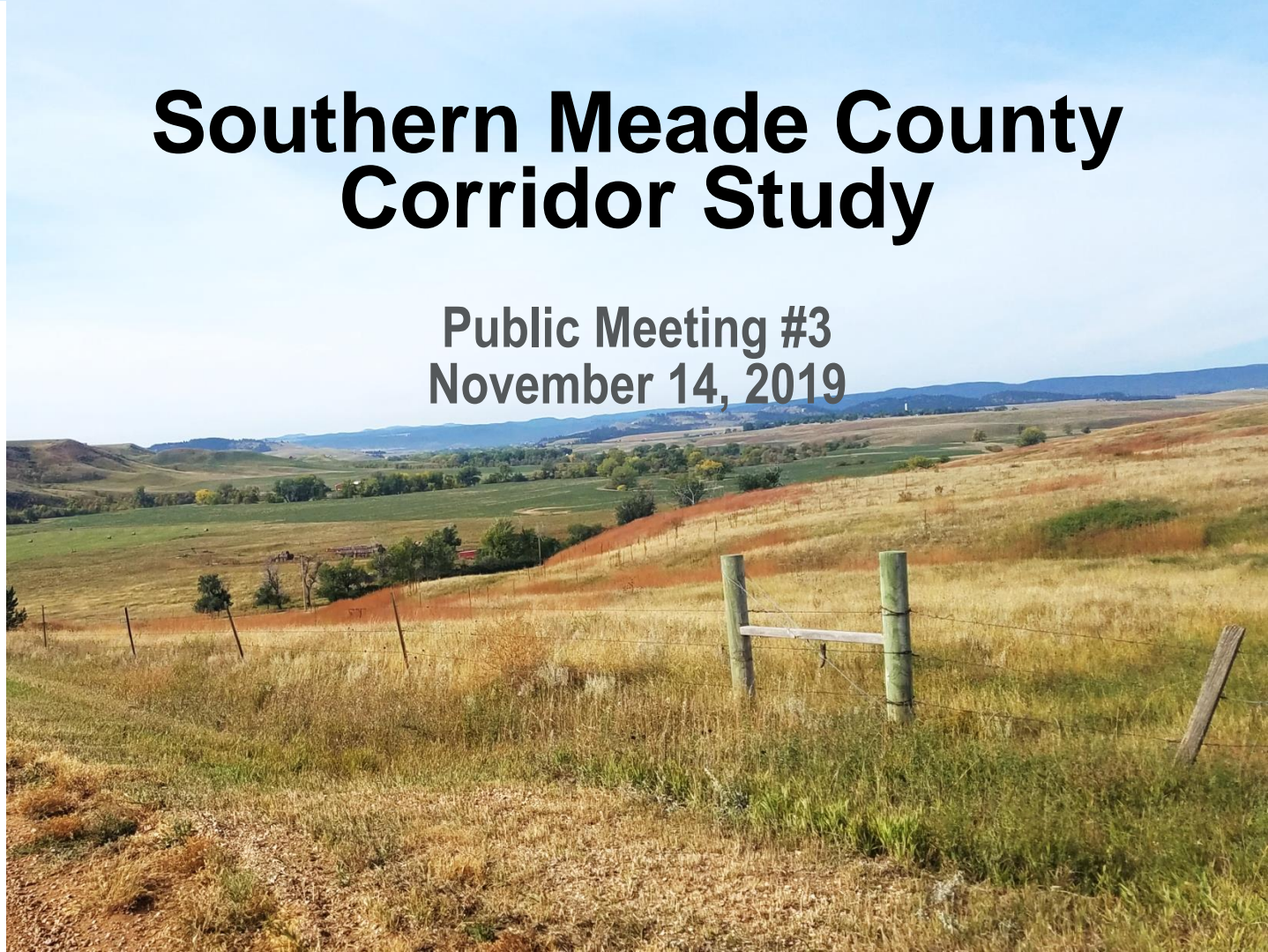


MEADE COUNTY



# Southern Meade County Corridor Study

Public Meeting #3  
November 14, 2019



# HOUSEKEEPING ITEMS

1. Sign-in sheet
2. Meeting materials posted on the study website  
[www.southernmeadecountycorridorstudy.com](http://www.southernmeadecountycorridorstudy.com)
3. Comment Cards – due December 14<sup>th</sup>
4. Short presentation followed by one-on-one Q&A with Study Advisory Team



# SCHEDULE



# OUTLINE OF DRAFT CORRIDOR STUDY REPORT

**01** Project Overview

**02** Public Participation

**03** Existing and Projected Future Conditions

**04** Alternatives Development

**05** Conclusions and Recommendations

**06** Steps Moving Forward

**07** Appendices

Electronic copies of the draft report are available at:  
[www.southernmeadecountycorridorstudy.com](http://www.southernmeadecountycorridorstudy.com)



01

# PROJECT OVERVIEW

MEADE COUNTY



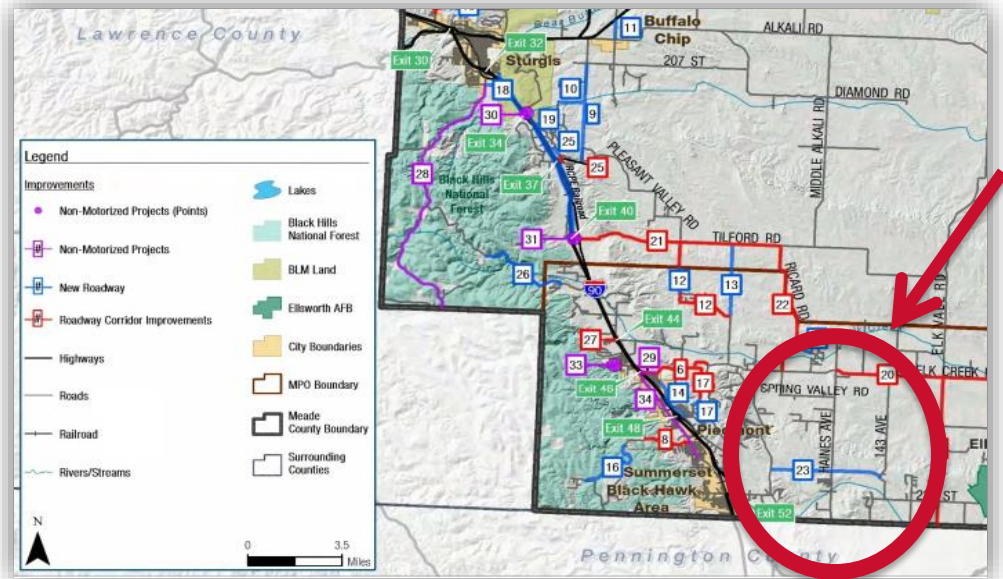
RAPID CITY AREA  
Metropolitan Planning Organization



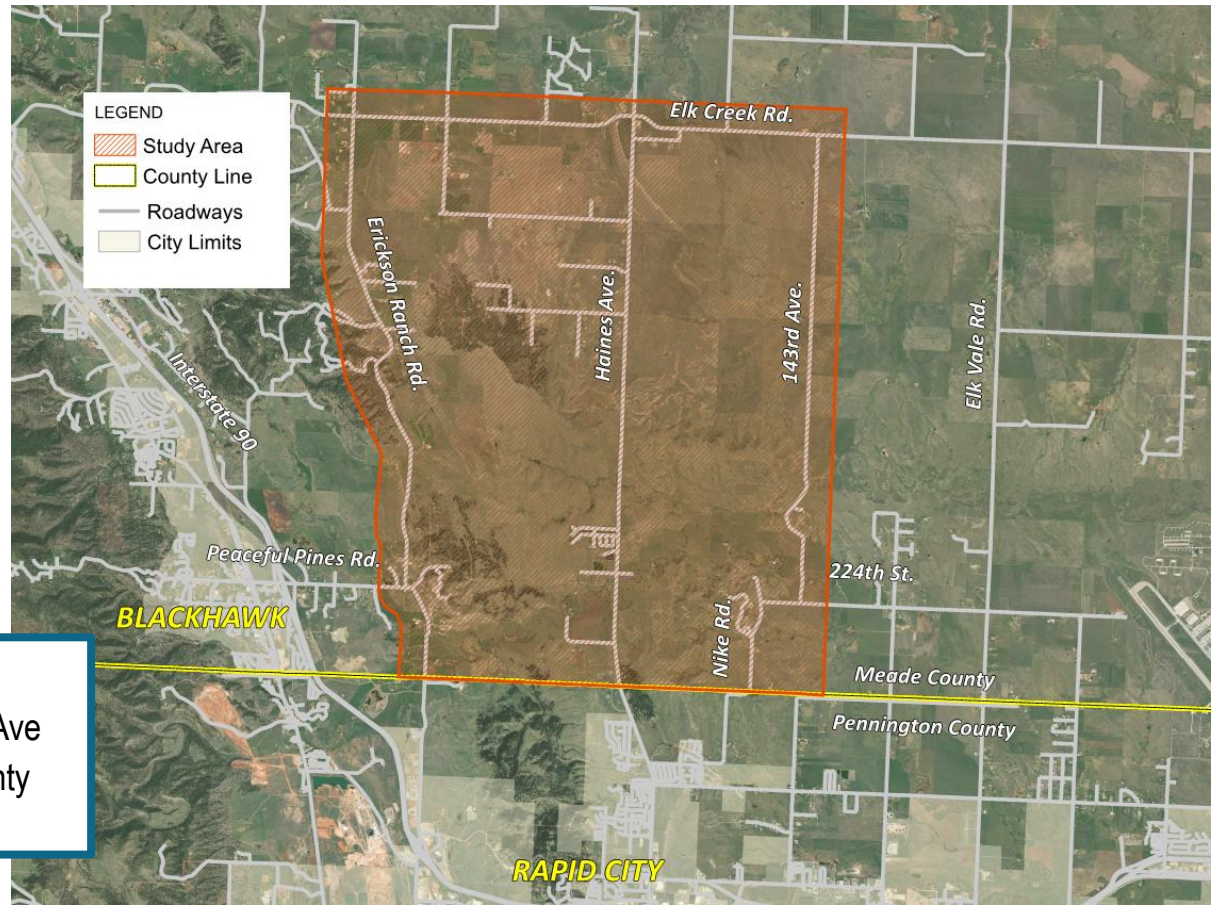
Southern Meade County  
Corridor Study

# BACKGROUND

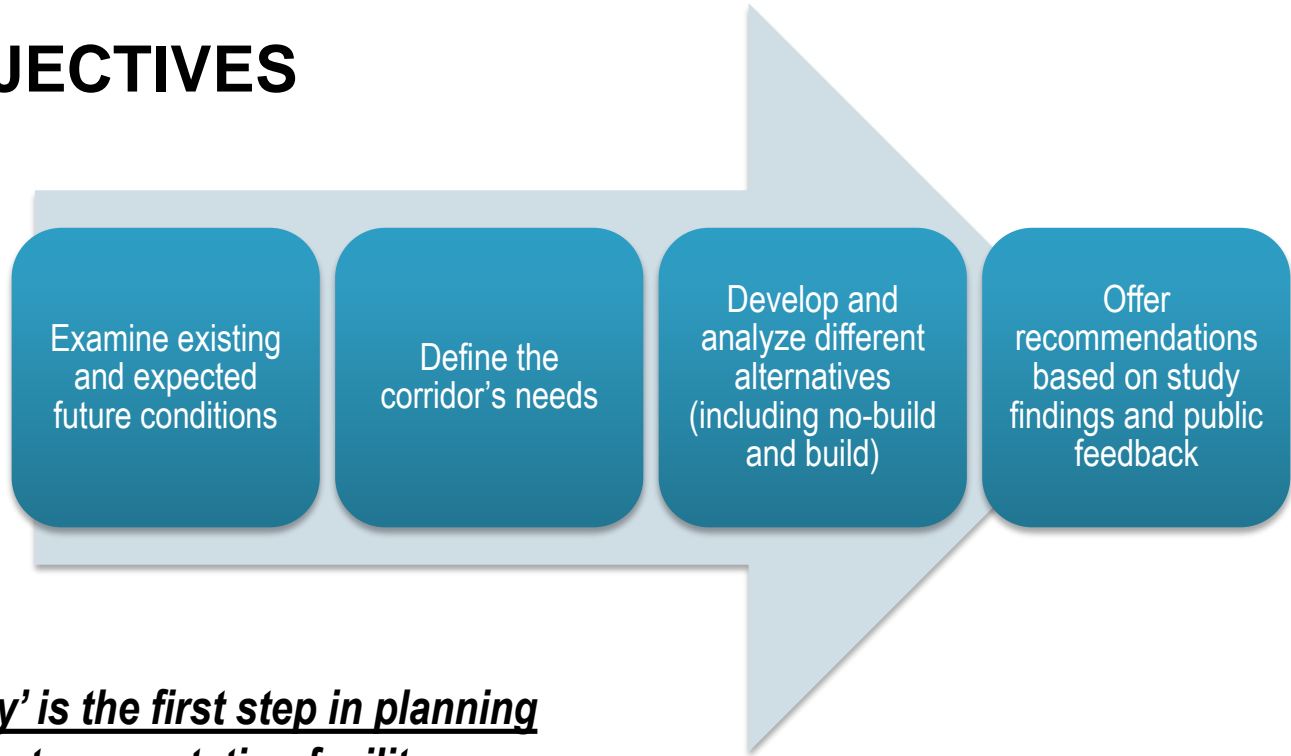
- Meade Moving Forward 2040 identified the need for an east-west corridor in this area
- Corridor preservation/High level planning
- Area of county likely to see development (primarily rural residential) within the 20 year planning horizon
- Framework for future development
- No near term funding or plan to construct identified by public agencies at this time



# STUDY AREA



# STUDY OBJECTIVES



**A 'Corridor Study' is the first step in planning for the future of a transportation facility**

# PURPOSE AND NEED FRAMEWORK

- Purpose:
  - Define a corridor that will accommodate the planned future land use patterns.
  - Preserve the corridor and allow appropriate access management for any potential growth within the area.
- Need:
  - Projected increased density of residential development within the study area.
  - Rural residential development along Elk Creek Road is directly contributing to urban sprawl and premature fragmentation of agricultural land.
  - Limited east-west corridors north of Rapid City



# 02 PUBLIC PARTICIPATION

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Corridor Study

# STUDY PARTNERS

## ○ Study Advisory Team:

- Meade County
- Rapid City Area MPO
- South Dakota Department of Transportation (SDDOT)
- Federal Highway Administration

## ○ Consultant Team:

- HDR

## ○ Public Members/Stakeholders:

- Landowners and Business Owners
- Traveling Public and Concerned Citizens

MEADE COUNTY



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# PUBLIC INVOLVEMENT

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Public Meetings			●				●				●	
Landowner Meetings							●					
SAT Meetings	●	●			●		●		●		●	
Resource Agency Coordination							●	●				
Meade County and MPO Presentations												●
Website		●	●	●	●	●	●	●	●	●	●	●

03

# EXISTING AND PROJECTED FUTURE CONDITIONS

MEADE COUNTY



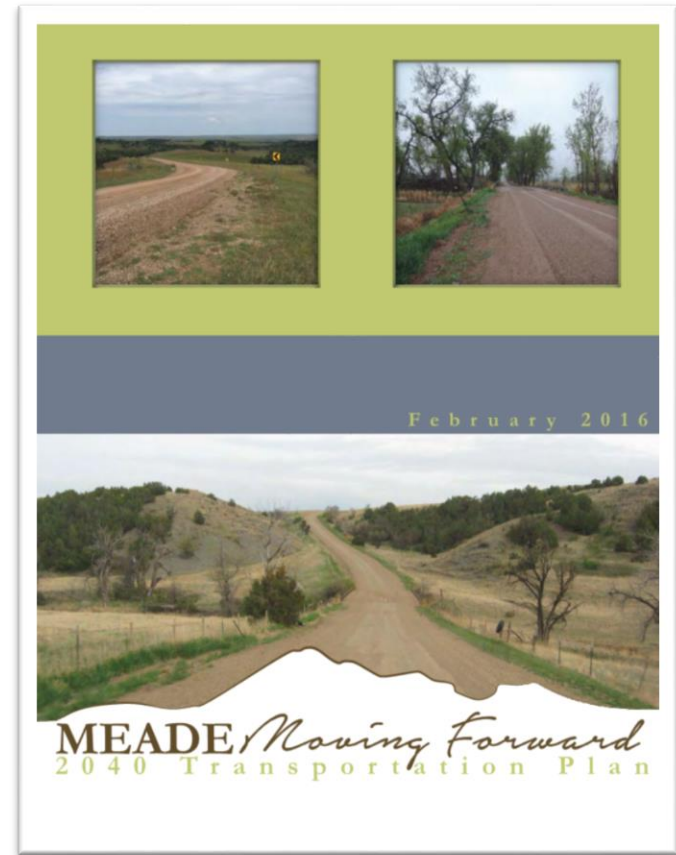
RAPID CITY AREA  
Metropolitan Planning Organization



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# EXISTING MASTER PLANS AND PREVIOUS STUDIES

- Meade Moving Forward 2040 Transportation Plan
- Meade County Comprehensive Plan
- Plan Rapid City – Comprehensive Plan Update
- Rapid City Major Street Plan
- Rapid Trip 2040 – Rapid City Area Long Range Transportation Plan Update
- Meade County Ordinances
- Ellsworth Airforce Base Joint Land Use Study
- Elk Creek Road Alignment Study
















# ENVIRONMENTAL SCAN

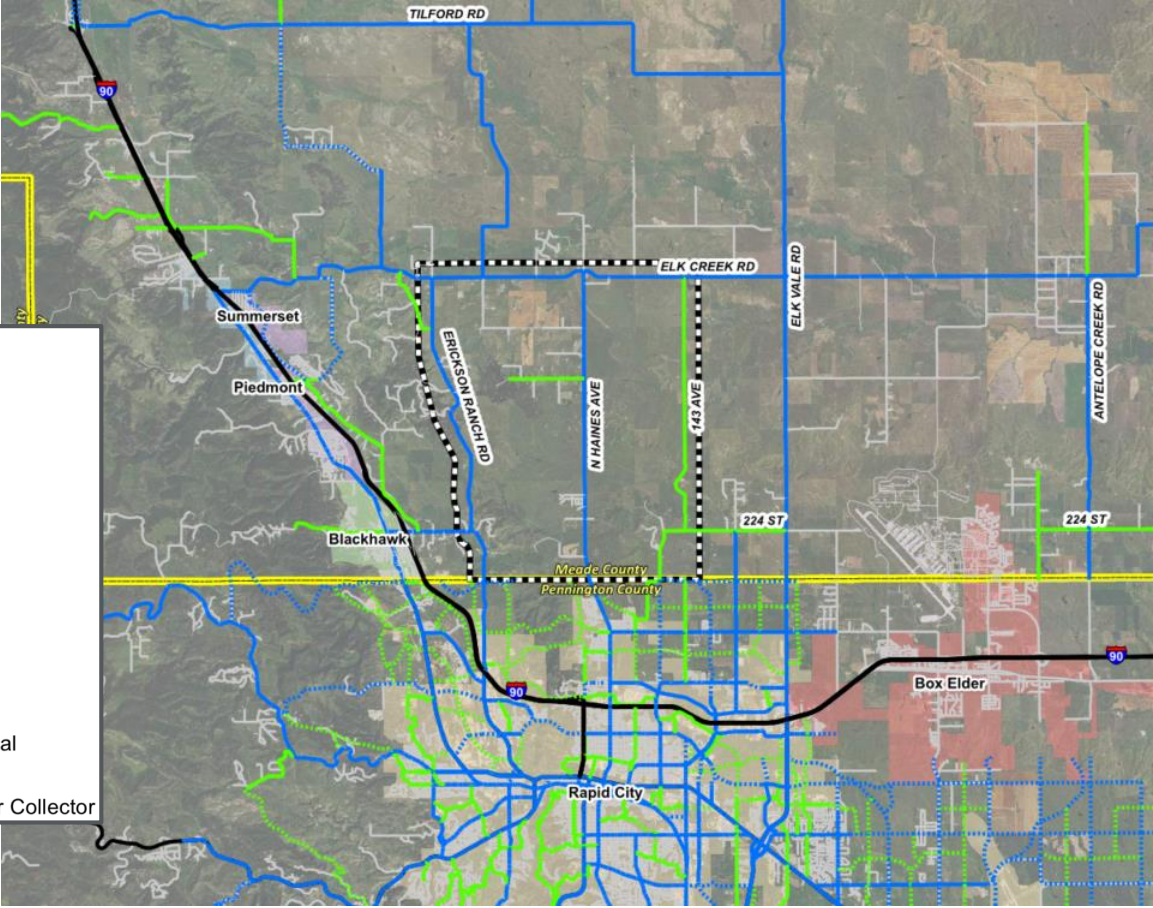
- 500' buffer around all three study build alternatives
- Environmental Data Reviewed
  - Threatened and endangered species
  - Archaeological and historical resources
  - Section 4(f)/6(f) properties
  - Wetlands and other waters of the U.S
  - Floodplains and floodways
  - Right-of-way



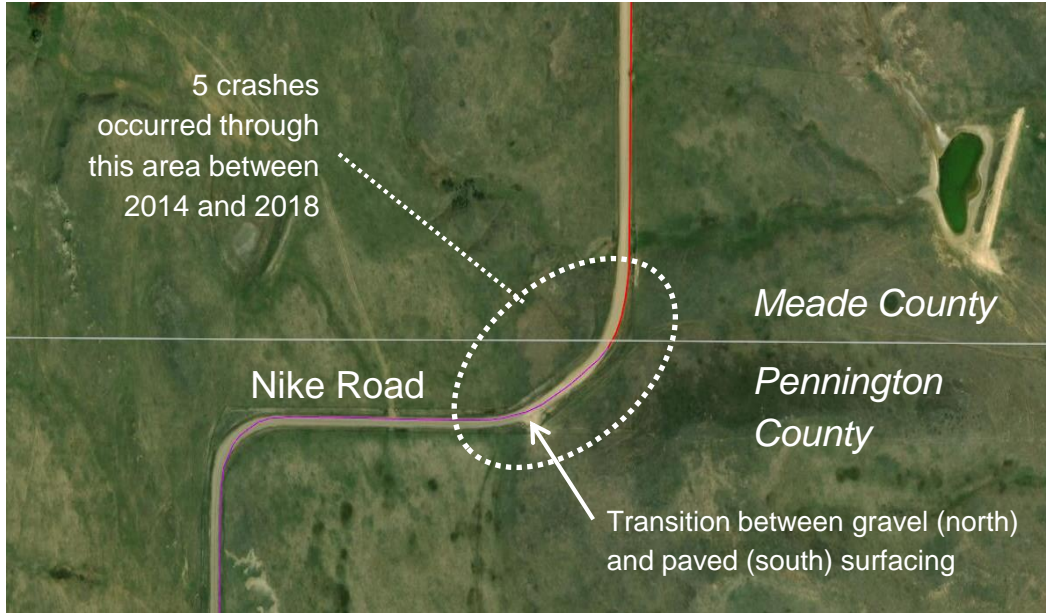
# EXISTING ROADWAY NETWORK

**LEGEND**

-  Study Area
-  County Line
- City Limits**
-  Blackhawk
-  Box Elder
-  Piedmont
-  Rapid City
-  Summerset
-  Existing Roads
-  Interstate
-  Arterial
-  Proposed Arterial
-  Collector
-  Proposed Minor Collector

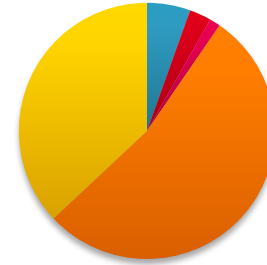


# CRASH HISTORY



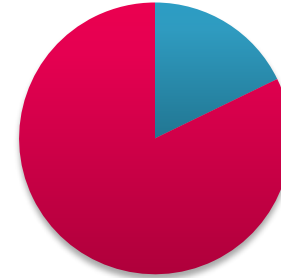
**Nike Road Horizontal Curve at Meade County/Pennington County Boundary**

## Roadway Segment Crash Type



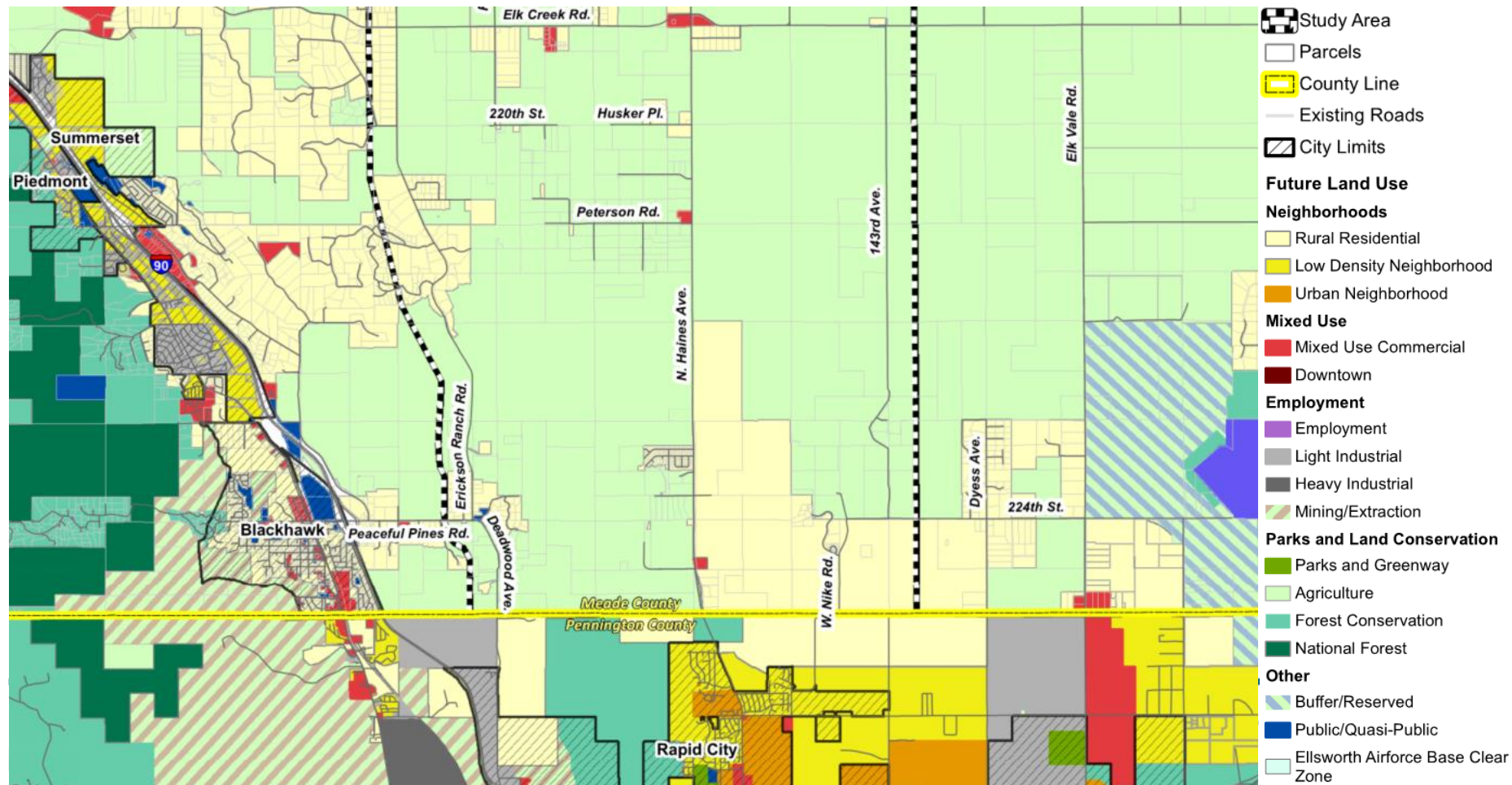
- Rear End
- Angle
- Side Swipe
- Roadway Departure
- Wild Animal

## Roadway Segment Crash Severity



- Injury Crashes
- Property Damage Only

# 2040 FUTURE LAND USE MAP



# TRAFFIC ANALYSIS CONCLUSION

- All intersections and roadway segments during ***no-build and build 2045 conditions*** are expected to operate at acceptable levels of service
- Traffic operations along the existing North-South corridors will likely not drive the need for this east-west connector.
- The corridor will provide less measurable benefits including:
  - Connectivity
  - Encouragement of orderly development by clustering of rural residential development near incorporated communities
  - Conserve natural features and lessen fragmentation of agricultural land that is currently occurring north of the study area
  - Framework as development intensifies



# 04

# ALTERNATIVES DEVELOPMENT

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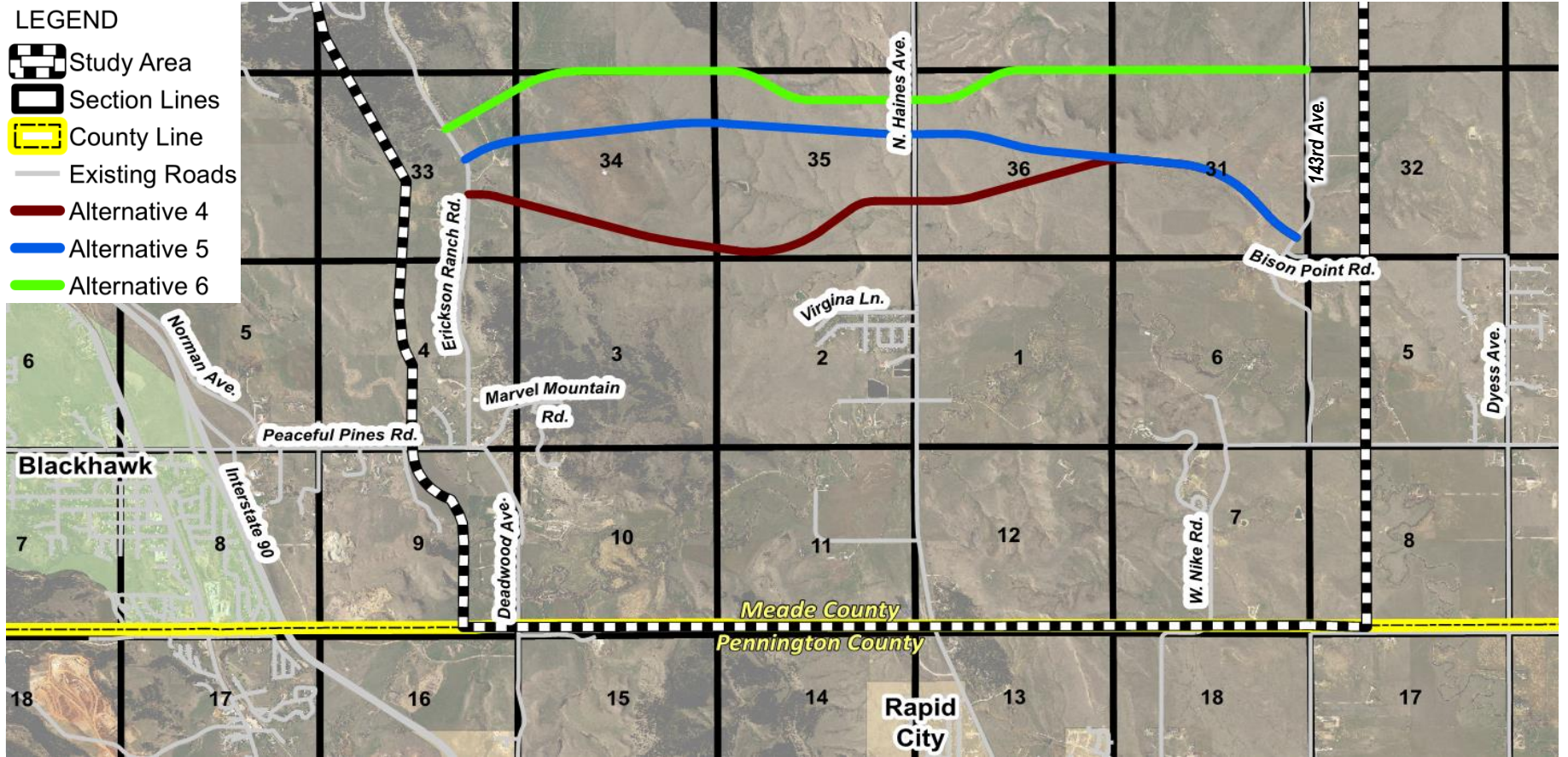
# ALTERNATIVES DEVELOPMENT



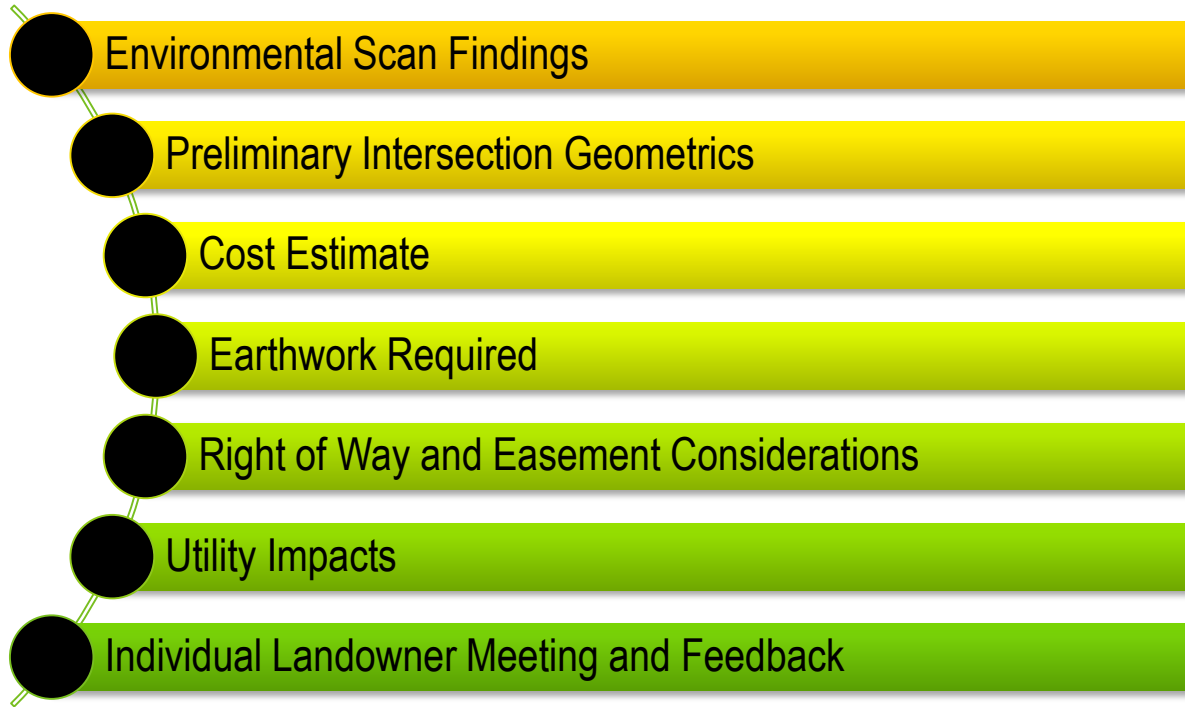
# STUDY BUILD ALTERNATIVES

## LEGEND

-  Study Area
-  Section Lines
-  County Line
-  Existing Roads
-  Alternative 4
-  Alternative 5
-  Alternative 6



# ALTERNATIVE ANALYSIS



# ENVIRONMENTAL SCAN FINDINGS





Alternative	Threatened and Endangered Species			Archaeological/ Historical (One mile Radius)	Section 4(f)/6(f)	Wetlands and Other Waters of the U.S.	Flood- plains	Right-of-Way (Acres)	Hazardous Material
	Northern Long- Eared Bat	Whooping Crane	Least Tern and Rufa Red Knot.						
Alignment 4	✓ May affect, not likely to adversely affect.	✓ May affect, not likely to adversely affect. However, most likely alignment for the whooping crane due to the most wetlands being present here.	✓ No anticipated effect	7 SHPO previous surveys 2 SHPO previous structures 1 SHPO previous bridge	✓ No anticipated impacts	✓ Low Wetland Impacts	✓ No anticipated impacts	7 unique landowners 66.59 acres of impact	✓ No anticipated impacts
Alignment 5	✓ May affect, not likely to adversely affect.	✓ May affect, not likely to adversely affect.	✓ No anticipated effect	7 SHPO previous surveys 2 SHPO previous structures 1 SHPO previous bridge	✓ No anticipated impacts	✓ Low Wetland Impacts	✓ No anticipated impacts	7 unique landowners 66.16 acres of impact	✓ No anticipated impacts
Alignment 6	✓ May affect, not likely to adversely affect.	✓ May affect, not likely to adversely affect.	✓ No anticipated effect	4 SHPO previous surveys 1 SHPO previous structures 0 SHPO previous bridge	✓ No anticipated impacts	✓ Moderate Wetland Impacts	✓ No anticipated impacts	6 unique landowners 53.66 acres of impact	✓ No anticipated impacts

# 05

# CONCLUSIONS AND RECOMMENDATIONS



# CONCLUSIONS

-  The no-build alternative does not align with Meade County's goals listed in their planning documents and does not meet the purpose and need of this Study.
-  Alternative 6 was eliminated because of poor constructability, high construction cost, and utility impacts.
-  Alternative 4 was ultimately eliminated because of safety issues with the intersection at Haines Avenue. Utility impacts are anticipated with both the transmission lines.
-  The recommended alternative was Alternative 5. This alternative has optimal intersection geometrics and the most constructible compared to other two alternatives. It also has the least amount of wetland and utility impacts.

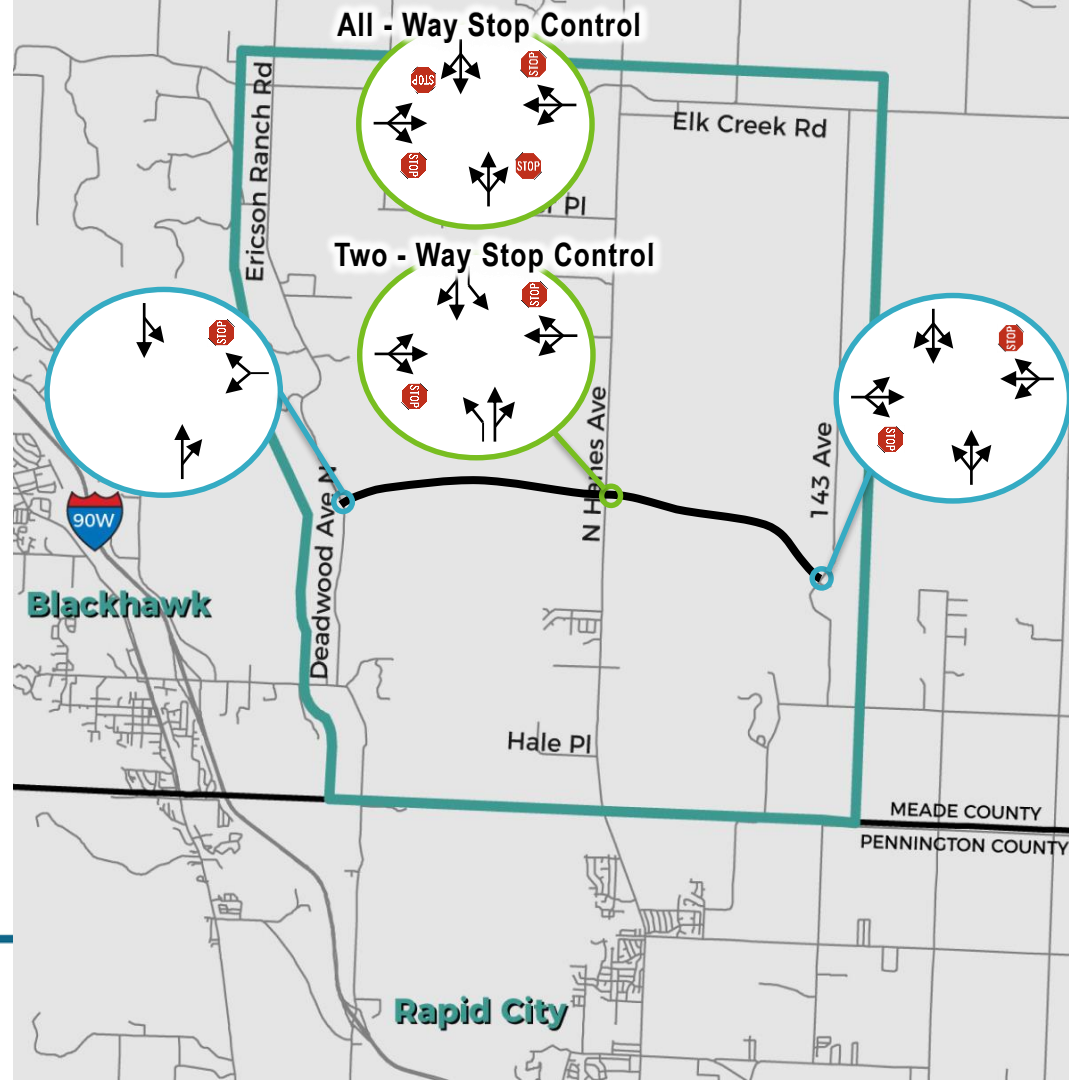
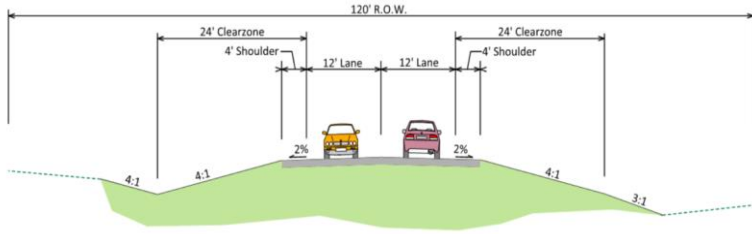


# EXTENDED ROADWAY NETWORK

- Due to the regional significance of Elk Vale Road, it is recommended that Meade County plan for a connection to be made between 143rd and Elk Vale Road.
- If a connection is not planned, 143rd Avenue between the future roadway and 224th Avenue should be upgraded to an arterial roadway typical section. The 143rd Avenue Bridge over Box Elder Creek should be evaluated for the additional traffic volumes and the horizontal curve and longitudinal grades should be reconstructed to meet design criteria.



# PROPOSED CORRIDOR DESIGN ELEMENTS



06

# STEPS MOVING FORWARD

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# 07

# APPENDICES



# APPENDICES

- Appendix A – Public Meeting Summary Reports
- Appendix B – Methods and Assumptions
- Appendix C – Environmental Scan Technical Memorandum
- Appendix D – Crash History Review Technical Memorandum
- Appendix E – Traffic Forecasts Technical Memorandum
- Appendix F – Existing and 2045 No-Build Conditions Traffic Operations Technical Memorandum
- Appendix G – 2045 Build Conditions Traffic Operations Technical Memorandum
- Appendix H – Alternatives Development Screening Technical Memorandum
- Appendix I – Alternatives Analysis Technical Memorandum



# STUDY SCHEDULE

January 2019 – *Project Kickoff*

January - March 2019 – *Data Collection*

March 2019 – *Public Meeting #1*

April - June 2019 – *Traffic Analysis*

April - June 2019 – *Alternatives Development*

July 2019 – *Environmental Scan*

July 2019 – *Public Meeting #2 / Landowner Meetings*

September 2019 – *Select Recommended Alternative(s)*

October 2019 – *Draft Corridor Study Report*

November 2019 – *Public Meeting #3*

December 2019– *Presentations to Meade County Commission and Rapid City Area MPO Committees*

December/January 2019– *Finalize Corridor Study Report*

# PUBLIC INPUT

- What are your thoughts on the draft corridor study report?



## Comment Cards

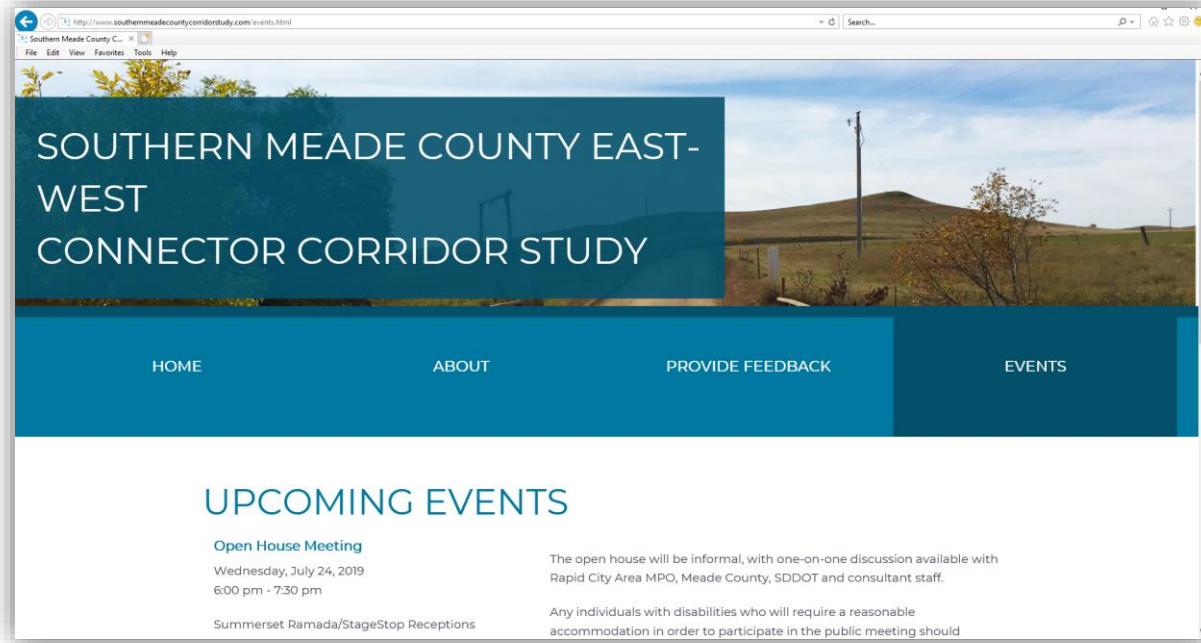


## Project Website

[www.SouthernMeadeCountyCorridorStudy.com](http://www.SouthernMeadeCountyCorridorStudy.com)



# PROJECT WEBSITE



***www.SouthernMeadeCountyCorridorStudy.com***



Southern Meade County  
Corridor Study

# STUDY CONTACTS

## Consultant Team Contact:

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Project Manager

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## Rapid City Area MPO Project Manager:

Kelly Brennan

Long Range Planner

[kelly.brennan@rcgov.org](mailto:kelly.brennan@rcgov.org)

Phone: 605-394-4120

## Meade County Contact:

Bill Rich

Meade County Planning

[billr@meadecounty.org](mailto:billr@meadecounty.org)

Phone: 605-347-3818



***THANK YOU FOR PARTICIPATING!***