

# Supplemental Environmental Assessment and Section 4(f) Evaluation

## South Veterans Parkway

NH 0100(110)405, PCN 01V9, I-29 to Western Ave  
P 1359(00), PCN 08DA, CIP 11111  
P 1391(00), PCN 08DC, CIP 11112  
NH 0100(108)407, PCN 01V6, Western Ave to Cliff Ave  
P 1353(00), PCN 08DD, CIP 11113  
NH 2115(00), PCN 08DE, CIP 11114  
P 1261(00), PCN 08DF, CIP 11115  
NH 0100(106)409, PCN 01V7, Cliff Ave to Sycamore Ave  
P 8042(00), PCN 08DG, CIP 11116  
P 8042(00), PCN 08DH, CIP 11117  
NH 0100(107)411, PCN 01VA, Sycamore Ave to 57th St  
P 1440(00), PCN 08DJ, CIP 11118  
P 1432(00) PCN 08DK, CIP 11119

## Lincoln and Minnehaha Counties Sioux Falls, South Dakota

Submitted Pursuant to 42 U.S.C. 4332(2) and 49 U.S.C. 303  
by the  
U.S. Department of Transportation  
Federal Highway Administration  
South Dakota Department of Transportation  
and  
City of Sioux Falls.

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The following persons may be contacted for additional information concerning this document:

Chad Babcock  
Environmental Scientist Manager  
SD Department of Transportation  
700 East Broadway  
Pierre, SD 57501  
605.773.3721



Chad  
Babcock

Digitally signed by  
Chad Babcock  
Date: 2022.11.16  
15:16:13 -06'00'

Chad Babcock,  
Environmental Scientist Manager

Tom Lehmkuhl  
Environmental Engineer  
Federal Highway Administration  
116 East Dakota  
Pierre, SD 57501  
605.224.8033



Tom Lehmkuhl  
2022.11.16 15:29:45 -06'00'

Tom Lehmkuhl,  
Environmental Engineer

This document was made available for public review on November 17, 2022. Comments are due on December 16, 2022. For additional information regarding this document, please contact:

Shannon Ausen, PE  
Engineering Program Manager  
City of Sioux Falls Public Works: Engineering  
231 North Dakota Avenue  
City Center  
Sioux Falls, SD 57104  
605-367-8607  
sausen@SIOUXFALLS.org



# Contents

- 1.0 Introduction ..... 1
  - 1.1 Project Description and Study Area..... 4
  - 1.2 Updates to Environment and Regulations Since 2012 FONSI ..... 6
  - 1.3 Independent Relationship with Local Projects and Growth ..... 8
- 2.0 Purpose and Need for Project..... 10
  - 2.1 Purpose ..... 10
  - 2.2 Need ..... 10
  - 2.3 Goals and Objectives ..... 19
  - 2.4 Logical Termini and Independent Utility ..... 20
- 3.0 Alternatives Analysis ..... 22
  - 3.1 Background ..... 22
  - 3.2 Changes to the Preferred Alternative since 2012..... 23
  - 3.3 Alternatives Screening..... 29
  - 3.4 Public Input Received on the Preferred Alternative ..... 33
  - 3.5 Conclusion..... 33
- 4.0 Affected Environment and Environmental Consequences ..... 34
  - 4.1 Land Use ..... 41
  - 4.2 Public Facilities, Utilities, and Services ..... 44
  - 4.3 Visual Impacts and Aesthetics..... 44
  - 4.4 Archeological and Historic Resources..... 47
  - 4.5 Economic Resources..... 49
  - 4.6 Noise ..... 51
  - 4.7 Relocations..... 53
  - 4.8 Wetlands and Streams ..... 54
  - 4.9 Floodplains ..... 57
  - 4.10 Threatened and Endangered Species ..... 59
  - 4.11 Section 4(f) and Section 6(f) Resources..... 61
  - 4.12 Regulated Materials..... 66
  - 4.13 Climate Change and Resiliency ..... 68
  - 4.14 Cumulative Impacts ..... 71
- 5.0 Agency Coordination and Public Involvement..... 77
  - 5.1 Agency and Tribal Coordination ..... 77
  - 5.2 Public Involvement ..... 78



6.0 Future Actions / Recommendations .....81  
 7.0 References .....87

## Tables

Table 2-1. Summary of the Project’s Purpose and Need along with evidence supporting the Needs..... 12  
 Table 3-1. Comparison of the 2012 EA Preferred Alternative and current Preferred Alternative 24  
 Table 3-2. Major roadway design elements of South Veterans Parkway .....26  
 Table 3-3. Change in accessibility .....31  
 Table 3-4. Level of service for roadways and intersections on South Veterans Parkway.....32  
 Table 4-1. Assessment of resources requiring review ..... 35  
 Table 4-2. Recent, current and future growth in the City of Sioux Falls and neighboring communities.....49  
 Table 4-3. Noise study results summary.....52  
 Table 4-4. Impacts to state and federally listed species potentially in the Study Area..... 61  
 Table 4-5. Section 4(f) resources in the Study Area ..... 64  
 Table 4-6. Regulated materials and/or potentially contaminated properties in the regulated materials Study Area.....66  
 Table 6-1. Section A standard commitments required for each project phase. ....81

## Figures

Figure 1-1. Veterans Parkway completed and planned segments overview map ..... 2  
 Figure 1-2. Environmental Assessment timeline..... 4  
 Figure 1-3. South Veterans Parkway project Study Area and proposed construction phases..... 5  
 Figure 1-4. South Veterans Parkway in relation to City arterial projects and neighboring growth areas ..... 9  
 Figure 2-1. Spatial extent of the existing road network and traffic analysis zones within the City of Sioux Falls travel demand model ..... 14  
 Figure 2-2. Level of service illustration ..... 15  
 Figure 2-3. Year 2050 level of service distribution of Sioux Falls transportation network at AM and PM peak travel time absent of South Veterans Parkway. road segments operating at LOS “D”, “E”, and “F” are considered failing. .... 15  
 Figure 2-4. 2026 and 2050 planning horizon build condition traffic volumes ..... 18  
 Figure 3-1. Common typical sections for South Veterans Parkway. ....27  
 Figure 3-2. Typical sections for intersecting City arterial segments.....28



Figure 3-3. Year 2050 level of service distribution of Sioux Falls transportation network lane miles with South Veterans Parkway at AM peak travel time. road segments operating at LOS “D”, “E”, and “F” are considered failing. ....30

Figure 3-4. Year 2050 level of service distribution of sioux falls transportation network lane miles with South Veterans Parkway at PM peak travel time. road segments operating at LOS “D”, “E”, and “F” are considered failing. ....30

Figure 4-1. City of Sioux Falls land use ..... 43

Figure 4-2. Impacts to effective floodway and floodplain. ....58

Figure 4-3. Section 4(f) properties within the Study Area .....65

Figure 4-4. Relationship between access and traffic movement among roadway classes ..... 70

Figure 4-5. Planned growth areas for Sioux Falls ..... 74



## Appendices

Appendix A: Traffic Study

Appendix B: SD100 Access and Noise Plan

Appendix C: Environmental Justice Screening and Mapping

Appendix D: Visual Impact Analysis

Appendix E: Noise Study Technical Report and Addendum

Appendix F: Wetland Delineation Reports

Appendix G: EO 11990 Wetland Finding Supplement

Appendix H: Section 4(f) Determination

Appendix I: Regulated Materials/Contaminated Properties Survey Report

Appendix J: Agency Coordination and Public Engagement Summary

Appendix K: Summary of Public Scoping Comments

Appendix L: Section A – Environmental Commitments of Engineering Plan Sets



## Acronyms and Abbreviations

APE	area of potential effects
AIS	aquatic invasive species
BMP	best management practice
City	City of Sioux Falls, South Dakota
CEQ	Council on Environmental Quality
CIP	Capital Improvements Plan
CLOMR	Conditional Letter of Map Revision
EA	Environmental Assessment
EDR	Environmental Data Resources, Inc.
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
I-29	Interstate 29
I-90	Interstate 90
LEDPA	Least Environmentally Damaging Practicable Alternative
LOS	level of service
mph	miles per hour
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWRP	Navigable Waters Protection Rule
Project	South Veterans Parkway Project
Regulations	NEPA Implementing Regulations
ROW	right-of-way



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SDDANR	South Dakota Department of Agriculture and Natural Resources
SDDOT	South Dakota Department of Transportation
SDGFP	South Dakota Department of Game Fish and Parks
SHPO	State Historic Preservation Office
SWPPP	Stormwater Pollution Prevention Plan
TMP	Transportation Master Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WAPA	Western Area Power Administration
WOTUS	waters of the United States





## 1.0 Introduction

The 1995 Sioux Falls Regional Transportation Study (Sioux Falls MPO 1995) introduced an East Side Corridor Project to address future transportation needs in the area south and east of current city limits of Sioux Falls. Goals and objectives were identified to guide the project. The East Side Corridor was proposed to be a 17-mile controlled access regional arterial highway to accommodate forecasted regional travel demand between I-29 and I-90 in Lincoln and Minnehaha Counties.

In 1999, alternatives for the potential East Side Corridor were identified in the Sioux Falls Regional Arterial Corridor Analysis-East Side Corridor Study, Phase I (Sioux Falls MPO 1999). An intensive scoping process was undertaken and published in the Sioux Falls East Side Corridor Scoping Memorandum (SEH 2001). Through the scoping process, previously studied Build Alternatives and new Build Alternatives were analyzed by a Process Team that included members from the City of Sioux Falls, Minnehaha and Lincoln Counties, South Dakota Department of Transportation (SDDOT), and the Federal Highway Administration (FHWA). At the completion of the scoping process, the Process Team recommended a New Corridor-Preferred Alternative for the preparation of an Environmental Assessment (EA).

An EA completed in March 2003 (USDOT 2003) evaluated the environmental impacts of what was originally the East Side Corridor, which extended between I-29 and I-90. The FHWA signed a finding of no significant impact (FONSI) in July 2003 that identified a corridor location for the future roadway. Between 2005 and 2007, the East Side Corridor was named SD Highway 100 (SD100)/Veterans Parkway.

In 2003, the SDDOT initiated the design phase for the following segments of the 2003 EA Preferred Alternative:

- A 1.4-mile project along SD Highway 11 (SD11) from 0.4 miles south of 26<sup>th</sup> Street to SD Highway 42 (SD42), and
- 1.1-mile project along Powder House Road from SD42 to 0.1 miles north of Madison Street.

During the design phase, it was determined that these segments were not feasible or practical due to the significant increase in right-of-way (ROW) costs. The increased costs led to the re-evaluation of the centerline location for these segments of SD100 to utilize existing ROW of SD Highway 11 (SD11). A Supplement to the EA (SDDOT 2005) was prepared to address the changes made to this segment of the 2003 EA Preferred Alternative and to assess the impacts of this alignment shift for the two aforementioned segments. The 2005 Supplement to the EA was approved by the FHWA and these segments have been constructed (see Figure 1-1).

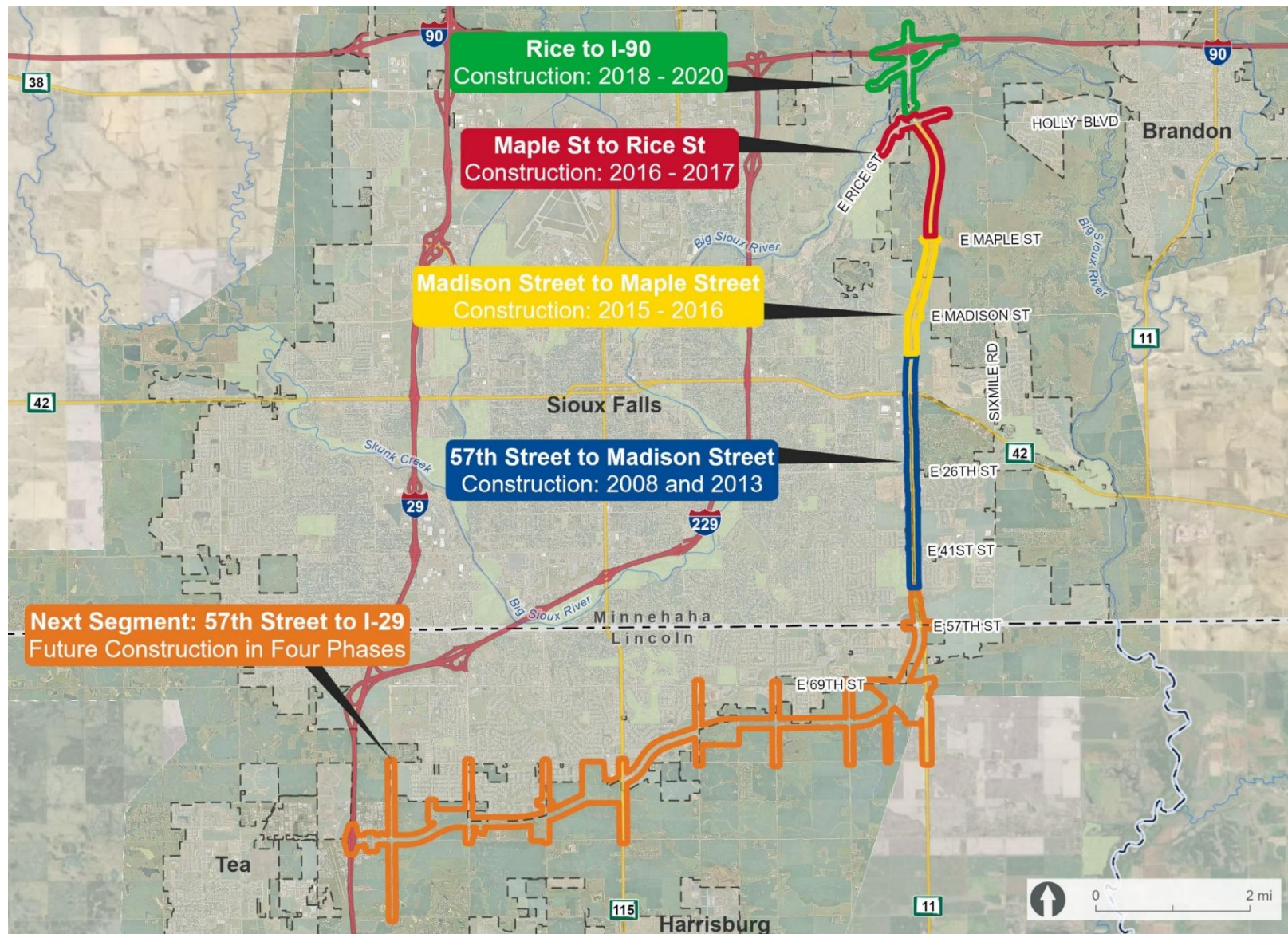


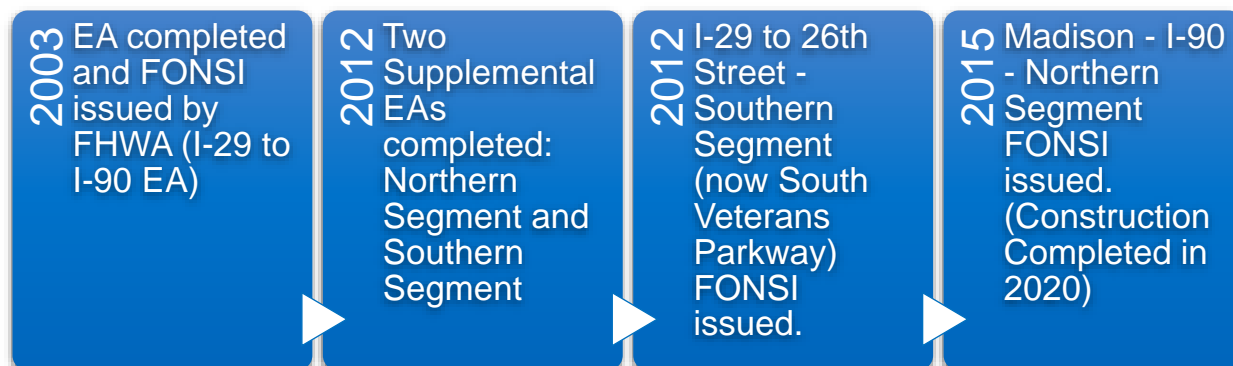
Figure 1-1. Veterans Parkway completed and planned segments overview map



In 2006, preparation of ROW plans and plats was initiated for the remainder of the alignment of the 2003 EA Preferred Alternative. This phase of the Project was to initiate the purchase of ROW for the 2003 EA Preferred Alternative to preserve the corridor for future SD100. During an open house held on February 7, 2006, several concerns about the corridor were raised. Substantive changes were proposed in several locations along the entire corridor which modified the corridor identified by the 2003 EA Preferred Alternative.

To analyze the changes to the 2003 Preferred Alternative, a Supplemental EA was drafted that included the corridor from I-29/County Road 106 (Exit 73) to I-90/N Timberline Avenue (Exit 402) excluding the segments addressed in the 2005 Supplement to the EA. The alternative that included the changes requested by the public was referred to as the Revised Build Alternative. A Supplemental EA for the Revised Build Alternative was initiated in 2006. During the coordination for the Supplemental EA, FHWA and SDDOT determined that the northern portion of the alignment from 0.1 miles north of Madison Street to I-90/North Timberline interchange (referred to as the Northern Segment) was difficult to finalize primarily due to the ongoing environmental study for a rail yard relocation project. The project to relocate the BNSF rail yard from downtown Sioux Falls (Rail Relocation project) had identified two locations in the vicinity of SD100 north of Rice Street. The unknowns with regards to impacts to both SD100 and the rail yard made it difficult to finalize the SD100 EA for the Northern Segment until the Railroad Relocation project had progressed further. In 2012, a Supplemental Environmental Assessment (USDOT 2012) was completed and a FONSI was signed that confirmed the southern component of the roadway's future location, which extends from I-29 to just south of 26th Street in Sioux Falls, South Dakota. Intersection locations have been determined based on the results of the 2012 EA/FONSI. Since that time, ROW preservation has been ongoing through the previous *SD100 Corridor Preservation* project and the Northern Segment of Veterans Parkway has been fully constructed between I-90 and 57th Street along the east side of Sioux Falls. A Supplemental EA was developed and a FONSI was approved for the SD100 Northern Segment on January 17, 2015, with re-evaluations occurring in August 2016, July 2017, and November 2017. Figure 1-2 summarizes the timeline for the environmental process from 2003 until the last FONSI was issued in 2015. This current South Veterans Parkway project completes the corridor by connecting I-29 to 57th Street along the south side of Sioux Falls.





**Figure 1-2. Environmental Assessment timeline**

Due to regulatory and environmental changes as well as the length of time that has passed since the 2012 EA/FONSI, the FHWA, in cooperation with the SDDOT and City of Sioux Falls (City) is completing a supplemental EA for the South Veterans Parkway project (the Project). FHWA is the Project’s lead federal agency in fulfilling the requirements set forth in the National Environmental Policy Act (NEPA) and Section 106 of the National Historical Preservation Act. The U.S. Army Corps of Engineers (USACE) agreed to be a cooperating agency in the development of this Supplemental EA due to their jurisdiction by law in regulating activities that fill waters of the United States (including wetlands). This supplemental EA was prepared in compliance with NEPA, 23 Code of Federal Regulations (CFR) 771, and CFR 40 Part 230. The 2003 EA and 2012 EA are incorporated by reference within the supplemental analysis to confirm that a FONSI still applies to the Project.

## 1.1 Project Description and Study Area

Veterans Parkway is a limited-access regional arterial roadway constructed to address future transportation system needs and upon full construction would consist of a 17-mile-long, paved roadway between I-29 and I-90, as shown in Figure 1-1. To date, the northern half of the corridor, from I-90 south to just north of 57th Street, has been constructed.

Figure 1-3 shows the study area for this supplemental EA and identifies the proposed construction phases for the remaining 8.5 miles of Veterans Parkway from the I-29/Exit 73 interchange to just north of 57th Street, to be completed by late Fall 2026.

South Veterans Parkway would accommodate six lanes of traffic and intersect with existing arterials along the corridor. Posted speed limits would range from 45 to 55 miles per hour (mph) based on speed studies to be performed following its opening. The horizontal and vertical alignments are based on a design speed of 60 mph. The proposed highway would be located within the City’s exterior limits and within its growth area to the south and east of the current City limits. A shared-use path would be located on the south side of South Veterans Parkway.

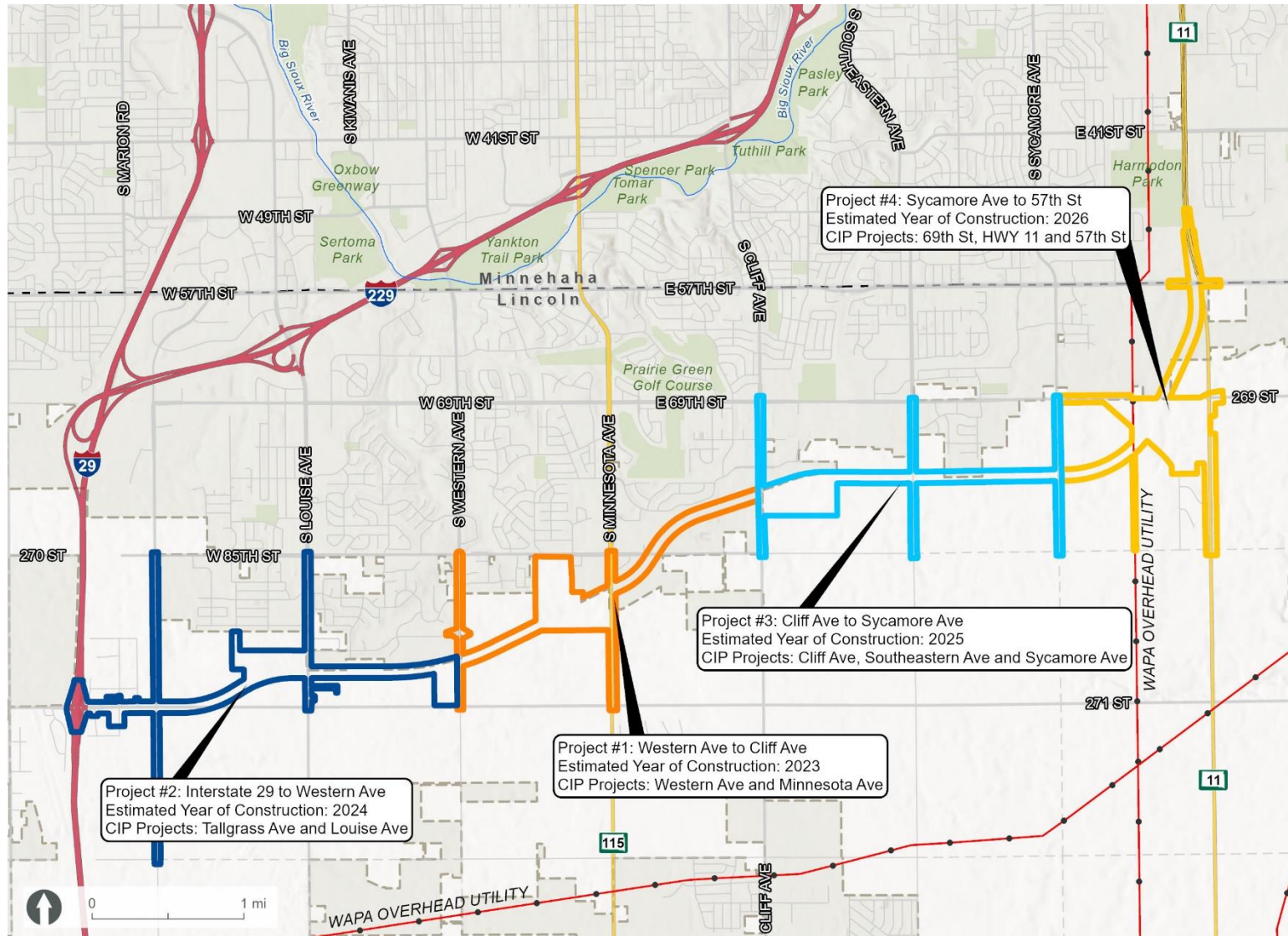


Figure 1-3. South Veterans Parkway project Study Area and proposed construction phases



## 1.2 Updates to Environment and Regulations Since 2012 FONSI

Due to the amount of time that has gone by since FHWA determined there would be no significant impacts associated with the construction of South Veterans Parkway, the finding must be reevaluated, and supplemental analysis completed. Since 2012, additional development has occurred in southern Sioux Falls. The traffic analysis has been updated to future design year 2050 to confirm that the previously identified project needs are met both now and 20 years into the future. Section 4.0, *Affected Environment and Environmental Consequences*, provides more information on environmental changes since the 2012 EA.

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*The South Veterans Parkway EA/FONSI must be re-evaluated, and supplemental analysis completed because of changes to the environment, updates to regulatory laws and guidance, and additional development within the City of Sioux Falls.*

In addition to environmental changes in the study area, there have been changes to several of the environmental regulations that affect the environmental analysis. The Council on Environmental Quality's (CEQ) NEPA Implementing Regulations<sup>1</sup> developed new requirements for the preparation of NEPA documentation. The following changes to NEPA documentation are applicable to the Project:

- Executive Order 14008 (2021) *Tackling the Climate Crisis at Home and Abroad*, Section 213, *Sustainable Infrastructure*. (a) The Chair of the CEQ and the Director of the Office of Management and Budget shall take steps to ensure that Federal infrastructure investment reduces climate pollution, and to require that Federal permitting decisions consider the effects of greenhouse gas emissions and climate change. In addition, they shall review permitting processes and identify steps that can be taken to accelerate the deployment of clean energy and transmission projects in an environmentally stable manner. (b) Agency heads conducting infrastructure reviews shall consult from an early stage with State, local, and Tribal officials involved in permitting or authorizing proposed infrastructure projects for decision-making.
- Incorporation of key elements of the One Federal Decision policy (§1501). All relevant federal agencies agree to one NEPA document.
- Tribal entities are now given commensurate status with State and Local governments regarding agency coordination and consultation.
- Change to definition of "Significantly" and deletion of inference to segmentation (now §1501.3, formerly §1508.27).
- The Regulations codify the practice of a mitigated FONSI, in which an agency can issue a FONSI on the premise that enforceable mitigation will be undertaken to avoid significant impacts.
- The mitigation revisions clarify that adoption of mitigation is not required in the NEPA analyses, and proposed mitigation should be designed to mitigate the effects of the proposed action (not be ancillary to the proposed action) (§1508(s)).

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<sup>1</sup> CEQ's 2020 NEPA Implementing Regulations are currently being reviewed for consistency with EO 13990 Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, and EO 14008 Tackling the Climate Crisis at Home and Abroad.



- Public comments are allowed in the 30-day waiting period.
- Updates have been made to the ways federal agencies interface with stakeholders and the public, such as allowing electronic forms of communication for making information available to the public, conducting outreach, providing public notice, accepting comments, and structuring public participation. These also require earlier solicitation of input from the public.

The following updates to the Endangered Species Act and Section 404 of the Clean Water Act are being evaluated with this supplemental EA:

- The final rule defined “habitat” as being for the purposes of designating critical habitat only, habitat is the abiotic and biotic setting that currently or periodically contains the resources and conditions necessary to support one or more life processes of a species (50 CFR 424.02).
- The northern long-eared bat was listed as threatened under the Endangered Species Act on April 2, 2015. The US Fish and Wildlife Service (USFWS) developed a final 4(d) rule that was published in the Federal Register on January 14, 2016 and defines "take" prohibitions specifically. Incidental take is not prohibited. A final decision to change the northern long-eared bat Endangered Species Act listing from threatened to endangered includes removing the 4(d) rule from its listing and is planned to take place by the end of 2022.
- The USFWS has designated the Monarch butterfly as a Candidate species, which is a species under consideration for official listing as either a threatened or endangered species.
- On January 13, 2021, the USACE published a final rule in the Federal Register (86 FR 2744) announcing the reissuance of 12 existing nationwide permits (NWPs) and four new NWPs as well as the reissuance of NWP general conditions and definitions with some modifications. The NWP for linear transportation projects (NWP 14) became effective on February 25, 2022.
- On January 23, 2020, the US Environmental Protection Agency (EPA) and USACE announced a final Navigable Waters Protection Rule (NWPR) to define “waters of the United States” (WOTUS). However, in a ruling issued on August 30, 2021 the U.S. District Court for the District of Arizona ordered the NWPR promulgated in 2020 be remanded and vacated. Considering this order, the EPA and USACE have halted implementation of the NWPR nationwide and are interpreting WOTUS consistent with the pre-2015 regulations until further notice.
- Clean Water Act Section 401 Certification Rule (85 FR 42,210 [July 13, 2020]) has been implemented nationwide. Water Quality Certification (WQC) requests are no longer being completed by USACE as part of the individual 404 permitting process but rather must be requested by the project sponsor. The Rule requires the certifying authority to act on a WQC request within a reasonable period of time, not to exceed one year after receipt of a WQC request. Currently, Omaha District USACE will communicate to the certifying authority, and the reasonable period of time to act on certification requests will be 60 days. The certifying authority in South Dakota is the South Dakota Department of Agriculture and Natural Resources (SDDANR).
- USACE re-issued Section 404 Clean Water Act Nationwide Permits on 2/25/2022.



### 1.3 Independent Relationship with Local Projects and Growth

The City is planning to construct nine City arterial roadway projects that intersect with the proposed South Veterans Parkway (Figure 1-4). The City’s 2021-2025 Capital Improvements Plan (CIP) identifies these nine arterial Projects to be associated with South Veterans Parkway and they are the next logical extension of existing arterials — they typically begin where urbanization currently ends. These are referred to as the “City arterials” in this document. The City arterials have been planned to be constructed simultaneously with South Veterans Parkway to improve efficiency and reduce the duration of road closures to the traveling public. Because they will require adequate turn lanes and queue lengths appurtenant to the function of South Veterans Parkway, the City arterials are being analyzed in this EA. Several other major capital improvement projects (completed and planned) which are independent from this Project are projected to occur within a reasonably foreseeable timeframe from when this Project is constructed. Past, present, and future projects are discussed later in Section 4.14 - Cumulative Impacts.



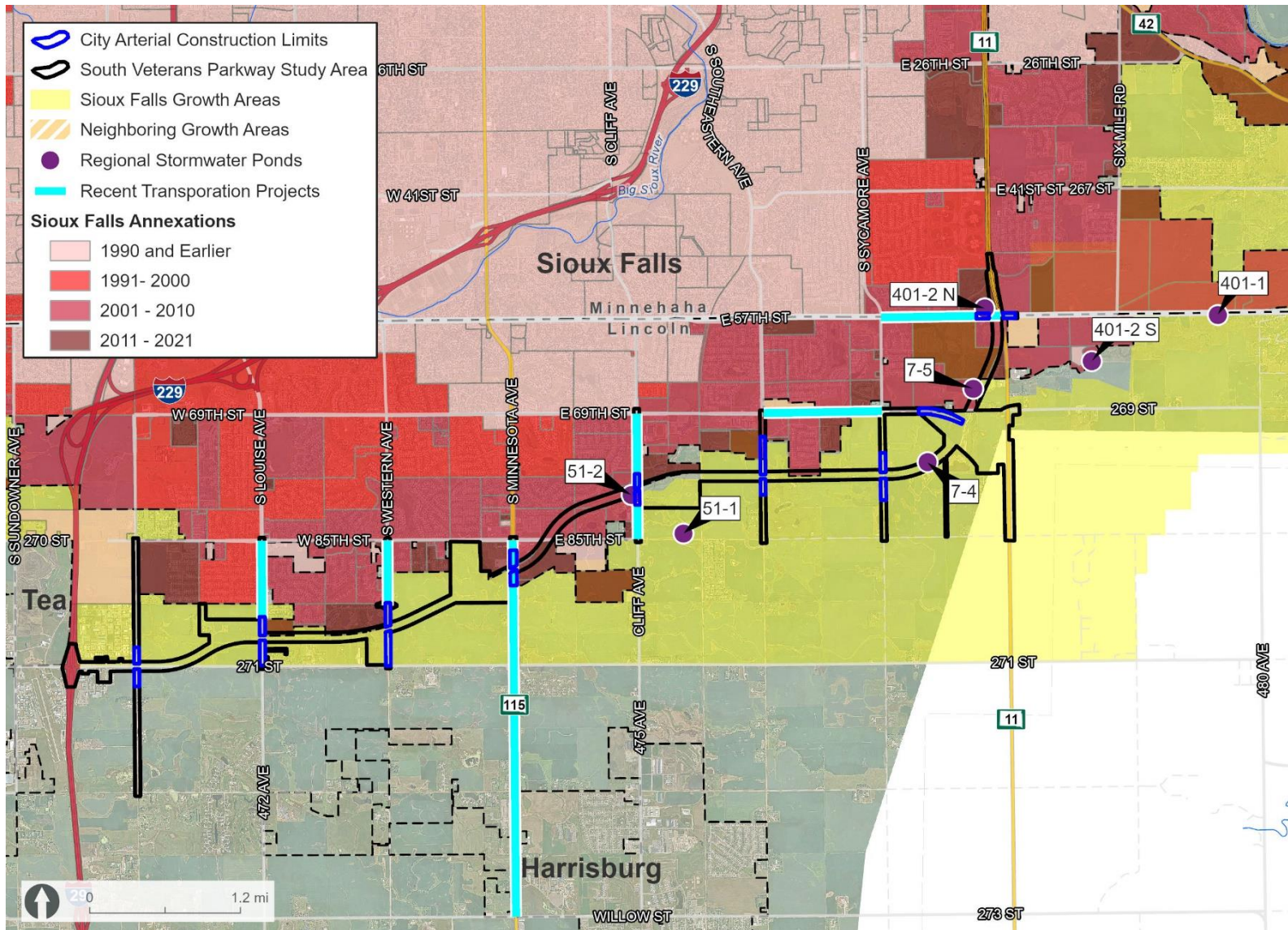


Figure 1-4. South Veterans Parkway in relation to City arterial projects and neighboring growth areas



## 2.0 Purpose and Need for Project

The purpose for the Project was identified in the 2003 EA and focused on addressing the transportation needs for year 2025; however, 2050 traffic projections were considered as 2050 represented full buildout throughout the City’s growth area. The 2012 EA had the same purpose except that it focused on addressing the transportation needs for year 2035. A determination is required to validate that the 2012 conditions and assumptions have not changed to the point where the original purpose and need is no longer appropriate.

### 2.1 Purpose

The purpose and need for the Project identified in the 2003 EA and 2012 EA focused on the transportation needs for years 2025 and 2035 respectively. The purpose for the Project in this Supplemental EA is the same as the 2003 EA and 2012 EA except that the transportation needs for the years 2025 and 2035 have been replaced with 2026 and 2050. Construction of South Veterans Parkway is planned to be opened in 2026 while 2050 is the end of the 20-year planning horizon following completion of South Veterans Parkway. The purpose for the Project is to:

- Adequately prepare the City of Sioux Falls for the year 2026 and 2050 transportation system needs consistent with planning decisions and future construction of other public and private infrastructure investments.
- Prevent deficiencies that will occur within the Sioux Falls transportation network by the years 2026 and 2050 if nothing is done. These deficiencies include congestion (i.e., travel delay and level of service failures) and worsening accessibility.
- Accommodate the 2026 and 2050 traffic growth needs of the study area.

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*“Sioux Falls transportation network” refers to the transportation network as it exists within the City’s transportation demand model. Since 2003, the City’s Long-Range Transportation Plan and traffic model have included Veterans Parkway (SD100) as a part of the transportation network.*

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### 2.2 Need

The “Need” element of the Purpose and Need demonstrates that there is a transportation problem or deficiency whose severity warrants the project. It provides the factual and quantifiable foundation for the statement of project purpose. Needs are the “drivers” of the project and reflect the fundamental reasons why the project is being pursued.

Since 1995, various transportation system analyses and future land use concepts have pointed to the need for a corridor outside the existing interstate system that would serve the future growth, especially on the east and south sides of Sioux Falls. An East Side Corridor (Veterans Parkway), a limited access roadway, was one of the consistent proposals in all previous studies. Veterans Parkway will preserve the function and working performance of the existing and future minor arterial and collector street systems by removing some of the existing and many of the



future regional movements within the Sioux Falls metropolitan area. The 1995 Sioux Falls Regional Transportation Study (Sioux Falls MPO 1995) recommended developing a system of limited access arterial roadways to serve new development outside of the existing interstate corridors.

The Sioux Falls 2015 Comprehensive Development Plan also recognized the need for the East Side Corridor roadway (Sioux Falls 1996). It stated:

*A complete circumferential roadway system around the City was analyzed as part of a regional transportation needs assessment in 1995. The analysis determined that an interstate designed beltway would not be justified based on growth projections to the year 2015. The report did recognize, however, the need for development of a limited access system of arterial streets to serve the transportation needs of the City's growth areas within the planning period. The analysis also concluded that the City should designate this corridor and develop an access control policy and begin right-of-way acquisition. A system of arterials may eventually need to be expanded into an interstate style beltway as traffic needs warrant, sometime beyond the planning horizon (Sioux Falls 1996).*

The comprehensive plan also stated:

*The comprehensive plan provides a connection of future land uses to a regional street system with a supporting network of arterials that will permit movement of intra-city traffic. The plan is based on the identification of transportation needs between intensive employment areas and both established and planned residential growth areas. Of primary importance is the provision of access to and from the major routes that encourages regional trips and reduces congestion on local streets. The local street network is also important by providing inter-neighborhood connectivity, while preventing congestion on arterials that would occur if they were used for shorter trips (Sioux Falls 1996).*

For this supplemental EA, updated transportation and land use plans were reviewed, and a traffic analysis was completed for the 2050 planning horizon. The results of the traffic analysis are documented in the South Veterans Parkway Traffic Design Technical Memo which identifies the needed lanes and intersection configurations to accommodate projected 2050 traffic volumes (Appendix A). The needs for the Project are system linkage, traffic congestion, accessibility, and capacity.

Table 2-1 breaks down the components of the purpose and need for the Project and what the target criteria are for addressing the Project needs. A narrative that presents the data substantiating the Project needs which support the purpose statements follows Table 2-1. In summary, the concerns identified within the previous purpose and need statements within the 2003 and 2012 EA remain and continue to support the necessity of this action.





**Table 2-1. Summary of the Project’s Purpose and Need along with evidence supporting the Needs**

PURPOSE STATEMENTS*		
<p><b>Purpose Statement #1:</b> Adequately prepare the City of Sioux Falls for the year 2026 and 2050 transportation system needs consistent with planning decisions and future construction of other public and private infrastructure investments.</p>	<p><b>Purpose Statement #2:</b> Prevent deficiencies that will occur within the Sioux Falls transportation network by the years 2026 and 2050 if nothing is done. Transportation deficiencies include travel delay, level of service failures, and worsening accessibility in the southeast region.</p>	<p><b>Purpose Statement #3:</b> Accommodate the 2026 and 2050 traffic growth needs of the Sioux Falls Travel Demand Model within the study area.</p>
NEEDS		
System Linkage	Traffic Congestion, Accessibility	Capacity
TARGET CRITERIA (see sections below)		
<p>Validate official planning documentation that identifies Veterans Parkway to link major transportation facilities (I-29 to I-90) of the same mode.</p> <ul style="list-style-type: none"> <li>• 2045 Long-Range Transportation Plan (Sioux Falls MPO 2020)</li> <li>• Shape Sioux Falls 2040 - Comprehensive Plan (Sioux Falls 2019)</li> <li>• Lincoln County Transportation Master Plan (Lincoln County 2019)</li> </ul>	<p>Reduce traffic delay within the Sioux Falls transportation network by improving accessibility and reducing lane miles of roadway within the Sioux Falls transportation network that have failing level of service (LOS) at AM and PM peak traffic periods.</p>	<ul style="list-style-type: none"> <li>• Meet minimum Level of Service (LOS) for projected 2026 and 2050 traffic volumes on South Veterans Parkway.</li> <li>• Meet minimum Level of Service (LOS) for projected 2026 and 2050 traffic volumes at City arterials.</li> <li>• Meet minimum Level of Service (LOS) for projected 2050 traffic volumes at Exit 73 where South Veterans Parkway connects to I-29.</li> </ul>

\* Purpose statements were taken from the Purpose and Need statements found within the 2003 and 2012 EA. The years (2026 and 2050) were updated to reflect the current planning horizon. Purpose Statement #2 was updated to reflect the current purpose based on needs of the proposed Project.



**Purpose Statement #1: Adequately prepare the City of Sioux Falls for the year 2026 and 2050 transportation system needs consistent with planning decisions and future construction of other public and private infrastructure investments.**

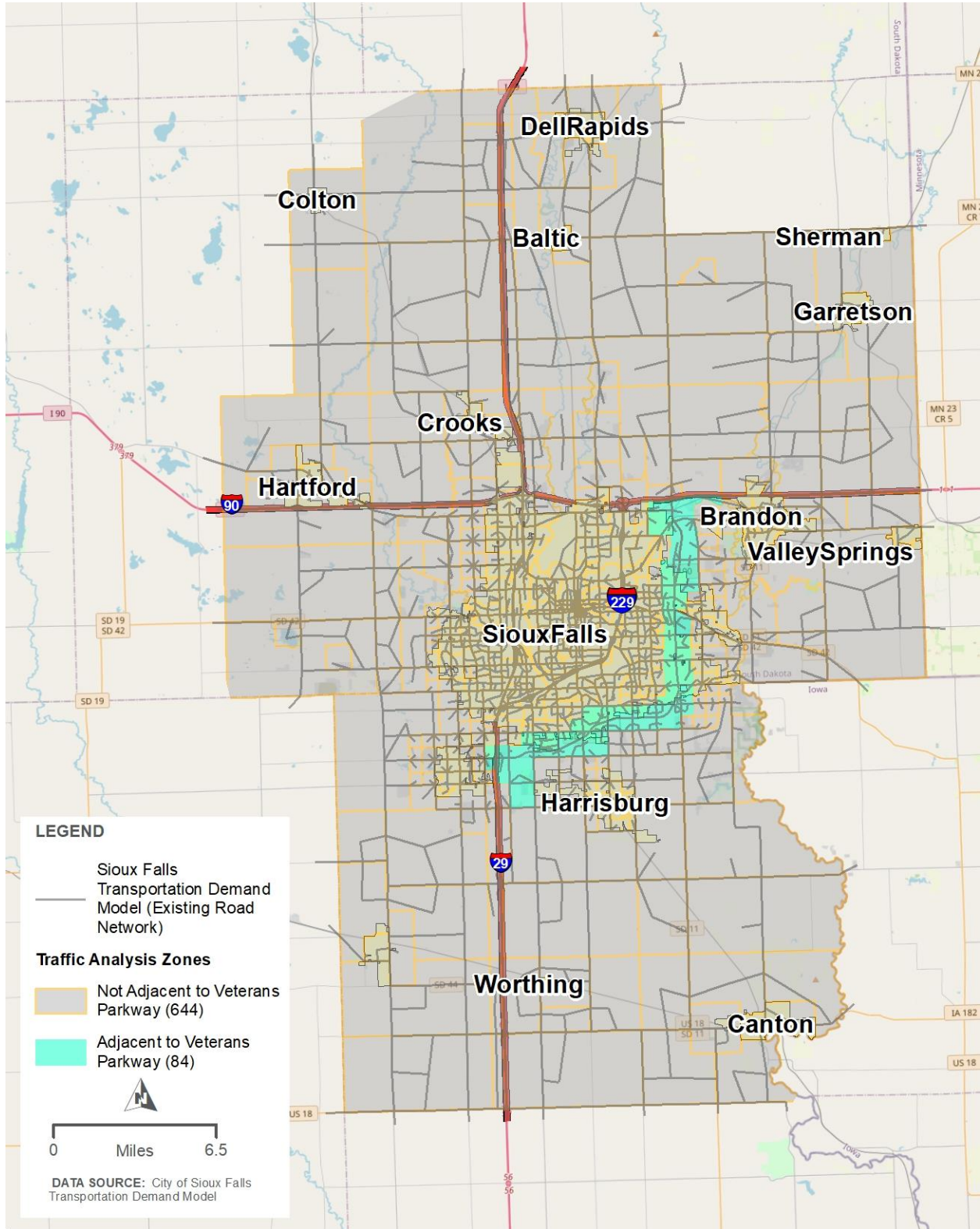
Purpose statement #1 requires addressing a system linkage need between I-29 and I-90 with a transportation facility of the same mode. North Veterans Parkway has partially addressed this need between I-90 and 57th Street. Numerous studies and plans that have been completed over the past 27 years that have played a key role in City transportation and land use planning decisions. An alternative that is verified to remain consistent with the system linkage need between I-29 and I-90 as demonstrated within current planning documents satisfies the target criteria for addressing this system linkage need. Current planning documents include the 2045 Long-Range Transportation Plan (Sioux Falls MPO 2020), Shape Sioux Falls 2040 - Comprehensive Plan (Sioux Falls 2019), and Lincoln County Transportation Master Plan (Lincoln County 2019).

**Purpose Statement #2: Prevent deficiencies that will occur within the Sioux Falls transportation network by the years 2026 and 2050 if nothing is done. These deficiencies include travel delay, level of service failure, and worsening accessibility.**

Purpose Statement #2 requires addressing traffic congestion needs within the Sioux Falls transportation network. The congestion issues needing to be addressed are beyond the localized study area of the Project as depicted in this supplemental EA and thus are being evaluated at a macro level. The spatial extent of the Sioux Falls transportation network (i.e., road network) is shown in Figure 2-1. Congestion can be expressed in terms of level of service, delay, and accessibility. The Sioux Falls Travel Demand Model (TDM) is a macroscopic computer simulation that evaluates the interaction of development patterns and the transportation system and is the primary tool used for assessing future conditions of the Sioux Falls area transportation system.

East-west connectivity across the City of Sioux Falls has been documented to be the top current or emerging transportation issue among residences in a 2019 Market Research Survey (Sioux Falls MPO 2020). The presence of several barriers, such as the Big Sioux River, BNSF railroad, I-29, and I-229 result in traffic consolidating onto the corridors that span these barriers. The lack of routing options over these barriers results in congested corridors.

Level of service (LOS) is a quantitative stratification of performance measures representing quality of service, or how well traffic moves from a traveler's perspective (Figure 2-2). The minimum allowable LOS for City street segments is "C" and thus LOS "D", "E", and "F" are considered failing. The Sioux Falls TDM indicates that by 2050, 35.5% and 27.2% of the City's road segments throughout the entire existing road network would be failing during the peak AM and PM travel hours without Veterans Parkway, respectively (Figure 2-3). The target threshold for addressing this congestion issue is a reduction of the proportion of lane miles of roadway within the Sioux Falls transportation network that are below minimal LOS "C" at both AM and PM peak traffic periods.



**Figure 2-1. Spatial extent of the existing road network and traffic analysis zones within the City of Sioux Falls travel demand model**



☰ Multilane Highway/Freeway		
<b>A</b>	Free-flow operation Density: ≤11 passenger cars/mile/lane	
<b>B</b>	Reasonably free-flow operation; minimal restriction on lane changes and maneuvers Density: >11–18 passenger cars/mile/lane	
<b>C</b>	Near free-flow operation; noticeable restriction on lane changes and other maneuvers Density: >18–26 passenger cars/mile/lane	
<b>D</b>	Speed decline with increasing flows; significant restriction on lane changes and other maneuvers Density: >26–35 passenger cars/mile/lane	
<b>E</b>	Facility operates at capacity; very few gaps for lane changes and other maneuvers; frequent disruptions and queues Density: >35–45 passenger cars/mile/lane	
<b>F</b>	Unstable flow; operational breakdown Density: >45 passenger cars/mile/lane or Demand exceeds capacity	

**Levels Designation Scale:**

LOS is presented through a familiar A to F scale, where "A" means the best operating condition and "F" the worst.

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**LOS Measures:** 6th Edition of the Highway Capacity Manual (HCM6)

**LOS Definitions:** SDDOT Road Design Manual and HCM6

Figure 2-2. Level of service illustration

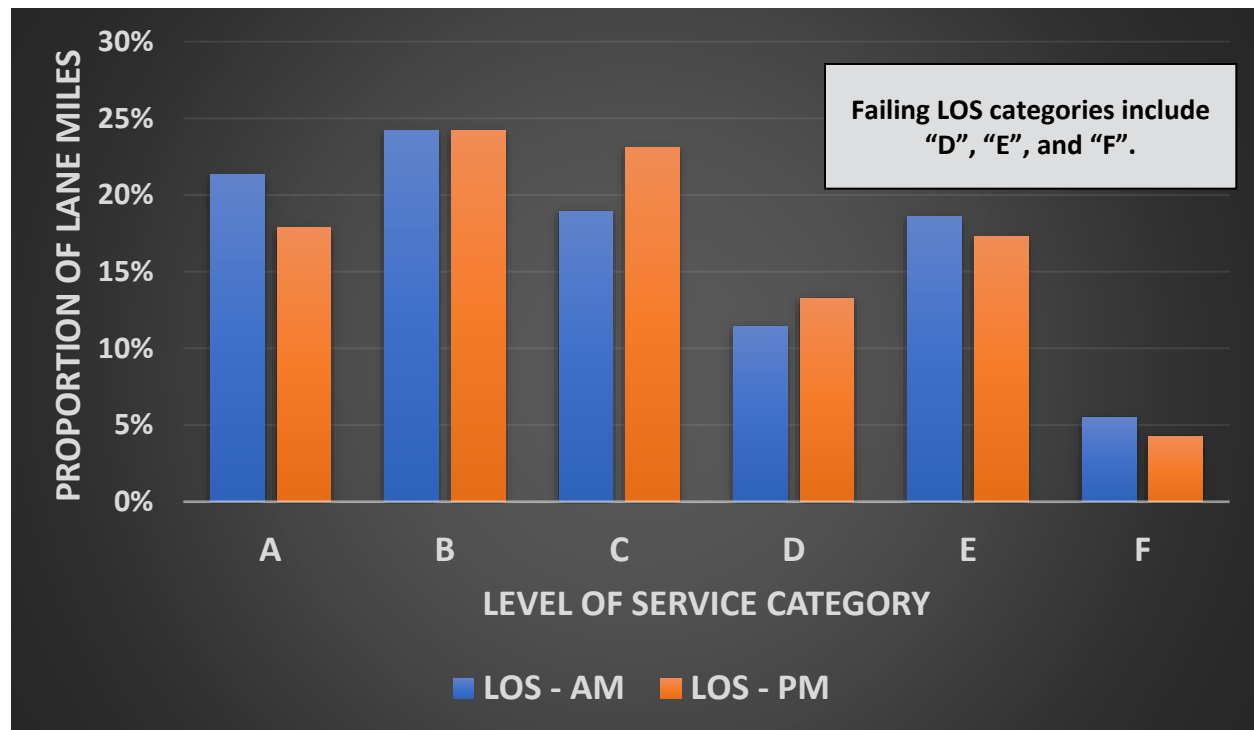


Figure 2-3. Year 2050 level of service distribution of Sioux Falls transportation network at AM and PM peak travel time absent of South Veterans Parkway. road segments operating at LOS "D", "E", and "F" are considered failing.



Accessibility-based measurements evaluate the ability of people and businesses to reach desired goods, services, and activities. The City's travel forecasting model created in May 2020 was used to quantify the degree of accessibility throughout the Sioux Falls Transportation Network. In the process of applying that model, a calculation is performed to estimate accessibility to employment for each of 728 traffic analysis zones in the modelled area (Figure 2-1). In this context, *accessibility* is defined as the sum of an opportunity (in this case, employment) divided by the square of the travel time, summed over all internal zones:

$$ACC_i = \sum_j \frac{EMP_j}{TT(ij)^2}$$

Where:

- ACC = accessibility value (dimensionless) for zone i
- $EMP_j$  = total employment in zone j
- TT = a measure of auto travel time between i and j

The denominator for this equation involves travel time and the numerator involves employment. The equation sums up the employment / square of travel time for all trips between traffic analysis zones within the model. In simple terms, if employment remains constant and travel time decreases for a typical trip, then accessibility value increases.

The acceptable level of performance defining success is two-part:

1. Accessibility must be improved cumulatively throughout the Sioux Falls transportation network.
2. Accessibility must be improved cumulatively within traffic analysis zones adjacent to Veterans Parkway.

Overall vehicle travel delay throughout the Sioux Falls road network was 18,000 hours of vehicle travel delay per day in 2018. The TDM determined traffic delay in 2050 would increase to 140,000 hours of vehicle travel delay per day if no transportation projects were constructed after 2023. If all transportation projects identified in the Go Sioux Falls Metropolitan Planning Organization 2045 Long-Range Transportation Plan (Sioux Falls MPO 2020) were constructed except for Veterans Parkway, then the TDM indicates that 39,000 hours of vehicle travel delay per day would occur. This provides a baseline level of travel delay for which to compare the No Build and South Veterans Parkway Preferred Alternative. The acceptable level of performance or desired operating condition is a reduction in daily vehicle travel delay to less than 39,000 hours in 2050 throughout the existing Sioux Falls road network.

### **Purpose Statement #3: Accommodate the 2026 and 2050 traffic growth needs of the Study Area.**

Purpose Statement 3 requires alternatives that meet the projected 2050 traffic capacity needs for the study area. The nine intersecting City arterials within the study area combined with the South Veterans Parkway were evaluated to determine what improvements are required to meet the projected traffic demand (see Purpose Statement #2). The study area used to evaluate whether this capacity need is met includes the City arterial network out to the next major





intersection. Rationale is that the major intersections are the points where traffic volumes change, where existing typical sections change, and, as a consequence, where traffic congestion worsens or lessens. The target threshold for meeting this capacity need is to achieve the minimal allowable LOS set by the City for urban arterials and by SDDOT for the I-29 Exit 73 connection in the 2050 Design Year (HDR 2022b). The City has determined the minimum allowable LOS to be “D” at signalized intersections and “C” for arterial road segments. SDDOT has determined the minimal LOS to be “C” at the Exit 73 interchange. Figure 2-4 shows the 2026 and 2050 traffic volumes that were projected in the South Veterans Parkway Traffic Design Technical Memo (HDR 2022b) (Appendix A).



Figure 2-4. 2026 and 2050 planning horizon build condition traffic volumes





## 2.3 Goals and Objectives

*Project goals are desirable outcomes and not primary drivers for the Project.*

These goals are incorporated into the alternatives, where possible, to meet the concerns of the stakeholders and public. These Project goals do not, by themselves, provide a basis for eliminating alternatives in the screening stage of NEPA, but could be considered as a factor in screening and could also be considered in selecting a preferred alternative.

The following are goals and objectives of the Project:

### ***Provide for orderly future development of public and private infrastructure***

The SDDOT, City, and developers have worked together for nearly 20 years to preserve the corridor where SD100 (now Veterans Parkway) has been approved by FHWA. The SD100 corridor was preserved as adjacent land was developed and SD100 was identified on plats. Orderly future development of public and private infrastructure and unlocking the full potential of growth now depends on completing South Veterans Parkway. The City's comprehensive plan (Shape Sioux Falls 2040) has identified tiered growth areas and has prioritized investments in public water and sewer infrastructure in areas that would become more accessible upon construction of the roadway within the preserved corridor. A limited-access corridor servicing the growth areas supports a backbone of arterials that provide access to new developments while enabling faster commuter routes for those living in the developments and working elsewhere in the community.

### ***Preserve quality of life***

Preserving quality of life can be achieved through providing route choices that offer reduced travel times and better access to jobs and services. Providing bicycle and pedestrian facilities that enable multi-modal connectivity in a safe manner enables walkable neighborhoods and connectivity between neighborhoods, schools, businesses, and other existing and planned multimodal facilities would result in preserving the quality of life.

### ***Improve safety***

Safety is a goal that can be achieved through the implementation of key elements that contribute to improving the overall safety of roadway transportation systems. Key design components that contribute to safety may include:

- Center raised median that divides opposite flows of traffic.
- Limiting access to the corridor in accordance with SDDOT and Sioux Falls (2007) (generally at signalized intersections spaced one mile apart).
- Left and right turn lanes at all arterial signalized intersections.
- Design speed exceeding posted speeds.
- Clear zone meeting and exceeding design standards.
- Roadway lighting throughout the corridor.



## 2.4 Logical Termini and Independent Utility

The Purpose and Need also serves to establish and justify the Project is in accordance with 23 CFR 771.111(f)(1) which states that actions evaluated under NEPA must:

- 1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope.
- 2) Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made.
- 3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

### Logical Termini

A project must have rational beginning and end points and end points may not be created simply to avoid proper analysis of environmental impacts. The logical termini for the South Veterans Parkway corridor are I-29 Exit 73 interchange to where North Veterans Parkway currently ends at East 57th Street. The logical termini for the nine additional City arterials are the next major intersections. Rationale is that the major intersections are the points where traffic volumes change, where existing typical sections change, and consequently, where traffic congestion worsens or lessens.

As previously stated, analysis of logical termini requires that environmental impacts be considered on a sufficiently broad scope. The following two conditions were evaluated for South Veterans Parkway and the nine additional City arterial projects to determine if this standard is met:

1. LOS should be acceptable beyond the termini, thus indicating there is not a reasonably foreseeable need to extend improvements beyond the fiscally constrained Go Sioux Falls 2045 LRTP prioritized list of projects; and
2. A project should not be programmed to extend improvements beyond a terminus.

A traffic design memo documents the Project meets these logical termini standards (HDR 2022b) (Appendix A). Year 2050 AM and PM peak hour traffic forecast were developed for the next major arterial intersection (typically section line road) adjacent to Veterans Parkway to establish a terminus of potential crossroad corridor improvements. The traffic design memo demonstrates that the intersections at each of the termini meet acceptable LOS. There are no projects programmed within the City of Sioux Falls CIP extending from the Veterans Parkway corridor beyond the nine City arterial termini aside from reconstructing 85<sup>th</sup> Street from east of Tallgrass Avenue to the planned I-29 and 85th Street interchange and reconstructing Tallgrass Avenue from 74th Street to South Veterans Parkway (CIP 11006). CIP 11006 reflects the intersection configuration presented and analyzed in the Proposed 85th Street Improvements: Sundowner to Louise Avenue Environmental Assessment. This project is being planned and designed using the same traffic demand model as South Veterans Parkway and is needed to accommodate traffic once the 85<sup>th</sup> Street Interchange is built.



## Independent Utility/Reasonable Expenditure

Federal regulations require that a project have independent utility and be a reasonable expenditure even if no other transportation improvements are made in the area. 23 CFR 771.111(f)(2). Stated another way, a project must be able to meet its purpose and need with no other projects being built and thus must not create or exacerbate a need for improvements beyond its termini. The City's Capital Improvement Plan includes urban arterial extension projects which intersect the South Veterans Parkway corridor. These City arterials were evaluated within a single traffic design memo which determined that the Project would not cause operations of the City arterials to degrade to unacceptable levels (or vice versa) forcing the need for additional improvements beyond the logical termini (HDR 2022b).

The Project has independent utility between its logical termini as it would be used and provide a transportation benefit absent of other transportation projects. South Veterans Parkway provides a linkage between two interstate systems that is not present today. Additionally, each phase of the Project would provide linkage between major city arterial crossroads. South Veterans Parkway would not cause transportation deficiencies beyond its termini, including the nine City arterials to the next major intersection (typically section line road) that would necessitate additional transportation projects for the proposed Project to stand on its own. The completed segment of Veterans Parkway north of 57<sup>th</sup> Street to I-90 was designed to accommodate projected traffic volumes based on the City's TDM which accounted for South Veterans Parkway. A need for additional roadway improvements along Gateway Boulevard to the west of I-29 would not be required as Gateway Boulevard was designed to accommodate projected traffic volumes based on the City's TDM which accounted for South Veterans Parkway.

Urbanization of arterial streets is driven by the City's annexation process and need to provide adequate transportation facilities to support growth as new land is serviced with utilities and becomes open for development. Traffic is drawn to limited access corridors due to their ability to provide an efficient means of travel. As a limited access corridor, South Veterans Parkway would alleviate traffic congestion from the City's transportation network and thus prevent forecasted transportation deficiencies that would then result in a need for additional transportation improvement projects not identified in the City's Capital Improvement Plan.

Overall, long-range needs at the intersecting City arterial major intersections to the north and south of the proposed South Veterans Parkway are being addressed through planned projects, studies, and a clearly defined tiered growth area based on serviceability of utilities. As discussed in the traffic design memo (HDR 2022b), the more immediate intersection and corridor needs, generally north of the proposed South Veterans Parkway, are being addressed through planned City of Sioux Falls CIP projects. Mid-range needs, generally along the 271st Street (CR106) corridor, are being addressed through the Lincoln County Highway 106 Corridor Study that began in 2022. Long-range needs in the rural and/or Tier 3 growth areas have been identified and are being planned for through the City of Sioux Falls Growth Management Plan and Go Sioux Falls 2045 LRTP.

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*Tier 3 is the furthest future planned future growth area, and is only identified for development in 16 to 25 years*



The Sioux Falls MPO TDM used to develop future-year volumes reflects the fiscally constrained Go Sioux Falls 2045 LRTP prioritized list of projects. There are corridors that cross the proposed South Veterans Parkway, such as Sycamore Avenue and Southeastern Avenue, where several factors need to align before the future traffic demand shown in the TDM is realized. This includes paving several miles of gravel roads, development in the City of Sioux Falls Tier 3 growth area that requires significant investment in utilities to be able to service the area, and development. Without even one of these factors, traffic demand will be limited along these rural segments.

## Restriction of the Consideration of Alternatives for Reasonably Foreseeable Projects

Federal law prohibits a project from restricting consideration of alternatives for other reasonably foreseeable transportation improvements. 23 CFR 771.111(f)(3). Including the nine City arterials that would intersect South Veterans Parkway within this Supplemental EA, the study area extends far enough along the City arterials to not restrict the consideration of avoidance alternatives. Utilization of these endpoints will allow the NEPA process to discover if improvements along these nine segments appear feasible by assessing impacts on the natural environment in addition to adjacent community resources/businesses.

## 3.0 Alternatives Analysis

### 3.1 Background

Two build alternatives and a No Action alternative were brought forward from earlier scoping efforts to evaluate within the 2003 EA (SEH 2001). The build alternatives considered were 1) Widen/Improve Section Line Roads and 2) New Corridor-Preferred Alternative. The New Corridor build alternative was determined to meet the purpose and need and was selected to be the Preferred Alternative. The 2003 EA is incorporated by reference as it provides additional details of the alternatives and the screening process used to identify the 2003 EA Preferred Alternative (City of Sioux Falls 2003).

In 2006, during the public involvement process for the corridor preservation phase of the 2003 EA Preferred Alternative, concerns were brought forward regarding the proposed speed limit (45 mph), intersection safety due to the angle of the corridor alignment through intersecting roads, and corridor safety. These public concerns were addressed through refinements in the 2003 EA Preferred Alternative alignment and resulted in a higher design speed, improved alignment at major intersections, less impact to wetlands, and accommodated projected 2035 traffic volumes.

The 2012 EA considered No Build and Build Alternatives (2003 EA Preferred Alternative & Revised Build Alternative). SDDOT and FHWA selected the Revised Build Alternative as the Preferred Alternative in the FONSI. As part of the 2012 EA, the U.S. Army Corps of Engineers (USACE) was provided a document titled *SD100 Supplemental Environmental Assessment (EA) Alternatives Analysis* that evaluated the No Build Alternative and Widen CR106/SD11 Alternative, in addition to the two build alternatives identified in the 2012 EA. Upon review, the



USACE confirmed in a letter on March 28, 2012, that multiple alternatives were evaluated and that the Least Environmentally Damaging Practicable Alternative (LEDPA) was selected as the preferred alternative. This LEDPA decision was made in accordance with the Clean Water Act Section 404(b)(1) Guidelines during a previous permit review and provided assurance that the Preferred Alternative could be authorized under a Clean Water Act 404 Permit. The 2012 EA is incorporated by reference as it provides additional details of the alternatives and the screening process used to identify the Revised Build Alternative as the Preferred Alternative. The *SD100 Supplemental Environmental Assessment (EA) Alternatives Analysis* and the USACE LEDPA decision letter is included in Appendix H of the 2012 EA.

After FHWA issued a FONSI on April 26, 2012, which determined that the Preferred Alternative would have no significant impact on the human environment, the City continued to preserve the corridor as developments were platted within proximity to the Preferred Alternative. Developers have accounted for and shown the corridor in their submitted plans for City approvals.

## 3.2 Changes to the Preferred Alternative since 2012

This Supplemental Environmental Assessment evaluates the previous decisions made by FHWA and USACE to identify if there are any changes since 2012 that would result in a new decision regarding the Preferred Alternative. Changes to the 2012 Preferred Alternative evaluated in this Supplement EA are described below and summarized in Table 3-1.

The following portions of the 2012 EA Preferred Alternative have been constructed: SD11 widening between 57<sup>th</sup> Street and 69<sup>th</sup> Street and Veterans Parkway between 26<sup>th</sup> Street and 57<sup>th</sup> Street (Figure 1-1). The evaluation for this Supplemental EA has subsequently reduced the scope of the Preferred Alternative from I-29 (Exit 73) north and east to where it connects to the north segment of Veterans Parkway at 57<sup>th</sup> Street.

Due to the City's growth to the south and southeast since the 2012 EA, development is now encroaching on the corridor and expansion of existing City arterials through the South Veterans Parkway corridor have become reasonably foreseeable projects and are now being included within this Supplemental EA. A corridor traffic study was conducted in 2022 to verify that the roadway section, intersections, and the related intersecting City arterial roadways of the Preferred Alternative would meet future traffic demands and not require unanticipated road improvements beyond the next major intersection (HDR 2022b). The traffic study identified the road segment typical section and intersection configuration needs with South Veterans Parkway and with City collector streets. It concluded that an at-grade intersection would adequately accommodate the 2050 projected traffic at the intersection with 57<sup>th</sup> Street whereas the 2012 EA identified a single point urban interchange (SPUI) at 57<sup>th</sup> Street. The SPUI at 57<sup>th</sup> Street was identified in the 2012 EA based on the recommendation from the 2011 SD11 Traffic Study Update Memo which proposed an interchange at 57<sup>th</sup> Street in response to 'future vehicular demand' (HDR 2011). Since completion of that study, the Sioux Falls MPO Travel Demand Model (TDM) has been updated and approved multiple times as part of the MPO's Long Range Transportation Plan process. The current TDM incorporates the latest, updated long-range planning for the MPO area (such as roadway priorities, growth tiers, land use density, serviceable areas for utilities). The current TDM shows less vehicular demand along Veterans



Parkway and 57<sup>th</sup> Street when compared to the TDM used in the 2011 study. ‘Future vehicular demand’ no longer warrants design analysis of a grade-separated interchange because an at-grade intersection has ample capacity for the latest projected volumes. The updated corridor traffic study conducted in 2022 also recommended that dual left-turn lanes be incorporated into the I-29 off-ramps for both southbound and northbound movements to meet the needs of future vehicular demand.

**Table 3-1. Comparison of the 2012 EA Preferred Alternative and current Preferred Alternative**

Criteria	2012 EA Preferred Alternative (I-29 To 26th Street)	Current Preferred Alternative (I-29 Exit 73 To 57th Street)
Roadway Length (miles)		
• Main Alignment Corridor	10.4	8.87
• SD 11 Improvements	0.9 <sup>a</sup>	NA
• Intersecting City Arterials		
○ Tallgrass Ave	NA	0.35
○ Louise Ave	NA	0.31
○ Western Ave	NA	0.49
○ Minnesota Ave	NA	0.23
○ Cliff Ave	NA	0.21
○ Southeastern Ave	NA	0.74
○ Sycamore Ave	NA	0.63
○ 69 <sup>th</sup> Street	1.20	1.20
○ 57 <sup>th</sup> Street	NA	0.20
Identified Interchanges	57 <sup>th</sup> Street	57 <sup>th</sup> Street interchanged no longer needed.  I-29/Exit 73 Interchange ramp improvements needed
Residential Relocation (units)	2	4
Meets all AASHTO design criteria	Yes	Yes
Business Buyouts / Relocations	1	2
Rail Crossings (Active)		
• At Grade	0	0
• Grade Separated	1	1
Meets Purpose and Need of Project	Yes	Yes

a) previously constructed

Table 3-2 provides a summary of the major roadway design elements including expected vehicle classification and projected 2050 traffic volumes on South Veterans Parkway. Below is a high-level summary of the Preferred Alternative:

- Six-lanes of traffic separated by a 32-foot-wide raised median. The raised median would be replaced with a 56-inch-high concrete barrier with 4-foot-wide shoulders between 85th Street and Cliff Avenue to further distance the road from residences as well as over the Burlington Northern Santa Fe (BNSF) railway to consolidate all traffic lanes onto a single bridge (Figure 3-1).





- Extending intersecting City arterial roadways through South Veterans Parkway.
- Dual left turn lanes at each City arterial intersection.
- Intersections with City arterials would be at-grade except for at 85th Street where there would be a grade-separated crossing (see 2012 EA [FHWA and SDDOT 2012]).
- Curb and gutter along each side of the raised median and along the outside of each roadway section.
- Shared-use path located along the south side of the roadway for pedestrian and bicyclist users. The City has identified underpass locations to be situated in locations that would best serve existing and future schools, parks, and residential developments.
- Access spacing limited to signalized intersections located at arterial streets which are approximately one mile apart. The exemption to the one-mile intersection spacing would be from I-29 to Tallgrass Avenue where spacing is reduced to accommodate existing development access locations. The one-mile spacing is utilized to maintain the designation of the corridor as a limited-access highway. The design of the Preferred Alternative would carry out access management in accordance with the SD100 Access and Noise Plan which was approved by the Transportation Commission in 2008 (SDDOT and Sioux Falls 2007) (see Appendix B).
- Two overpasses including one over 85th street and the other over the BNSF railroad between Cliff Avenue and Southeastern Avenue.
- Posted speed limits on South Veterans Parkway would range between 45 and 55 mph based on speed studies performed following the opening. The design speed would be 60 mph based on current road design standards.
- Intersecting City arterials would be consist of a four-lane urbanized road section with two lanes in each direction and a raised median. Intersections with South Veterans Parkway would include additional lanes for left and right turning movements (Table 3-2, Figure 3-2).
- Intersecting City arterials would taper into the existing 2-lane rural road segments to the south of South Veterans Parkway and tie into the existing urban roadway section to the north of South Veterans Parkway.
- Western Avenue's intersection with 95th Street to the north of South Veterans Parkway would become a round-a-bout.



**Table 3-2. Major roadway design elements of South Veterans Parkway**

Major Design Element	2012 EA Preferred Alternative (I-29 To 26 <sup>th</sup> Street)	Current Preferred Alternative (I-29 Exit 73 To 57 <sup>th</sup> Street)
<u>Design Traffic Volume</u>	<u>2050 Forecasts (vpd)<sup>a</sup></u>	<u>2050 Forecasts (vpd)</u>
I-29 to Tallgrass Ave	33,000	34,000
Tallgrass Ave to Louise Ave	37,000	32,500
Louise Ave to Western Ave	41,000	35,500
Western Ave to Minnesota Ave	36,000	36,500
Minnesota Ave to Cliff Ave	38,000	28,000
Cliff Ave to Southeastern Ave	39,000	20,000
Southeastern Ave to Sycamore Ave	37,000	15,500
Sycamore Ave to 69th St	45,000	26,500
69th Street to 57th St	47,000	32,500
57 <sup>th</sup> Street to 26 <sup>th</sup> St		
Vehicle Classification	90.7% cars 4.2% medium trucks 3.3% heavy trucks 0.7% Buses 1.1% Motorcycles	90.7% cars 4.2% medium trucks 3.3% heavy trucks 0.7% Buses 1.1% Motorcycles
Surface Type	Concrete	Concrete
Traffic Lane Width	12 feet	12 feet
Shared Use Path	10 feet on the south/east side of the main alignment	10 feet on the south/east side of the main alignment
<u>Posted Speed (mph)</u>		
I-29 E to 57th St <sup>b</sup>	55	55
57th St to 26th St	45	N/A
City Arterials <sup>c</sup>	NA	40
<u>Design Speed (mph)</u>		
I-29 to Tallgrass Ave	55	55
Tallgrass Ave to 57th St	60	60
City Arterials	NA	45
<u>ROW Minimum Width (feet)</u>		
South Veterans Parkway	200	200
City Arterials	NA	100
<u>Access Spacing</u>		
½-mile Spacing	41 <sup>st</sup> St to 26 <sup>th</sup> St	N/A
1-mile Spacing <sup>d</sup>	I-29 to 41 <sup>st</sup> St	I-29 to 57 <sup>th</sup> St

a) vehicles per day

b) Would be posted at 45 mph between I-29 and Tallgrass Avenue.

c) Western Avenue posted speed limit of 35 mph would remain due to proximity to existing schools.

d) Exception to this would be from I-29 to Tallgrass Avenue where spacing is reduced to accommodate existing development access locations.

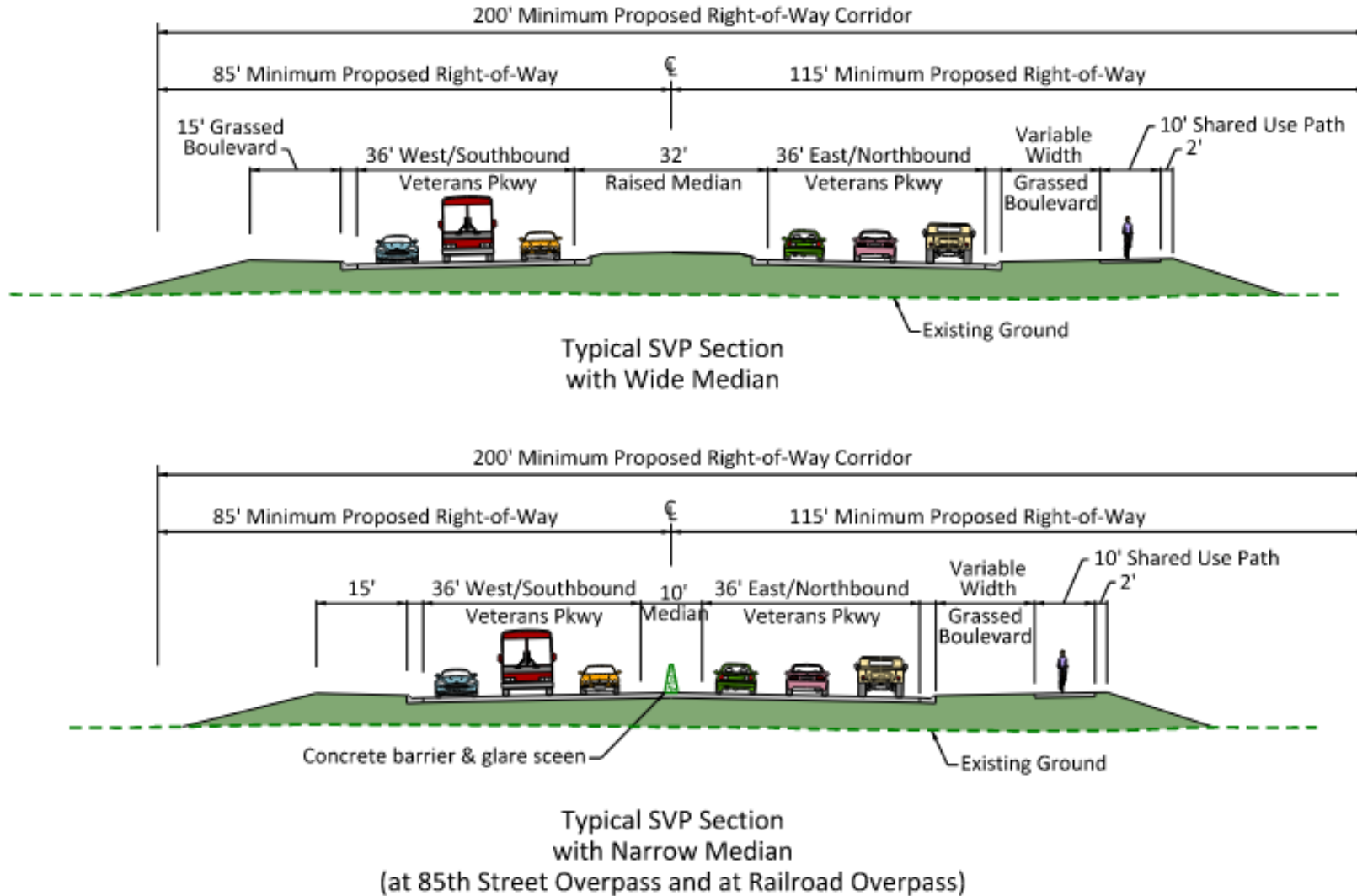
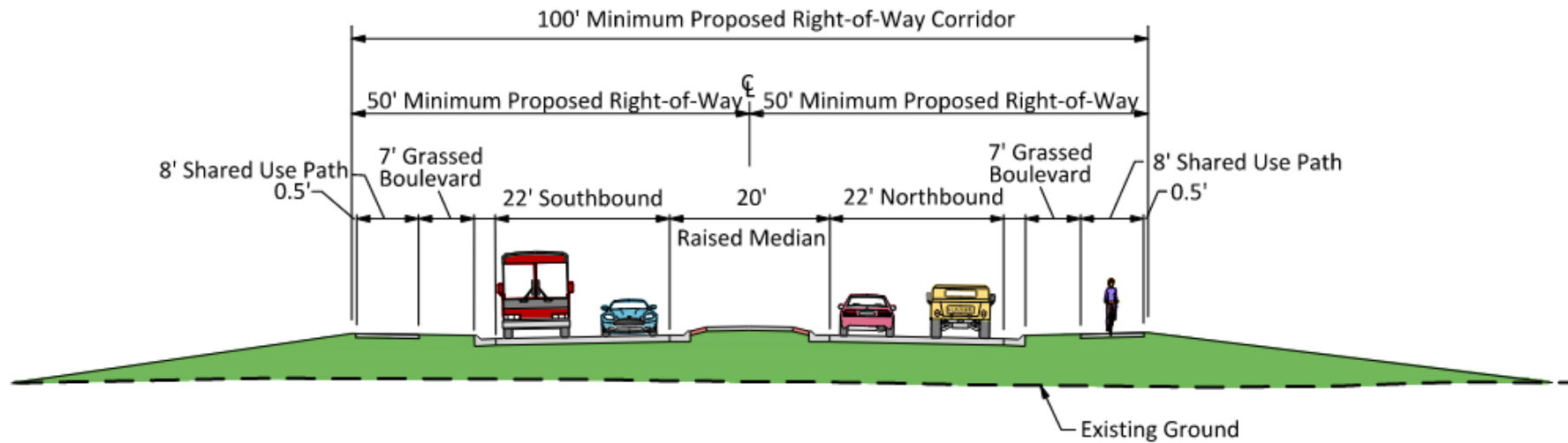


Figure 3-1. Common typical sections for South Veterans Parkway.



**Figure 3-2. Typical sections for intersecting City arterial segments<sup>2</sup>**

<sup>2</sup> Tallgrass Ave, Western Ave, Cliff Ave, and 69th St would have dedicated right and left turn lanes onto South Veterans Parkway and two through lanes in each direction (6 total lanes); Sycamore Ave would have a dedicated left turn lane, a combined through / right turn lane onto South Veterans Parkway, and a combined a through lane in each direction (5 total lanes); Louise Ave, Minnesota Ave, Southeastern Ave, and 57th St would have two dedicated left turn lanes and a dedicated right turn lane onto South Veterans Parkway as well as two through lanes in each direction (7 total lanes).



### 3.3 Alternatives Screening

The following text describes the screening process used to validate whether the Preferred Alternative addresses the purpose and need of the Project (HDR 2022c). Though it does not meet the purpose and need of the Project, the No-Build Alternative is included in the analysis as a baseline of comparison to the Preferred Alternative. Table 2-1 located in Section 2.0 identifies the target criteria that must be met to achieve each of the identified Project needs.

#### System Linkage

The Preferred Alternative meets the target criteria set forth in the Purpose and Need for determining whether it addresses the identified need for roadway linkage between I-29 and I-90. Official planning documentation identifies Veterans Parkway to link major transportation facilities (I-29 to I-90) of the same mode. Official planning documents identify Veterans Parkway within the corridor of the Preferred Alternative include the following:

- 2045 Long-Range Transportation Plan (Sioux Falls MPO 2020)
- Shape Sioux Falls 2040 - Comprehensive Plan - City of Sioux Falls (Sioux Falls 2019)
- Lincoln County Transportation Master Plan (Lincoln County 2019)

By addressing the system linkage need, the Preferred Alternative would fulfill Purpose Statement #1: *“Adequately prepare the City of Sioux Falls for the year 2026 and 2050 transportation system needs consistent with planning decisions and future construction of other public and private infrastructure investments.”*

#### Traffic Congestion & Accessibility

*Veterans Parkway would reduce daily vehicle travel delay by 4,000 hours*

The Preferred Alternative meets the target criteria set forth in the Purpose and Need for addressing both traffic congestion and accessibility needs within the Sioux Falls transportation network. Improving accessibility throughout the Sioux Falls transportation network contributes to solving the congestion problem that can be measured in traffic delay reductions and improved LOS throughout the transportation network.

The Sioux Falls Travel Demand Model (TDM) determined that overall vehicle travel delay per day throughout the Sioux Falls road network by year 2050 would be 35,000 hours with Veterans Parkway and 39,000 hours without Veterans Parkway.

The Sioux Falls TDM determined the number of lane miles of roadway throughout the Sioux Falls transportation network that would have a failing Level of Service (LOS) at AM and PM peak travel periods by 2050 in absence of South Veterans Parkway. The target threshold for addressing this congestion issue is a reduction of the proportion of lane miles of roadway within the Sioux Falls transportation network that are below minimal LOS “C” at both AM and PM peak traffic periods. The Preferred Alternative results in a reduction of the proportion of lane miles of roadway within the Sioux Falls transportation network that are below minimal LOS “C” at both AM and PM peak traffic periods when compared to the No Build Alternative (Figure 3-3 and Figure 3-4).

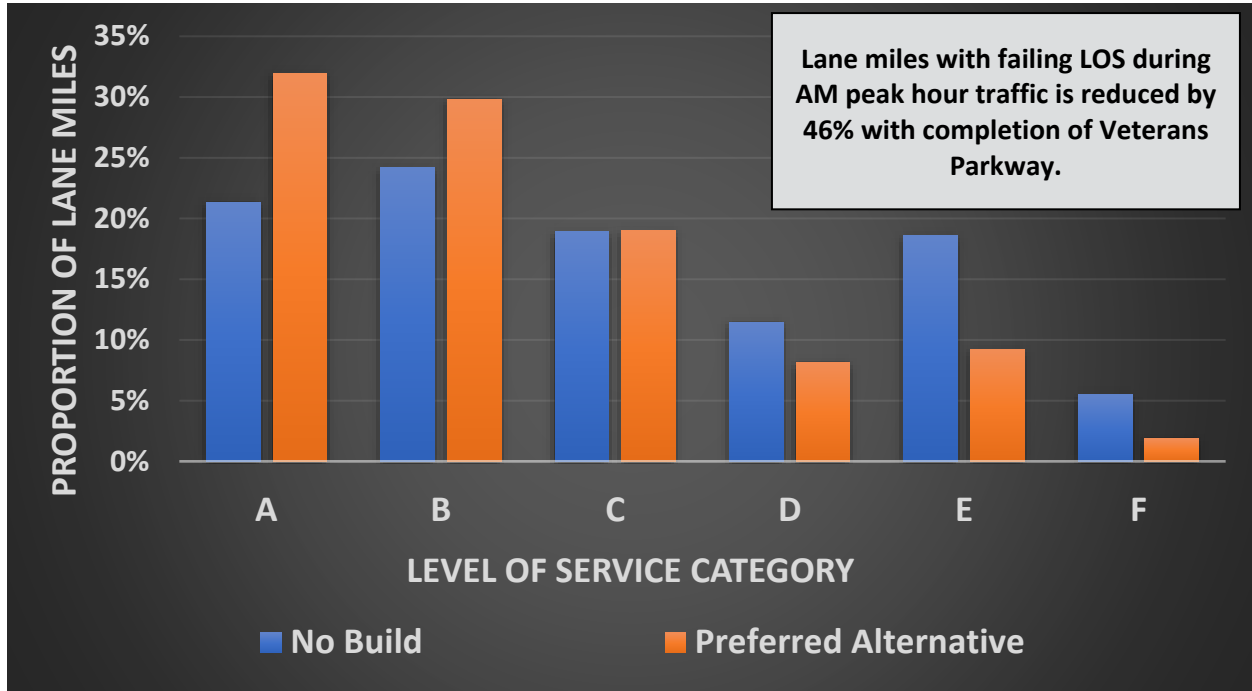


Figure 3-3. Year 2050 level of service distribution of Sioux Falls transportation network lane miles with South Veterans Parkway at AM peak travel time. road segments operating at LOS “D”, “E”, and “F” are considered failing.

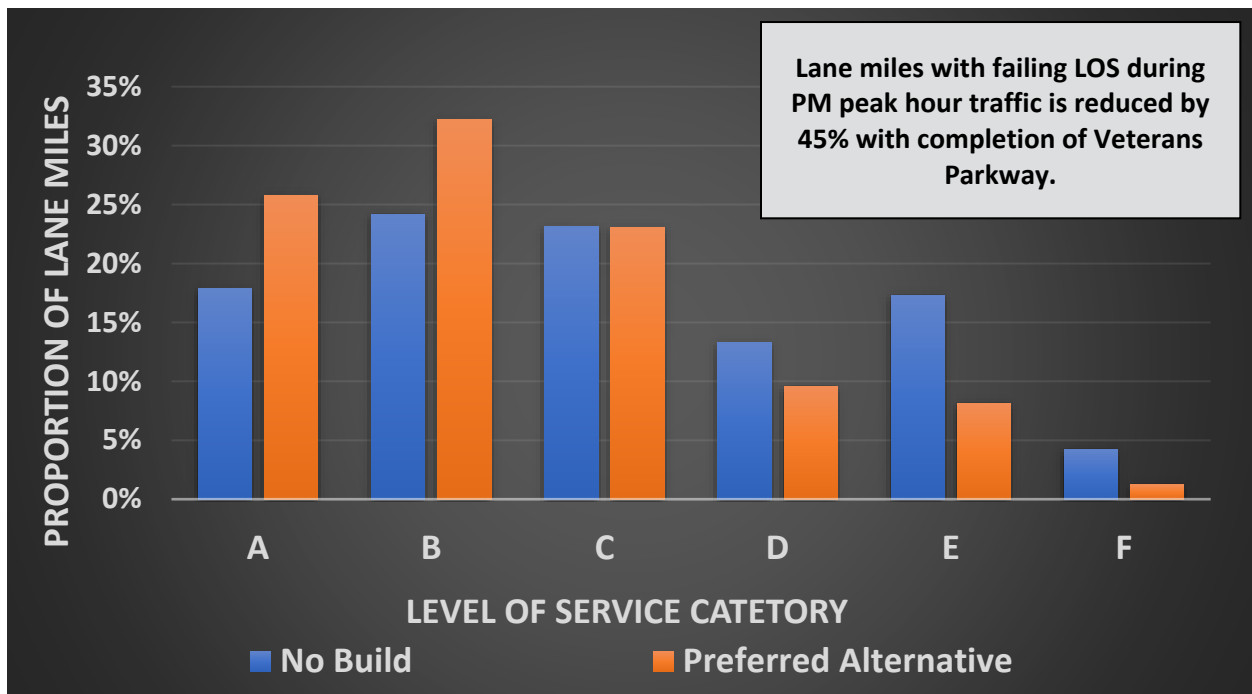


Figure 3-4. Year 2050 level of service distribution of Sioux Falls transportation network lane miles with South Veterans Parkway at PM peak travel time. road segments operating at LOS “D”, “E”, and “F” are considered failing.



The Sioux Falls TDM was used to estimate accessibility throughout the Sioux Falls transportation network and for the traffic analysis zones (or Corridor Zones) adjacent to Veterans Parkway. Table 3-3 reports the improvement in accessibility between one scenario that excludes South Veterans Parkway and another scenario that includes South Veterans Parkway using 2050 traffic forecasts provided by the City. Both scenarios included all existing roadways within the TDM in addition to all capital improvement projects shown in the 2045 Long-Range Transportation Plan (Sioux Falls MPO 2020). The results of this analysis show there is an improvement in accessibility for both peak and off-peak periods for the Sioux Falls transportation network as well as those corridor zones that are adjacent to the Veterans Parkway.

**Table 3-3. Change in accessibility**

Period	Corridor Zones	All Zones
Peak	+11.3%	+3.3%
Off-Peak	+3.0%	+0.5%

By addressing traffic congestion and accessibility issues within the Sioux Falls transportation network, the Preferred Alternative would fulfill Purpose Statement #2: *“Prevent deficiencies that will occur within the Sioux Falls transportation network by the years 2026 and 2050 if nothing is done. Transportation deficiencies include travel delay, level of service failures, and worsening accessibility in the southeast region.”*

## Capacity

The Preferred Alternative meets the target criteria set forth in the Purpose and Need for determining whether it addresses the capacity needs of South Veterans Parkway, the intersecting City arterials, as well as the I-29 Exit 73 interchange where South Veterans Parkway would connect.

As previously mentioned in Section 3.2, a traffic study was conducted to identify the number of lanes and intersection configuration necessary to accommodate projected 2050 traffic. The traffic study confirmed that all minimum LOS requirements for both AM and PM peak hour traffic along South Veterans Parkway and intersecting City arterials would be met as summarized in Table 3-4. The traffic study also confirmed the minimum allowable LOS at the next major intersections to the north and south of South Veterans Parkway along each of the intersecting City arterials would be met under projected 2050 traffic numbers. This indicates that constructing South Veterans Parkway would not force additional transportation needs beyond the study area that were not already anticipated in long range transportation plans. By addressing capacity needs of South Veterans Parkway and its connection to I-29 and Exit 73, the Preferred Alternative would fulfill Purpose Statement #3: *“Accommodate the 2026 and 2050 traffic growth needs of the study area.”*





**Table 3-4. Level of service for roadways and intersections on South Veterans Parkway**

Roadway Segment / Intersection	City or SDDOT LOS Standard	Minimum Level of Service Criteria	2050 Level of Service (AM/PM)
Veterans Parkway Eastbound	SDDOT	C	B/B
Veterans Parkway Westbound	SDDOT	C	C/C
Veterans Parkway and I-29 Exit 73	SDDOT	C	C/C
Veterans Parkway and Albers Avenue	City	D	A/A
Veterans Parkway and Tallgrass Avenue	City	D	C/C
Veterans Parkway and Louise Avenue	City	D	D/D
Veterans Parkway and Western Avenue	City	D	C/C
Veterans Parkway and Minnesota Avenue	City	D	D/D
Veterans Parkway and Cliff Avenue	City	D	D/D
Veterans Parkway and Southeastern Avenue	City	D	D/D
Veterans Parkway and Sycamore Avenue	City	D	C/C
Veterans Parkway and SD11/69 <sup>th</sup> Street	City	D	C/C
Veterans Parkway and 57 <sup>th</sup> Street	City	D	D/D

See Appendix A for full evaluation of all intersections.

## Goals and Objectives

### *Provide for orderly future development of public and private infrastructure*

The Preferred Alternative would support the backbone of arterials that provide access to new developments while enabling faster commuter routes for those living in the developments and working elsewhere in the community. It would align with long term plans that have been in development for nearly 20 years and thus provide orderly future development of public and private infrastructure and unlocking the full potential of growth that now depends on completion of the planned Veterans Parkway corridor.

### *Preserve quality of life*

The Preferred Alternative would provide another route choice that offers reduced travel times and better access to jobs and services. It would provide bicycle and pedestrian facilities and would incorporate safe crossings, including underpasses at key locations that best enables connectivity between neighborhoods, schools, businesses, and other existing and planned multimodal facilities.

### *Improve safety*

The Preferred Alternative would include key road design elements that contribute to improving the overall safety of roadway transportation systems. These include:

- Center raised median that divides opposite flows of traffic.





- Limiting access to the corridor in accordance with SDDOT and Sioux Falls (2007) (generally at signalized intersections spaced one mile apart).
- Left and right turn lanes at all arterial signalized intersections.
- Design speed exceeding posted speeds.
- Clear zone meeting and exceeding design standards.
- Roadway lighting throughout the corridor.

### 3.4 Public Input Received on the Preferred Alternative

Scoping is part of the NEPA process used to identify concerns of the general public, stakeholder groups, and agencies. The scoping process was completed for the 2003 and 2012 EAs, this included coordination with the public, agencies, and area tribes through FHWA and the SDDOT. As part of this supplemental environmental review, FHWA and SDDOT have coordinated again with the public, agencies, and tribes.

#### Agency and Tribal Coordination

Agency and tribal coordination occurred early in the Project and these entities were re-engaged as more information was known or as changes occurred to Project. Agency comments assisted in understanding the environmental concerns for the Project and helped determine appropriate environmental commitments for Project impacts. A summary of the agency and tribal coordination is discussed in Section 5.1.

#### Public Involvement

Public involvement was proactively sought for input on the Preferred Alternative. All comments received were read, considered, and responded to. Comments that merely expressed support for or opposition to the Project or a particular alternative were not considered substantive unless they raised specific issues or concerns regarding the Project or study processes. Input received was taken into consideration to inform project planning decisions. A summary of the public involvement effort is discussed later in Section 5.2.

### 3.5 Conclusion

The updated Preferred Alternative has been re-evaluated for its ability to meet the Purpose and Need of the Project which are the ultimate driving factors for selection of a Preferred Alternative. Goals and objectives were considered during the process as secondary factors for selection of a preferred alternative. The Purpose and Need of the Project have been found to be met by the preferred alternative and goals and objectives are supported. Public scoping did not yield other alternatives that would meet the purpose and need of the Project. Hence, only the Preferred Alternative and No Build Alternative (as a comparison for environmental impacts) will be considered as part of this South Veterans Parkway Supplemental EA.



## 4.0 Affected Environment and Environmental Consequences

This chapter includes a discussion of the existing social, economic, and environmental resources around the Preferred Alternative. For this analysis, the “study area” is generally defined as the area within 300 feet of the Project centerline. The study area is shown in Figure 1-3.

The 2012 EA documented the existing conditions and potential impacts to natural, cultural, and community resources. Environment and regulatory changes since 2012 are detailed in Section 1.2, *Updates to Environment and Regulations Since 2012 FONSI*. Changes to the affected environment since 2012 are generally related to new development that has occurred in the study area and the associated effects on other resources. Additional details about the regulatory and environmental changes, specific to each resource, are provided in the resource sections below. Some of the resources analyzed in the 2012 EA have no related regulatory or environmental changes and therefore a new analysis is not necessary. Table 4-1 lists each resource from the 2012 EA along with a current assessment of whether further review is needed. Based on this assessment, further review was completed for 13 of the 22 resource categories that were included in the 2012 EA. An analysis of climate and resiliency has been added to this Supplemental EA because since the 2012 EA, federal courts consistently have held that NEPA requires agencies to disclose and consider climate impacts in their reviews (see Section 4.13). The term ‘resilience’, with respect to a project means a projects ability to withstand disruptions resulting from extreme weather events that are predicted to become more frequent and of increased magnitude that in the past due to climate change.

The resource sections following Table 4-1 focus on changes in the existing conditions and regulations governing these resources since 2012. The impacts analysis addresses the effects of the Preferred Alternative on the human and natural environment including short-term impacts (typically 1 to 2 years once construction is complete). Under the No-Build Alternative, South Veterans Parkway would not be constructed. The 2003 EA indicated that the No-Build Alternative would not accommodate the traffic growth needs of the region. This Supplemental EA again determined that the No-Build Alternative would not accomodated traffic projections for 2050; however, it is considered as part of the overall NEPA process to serve as a baseline for which other alternatives are compared. If the Project was not constructed then the local jurisdictions would continue to develop arterial and local roadways within the area. Though new development has occurred within the Study Area, the outcome of a No-Build scenario remains the same as discussed in the 2012 EA and is not further discussed within this Supplemental EA. Further, this analysis addresses if mitigation updates are needed based on changes in impacts or due to regulatory changes since the 2012 EA/FONSI.



**Table 4-1. Assessment of resources requiring review**

Resource	2012 EA Preferred Alternative Summary <sup>1</sup>	Environmental Changes or Regulatory Updates since 2012	Further Review in Supplemental EA?
Land Use	Compatible with existing planning documents.	Updated land use planning documents.	Yes
Social Environment	Would have beneficial impacts from controlled access provided for increased traffic and improved traffic flow in developed areas.	Growth areas and trends are consistent with those analyzed in the 2012 EA and development has occurred as expected in the 2012 EA. The City of Sioux Falls plans for a trend of 2% growth yearly. There are no readily identifiable groups <sup>3</sup> of minority, low-income, or limited English proficiency populations within the Study Area (see Appendix C).	No
Public Facilities, Utilities, and Services	Would not impact public buildings; alternative access would be provided. Temporary impacts to private utilities during construction.	New public facilities including a school and fire station have been constructed. None of these facilities would be impacted. Private and public utilities will be temporarily impacted.  Coordination will occur with all private utilities as well as Western Area Power Administration (WAPA), a public power marketing administration with the U.S. Department of Energy as design progresses. Additional coordination has occurred and is documented in Appendix J. If needed, further analysis would be completed in a re-evaluation during final design.	Yes

<sup>3</sup> FHWA does not define “readily identifiable group”. Guidance developed by the CEQ, who along with the EPA identifies a minority and low-income population when 1) the percentage of minorities or low-income residents, respectively, exceeds 50 percent or the population in the area affected by the Project, or 2) the minority population of the affected area is meaningfully (or substantially) greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. Neither CEQ or EPA’s guidance define “meaningfully greater” but leave it to the professional judgement of the NEPA analyst based on the circumstances in the area affected by the project and the surrounding community. See “Environmental Justice Guidance Under the National Environmental Policy Act” at [https://www.energy.gov/sites/default/files/nepapub/nepa\\_documents/RedDont/G-CEQ-EJGuidance.pdf](https://www.energy.gov/sites/default/files/nepapub/nepa_documents/RedDont/G-CEQ-EJGuidance.pdf). Retrieved 3/21/2021



Resource	2012 EA Preferred Alternative Summary <sup>1</sup>	Environmental Changes or Regulatory Updates since 2012	Further Review in Supplemental EA?
Railroads	Incorporates a grade separated crossing of the active BNSF rail line. Construction would be coordinated with BNSF to minimize impacts.	No changes. Coordination will continue with BNSF during final design.	No
Bicyclists and Pedestrians	No significant impacts	Sioux Falls updated their bike plan in 2015 which depicts updated plans for expanding bicycle trails and connecting to the existing bike trail system. The 2012 EA noted only those exact locations of access points from developments to the SD100 trail/sidewalk would be determined during the final design phase. The side path, including underpass locations along South Veterans Parkway would be consistent with the general underpass locations as shown within the current Sioux Falls bike plan in addition to an underpass between Tallgrass Avenue and Louise Avenue (see Figure 4-1). Ultimately, there will be one underpass for connecting developments to the north of South Veterans Parkway to the side path on the south side of South Veterans Parkway. The Project remains compatible with and assists in fulfilling bike and pedestrian goals.	No
Visual Impacts and Aesthetics	Adverse impacts	Residential development has encroached the study area, particularly between 85 <sup>th</sup> Street and Cliff Avenue. Input has been received from neighboring residents concerning visual resources. In 2015, FHWA published Guidelines for the Visual Impact Assessment of Highway Projects.	Yes



Resource	2012 EA Preferred Alternative Summary <sup>1</sup>	Environmental Changes or Regulatory Updates since 2012	Further Review in Supplemental EA?
Archeological and Historic Resources	No adverse effect	Structures now within the 45-year or older range need evaluation. Additional areas within Area of Potential Effect had not been previously surveyed.	Yes
Economic Resources	Partial take of one business (Dakota Stone), and several would be temporarily affected during construction. Improved connectivity from the new arterial would benefit businesses.	Additional ROW acquisition and additional access modifications would occur to businesses between I-29 and Tallgrass Avenue because of a 3 <sup>rd</sup> through lane that was recommended in the recent final traffic study. Albers Avenue would remain the only access to South Veterans Parkway between I-29 and Tallgrass Avenue. Stacey's Vintage Art Boutique would have to be acquired/relocated to ROW and control of access requirements. Other business access modifications have been reviewed with business owners to maintain and accommodate normal business operations to the extent possible.	Yes
Environmental Justice	No impact	Based on updated assessment using EPA's EJ SCREEN, there are no substantial populations of low-income or minorities at the Census Tract level that warrant further investigation.	No
Air Quality	No significant impact	No changes to air quality standards or attainment for the area.	No
Noise	Would increase noise in the study area as agricultural land use is converted to residential, commercial, and other land uses. Potential for noise impacts to the residential area in the northwest quadrant of the intersection of 41st Street and SD100.	New receptors in study area resulting in continued growth. Updated noise modeling needs to be completed.	Yes





Resource	2012 EA Preferred Alternative Summary <sup>1</sup>	Environmental Changes or Regulatory Updates since 2012	Further Review in Supplemental EA?
Relocations	Would require acquisition and/or relocation of two farmsteads / residences and partial acquisition of the Dakota Stone business.	Both residences / farmsteads noted in the 2012 EA have been previously purchased by SDDOT. Two additional residences would be acquired for the Project. All remaining ROW and relocation impacts would be in conformance with the Uniform Relocation Assistance and Real Property Acquisition Act (UA) of 1970, as amended by the Surface Transportation Assistance Act of 1987 and as codified in 49 CFR 24, effective April 1989.	Yes
Farmland	No significant impact	Increased development has reduced the amount of farmland within the study area, but the changes are not sufficient to change the conclusions of the 2012 EA or warrant additional review.	No
Wetlands and Streams	2012 EA Preferred Alternative was confirmed as the LEDPA based on desktop analysis.	Potential changes to drainage and wetland area because of new development. Wetland boundaries require field delineation.	Yes



Resource	2012 EA Preferred Alternative Summary <sup>1</sup>	Environmental Changes or Regulatory Updates since 2012	Further Review in Supplemental EA?
Water Quality	No significant impact	Changes to South Dakota surface water quality standards have been made but those changes do not change how the project would or would not impact water quality. Current SDDOT construction plan environmental commitments will be reviewed and for each phase of the Project and will be included within the construction plan sets. These include measures to control aquatic invasive species and measures to meet water quality standards of water resources within the study area or downstream of project construction. The SDDANR General Permit authorizing stormwater discharges associated with construction activities was updated in 2018 and would be obtained for construction of the project. A Temporary Discharge Permit would be obtained especially if a dewatering and collection system is needed to collect turbid stormwater and treat with flocculants.	No
Floodplains	0.73 acre of floodway impacted, and 4.75 acres of floodplain impacted.	Changes to mapped floodways.	Yes



Resource	2012 EA Preferred Alternative Summary <sup>1</sup>	Environmental Changes or Regulatory Updates since 2012	Further Review in Supplemental EA?
Vegetation, Fish, and Wildlife	Minor loss	No additional species or habitat impacts. Updates to known trout perch streams indicate habitat is no longer present within our study area. South Dakota Department of Game Fish and Parks (SDGFP) provided new conservation measures to be implemented during construction for lined snake habitat: habitat is marginal and limited and conservation measures will be implemented by construction segment as needed. The City of Sioux Falls has taken a proactive approach towards controlling the infestation of the Emerald Ash Borer through implementation of ordinance towards tree removal/debris practices and transportation & disposal. Conclusions in 2012 EA are still valid.	No
Threatened or Endangered Species	May affect, likely to adversely affect Topeka shiner	Streams within the study area have been determined to not contain habitat for the Topeka Shiner. The northern long-eared bat has been listed as a threatened species. The monarch butterfly has been listed as a candidate species.	Yes
Invasive Plants	SDDOT would implement Best Management Practices (BMPs) to prevent and control the spread of invasive plant species	No changes	No
Section 4(f) and Section 6(f) Resources	<i>De minimis</i> use	Two new schools have been built within the study area, but recreational facilities associated with those school will not be temporarily or permanently impacted. A new site eligible for listing under National Register of Historic Places was identified.	Yes
Regulated Materials	No significant impact	New development within study area may change potential for regulated materials.	Yes



Resource	2012 EA Preferred Alternative Summary <sup>1</sup>	Environmental Changes or Regulatory Updates since 2012	Further Review in Supplemental EA?
Climate / Resiliency	Not Included within 2012 EA	E.O. 13990 instructs agencies to establish a policy to reduce greenhouse gas emissions and strengthen resilience to the impacts of climate change. Changes to NEPA guidance have been made by the Council on Environmental Quality, although draft guidance remains pending.	Yes
Cumulative Impacts	Indirect and cumulative impacts are not anticipated to be significant. No significant cumulative impacts are projected to occur with the Project in conjunction with other projects.	There are no additional indirect or cumulative impacts that were not discussed in the 2012 EA.	Yes

## 4.1 Land Use

### Existing Conditions and Changes since 2012

Section 3.1 *Land Use* of the 2012 EA documented the study area to consist of commercial crops, pasture or grazing land, recent residential and commercial developments, and a recreational area, Harmodon Park. Development adjacent to the study area was expected to continue as described in the Sioux Falls Comprehensive Development Plan: Shape Sioux Falls 2035 (Sioux Falls 2009) and Direction 2035: Sioux Falls MPO Long-Range Transportation Plan (Sioux Falls MPO 2010). The Sioux Falls 2035 Comprehensive Development Plan indicated that future land use in the areas adjacent to the Preferred Alternative would include residential use with schools and parks strategically placed within the developments. Business parks and commercial developments were planned at intersections along the Preferred Alternative (Figure 4-1).

Since the 2012 EA, the City updated their comprehensive plan, which is now known as Shape Sioux Falls 2040 - Comprehensive Plan (Sioux Falls 2019), the Sioux Falls MPO has adopted the 2045 Long-Range Transportation Plan (Sioux Falls MPO 2020), and Lincoln County published its Transportation Master Plan (Lincoln County 2019). Like the earlier land use plans, these documents identify a consistent plan for growth and urban transition in proximity to the study area. New schools have been built, and future school and park locations have been planned. South Veterans Parkway is being designed so that its utility is maximized for bicyclist and pedestrians to and from these facilities.

Although private development may occur more rapidly in certain areas near the study area, the Shape Sioux Falls 2040 – Comprehensive Plan and MPO 2045 Long-Range Transportation Plan show full build out of the growth area and have been developed based on the



understanding that South Veterans Parkway would be built. The SDDOT in conjunction with the City of Sioux Falls Public Works Department developed the SD100 Access and Noise Plan (SDDOT and Sioux Falls 2007) that was approved by the State Transportation Commission January of 2008. The SD100 Access and Noise Plan outlines the rules for access onto SD100 (i.e., Veterans Parkway) to preserve its traffic capacity and to maintain accessibility to new developments in the Sioux Falls growth area as projected traffic levels are realized. Land use and noise considerations were considered so that the City would be informed in reviewing development plans adjacent to the Preferred Alternative for their compatibility with access and noise requirements.

## **Environmental Consequences**

South Veterans Parkway remains compatible with adjacent land use. The SD100 Access and Noise Plan is consistent with the transportation improvements identified within the City and MPO planning documents due to the collective planning efforts. Thus, construction of the Preferred Alternative would not result in the need to revise land use designations or zoning that would otherwise be incompatible.



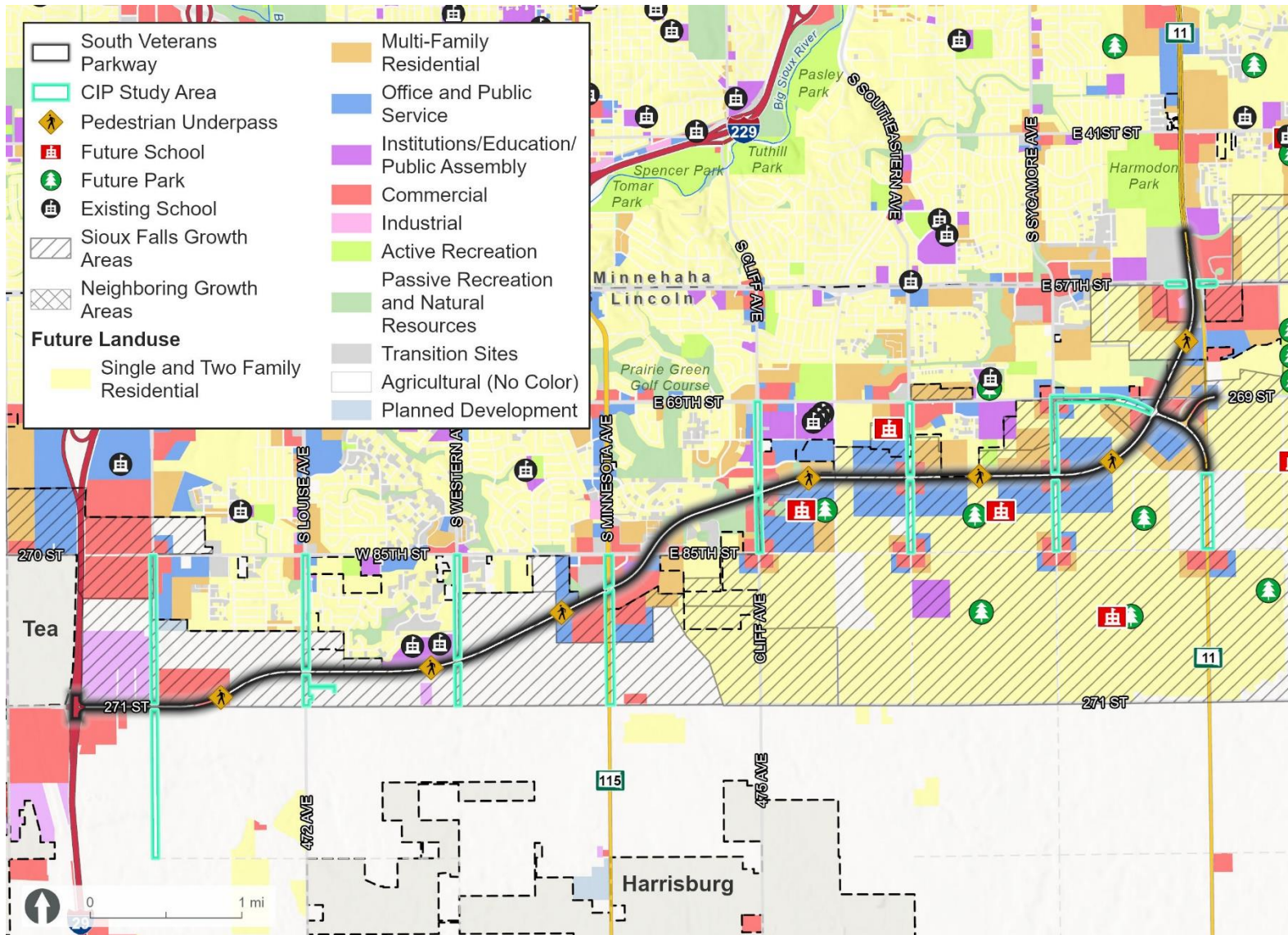


Figure 4-1. City of Sioux Falls land use



## 4.2 Public Facilities, Utilities, and Services

### Existing Conditions and Changes since 2012

Public facilities include buildings such as City Hall, libraries, auditoriums, schools, emergency response buildings, churches, and utilities such as communication, power, gas, water, and wastewater systems. New public facilities including a school and fire station have been constructed within or near the study area since the 2012 EA.

The study area also has several public and private utilities that serve existing and planned future development in the area.

### Environmental Consequences

Impacts to public services and systems from the Project would generally occur only during construction. The new school and fire station will not be impacted by the Project and access to and from these facilities will be maintained throughout construction.

Private and public utilities will be temporarily impacted during construction of the Project. As design progresses and detailed impacts are known, coordination will occur with all private utilities as well as Western Area Power Administration (WAPA), a public power marketing administration with the U.S. Department of Energy. Additional coordination with WAPA has occurred and is documented in Appendix J. As a result of this coordination, additional Study Area was included in this Supplemental EA to account for possible utility relocation impacts that may be forced by this project. Upon determining WAPA utility/structure relocations, additional environmental analysis would be completed either by WAPA or within a re-evaluation of this Supplemental EA during final design.

## 4.3 Visual Impacts and Aesthetics

### Existing Conditions and Changes since 2012

Section 3.6 *Visual Impacts and Aesthetics* of the 2012 EA described the study area as a rural setting that is characterized primarily by agricultural farmland with recent development, mainly single-family residences.

Visual resources are defined by views and the user groups that view the landscape, including those that view the road corridor and road users that view the surrounding landscape. As indicated in Section 4.1, land use within the study area consists of commercial crops, pasture or grazing land, recent residential and commercial developments, and a recreational area, Harmodon Park. Other parks are located outside the study area (see Figure 4-1). Visual changes since 2012 are consistent with the transition from wide open space with pastoral views of farmland providing a sense of rural living, to a suburban landscape with single and multi-family subdivisions and commercial developments. Residential development has occurred within the study area between 85<sup>th</sup> Street and Cliff Avenue. The single-family homes to the south of the Preferred Alternative between 85<sup>th</sup> Street and Cliff Avenue would be shielded as the developer added a berm between the houses and the location of the Preferred Alternative.



In 2015, FHWA published Guidelines for the Visual Impact Assessment of Highway Projects which presents FHWA’s current thinking on best practices for addressing visual impacts (FHWA 2015). The Guidelines do not create or confer any rights for or on any person or operate to bind the public. Rather, they provide FHWA’s framework for how to establish what aesthetic qualities are valued, assess visual impacts, develop effective mitigation measures, and define what constitutes an effective mitigation measure. The assessment completed is described in the following section.

## Environmental Consequences

The views from the road would be like other roadways in Sioux Falls, especially those in the urbanizing areas, where motorists see houses and commercial development interspersed with farmland. This view would be expected to transition to mostly urban uses over time, consistent with the growth area.

For the residential development that has occurred since 2012, particularly homes that were constructed along the previously identified corridor between 85th Street and Cliff Avenue, the views from backyards would permanently change from a narrow corridor of primarily grasses and scattered trees and build features — apartment buildings, 85<sup>th</sup> Street, and power lines in the backdrop — to more hard texture that a roadway would bring. The construction phase of each segment would involve temporary visual impacts when construction activity involving heavy machinery would be present and visible to nearby residents. The development to the north of the Preferred Alternative remains largely unshielded and the visual appearance of the roadway will be dependent on the distance the homes are from the road and the surrounding vegetation. Residences closer to 85<sup>th</sup> Street will see a higher embankment as the Preferred Alternative overpasses 85<sup>th</sup> Street. Residents along 77<sup>th</sup> Street may be able to see roadway pavement that is between 150 to 300 feet from their backyards at approximately the same elevations as their backyards. The roadway embankment is planned to be aesthetically enhanced with un-mowed native plantings. A visual impact analysis was completed in accordance with FHWA’s Visual Impact Assessment Guidelines (Guidelines) and is documented within a report that is included in Appendix D.

The change in viewshed was addressed in the 2012 EA; however, new residents have provided additional input into the visual impacts of the proposed Project since the 2012 EA. In response to public feedback, the SDDOT and City have worked together to understand what visual qualities are valued by the public and how visual qualities would be impacted. Neighborhood meetings with residents that expressed the greatest concern were held to gather more focused input on the concerns brought forward during an early public comment period. The visual impact analysis determined that effective mitigation practices as defined by the Guidelines were available. The City and SDDOT have explored mitigation options — evaluating what is both technically possible and practical. Mitigation options that 1) were found to be acceptable by the community and regulatory agencies as mitigating the visual impacts and 2) were determined politically and financially feasible by the SDDOT and City who would need to pay for their construction and maintenance, were incorporated into the Project design.





The first mitigation strategy involves narrowing the median from 32 feet to 10 feet and installing a 56-inch-high concrete barrier & glare screen between directions of traffic in the area between 85th Street and Cliff Avenue. This adjustment results in three improvements to concerns raised by the neighboring residents. First, it distanced the roadway from adjacent properties which then provided additional space to evaluate further mitigative actions that would otherwise be space-limited such as constructing a berm and adding trees. Second, it would reduce some headlight glare. Third, it would reduce traffic noise.

The second mitigation strategy involves planting woody vegetation between the residences and the road. The SDDOT preferred that no trees be planted within the ROW due to safety concerns should a vehicle leave the roadway; however, the only requirement is for trees to be outside the clear zone which extends 30 feet from the edge of the road pavement. The City considered tree (and shrub) plantings to be technically possible and practical and would also be politically and financially feasible to the community. The City and SDDOT would commit to work together in incorporating trees into the final design that aligns with the mitigation strategy described in the visual impact analysis. The tree plantings would not have an immediate effect on screening the view of the road and traffic from the residences; however, over time as the trees mature, the roadway and associated traffic would become less visible from the neighboring residences. In addition to incorporating trees/shrubs between 85<sup>th</sup> Street and Cliff Avenue into the Project design, the City also informed the adjacent residents of a Neighborhood Project Grant Program that is available to neighborhood associations and those that work in partnership with a neighborhood association. The City has committed to offering this grant program to the residential neighbors to fund additional vegetative plantings on private property owned by individual residents or the respective homeowner's association.

There was no opposition to narrowing the median and installing the 56-inch-high concrete barrier & glare screen within the median. Some neighboring residents were underwhelmed with the effectiveness that tree plantings would provide in screening the view of the roadway during the initial years following construction; however, overall feedback regarding tree plantings was positive.

The Project is consistent with long range plans that were available to the affected population prior to development of their residential properties. Based on the Guidelines and when taking into consideration the regulatory context, the proposed project will create adverse impacts on visual quality by adversely affecting the sensitivity of neighbors between 85<sup>th</sup> Street and Cliff Avenue. Adverse impacts on viewer awareness include drawing attention and focus to streetlights, headlights, traffic, and the roadway in general.

The proposed project will compensate for adverse impacts on the awareness of viewers. It will narrow the median from 32 feet to 10 feet and install a 56-inch-high concrete barrier & glare screen between directions of traffic in the area between 85th Street and Cliff Avenue. Additionally, it will involve planting woody vegetation between the residences and the road in the area between 85th Street and Cliff Avenue. In doing so, the Project will retrospectively include components of buffer that would have been a requirement by City ordinance if the ROW had been officially established within the preserved corridor at the time of development. Opportunities to enhance visual quality have been explored as part of this visual impact analysis



based on public input received. Effective mitigation strategies have been identified that would be implemented along the north side of the Project between the roadway and adjacent residential forms from 85<sup>th</sup> Street to Cliff Avenue.

## 4.4 Archeological and Historic Resources

### Existing Conditions and Changes since 2012

Section 3.7 *Archeological and Historic Resources* of the 2012 EA noted that nine archaeological sites were identified during cultural surveys. Of these resources, two were considered eligible for listing on the National Register of Historic Places (NRHP). One site is an abandoned railroad, and another is an active railroad owned by BNSF. The abandoned rail site was confirmed to no longer be present in 2007 because the rail was removed in 1979 leaving no physical remains. The 2012 EA Preferred Alternative included an overpass to span the active BNSF rail site. The State Historic Preservation Office (SHPO) previously concurred with a recommended determination of “no adverse effect” for both sites since impacted portions of the sites were non-contributing elements.

Section 3.7 *Archeological and Historic Resources* of the 2012 EA documented potential historic structures that were evaluated:

- An occupied farmstead located at 47771 South 69<sup>th</sup> Street was evaluated for historic significance because relocation/acquisition would be required. Five structures were evaluated on this farmstead, none of which were found to have characteristics that would make them eligible for the NRHP.
- An abandoned farmstead comprised of eight standing structures located 0.5 mile south of the intersection of Sycamore Avenue and 69<sup>th</sup> Street were determined to be not eligible for the NRHP.
- Three standing structures which include a schoolhouse, garage, and storage shed located at 27014 Southeastern Avenue, all of which were determined to be not eligible for the NRHP.
- A single-family residence with an attached garage located at 47779 57<sup>th</sup> Street East which was recommended as not eligible for the NRHP.
- A modified two-car garage located at 3300 South Lisa Drive which was recommended as not eligible to the NRHP.
- The historic farmstead near 69<sup>th</sup> Street and 478<sup>th</sup> Avenue has since been destroyed and is no longer present. Additionally, this site is outside of the Project study area and the parcel will not be impacted.

In June 2021, a Level III archaeological resources survey was conducted in previously unsurveyed areas along South Veterans Parkway (approximately 9.6 acres total). No archaeological resources were identified in the new areas surveyed (Kogel Archaeological Consulting Services LLC 2021).

In addition, the area of potential effects (APE) for the Preferred Alternative was assessed for historic structures that were not previously old enough for evaluation during the 2003 and 2012 EAs (HDR 2021a). Based on this assessment, one new property, the KSOO radio transmission





site located at 26962 476th Avenue, was recommended as eligible for listing on the NRHP due to its state-level significance under Criterion A in the area of communications. The property retains its historic character-defining features including a radio transmission building that was built in 1952, original five-tower antenna array, and cable lines radiating out from the central building. The eligible property lies adjacent to the south side of the proposed parkway alignment. A non-historic (c. 2015) concrete pier is located within the limits of disturbance and has guy-wires extending south (out of the construction limits) to the northernmost radio tower.

A Level III cultural resources survey was conducted adjacent to the City arterial roads that intersect the proposed South Veterans Parkway (Kogel Archaeological Consulting Services LLC 2022). Two sites were identified, and two sites were revisited. The two sites that were identified include one at the intersection of Sycamore Avenue and the proposed South Veterans Parkway and one at the intersection of Sycamore and 69<sup>th</sup> Street.

The site identified at the intersection of Sycamore Avenue and the proposed South Veterans Parkway is associated with the former Griswold Farm District that once had eight structures that were evaluated in 1991—all determined not eligible for the NRHP. All structures have been removed, including the foundation of the primary residence. The site remains unevaluated under Criterion D. The site identified at the

intersection of Sycamore Avenue and 69<sup>th</sup> Street consists of a farmstead mainly north of 69<sup>th</sup> Street. A granary thought to be part of the farmstead is located on the south side of 69<sup>th</sup> Street was previously recommended as not eligible; however, the site's eligibility under Criterion D remains unevaluated.

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*Criterion D requires a property to have, or have had, information to contribute to our understanding of human history or prehistory, and the information must be considered important.*

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The two sites that were revisited included the Chicago, Rock Island & Pacific Railroad which crosses the 69<sup>th</sup> Street City arterial project and a native American artifact scatter located southeast of the proposed South Veterans Parkway / 57<sup>th</sup> Street intersection. The native American artifact scatter remains unevaluated for the NRHP. The segment of the Chicago, Rock Island & Pacific Railroad which crosses 69<sup>th</sup> Street has been reclaimed and does not retain any characteristics that would contribute to its status as a NRHP-eligible property.

## Environmental Consequences

The determination of “no adverse effect” remains valid for the two historic railroad sites. The concrete pillar and attached guy wire are considered modern modifications to the KSOO radio transmission line and impacts to these structures would not impact the overall historic KSOO radio transmission property. On October 4, 2021, SHPO agreed that the KSOO radio transmission tower should be considered “Eligible” for listing on the NRHP and concurred with a determination of “No Adverse Effect” for the proposed undertaking of constructing South Veterans Parkway. The staging and/or storage of construction equipment or materials shall not take place outside proposed construction limits that are within or adjacent to the defined boundaries of the historic site. Construction plan sheets will address the location adjacent to proposed construction limits to protect the existing historic site. More information regarding



environmental commitments on the KSOO site can be found in Section 6.0 Future Actions / Recommendations.

Due to the removal of structures and foundations and overall disturbance of the site associated with the former Griswold Farm District located at the intersection of Sycamore Avenue and the proposed South Veterans Parkway, it is unlikely to yield information important in prehistory or history that would make it eligible for listing under Criterion D.

The Project would not directly or indirectly impact the site consisting of a farmstead at the intersection of Sycamore Avenue and 69th Street; however, the Project would contribute to cumulative impacts that would likely impact the site at a later time when intersection of 69th and Sycamore is improved (currently not planned). Further site evaluation would be conducted as part of that future improvement project.

The native American artifact scatter located southeast of the proposed South Veterans Parkway / 57th Street intersection would be avoided and will be clearly demarcated in the plans as an avoidance area (see 6.0 Future Actions / Recommendations).

SDDOT recommended a determination of “No Adverse Effect” for the nine City arterial projects to the SHPO on September 1, 2022, and SHPO concurred with a determination of “No Adverse Effect” on September 9, 2022.

## 4.5 Economic Resources

### Existing Conditions and Changes since 2012

The Sioux Falls metropolitan area is considered a growing regional hub for transportation, health care, employment, and a variety of other services. According to Sioux Falls MPO (2020), the region’s population has a projected growth rate of 2.9% annually through 2045. Population of Sioux Falls is anticipated to reach around 270,000 by 2045 (see Table 4-2).

The City of Sioux Falls is the largest city in South Dakota, with approximately 70% of the MPO population. Other surrounding cities are projected to experience over 100% growth by 2045 with the highest growth rate occurring in Tea, Hartford, and Harrisburg. In recent years the region’s growth rate has outpaced that of the City of Sioux Falls.

**Table 4-2. Recent, current and future growth in the City of Sioux Falls and neighboring communities**

City	2008	2018	2045	2018-45 Growth
Sioux Falls	151,000	183,200	270,000	47%
Tea	3,600	5,397	13,119	143%
Harrisburg	3,700	6,482	21,153	226%
Hartford	2,680	3,381	8,740	159%

Employment is anticipated to grow with the increasing business in the area. Total employment in the Sioux Falls MPO area has seen an increase since 1990. Job growth in the Sioux Falls MPO area is projected by U.S. Department of Labor to be slightly higher than the national growth rate (Sioux Falls MPO 2020). The Sioux Falls MPO predicts that Sioux Falls employment



in 2045 will be 205,837 and 66,000 new jobs will be created between 2018-2045. The median household income in the Sioux Falls MPO area is estimated at \$62,000 in 2017.

The 2012 EA reports that the Revised Build Alternative would require approximately 239.8 acres of new roadway ROW between I-29 to 26<sup>th</sup> Street from private landowners and noted that the commitment of land to roadway ROW and the associated loss of tax revenue would not affect the ability of the surrounding area to be developed nor would it affect the ability to generate new jobs and City income via property and sales tax.

The 2012 EA reported that one business would be permanently impacted by the revised Build Alternative, Dakota Stone. It reported that Franklin Motors and other businesses adjacent to I-29/County Road 106 Interchange would be impacted temporarily by construction and that three businesses along CR 106 would require minor partial acquisitions to accommodate roadway ROW.

Since completion of the 2012 EA, a recent traffic study recommended adding a third through lane in each direction from I-29 to Tallgrass Avenue to maintain continuity and meet driver expectancy. This is a change from the 2012 Revised Build Alternative and to meet SDDOT access control criteria, public street and private property access locations require modification from the current conditions.

## Environmental Consequences

Residential land use is heavily concentrated in the southern part of the Sioux Falls metropolitan area, while jobs are concentrated in northern Sioux Falls. As neighboring communities around Sioux Falls continue to grow at an even higher rate, increased commuter traffic volumes into concentrated business areas are expected. South Veterans Parkway would reduce travel times between businesses and residences (particularly east-west commutes) and improve overall accessibility. This increases attractiveness for homeowners, local businesses, consumers, and employees.

The Preferred Alternative would require approximately 196 acres of roadway ROW and 31 acres of temporary easements between I-29 and 57<sup>th</sup> Street based on the current design. Permanent ROW acquisition would be required from seven additional businesses located along County Road 106. Permanent alterations in access to businesses from South Veterans Parkway would result from Albers Avenue being the only access maintained off South Veterans Parkway between I-29 and Tallgrass Avenue. Businesses and road districts are being coordinated with to determine the best course of action to maintain adequate access for customers and normal business operations where possible.

All ROW acquisitions and relocations would be in conformance with the Uniform Relocation Assistance and Real Property Acquisition Act (UA) of 1970, as amended by the Surface Transportation Assistance Act of 1987 and as codified in 49 CFR 24, effective April 1989. SDDOT's Right of Way Program is responsible for acquiring the property necessary for highway purposes and performing services related to acquisition per the UA. Associated loss of tax revenue would not affect the ability of the surrounding area to continue development and generate new jobs.



## 4.6 Noise

### Existing Conditions and Changes since 2012

Section 3.11 *Noise* of the 2012 EA determined that there were impacted residential receptors located in the northwest quadrant of the intersection of 41<sup>st</sup> Street and Veterans Parkway, a previously constructed portion of Veterans Parkway. The 2012 EA included the 66 dBA and 71 dBA noise contours and disclosed that the Preferred Alternative would contribute to the increase of noise in the study area as agricultural land use is converted to residential, commercial, and other land uses.

Since that time, residential growth has expanded southward and has encroached into areas adjacent to the Preferred Alternative. Most notably, residential development has occurred adjacent to the Preferred Alternative between 85th Street and Cliff Avenue. Additionally, 2050 projected traffic levels were updated which may have altered modeled noise levels.

FHWA has defined a noise impact when the predicted noise levels approach or exceed 67 A-weighted decibels (dBA) for residential receptors and 72 dBA for commercial receptors or when they substantially exceed the existing noise levels. SDDOT (2011) has developed a Noise Analysis and Abatement Guidelines/Policy (SDDOT NAAG) that defines “approach” as coming within 1 dBA of the 67 and 72 dBA thresholds for residential and commercial receptors, respectively. The term “substantially exceed” means an increase of at least 15 dBA above existing noise levels. Thus, a traffic noise impact occurs if either of the following conditions is met:

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*Noise is measured in decibels (dB) – a logarithmic scale. Because human hearing is not equally sensitive to all frequencies of sound, certain frequencies are given more “weight”. The A-weighted scale corresponds to the sensitivity range for human hearing (dBA).*

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- Predicted design year traffic noise level approaches or exceeds SDDOT Noise Analysis and Abatement Guidance Noise Abatement Criteria (NAC) at a receptor (SDDOT 2011).
- Predicted design year traffic noise level substantially exceeds the existing condition highway traffic noise level at a receptor.

As previously mentioned in Section 4.1, *Land Use*, the SDDOT in conjunction with the City of Sioux Falls Public Works Department developed the SD100 Access and Noise Plan that was approved by the State Transportation Commission January of 2008 (SDDOT and Sioux Falls 2007). The SD100 Access and Noise Plan facilitated planning for noise-compatible land uses by documenting the location of the 66 dBA noise contours. The City has implemented the plan by incorporating the noise contours in official maps and overlay zones to guide the development along the Preferred Alternative.

### Environmental Consequences

A revised noise study has been completed to analyze the existing noise level conditions at receptors and compare them to expected noise levels based on 2050 traffic

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*A receiver is a modeled point that represents one or more receptors.*



projections along South Veterans Parkway (HDR 2022e) (see Appendix E). Table 4-3 summarizes the results of the noise study. Noise levels are currently low, particularly due to being in neighborhood settings. All receptors that exceed the NAC also experience a substantial noise increase. Therefore, a total of 107 receptors would be impacted by the year 2050 during the peak-hour noise period. All receptors are residential properties.

**Table 4-3. Noise study results summary**

Receptors	Receivers	Existing Noise Level (dBA)	2050 Peak Noise Level (dBA)	Receptors exceeding Noise Abatement Criteria	Receptors with Substantial Noise Increase
337	337	36.2–59.0	46.4–69.7	18	107

Noise abatement for the impacted receptors was evaluated in accordance with guidelines from the SDDOT NAAG. Although abatement must be evaluated, it is only recommended for inclusion in the Project when determined to be both feasible and reasonable.

Abatement is feasible if it:

- Provides at least 5 dB of noise reduction for a minimum of 60% of front row receptors directly behind the noise wall (noise wall must extend entirely across receptor’s property line).
- Does not have design and construction factors that are “fatal flaw” issues (e.g., safety, barrier height, topography, drainage, utilities, abatement maintenance, maintenance access to adjacent properties, and access to adjacent properties [i.e., arterial widening projects]).

If abatement is not feasible, further evaluation is not needed. However, if it is feasible, reasonableness is evaluated. Abatement is reasonable if it:

- Meets the minimum noise reduction design goal of at least 7 dB for a minimum of 40% of benefited receptors.
- The Cost Benefit (\$/receptor) equals or is less than the Cost Benefit Index (\$25,000/receptor) using \$52/ft<sup>2</sup> for barrier costs.
- Has support from the potentially benefited receptors<sup>4</sup>.

For this Project, noise walls were evaluated as an abatement strategy for impacted receptors at six locations. Noise abatement at all six locations for 107 impacted receptors were determined to be feasible but not reasonable since the Cost Benefit would range between \$40,759 and \$473,200.

Noise walls would not be included within the final design due to failing the cost-reasonable goal. However, it was decided that the typical section throughout most of the stretch between 85<sup>th</sup> and Cliff Avenue where the highest density of impacted receptors was located would be modified from having a 32-foot-wide raised median to having a 10-foot-wide median with concrete barrier. This effectively decreased the number of impacted noise receptors from 83 to 54 between 85<sup>th</sup> Street and Cliff Avenue. These receptors would be impacted due to exceeding 15 dBA above

<sup>4</sup> Support determined through Benefited Receptor Preference Survey, which may be conducted after the NEPA process and is documented in a separate report.





existing noise levels based on modeled peak hour 2050 projected traffic levels while none of these receptors approach or exceed SDDOT NAAG Noise Abatement Criteria, demonstrating the City's careful implementation of the SD100 Access and Noise Plan (SDDOT and Sioux Falls 2007).

An Addendum to the South Veterans Parkway Noise Study Technical Report was completed to evaluate existing and future noise levels at receptors present in the nine City arterial project study areas (see Appendix E). A total of 20 receptors were identified within the nine City arterial project study areas. Noise impacts were not predicted at any receptors.

Properties adjoining project construction may be exposed to noise caused by construction activities of the proposed Project. Construction noise was not analyzed as part of the noise analysis and neither FHWA nor SDDOT have construction noise abatement criteria. Rather, noise construction is subject to relevant local regulations and ordinances. City of Sioux Falls ordinance § 93.006 exempts construction work from obtaining a sound permit if operating between the hours of 6:00 a.m. and 10:30 p.m. in residential or commercial land use zones. The City may issue sound permits for any activity conducted between the hours of 6:00 a.m. and 10:30 p.m. A special sound permit for a location may be granted by the City, allowing extended time and/or sound levels on a case-by-case basis. The permit may prescribe any reasonable conditions or requirements deemed necessary to minimize adverse effects upon the city or the surrounding neighborhood. To aid with minimizing future traffic noise impacts on currently undeveloped lands adjacent to South Veterans Parkway, the 66 dBA and 71 dBA noise contours will be provided to local officials for their planning purposes.

## 4.7 Relocations

### Existing Conditions and Changes since 2012

The 2012 EA reported that the Revise required partial acquisition, acquisition, or relocation of the following business and structures:

- A barn associated with the residence located at 27059 Western Avenue would be acquired and demolished or relocated.
- A farmstead located at 47771 South 69th Street. The house and outhouse building would be acquired and demolished or moved off the property. A garage/workshop, six-stall horse barn, and two steel grain bins are within the ROW corridor but would not necessarily have to be demolished.
- A residence, located at 6000 East 57th Street, would be relocated within the property or acquired due to the construction of an interchange at 57th Street and SD 11. This residence has already been purchased by the SDDOT.
- The Dakota Stone business located at 27024 South Minnesota Avenue would be partially acquired. The main building is located within the proposed roadway.

Design and planning have progressed since 2012 EA. Key changes include the addition of a including adding a third through lane in each direction from I-29 to Tallgrass Avenue to maintain continuity and meet driver expectancy as well as the addition of nine City arterial projects that would intersect South Veterans Parkway. These changes, described below, have had an impact



on the number of business and residence relocations that would be required with the new Preferred Alternative.

## Environmental Consequences

Two additional residences located east of Cliff Avenue and south of the Preferred Alternative need to be fully acquired. Access to one of the residences would interfere with a dedicated right turn lane onto South Veterans Parkway to Cliff Avenue. A left turning movement into the other residence to the south would no longer be allowed when traveling southbound per the SD100 Access and Noise Plan requirements. In addition to the expected change in land use along Cliff Avenue, a total acquisition of this residential property was determined warranted. These residential displacements do not include minority or low-income communities.

All remaining ROW and relocation impacts would be completed in conformance with the Uniform Relocation Assistance and Real Property Acquisition Act (UA) of 1970, as amended by the Surface Transportation Assistance Act of 1987 and as codified in 49 CFR 24, effective April 1989.

### 4.8 Wetlands and Streams

#### Existing Conditions and Changes since 2012

Section 3.14 *Wetlands and Other Waters of the US* of the 2012 EA estimated a total of 58.7 acres of wetland would be impacted by the 2003 EA Preferred Alternative, these wetland impacts occurred only in the portion of the 2003 Preferred Alternative that were also evaluated in the 2012 EA for the south portion of Veterans Parkway. The 2012 EA Preferred Alternative would impact 50.7 acres of wetland. These wetland impacts were estimated based on wetland boundaries that were determined through desktop analysis.

As referenced in Appendix I of the 2012 EA (Executive Order 11990 Wetland Finding), a supplemental EA was completed in February 2012 to: (1) fully outline the development of the various alternative design concepts since the inception of the Project and (2) analyze alternatives so that FHWA and USACE could decide as to whether the preferred alternative satisfies regulatory requirements. The No Build Alternative, Widen CH106/SD11 Alternative, 2003 EA Preferred Alternative, and the 2012 EA Preferred Alternative were initially evaluated for their ability to meet the purpose and need and subsequently to compare practicable alternatives for their impacts on wetlands. In response to the alternatives analysis, FHWA made a decision, referred to as a “Wetland Finding,” that there is no feasible or practical alternative to the proposed construction of the 2012 EA Preferred Alternative and that all practical measures to avoid wetlands areas had been considered. Since 2012, no change has occurred regarding how FHWA makes Wetland Finding decisions.

Additionally, USACE determined that the 2012 EA Preferred Alternative was the LEDPA. No change in regulation has occurred regarding how USACE makes a LEDPA determination. Based on these prior decisions, FHWA and USACE determined that the 2012 EA Preferred



Alternative could be authorized and constructed so long as special conditions were met, including mitigation of wetland impacts.

USACE remains the agency that regulates the discharge of dredged or fill material placed within aquatic resources that meet the definition of WOTUS. As mentioned in Section 1.2, on January 23, 2020, EPA and USACE announced a final Navigable Waters Protection Rule (NWPR) to redefine WOTUS. As a result of this rule, the definition of a WOTUS changed and ultimately reduced the scope of what was considered WOTUS. However, on August 30, 2021, the U.S. District Court for the District of Arizona ordered the NWPR to be remanded and vacated. Considering this order, the EPA and USACE have halted implementation of the NWPR nationwide and are interpreting WOTUS consistent with the pre-2015 regulations. Although the definition of WOTUS may change moving forward, FHWA regulation pertaining to wetlands (23 CFR Part 777) provides a redundant level of protection for wetland resources and requires the mitigation of all natural wetlands, regardless of whether they meet the definition of WOTUS.

The wetland boundaries within the 2012 EA were determined via desktop analysis. Since that time, formal wetland delineation has taken place in accordance with the *Corps of Engineers Wetland Delineation Manual* (USACE 1987) and the Midwest Regional Supplement to the Corps of Engineers Wetland Delineation Manual (USACE 2010). The field wetland delineation was completed in 2021 and identified 46 wetlands totaling 167.17 acres and three intermittent streams totaling 1.31 acres and 2,800 linear feet within the study area adjacent to South Veterans Parkway (HDR 2021b). An additional twelve wetlands totaling 40.71 acres and one intermittent stream totaling 0.17 acres and 990 linear feet are within the study areas adjacent to the intersecting City arterial projects and study areas associated with three potential borrow pit locations (HDR 2022f). Aquatic resources include Spring Creek and other unnamed drainages and wetlands within the Nine Mile Creek, Spring Creek, and Cactus Hills – Big Sioux River basins (see Appendix F).

One change to the 2012 EA Preferred Alternative alignment was made just west of Louise Avenue to separate the road further from a house that was built based on the 2003 preferred alternative alignment. The decision was made to adjust the alignment to the south to provide the residence between Louise Avenue and Tallgrass Avenue an additional fifty feet of separation from the revised Preferred Alternative alignment. This shift to the south was results in an additional 0.47 acres of wetland in comparison to the 2012 Preferred Alternative alignment.

## Environmental Consequences

The Wetland Finding completed as part of the 2012 EA was updated in 2022. FHWA approved the Wetland Finding on October 20, 2022, which documents that this project complies with EO 11990 “Protection of Wetlands”, meaning that FHWA determined there is no practical alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that result from constructing the Project (see Appendix G). The Wetland Finding includes a re-evaluation of the wetland impacts based on the field delineated wetland boundaries which determined that a total of 58.54 acres of wetland would be filled because of constructing the Preferred Alternative. Another 2.48 acres of wetland impacts are estimated to result from constructing the following City arterial projects associated with the



Project: Tallgrass, Louise, Western, Minnesota, and Cliff Avenues. Wetland and stream impacts associated with Southeastern Avenue, Sycamore Avenue, 69<sup>th</sup> Street, and 57<sup>th</sup> Street are expected to be like the other City arterial projects and will be determined during later design phases. Additionally, the Project would impact 0.45 acre of stream totaling 865 linear feet. Appendix G includes summary wetland and stream impact tables and figures showing the impact locations. As previously indicated, the 2012 EA Preferred Alternative is the Preferred Alternative for this supplement. The re-evaluation determined there would be an increase in impacts to aquatic resources in comparison to the estimated desktop analysis reported in the 2012 EA. Spatial differences in the location and size of impacts can be attributed to a combination of a few primary factors: (1) publicly available data (such as the National Wetland Inventory) previously used to inform the desktop determination of wetland boundaries are not precise boundaries of current conditions. They include both errors of omission and commission (errors of omission were found to be particularly evident in the National Wetland Inventory between Louise and Western Avenue), (2) Additional growth in southern Sioux Falls has contributed to additional runoff and altered drainage patterns, which presumably has resulted in an expansion of wetland areas, and (3) artificial ponds have since been constructed for the purposes of obtaining borrow material or providing stormwater detention.

A USACE Section 404 permit, with Section 401 Water Quality Certification from SDDANR, would be required for the discharge of dredged or fill material in waters of the U.S. To issue a 404 permit, the USACE must ensure that the activity complies with EPA's 404(b)(1) Guidelines, set out in 40 C.F.R. section 230. These guidelines require there to be no practicable alternatives to the proposed discharge that would have a less adverse effect on the aquatic environment; therefore, the permitted alternative must be shown to be the Least Environmentally Damaging Practical Alternative (LEDPA).

A Section 404 permit application would be submitted to USACE prior to commencement of construction activities for the Project. The application would include an Alternatives Analysis to address changes to the 2012 EA preferred alternative to verify whether the revised alignment would remain the LEDPA.

The area of aquatic resource impacts can be expected to change during final design; however, practicable measures would be implemented so that impacts are minimized and mitigated to the greatest extent feasible. Additional impacts to aquatic resources may also result from borrow sites that will be identified during the final design of each segment. Additional wetland delineation and supplemental analysis would be conducted as borrow locations are identified.

Compensatory wetland mitigation would offset the remaining unavoidable loss of wetland and would be accomplished by purchasing credits from USACE-approved wetland mitigation bank options located within the lower Big Sioux River watershed that has demonstrated successful wetland restoration. For wetlands found not to be under the USACE jurisdiction, FHWA regulations (23 CFR 777.9) would apply and mitigation for permanent impacts to these wetlands would be required in accordance with the Wetland Finding (see Appendix G).



## 4.9 Floodplains

### Existing Conditions and Changes since 2012

As stated in Section 3.16 *Floodplain* of the 2012 EA, the 2012 EA Preferred Alternative crosses the Spring Creek floodplain in the vicinity of Cliff Avenue in addition to the floodplain and floodway associated with the unnamed intermittent stream located near 69th Street. The estimated area of 100-year floodplain (Zone AE) encroachment along Spring Creek and the unnamed intermittent stream was reported to be approximately 4.75 acres, while the floodway encroachment was reported to be 0.73 acre.

Since completion of the 2012 EA, the Federal Emergency Management Agency (FEMA) revised the floodplain and floodway boundaries associated with the unnamed intermittent stream near 69th Street. The new boundaries became effective on 8/17/2017 (LOMR 16-08-0908P). The floodplain and floodway boundaries associated with the Spring Creek crossing near Cliff Avenue have remained the same. Figure 4-2 shows the effective floodplain currently mapped by FEMA.

The City recently updated their floodplain ordinance (§ 156.003) which became effective on July 30, 2021. As a result, the City has now added the use of newer FEMA technology and modeling (Base Level Engineering) which includes new areas into the effective floodplain mapped by FEMA that are not already included. This influences the Project design as it requires compensatory storage for fill that is placed within the new regulatory floodplain by excavating to provide water storage within the same general area.

### Environmental Consequences

A re-evaluation of the floodplain and floodway encroachments based on the current work limits and effective floodplain and floodway boundaries determined that a total of 5.16 acres of floodplain and 1.22 acre of floodway would be encroached by the Project. Impacts are shown below in Figure 4-2.

During final design, coordination with the local floodplain authorities would be required for construction within the floodplain and floodway associated with Spring Creek and the unnamed tributary. As the local authorities for FEMA, the City, Lincoln County, and Minnehaha County would review the proposed design of the crossings and verify that either a No Rise Certificate or Conditional Letter of Map Revision (CLOMR) would be needed for the crossings to meet regulatory requirements. The final analysis for a No Rise Certificate or CLOMR will be required during final design of the Project.

Additionally, coordination with the City will occur to verify compliance with the current City floodplain ordinance.



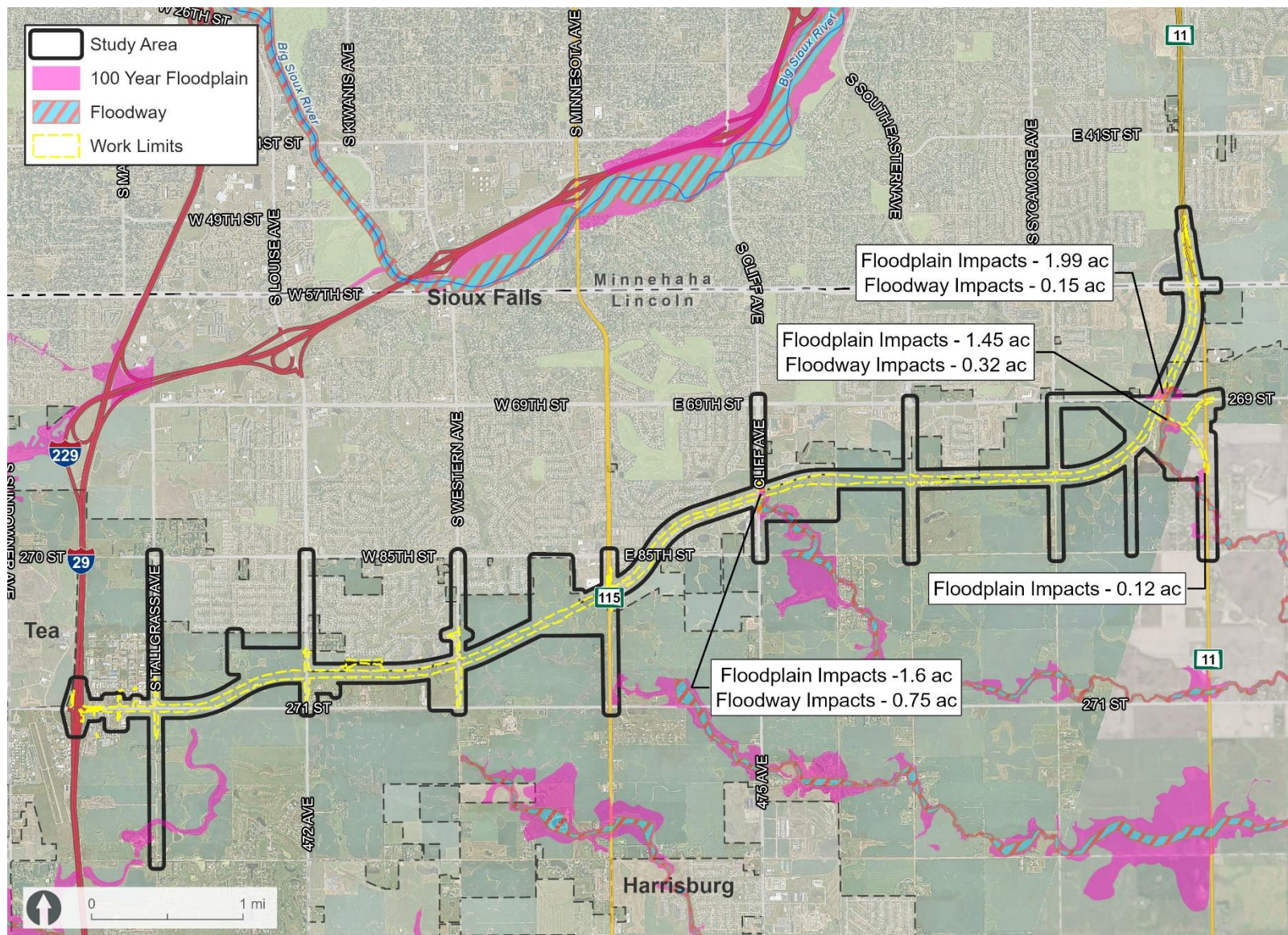


Figure 4-2. Impacts to effective floodway and floodplain.



## 4.10 Threatened and Endangered Species

### Existing Conditions and Changes since 2012

Section 3.18 *Threatened and Endangered Species* of the 2012 EA identified three federally endangered species and seven state-listed species with potential to be found in the study area, based on coordination with USFWS and SDGFP. Two of these listed species, the federally listed western prairie fringed orchid and Topeka shiner, included further discussion in the 2012 EA. USFWS recommended that surveys for the western prairie fringed orchid be conducted prior to construction resulting in a “may affect, not likely to adversely affect” determination. The 2012 EA concluded that long-term impacts to the Topeka shiner would be avoided by designing the structures crossing Spring Creek to allow adequate fish passage. The Project would have no effect on all other federally and state listed species.

An update of federally listed threatened and endangered species potentially occurring in the study area was obtained from the USFWS IPaC database (USFWS 2021). This updated list included the western prairie fringed orchid, the northern long-eared bat, Rufa red knot, monarch butterfly, and no longer included the Topeka shiner<sup>5</sup> as habitat is not present within the study area. The monarch butterfly has become a Candidate species that is being considered for official listing as either threatened or endangered. At this time USFWS encourages agencies to take advantage of opportunities they may have to conserve the species.

The Natural Heritage Database was reviewed through the SDGFP Environmental Review Tool for observations of state and federally listed threatened or endangered species recorded in the vicinity of the study area and determined previous documentation of the state listed lined snake. Coordination with SDGFP recommended that visual surveys for lined snakes occur prior to work in lined snake habitat (e.g., dry grassland areas) from April to October. The area of potential lined snake habitat was identified to in a small patch and only within the final segment of South Veterans Parkway that connects to 57<sup>th</sup> Street.

Due to declines caused by white-nose syndrome and continued spread of the disease, the northern long-eared bat was listed as threatened under the Endangered Species Act on April 2, 2015. The USFWS also developed a final 4(d) rule, which was published in the Federal Register on January 14, 2016. Under the 4(d) rule, incidental take of a northern long-eared bat is not prohibited so long as it occurs beyond ¼ mile of a hibernacula and beyond 150 feet of a known maternity roost tree<sup>6</sup>. However, the 4(d) rule is set to be rescinded from the listing of the northern long-eared bat in November 2022 when it is changed from “threatened” to “endangered”. Additional consultation on the bat was conducted outside the 4(d) verification.

Northern long-eared bats hibernate in caves or abandoned mines from October through March. In April, most individuals (especially reproductively active females) migrate to summer habitat

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<sup>5</sup> Topeka shiner was indicated to be present in the 2012 EA because it was known to generally occur within streams located in Minnehaha County. USFWS has since determined that the streams within the study area do not have the characteristics to support the Topeka shiner.

<sup>6</sup> “Take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct.” Incidental take is an unintentional, but expected, taking.





where they form maternity colonies under loose tree bark as well as tree cracks, crevices, and cavities. The species has also been found roosting in human-made structures such as abandoned buildings or bridges, but the species appears to prefer tree roosts if they are available. The western prairie fringed orchid prefers non-flooded, undisturbed ground, and is most often found in native prairie and meadows. Rufa red knots are migratory birds that use areas in South Dakota as stopover habitat during migration between breeding grounds in the arctic tundra and wintering habitat in South America and prefer sandy beaches along rivers.

## Environmental Consequences

The Project would require tree removal and result in impacts to structures that have potential habitat for northern long-eared bats. Work on structures and tree removal activities would be completed outside the NLEB active season, April 1 to October 31. No documented northern long-eared bat hibernacula are present within  $\frac{1}{4}$  mile and no known maternity roost trees within 150 feet of the study area. SDDOT requested USFWS concurrence with a May Affect, Not Likely to Adversely Affect and on October 19, 2021, USFWS concurred with SDDOT's determination. Re-coordination with USFWS occurred on August 2, 2022, to inform them of the nine intersecting City arterial projects and ask for additional comments pertaining to the newly added study areas. USFWS concurred with this finding on 8/30/22.

No suitable habitat for the western prairie fringed orchid was identified during field 2021 evaluations. Likewise, no suitable habitat for the Rufa red knot was identified within the study area. Habitat in the study area includes farmland, commercial development, and recently developed residential homes. Due to lack of habitat, the Project would have no effect on either the Rufa red knot or the western prairie fringed orchid. Although milkweed is present in the study area, the Project is not anticipated to adversely impact the monarch butterfly. USFWS concurred with these findings on August 30, 2022.

Table 4-4 includes a comparison of impacts to state and federally listed threatened and endangered species potentially within the Study Area between the 2012 EA and current supplemental EA.



**Table 4-4. Impacts to state and federally listed species potentially in the Study Area**

Species	Status	2012 EA Impacts/ Evaluation*	Current Supplemental EA Impacts/ Evaluation*
Northern Long-eared Bat ( <i>Myotis septentrionalis</i> )	Federal Threatened	Not listed as threatened in 2012	May Affect, Not Likely to Adversely Affect
Rufa Red Knot ( <i>Calidris canutus rufa</i> )	Federal Threatened	No Effect	No Effect
Western Prairie Fringed Orchid ( <i>Platanthera praeclara</i> )	Federal Threatened	May affect, not likely to adversely affect	No Effect
Monarch Butterfly ( <i>Danaus plexippus</i> )	Federal Candidate	Not listed as candidate species in 2012	Not likely to jeopardize candidate species
Topeka Shiner ( <i>Notropis topeka</i> )	Federal Endangered	May affect, Likely to adversely affect	Not listed as species within the study area per USFWS IPaC official species list
Pallid Sturgeon ( <i>Scaphirhynchus albus</i> ) <sup>7</sup>	Federal & State Endangered	No Effect	Not listed as species within the study area per USFWS IPaC official species list
Lined Snake ( <i>Tropidoclonion lineatum</i> )	State Endangered	Species assumed to occur within surrounding area, no known presence within Southern Segment of Revised Build Alternative	Potential habitat in the last segment may be impacted by Preferred Alternative; SDDOT biologist to survey area prior to construction
Peregrine Falcon ( <i>Falco peregrinus</i> )	State Endangered	The study area is within the migratory area of this species	The study area is within the migratory area of this species
Osprey ( <i>Pandion haliaetus</i> )	State Threatened	The study area is within the migratory area of this species	The study area is within the migratory area of this species

\*Comments were included for species not federally listed and that did not go through USFWS consultation.

## 4.11 Section 4(f) and Section 6(f) Resources

### Existing Conditions and Changes since 2012

Section 4(f) states, in part, that, “It is the policy of the United States Government that special effort be made to preserve the natural beauty of the countryside and public park and recreation

<sup>7</sup> At the time of the 2012 EA, Pallid Sturgeon was listed in Minnehaha County and the species list was based on those listed by County. The species was known to occur in the Big Sioux River which was located outside of the study area.



lands, wildlife and waterfowl refuges, and historic sites” (49 USC 303). Section 4(f) resources that must be evaluated for a proposed highway project include public recreation areas, parks, wildlife and waterfowl refuges, and significant historic properties. There have been no changes made to the definition of Section 4(f) resources or how these resources are to be evaluated since 2012.

Section 6(f) states that no lands that have been paid for in part or in entirety by federal land and water grants can be converted to non-park or non-recreation uses without the approval of the National Park Service. This approval will be granted only if the action follows the state recreation plan and an area of equal fair market value and usefulness is substituted for the land being removed from park and/or recreation use (16 USC 4601-4 to -11 et seq., as amended).

The 2012 EA identified Section 4(f) use of three properties, Harmodon Park and two historic abandoned railroads, and noted that there were no Section 6(f) resources within the study area. The City of Sioux Falls Parks and Recreation concurred with the Section 4(f) *de minimis* finding for Harmodon Park where 1.17 acres of the 150-acre park would be permanently impacted and a temporary easement area of 4.34 acres would be needed. The *de minimis* impact to Harmodon Park reported in the 2012 EA has already occurred during the construction of the segment between 57<sup>th</sup> Street and 26<sup>th</sup> Street. The SHPO concurred that this undertaking would have a “No Adverse Effect” on the two railroad sites. Consequently, a *de minimis* finding was also applicable to the construction on current or abandoned historic railroad grades. All Section 4(f) resources found within the South Veterans Parkway study area are listed below in Table 4-5.

Since completion of the 2012 EA, two new schools have been built to the west of Western Avenue and north of the proposed South Veterans Parkway alignment (see Figure 4-3). The schools alone are not 4(f) resources; however, they do have recreational facilities that the public may walk on and use, including a playground, basketball courts, and track and field. The ability to use these facilities would not be impacted because of the Project and thus there is no 4(f) use.

The 2009 MPO Bike Plan and 2015 Sioux Falls Bike Plan were first used to inform the Section 4(f) applicability to bicycle/pedestrian facilities within the study area. Recent construction of an urban arterial road section on SD115/Minnesota Avenue between the City of Sioux Falls and Harrisburg involved adding a shared-use path on the east side of the road. The Sioux Falls MPO Bicycle Plan completed in 2009 distinguishes the difference between “Routes” and “Trails” (Sioux Falls MPO 2009). “Routes” are described as vital bicycle transportation corridors that link various MPO communities while “Trails” are described in the context of recreation. It states that Sioux Falls has approximately 20 miles of bike “Trails” which generally follow the Big Sioux River and Skunk Creek. Sioux Falls MPO (2009) also identifies existing bike “Routes” on Western Avenue and Cliff Avenue within the study area as well as a future bike “Route” along Southeastern Avenue. The City of Sioux Falls Bike Plan published in 2015 includes identification of the {now built} SD115/Minnesota Avenue trail but does not include the bike routes along Western, Cliff, and Southeastern Avenue as in Sioux Falls MPO (2009). In order to confirm Section 4(f) applicability, the City of Sioux Falls (the City), who has jurisdiction of these bike/pedestrian facilities confirmed that primary designation for these facilities is for





transportation/commuter route for bicyclists and pedestrians. FHWA concurred in the determination of no Section 4(f) applicability to these bike/pedestrian facilities as identified via Sioux Falls MPO (2009) and coordination with the City (see Appendix H).

One new historic property, the KSOO radio transmission site was identified, as described in Section 4.4 Archeological and Historic Resources. The KSOO radio transmission site located at 26962 476th Avenue was recommended as eligible for NRHP listing for its state-level significance under Criterion A in the area of communications and thus qualifies as a Section 4(f) resource. The property retains its historic character-defining features including a radio transmission building that was built in 1952, original five-tower antenna array, and cable lines radiating out from the central building. The eligible property lies adjacent to the south side of the proposed parkway alignment. A non-historic (c. 2015) concrete pier is located within the limits of disturbance and has guy-wires extending south (out of the construction limits) to the northernmost radio tower.

The two other unevaluated cultural sites discussed in Section 4.4 will not be impacted and therefore no Section 4(f) impacts are anticipated.

SDGFP confirmed on July 9, 2021, that no lands have been purchased or improved with Land and Water Conservation Funding, commonly referred to as Section 6(f), since 2012 within or adjacent to the study area (Kittle, personal communication with Laura Lutz-Zimmerman, 2021).

## Environmental Consequences

Harmodon Park is adjacent to the segment of Veterans Parkway between 26th Street and 57th Street which has already been constructed. An existing shared-use path located on the east side of the previously constructed segment of Veterans Parkway connects to Harmodon Park via underpass through Veterans Parkway. The existing shared-use path north of 57<sup>th</sup> Street will remain in place. Neither the shared-use path or the public access road connecting 57th Street to Harmodon Park located within the study area would be impacted nor interruption to the use of either would occur during construction. Thus, there is no use of Harmodon Park and the associated bike path and Section 4(f) does not apply.

The Project would have no adverse effects on significant historic properties. Impacts from the Project on Section 4(f) resources (the railroad crossings and KSOO radio properties) would be *de minimis*. SHPO is the Official with Jurisdiction on historic properties and concurred with a “no adverse effect,” therefore, meets the requirements of a *de minimis* finding upon approval by FHWA. A *de minimis* impact finding request to FHWA has been prepared for FHWA concurrence after the public notice and comment period has concluded for this Supplemental EA (see Appendix H).



**Table 4-5. Section 4(f) resources in the Study Area**

4(f) Resource	Impact
Harmodon Park / Bike Path	No use
KSOO	de minimis
Chicago, Rock Island, and Pacific Railroad	de minimis
Chicago, Milwaukee, St. Paul and Pacific Railroad	de minimis

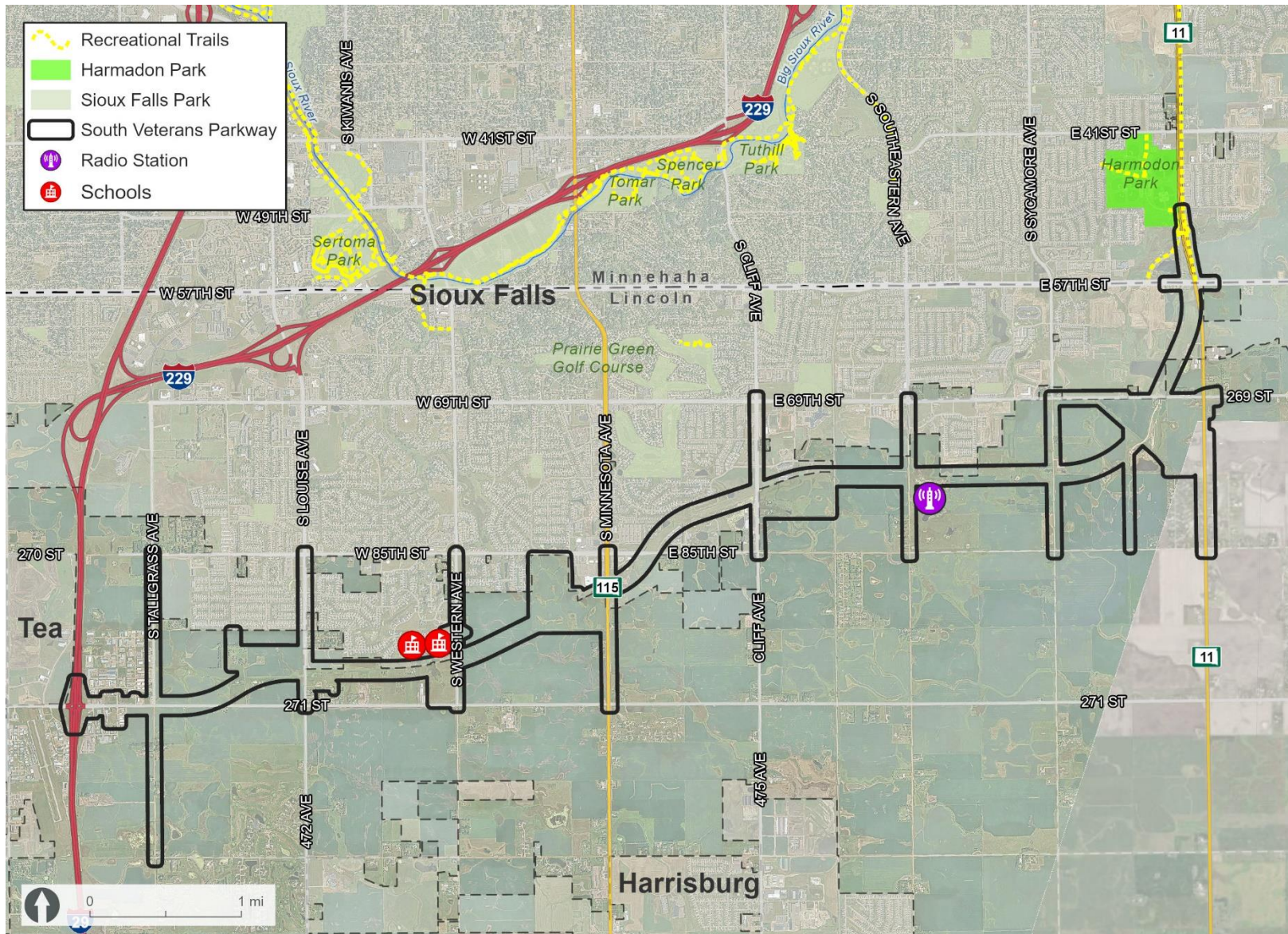


Figure 4-3. Section 4(f) properties within the Study Area





## 4.12 Regulated Materials

### Existing Conditions and Changes since 2012

Section 3.21 *Regulated Materials* of the 2012 EA noted 12 sites with recognized environmental conditions within 0.25 mile of the 2012 EA’s Preferred Alternative centerline. Two sites were identified from a search by Environmental Data Resources, Inc. (EDR) and ten sites were identified during a field survey. Four of the 12 identified sites were located within the proposed ROW, and only two of these would potentially be affected by construction of the Project.

The area surrounding the Project has become more developed since the 2012 EA was completed, changing the potential for regulated materials. Based on the previous EDR search results, multiple sites that had been previously listed have now been removed either because of the time that has passed or because contamination has been removed.

A new EDR search, and field survey were conducted in 2021 to verify potential recognized environmental conditions within 0.25 mile of the Preferred Alternative centerline, also known as the regulated materials study area. Results are presented in a Regulated Materials/Contaminated Properties Survey Report (HDR 2021c) (see Appendix I).

This report identified 13 potentially contaminated properties within the regulated materials study area. Six of the twelve sites that were identified in the 2012 EA are no longer identified in the 2021 Regulated Materials/Contaminated Properties Survey Report. Six sites identified in the 2012 EA remain, and seven new sites were identified. Table 4-6 summarizes the 13 properties potential recognized environmental conditions that were identified by the latest database search and field survey.

**Table 4-6. Regulated materials and/or potentially contaminated properties in the regulated materials Study Area**

Facility Name	Reason for Listing	Location	Field Survey Confirmed Location
Larry’s Truck Stop/Roadway Travel Center (i.e., Sinclair Gas Station)*	Former leaking underground storage tank (LUST) site with active underground storage tanks (UST)	I-29/County Road 106, Exit 73	Yes, active gas station with multiple businesses.
Everett Property	Former LUST location. UST removed. Some minor dumping.	26949 Sycamore Avenue	Yes, buildings no longer present.
Homan Farm	Former LUST location. UST removed.	26972 Minnesota Avenue	Yes, buildings no longer present.



Facility Name	Reason for Listing	Location	Field Survey Confirmed Location
Hayes Property	Former LUST location. UST removed.	26908 South Highway	Yes, buildings no longer present.
Dakota Hardscapes*	Mine and National Pollutant Discharge System listing. Possible unregistered petroleum and hazardous waste use based on business type.	27024 South Minnesota Avenue	Yes
Mid-State Transport	Potential use or storage of hazardous materials or petroleum products	47086 271st Street	Yes
Big Country Motors (identified as Koehler Auto Sales in 2012 EA)*	Potential use or storage of hazardous materials or petroleum products. Former South Dakota Air Emission listing.	27097 Tallgrass Avenue	Yes
Pole Barn*	Discarded aboveground storage tank (AST), empty totes, and other material storage onsite.	Approximately 0.33 mile west of Western Avenue and 0.25 mile north of 271st Street (CH106)	Yes
Unnamed Business	Storage of 55-gallon drums outside without secondary containment.	47064 West 98th Street	Yes
Excessive Autosports Property	55-gallon drums without secondary containment. Former Resource Conservation and Recovery Act - Very Small Quantity hazardous waste generator and other database listings.	47077 98th Street	Yes
A & M Self Storage	Approximately 1,000-gallon AST with pump dispenser	47079 98th Street	Yes
Frankman Motor Company*	Waste drums outside of service garage. Automotive repairs being conducted onsite.	26874 SD Highway 11	Yes
Residence*	Two ASTs onsite.	Southwest quadrant of 57th Street and SD Highway 11 intersection	Yes

\*Site identified in 2012 EA





## Environmental Consequences

The number of potentially contaminated sites located within the regulated materials study area has increased since the 2012 EA. Along with increased development in the area, this increases the chances of encountering contaminated soils during construction. Acquisition of additional ROW and road construction activity encroaching on what is now the Sinclair gas station property (identified in Table 4-6 as Larry's Truck Stop/Roadway Travel Center) is believed to have high potential for petroleum impacted soils from overfill runoff from the concrete padded gas pump area and/or the documented leaky underground storage tank. Twelve other potentially contaminated properties were identified either within the Project corridor or on adjacent properties; however, based on the Phase I survey did have obvious or noticeable contamination. To avoid and/or minimize impacts from recognized environmental conditions, the contractor would be directed to be alert for areas of soil staining, unusual odors, buried drums or tanks, or other indications of potential contamination and coordinate with SDDOT and the SDDANR prior to continuing work in those areas. A Phase II environmental site analysis may be completed to identify contamination on ROW acquisition areas within the Sinclair gas station property prior to property acquisition (for liability purposes) and/or to inform the construction phase of expected conditions and coordinate BMPs and disposal / reclamation solutions with SDDANR prior to construction.

### 4.13 Climate Change and Resiliency

#### Existing Conditions and Changes since 2012

Annual average temperatures across the Northern Great Plains region continue to rise as they have been since 2012. Atmospheric carbon dioxide (CO<sub>2</sub>) concentration trajectories are expressed as representative concentration pathways (RCPs), with RCP 8.5 (which equates to >1000 ppm CO<sub>2</sub>eq) being the worst-case scenario (i.e., business as usual) and is estimated to result in a 5-degree Celsius increase from the mid-21<sup>st</sup> century to the late-21<sup>st</sup> century (U.S. Climate Resilience Toolkit 2021). The region normally experiences highly variable and extreme events; however, such events are projected to become more severe and frequent if RCP 4.5, or lower, thresholds are not maintained.

Climate change and resiliency were not considered within either the 2003 EA or 2012 EA. Many projects and programs proposed, funded, or approved by Federal agencies have the potential to emit or sequester greenhouse gases (GHGs), and may be affected by or affect climate change. An article published in World Economic Forum estimates that the construction sector contributes 40% of the world's carbon emissions (WEF 2021). The development and transport of materials, construction equipment, and traffic delay are all activities that contribute to emissions.

Federal courts consistently have held that NEPA requires agencies to disclose and consider climate impacts in their reviews. The following are past and current changes the CEQ has made to NEPA guidance since 2012:

- 2016 – Issued “Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in



National Environmental Policy Act Reviews” (2016 GHG Guidance) to help agencies with this requirement.

- 2017 – Withdrew the GHG guidance in response to E.O. 13873, “Promoting Energy Independence and Economic Growth.”
- 2019 – Proposed “Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions” (2019 Draft GHG Guidance) for public comment but was never finalized.
- 2021 – Rescinded the 2019 Draft GHG Guidance and updated the 2016 GHG Guidance (Section 7(e)) in accordance with newly issued E.O. 13990 “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis). The withdrawal of the 2019 guidance does not change any law, regulation, or other legally binding requirement.
- Current – The 2016 GHG Guidance is under review and revision. In the interim, CEQ recommends agencies consider all available tools and resources in assessing GHG emissions and climate change effects of proposed actions, including the 2016 GHG Guidance.

East and westbound traffic volumes have continued to increase in southeast Sioux Falls as the City expands southeast. As discussed in Section 3.3, traffic congestion is projected to increase throughout the Sioux Falls road network if nothing is done. Traffic congestion increases the need to brake and accelerate which can result in a 10-40% reduction in fuel efficiency. Furthermore, idling can decrease fuel efficiency by a quarter of a gallon per hour (USDE n.d.).

## Environmental Consequences

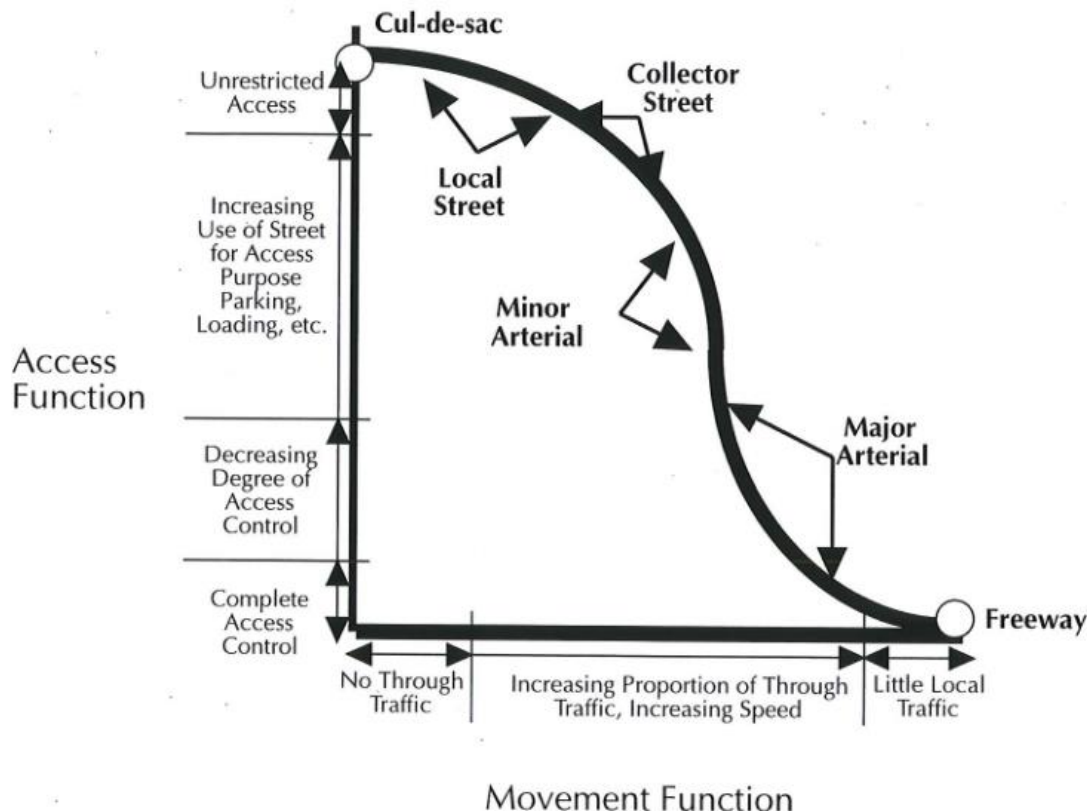
NEPA requires the disclosure of a project’s impacts on climate. The FHWA has not yet established policy or guidance for analyzing GHG emissions or resilience to climate change. According to the 2016 GHG Guidance, it is recommended that when addressing climate change agencies should consider:

- (1) The potential effects of a proposed action on climate change as indicated by assessing GHG emissions (e.g., to include, where applicable, carbon sequestration); and
- (2) The effects of climate change on a proposed action and its environmental impacts.

Climate change because of GHG emissions from the Preferred Alternative cannot be isolated or quantified. For this Project, net GHG contributions emitted from the production of materials, construction operations, and traffic were considered. The Preferred Alternative would contribute GHG emissions during the production of materials required for constructing the new road and by heavy equipment operation during construction. Once built, the Preferred Alternative would reduce the projected traffic congestion and delay within the Sioux Falls transportation network and would thereby reduce GHG emissions contributed by Sioux Falls traffic. Without South Veterans Parkway, traffic delay is estimated to be 4,000 hours per day more throughout the Sioux Falls transportation network by 2050 which would result in increased emissions (refer to Section 3.3). Reduction in delays will be most notable for east-west traffic movements on the South and East portions of the City.



Limited access arterials are known to be an efficient means of conveying through traffic in comparison to other types of roadways with increased accessibility (Figure 4-4). South Veterans Parkway is a limited access arterial and has been demonstrated that it would reduce congestion and traffic delay that would otherwise occur (HDR 2022c).



**Figure 4-4. Relationship between access and traffic movement among roadway classes<sup>8</sup>**

A benefit-cost analysis performed for the Western Avenue to Cliff Avenue portion of the Project found an overall decrease in traffic-generated pollutants (NO<sub>x</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and CO<sub>2</sub>) resulting from a reduction in traffic delay (HDR 2021d). This analysis reported that the Project has two opposite impacts on emissions: 1) reduction in delays for drivers would lower emissions from vehicles due to less time spent idling and 2) vehicle miles traveled would increase which produces more emissions. The emissions reductions from delay reduction were greater than emissions increase from higher vehicle miles traveled. This segment of South Veterans Parkway alone was projected to eliminate 10.5 million person-hours of traffic delay and reduce CO<sub>2</sub> by 14,000 tons over a 30-year period. The results of this analysis can be extrapolated for the entire Project; hence, a greater reduction in vehicle CO<sub>2</sub> emissions can be expected because of the Project. Thus, when considered holistically, the Project, is anticipated to result in less CO<sub>2</sub> emissions from traffic when compared to the No Build Alternative.

The effects of climate change can include higher temperatures, more frequent and severe extreme events, and more intense precipitation. South Veterans Parkway is expected to last for

<sup>8</sup> taken from FHWA Research Directive 91-044 – November 1992



50 years or longer without major repairs, so it is important to understand how climate may affect the highway in the next several decades.

Higher temperatures can cause pavement to expand or soften which can increase potholes, place stress on joints, or cause buckling in the roadway. Heavy rains may result in flooding which could disrupt traffic, delay construction, or damage the roadway. Exposure to other storm events can also increase damage to the highway.

Structures would be sized to accommodate 100-year precipitation events with appropriate bank stabilization in areas that may be prone to scour. Stormwater ponds planned by the City would be designed where needed to detain flows so that pre-project flow rates are maintained which would help lessen the effects of flooding. Properly placed expansion joints can help prevent buckling in extreme heat and reinforcing the concrete can help prevent cracking of the concrete. Using these established design criteria can help South Veterans Parkway withstand the effects of climate change.

Based on the improved traffic flow and reduced delays as well as information inferred from the benefit-cost analysis performed for one segment of the Project, the Project is expected to contribute to GHG emissions during construction; however, GHG emissions from vehicle traffic would be reduced once in operation. Construction may cause short-term, localized elevations of air pollution emissions because of construction equipment and required energy to build. The new project infrastructure will allow for free-flowing traffic that will provide vehicle fuel efficiencies for years to come. Reductions in travel time and accidents paired with improved access to businesses will result in an enhanced quality of life.

## 4.14 Cumulative Impacts

### Existing Conditions and Changes since 2012

Cumulative impacts are beneficial and/or adverse effects that would result when impacts from the Project are considered with impacts from other local or regional projects. CEQ's Regulations for Implementing the Procedural Provisions of NEPA define cumulative impacts as the following:

*The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR 1508.7).*

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. They may arise from single or multiple actions and result in additive or interactive effects. Before cumulative impacts can be evaluated, a proposed action must have advanced far enough in the planning process that its implementation is reasonably foreseeable. Reasonably foreseeable actions are not speculative, are likely to occur based on reliable sources, and are typically characterized in planning documents.

Since the 2012 EA, past actions and future actions that are reasonably foreseeable have changed as more projects have been planned for the City and region.



Past actions that have affected resources within the study area are as follows:

- Agricultural activity, especially the conversion of native prairie to cropland.
- Commercial and industrial development has occurred at the I-29/ County Road 106 Interchange.
- Small businesses along the corridor such as vehicle sales and landscaping.
- Residential development throughout the corridor.
- Other development, such as roads, utilities, and limited residential areas.

The South Veterans Parkway Project described in this Supplemental EA is one element of the identified transportation needs in the south and east growth areas. Figure 1-4 identifies several major transportation capital improvement projects the City has constructed in these growth areas over the last 15 years which include urbanizing:

- Louise Avenue from 85th Street to 95th Street
- Western Avenue from 85th Street to 95th Street
- Minnesota Avenue from 85th Street to Harrisburg
- Cliff Avenue from 69th Street to 85th Street
- 57th Street from Sycamore Avenue to SD11
- 69th Street from Southeastern Avenue to Sycamore Avenue

Present actions within and near the Project corridor include continued residential development and associated infrastructure. Several areas along the Project corridor are in the process of being annexed or constructing residential developments. As result of continued development, impervious surfaces are being constructed. However, retention ponds and other stormwater systems are being developed to minimize runoff and facilitate groundwater recharge. Noise would be generated as a temporary impact during construction of these projects. Continued development would also impact air and water qualities, visual aesthetics, land use, farmlands, floodplains, wetlands, and waters of the U.S. Impacts to most of these resources would be limited by the size of the developments and regulatory requirements, such as limits on stormwater runoff under NPDES permits. Impacts to wetlands and waters of the U.S. would be further limited by permit and mitigation requirements. Most of the impacts would be short-term, primarily during construction. However, the conversion of agricultural land and other lands for development as part of other present actions independent of the SD100 Project would also cause long-term impacts to air and water qualities, floodplains, land uses, and visual aesthetics. Air quality would be affected from the conversion of cropland to industrial areas; emissions would be released from boilers, heaters, and other types of machinery. Increase in traffic volumes would also have increase emissions in the study area. The conversion of cropland to urban development will also cause additional stormwater and less recharge to groundwater aquifers.

The City has prioritized future growth areas (or “Future Development Tiers”) based on the City’s comprehensive plan (Figure 4-5). Tiers are developed primarily based on the timeframe in which an area might be provided sanitary sewer services. Other contributing factors include water supply, road expansion, and storm drainage capacity. The City provides utilities to accommodate growth and typically does so in association with City arterial improvements. Key





projects near the study area that are anticipated to contribute to additional growth and cumulative impacts include:

- Sewage lift station is planned along CR106, west of Louise and a sanitary sewer forcemain extending from the lift station would serve future development to the north.
- Sewer installation is planned along Cliff Avenue to service area south of South Veterans Parkway and east of Cliff for future development.
- Extending an urban section of 57<sup>th</sup> Street to the east of SD11 to Six Mile Road.

The City provides regional stormwater detention facilities designed to moderate up to 100-year precipitation events so that 100-year flow rates do not exceed pre-development levels. Often, regional stormwater facilities are planned for and constructed well in advance of a drainage basin being fully developed. Several needed regional stormwater ponds were identified in the south and east portions of Sioux Falls within the City's 2003 Stormwater BMP Master Plan (Figure 1-4) (Sioux Falls 2003). Some of the regional stormwater ponds near the study area have been constructed while others are in various stages of planning and may be constructed throughout the construction timeframe of South Veterans Parkway. Since the release of the 2003 Stormwater BMP Master Plan, the City has continually evaluated regional stormwater detention needs in more focused basin studies as development plans mature and are realized.

The Lincoln County Transportation Master Plan (TMP) (Lincoln County 2019) identified intersections that would be expanded or improved based on safety and traffic analyses. In addition, traffic data was used to analyze various roadway improvements to determine what improvements would be needed to achieve a minimum level of service (LOS). County road improvement projects identified within the Lincoln County TMP that are in the Sioux Falls growth area but beyond current City limits are identified as roads that would be transferred into the City's jurisdiction and thus would be built to City design standards or better.





## ***Visual Impacts and Aesthetics***

Collectively with other projects, visual changes would continue to occur to the overall landscape. As the area's infrastructure continues to expand, the overall visual landscape would change from rural to more urban in nature. These changes would occur regardless of the South Veterans Parkway. The project would allow for meeting transportation needs without the expansion of several other arterial roadways. Overall, the Project is not expected to have a significant impact to the natural, cultural, or Project environments. Cumulatively, this project is not expected to contribute towards significant visual impacts within the area that are contrary to urban expansion.

## ***Economic Resources***

The South Veterans Parkway area would contribute to economic cumulative impacts. The project will serve the growing residential and commercial developments in the area. This increase in development will also increase the demand for public services such as utilities, schools, or parks.

The acquisition of land for ROW would result in loss of property tax revenue, though with the increase in development and the addition of a limited access highway to ease traveling between different parts of the city, property values would likely increase, and the tax base would recover or increase.

Based on this, the Project is not anticipated to have a negative cumulative impact on economic resources in the area.

## ***Archaeological and Historic Resources***

Several cultural sites have been identified within or near the study area, though these have been avoided and a "no adverse effect" determination was made for the Project. The Project would not directly or indirectly impact a site consisting of a farmstead at the intersection of Sycamore Avenue and 69th Street; however, the Project would contribute to cumulative impacts that would likely impact the site at a later time when intersection of 69th and Sycamore is improved. This intersection project is currently not planned. Further site evaluation would be conducted as part of that future improvement project if improvements to the intersection are planned, and impacts would be mitigated. Several other archaeological and historic resources likely exist outside the Study Area that have not been identified and may be impacted by future development and infrastructure improvements. Therefore, the Project will have minor, negative cumulative impacts.

## ***Section 4(f)***

Section 4(f) protects publicly owned parks, recreation areas, wildlife and waterfowl refuges as well as publicly or privately owned eligible historic sites and pertains only to agencies within U.S. Department of Transportation (U.S. DOT). No parks, recreation facilities, or refuges would be impacted by the Project. Eligible historic sites do exist within or near the study area. If future U.S. DOT projects occur in the area, the lead federal agency will be required to determine if a feasible and prudent avoidance alternative is available and that all possible planning to minimize harm has occurred. Due to the Project having only a de minimis use of a historic site, and the



detailed review required for future projects for Section 4(f) impacts, the Project is not anticipated to contribute to cumulative effects to properties protected under Section 4(f).

### **Noise**

Several receptors within the study area would experience a substantial noise increase as part of the Project. As development continues south within the Sioux Falls Area, traffic would continue to increase as well as impacts from construction of roadways. Increased traffic from secondary development has the potential to increase localized noise levels. City zoning and implementation of the SD100 Access and Noise Plan (SDDOT and Sioux Falls, 2007) would minimize and avoid building noise sensitive receptors such as residential houses too close to busy roadways through the area can minimize future highway traffic noise impacts. Therefore, the cumulative effect on noise in the area is expected to be minor.

### **Relocations**

As part of the planned development and transportation projects, two residences and two businesses would be acquired. The Project results in two residences that will be relocated. Other planned projects in the area may also potentially acquire residences; however, the required relocations are unknown. Overall, this is expected to have a minor, adverse cumulative effect in the study area.

### **Regulated Materials**

Cumulative impacts to regulated materials would result from projects that combine to increase environmental or human exposure to hazardous materials. A limited Phase I ESA was performed as part of the Project. Acquisition of additional ROW and road construction activity encroaching on what is now the Sinclair gas station property is believed to have high potential for petroleum impacted soils from overfill runoff from the concrete padded gas pump area and/or the documented leaky underground storage tank. Twelve other potentially contaminated properties were identified either within the Project corridor or on adjacent properties; however, based on the Phase I survey did have obvious or noticeable contamination.

Other known future projects in the area are not anticipated to increase the chance of release or exposure of hazardous materials. Further, the proposed project and future projects would be required with local, state, and/or federal stipulations regarding the use, handling, transport, storage, and disposal of hazardous materials. The proposed project would implement Best Management Practices and a SWPPP which would minimize hazardous materials release into the environment. Based on this, the Project is not anticipated to contribute to cumulative effects of regulated materials on the environment.

### **Wetlands and Streams**

Future development and associated construction of infrastructure will likely impact wetlands and streams. Water quality degradation from multiple point-source discharges and land uses that result in nonpoint source pollution within the watershed will occur as development progresses. Habitat loss and diminished natural flood control capacity will result from dredging and filling individual tracts of wetlands. Wetland and stream loss would be mitigated as per requirements





established by the USACE during the issuance of a Section 404 Permit. Therefore, the cumulative effect on wetlands and streams in the study area is anticipated to be an overall minor, adverse effect due to actions within the study area.

### ***Floodplains***

For the Project and other present and reasonably foreseeable projects, a Floodplain Development Permit would be required. The permit is coordinated by the City, and Minnehaha County, and Lincoln County Floodplain Administrators and would be required for projects that impact the floodplain. Because of these permit requirements, a minor, adverse effect on floodplain in the Project Area would be anticipated.

### ***Threatened and Endangered Species***

Three federally listed species, one candidate species, and three state listed species have the potential to occur in the study area. For those species, including the northern long-eared bat and lined snake, minimization techniques would occur to lessen impacts caused by the Project. Other development and related infrastructure would continue to expand, potentially causing impacts to these species as well as habitat fragmentation from the cumulative effects of multiple land clearing activities associated with urban development. The proposed Project has the potential to contribute to minor cumulative impacts on threatened, endangered, or candidate species and state listed species.

### ***Climate Change***

Climate change is a global phenomenon. A cumulative impact would occur if a project would result in an increase in GHG emissions. The project is not anticipated to contribute an increase in greenhouse gas emissions when taking into consideration the net GHG contributions emitted from the production of materials and construction operations and GHG reductions from more efficient traffic operations. Therefore, the Project is not anticipated to contribute to the cumulative effects that GHG has on the climate.

## **5.0 Agency Coordination and Public Involvement**

Scoping is part of the NEPA process used to identify concerns of the general public, stakeholder groups, and agencies. The scoping process was completed for the 2003 and 2012 EAs, this included coordination with the public, agencies, and area tribes through FHWA and the SDDOT. As part of the 2021 South Veterans Parkway environmental review, FHWA and SDDOT have coordinated with the public, agencies, and tribes.

### **5.1 Agency and Tribal Coordination**

FHWA sent an invitation to participate in the undertaking and to request input on the Project from Natural Resources Conservation Service (NRCS), Federal Aviation Administration (FAA), Western Area Power Administration (WAPA), on May 11, 2021, and USACE on December 16, 2020. Responses were received from FAA on May 12, 2021, WAPA on May 19, 2021, and





USACE on January 26, 2021. USACE was the only federal agency that accepted FHWA's invitation to participate. Meetings were also held with WAPA regarding impacts to their transmission line. This coordination provided insight on WAPA's future environmental needs once design progresses and exact relocations required are known. Ongoing coordination with WAPA will occur as more is understood regarding the potential environmental impacts that may occur should utility relocation and/or modification be required. No response from NRCS was received. No response from NRCS was received.

SDDOT requested agency comments on the Project from SDDANR and SDGFP on May 10, 2021. SDGFP responded on May 25, 2021, and July 9, 2021, and SDDANR responded on May 28, 2021. Additional coordination was requested in July and August 2022 regarding updates to the study area.

SDDOT mailed tribal coordination letters to the following nine tribes on May 10, 2021, and August 2, 2022:

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

The letters notified tribes of the proposed Project and its purpose and included a request for comments or concerns regarding the Project. No responses have been received from the Tribes.

A summary of the coordination by both FHWA and SDDOT with the tribes and agencies is provided in Appendix J.

## 5.2 Public Involvement

Public involvement was completed for both the 2003 EA and the 2012 EA primarily through public meetings/open houses and providing project information online. For the 2003 EA, activities of the project's process, meeting minutes of the process and mitigation teams, as well as project related reports were posted on the City of Sioux Falls' website. Outreach events included official meetings with the Lincoln and Minnehaha County Commissioners, City of Sioux Falls, the Business Transportation Committee of Sioux Falls, bi-monthly Metropolitan Transportation Planning meetings, and meetings with individual property owners. Open houses were held periodically for both the 2003 EA and 2012 EA to receive public input for the design team to take into consideration.

For the 2022 Supplemental EA, invitations to the virtual public meeting were sent via mail to residents, business owners, and other property owners in proximity to the study area.



Notifications included a project mailing, paid advertisements, social media messaging, a news release, and email notifications. A total of 68 postcards were mailed to residents, businesses, and property owners on April 28, 2021, and included a project and virtual public meeting overview. Paid advertisements were included in local newspapers announcing the Project and online engagement opportunities. Press releases were distributed via the Argus Leader, Sioux Valley News (Canton), Tea Weekly, Sioux Falls Shopping News, all local TV news outlets, and various City communication channels. SDDOT and the City promoted the public meeting on Facebook and Twitter social media platforms that reached over 7,000 people (see Appendix K).

FHWA, SDDOT, and the City held a virtual public information meeting and formal comment period between April 29 and May 29, 2021, on the City's public website for the Project (City of Sioux Falls 2021). The meeting featured three video messages describing the purpose of and need for the Project, introducing the Project team and sharing work performed, the EA status, and project website usage. Meeting materials consisting of a project overview fact sheet, online interactive map, video and website analytics, and contact email form for comments were also made available on the Project website.

Thirty-eight people submitted questions and concerns regarding the Project during the online public meeting. Comments were received via phone calls (2), website (20), email (8), letters (3) and the online interactive comment map (5). A total of 1,784 users accessed the website, with 376 overview video plays, 78 environmental video plays, and 267 website tutorial plays.

Appendix K includes summaries of the public comments received, and FHWA and SDDOT's responses. Key issues brought up involved noise, visual, and growth concerns. For noise, concerns included noise pollution that would be generated by traffic and minimal room available for noise barriers. Residents expressed concerns about visual impacts, such as how well the bridge over 85th Street would be seen from their yards. Another concern was growth and how some areas would require high flow corridors, as well as the need for a pathway crossing the parkway to expand neighborhood bike and walking trails. Other concerns shared were that increased development would result in pedestrian safety issues as well as increasing the discharge of water to downstream properties, particularly at outlet locations. The Project would incorporate pedestrian crossings and underpass locations to provide easy and safe access from neighborhoods to the shared-use path along South Veterans Parkway. The City would implement its stormwater management plan that includes safely conveying urban runoff to the Big Sioux River through storm sewers, open channel drainageways, including detention and retention basins that follow EPA regulations. The Sioux Falls Engineering Design Standards Chapter 11 *Drainage Improvements* requirements would be incorporated into the design which require for 5-year and 100-year rainfall events to be detained so that peak flows do not increase because of the Project.

Some commenters requested to shift the alignment to the south of 85<sup>th</sup> Street between Minnesota Avenue and Cliff Avenue. The 2003 EA and 2012 EA established the current corridor. Since 2012, the City has collaborated with local developers to preserve the roadway corridor as development occurs adjacent to the corridor. Due to the length of time that has gone by since the corridor has been preserved, planned development of private and public infrastructure constrains the potential to adjust the alignment in many locations.



In addition to the virtual public meeting, during the week of June 21, 2021, SDDOT and the City held 27 landowner meetings in-person and via Webex with those landowners that would be affected by the design and construction of the Preferred Alternative mainline and intersections between Western and Cliff Avenues. The main focus of these discussions was on the residential areas adjacent to the proposed Project between 85th Street and Cliff Avenue. The primary concerns expressed by these residents pertained to increases in traffic noise and the visual changes the roadway would bring (including traffic and lights), particularly the bridge over 85th Street where the roadway would be elevated and change the view from their yards. Many landowners asked for natural visual buffers like trees, berms, or a combination of both trees and berms; they indicated they did not like walls. A few residents that lived nearest to the road had concerns with safety due to the possibility of vehicles exiting the roadway and into their property. These comments were taken into consideration during the environmental review. A visual impact analysis was completed which informed visual mitigation and a noise analysis was completed based on current traffic projections for year 2050. Visual mitigation measures and additional safety elements have been incorporated into the design between 85<sup>th</sup> Street and Cliff Avenue that were not planned in 2012. The visual mitigation elements include increasing separation between the road and residences by narrowing the 32-foot-wide elevated median, installing a concrete barrier median that is tall enough to interfere traffic headlights, and incorporating a vegetative buffer between the road surface and residences. Cable guard rail would be installed between 85<sup>th</sup> Street and Cliff Avenue on the north side of South Veterans Parkway to address safety concerns. Ultimately, noise abatement measures were determined to be feasible but not reasonable. Visual and noise analysis are included in Sections 4.2 and 4.6, respectively.

Throughout July 2022 and August 2022, two meetings with road districts were held in addition to 21 individual landowner meetings with those landowners that would be affected by the design and construction of the Preferred Alternative mainline and intersections between I-29 and Western Avenue. The primary concerns discussed during these meetings were alterations in access to businesses from South Veterans Parkway because Albers Avenue would be the only access maintained off of South Veterans Parkway between I-29 and Tallgrass Avenue. Businesses and road districts were coordinated with to determine the best course of action to maintain adequate access for customers and normal business operations where possible. An existing access to one residence between Tallgrass Avenue and Louise from CR 106 would be removed and would be replaced with an alternative access to the north. The property owner noted that their residence was constructed based on the location of the 2003 EA Preferred Alternative which was located to the south of the Preferred Alternative alignment and desired for the alignment to be shifted back to where it was planned in 2003. A slight shift in the 2012 Preferred Alternative alignment to further south of the residence (50 feet) was determined possible that would still meet engineer design standards for a 60-mph design speed but remains under review.

Additional meetings with landowners will occur as design progresses through subsequent phases of the Project. Project updates via email will continue to be sent to those that have subscribed via the Project website.



## 6.0 Future Actions / Recommendations

Mitigation measures and future actions have been addressed by resource in *Chapter 4.0* and are summarized here as a post-environmental document tool to track the requirements that would be included in pre-construction, construction, and post construction for easy review and incorporation into final design activities, construction plans, and post-construction activities; as applicable. If a specific SDDOT standard environmental commitment is required, then the specific reference to the commitment is included. Table 6-1 includes a matrix of the SDDOT standard commitments that would apply during construction by phase. Please see Appendix L for the SDDOT Section A of the construction plan sheets that would be included for the Preferred Alternative.

**Table 6-1. Section A standard commitments required for each project phase.**

Standard Commitment	Project Phase			
	Phase 1: 01V6 (Western Ave to Cliff Ave)	Phase 2: 01V9 (I-29 to Western Ave)	Phase 3: 01V7 (Cliff Ave to Sycamore Ave)	Phase 4: 01VA (Sycamore Ave to 57th St)
Commitment A: Wetlands	X	X	X	X
<b>Commitment B: Federally Threatened, Endangered, and Protected Species</b>				
Commitment B5: Northern Long-Eared Bat	X	X	X	X
Commitment B6: Migratory Birds Work Restriction	X	X	X	X
Commitment C: Water Source	X	X	X	X
<b>Commitment D: Water Quality Standards</b>				
Commitment D1: Surface Water Quality	X	X	X	X
Commitment D2: Surface Water Discharge	X	X	X	X
Commitment E: Stormwater	X	X	X	X
Commitment G: Dewatering and Sediment Collection	X	X	X	X
Commitment H: Waste Disposal Site	X	X	X	X



Standard Commitment	Project Phase			
	Phase 1: 01V6 (Western Ave to Cliff Ave)	Phase 2: 01V9 (I-29 to Western Ave)	Phase 3: 01V7 (Cliff Ave to Sycamore Ave)	Phase 4: 01VA (Sycamore Ave to 57th St)
Commitment I: Historical Preservation Office Clearances	X	X	X	X
Commitment J: Construction Practices for Temporary Works in Waterways of the U.S.		X		X
Commitment L: Contaminated Material		X		
<b>Commitment M: Section 4(f)/6(f) Resources</b>				
Commitment M1: Section 4(f) Resources			X	
Commitment N: Section 404 Permit	X	X	X	X
Section O: Section 401 Water Quality Certification	X	X	X	X
Commitment Q: Archaeological Coordination			X	X
<b>Commitment T: Other</b>				
Commitment T1: Lined Snake				X
Commitment T2: City of Sioux Falls Sound Permit	X	X	X	X
Commitment T3: Emerald Ash Borer Management	X	X	X	X

The following are commitments have been made for pre-construction:

- Design for a narrow median (10-foot-wide) and that includes a 56-inch-high concrete barrier & glare screen between directions of traffic in the area between 85th Street and





Cliff Avenue. SDDOT should verify that this is included in plan set during inspection of final plans.

- The City and SDDOT would commit to work together in incorporating trees into the final design that aligns with the mitigation strategy described in the visual impact analysis to the north of South Veterans Parkway between 85<sup>th</sup> Street and Cliff.
- The 66 dBA and 71 dBA noise contours will be provided to local officials for their planning purposes. The City will use the noise contours to inform approvals of future development plans adjacent to South Veterans Parkway.
- Utility coordination with WAPA would occur to understand WAPA utility relocations / structure modifications that may be necessary to complete construction of PCN 01VA (Sycamore to 57<sup>th</sup> Street). If it is determined that the Project requires a WAPA undertaking, an adaptive management plan will be developed which will outline FHWA and WAPA (participating agency) responsibilities for NEPA, Section 7 Endangered Species Act (ESA) consultation, and Section 106 National Historic Preservation Act (NHPA) consultation. These additional environmental and cultural clearances for WAPA undertakings required by the Project would be completed as part of a re-evaluation once the scope of the WAPA undertakings is known. An Environmental Assessment re-evaluation for WAPA undertakings would be completed (if needed) prior to construction of the Project between Southeastern Avenue and 57<sup>th</sup> Street.
- All ROW and relocations would be in conformance with the Uniform Relocation Assistance and Real Property Acquisition Act (UA) of 1970, as amended by the Surface Transportation Assistance Act of 1987 and as codified in 49 CFR 24, effective April 1989 (See Section 3.8 and 3.12 of 2012 EA).
- A Floodplain Development Permit from the local authorities would be required for construction of the proposed crossings for the Preferred Alternative across Spring Creek. The City of Sioux Falls and Lincoln County as the local authorities for FEMA, would review the proposed design of the crossings and verify that the rise in elevation of the floodplain would meet the regulatory requirements. Coordination would also occur with FHWA to submit the final FEMA documentation, no-rise certificate or CLOMR, of the crossings for the Preferred Alternative.
- SDDOT would receive confirmation from the City that the Project has been verified to comply with current City floodplain ordinance.
- The KSOO radio transmission tower is a NRHP-eligible property. The following measures to minimize harm will be considered during the final design phase and/or incorporated into the plans as plan notes and as environmental commitments within the construction plans:
  - Evaluate options to minimize or avoid impacts to the modern guy wire and foundation during final design.
  - Avoidance of all historic character-defining features associated with the KSOO radio transmission site.
  - Construction plan sheets will address the location adjacent to proposed construction limits to protect the existing 4(f) resource.
  - The staging and/or storage of construction equipment or materials shall not take place outside proposed construction limits that are within or adjacent to the defined boundaries of the 4(f) resource.



- The Native American artifact scatter located within proximity to the South Veterans Parkway / 57th Street intersection will be avoided during the Project. The site shall be clearly identified as an “Environmentally Sensitive Site (ESS)” within the plan set and clearly demarcated with construction staking / fence prior to beginning grading activities.
- Lined snakes were noted to have potential habitat in the study area and SDGFP recommended that visual surveys for lined snakes occur prior to work in lined snake habitat (e.g., dry grassland areas) from April to October. Through coordination with SDGFP, the area of potential lined snake habitat was identified as a small patch within the final segment of South Veterans to Parkway between Sycamore Avenue and 57th Street.
- During final design, formal wetland delineations will need to be completed to determine the boundaries of wetlands and other waters of the U.S. within areas where wetland delineation has not yet been performed, including borrow sites and stormwater detention ponds that are identified as the Project design progresses.
- Level III Cultural Survey and/or Architectural Survey will need to be completed within undisturbed areas if during final design unsurveyed areas are identified as being impacted by project activities (e.g., borrow sites and stormwater detention ponds).
- During final design of the final two phases (Cliff Avenue to Sycamore Avenue and Sycamore Avenue to 57th Street), wetland impacts would be determined along the following arterial intersection projects where design information is currently not available: Southeastern Avenue, Sycamore Avenue, 69th Street, 57th Street.
- A USACE Section 404 permit, with Section 401 Water Quality Certification, would be obtained before dredged or fill material is discharged into waters of the U.S., including borrow sites that are identified for fill material. Wetland delineation would be conducted in additional areas that may be considered for borrow that have not been previously delineated.
- The Wetland Finding would be re-evaluated during the final design of each project to update the area of wetland impact and to confirm compensatory mitigation requirements prior to the construction of each project – particularly for wetland impacts that do not require compensatory mitigation as a special condition of the 404 permit.
- SDDOT would obtain a Bill of Sale from a Wetland Bank to document the transaction of compensatory mitigation credits that match the compensatory mitigation special condition outlined within the 404 Permit in addition to the compensatory mitigation requirement for all other natural wetlands as summarized in the Wetland Finding.
- A General Permit for Storm Water Discharges Associated with Construction Activities would be also required, which includes the preparation of a stormwater pollution prevention plan (SWPPP) (See Section 3.22 of 2012 EA). To comply with the General Permit, temporary drainage swales and drainage ponds will be considered and constructed if needed throughout the Project to help manage storm water flow during construction.

The following commitments have been made during construction and post construction and have corresponding commitments in the Section A Notes as listed in Table 6-1):

- All material identified in the application as removed waste material, material stockpiles, dredged or excavated material shall be placed for either temporary or permanent disposal in an upland site that is not a wetland, and measures taken to help ensure that



the material cannot enter the watercourse through erosion of any other means.  
(Commitment A, Commitment H)

- Work on structures and tree removal activities will take place outside the NLEB summer roosting season which is April 1 to October 31. (Commitment B5)
- Removal of vegetation shall be confined to those areas necessary for construction. (Commitment B6)
- Migratory birds are known to use the study area for nesting, which occurs primarily between April 1st and July 15th. Migratory birds have the potential to nest on the ground within areas not regularly mowed as well as within trees, large shrubs and on bridge structures. As noted in a USFWS letter dated September 15, 2010, the Preferred Alternative may impact migratory bird habitat. Further coordination occurred with the USFWS on December 19, 2011 indicated that no migratory bird surveys are necessary in non-suitable habitat (see Appendix H of the 2012 EA). Therefore, surveys for migratory birds will occur in suitable areas that have not been mowed or cleared prior to April 1st to determine if there are current nests and to determine offsetting measures to compensate for impacts to migratory birds. SDDOT will coordinate with the USFWS to determine appropriate offsetting measures for impacts to migratory birds after potential impacts have been identified. Surveys will be conducted within the same year, but prior to construction start to capture the current conditions and address possible affects more concisely. Surveys will be completed within the suitable habitat areas only if vegetation has not been cleared prior to migratory bird nesting season (See Section 3.17 of 2012 EA). (Commitment B6)
- The contractor will not withdraw water from waters equipment previously used outside the state of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water ( $\geq 140$  °F) and completely dried for a minimum of 7 days prior to subsequent use. (Commitment C)
- All fill material shall be free of substances in quantities, concentrations or combinations which are toxic to aquatic life. (Commitment D1)
- Waters of the state are located within the Project Area and are protected under Administrative Rules of South Dakota Chapter 74:51. Special construction measures would be taken to ensure that water quality standards are not violated. In accordance with the South Dakota Department of Environment and Natural Resources (SDDANR) general permit for stormwater discharge, a Storm Water Pollution Prevention Plan (SWPPP) would be included in the construction contract and implemented during construction to reduce or eliminate impacts due to erosion and sedimentation. If construction dewatering is required, the Contractor shall obtain the General Permit for Temporary Discharge Activities from the SDDANR Surface Water Program. The Contractor shall provide a copy of the approved permit to the Project Engineer (Commitment D2, Commitment G, and Commitment E).
- Methods shall be implemented to minimize the spillage of petroleum, oils and lubricants used in vehicles during construction activities. If a discharge does occur, suitable containment procedures shall be used to prevent entry of these materials into the waterway. (Commitment E, Commitment J)



- If activities for the Project occur in areas not previously surveyed, additional documentation and coordination with FHWA and SHPO is required. If buried prehistoric or historic cultural materials are encountered during construction, work should cease in that area and the SD SHPO should be contacted immediately (See Section 3.7 of 2012 EA). (Commitment I)
- A City sound permit would be obtained in accordance with City ordinance § 93.006 should construction be conducted between the hours of 6:00 a.m. and 10:30 p.m. (Commitment T2)
- To avoid and/or minimize impacts to RECs in the study area, contractors should be alert for the large areas of soil staining, buried drums, or USTs, and coordinate with SDDOT and SDDANR if obvious contamination is found prior to continuing work in those areas. A Phase II Environmental Site Assessment is recommended prior to ROW acquisition and construction within the Sinclair Gas Station property located near I-29. (Commitment L)
- Prior to earth moving activities, a SDDOT biologist that is qualified to handle state endangered species will survey the area of potential lined snake habitat. If a lined snake is observed during construction, a SDDOT biologist would be notified by the project engineer to identify the snake and remove and relocate it from the site if determined to be a lined snake. (Commitment T1)
- The City of Sioux Falls is taking a proactive approach to manage Emerald Ash Borers in Minnehaha & Lincoln Counties. Removal of ash trees by the Project undertaking will need to coordinate an action plan in accordance with the City's approved quarantine data and restrictions. (Commitment T3)



## 7.0 References

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# Appendix A: Traffic Study

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)



# Appendix B: SD100 Access and Noise Plan

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)



# Appendix C: Environmental Justice Screening and Mapping

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)





# Appendix D: Visual Impact Analysis

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)



# Appendix E: Noise Study Technical Report and Addendum

- **Noise Study Technical Report**
- **Noise Study Technical Report Addendum**

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)



## Appendix F: Wetland Delineation Reports

- **Wetland Delineation Report – South Veterans Parkway**
- **Wetland Delineation Report – Various City of Sioux Falls Capital Improvement Projects**

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)



# Appendix G: EO 11990 Wetland Finding Supplement

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)



# Appendix H: Section 4(f) Determination

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)





# Appendix I: Regulated Materials/Contaminated Properties Survey Report

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)



# Appendix J: Agency Coordination and Public Engagement Summary

- **Summary of Agency Comments**
- **DANR Coordination**
- **FAA Coordination**
- **GFP Coordination**
- **NRCS Coordination**
- **SHPO Concurrence**
- **Tribal Letters Sent**
- **USACE Coordination**
- **WAPA Coordination**
- **USFWS Consultation**
- **Public Engagement Summary**

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)



# Appendix K: Summary of Public Scoping Comments



# Appendix L: Section A – Environmental Commitments of Engineering Plan Sets

Available online at [www.southveteransparkway.com](http://www.southveteransparkway.com)