible*, a property must meet the National Register Criteria for Evaluation. This involves examining the property's age, integrity, and significance.

36 CFR Part 63 provides regulations to assist federal agencies in identifying and evaluating the eligibility of properties for inclusion in the National Register.

The majority of the Interstate Highway System is exempt from consideration as an historic property under Section 106 of NHPA and Section 4(f) of the USDOT Act requirements because of the [ACHP's Exemption Regarding Historic Preservation Review Process for Effects to the Interstate Highway System](#). The only properties in South Dakota which are excluded from the Interstate Exemption are the Tipi Structures located at six rest areas along the interstate system. SDDOT projects which have

the potential to affect any of the tipi structures are subject to Section 106 of NHPA.

The determination of eligibility will be submitted to the SHPO or THPO prior to requesting approval of the draft EA/EIS for public availability. A response is requested within 30 days of the submittal. If a Tribe does not have a THPO, the SHPO will be consulted and a copy of the archeological and/or historic survey will be forwarded to the Tribe's 106 coordinator.

#### **When do you consult with SHPO?**

The SHPO is consulted for all Section 106 matters on Non-Tribal Lands and for those undertakings on tribal lands for which the Tribe does not have a THPO.

#### **When do you consult with THPO?**

The THPO is consulted for all Section 106 matters on Tribal Lands. If a Tribe does not have a THPO, the SHPO is consulted with an informational copy to the Tribe.

#### **Keeper of the National Register of Historic Places**

The Keeper is the individual who has been delegated the authority by NPS to list properties and determine their eligibility for the National Register. The Keeper may further delegate this authority as he or she deems appropriate. [\[36 CFR 60.3 Definitions\]](#)

The Bureau of Indian Affairs' archeologist will also be sent a copy of request for THPO concurrence along with a copy of the Cultural Resources Survey report when tribal lands are adjacent to the project.

The EPC will make a determination of eligibility in accordance with the NRHP's criteria for

**Effect** is an alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register.

36 CFR 800.16(i)

evaluation. The following may result:

- ▶ If the SHPO or THPO, consulting parties and SDDOT agree that a property is eligible, the property shall be considered eligible and it meets the definition of a historic property.
- ▶ If the SHPO or THPO, consulting parties and SDDOT agree that a property is not eligible, the property shall be considered not eligible and it does not meet the definition of a historic property.
- ▶ If the SHPO or THPO, consulting parties and SDDOT do not agree on determination of eligibility, FHWA will be asked to resolve the issue.
- ▶ If FHWA is unable to determine eligibility, FHWA may request a determination of eligibility from the Keeper of the NRHP.
- ▶ The Keeper's determination is final regarding eligibility.

#### **Determination of No Historic Properties**

**Affected:** If the EPC, with guidance and recommendations from Secretary of the Interior-qualified professionals, determines there are no historic properties in the APE or that there are historic properties are present, but the project will have no effect upon the property, a determination of No Historic Properties Affected is made. According to [Programmatic Agreement among FHWA, SHPO, Advisory Council on Historic Preservation, and SDDOT](#), if the SHPO does not object to the determination in 10 days, the Section 106 process is complete. The THPO is given 30 days to comment/concur with the determination.

Ineligible properties may be considered as resources for NEPA, and SDDOT will coordinate with the interested parties under NEPA. The EPC will document the finding in the project file and applicable NEPA document and Environmental Project Tracking Database, providing the date the finding was received and attaching SHPO/THPO documentation.

**Determination of Effect to Historic Properties:** If there is a historic property present and it is affected by the undertaking, the EPC will proceed to Step 3 to assess effects.

#### **3. Assess Adverse Effects (36 CFR § 800.5)**

If SDDOT identifies historic properties in the APE, it must determine the effect of the project on the historic property. The criteria for determining an adverse effect is a systematic process of evaluating an undertaking that may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration is given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the NRHP. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. (36 CFR 800.5)

The EPC will make a determination of effects on historic properties (including places of traditional spiritual and cultural significance to Tribes) within the APE. All direct, indirect and cumulative effects must be considered. It may be necessary to re-assess the significant characteristics of properties that were listed or determined eligible prior to the beginning of the study.

The procedures for no adverse effect and adverse effect findings are described below:

- ▶ No Adverse Effect Finding
  - ◆ The EPC notifies FHWA and the SHPO/THPO, Tribes, and/or consulting parties, providing documentation in accordance with 36 CFR Part 800.11.
  - ◆ The SHPO/THPO, Tribes and/or consulting parties have 30 days to comment or object to the finding. If no objection

is stated or response provided after 30 days, the project may proceed.

- ◆ The EPC will consult with any objecting parties to resolve.
- ◆ FHWA may seek ACHP's opinion. Tribes may request ACHP review and comment. ACHP has 15 to 30 days to offer its opinion.
- ◆ FHWA will make a final decision and report the decision to the SHPO/THPO, Tribes and/or consulting parties. Section 106 consultation is complete, and the project may proceed. The EPC documents the No Adverse Effect determination in the project file and applicable NEPA documents.

► Adverse Effect Finding

- ◆ The EPC submits adverse effects findings to SHPO/THPO, Tribes, and/or consulting parties and they have 30 days to comment or object to the finding. If no objection is stated or response provided after 30 days, the project may proceed.
- ◆ The EPC documents the adverse finding by preparing notice to ACHP of Finding of Adverse Effect, using an e-106 form and FHWA submits to ACHP. This form serves as notice of the project and invites ACHP participation in the review. Although ACHP has 15 days to decide whether to participate in the process, it may enter the process at any time at its discretion.
- ◆ The EPC and FHWA consult with SHPO, THPO, Tribes, and/or consulting parties to develop a plan to avoid, minimize or mitigate adverse effects.
- ◆ The adverse finding is documented and the EPC and FHWA notifies all consulting parties and makes the finding available to the public. The EPC documents the finding in the Environmental Project Tracking

Database, project file, and applicable NEPA document, providing the date the finding was received and attaching SHPO/THPO documentation.

If adverse effects are found, SDDOT documents the findings as set forth in 36 CFR § 800.11(e), sends documentation to SHPO/THPO and consulting parties, and makes the documentation available to the public using SDDOT's [Public Involvement Plan](#), subject to the confidentiality provisions of 36 CFR § 800.11(c). FHWA sends the documentation to the ACHP and invites them to participate in the Section 106 process. The EPC will coordinate with FHWA and ACHP for any actions resulting in "Adverse Effect" findings. See Step 4.

**4. Resolve Adverse Effects (36 CFR § 800.6)**

Once adverse effects are determined, SDDOT and FHWA must work with the consulting parties to resolve differences. The EPC and FHWA consult with the SHPO or THPO and other consulting parties to develop and evaluate alternatives or modifications that could avoid or minimize adverse effects to historic properties. FHWA is ultimately responsible for deciding what actions, if any, should be taken to avoid, minimize or mitigate the adverse effects. FHWA and SDDOT involve the consulting parties to consider alternative methods to avoid or minimize effects. The top priority is to avoid 4(f) properties, which include NRHP eligible/listed properties. If avoidance cannot occur other alternatives are considered to minimize the impact. Avoidance or minimization alternatives may include options such as alignment shifts, design changes, or developing landscaping or screening for visual impacts. Finally, mitigation for the adverse effect must be considered if avoidance or minimization are not feasible or prudent. Mitigation measures are also considered as ways to resolve adverse effects by finding ways to offset or compensate for the negative effects. Mitigation may take many forms and creative approaches are

encouraged. Examples of mitigation may include but are not limited to: relocating a historic bridge to a new site, conducting archeological data recovery or intensive historic building documentation, providing interpretive or educational material and documenting and/or salvaging materials in the case of a demolition. The consulting parties may enter into a formal agreement with FHWA and SDDOT through an MOA or Programmatic Agreement to set forth the mitigation measures. If there is not agreement, FHWA issues a resolution comment, outlining the issues and the failure to resolve them. Consulting parties may appeal the decision to the ACHP for final resolution.

- ▶ **4a Memorandum of Agreement or Programmatic Agreement**—Resolution of adverse effects involves preparation of an MOA or Programmatic Agreement among the SHPO/THPO, Tribes, and/or the invited consulting parties that outlines how adverse effects will be addressed and resolved. Draft agreements are sent to the SHPO/THPO, Tribes and invited consulting parties for review. ACHP should also be invited to participate in the agreement; though a signature from the agency is not required. Once all parties have provided input on the agreement, the EPC will prepare an MOA for signature first by SDDOT, then the SHPO/THPO, and finally FHWA prior to approval of the final environmental document. Required signatories are FHWA and SHPO/THPO, and SDDOT acts as a concurring signatory. FHWA forwards a copy of the MOA/Programmatic Agreement to ACHP within two weeks.

#### Common Definitions:

**Memorandum of Agreement** is used to resolve adverse effects to historic properties and conclude the Section 106 process when implementing a discrete project with identified adverse effects.

**Programmatic Agreement** is a program alternative that may be used to implement the Section 106 process for a complex project situation. Programmatic Agreements can be developed on a national, statewide, or regional scope for similar or repetitive undertakings, for undertakings with repetitive effects on historic properties, or for situations where the effects to historic properties cannot be fully determined prior to the approval of an undertaking.

[\[CEQ NEPA and NHPA A Handbook for Integrating NEPA and Section 106\]](#)

- ▶ **4B Resolution Comment or Decision by the ACHP**—SDDOT, FHWA, SHPO, THPO, or ACHP may terminate consultation when an agreement cannot be reached to resolve adverse effects and when further consultation would not be productive [36 CFR 800.7(a)]. Possible outcomes are described, as follows:
  - ◆ If the SHPO terminates, SDDOT, FHWA, and ACHP may execute the MOA.
  - ◆ If SDDOT, FHWA, or ACHP terminate, the Tribes are notified by FHWA and ACHP issues comments to the head of FHWA with copies to the SHPO and the Tribes.
  - ◆ If THPO terminates, the ACHP issues comments to the SHPO and FHWA.
  - ◆ FHWA will consider ACHP comments and make a final decision.
  - ◆ SDDOT and FHWA gives notice of its decision to all consulting parties and proceeds.

If any party is not satisfied by the outcome, the ACHP is asked to make a final decision.

## **5. Documentation in Project File and Applicable NEPA Document**

Documenting the consultation process is important in the Section 106 process, as well as for NEPA and Section 4(f). EPC documents the coordination and findings throughout the Section 106 process in the project file and applicable NEPA document, including the MOA/Programmatic Agreement or termination of consultation (if applicable). CE Checklist information should include the date of MOA/Programmatic Agreement implementation and if cultural resources will be impacted. EPC sends CE Checklist to FHWA for signature. A copy of Section A Plan Notes, Commitment O, M1 and I are provided to Design for incorporation into the Final Plan set.

## **6. Monitor Implementation Stipulations**

Protecting historic, archeological and cultural resources during construction is an important priority for SDDOT. All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas. Refer to *Section A Plan Notes, Commitment I* for details on actions required for SHPO clearances for earth disturbing activities. Even after these required actions have taken place, extra precautions may be taken during construction or as mitigation stipulations including having an inadvertent discovery plan in place, a plan to avoid known sites, and/or an archaeological monitoring plan in areas where survey prior to construction cannot be completed.

**Post-review (or Inadvertent) Discoveries**—The Project Engineer ensures compliance with the plans and specifications by monitoring and exercising stop-work orders in the event of an

inadvertent discovery, as required by Section 106, SDCL 34-27 and other federal laws. If human remains are inadvertently discovered, the Contractor will follow the [\*Procedures for Inadvertent Discovery of Human Remains\*](#), as prescribed by state law.

If historic properties are discovered or unanticipated efforts on historic properties are found after the SDDOT has completed the Section 106 process, the project undertaking shall avoid, minimize, or mitigate the adverse effects to such properties and notify the SHPO/THPO, and Tribes that might attach religious and cultural significance to the affected property, within 48 hours of discovery, pursuant to 36 CFR 800.13. If an inadvertent discovery is made of an unevaluated resource, that resource will need to be evaluated with respect to NRHP criteria to determine if it is a historic property.

**Cultural Monitoring—Stipulations and/or Avoidance**—For projects where stipulations are identified, such as cultural monitoring or where avoidance of historic or archeological sites is needed, EPC will document the name or structure, location or project in project file and appropriate NEPA document. For ECC see Commitment O.

If a sacred site or TCP of spiritual or cultural significance is identified by the cultural monitor prior to project construction activities, then the tribal monitor will notify the Project Engineer. The Project Engineer, in consultation with the EPC and EO will work with the THPO and/or cultural monitor, to determine the appropriate course of action.

If a sacred site or TCP of spiritual or cultural significance is identified by the cultural monitor during project construction activities, the cultural monitor will notify the Project Engineer and activities will be immediately halted. The Project Engineer, in consultation with the EPC/EO, ARC,

THPO and/or cultural monitor, and SHPO, will determine the appropriate course of action.

**Archeologically Sensitive Sites**—Locations of archaeological sites are protected by state law ([SDCL 1-20-21.2](#)). Materials that contain information on the location of archaeological sites are not for public distribution. For projects where archeologically, sensitive sites that require avoidance during construction activities have been identified, the EPC will document in project file and appropriate NEPA document and provide a map with hatched area to help visualize the sensitive area without revealing the exact location of the site. All artifacts, features, and other items of archeological or paleontological interest that are uncovered by project construction activities will not be displaced unless THPO and SHPO consent to it.

The Contractor will notify the ARC and THPO one week before installing the safety fence so that an archeologist and tribal monitor can be present to ensure the proper location, quality, and visibility of the safety fence. The locations and boundaries of the site(s) for avoidance are shown in Section B, Grading Plans.

The Contractor will notify the ARC and THPO one week before any earth-disturbing activities near the archeological sites so that an archeologist and cultural monitor can be present to monitor the removal of topsoil, ensure avoidance of the fenced sites, and identify any cultural resources that may be uncovered during earth-disturbing activities.

### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to historical and archeological resources are presented by agency, with executive orders presented first.

### **Executive Orders**

Consultation and Coordination with Indian Tribal Governments (Executive Order 13175) – Executive Order 13175, issued in 2000, charges all executive departments and agencies with engaging in regular, meaningful, and robust consultation with Tribal officials in the development of Federal policies that have Tribal implications, including transportation.

### **Presidential Memorandums**

**Tribal Consultation and Strengthening Nation-to-Nation Relationships** – The Presidential Memorandum of January 26, 2021, requires agencies to submit detailed plans of action to implement the policies and directives of Executive Order 13175.

**Uniform Standards for Tribal Consultation** – The Presidential Memorandum of November 30, 2022, establishes a uniform minimum standard to be implemented across all agencies regarding how Tribal consultations are to be conducted. When consultation is necessary, the Agency point of contact should develop a notice of consultation with at least a 30-days' notice, conduct the consultation with mutual sovereign recognition and respect, and record the consultation.

### **Advisory Council on Historic Preservation**

**NEPA and NHPA: A Handbook for Integrating NEPA and Section 106**— The regulations that implement Section 106 of NHPA encourage Section 106 consultations to be coordinated with other statute requirements, such as NEPA. This handbook provides advice on both coordination of the Section 106 and NEPA reviews and the substitution of the NEPA reviews for the Section 106 process. [\[NEPA and NHPA A Handbook for Integrating NEPA and Section 106\]](#)

**Protection of Historic Properties (36 CFR 800)**— [Section 106](#) of NHPA requires federal agencies to consider the effects of their actions on historic properties and afford ACHP a reasonable opportunity to comment on such undertakings.

Procedures in this part define how federal agencies meet these statutory responsibilities.

**Effect of Federal Undertakings upon Property Listed in NRHP; Comment by the ACHP ([16 USC 470f](#))**—This section of USC outlines requirements for considering the effect of an undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP. It directs the head of any federal agency that has direct or indirect jurisdiction over a proposed federal or federally assisted undertaking in any state and the head of any federal department of an independent agency that has authority to license any undertaking to afford ACHP a reasonable opportunity to comment before expending funds.

#### Department of the Interior

**Archeological Resources Protection (16 USC Chapter 1B)**—The Archaeological Resources Protection Act ([16 USC Chapter 1B](#)) of 1979, as amended, establishes uniform definitions, standards, and procedures that federal land managers must follow to provide protection of archeological resources that are located on public and Indian lands of the U.S. Protection of Archaeological Resources: Uniform Regulations ([18 CFR 1312](#)) provide implementing regulations that define permit requirements for actions affecting archeological resources on public and Indian lands. SDDOT would need to follow these procedures for transportation projects on federal lands.

**Native American Graves Protection and Repatriation Regulations ([43 CFR 10](#))**—The Native American Graves Protection and Repatriation Act of 1990 provides regulations that develop a systematic process for determining the rights of lineal descendants and Indian Tribes and Native Hawaiian organizations to certain Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony with which they are affiliated.

SDDOT would need to follow these procedures for transportation projects on federal lands.

**Determinations of Eligibility for Inclusion in the NRHP of Historic Places ([36 CFR 63](#))**—These regulations assist federal agencies in identifying and evaluating the eligibility of properties for inclusion in the NRHP. The regulations explain how to request determinations of eligibility under section 2(b) of Executive Order 11593 and the regulations of ACHP (36 CFR part 800) for implementation of sections 1(3) and 2(b) of Executive Order 11593 and NHPA of 1966.

**Secretary Standards for Archeology and Historic Preservation**—The U.S. Department of the Interior-NPS maintains a website that sets forth the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

**Federal Highway Administration Interpretation of Title 23, Section 144(o) Reasonable Costs Associated with the Demolition of Historic Bridges**—The [FHWA website](#) provides a memorandum dated August 26, 2001, that addresses and clarifies conflicts between Sections 144(o) Historic Bridge Program and Section 133(b) Transportation Enhancement Activities and Historic Bridges.

**Historic Bridge Program (23 USC 144[o])**—National Bridge and Tunnel Inventory and Inspection Standards ([23 USC144](#)) set forth provisions requiring states to inventory and maintain all bridges and tunnels that are on and off the federal-aid highway system. The standards include a provision to determine the historical significance and encourage the retention, rehabilitation, adaptive re-use, and future study of historical bridges included on or eligible for inclusion on the NRHP.

**FHWA Technical Advisory T 6640.8A**—The [FHWA Technical Advisory T 6640.8A](#), dated October 30,

1987, provides the following guidance for addressing historic and archeological preservation:

Historic and archeological resources must be identified and evaluated in accordance with the requirements of 36 CFR 800.4 for each alternative that is under consideration in the environmental document. The information and effort level that is needed to identify and evaluate historic and archeological resources varies from project to project and is determined by FHWA after considering existing information, the views of SHPO, and the Secretary of Interior's "Standards and Guidelines for Archeology and Historic Preservation."

The discussion in the environmental document should briefly summarize the following items:

- ▶ The methodologies used in identifying historic and archeological resources
- ▶ The impacts of each alternative, proposed mitigation measures for each resource, and documentation of coordination with the SHPO on the significance of newly identified historic and archeological resources
- ▶ The eligibility of historic and archeological resources for the NRHP
- ▶ The effects of each alternative on both listed and eligible historic resources

The environmental document can allow ACHP an opportunity to comment pursuant to Section 106 requirements if the document contains the information required by 36 CFR 800.8. The letter transmitting the environmental documentation to ACHP should specifically request its comments pursuant to 36 CFR 800.6. To the fullest extent possible, the final environmental documentation must demonstrate that all the requirements of 36 CFR 800 have been met. If the preferred alternative has no effect on historic or

#### Common Definitions:

**Section 4(f) Property** includes publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance.

**OWJ** is official with jurisdiction over that resource for purposes of Section 4(f).

**Historic sites** include properties of spiritual and cultural importance to Indian Tribes, prehistoric and historic districts, sites, buildings, structures, or objects listed in, or eligible for, the NRHP.

**Use of a property** occurs when there is an adverse impact to, or occupancy of, a Section 4(f) property, whether temporary, permanent, or constructive.

**De minimis impact for historic sites** means that FHWA has determined, in accordance with 36 CFR part 800 (Section 106 regulations) that no historic property is affected by the project or that the project will have "no adverse effect" on the historic property in question. For parks, recreation areas, and wildlife and waterfowl refuges, a de minimis impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

**Least overall harm** means if there is no feasible or prudent avoidance alternative that meets purpose and need, FHWA may only approve the alternative that causes the least overall harm to the Section 4(f) property, when taking into consideration mitigation efforts. A list of all factors to be considered when determining least overall harm is provided in 23 CFR 774.3(c).

All definitions above are cited at 23 CFR 774.17.

archeological resources sites on, or eligible for, the NRHP, the final environmental documentation should indicate coordination and agreement with SHPO. If the preferred alternative has an effect on resource sites on, or eligible for, the NRHP, the final environmental documentation should contain the following information: (1) a determination of no adverse effect concurred in by ACHP, (2) an executed MOA, (3) in the case of a rare situation where

FHWA is unable to conclude the MOA, a copy of comments transmitted from ACHP to FHWA and FHWA's response to those comments. The proposed use of land from an historic resource on or eligible for the NRHP will normally require an evaluation and approval under Section 4(f) of the DOT Act. Section 4(f) also applies to all archeological sites on or eligible for the NRHP and that warrant preservation in place. See Section 4[f]).

### State of South Dakota

#### South Dakota Administrative Rules (ARSD)

- ▶ ARSD [24:52:06](#) State register of historic places.
- ▶ ARSD [24:52:07](#) Standards for continued listing on the state register
- ▶ ARSD [24:52:10](#) Deadwood historic preservation fund
- ▶ ARSD [24:52:13](#) Project review.
- ▶ ARSD [24:52:16](#) Heritage area designation

#### South Dakota Codified Laws

[SDCL 1-19A](#) **Preservation of Historic Sites**—outlines the state's historic preservation program. Similar to Section 106 of NHPA, the role of the SHPO in the state preservation law SDCL 1-19A-11.1 is to comment on projects with the potential to damage, destroy, or encroach upon any historic property listed on the state or the NRHP.

[SDCL 1-19B](#) **County and Municipal Historic Preservation Activities**—At the local level, SDCL 1-19B provides the authority for county and municipal historic preservation activities. SDCL 1-19B enables local governments to establish historic preservation commissions, designate historic properties by local ordinance, and protect historic properties through local design review procedures.

[SDCL 34-27-25](#) Reporting discovery of human skeletal remains

[SDCL 34-27-28](#) Notification to landowner and coroner

[SDCL 34-27-31](#) Discovery of human remains or funerary objects by state educational institution or museum

#### State Historic Preservation Office

[Statewide Preservation Plan 2021-2025](#)—In South Dakota, the SHPO, one of five program areas of the State Historical Society, is responsible for implementing the state's preservation program. SDCL 1-19A, entitled Preservation of Historic Sites, outlines the state's historic preservation program. The Plan outlines the purposes and policies of the NHPA but provides a statewide and local perspective on issues relating to South Dakota.

### U.S. Department of Transportation

**Section 4(f) of the USDOT Act (23 USC 138; 49 USC 303)**—Section 4(f) applies to projects or programs that involves funding or approvals from USDOT. It provides that the Secretary of USDOT may approve a transportation program or project that requires use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance only if the following applies: (1) there is no feasible and prudent alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from use. Implementing regulations are provided in [23 CFR 774](#).

**Authorization:** Section 4(f) of the USDOT Act established the requirement for consideration of publicly owned park and recreation land, wildlife and waterfowl refuges, and historic sites during transportation project development. The law, now codified in 49 USC §303 and USC §138, is implemented by FHWA through the regulation 23 CFR §774. Section 4(f) applies to projects that receive funding or require approval by an agency of the USDOT, including FHWA.

**AASHTO Practitioner’s Handbook 6 Consulting under Section 106 of the National Historic Preservation Act**—AASHTO published the Practitioner’s [Handbook 6](#), Consulting under Section 106 of the National Historic Preservation Act, in August 2016. This handbook provides recommendations for complying with Section 106 of the NHPA during the environmental review process for transportation projects and covers the following topics with Section 106:

- ▶ Preparing for Section 106 consultation
- ▶ Defining an APE
- ▶ Inviting consulting parties
- ▶ Evaluating eligibility for NRHP
- ▶ Determining adverse effects
- ▶ Resolving adverse effects
- ▶ Developing MOA and programmatic agreements
- ▶ Using alternative procedures to satisfy Section 106 requirements

## 4.6 Section 4(f) – Historic

Section 4(f) of the USDOT Act of 1966 provides protection to publicly owned parks, recreation areas (including recreational trails), wildlife or wildfowl refuges, or any publicly or privately-owned historic site listed or eligible for listing on the NRHP. The law only applies to USDOT agencies. Compared to the many procedural environmental laws that apply to federal highway actions, Section 4(f) is a substantive law that precludes project approval if there is a use of a

Section 4(f) property when a prudent and feasible avoidance alternative is available. This section defines key terms used in compliance with Section 4(f) regulations, introduces the applicable authority, and describes the environmental commitments for compliance with Section 4(f). The process for projects involving Section 4(f) properties is illustrated on **Figure 14**, summarized in **Table 17**, and described in further detail throughout the rest of this section. Relevant regulations are cited at the end of the section for further reading. Many environmental laws, including NEPA, are procedural, complying when one adheres to the procedures regardless of the outcome. In contrast, Section 4(f) is a substantive law. It prohibits certain types of decisions from being made. It focuses on the substance of a USDOT decision and includes an obligation to make a specific finding or determination. As a substantive law, Section 4(f) can block an action, regardless of how thoroughly the action has been studied.



An aerial view of Badlands National Park in western South Dakota. (SDDOT)

Section 4(f) applies to projects that are approved by any USDOT agency. Section 4(f) properties include significant publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately-owned historic site listed or eligible for listing in the NRHP. The statute prohibits the use of a Section 4(f) property unless the USDOT agency can demonstrate that:

- ▶ There is no feasible and prudent avoidance alternative to the use of land; and
- ▶ The action includes all possible planning to minimize harm to the property resulting from such use.
- ▶ The Administration determines that the use of the property will have a de minimis impact.

Figure 14. Section 4(f) Process

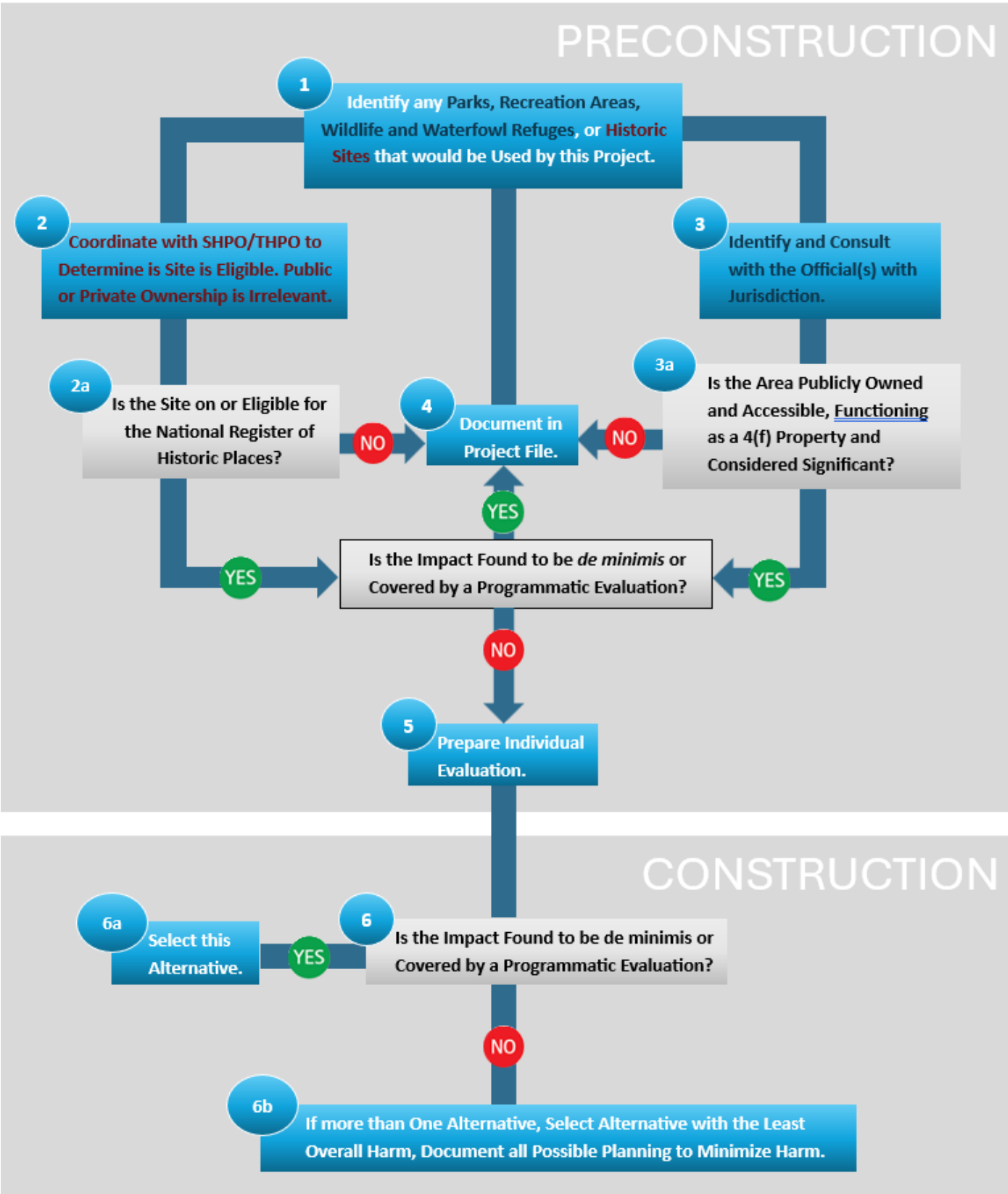


Table 17. Steps in the Section 4(f) Process

| Step                                                                                                                                  | Participant(s)             | Result(s)                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                                                                                                |                            |                                                                                                                                                                                                                                                                                   |
| 1. Identify any parks, recreation areas, wildlife and waterfowl refuges, or historic sites that would be used by the project          | EPC, ARC, agencies, Tribes | ARC, Agency and Tribal Letters, Environmental Project Tracking Database                                                                                                                                                                                                           |
| 2a. Coordinate with SHPO/THPO to determine if site is eligible. Public or private ownership is irrelevant                             | EPC, SHPO                  | Response letters, significance/ eligibility documented in project file, SHPO concurrence letter, Environmental Project Tracking Database Response letters, significance/ eligibility documented in project file, SHPO concurrence letter, Environmental Project Tracking Database |
| 3a. Identify and consult with the official (s) with jurisdiction                                                                      | EPC, OWJ                   | Newspaper ad, OWJ concurrence letter, FHWA approval letter (email), Environmental Project Tracking Database                                                                                                                                                                       |
| 4. Document in project file                                                                                                           | Design, FHWA, EPC, Public  | Document in project file, CE Checklist and ECC, EA/FONSI, EIS/ROD, copy of Section A Plan Notes (if applicable) to Design to incorporate into Final Plan set                                                                                                                      |
| 5. Prepare Individual Evaluation                                                                                                      | EPC, FHWA, Design/ROW      | Draft Evaluation, FHWA approval letter, Public Involvement Plan, Final Evaluation                                                                                                                                                                                                 |
| <b>Construction</b>                                                                                                                   |                            |                                                                                                                                                                                                                                                                                   |
| 6a. Select this Alternative                                                                                                           | EPC, Design/ROW            | Document in project file, CE Checklist and ECC, EA/FONSI, EIS/ROD, copy of Section A Plan Notes (if applicable) to Design to incorporate into Final Plan set                                                                                                                      |
| 6b. If more than one Alternative, Select the Alternative with the Least Overall Harm, Document all Possible Planning to Minimize Harm | EPC, Design/ROW            | Document in project file, make necessary changes to Section 4(f) use                                                                                                                                                                                                              |

Notes: ARC – State Archeological Research Center CE – Categorical Exclusion, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FONSI – Finding of No Significant Impact, FHWA – Federal Highway Administration, OWJ – Official with Jurisdiction, ROD – Record of Decision, ROW – Right of Way, SHPO – State Historic Preservation Office

### *Overview of Section 4(f) Historic Resources in the Project Planning Process*

The Section 4(f) Historic Resources section in the Environmental Screening Report is intended to identify Section 4(f) Historic Resources in the planning study area and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, review of Section 4(f) Historic Resources in the planning area shall occur through desktop review of online tools including preliminary survey, aerial photography, the NRHP database, USGS quadrangle maps, and other available survey data.

**Existing Conditions** – Section 4(f) Historic Resources that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field work efforts. Because resources can change over time, it is vital to verify the Planning Phase information and supplement it, as appropriate, during the NEPA Phase of a project. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

### *Overview of Section 4(f) Historic Resources in the Project Development and Delivery Process*

The Section 4(f) process involves a sequence of understanding the implications of proposed transportation projects and evaluating the impacts properly. It begins with identifying Section 4(f) properties, determining the use of the properties, considering avoidance and minimization and evaluating the proposed

project. The information was derived from the following resources: the 2012 FHWA Section 4(f) Policy Paper, the AASHTO Center of Excellence Section 4(f) Overview, and the FHWA Section 4(f) Tutorial.

#### **Identifying 4(f) Properties**

In addressing Section 4(f), transportation agencies must first determine whether Section 4(f) properties are involved. Properties protected under Section 4(f) are publicly owned public parks, recreation areas and wildlife and waterfowl refuges, as well as historic sites of national, state, or local significance (whether publicly or privately owned).

**Parks and Recreational Areas, and Wildlife and Waterfowl Refuges.** These 4(f) properties are of national, state, or local significance that are both publicly owned and open to the public. The OWJ is the land manager, such as USFS, Bureau of Land Management, NPS, or SDGFP. To qualify as a park, recreation area, or refuge under the statute, a property must meet all of the following criteria:

- ▶ Publicly owned; are owned by a federal, state or local government agency. It may be through fee simple ownership or easement, or through a long-term lease agreement for 4(f) purposes
- ▶ Open to the public, being accessible to the general public during its normal operating hours. Does not apply to refuges, when certain restrictions apply to protect species/habitat
- ▶ Major purpose must be for park, recreation, or refuge activities
- ▶ Significance means that in comparing the availability and function of the property with the park, recreation, or refuge objectives of the managing authority, the property in question plays an important role in fulfilling

those objectives (AASHTO Section 4(f) Overview).

**Nexus with Section 106 of the National Historic Preservation Act**— historic sites that are subject to Section 4(f) may require compliance with Section 106 and implementing regulations in 36 CFR 800.

**Nexus with Section 6(f) of Land and Water Conservation Fund Act**— parks and recreational areas that are subject to Section 4(f) may also require compliance with Section 6(f) and implementing regulations in 36 CFR 59.

**Historic Sites.** These 4(f) properties are of national, state, or local significance in public or private ownership regardless of whether they are open to the public. Historic sites are also referred to as cultural resources. The OWJ is the SHPO/THPO and the ACHP, when appropriate. Examples of the types of historic sites include: historic transportation facilities, archeological sites, traditional cultural places, historic and archeological districts, and historic trails. To qualify for protection under Section 4(f), a historic site must meet the following criteria:

- ▶ Historic sites of national, state, or local significance, regardless of whether the property is publicly owned or privately owned
- ▶ Eligible for listing in the NRHP as determined by FHWA in consultation with the SHPO, THPO, and/or tribes during the compliance step of Section 106 of the NHPA.

#### Determining the Use of Section 4(f) Property

Use of a Section 4(f) property occurs when (1) land is permanently incorporated into a transportation project; (2) there is a temporary occupancy and 4(f) property is required for project construction-related activities; or (3) there is a constructive use, as addressed in 23 CFR 774.15.



Truss bridge in Hand County that was built in 1913 by the Iowa Bridge company out of Des Moines, Iowa. (SDDOT)

The first consideration of a use is whether it is exempt from Section 4(f) regulations, as is or through application of avoidance or minimization.

**4(f) Exception.** USDOT has identified various exceptions to the requirements of Section 4(f), identified in 23 CFR 774.13. Exceptions do not require public involvement or require analysis of avoidance alternatives.

**Interstate Highway Exemption.** Section 6007 of SAFETEA-LU exempts most of the Interstate Highway System from being considered as a Section 4(f) property. This exemption applies to the entire Interstate System, except for specific facilities designated by FHWA as having national and/or exceptional significance (AASHTO Interstate).

If the property is not exempt from 4(f) consideration, the use of a property is defined in three possible scenarios (23 CFR 774.15):

- ▶ Permanent Incorporation/Permanent Easement
  - ◆ Permanent Incorporation involves a ROW acquisition of Section 4(f) land as part of a transportation project.
  - ◆ Permanent Easement involves the acquisition of a permanent easement by SDDOT on the Section 4(f) property for transportation or related purposes.

When selecting an alternative the most important point to remember is **if an avoidance alternative is determined to be feasible and prudent, it must be selected.**

An alternative is not **feasible** if it cannot be built as a matter of sound engineering judgment. It is not **prudent** if it compromises a project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need, is unacceptably unsafe or causes severe impacts 23 CFR 774.17.

- ▶ Temporary Occupancy—During the construction of a highway project, a temporary occupancy of a Section 4(f) property may be necessary for activities such as regrading slopes or to provide staging or access areas. Once the easement is no longer needed, the Section 4(f) property must be restored to the condition in which it was originally found. The Temporary Occupancy Exemption is not automatic and must meet the following criteria, otherwise a de minimis programmatic or individual 4(f) is required.

- (1) Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- (2) Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
- (3) There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
- (4) The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and

- (5) There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

- ▶ Constructive Use—Constructive use involves an indirect impact to the Section 4(f) property of such magnitude as to effectively act as a permanent incorporation. Here the project does not physically incorporate the resource but is close enough to it to severely impact important features, activities or attributes associated with it, and to substantially impair it (such as through severe visual, noise or vibration impacts).

### Considering Avoidance and Minimization

Before an alternative involving the use of a Section 4(f) resource can be selected, avoidance alternatives and minimization measures must be considered. For determining de minimis impacts, avoidance, minimization and mitigation measures should all be taken into account. Avoidance alternatives are those that totally avoid the use of Section 4(f) properties while meeting the defined project needs; minimization measures are efforts to minimize the impact of a project on a Section 4(f) property. Minimization measures may include mitigation, which is compensation for Section 4(f) impacts that cannot be avoided. Mitigation may entail replacement of Section 4(f) property or facilities.

**Avoidance.** Avoidance alternatives are those that entirely avoid the use of Section 4(f) properties. A key requirement of Section 4(f) compliance is an attempt to show whether a property can be completely avoided while meeting the transportation need. When the alternatives under consideration use land from one or more Section 4(f) properties, alternatives that avoid each of the properties must be evaluated.

Avoidance alternatives should consider minor alignment shifts, reduced cross-sections,

retaining structures, modifications to the project and so forth. Avoidance alternatives that are eliminated from detailed study should be discussed in the Section 4(f) Evaluation with a clear explanation of why they are not feasible and prudent (FHWA 4(f) Avoidance).

**Minimization.** Once it has been determined that no feasible and prudent avoidance alternative exists, minimization efforts should be pursued. Minimization entails measures to reduce the impact to Section 4(f) properties. If multiple alternatives under consideration result in use of Section 4(f) property and no feasible and prudent avoidance alternatives exist, the alternative that will cause the least overall harm (after factoring in mitigation measures) must be selected.

The least overall harm determination provides SDDOT with a way to compare and select between alternatives that would use different types of Section 4(f) properties when competing assessments of significance and harm are provided by the officials with jurisdiction over the impacted properties (FHWA 4(f) Minimization).

**Mitigation.** After all minimization efforts have been explored, mitigation measures are typically pursued. Mitigation entails measures to compensate for a Section 4(f) impact that cannot be avoided and should be developed in consultation with the official(s) with jurisdiction. Mitigation may entail replacement of land and facilities of comparable value and function, monetary compensation that can be used to enhance the remaining property around a Section 4(f) property, placement of vegetative buffers and screening of the project area, or documentation for educational or interpretive purposes.

Mitigation of historic sites usually entails measures that have been designed to preserve the historic integrity of the site and that have been agreed upon—in accordance with the

regulations implementing Section 106 of the NHPA (36 CFR, Part 800).

The cost of mitigation should be a reasonable public expenditure in light of the severity of the impact on the Section 4(f) resource (FHWA 4(f) Mitigation).

### Evaluation of the Proposed Project

**De minimis Impact** means that FHWA has determined, in accordance with 36 CFR part 800 that no historic property is affected by the project or that the project will have "no adverse effect" on the historic site in question. For parks, recreation areas, and wildlife and waterfowl refuges, a de minimis impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).  
(23 CFR 774.7(b))

Once opportunities to avoid, minimize or mitigate impacts to Section 4(f) properties is examined in the planning of the transportation project, an evaluation is made to demonstrate the minimization of harm to the property. The first consideration is whether a *de minimis* impact determination can be made for the transportation project. If a project would have a greater than de minimis impact, either a programmatic or individual written evaluation must be made.

**De minimis.** *De minimis* impacts are those that, after consideration of any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), do not adversely affect the activities, features or attributes of the Section 4(f) property. A *de minimis* determination fulfills all Section 4(f) requirements. When a *de minimis* impact is determined, an evaluation of avoidance alternatives and whether they are feasible and prudent is not required. However, it is still necessary to implement measures to minimize harm (which must be

considered when determining whether the impact is *de minimis*). A *de minimis* determination cannot be made when there is a constructive use since such a use, by definition, involves impacts to a Section 4(f) resource such that the protected activities, features, and attributes would be substantially impaired (AASHTO *de minimis* impacts).

According to FHWA, if the use would have a greater than *de minimis* impact on the property, a written evaluation must be prepared and submitted to FHWA for approval. There are two types of evaluations—an individual evaluation (otherwise known simply as an evaluation) and a programmatic evaluation. An individual evaluation may be submitted either as an independent document (for CEs) or as a section of an EIS or an EA/FONSI.

A programmatic evaluation may be used only for projects that meet the application criteria of one of the five nationwide programmatic evaluations that have been approved by FHWA.

Both types of evaluations describe the Section 4(f) property, the proposed use of the property, avoidance and minimization alternatives, other impacts associated with the alternatives, coordination with the official(s) with jurisdiction, and measures to minimize harm.

**Programmatic 4(f) Evaluation.** Programmatic Section 4(f) evaluations are meant to be a time-saving procedural option to be used in place of individual evaluation for certain types of transportation projects and specific uses. Despite their differences, programmatic and individual evaluations are similar in their coordination with FHWA and officials with jurisdiction.

Five existing Nationwide Programmatic Section 4(f) evaluations can be used in place of

individual evaluations for certain types of highway projects and specific uses:

- ▶ Independent bikeway or walkway construction projects
- ▶ Use of historic bridges
- ▶ Minor involvement with Historic Sites
- ▶ Minor involvement with Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges
- ▶ Transportation projects that have a Net Benefit to a Section 4(f) property (FHWA Section 4(f) Programmatic Evaluations)

**Individual 4(f) Evaluation.** An individual Section 4(f) evaluation is processed in two phases—a draft and a final—both of which must be submitted to the FHWA Division Office or Federal Lands Division Office for review and approval. The final Section 4(f) evaluation is subject to a legal sufficiency review by FHWA's Office of Chief Counsel.

For projects processed with an EIS or EA, the evaluation should typically be submitted as a subsection of the NEPA document where pertinent summaries from various sections are included. When putting an evaluation together as part of the NEPA document, make sure the Section 4(f) information is consistent with other references and information throughout the rest of the NEPA documentation.

For projects eligible as a CE, the Section 4(f) evaluation should be a separate document. Other projects that require the Section 4(f) evaluation to be submitted separately include those with design changes that were made after the CE, FONSI or ROD was processed, and those in which design modifications substantially increase the use of Section 4(f) property after the original Section 4(f) approval.

Regardless of whether the Section 4(f) evaluation is processed independently or as a subsection of

a NEPA document, the project sponsor must submit a draft that (1) identifies and evaluates prudent and feasible avoidance alternatives and, if required, (2) identifies and evaluates measures to minimize harm to the Section 4(f) property (FHWA Section 4(f) Individual Evaluations).

### Feasible and Prudent Avoidance Alternatives

When selecting an alternative the most important point to remember is **if an avoidance alternative is determined to be feasible and prudent, it must be selected.**

A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.

The regulations 23 CFR 774.17 set out factors to consider in determining whether an avoidance alternative is feasible and prudent:

An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.

An alternative is not prudent if:

- ▶ It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
- ▶ It results in unacceptable safety or operational problems;
- ▶ After reasonable mitigation, it still causes severe social, economic, or environmental impacts; severe disruption to established communities; severe disproportionate impacts to minority or low-income populations; or severe impacts to environmental resources protected under other federal statutes;

- ▶ It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
- ▶ It causes other unique problems or unusual factors; or
- ▶ It involves multiple factors specified above, “that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.”

### Least Overall Harm Alternative

If there is no feasible and prudent avoidance alternative, FHWA may approve from among the remaining alternatives that use Section 4(f) property, only the alternative that causes the least overall harm. The least overall harm alternative is determined by balancing several factors set forth in 23 CFR §774.3[c](1), as follows:

- (i) The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);
- (ii) The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
- (iii) The relative significance of each Section 4(f) property;
- (iv) The views of the official(s) with jurisdiction over each Section 4(f) property;
- (v) The degree to which each alternative meets the purpose and need for the project;
- (vi) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- (vii) Substantial differences in costs among the alternatives.



City park in Lennox, South Dakota. (SDDOT)

The procedures for SDDOT projects involving Section 4(f) properties are illustrated on **Figure 14**, summarized in **Table 17**, and are further described in the narrative following the table.

### *Section 4(f) Process Description*

#### **1. Identify any Parks, Recreation Areas, Wildlife and Waterfowl Refuges, or Historic Sites that would be used by the project**

Upon receipt of the Approved Scope, the EPC conducts a desktop review to determine if there are potential 4(f) properties in the project area. The desktop review includes but is not limited to accessing GIS layers, aerial photography, and PONTIS software (for historic bridges). This initial review is used to identify publicly owned parks, recreation areas, or wildlife or waterfowl refuges, and the extent of the property within the project area. Historic sites listed in the NRHP or eligible for it and of national, state, or local significance in public or private ownership are eligible for Section 4(f) consideration. A resource that meets the definition of 4(f) consideration is significant unless the OWJ indicates that the entire property is not significant.

The EPC sends letters to the (1) ARC, requesting a cultural resource survey, (2) SDGFP, and (3) Tribes to identify the potential for 4(f) properties in the project area. This review and the response letters provide a preliminary evaluation of the potential for the project to involve 4(f)

properties. The letters and responses are documented in the Environmental Project Tracking Database.

#### **2A. Coordinate with SHPO/THPO to determine if site is eligible. Public or private ownership is irrelevant**

After identifying potential Section 4(f) historic properties under Step 1, EPC determines whether these properties are subject to Section 4(f) and whether the properties would be used by the project.

For purposes of Section 4(f), a historic site is significant only if it is on or eligible for the NRHP. The eligibility determination is made in accordance with Section 106 (see Section 3.1). In rare cases, FHWA may determine that Section 4(f) may apply to a property that is not historic if the local official formally provides information that supports a local significance. Once the Section 106 effects determination is made and SHPO or THPO concurrence letters have been received, the following will determine the type of 4(f) document to be prepared.

- ▶ If the concurrence identifies an archeological resource as important chiefly because of what can be learned by data recovery and has minimal value for preservation in place, the EPC shall document in the Environmental Project Tracking Database Section 4(f) exception 23 CFR 774.13(b)(1) applies.
- ▶ With a “No Historic Properties Affected” determination, the EPC shall document in the Environmental Project Tracking Database there is no Section 4(f) use related to historic properties.
- ▶ With a “No Adverse Effect” determination, a Section 4(f) de minimis impact determination is required. Go to Step 4.
- ▶ With a “Adverse Effect” determination, an Individual Section 4(f) document is required. Go to Step 5. Section 106 would continue concurrently with 4(f).

The nature of impacts on 4(f) resources in the project area can be estimated on a preliminary basis but impacts cannot be defined until the significance of the sites or eligibility for NRHP listing is determined.

Before a determination is rendered, it is necessary to have current ROW information. Historic properties are defined by their National Registry boundary. Design may need to be contacted to identify grade lines because final design may not be available at this point.

### **3A. Determine Use of Section 4(f) Parkland Properties**

For the purposes of Section 4(f), a park, recreational area or refuge is assumed to be significant unless the OWJ indicates it does not support significant activities, features, or attributes. The following will determine the type of 4(f) document to be prepared:

- ▶ If no park, recreation, or refuge is located within the project area, no Section 4(f) impact would occur, so the EPC documents this in project file.
- ▶ If in coordination with the OWJ, the park, recreation, or refuge area is determined to be “not significant,” the EPC will document in the Environmental Project Tracking Database and project file that a Section 4(f) exception applies per 23 CFR 774.13(c). Go to Step 8.
- ▶ If the project will only temporarily occupy land of a section 4(f) property such that the duration is temporary, scope of work is minor, there will be no adverse physical impacts, land will be returned to original condition, and the OWJ agrees, then the use meets exception under 23 CFR 774.13(d). Go to Step 8.
- ▶ If the project relates to park road, parkways, trails, paths, bikeways or sidewalks, exceptions under 23 CFR 774.13(e, f, or g) may apply. If FHWA concurs with the exception, go to Step 8.

- ▶ When a park, recreation, or refuge property is significant, but the use of the property will not impact features, attributes, or activities designated for the area. The use requires a de minimis impact determination. Go to Step 4.
- ▶ When a park, recreation, or refuge area will require a use after avoiding minimizing AND that use will impact significant features, attributes, or activities central to that property, an individual Section 4(f) document is required. Go to Step 5.

## **4. Document in Project File**

SDDOT Section 4(f) determination recommendations with FHWA concurrence or approval are needed prior to SDDOT certification or FHWA approval of the CE. The EPC documents the 4(f) approvals on the CE Checklist and ECC, noting exceptions under 23 CFR 774.13, the type of 4(f) property, and the type of use (permanent, temporary, or constructive). Section A Plan Notes, Commitment M1 will be sent to Design for inclusion in the Final Plan set.

## **5. Prepare Individual Evaluation**

If the proposed use does not meet the criteria for de minimis finding or programmatic evaluation, then an individual project Section 4(f) evaluation is required. The purpose of the individual 4(f) evaluation is to demonstrate:

- ▶ There is no feasible or prudent avoidance alternative to the use of land from the property (23 CFR 774.3)
- ▶ All steps were taken to minimize harm to the property (23 CFR 774.3[c])

If the project has met these requirements, then the EPC and Project Engineer prepares a draft evaluation, including the evaluation of avoidance alternatives, and submits a preliminary document for comment and for a preliminary FHWA Legal Sufficiency Review. The EPC prepares a

newspaper advertisement, and the draft is made available for public comment for a 45-day period. The EPC gathers comments and works with FHWA to address any issues. These reviews may be performed concurrently with the public review and comment period. Prior to making a Section 4(f) approval, the evaluation is to be provided to the OWJ, the Department of Interior, and if appropriate the Department of Agriculture and Department of Housing and Urban Development.

The EPC prepares the final evaluation and submits the evaluation document along with the public involvement plan to FHWA's legal counsel for legal sufficiency review. Following legal review, the Project Engineer signs the document and sends it to FHWA for final approval.

#### **6A. Select This Alternative**

Unless a *de minimis* finding or exception applies to a project, the EPC and Project Engineer review design alternatives to avoid or eliminate the use of potential 4(f) properties. Avoidance alternatives can include minor alignment shifts, local alternatives, design changes, or other actions. If there are alternatives that have not been considered or were not considered for 4(f) impacts, these options must be analyzed and documented in an effort to find a feasible and prudent avoidance alternative. If 4(f) properties can be avoided, the EPC and Project Engineer must select the alternative, document the finding and review it with FHWA. If the determination is that no feasible or prudent avoidance alternatives exist, this should be documented in the project file, before proceeding to Step 7, to find the alternative that will cause the least overall harm from the transportation project.

#### **6B. If more than one Alternative, select the Alternative with the Least Overall Harm,**

#### **Document all Possible Planning to Minimize Harm**

If there are no feasible and prudent alternatives that avoid the use of Section 4(f) property, the alternative that will cause the least overall harm (after factoring in mitigation measures) must be selected. Per 23 CFR 774.3, the factors involved in the least harm analysis are as follows:

- ▶ The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);
- ▶ The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
- ▶ The relative significance of each Section 4(f) property;
- ▶ The views of the official(s) with jurisdiction over each Section 4(f) property;
- ▶ The degree to which each alternative meets the purpose and need for the project;
- ▶ After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- ▶ Substantial differences in costs among the alternatives.

The EPC documents the least overall harm analysis and measures to minimize harm in the project file. If minimization and mitigation alternatives are proposed, the EPC will work with FHWA to determine the level of documentation required.

#### *Section 4(f) Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to the Section 4(f) process are presented by agency, with executive orders presented first.

Federal Highway Administration

**FHWA Section 4(f) Policy Paper**—The Section 4(f) Policy Paper of July 20, 2012, supplements FHWA’s regulations governing the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites for federal highway projects. Although these requirements are now codified at 23 USC 138 and 49 USC 303, this subject matter remains commonly referred to as Section 4(f) because the requirements originated in Section 4(f) of the USDOT Act. It also replaces FHWA’s 2005 edition of the document.

**FHWA Technical Advisory T 6640.8A**—The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance in Section IX on “Section 4(f) Evaluations - Format and Content.” A Section 4(f) evaluation must be prepared for each location within a proposed project before the use of Section 4(f) land is approved (23 CFR 771.135[a]). For projects processed with an EIS or an EA/FONSI, the individual Section 4(f) evaluation should be included as a separate section of the document, and for projects processed as CEs, as a separate Section 4(f) evaluation document.

**AASHTO Practitioner’s Handbook 11 Complying with Section 4(f) of the USDOT Act**—AASHTO published the Practitioner’s Handbook 11, Complying with Section 4(f) of the USDOT Act, in May 2009. This handbook manages all aspects of Section 4(f) compliance and covers the following topics: with Section 4(f):

- ▶ Considering Section 4(f) before the NEPA process begins
- ▶ Scoping potential Section 4(f) issues
- ▶ Identifying and evaluating Section 4(f) properties
- ▶ Making determinations of de minimis impact
- ▶ Determining whether there is a “use” of Section 4(f) properties

- ▶ Developing and evaluating avoidance alternatives under the “feasible and prudent” standard
- ▶ Choosing among alternatives that use Section 4(f) properties
- ▶ Incorporating all possible planning to minimize harm to Section 4(f) properties
- ▶ Using Section 4(f) programmatic evaluations
- ▶ Coordinating with other agencies and stakeholders
- ▶ Documenting Section 4(f) analysis and conclusions

**Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges**—FHWA has issued

five nationwide programmatic Section 4(f) evaluations that address bikeways/walkways, historic bridges, minor involvements with historic sites, minor involvements with parks/recreations and lands/refuges, and for projects that no net benefit to a Section 4(f) property. The Historic Bridge Programmatic Section 4(f) evaluation is the most common and may be applied to projects that meet the following criteria:

1. The bridge is to be replaced or rehabilitated with federal funds.
2. The project will require the use of a historic bridge structure that is on or is eligible for listing on the NRHP.
3. The bridge is not a national historic landmark.
4. The FHWA Division Administrator determines that the facts of the project match those set forth in the sections of this document labeled Alternatives, Findings, and Mitigation.
5. FHWA, SHPO, and ACHP have reached agreement through procedures pursuant to Section 106 of NHPA.

The following alternatives avoid any use of the historic bridge:

1. Do nothing.

2. Build a new structure at a different location without affecting the historic integrity of the old bridge, as determined by procedures implementing NHPA.
3. Rehabilitate the historic bridge without affecting the historic integrity of the structure, as determined by procedures implementing NHPA.

The programmatic Section 4(f) evaluation does not apply if a reasonable alternative is identified that is not discussed in the programmatic evaluation document. The project record must clearly demonstrate that each of the above alternatives was fully evaluated and it must further demonstrate that all applicability criteria listed above were met before the FHWA Division Administrator concluded that the programmatic Section 4(f) evaluation applied to the project.

**Protection of Historic Properties (36 CFR 800)**—Section 106 of NHPA (16 USC 470f) requires federal agencies to take into account the effects of their actions on historic properties and to give ACHP a reasonable opportunity to comment. It defines the procedures of how federal agencies should meet these statutory responsibilities.

**Criteria for Evaluation (36 CFR 60.4)**—This part of the CFR describes the criteria used for evaluating the eligibility of sites for the NRHP.

**U.S. Department of Transportation Parks, Recreation Areas, Wildlife and Waterfowl Refuges and Historic Sites (23 CFR 774)**—The revised regulations in 23 CFR 774 replace the provisions that were contained in 23 CFR 771.135, “Section 4(f) (49 USC 303).” The law, now codified in 49 USC §303 and 23 USC §138, is implemented by FHWA through the regulation 23 CFR 774. Section 6009 of SAFETEA-LU amended Section 4(f) to: (1) clarify the factors considered and the standards applied in determining the prudence and feasibility of alternatives that avoid

uses of Section 4(f) properties; and (2) provide a simplified approval process of projects that have de minimis impacts on Section 4(f) property.

**Policy on Lands, Wildlife and Waterfowl Refuges, and Historic Sites (49 USC 303) and Preservation of Parklands (23 USC 138)**—Both of these sections contain policy that a special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The policy provides the Secretary of USDOT with means to approve a transportation program or project that requires the use of publicly owned parks, recreation areas, or wildlife and waterfowl refuges if there are no feasible alternatives. This policy also addresses “*De Minimis* Impacts” and clarifies the requirements as they apply to properties under Section 4(f).

**23 USC 103(c) Interstate System**—Section 6007 of SAFETEA-LU amended 23 USC 103(c) to exempt the Interstate System from consideration as a historic site under Section 4(f). It also directs that the Secretary of USDOT will determine, through an administrative process established for exempting the Interstate System from Section 106 of NHPA, those individual elements of the Interstate System that possess national or exceptional historical significance. These elements are considered to be a historic site under Section 4(f). However, designation of an individual element of the Interstate System does not prohibit the state from carrying out construction, maintenance, restoration, or rehabilitation activities. Individual element exemptions can be found on FHWA’s website in the Final List of Nationally and Exceptionally Significant Features of the Federal Interstate Highway System.

## 4.7 Section 6(f)

Compliance with Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965 in planning, construction, and maintenance of transportation projects assures the quality and quantity of outdoor parks and recreation areas for present and future generations. The process for identifying recreational properties acquired or improved with funding assistance under the LWCF Act for potential conversion in compliance with Section 6(f) is shown on **Figure 15**, summarized in **Table 18**, and described in further detail throughout this section. Relevant regulations are cited at the end of the section for further reading.

Section 6(f) of LWCF ensures that a recreational area funded with LWCF assistance is continually maintained in public outdoor recreation use unless NPS approves the conversion in accordance with the Statewide Comprehensive Outdoor Recreation Plan (SCORP) (36 CFR 59.3). When a Section 6(f) land conversion is proposed for a highway project, replacement land will be necessary. NPS must ensure that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions.

### Common Definitions:

**Section 6(f) Property** refers to lands acquired or improved with LWCF assistance. Parks and projects funded through LWCF have the unique reality of being dedicated to public outdoor recreation in perpetuity. Section 6(f) properties are protected under the law: "No property acquired or developed with the assistance under this section shall, without the approval of the Secretary (Department of the Interior), be converted to other than public outdoor recreation uses" (36 CFR 59.3).

**Authorization:** Through the Department of the Interior (NPS), Section 6(f)(3) of the LWCF Act creates parks and open spaces, protects wilderness, wetlands, and refuges, preserve wildlife habitat, and enhances recreational opportunities. In general, land acquisition, development, and renovation projects for public outdoor recreation purposes are eligible LWCF projects.

Responsibility for compliance and enforcement of these provisions rests with SDGFP for both state and locally sponsored projects. The responsibilities cited herein are applicable to the area depicted or otherwise described on the 6(f)(3) boundary map and/or as described in other project documentation approved by the Department of the Interior. In many instances, this mutually agreed to area exceeds that receiving LWCF assistance so as to assure the protection of a viable recreation entity.

In the event that Lessee shall at any time during the term of this agreement cease to utilize said premises for a public park and recreation area, the lease granted hereunder shall terminate immediately upon such happening. At this time, or if the lease is allowed to expire, the lessor shall own, operate, and maintain the property as a public park and recreation area in perpetuity in compliance with the LWCF Act.

Leases can be developed on land leased from another public agency; they cannot be developed on land leased from a private entity.

Figure 15. Section 6(f) Process

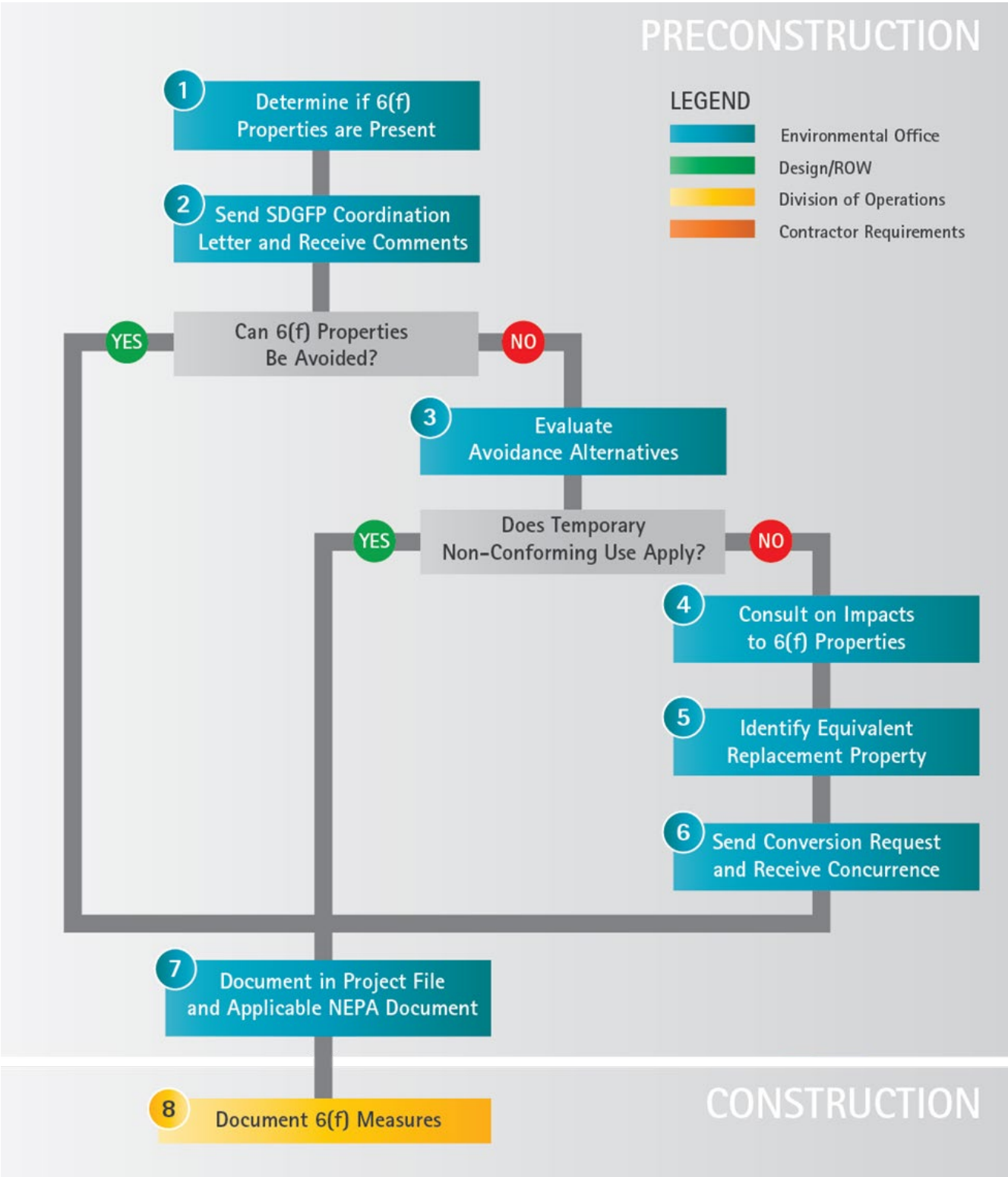


Table 18. Steps in the 6(f) Process

| Step                                                     | Participant                           | Result(s)                                                                                                                        |
|----------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                   |                                       |                                                                                                                                  |
| 1. Determine if 6(f) properties are present              | EPC                                   | Determination documented in project file                                                                                         |
| 2. Send SDGFP coordination letter and receive comments   | EPC, SDGFP Grant Coordinator          | SDGFP comments, Environmental Project Tracking Database                                                                          |
| 3. Evaluate avoidance alternatives                       | EPC, Design/ROW                       | Avoidance determination document in project file, CE Checklist and ECC (if applicable)                                           |
| 4. Consult on impacts to 6(f) properties                 | EPC, SDGFP, Property Owner            | SDGFP and Property Owner letter on fair market value, document in Environmental Project Tracking Database, CE, and ECC           |
| 5. Identify equivalent replacement property              | Area Office, Design/ROW, stakeholders | Fair market appraisal                                                                                                            |
| 6. Send conversion request and receive concurrence       | SDGFP, NPS                            | 6(f) documentation, NPS approval, Environmental Project Tracking Database                                                        |
| 7. Document in project file and applicable NEPA document | EPC                                   | Project file, CE Checklist and ECC, EA/FONSI, EIS/ROD; copy of Section A Plan Notes to Design to incorporate into Final Plan set |
| <b>Construction</b>                                      |                                       |                                                                                                                                  |
| 8. Document 6(f) measures                                | Project Engineer, stakeholders, EPC   | Document any changes to 6(f) compliance in construction findings and project file                                                |

Notes: CE – Categorical Exclusion, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FONSI – Finding of No Significant Impact, NEPA – National Environmental Policy Act, NPS – National Park Service, ROD – Record of Decision, ROW – Right-of-Way, SDGFP – South Dakota Game, Fish and Parks

### *Overview of Section 6(f) Resources in the Project Planning Process*

The Section 6(f) Resources section in the Environmental Screening Report is intended to identify Section 6(f) Resources in the planning study area and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, review of Section 6(f) Resources in the planning area shall occur through desktop review of online tools including preliminary survey, aerial photography, USGS quadrangle maps, and other available survey data.

**Existing Conditions** – Section 6(f) Resources that are found within the planning study area

should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field work efforts. Because resources can change over time, it is vital to verify the Planning Phase information and supplement it, as appropriate, during the NEPA Phase of a project. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.



Grant money from the LWCF could have been used to purchase playground equipment and should be checked with SDGFP Grants Coordinator to determine if the property falls under 6(f) regulation. (SDDOT)

### *Overview of Section 6(f) Resources in the Project Development and Delivery Process*

Since its inception in 1964, LWCF has made outdoor recreational opportunities possible throughout South Dakota. SDGFP administers the program and has used over 36 million dollars for projects relating to public outdoor recreation, dedicated to the public in perpetuity. If a transportation project involves a Section 6(f) property, the land is converted

to another use. Before SDDOT can gain approval for the conversion, the law requires the land to be replaced with that of equal value, location, and usefulness.

Identifying Section 6(f) properties early in the project development process may help avoid these important public outdoor recreational properties. Projects being developed by SDDOT that have the potential to affect lands that have used LWCF grants are considered to be converting the use of that property because the activity proposed is not of an outdoor recreational nature. An exception to Section 6(f) is if the use of the property would be temporary and would not alter the recreational benefits of the property. In accordance with NPS LWCF Manual, a temporary, non-conforming use allows non-recreational activities within a Section 6(f) property as long as they are resolved within 6 months and do not permanently alter the public outdoor recreational use of the property.

Coordination for Section 6(f) projects is done with the SDGFP Grants Coordinator. SDGFP will consult with the NPS Midwest Regional Director or designee to make a determination on the potential impacts on Section 6(f) properties and replacement properties.

NPS will consider conversion requests if the following prerequisites have been met in accordance with 36 CFR 59 (b):

- ▶ All practical alternatives to the proposed conversion have been evaluated.
- ▶ The fair market value of the property to be converted has been established and the property proposed for substitution is of at least equal fair market value as established by an approved appraisal (prepared in accordance with the Uniform Federal

Appraisal Standards) excluding the value of structures or facilities that will not serve a recreation purpose.

- ▶ The property proposed for replacement is of reasonably equivalent usefulness and location as that being converted. SDDOT's review must analyze the Section 6(f) area proposed for conversion, as well as the development of the replacement parkland.

The procedures for SDDOT projects involving Section 6(f) properties are illustrated on **Figure 15**, summarized in **Table 18**, and are further described in this section.

### *Section 6(f) Process Description*

#### **1. Determine if 6(f) Properties are Present**

After receipt of the Approved Scope, the EPC conducts a desktop review to identify if publicly owned parks or recreation areas are located within the project area. If it is obvious that no park or recreation area is identified in the project area, Section 6(f) does not apply, proceed to Step 7. If Section 6(f) properties are identified, proceed to Step 2.

#### **2. Send SDGFP Coordination Letter and Receive Comments**

The EPC sends a letter to the SDGFP Grant Coordinator, including the project description and location. The Grant Coordinator will confirm if the proposed project is subject to Section 6(f) requirements and will send a reply notifying the EPC whether the property has used Section 6(f) grant funding. The EPC will document the letter and response in the Environmental Project Tracking Database. If Section 6(f) does not apply, proceed to step 7. If Section 6(f) properties are identified, proceed to Step 3.

Proposals for "temporary non-conforming uses," that is temporary non-recreation activities of less than a six-month duration within a Section 6(f)(3) protected area, must be reviewed by NPS (LWCF Manual).

#### **3. Evaluate Avoidance Alternatives**

The EPC and Design/ROW will review the preliminary gradeline to evaluate alternatives for avoiding or minimizing conversion of Section 6(f) properties. If 6(f) properties can be avoided, proceed to Step 7. When 6(f) properties cannot be avoided, the EPC, Design/ROW, and property owner will review potential impacts on Section 6(f) properties. Activities qualifying for a temporary non-conforming use can be determined at this step. If the exception applies, the EPC coordinates with SDGFP and provides necessary details so an application can be submitted to NPS, Midwest Region. When the response is received, the SDGFP Grants Coordinator will provide the response to the EPC. The EPC will document in appropriate NEPA document and project file.

#### **4. Consult on Impacts to 6(f) Properties**

If the project does not meet the requirements for a temporary non-conforming use, then the EPC will continue to consult with SDGFP Grants Coordinator, Design/ROW, and stakeholders to determine a fair market value of the impacted 6(f) property area and to identify other potential replacement properties that satisfy the requirements of 36 CFR 59.3.

#### **5. Identify Equivalent Replacement Property**

The EPC coordinates with the Area Office and Design/ROW to identify equivalent replacement properties based on the criteria in 36 CFR 59.3.

- ▶ The property proposed for substitution must be of at least equal fair market value as established by an approved appraisal prepared in accordance with the Uniform Appraisal Standards for Federal Land Acquisitions.
- ▶ The property proposed for substitution must be of reasonably equivalent usefulness and location as that to be converted.
- ▶ The property proposed for substitution must meet the eligibility requirements for LWCF substitution, i.e., the replacement property must constitute or be part of a viable recreation area.
- ▶ A fair market appraisal will be conducted in accordance with the requirements of the Uniform Appraisal Standards for Federal Land Acquisitions.

## **6. Send Conversion Request and Receive Concurrence**

The EPC submits documentation to SDGFP Grants Coordinator, including the location of the property to be converted, a description of proposed replacement property; avoidance or minimization alternatives; and the appraisal. SDGFP Grants Coordinator will prepare the NPS Project Description/Environmental Screening Form and submit to NPS for approval. NPS is prohibited from approving Section 6(f) conversions until after SDDOT has completed its planning process. Conversions are federal undertakings and may require Section 106 and NEPA clearance for both the converted property and the replacement property. A SHPO clearance letter and applicable NEPA documentation should accompany the conversion documentation.

## **7. Document in Project File and Applicable NEPA Document**

Once the approval of the conversion is received from NPS, the EPC will document the correspondence in the project file and applicable NEPA Document (CE/EA/EIS and applicable 4(f) document).

The EPC will provide the Section A Plan Notes, Commitments M1 and M2, to Design for incorporation into the Final Plan set.

## **8. Document 6(f) Measures**

During construction of the project, the Contractor shall notify the Project Engineer if additional easement is needed to complete the work adjacent to any Section 6(f) property. The Project Engineer shall obtain an appropriate course of action from the EPC, including notifying stakeholders, before proceeding with construction activities that affect any Section 6(f) property. The EPC documents the construction findings and all other comments received in the project file.

### *Section 6(f) Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to protection of 6(f) resources are presented by agency, with executive orders presented first.

**Land and Water Conservation Fund Program of Assistance to States; Post-Completion Compliance Responsibilities (36 CFR 59)**—This part of the CFR contains provisions for implementing Section 6(f) requirements. Section 59.1 defines applicability and Section 59.3 details the prerequisites that must occur to get approval for converting the property or facility to a use other than a public outdoor recreation use.

**USC 4601-6(f)(3)**—This section of the USC codifies Section 6(f)(3) of the LWCF Act, which

establishes the requirements applicable to conversion of property acquired or developed with assistance under the Act to a use other than a public outdoor recreation use.

#### Federal Highway Administration

**Technical Advisory T 6640.8a, October 30, 1987, NEPA Implementation Guidance for Preparing and Processing Environmental and Section 4(F) Documents**—The use of Section 4(f) land may involve concurrent requirements of other federal agencies, e.g., approval of land conversions under Section 6(f) of the LWCF Act. The mitigation plan developed for the project should include measures that would satisfy the various requirements. For example, Section 6(f) directs the Department of the Interior–NPS to assure that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions.

#### National Park Service

**Land and Water Conservation Fund, State Assistance Program, Federal Financial Assistance Manual, Volume 69**—NPS published this manual on October 1, 2008, to set forth the administrative procedures and requirements for LWCF federal assistance. Chapter 8 of this manual contains the requirements for maintaining LWCF-assisted sites and facilities in public outdoor recreation use following project completion and to assure that LWCF-assisted areas remain accessible to the general public, including nonresidents of assisted jurisdictions.

**Land and Water Conservation Fund, Compliance Responsibilities and Legal Protection**—This NPS webpage provides discussion on post-completion compliance and legal protection. Post-completion compliance responsibilities apply to each area or facility

for which LWCF assistance is obtained, regardless of the extent of program participation in the assisted area or facility and consistent with the contractual agreement between NPS and the state. The state is responsible for compliance and enforcement of these provisions for both state and locally sponsored projects.

**Land and Water Conservation Fund, Project List by County and Summary Reports**—This webpage displays LWCF activity since the first grant was awarded in 1965 summarized by state or by Federal Fiscal Year and Grant Type. Note: Confirm current information with SDGFP.

**Uniform Appraisal Standards for Federal Land Acquisitions**—The Federal Interagency Land Acquisition Conference in cooperation with the U.S. Department of Justice published standards to meet the requirement of 36 CFR 59.3. This section of the CFR states that the fair market value of a Section 6(f) property to be converted must be established, and the property proposed for substitution must be of at least equal fair market value as established by an approved appraisal prepared in accordance with the Uniform Federal Appraisal Standards.

#### State of South Dakota

**2018 Statewide Comprehensive Outdoor Recreation Plan**—The 2018–2022 South Dakota SCORP examines how to best meet the needs of South Dakota’s citizens to provide quality, accessible outdoor recreational facilities in the state. This SCORP looks at the most recent trends, data, opinions, and collaborations.

## 4.8 Economic and Social Analysis

On January 20, 2025, the President signed Executive Order (E.O.) 14148 --Initial Rescissions of Harmful Executive Orders and Actions and E.O. 14154 – Unleashing American Energy. The E.O.s revoked E.O. 14096 – Revitalizing Our Nation’s Commitment to Environmental Justice for All (April 21, 2023). Subsequently on January 21, 2025, the President signed E.O. 14173 – Ending Illegal Discrimination and Restoring Merit-Based Opportunity. This E.O. revoked E.O. 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994). On February 25, 2025, the Council on Environmental Quality (CEQ) published an Interim Final Rule removing the CEQ’s National Environmental Policy Act (NEPA) implementing regulations, effective April 11, 2025 (90 Fed. Reg. 10610). As a result of these actions, all federal environmental justice requirements are revoked and no longer apply to the federal environmental review process. FHWA, FTA and FRA’s Joint NEPA regulations (23 CFR part 771) and the agencies Interim Final Guidance on “Section 139 Environmental Review Process: Efficient Environmental Reviews for Project Decisionmaking and One Federal Decision” (12/17/2024) do not require an environmental justice analysis. Accordingly, no guidance on analysis of environmental justice is included in this procedures manual. Social, economic, and community impacts will continue to be disclosed where applicable in accordance with 23 CFR 771.

**4.8.1 SDDOT Title VI Program Plan**—SDDOT is a recipient of federal funding assistance and is therefore subject to the Title VI compliance conditions, including USDOT Order 5610.2. The

SDDOT Title VI Program Plan states that the policy of SDDOT is to ensure that no person or group of persons shall, on the grounds of race, color, national origin, religion, sex, age, disability or other statutorily prescribed basis, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity administered by the Department.

### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to environmental justice are presented by agency, with executive orders presented first.

**Executive Orders 14148** – Initial Rescissions of Harmful Executive Orders and Actions; and

**Executive Order 14154** – Unleashing American Energy. The E.O.s revoked E.O. 14096 – Revitalizing Our Nation’s Commitment to Environmental Justice for All (April 21, 2023).

**Executive Order 14173** – Ending Illegal Discrimination and Restoring Merit-Based Opportunity. This E.O. revoked E.O. 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994)

### *Federal Highway Administration*

**FHWA Guidance on Environmental Justice and NEPA**—This guidance describes the process to address environmental justice during the NEPA review, including documentation requirements. It supplements FHWA Technical Advisory 6640.8A, which provides guidance for documenting the potential social, economic, and environmental impacts considered in the selection and implementation of highway projects.

### **Guidance for Preparing and Processing Environmental and Section 4(f) Documents—**

The revised guidance gives expanded coverage to CE determinations, EAs, FONSI, EISs, supplemental EISs, reevaluations, and Section 4(f) evaluations. This material is not regulatory. It does, however, provide for uniformity and consistency in the documentation of CEs and the development of environmental and Section 4(f) documents.

#### **South Dakota Department of Transportation**

**SDDOT Title VI Program Plan**—SDDOT is a recipient of federal funding assistance and is therefore subject to the Title VI compliance conditions, including USDOT Order 5610.2. The SDDOT Title VI Program Plan states that the policy of SDDOT is to ensure that no person or group of persons shall, on the grounds of race, color, national origin, religion, sex, age, disability or other statutorily prescribed basis, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity administered by the Department.

#### **U.S. Department of Transportation**

**USDOT Order 5610..1D)**— The purpose of these procedures is to describe the process by which DOT determines what actions are subject to the National Environmental Policy Act's (NEPA's) procedural requirements and the applicable level of NEPA review. This Order sets forth DOT's procedures and practices for implementing NEPA. It further explains DOT's interpretation of certain key terms in NEPA. Sections 1 through 25 of this Order establishes procedures and processes that all Operating Administrations (OAs) should apply when implementing NEPA.

### **4.8.2 Farmland**

Protecting farmland from conversion from agricultural use to build infrastructure during the planning, construction, and maintenance of transportation projects is an important step in complying with the provisions of 7 CFR 658 et seq. Farmland Protection Policy Act (FPPA). This section defines key terms used in the protection of farmland, introduces the applicable authorities, and presents the environmental commitments established for transportation projects. The process by which SDDOT documents compliance with FPPA is summarized in **Table 20** and described in further detail throughout this section. Relevant regulations are cited at the end of the section for further reading.

Table 20. Steps in the Farmland Process

| Step                                                                                   | Participant(s)        | Result(s)                                                                                          |
|----------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                                                 |                       |                                                                                                    |
| 1. Determine if the project will involve conversion of farmland to non-agriculture use | EPC                   | Document determination in project file                                                             |
| 2. Request determination from NRCS                                                     | EPC, NRCS             | Document determination in project file, NRCS AD-1006 Form, Environmental Project Tracking Database |
| 3. Evaluate avoidance or minimization alternative                                      | EPC, Design/ROW, NRCS | Document alternatives in project file                                                              |
| 4. Document in project file and applicable NEPA document                               | EPC                   | Project file, CE Checklist and ECC, EA/FONSI, EIS/ROD                                              |

Notes: CE – Categorical Exclusion, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FONSI – Finding of No Significant Impact, NEPA – National Environmental Policy Act, NRCS – Natural Resources Conservation Service, ROD – Record of Decision

Transportation projects funded through FHWA are subject to the FPPA. NRCS is the agency responsible for ensuring that the FPPA is implemented. It is the responsibility of other federal agencies and entities receiving federal funds to reduce the effects of conversion activities on farmland and to ensure that their programs or activities are compatible, to the extent practicable, with state, local, and private programs to protect farmland.

### *Overview of Prime and Unique Farmlands in the Project Planning Process*

The Prime and Unique Farmlands section of the Environmental Screening Report is intended to identify farmlands in the planning study area and determine the project's potential impacts and mitigation for those resources.

#### **Common Definitions:**

**Farmland** means prime or unique farmlands or farmland that is determined by the appropriate state or unit of a local government agency or agencies with concurrence of the Secretary of Agriculture to be farmland of statewide or local importance. "Farmland" does not include land already in or committed to urban development or water storage (7 CFR 658.2).

**Authorization:** Congress created the FPPA to minimize the impact that federal programs have on conversion of farmland to nonagricultural uses and to assure that federal programs are compatible with state, local units of government, and private programs and policies to protect farmland. The FPPA does not authorize the federal government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners. The Department of Agriculture is the agency primarily responsible for the implementation of federal policy with respect to U.S. farmland (7 USC 4201 [a][7], [b]; 7 CFR Part 658).

**Methodology** – For an Environmental Screening Report, the NRCS Soil Survey should be utilized in order to identify types of soil within the study area, including prime, unique, and statewide and locally important farmlands.

**Existing Conditions** – Farmlands that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field investigation efforts. Because resources can change over time, it is vital to verify the Planning Phase information and supplement it, as appropriate, during the NEPA Phase of a project. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

### *Overview of Prime and Unique Farmlands in the Project Development and Delivery Process*

In accordance with the FPPA, important farmland includes all land that is defined as prime, unique, or farmlands of statewide or local importance based on soil types. SDDOT identifies important farmland from currently published or interim soil survey maps and data produced and certified by the NRCS National Cooperative Soil Survey Program.

FPPA (7 USC 4201-4209) defines four types of farmland:

- ▶ Prime Farmland—Land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural

crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary of Agriculture. Prime farmland includes land that possesses the above characteristics but is being used currently to produce livestock and timber. It does not include land already in or committed to urban development or water storage.

- ▶ Unique Farmland—Land other than prime farmland that is used for production of specific high-value food and fiber crops, as determined by the Secretary of Agriculture. Unique farmland has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables.
- ▶ Statewide Importance—Land for the production of food feed, fiber, forage, or oilseed crops, as determined by the appropriate state or unit of local government agency, and that the Secretary of Agriculture determines should be considered as farmland.
- ▶ Local Importance—Land for the production of food feed, fiber, forage, or oilseed crops, as determined by the appropriate state or unit of local government agency, and that the Secretary of Agriculture determines should be considered as farmland.

The NRCS Web Soil Survey is an online tool that provides soil data and information produced by the National Cooperative Soil Survey and can be used to identify types of soil within an area of interest, including prime,

unique, and statewide and locally important farmlands. NRCS uses a Farmland Conversion Impact Rating Form AD-1006 for requesting a determination of farmland. The form provides an impact rating score on proposed sites of federally funded and assisted projects. The score is used as an indicator of the project sponsor to consider alternative sites if the potential adverse impacts on farmland exceed the recommended allowable level. Instruction for completing the form are provided on page 2 of Form AD-1006.

This is applicable for EA and EIS environmental analysis. The procedures for SDDOT projects involving important farmlands are summarized in **Table 20** and are further described in the narrative following the table.

### *Farmland Process Description*

#### **1. Determine if Project will Involve Conversion of Farmland to Non-Agriculture Use**

Upon receipt of the Approved Scope, the EPC conducts a desktop review to determine if the project will involve conversion of farmland to non-agriculture use. The desktop review tools include project boundary maps and the NRCS Web Soil Survey. The online soil survey will indicate prime, unique, and farmland of statewide or local importance.

If no farmland (prime, unique, or statewide or local importance) is located within the project area, the EPC documents the determination in the project file. If the desktop review and web soil survey indicate farmland within the project area, proceed to Step 2.

#### **2. Request Determination from National Resources Conservation Service**

If there is potential for farmland to be impacted, the EPC completes Form AD-1006 Parts I and III and submit it to NRCS along with maps requesting a determination of farmland.

NRCS will make a determination as to whether the project contains prime, unique, statewide, or local important farmland and will return the form to SDDOT to complete Parts VI and VII of the form. If the rating is less than 160 points, SDDOT will keep a copy of the form in the project file. The EPC documents the correspondence in the Environmental Project Tracking Database and project file. If the rating is greater than 160 points, SDDOT will need to select an alternative site or evaluate measures to minimize or reduce the impacts (Step 3).



Farmland designations are determined by NRCS, if the project could convert farmland check with NRCS. Wheat Field, Eastern South Dakota (SDDOT)

#### **3. Evaluate Avoidance or Minimization Alternatives**

The EPC and Design will evaluate alternative sites or measures to minimize impacts and submit this information to the NRCS field office for review. The EPC will document information in the project file and incorporate it into applicable environmental documents (CE, EA, or EIS).

#### 4. Document in Environmental Project Tracking Database, Project File and Applicable NEPA Document

The EPC documents correspondence with NRCS in the Environmental Project Tracking Database, project file and the applicable NEPA documents (CE, EA, or EIS).

##### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to farmland resources are presented by agency, with executive orders presented first.

##### *Federal Highway Administration*

**FHWA Technical Advisory T 6640.8A**—FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance for addressing impacts on farmland, which is defined as prime or unique (other than prime or unique land that is of statewide or local importance), and for reporting analysis and results in an environmental document.

Where any of the four farmland types could be directly or indirectly impacted by any alternative under consideration in the environmental document, SDDOT will summarize the results of early consultation with NRCS and, as appropriate, state and local agriculture agencies. Where farmland may be impacted, the draft environmental document must contain a map showing the location of all farmlands in the project impact area, discuss the impacts of various alternatives, and identify the measures to avoid or reduce the impacts. The appropriate Farmland Conversion Impact Rating Form (either AD-1006 or CPA-106) must be completed and included in the environmental document. Land Evaluation and Site Assessment Scores greater than 160 points require that the form be submitted to the local NRCS field office for completion and

include a review of alternatives to avoid impacts. If impacts are unavoidable, measures to minimize or reduce the impacts must be presented and included in the proposed action.

##### *U.S. Department of Agriculture*

##### **7 CFR Part 658 Farmland Protection Policy**

**Act**—This part sets out the criteria developed by the Secretary of Agriculture, in cooperation with other federal agencies, pursuant to section 1541(a) of the FPPA 7 USC 4202(a). As required by section 1541(b) of the FPPA, 7 USC 4202(b), federal agencies are to (a) use the criteria to identify and take into account the adverse effects of their programs on the preservation of farmland; (b) consider alternative actions, as appropriate, that could lessen adverse effects; and (c) ensure that their programs, to the extent practicable, are compatible with state and units of local government and private programs and policies to protect farmland. Guidelines to assist agencies in using the criteria are included in this part. The Department of Agriculture may make available to states, units of local government, individuals, organizations, and other units of the federal government, information useful in restoring, maintaining, and improving the quantity and quality of farmland.

##### **7 CFR Part 523 Farmland Protection Policy Act**

**Manual**—This manual provides information on the FPPA laws and regulations, roles and responsibilities, and describes lands and activities covered by the act, designations, and other policy directives.

##### *4.8.1 Land Use*

Incorporating current and future land use and forecasting land use and trends are a key consideration in transportation planning,

design, and construction. Although there are no FHWA or SDDOT land use regulations, land use is considered in a NEPA analysis. This section presents an introduction of environmental commitments in land use. The process SDDOT follows to identify and analyze land use impacts is summarized in Table 3.6-3 and described in further detail throughout this section. Relevant guidance documents are cited at the end of the section for further reading.

Demand for safe and efficient modes of transportation (motorized and non-motorized) are influenced by current and future land use. Transportation projects must address the potential direct, indirect, and cumulative effects that a proposed action may have on current and planned land use and development. Examples may include:

- ▶ **Direct impacts**—residential or business displacements, property acquisitions
- ▶ **Indirect impacts**—increased traffic in nearby locations, due to improved transportation systems
- ▶ **Cumulative impacts**—increased development with greater accessibility, higher property values and increased

### *Overview of Land Use in the Project Planning Process*

The Land Use and Economic Resources section of the Environmental Screening Report is intended to identify different land uses in the planning study area and determine the project's potential to impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, a review should be conducted of existing and proposed land use in the planning study area and any anticipated changes in land use, including the following

information. Review of municipal/county planning documents, zoning maps and master plans, aerial photographs, USGS and other maps, digital orthographic quadrangle images, and GIS data should be completed.

Coordination letters may be sent to the local governments, Tribes, or economic development corporations to determine any potential land use or social/economic impacts.

**Existing Conditions** – Different land uses that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field delineation efforts. Because municipalities consistently update their Comprehensive Plans and subsequent land use designations, land use can change over time, it is vital to verify the Planning Phase information and supplement it, as appropriate, during the NEPA Phase of a project. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

### *Overview of Land Use in the Project Development and Delivery Process*

SDDOT considers various Tribal, county, and local government land use plans, zoning, future use and growth management areas, and annexation plans, in the review process when available.

Class II CE projects may not require a detailed land use analysis; however, exceptions may include displacements, relocations, or acquisition of ROW or easements that might influence land use and/or development. FHWA

guidance materials for conducting social and economic analysis, including land use forecasting in NEPA is provided in the Applicable Laws, Regulations, and Guidance section.

The procedures for SDDOT projects involving land use are summarized in **Table 21** and are further described in the narrative in this section.

### *Land Use Process Description*

#### **1. Conduct Desktop Review of Local Planning Documents**

Upon receipt of the Approved Scope, the EPC will conduct a desktop review of existing and proposed land use in the project area and any anticipated changes in land use, including the following information:

- ▶ Municipal/county planning documents
- ▶ Zoning maps and master plans
- ▶ Aerial photographs
- ▶ USGS and other maps
- ▶ Digital orthographic quadrangle images
- ▶ GIS data

The EPC may send coordination letters to the local governments or Tribes to determine any potential land use or social/economic impacts.

Land use is analyzed in Class I EIS and Class III EA projects. Also, consideration must be given if there is a 4(f) impact. The following types of impacts are an indication of potential “unusual circumstances” for which some level of land use analysis may be necessary for a CE project:

- ▶ Project or project-related impacts are inconsistent with an adopted municipal or county comprehensive land use plan
- ▶ Project involves residential or business displacements

- ▶ Public controversy related to land use impacts of the project
- ▶ Project purpose and need involves supporting a specific planned land use development or spurring economic development
- ▶ Project involves capacity changes that could change accessibility, such as construction of a new alignment roadway, adding travel lanes to an existing roadway, or construction of a new interchange

If a detailed land use analysis is not required, the EPC documents information in the project file. If a detailed land use analysis is required, the EPC or approved consultant will proceed to Step 2.

Table 21. Steps in the Land Use Process

| Step                                                      | Participant(s)                                                                                            | Result(s)                                                                                                                                                   |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                    |                                                                                                           |                                                                                                                                                             |
| 1. Conduct desktop review of local planning documents     | EPC, local government<br>Tribal governments and<br>Metropolitan Planning Organizations<br>(as applicable) | Coordination letters, document in project file and Environmental Project Tracking Database                                                                  |
| 2. Identify and analyze potential impacts on land use     | EPC                                                                                                       | Document potential impacts in project file                                                                                                                  |
| 3. Evaluate avoidance minimization or mitigation measures | EPC, Design/ROW, local government, Tribal government (as applicable), public                              | Document avoidance, minimization, or mitigation measures, and public involvement (as necessary) in project file and Environmental Project Tracking Database |
| 4. Document in project file and applicable NEPA document  | EPC                                                                                                       | Project file, CE Checklist and ECC; EA/FONSI, EIS/ROD                                                                                                       |

## 2. Identify and Analyze Potential Impacts to Land Use

The EPC in cooperation with Design will identify and analyze any potential impacts on land use from information collected in Step 1 in coordination with information gathered for other resources, such as noise, ROW, and relocations. The EPC (CE) or consultant (EA/EIS) determines if the project will affect land use and/or growth management plans in the area. Analysis will be conducted following FHWA and other guidance cited in this section. The information will be incorporated into the applicable NEPA document (CE/EA/EIS).

## 3. Evaluate Avoidance, Minimization, or Mitigation Measures

If the project has potential to impact existing or future land use or is inconsistent with regional or local planning documents, the EPC and Design will evaluate avoidance, minimization, or mitigation measures. Public

involvement will be incorporated as appropriate in accordance with the SDDOT Public Involvement Plan. Potential mitigation measures include rerouting or changing alignments, elevated/depressed roadways, berms, and noise barriers in accordance with SDDOT standard specifications.

If there is a potential 4(f) impact, it must be avoided if there is a feasible or prudent alternative that meets the purpose and need of the proposed transportation project.

## 4. Document in Project File and Applicable NEPA Document

The EPC will document in project file and provide land use analysis information in the applicable NEPA document (CE/EA/EIS).

## *Applicable Laws, Regulations and Guidance*

### *Federal Highway Administration*

**FHWA Technical Advisory T 6640.8A**—The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, suggests that the analysis of land use impacts should include the following items:

- ▶ Identification of the current development trends and the state and/or government plans and policies on land use and growth in the area that will be impacted by the proposed project.
- ▶ Assessment of the consistency of the project's alternatives with the comprehensive development plans adopted for the area and (if applicable) other plans used in the development of the transportation plan required by Section 134.
- ▶ Identification of the secondary social, economic, and environmental impacts of any substantial, foreseeable, and induced development for each alternative, including adverse effects on existing communities. Where possible, the distinction between planned and unplanned growth should be identified.

**Interim Guidance on the Application of Travel and Land Use Forecasting in NEPA**—In March 2010, FHWA released an interim report to encourage improvement in the state-of-the-practice in project-level forecasting as it is applied in the context of the NEPA process. This guidance shares key considerations, collective lessons learned, and best practices regarding how to apply forecasting in NEPA. These can be used to help Departments of Transportation avoid common issues and improve the quality of forecasts, resulting in

faster and more effective project delivery. This guidance focuses more on the procedural or process for forecasting land use and less on the technical guidelines for producing forecasts for projects.

**FHWA Community Impact Assessment**—Community Impact Assessment (CIA) is a process to evaluate the effects of a transportation action on a community and its quality of life. FHWA sponsors a website on CIA, which is administered by the Center for Urban Transportation Research at the University of South Florida. This web site contains a variety of references and resources related to CIA. The Community Impact Assessment: A Quick Reference for Transportation publication (Number FHWA-PD-96-036) relays the CIA process.

**Guidebook for Assessing the Social and Economic Effects of Transportation Projects**—The National Cooperative Highway Research Program developed report 456. This publication provides useful information to evaluate land use impacts on transportation projects.

**Assessing the Extent and Determinates of Induced Growth**—Montana Department of Transportation—This research report includes a desk reference for addressing indirect land use impacts, including a step-by-step screening process to determine if further analysis of indirect effects is warranted.

## 4.8.2 Pedestrian and Bicyclist Access

Promoting development of facilities for use by pedestrians and bicycles is an important consideration during transportation project planning. This section defines key terms used in bicycle and pedestrian programs, introduces the applicable authority, and describes the

environmental commitments for ensuring that bicycles and pedestrian facilities are addressed during transportation planning. The process for projects involving existing or proposed pedestrian and bicycling facilities summarized in **Table 21** and described in further detail throughout the rest of this section. Relevant regulations are cited at the end of the section for further reading.

To help state Departments of Transportation develop or update pedestrian and bicycle plans, FHWA released the Statewide Pedestrian and Bicycle Planning Handbook that covers statewide planning from inception and scoping to implementation, including topics like engaging stakeholders and the general public; developing goals, objectives, and strategies; collecting and analyzing data; and linking to larger planning processes.

SDDOT has a Bicycle and Pedestrian Coordinator who promotes and facilitates the increased use of nonmotorized transportation, including developing facilities for the use of pedestrian and bicyclists. The South Dakota Transportation Alternatives Program provides funding for specific activities that enhance the intermodal transportation system and provide safe alternative transportation options.

### *Overview of Bicycle and Pedestrian Facilities in the Project Planning Process*

The Bicycle and Pedestrian Facilities section in the Environmental Screening Report is intended to identify existing and planned bicycle and pedestrian resources in the planning study area and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, a desktop review should be conducted to identify existing pedestrian and

bicycle facilities located within the study area and determine the locations and width of existing and planned sidewalks, pedestrian bridges, footpaths, bike routes, and designated trails. Tools to identify facilities include maps, aerial photos, local governments, and users. Americans with Disabilities Act (ADA) accessibility should also be considered.

This assessment helps to identify missing bicycle, pedestrian, and ADA-accessible infrastructure, as well as multimodal connections among transit, vehicle, bicycle,

#### **Common Definitions:**

**The term bicycle transportation facility** means a new or improved lane, path, or shoulder for use by bicyclists and a traffic control device, shelter, or parking facility for bicycles (23 USC 217 (j)).

**The term pedestrian** means any person traveling by foot and any person with a mobility impairment who is using a wheelchair (23 USC 217 (j)).

**The term wheelchair** means a mobility aid, usable indoors, and designed for and used by individuals with mobility impairments, whether operated manually or motorized (23 USC 217(j)).

**The term pedestrian walkway or walkway** means a continuous way designated for pedestrians and separated from the through lanes for motor vehicles by space or barrier (23 CFR 652).

**Authorization:** Federal law (23 USC 217) and associated regulations (23 CFR 450 and 23 CFR 652) recognize the importance of accommodating the needs and safety of pedestrians and bicyclists in the development and implementation of transportation system plans and projects.

23 CFR 450 requires states to carry out an STIP that serves the needs of people and freight (including pedestrian walkways and bicycle transportation facilities).

23 CFR 652 provides policies and procedures relating to pedestrian and bicycle accommodations on federal aid projects and federally funded projects.

and pedestrian facilities that could be addressed as part of the alternatives development/analysis.

**Existing Conditions** – Bicycle and/or pedestrian facilities that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field investigation efforts. Because resources can change over time, like new trails constructed or planned, it is vital to verify the Planning Phase information and supplement it, as appropriate, during the

NEPA Phase of a project. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

### *Overview of Bicycle and Pedestrian Facilities in the Project Development and Delivery Process*

Various activities are eligible for Transportation Alternatives Program funding, including facilities for pedestrians, bicyclists and other non-motorized forms of transportation. SDDOT identifies and evaluates bicycle and pedestrian facilities as part of the environmental documentation for federally funded projects. **Table 22** presents the procedures for SDDOT projects involving pedestrian and bicyclist access.

Table 22. Steps in the Bicycle/Pedestrian Process

| Step                                                                            | Participant(s)                                   | Result(s)                                                                                                                                      |
|---------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                                          |                                                  |                                                                                                                                                |
| 1. Identify existing pedestrian/ bicycle facilities in project area             | EPC, applicable local government or municipality | Coordination Letters, Environmental Project Tracking Database, document in project file                                                        |
| 2. Identify and evaluate potential impacts on pedestrian and bicycle facilities | EPC                                              | Document potential impacts in project file                                                                                                     |
| 3. Evaluate minimization measures                                               | EPC, Design/ROW                                  | Document mitigation measures, in project file                                                                                                  |
| 4. Document in project file and applicable NEPA document                        | EPC                                              | Project file, CE Checklist and ECC; EA/FONSI, EIS/ROD; copy to Section A Plan Notes (if applicable) to Design to incorporate in Final Plan set |
| <b>Construction</b>                                                             |                                                  |                                                                                                                                                |
| 5. Monitor implementation of avoidance, minimization, and mitigation measures   | EPC, Project Engineer                            | Document construction findings in project file                                                                                                 |

Notes: CE – Categorical Exclusion, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EPC – Environmental Project Coordinator, EIS – Environmental Impact Statement, FONSI – Finding of No Significant Impact, NEPA – National Environmental Policy Act, ROD – Record of Decision, ROW – Right of Way

## *Bicycle and Pedestrian Process Description*

### **1. Identify Existing Pedestrian/Bicycle Facilities in the Project Area**

Upon receipt of an Approved Scope, the EPC will conduct a desktop review to identify existing pedestrian/bicycle facilities located within the project area and determine the locations of existing sidewalks, pedestrian bridges, footpaths, bike routes, and designated trails. Tools to identify facilities include maps, aerial photos, field visits, and coordination with the SDDOT bicycle coordinator and other local government planners, and users. Design will provide the EPC with preliminary plans for pedestrian/bicycle facilities to be incorporated into the project to accommodate bicycles or pedestrians.

The EPC will send coordination letters to local government and municipalities to identify any impacts and document in the Environmental Project Tracking Database.

### **2. Identify and Evaluate Potential Impacts on Pedestrian and Bicycle Facilities**

The EPC will identify and evaluate potential impacts that project alternatives will have on existing pedestrian and/or bicycle facilities, including consistency with local and regional plans. If the project alternative will close an existing major route for non-motorized transportation, the EPC and Design will provide a reasonable alternative route or demonstrate that a route exists (in accordance with 23 USC 109[n]). The EPC will document in the project file. If impacts are identified, proceed to Step 3.

### **3. Identify and Evaluate Avoidance, Minimization, or Mitigation Measures**

If the project will impact an existing or planned pedestrian or bicycle facility, the EPC and Design staff will evaluate measures for avoiding or mitigating adverse impacts. Input from municipalities, OWJ, and the public should be incorporated into the measures.

For temporary impacts, mitigation measures may include detours, signage, fencing, or other barriers to protect users from unsafe areas. Long-term and permanent impacts may include alignment changes and underpass/overpass structures.

If an affected pedestrian or bicycle facility is on land that is publicly owned, or the facility itself is publicly owned, or used for public recreational purposes, use of land from the facility is subject to compliance with Section 4(f). Section 4(f) sites and trails and trail crossings are both identified as noise-sensitive receptors under Activity Category C in 23 CFR 772—Noise Abatement Criteria and may require additional analysis.

Include a discussion of bicycle and pedestrian facilities in each applicable NEPA document (CE, EA, or EIS). If the project does not include pedestrian and bicycle facilities, provide discussion of why such facilities were not considered. EPC and Design staff determines whether appropriate consideration and accommodation has been made for bicyclists and pedestrians on state projects and delegated federal projects.

### **4. Document in Project File and Applicable NEPA Document**

The EPC will document information in project file and applicable NEPA document (CE/EA/EIS). The EPC will provide Section A

Plan Notes, Commitments M1 and/or M2, to Design to incorporate in the Final Plan set.

## **5. Monitor Implementation of Avoidance and Minimization Measures**

During construction, the Project Engineer and the EPC will conduct monitoring to ensure that avoidance, minimization, or mitigation measures were implanted in accordance with the final design plans. The EPC will document construction findings in the project file.

### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to bicycle and pedestrian facilities are presented by agency, with executive orders presented first.

**Bicycle Transportation and Pedestrian Walkways (23 CFR 217)**—This section of the USC includes the following requirements concerning bicyclists and pedestrians:

- ▶ Bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization (MPO) and state.
- ▶ Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted.
- ▶ Transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians.

**Bicycle Transportation and Pedestrian Walkways; Planning and Design (23 USC 17[g])**—this part provides policies and

procedures relating to the provision of pedestrian and bicycle accommodations on federal-aid projects, and federal participation in the cost of these accommodations and projects.

**Planning Assistance and Standards (23 CFR 450)**—This part of the CFR includes requirements for development of transportation plans and improvement programs that facilitate the safe and efficient management and operation of transportation systems that will serve the mobility needs of people, including accessible pedestrian walkways and bicycle transportation facilities.

**Pedestrian and Bicycle Accommodations and Projects (23 CFR 652)**—This part of the CFR is scheduled for update in the near future. It includes policies and procedures relating to the provisions of pedestrian and bicycle accommodations on federal-aid projects and federal participation in the cost of these accommodations. In accordance with these regulations, the safe accommodation of pedestrians and bicyclists should be given full consideration during the development and construction of federal-aid projects. Key requirements of the policies in this part include the following:

- ▶ The special needs of the elderly and persons with disabilities must be considered in all federal-aid projects that include pedestrian facilities
- ▶ Where current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility
- ▶ On highways without full control of access where a bridge deck is being replaced or rehabilitated, and where bicycles are

permitted to operate at each end, the bridge must be reconstructed so bicycles can be safely accommodated, when it can be done at a reasonable cost

- Consultation with local groups of organized bicyclists is encouraged in the development of bicycle projects

#### Federal Highway Administration

**FHWA Technical Advisory T6640.8A**—The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance for considerations relating to pedestrians and bicyclists.

**Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users, Section 1807**—Includes provisions such as the Nonmotorized Transportation Pilot Program to demonstrate the extent to which bicycling and walking can carry a significant part of the transportation load and represent a major portion of the transportation solution, within selected communities.

### 4.8.3 Visual Resources/Aesthetics

Preservation of visual resources in the planning, construction, and maintenance of transportation enhances the transportation system and improves the quality of life for South Dakota citizens. This section defines key terms in analyzing visual resources and presents the environmental commitments for analyzing and documenting visual resources. The process by which SDDOT identifies and evaluates visual resources is summarized in Table 3.6-5 and described in further detail throughout this section. Relevant regulations are cited at the end of the section for further reading.

FHWA is in the process of updating its Visual Impact Assessment (VIA) guidelines to help practitioners consider the scope and level of

analysis that would best benefit the affected area and population and implement environmentally streamlined, effective solutions. The VIA guidelines are an effective tool for evaluating existing conditions, minimizing project impacts, and planning and implementing aesthetic transportation improvements.

#### *Overview of Visual Resources and Aesthetics in the Project Planning Process*

The Visual Resources and Aesthetics section in the Environmental Screening Report is intended to identify visual resources in the planning study area and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, the methodology can include a description of the study area's topography, as well as current and future land use. Discussion may also include detailing distinctive landscape character units such as: Residential (urban, suburban, rural), commercial, industrial, and municipal uses; parks, recreational areas, trails, water and natural resources; agricultural open space and undeveloped lands.

**Existing Conditions** – Visual Resources that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field delineation efforts. Because situations that can dramatically affect visual resources can change over time, it is vital to verify the Planning Phase information

#### Common Definitions:

**Visual Resources:** A project's affected environment.

**Viewsheds:** What people can see in the environment; the result of the intersection between the physical constraints of the environment and the physiological limits of human perception.

- A dynamic viewshed is what travelers on the road see as they move through the landscape.
- A static viewshed is what neighbors of the road see from a stationary location

**Area of Visual Effect:** The area of project visibility, determined by the physical constraints of the environment and the physiological limits of human sight. It is the sum of all viewsheds.

**Neighbors:** Those people who are adjacent to the highway and have views of the road.

**Travelers:** Those people who are using the highway and have views from the road.

**Viewers:** A project's affected population.

Source: FHWA, 2014

and supplement it, as appropriate, during the NEPA Phase of a project. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

#### *Overview of Visual Resources and Aesthetics in the Project Development and Delivery Process*

SDDOT's process for evaluating impacts to visual resources follows the FHWA VIA guidance. Project visual impacts include both the view from the road and the view of the road. It is important that impacts both positive and negative are adequately assessed and considered when a highway project is developed. VIA is carried out in four phases and is the same regardless of project complexity—the level of effort is tailored to fit each project. Each phase is based on the

interaction between people and the environment:

- ▶ **Establishment**—Define the area of visual effect, or the study area of the VIA. The area of visual effect represents the sum of all viewsheds, considering landscape constraints and physiological limits of human sight.
- ▶ **Inventory**—Identify the affected environment and population and examine visual quality, or what people like or dislike seeing.
- ▶ **Analysis**—Evaluate and analyze potential impacts that the project may have on the identified visual resources and viewers, determining the level of impact to be beneficial, adverse, or neutral.
- ▶ **Mitigation**—Define the project design's mitigation and enhancement. Established processes, such as Context Sensitive Solutions or similar state DOT guidance, can be helpful in coordinating with project designers and the public to identify effective and acceptable mitigation measures. The VIA guidelines provide examples of construction- and design-related mitigation measures that aid in identifying options and general effective measures to fit each project.

The procedures for SDDOT projects involving visual resources are summarized in **Table 23** and are further described in the narrative following the table.

#### *Visual Resources Process Description*

##### **1. Identify Areas of Visual Effect and Study Area**

Upon receipt of the Approved Scope, the EPC will identify and map the study area and AVE to determine if a visual assessment is necessary based on the FHWA VIA guidance

document. The EPC will document the information in the project file.

## 2. Conduct Inventory and Visual Assessment

The EPC or consultant will conduct an inventory and visual assessment using the FHWA VIA guidance. The VIA will include steps to catalogue the views from the project and the views toward the project, landforms and

land cover types in the area, and characteristics of the populations who will view the project. These data are used to prioritize the relative importance from each viewpoint in terms of its visual importance, viewer characteristics, and potential visual impact. Visual character and visual quality are defined for current conditions and post-project conditions.

Table 23. Steps in the Visual Resources Process

| Step                                                     | Participant(s)        | Result(s)                                             |
|----------------------------------------------------------|-----------------------|-------------------------------------------------------|
| <b>Preconstruction</b>                                   |                       |                                                       |
| 1. Identify area of visual effect and study area         | EPC                   | Document map and viewsheds in project file            |
| 2. Conduct inventory and visual assessment               | EPC or Consultant     | Document visual assessment in project file            |
| 3. Evaluate mitigation measures                          | EPC, Design/ROW       | Document mitigation measures in project file          |
| 4. Document in project file and applicable NEPA document | EPC                   | Project file, CE Checklist and ECC; EA/FONSI, EIS/ROD |
| <b>Construction</b>                                      |                       |                                                       |
| 5. Monitor implementation of mitigation measures         | EPC, Project Engineer | Document construction findings in project file        |

Notes: CE – Categorical Exclusion, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FONSI – Finding of No Significant Impact, ROD – Record of Decision

## 3. Evaluate Mitigation Measures

If visual impacts are identified (i.e., visual quality is reduced), the EPC will evaluate mitigation measures and incorporate them into the project design where it is feasible and practicable. The EPC will incorporate the VIA and mitigation measures in the NEPA document (CE, EA, or EIS) and project file. Any public meeting requests should follow SDDOT's Public Involvement Plan procedures.

## 4. Document in Project File and Applicable NEPA Document

The EPC documents the visual assessment and mitigation measures in the project file and incorporates the analysis and mitigation measures into the applicable NEPA document (CE/EA/EIS).

## 5. Monitor Implementation of Mitigation Measures

The Project Engineer and EPC will monitor project construction to ensure that measures to avoid, minimize, or reduce adverse visual impacts are implemented in accordance with the approved project plans. The EPC will document construction findings in the project file.

### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to visual resources are presented by agency, with executive orders presented first.

#### *Federal Highway Administration*

**Guidelines for the Visual Impact Assessment of Highway Projects** (publication no. FHWA-HEP-15-029) The 2015 field guide is intended to help those who prepare or review the coverage of visual impacts in EAs or EISs for highway projects. The guide discusses how to develop such coverage and how to review its adequacy.

**FHWA Technical Advisory T 6640.8A**—FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance for addressing visual aesthetics. Where the project alternatives have a potential for visual quality impacts, the draft environmental documentation should accomplish the following:

- ▶ Identify the impacts to the existing visual resource and the relationship of the impacts to potential viewers of and from the project.
- ▶ Identify measures to avoid, minimize, or reduce adverse impacts.
- ▶ Explain the consideration given to design quality, art, and architecture in the project

planning. These values may be particularly important for facilities located in visually sensitive urban or rural settings.

The guidance also states that the draft environmental documentation should be circulated to officially designated state and local arts councils and, as appropriate, other organizations with an interest in design, art, and architecture. The final environmental documentation should identify any proposed mitigation for the preferred alternative.

### 4.8.4 Air Quality

Protecting air quality in the planning, construction, and maintenance of transportation projects is an important step in complying with provisions of 42 USC 7401 et seq., the Clean Air Act (CAA). This section defines key terms used in the protection of air quality, introduces the applicable authorities, and presents the environmental commitments established for construction projects. The process by which SDDOT evaluates impacts on air quality is summarized in Table 3.7 1 and described in further detail throughout this section. Relevant regulations are cited at the end of the section for further reading.

The SDDANR Air Quality Program is responsible for maintaining air quality levels in South Dakota. It is responsible for air quality levels that protect human health, safety and welfare, and the National Ambient Air Quality Standards (NAAQS) established through the CAA. SDDANR is responsible for maintaining a network of air-quality monitoring stations and reporting annual air-quality monitoring results for South Dakota.

There are currently no nonattainment or maintenance areas designated by USEPA within South Dakota. Therefore, the requirements of the transportation conformity

regulations (40 CFR 93 Subpart A) do not apply to transportation projects in South Dakota (e.g., ensuring project is from a conforming long-range plan and Transportation Improvement Plan, hot-spot analysis etc.). However, air quality is an environmental concern within the broad purview of the NEPA and the thresholds/screening criteria included in the transportation conformity regulations and guidance can be helpful in deciding whether an air quality analysis of a proposed transportation project is warranted for NEPA purposes. For example, the list of project types exempt from transportation conformity (40 CFR 93.126) can be used as an indicator of minimal air quality effects and can support a decision not to analyze air quality further as part of the NEPA process.

For non-exempt projects, the transportation conformity regulations can be used to consider whether a CO hot-spot analysis is warranted for NEPA purposes based on whether the project affects signalized intersections that are at level of service (LOS) D, E, or F, or those that will change to LOS D, E, or F because of increased traffic volumes related to the project (40 CFR 93.123). Intersections at LOS C or better do not require any consideration of localized CO hot-spots, because hot-spots are only an issue at very congested intersections with high traffic volumes. If a project increases congestion at an intersection at LOS D, E, or F, the need for a hot-spot analysis can be further screened using FHWA's *CO Categorical Hot-Spot Finding*. The categorical finding includes a simple web-based tool that can be used to quickly confirm whether further analysis is required.

Transportation conformity also provides guidelines that can be used to consider whether particulate matter (PM2.5 and/or

PM10) hot-spot analysis is warranted for NEPA purposes. The need for such an analysis for projects that qualify for CEs is unlikely. Projects meeting one or more of the following criteria for "projects of local air quality concern" could warrant consideration of PM hot-spot analysis:

1. New highway projects that have a significant number of diesel vehicles and expanded highway projects that have a significant increase in the number of diesel vehicles (40 CFR 93.123[b][1][i]). For

#### Common Definitions:

**Nonattainment area** means any geographic region of the U.S. that has been designated as nonattainment under section 107 of the CAA for any pollutant for which a national ambient air quality standard exists.

**Maintenance area** means any geographic region of the U.S. previously designated as nonattainment pursuant to the CAA Amendments of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under section 175A of the CAA, as amended).

**National Ambient Air Quality Standards (NAAQS)** are those standards established pursuant to Section 109 of the CAA.

Note: All definitions are cited at 40 CFR 93.101.

**Authorization:** Under the authority of the CAA, the U.S. Environmental Protection Agency sets NAAQS for six air pollutants, also known as criteria pollutants: carbon monoxide (CO), ozone, nitrogen dioxide, particulate matter (PM2.5 and PM10), sulfur dioxide, and lead.

Mobile sources (e.g., autos, trucks, and trains) are a major contributor to emissions of four of these pollutants: CO, ozone, nitrogen dioxide, and particulate matter. If the concentration of one or more of these pollutants is found to exceed the regulated level or threshold in a particular geographic area, the area may be classified as a nonattainment area. Geographic areas that are below the regulated level for these pollutants are considered attainment or unclassifiable areas (42 USC 7401).

example, a project on a new highway or expressway that serves a significant volume of diesel truck traffic, such as facilities with greater than 125,000 annual average daily traffic and 8 percent or more of such annual average daily traffic is diesel truck traffic.

2. Projects affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project (40 CFR 93.123[b][1][ii]).
3. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location (40 CFR 93.123[b][1][iii]). For example, new exit ramps and other highway facility improvements to connect a highway or expressway to a major freight, bus, or intermodal terminal.
4. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location (40 CFR 93.123[b][1][iv]).

NEPA also requires consideration of air toxics for which no NAAQS have been established under the CAA. Toxic air pollutants, also known as Hazardous Air Pollutants, are substances known to cause or are suspected of causing cancer or other serious health ailments. FHWA has provided a framework for analyzing air toxics in the 2012 guidance memo entitled *Interim Guidance Update on Mobile Source Air Toxic (MSAT) Analysis in NEPA*. For projects that are categorically excluded under 23 CFR 771.117(c), are exempt from conformity requirements under the CAA pursuant to 40

CFR 93.126, or have no meaningful effect on traffic volumes or vehicle mix, no analysis or discussion of MSATs is necessary.

Documentation sufficient to demonstrate that the project qualifies as a CE and/or exempt project will suffice. Larger projects not meeting these criteria for exemption from MSAT analysis should conduct a qualitative or quantitative MSAT analysis in accordance with the FHWA guidance (which includes template documentation language).

### *Overview of Air Quality in the Project Planning Process*

The Air Quality section of the Environmental Screening Report is intended to identify Air Quality concerns in the planning study area and the project's potential impacts and mitigation for air quality.

**Methodology** – For an Environmental Screening Report, a review of areas of the state where the NAAQS have been violated in the past, requires that all federally funded transportation projects and projects of regional air quality significance be described and modeled for regional conformity. A fiscally constrained regional transportation plan must be prepared by the area MPO and must have funding included in the Transportation Improvement Program.

**Existing Conditions** – Air quality concerns that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for any field investigation efforts. Describe how the planning data may

need to be supplemented during the NEPA phase. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

### *Overview of Air Quality in the Project Development and Delivery Process*

When a transportation project is proposed, the potential impacts on air quality in the project area are reviewed by the Environmental Manager or Environmental Engineer during the completion of the preliminary Class of Action determination. If there is an indication of a potential impact, an EPC is assigned an Approved Scope to conduct further evaluation. The procedures for SDDOT projects involving air quality are summarized in **Table 24** and are further described in the narrative following the table.

### *Air Quality Process Description*

#### **1. Determine if the Project is Located in a Nonattainment Area for Transportation-related Criteria Pollutants**

Upon receipt of the Approved Scope, the EPC conducts a desktop review to determine if the project is located within a nonattainment area using the USEPA Green Book Nonattainment Areas for Criteria Pollutants website. (Note: currently there are no areas designated as nonattainment within South Dakota).

To avoid USEPA designating Rapid City a PM<sub>10</sub> non-attainment area in 1996, a Natural Events Action Plan was developed by the state and approved by USEPA in 1998. The plan requires special fugitive dust control measures for all construction activities in the Rapid City Air Quality Control Zone. As long as PM<sub>10</sub>

concentration remain below the standard, USEPA will take no further action to designate the Rapid City Area nonattainment.

The EPC also determines if the project is located within any of the municipalities that require an air quality permit during construction. Currently in the South Dakota, the only municipality with permitting requirements is Rapid City.

Permitting requirements and applications are set forth in the Rapid City Municipal Code 8.34 and Pennington County Ordinance No. 12. A map of the area of air quality concerns is found at the Rapid City Area Air Quality Control Zone.

A state facility is defined as any state agency, state-owned or state-leased property, or property subject to a temporary stated easement in the Rapid City Air Quality Control Zone.

As required by Administrative Rules South Dakota Chapter 74:36:18:03, a construction activity on a state facility within the Rapid City Air Quality Control Zone must get an air quality permit for fugitive dust emissions from SDDANR. A construction activity is defined as any temporary activity at a state facility which involves the removal or alteration of the natural or pre-existing cover of one acre or more of land. One acre of surface area is based on a cumulative area of anticipated disturbance to be completed for the entire project. Information on this permit can be obtained at the SDDANR Regional Office in Rapid City by calling the Pennington County Air Quality Division at 605-394-4157.

Table 24. Steps in the Air Quality Process

| Step                                                                                                          | Participant(s)    | Result                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                                                                        |                   |                                                                                                                                                              |
| 1. Determine if the project is located in a nonattainment area for transportation-related criteria pollutants | EPC, SDDANR       | SDDANR Coordination Letter, Environmental Project Tracking Database, Air Quality Construction Permit (if applicable), document determination in project file |
| 2. Determine if the project is exempt per transportation conformity regulations                               | EPC               | Document exemption in project file                                                                                                                           |
| 3. Determine if CO, PM <sub>2.5</sub> , PM <sub>10</sub> analysis is warranted                                | EPC or Consultant | Document CO screening; PM hot spot analysis (if applicable) in project file                                                                                  |
| 4. Determine if the project is exempt from MSAT analysis                                                      | EPC or Consultant | Document Qualitative/Quantitative Analysis (if applicable) in project file                                                                                   |
| 5. Document in project file and applicable NEPA document                                                      | EPC               | Project file, CE Checklist and ECC; EA/FONSI, EIS/ROD; copy to Section A Plan Notes (if applicable) to Design to incorporate in Final Plan set               |

Notes: CE – Categorical Exclusion, CO – Carbon Monoxide, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FONSI – Finding of No Significant Impact, MSAT – Mobile Source Air Toxics, PM – Particulate Matter, ROD – Record of Decision, SDDANR – South Dakota Department of Agriculture and Natural Resources

The EPC sends a coordination letter to the SDDANR Air Quality Program to confirm the project's location within a nonattainment area. The letter is documented in the Environmental Project Tracking Database. If the project is not located within a nonattainment area, it is documented in the project file. SDDANR coordination is documented in the CE Checklist.

If the project is located within an attainment area, proceed to Step 2. If the project is located within a municipality that requires an air quality permit, the EPC will prepare and submit an application and document in the CE

Checklist under "other unusual circumstances apply."

## 2. Determine if the Project is Exempt per Transportation Conformity Regulations

The EPC will determine if the project is exempt from transportation conformity regulations. If exempt, the EPC will document in the project file. If transportation conformity regulations apply, the EPC will need to determine if a hot-spot analysis is warranted.

## 3. Determine if a CO, PM<sub>2.5</sub> or PM<sub>10</sub> Hot Spot Analysis is Warranted

If a hot-spot analysis is not warranted, the EPC will document in the project file. If warranted,

the EPC or consultant will conduct a CO screening using the FHWA CO Categorical Hot

#### **4. Determine if the Project is Exempt from Mobile Source Air Toxics Analysis**

The EPC will determine if the project is exempt from MSAT analysis. If exempt, the EPC will document in the project file.

#### **5. Document in Project File and Applicable NEPA Document**

The EPC will document in project file and applicable NEPA document (CE/EA/EIS). The ECC (if applicable) should indicate that SDDANR coordination was completed and provide any comments in the ECC under “other unusual circumstances apply.” A copy of Section A Plan Notes, Commitment K, is sent to Design to incorporate in Final Plan set.

#### *Applicable Air Quality Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to air quality are presented by agency, with executive orders presented first.

#### *U.S. Environmental Protection Agency*

**42 USC 7401 et seq., “Air Pollution Prevention and Control”**—These parts of the USC codify the provisions of the CAA. The fundamental purpose of the CAA is to protect and enhance the quality of the nation’s air resources to promote the public health, welfare, and the productive capacity of its population. Under the authority of the CAA, USEPA uses six criteria pollutants (i.e., ozone, CO, nitrogen dioxide, sulfur dioxide, PM2.5, PM10, and lead) as indicators of air quality. USEPA has established a maximum concentration above which adverse effects on human health may occur. These threshold concentrations constitute the NAAQS. Current NAAQS are available on the USEPA website. The CAA

Spot Finding Tool and a hot-spot analysis using the USEPA Guidance.

provides that when an area does not meet the air quality standard for one of the criteria pollutants, it may be subject to the formal rule-making process that designates it as nonattainment for that pollutant. Under the CAA, USEPA further classifies ozone, CO, and some PM nonattainment areas based on the magnitude of an area’s problem.

Nonattainment classifications may be used to specify air pollution reduction measures that an area must adopt and when the area must reach attainment.

#### **Project-Level Conformity and Hot-Spot**

**Analyses**—USEPA provides a webpage containing policy guidance, technical guidance, and other resources issued by USEPA to assist agencies in completing project-level conformity analyses, including PM2.5, PM10, and CO hot-spot analyses.

**40 CFR 51 and 93 Transportation Conformity Rule Amendments to Implement Provisions Contained in the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users**—This Final Rule, dated January 24, 2008, implements amendments to the conformity regulations to make them consistent with CAA Section 176(c) as amended by SAFETEA-LU, including changes to reflect that the CAA:

- ▶ Provides more time for state and local governments to meet conformity requirements
- ▶ Provides a 1-year grace period before the consequences of not meeting certain conformity requirements
- ▶ Allows the option of shortening the timeframe of conformity determinations
- ▶ Streamlines other provisions

The final rule also includes minor amendments that are not related to SAFETEA-LU (e.g., allowing USDOT to make categorical hot-spot findings for appropriate projects in CO nonattainment and maintenance areas). While the SAFETEA-LU statutory changes apply in all states, these non-statutory amendments only apply in states with up-to-date “conformity SIPs” (another type of SIP that incorporates the federal conformity requirements into state law).

**Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA**—The purpose of this memorandum is to update the September 2009 interim guidance that advised FHWA division offices on when and how to analyze MSAT under the NEPA review process for highway projects. This update reflects recent changes in methodology for conducting emissions analysis and updates of research in the MSAT arena.

#### 4.8.5 Contaminated Materials

Identifying contaminated materials that may

**Authorization: Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)** (42 USC 9601 et seq.)—This 1980 statute commonly referred to as a “Superfund” established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste, and established a trust fund to cleanup when no responsible party could be identified.

**The Resource Conservation and Recovery Act** (42 USC §6901 et seq.)—This amended statute gives the U.S. Environmental Protection Agency the authority to control hazardous waste from the “cradle-to-grave.” This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled the U.S. Environmental Protection Agency to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

be present or are known to be present within a project area is an important consideration during transportation planning, construction, and maintenance. From a regulatory perspective, contaminated materials are considered to be hazardous waste, hazardous substances, or other regulated materials such as petroleum products. This section provides key definitions, introduces the applicable authority, and provides the steps to ensure compliance. The process that SDDOT follows to identify and address contaminated materials is summarized in Table 3.7-2 and described in further detail throughout this section. Relevant regulations are cited at the end of the section for further reading.

Contaminated materials encountered during construction can cause issues, delay the

project schedule, and involve additional costs. Identifying contaminated materials (potential or known) within a project area or adjacent to a project area should occur early in the planning stage for the project.

### *Overview of Contaminated Materials in the Project Planning Process*

The Contaminated Materials section of the Environmental Screening Report is intended to identify petroleum and other hazardous material-contaminated soils and groundwater in the planning study area and determine the project's potential impacts and mitigation for those resources.

**Methodology** – For an Environmental Screening Report, review of hazardous materials in the planning study area shall occur through a database search and desktop review of online tools including preliminary survey, aerial photography, USGS quadrangle maps, Sanborn Fire Insurance Maps, soil survey maps, and available survey data.

**Existing Conditions** – Hazardous materials that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for further contaminated materials documentation (Phase I Environmental Site Assessment (ESA), Modified Phase I ESA, and/or Phase II ESA) as well as future field investigation efforts. Describe how the planning data may need to be supplemented during the NEPA phase. In addition, design modifications to avoid impacts as well potential mitigation options should be

presented. A Materials Management Plan should also be used if construction activities are anticipated to encounter contaminated materials.

## Known/Suspected Contaminated Soil Site Procedures

- ▶ EPC provides information to SDDANR about the project site to determine possible contamination of soils. If suspected, EO issues work order for a

### Common Definitions:

**Contaminated materials** used in this section is a general phrase not defined in federal or state statutes or regulations, but it includes hazardous wastes under the Resource Conservation and Recovery Act (RCRA); hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act; and other regulated materials such as petroleum-contaminated soil that must be handled as nonhazardous, as defined below:

**Hazardous substance** means any substance designated pursuant to 40 CFR 302.3. Hazardous substances include listed and unlisted substances. Listed substances are delineated in 40 CFR 302.4, Table 302.4. Unlisted substance may meet certain definitions and meet or exceed thresholds for ignitability, corrosivity, reactivity, and toxicity.

**Hazardous waste** shall have the meaning provided in 40 CFR 261.3. To be considered a hazardous waste, a material first must be classified as a solid waste (40 CFR §261.2). If a waste is considered solid waste, it must then be determined if it is hazardous waste (§262.11). Wastes are defined as hazardous by the U.S. Environmental Protection Agency if they are specifically named on one of four lists of hazardous wastes located in Subpart D of Part 261 (F, K, P, U) or if they exhibit one of four characteristics located in Subpart C of Part 261 (characteristic wastes) (USEPA Wastes – Hazardous Waste Webpage, 40 CFR 261).

**Contaminated Soil Site:** Site contaminated by leaking petroleum storage tanks and lines, or by spills of petroleum products caused by accidents, refueling overfills, etc.

consultant to conduct a site assessment or soil screening/sampling.

**Suspect Site:** Site suspected of being contaminated because of know tank leakage, spills, longtime use as a petroleum refueling station, etc.

**Non-suspect tank removal and/or replacement:** Petroleum storage tank removal and/or replacement project where records and site conditions do not indicate a presence of leaks or contaminated soil. (SDDOT Policy PD-2004-03)

- ▶ If no contamination is found, the report is furnished to the EO, Region Office, SDDANR, and Petroleum Release Compensation Fund
- ▶ If contamination is found, the site assessment report, complete with proposed remediation plan, is furnished to EO; EO notifies, or directs consultant to notify, SDDANR. Procedures to remove and dispose of contaminated materials are specified in PD-2004-03.

### Non-Suspect Tank Removal and/or Replacement Procedures

- ▶ Region notifies EO and submits plans to SDDANR and the State Fire Marshal for approval. After approval by SDDANR and the marshal, the Region lets contract for removal/replacement.
- ▶ If no contamination is found, the Region completes project.
- ▶ If contamination is found, EO will notify SDDANR. Procedures to remove and dispose of contaminated materials are specified in PD-2004-03.

Contaminants such as petroleum products or solvents in the subsurface or groundwater can migrate onto SDDOT ROW from adjacent locations. Other projects that may require review include acquiring new ROW or

permanent easement, excavating or other disturbance of the soil, or demolishing or substantially modifying buildings or structures. Even projects that do not involve these activities should be reviewed for contamination to ensure that potential issues are identified as early as possible. The procedures for SDDOT projects involving contaminated materials are summarized in **Table 25** and are further described in the narrative following the table.

### *Contaminated Materials Process Description*

#### **1. Determine if Project is Located in an Area with Potential for or Known Contaminated Materials**

Upon receipt of the Approved Scope, the EPC will conduct a desktop review to determine if the project area is located within an area with potential for or known contaminated materials and/or known gas stations and underground storage tanks. The EPC must consider surrounding land use when screening for contaminated materials. Desktop review involves review of location map, aerial photography, Sanborn Maps, regulatory databases such as the USEPA) Superfund site list called CERCLIS, USEPA Enforcement History and Compliance Online, and SDDANR Aboveground and Underground Tank database and spill database. The EPC should also review available American Society for Testing and Materials Phase I and Phase II Environmental Site Assessments and contact SDDANR for other relevant information to identify past uses of the property and adjacent properties.

The EPC will send a coordination letter to SDDANR to determine if the project is located in an area where contaminated materials or

groundwater quality could potentially impact the project.

Table 25. Steps in the Contaminated Materials Process

| Step                                                                                             | Participants(s)       | Result(s)                                                                                                                                      |
|--------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                                                           |                       |                                                                                                                                                |
| 1. Determine if project is located in an area with potential for or known contaminated materials | EPC, SDDANR           | SDDANR Coordination Letter, Environmental Project Tracking Database, document in project file                                                  |
| 2. Determine if the project will impact contaminated materials or Identified sites               | EPC                   | Decision on further action; if none is required, document in project file and CE Checklist and ECC (if applicable)                             |
| 3. Evaluate avoidance or remediation alternatives                                                | EPC, Design/ROW       | Document avoidance or Remediation Plan (if applicable) in project file                                                                         |
| 4. Document in project file and applicable NEPA document                                         | EPC                   | Project file, CE Checklist and ECC; EA/FONSI, EIS/ROD; copy to Section A Plan Notes (if applicable) to Design to incorporate in Final Plan set |
| <b>Construction</b>                                                                              |                       |                                                                                                                                                |
| 5. Monitor implementation of avoidance or remediation plan                                       | Project Engineer, EPC | DOT-272, document construction findings in project file                                                                                        |

Notes: CE – Categorical Exclusion, DOT – Department of Transportation, EA – Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FONSI – Finding of No Significant Impact, NEPA – National Environmental Policy Act, ROD – Record of Decision, ROW – Right of Way, SDDANR – South Dakota Department of Agriculture and Natural Resources

If no contaminated materials or significant sites are identified, no further action is necessary. The EPC will document this information in the project file, CE Checklist, and ECC. If contaminated materials or significant sites have been identified and have the potential to impact project, proceed to Step 2.

## 2. Determine if the Project will Impact Contaminated Materials or Identified Sites

The EPC will determine if the project will impact contaminated materials or identified sites. If no impacts are identified, no further

action is necessary. The EPC documents in this information in the project file, and if applicable in the CE Checklist, and ECC. If impacts on contaminated materials or identified sites are identified, proceed to Step 3.

## 3. Evaluate Avoidance Measures or Develop Remediation Plan

The EPC and Design Engineer will develop alternatives to avoid the contaminated materials site first, and if avoidance is not possible, they will develop a remediation plan. Further coordination with SDDANR may be necessary. The EPC submits a written notice of work on contaminated materials to SDDANR,

SDDOT Area Office, 30 days before work begins. The EPC documents avoidance or remediation measures in the project file.

#### **4. Document in Project File and Applicable NEPA Document**

The EPC documents the avoidance measures or remediation plan in the appropriate NEPA document (CE, EA, or EIS). The EPC provides a copy of Section A Plan Notes, Commitment I, (if applicable) to Design to incorporate in Final Plan set, including contaminated material location and possible disposal site.

#### **5. Monitor Implementation of Avoidance or Remediation Plan**

During construction, the Project Engineer will monitor the construction site to ensure that the avoidance measures or remediation have been accomplished in accordance with the plans. If contamination is encountered during construction, the Project Engineer will contact the EO, which will contact SDDANR and a qualified consultant to inspect and monitor removal of any contaminated soil. Removal of soil will be completed under a separate bid. The EPC will document DOT-272 and construction findings in project file.

#### *Applicable Laws, Regulations, and Guidance*

Laws, regulations, and guidance relevant to contaminated materials are presented by agency, with executive orders presented first.

#### **Environmental Protection Agency**

**Toxic Substance Control Act**—The Toxic Substances Control Act of 1976 provides USEPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from the Toxic Substance

Control Act, including, among others, food, drugs, cosmetics, and pesticides. The Toxic Substance Control Act addresses the production, importation, use, and disposal of specific chemicals, including polychlorinated biphenyls, asbestos, radon, and lead-based paint.

**Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (American Society for Testing and Materials Standard E 1527)**—On December 30, 2013, USEPA approved American Society for Testing and Materials Standard E1527-13 as sufficient to satisfy All Appropriate Inquiry for potential liability protections under CERCLA and stand as the baseline for Phase I Environmental Site Assessments.

**Solid Waste Disposal (42 USC 6901 et seq.)**—These USC sections codify the provisions of the RCRA, which gives USEPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

The Federal Hazardous and Solid Waste Amendments in 1984 amended RCRA and focus on minimizing waste, phasing out land disposal of hazardous waste, and performing corrective action for releases. Other mandates of this law include increased enforcement authority for USEPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank

program. Implementing regulations for RCRA are provided in 40 CFR 260-282.

**Comprehensive Environmental Response, Compensation and Liability (42 USC 9601 et seq.)**—This 1980 statute is commonly referred to as “Superfund.” The statute created a tax on chemical and petroleum industries and allowed broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. The CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste, and established a trust fund to cleanup when no responsible party could be identified. The law authorized the following two types of response actions:

- ▶ **Short-term Removals:** Actions may be taken to address releases or threatened releases that require a prompt response.
- ▶ **Long-term Remedial Response:** Actions that permanently or significantly reduce the dangers associated with releases or threatened releases that are not immediately life threatening. These actions can only occur at sites listed on USEPA’s National Priorities List) (often known as the list of Superfund sites.

The National Contingency Plan provides the guidance and procedures for responding to releases and threatened releases of hazardous substances, pollutants, or contaminants. It established the National Priorities List.

The *Superfund Amendments and Reauthorization Act* (SARA) amended CERCLA in 1986. SARA required USEPA to revise the Hazard Ranking System to more accurately assess the degree of risk posed to human

health and/or environment by uncontrolled hazardous waste sites that may be placed on the National Priorities List. Implementing regulations for CERCLA and SARA are provided in 40 CFR 300-374.

**Innocent Landowners, Standards for Conducting All Appropriate Inquiries (40 CFR 139)**—The purpose of this section is to provide standards and practices for “all appropriate inquiries” into the previous ownership and uses of a property for the purposes of CERCLA sections 101(35)(B)(i)(I) and 101(35)(B)(ii) and (iii).

**National Emission Standard for Asbestos (40 CFR 61, Subpart M)**—Asbestos is an USEPA-designated hazardous air pollutant and is regulated under Subpart M.

#### Federal Highway Administration

**FHWA Supplemental Hazardous Waste Guidance**—This FHWA guidance on hazardous waste contamination, written on January 16, 1997, encourages early identification; assessment; and federal, state, and local coordination regarding contamination and its clean-up.

**FHWA Technical Advisory T 6640.8A**—The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, provides guidance for providing environmental documentation related to hazardous waste sites, as follows:

- ▶ During early planning, the location of permitted and nonregulated hazardous waste sites should be identified. Early coordination with the appropriate regional USEPA office and the appropriate state agency will aid in identifying known or potential hazardous waste sites.
- ▶ If known or potential waste sites are identified, the locations should be clearly marked on a map showing their

relationship to the alternatives under consideration.

- ▶ If a known or potential hazardous waste site is affected by an alternative, information about the site, the potential involvement, impacts, public health concerns, and the proposed mitigation measures to eliminate or minimize impacts or public health concerns should be discussed in the draft EIS.
- ▶ If the preferred alternative impacts a known or potential hazardous waste site, the final EIS should address and resolve the issues raised by the public and government agencies.

#### 4.8.6 Noise

Noise from highway traffic and construction is an important environmental consideration in the planning, construction, and maintenance of transportation projects. This section defines key terms in noise analysis and abatement, introduces the authorities, and presents an introduction to the federal and SDDOT procedures for applying 23 CFR 772. The process by which SDDOT implements FHWA noise standards is summarized in Table 3.7-3 and described in further detail throughout this section. Relevant regulations are cited at the end of the section for further reading.

FHWA developed noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, applies to highway projects requiring federal funding or approvals. This regulation applies to all Type I projects unless the regulation specifically indicates that a section only applies to Type II or Type III projects. If a project is determined to be a Type I project under this definition,

then the entire project area as defined in the environmental document is a Type I project.

Type I projects are defined as federal-aid highway projects in a new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. Type I projects can also include new or altered weigh stations, rest stops, ride-share lots, or toll plazas. Noise analysis is not required for the no-build alternative or other eliminated alternatives. SDDOT uses this definition to determine whether or not a project is Type I. SDDOT does not participate in or fund Type II projects along existing highways.

#### *Overview of Noise Analysis in the Project Planning Process*

The Noise section of the Environmental Screening Report is intended to identify noise conditions within the planning study area and determine the project's potential impacts and

**Common Definitions:** *Abatement* are measures used to reduce traffic noise levels. Abatement measures will not be implemented unless determined to be feasible and reasonable.

*Feasibility* is the combination of engineering and acoustical factors considered in the evaluation of a noise abatement measure.

*Reasonableness* is the combination of social, economic, and environmental factors considered in the evaluation of noise abatement measures.

*Statement of likelihood* is a statement provided in the environmental clearance document based on the feasibility and reasonableness analysis completed at the time the environmental document is being approved.

Note: All definitions are cited at 23 CFR 772.5.

mitigation to noise-sensitive locations and benefited receptors.

**Methods** – For an Environmental Screening Report, no noise study should be conducted. Instead, a review of noise conditions within the planning study area should be conducted to identify noise-sensitive location and benefited receptors.

**Existing Conditions** – Noise-sensitive locations and benefited receptors that are found within the planning study area should be mapped and summarized in the Environmental Screening Report. Potential impacts should be identified as well as potential avoidance, minimization, and mitigation efforts.

**Next Steps** – A summary of the next steps for the future projects shall include recommendations for field analysis efforts. Because developments and regulations can change over time, it is vital to verify the Planning Phase information and supplement it, as appropriate, during the NEPA Phase of a project. In addition, design modifications to avoid impacts as well as potential mitigation options should be presented.

### *Overview of Noise Analysis in the Project Development and Delivery Process*

The SDDOT Noise Analysis and Abatement Guidance outlines and supplements procedures for applying 23 CFR 772 in an equitable and cost-effective manner in South Dakota. Noise analyses conducted should use the latest approved version of the FHWA

Traffic Noise Model (TNM), (currently version 3 as of March 2017), or any other model determined by the FHWA to be consistent with the methodology of FHWA TNM. (Note: no other models have been approved to date.)

The procedures for SDDOT projects involving noise are summarized in **Table 26** and are further described in the narrative following the table.

### *Noise Process Description*

#### **1. Determine if Project is a Type I Project**

Upon receipt of the Approved Scope and Project, the EPC determines whether the project is a Type I project and documents this finding in the project file. As discussed above, no noise analysis is necessary for non-Type I projects.

**Authorization: Standards (23 USC 109[i])**—This part of the USC codifies a provision enacted by the Federal-Aid Highway Act of 1970 that requires the USDOT to develop and promulgate standards for highway noise levels that are compatible with different land uses. The resulting criteria are contained in Title 23 CFR Part 772, Procedures of Abatement of Highway Traffic Noise and Construction Noise.

**Noise Control (42 USC 4901–4918)**—These parts of the USC codify the provisions of the Noise Control Act of 1972. They authorize the U.S. Environmental Protection Agency to establish noise regulations to control major sources of noise, including transportation vehicles and construction equipment.

Table 26. Steps in the Noise Analysis Process

| Step                                                                               | Participant(s)                       | Result(s)                                                                                                                                      |
|------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Preconstruction</b>                                                             |                                      |                                                                                                                                                |
| 1. Determine if the project is a Type I project                                    | EPC                                  | Document in project file                                                                                                                       |
| 2. Identify noise sensitive areas and conduct existing conditions noise monitoring | EPC                                  | Document need for noise analysis in project file                                                                                               |
| 3. Conduct Noise Analysis                                                          | EPC or Consultant                    | Noise Analysis                                                                                                                                 |
| 4. Evaluate abatement alternatives                                                 | EPC, Local Government Agency, Public | Document abatement alternatives, Statement of Likelihood, and Public Involvement Plan in project file                                          |
| 5. Document in project file and applicable NEPA document                           | EPC                                  | Project file, CE Checklist and ECC; EA/FONSI, EIS/ROD; copy to Section A Plan Notes (if applicable) to Design to incorporate in Final Plan set |
| <b>Construction</b>                                                                |                                      |                                                                                                                                                |
| 6. Monitor implementation of abatement measures                                    | EPC, Project Engineer                | Document construction findings in project file                                                                                                 |

Notes: CE – Categorical Exclusion, EA- Environmental Assessment, ECC – Environmental Commitments Checklist, EIS – Environmental Impact Statement, EPC – Environmental Project Coordinator, FONSI – Finding of No Significant Impact, NEPA – National Environmental Policy Act, ROD – Record of Decision

## 2. Identify Noise Sensitive Areas and Conduct Existing Conditions Noise Monitoring

If the project is Type I or involves potential noise issues, the EPC or consultant will identify and map potential noise sensitive areas within the project area. Noise sensitive land uses include residences, parkland, schools, trails, libraries, and places of worship, among others (see complete list in 23 CFR 772). Noise sensitive areas can be preliminarily identified using a desktop review (e.g., aerial photos), but need to be confirmed in the field as well.

If there are no noise sensitive areas along the project alignment, no noise analysis will be required to conclude there will not be any noise impacts. If noise sensitive land uses are present in the project area, existing conditions noise monitoring should be conducted following the procedures described in the SDDOT Noise Analysis and Abatement Guidance (2023). The EPC will document the identification of noise sensitive areas and existing conditions noise monitoring in the project file. If a noise analysis is warranted, proceed to Step 3.

**Highway traffic noise impacts** occur when the predicted traffic noise levels for the design year approach (reach 1 decibel less than) or exceed the noise abatement criteria contained in 23 CFR 772 (Appendix 1), or when the predicted traffic noise levels substantially exceed the existing noise levels by 15 A-weighted decibels, even though the predicted levels may not exceed the noise abatement criteria.

### **3. Conduct Traffic Noise Analysis and Identify Noise Impacts**

The EPC or an approved Contractor will conduct a traffic noise analysis using FHWA's TNM in accordance with 23 CFR 772 and SDDOT's Noise Analysis and Abatement Guidance. The TNM modeling requires several key inputs, including the proposed alignment/pavement layout, existing and future year traffic volumes, and vehicle classification data (especially important due to the large influence of heavy truck volumes on traffic noise). Based on the TNM modeling, noise impacts can be determined according to the noise abatement criteria. A noise levels "approach" (defined by SDDOT as within 1 decibel [dBA] of the noise abatement criteria) or "substantially exceed" existing noise levels (defined by SDDOT as an increase of 15 dBA over existing conditions).

The noise analysis must include an analysis of each activity category as detailed in 23 CFR 772. A detailed list of land use types within each category can be found in Appendix 1 (23 CFR 772).

### **4. Evaluate Abatement Measures**

For those receptors that are identified as noise impacts, the EPC and Design will consider and evaluate abatement measures (e.g., barriers, earth berms, buffer zones, traffic management measures, and alteration of horizontal and

vertical alignments) for feasibility and reasonableness. This includes modeling of abatement measures in TNM to assess their acoustic benefits, considering engineering issues related to potential abatement designs, and estimating costs of abatement measures in accordance with SDDOT's traffic noise policy. The noise abatement measure analysis concludes with a recommendation of whether or not mitigation is feasible and reasonable in each location with noise impacts, and a preliminary proposed mitigation design. The preliminary mitigation design will be subject to further refinement in final design.

The analysis report should include:

- ▶ Noise abatement measures that are feasible or reasonable and are likely to be incorporated into the project
- ▶ Noise impacts for which no abatement appears to be feasible and reasonable
- ▶ Statement of likelihood (abatement measures that will be included in final design)

The EPC will present the noise analysis to the affected local government agency or municipality along with information on noise-compatible planning techniques.

The EPC will prepare a statement of likelihood and develop a public involvement plan to provide the opportunity for the public to review and comment on existing noise levels (both measured and modeled), future predicted noise levels, and preliminary noise abatement considerations. SDDOT will not be responsible for providing highway traffic noise abatement for undeveloped lands permitted after the approval of the environmental document (CE, FONSI, or ROD).

## Step 5. Reasonableness

Subjective criteria that applies common sense and good judgement when noise abatement measures are considered. The following three reasonableness criteria must be collectively achieved for abatement measure to be considered reasonable:

- ▶ **Viewpoints of the Property Owners and Residents of all Benefited Receptors (Activity Category B Land Uses)** – When it is determined that it would be feasible to provide noise abatement for a site, and preliminary determination has been made, a public informational meeting will be held for a final determination of whether abatement would be reasonable. Benefited property owners and residents will be given an opportunity to vote on noise abatement by ballot.
- ▶ **Cost Effectiveness** – Noise barriers that are determined to be feasible to design and construct must also be evaluated for reasonable cost. SDDOT defines cost effectiveness as dollars per benefited receiver. Based on 2010 construction cost estimates, SDDOT will use \$44 per square foot for barrier costs. If the cost per benefited receptor is more than \$21,000, the abatement measure will be considered not reasonable.  
  
The cost calculations of the noise abatement measure includes all items directly related to the construction of the abatement measure. Cost item examples include design, ROW, drainage modifications, utility relocation, traffic control, retaining walls, landscaping for graffiti abatement and standard aesthetic treatments.
- ▶ **Noise Reduction Goal** – A minimum of 40% of benefited receptors must achieve a

7dB(A) noise reduction for noise abatement to be reasonable. SDDOT Noise Analysis and Abatement Guidance – (July 2011)

### 5. Document in Project File and Applicable NEPA Document

The EPC will document the noise analysis and abatement measures in the project file and applicable NEPA document (CE, EA, or EIS). A copy of Section A Plan Notes (if applicable) will be sent to Design to incorporate into the Final Plan set.

### 6. Monitor Implementation of Abatement Measures

During construction of the project, the Project Engineer and the EPC are responsible for monitoring that noise abatement measures were implemented in accordance with SDDOT guidance. The EPC documents construction findings in the project file.

### *Applicable Laws, Regulations and Guidance*

Laws, regulations, and guidance relevant to noise are presented by agency, with executive orders presented first.

**Standards (23 USC 109[i])**—Codifies a provision enacted by the Federal-Aid Highway Act of 1970 that requires USDOT to develop and promulgate standards for highway noise levels that are compatible with different land uses. The resulting criteria are contained in Title 23 CFR Part 772, Procedures of Abatement of Highway Traffic Noise and Construction Noise.

**Noise Control (42 USC 4901–4918)**—Codifies the provisions of the Noise Control Act of 1972, authorizing the U.S. Environmental Protection Agency (USEPA) to establish noise regulations to control major sources of noise,

including transportation vehicles and construction equipment.

**Procedures for Abatement of Highway Traffic Noise and Construction Noise (23 CFR 772)—**

The Procedures of Abatement of Highway Traffic Noise and Construction Noise, dated October 16, 1997, and amended July 13, 2010, provides procedures for noise studies and noise abatement measures to help protect the public health and welfare, supply noise abatement criteria, and establish requirements for information to be given to local officials for use in highway planning and design that are approved pursuant to Title 23 USC.

**Federal Highway Administration**

**FHWA Highway Traffic Noise Analysis and Abatement Policy and Guidance**—FHWA updated the Highway Traffic Noise Analysis and Abatement Policy and Guidance document (FHWA-HEP-10-025) in December 2011. This document provides FHWA guidance for applying the 23 CFR 772 in the analysis and abatement of highway traffic noise.

**FHWA Highway Construction Noise**

**Handbook**—This handbook provides guidance on measuring, predicting, and mitigating highway construction noise and developing noise criteria. The handbook includes the FHWA Roadway Construction Noise Model. The analysis tool enables the prediction of construction noise levels for a variety of construction operations based on a compilation of empirical data and the application of acoustical propagation formulas. The program enables calculation of construction noise levels in more detail than manual methods while avoiding the need to collect extensive amounts of project-specific input data.

**National Cooperative Highway Research Program Guidelines for Selection and**

**Approval of Noise Barrier Products**—The National Cooperative Highway Research Program published the Guidelines for Selection and Approval of Noise Barrier Products in July 2008. This document provides information on the types of barriers, materials, and surface textures; the costs associated with barriers; the process for designing barriers; and more.

**South Dakota Department of Transportation**

**Noise Analysis and Abatement Guidance**

**(December 2023)**—This guidance outlines SDDOT procedures on how highway traffic impacts are defined, how noise abatement is evaluated, and how noise abatement decisions are made. It is intended to supplement 23 CFR 772. The document is reviewed annually and updated, as necessary, when FHWA issues new guidance. This document was developed by SDDOT and was reviewed and approved by FHWA.