



US 85

CORRIDOR STUDY

SPEARFISH TO DEADWOOD

Project Overview

A planning-level corridor study is being performed for the portion of U.S. Highway 85 (US85) between the cities of Spearfish and Deadwood.

Purpose of the study:

1. Evaluate existing and future conditions of the corridor
2. Identify potential improvements related to roadway conditions, traffic operations, and safety

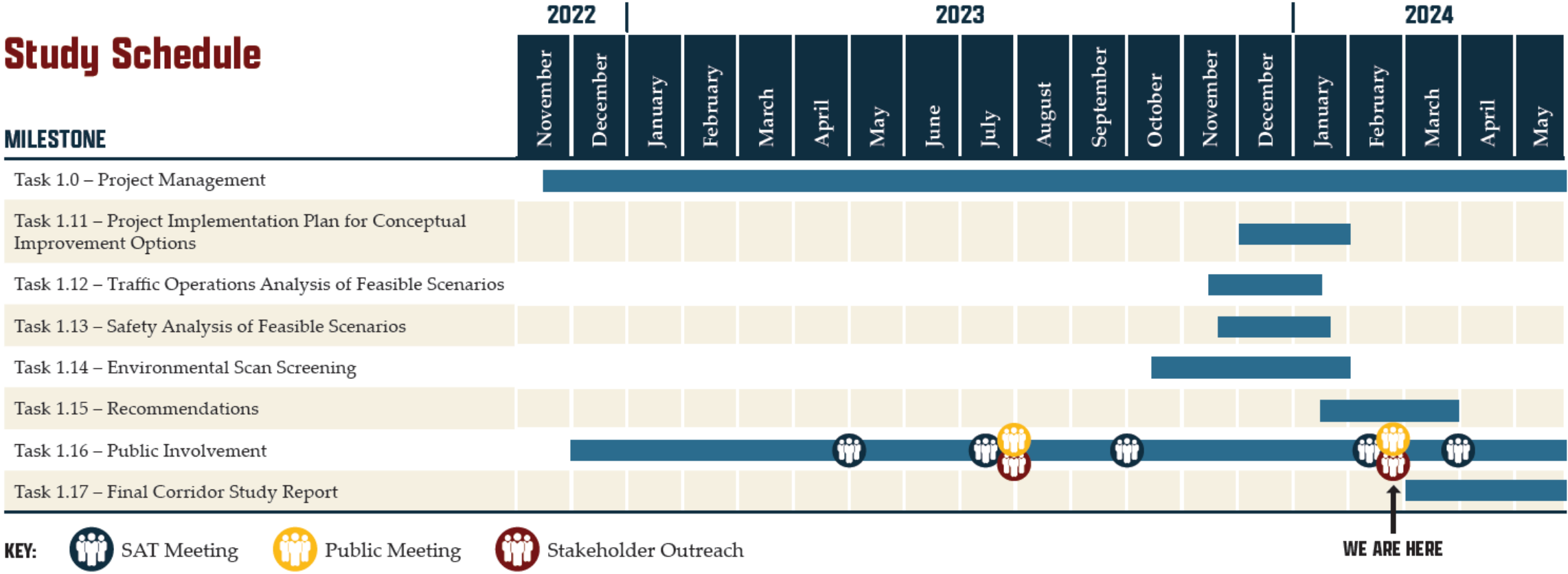
The study corridor begins at Duke Parkway, just north of Interstate 90 (I-90) at Exit 17 in Spearfish, and continues south to the junction of U.S. Highway 14 Alternate (US14A) in Deadwood.



Project Overview

Work on the corridor study began in winter 2022/2023. A final report, including the improvement recommendations, is anticipated to be completed in spring 2024.

Study Schedule



Corridor Segments & Identified Needs – North

1. Duke Parkway/park & ride driveway

- Access to future development

5. E. Colorado Boulevard/St. Onge Road

- Existing and future traffic operations deficiencies
- Deficient intersection geometry
- Recurring vehicle crashes

6. Elkhorn Ridge RV Resort driveway

- Safety enhancements to address future traffic volumes

7. Centennial Road

- Deficient intersection geometry
- Traffic operations and safety improvements to accommodate future traffic volume growth including potential expansion of City of Spearfish transportation network



Corridor Segments & Identified Needs – South

8. Crook City/Pendo Road

- Traffic operations and safety improvements to accommodate future traffic volume growth

9. Mt. Roosevelt Road

- Traffic operations and safety improvements to accommodate future traffic volume growth

10. U.S. Highway 14A (US14A)

- Traffic operations improvements to accommodate future traffic volume growth



Recommendation Types

Roundabouts

Reduced Conflict Intersections
(RCI)

Continuous Green T
Intersections (CGT)



Roundabouts

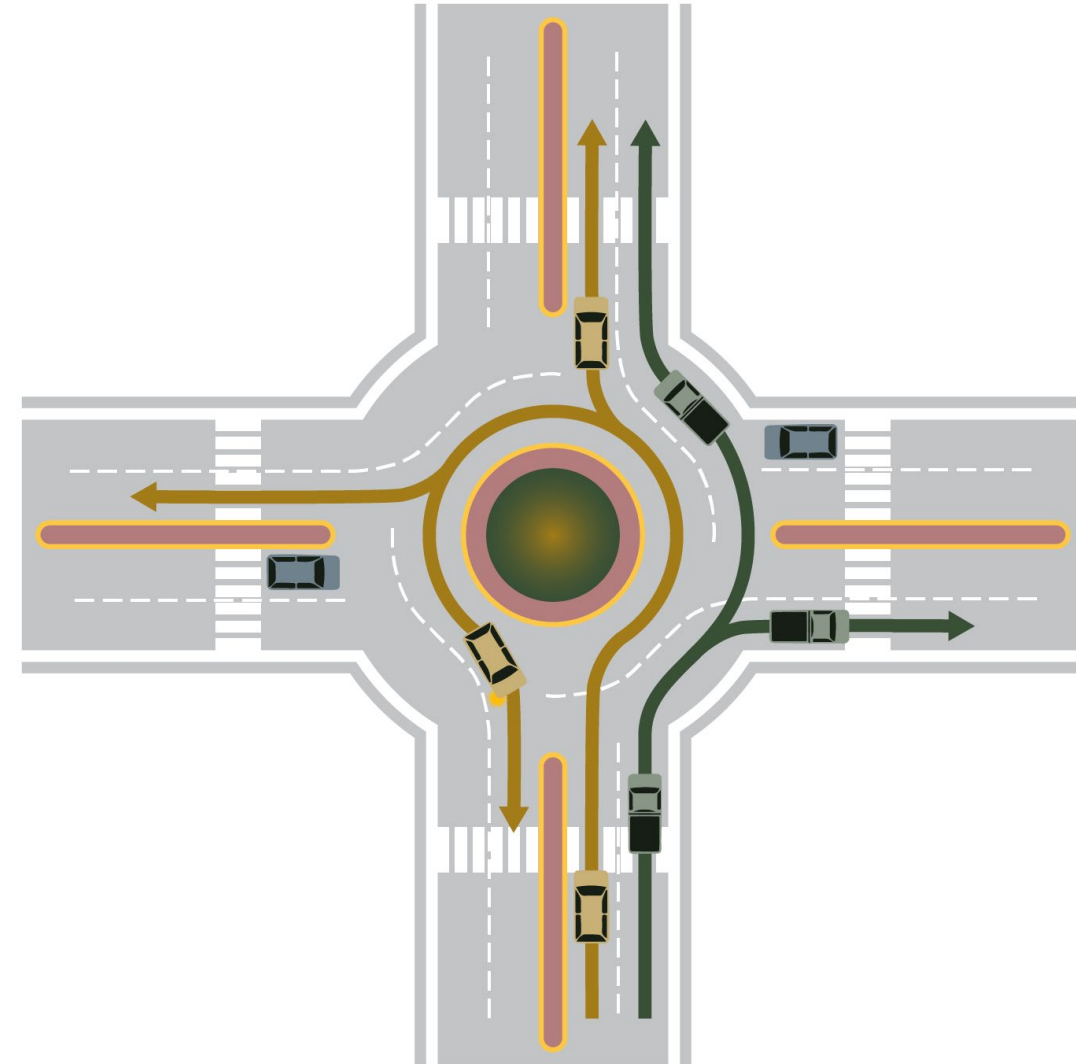
A roundabout is an unsignalized intersection that facilitates safe and efficient vehicle and pedestrian movements.

A roundabout has three key design features:

1. Counterclockwise traffic flow around a raised center island
2. Splitter islands on the approaches to provide for proper vehicle speed reduction and pedestrian refuge
3. Yield control on the entry approaches

Roundabouts offer improved safety characteristics over traditional intersections in the following ways:

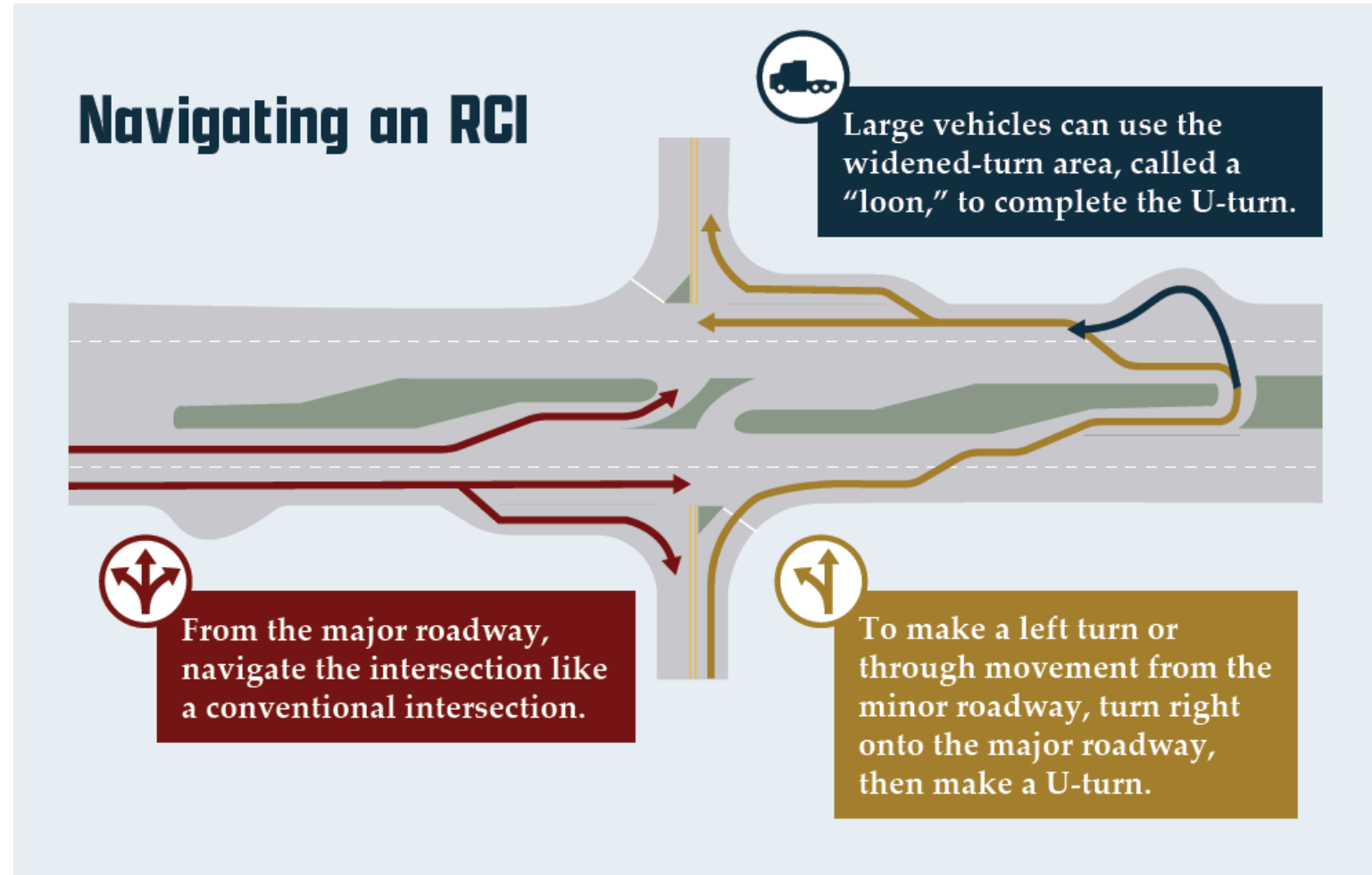
- Reduced number of vehicle-vehicle conflict points
- Reduced risk of severe crashes due to slower and consistent vehicle speeds
- One-way traffic flow



Reduced Conflict Intersections (RCI)

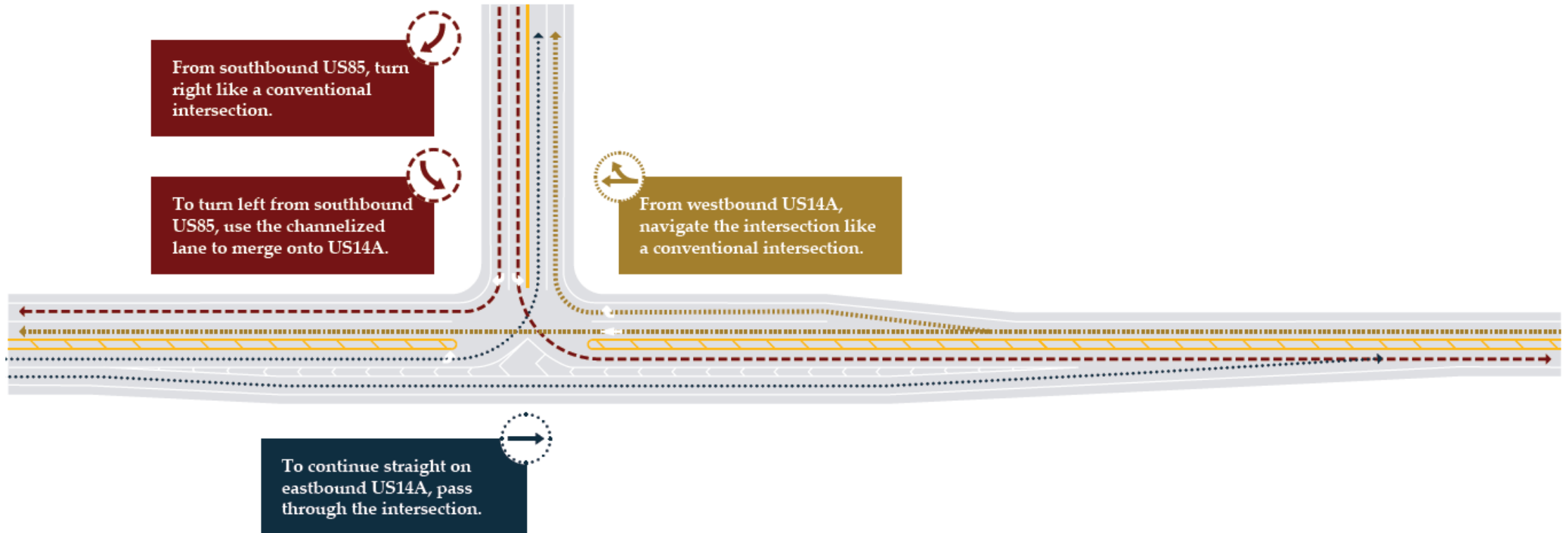
A Reduced Conflict Intersection (RCI) is an innovative intersection design that improves safety and operations by changing how minor roadway traffic crosses or turns left a major roadway.

At an RCI, drivers stopped on the minor roadway waiting to cross or turn left onto the major roadway no longer must navigate a complex, high-speed intersection.



Continuous Green T Intersections (CGT)

A CGT is an intersection design where one major street direction of travel (the top side of the “T”) can pass through the intersection without stopping and the opposite major street direction of travel is typically controlled by a traffic signal.



Proposed Alternatives

Colorado Boulevard

Crook City/Pendo Road

Mt. Roosevelt Road



Colorado Boulevard Intersection – Proposed Alternatives

Traffic Signal

The all-way stop currently in place would be replaced by a traffic signal.



Reduced Conflict Intersection (RCI)

Left-turn movements would be allowed from US85 to E Colorado Boulevard and St Onge Road; however, movements from the east and west legs of the intersection would be restricted to right-turn movements only.



Roundabout

Reconstruct the intersection as multi-lane (2x2) roundabout.



The Colorado Boulevard/St. Onge Road intersection is being evaluated to enhance safety and accommodate development-driven traffic volume growth.

Operations Motorist Delay/Travel Time	2027	★★★★☆	2027	★★★★☆	2027	★★★★☆
	2040	★★★★☆	2040	★★★★☆	2040	★★★★☆
Vehicle Safety Conflicts/Severe & Fatal Crashes		★☆☆☆☆		★★★★☆		★★★★☆
Pedestrian Safety		★★★☆☆		★★★☆☆		★★★★☆
Project Implementation Cost (2027) Design, Construction, ROW, Utilities		\$13.4-14.3 million		\$7.8 million		\$7.5 million
Other Considerations		<ul style="list-style-type: none"> Improved skew angle of intersection; results in additional property impacts Intersection can be operated initially with a single left-turn lane on eastbound approach 		<ul style="list-style-type: none"> Increased travel times due to out-of-direction travel Intersection can be operated initially with single right-turn lanes and without signalization at u-turn locations 		<ul style="list-style-type: none"> Intersection can be operated initially as a 2x1 roundabout with single lanes on the eastbound and westbound approaches

Ratings on a scale of 1-5 stars, with 5 being the best

Crook City/Pendo Road Intersection – Proposed Alternatives

The Crook City Road/Pendo Road intersection being evaluated due to high truck traffic and future traffic volume growth.

North and Southbound Right-Turn Lanes

Add north and southbound offset right-turn lanes.



Signalization

Replaces stop-controlled conditions with a traffic signal and includes the right-turn lanes.



Reduced Conflict Intersection (RCI)

Left-turn movements would be allowed from US85 to Crook City Road and Pendo Road; however, movements from the east and west legs of the intersection would be restricted to right-turn movements only.



Roundabout

Reconstruct the intersection as multi-lane (2x1) roundabout.



Operations

Motorist Delay/Travel Time



Vehicle Safety

Conflicts/Severe & Fatal Crashes



Pedestrian Safety



Project Implementation Cost (2027)

Design, Construction, ROW, Utilities

\$1.7 million

\$2.9 million

\$7.6 million

\$5.6 million

Other Considerations

- Increased travel times due to out-of-direction travel

Ratings on a scale of 1-5 stars, with 5 being the best

Mt. Roosevelt Road Intersection – Proposed Alternatives

The Mt. Roosevelt Road intersection is being evaluated to improve safety due to future traffic growth.

Northbound Right-Turn Lane

Add a northbound right-turn lane.



Signalization (with northbound right-turn lane)

Replaces stop-controlled conditions with a traffic signal and includes the northbound right-turn lane.



Roundabout

Reconstruct the intersection as multi-lane (2x1) roundabout.



Operations Motorist Delay/Travel Time	2027	★★★★☆	2027	★★★★★	2027	★★★★★
	2040	★☆☆☆☆	2040	★★★★★	2040	★★★★★
Vehicle Safety Conflicts/Severe & Fatal Crashes		★☆☆☆☆		★★☆☆☆		★★★★★
Pedestrian Safety		★☆☆☆☆		★★★☆☆		★★★★★
Project Implementation Cost (2027) Design, Construction, ROW, Utilities		\$230,000		\$1.0 million		\$5.4 million
Other Considerations						<ul style="list-style-type: none"> • Steep grades (~9%) on west leg • Challenging southbound to westbound right-turn movement

Ratings on a scale of 1-5 stars, with 5 being the best

Additional Corridor Alternatives

Duke Parkway

Elkhorn Ridge RV Resort

Centennial Road

Duke Parkway to Crook City Road/Pendo Road



Duke Parkway

- T intersection (signal to be added if/when traffic volumes satisfy warrant criteria)
- Roundabout



Elkhorn Ridge RV Resort

- Southbound right-turn lane
- RCI



Location of a potential future intersection to accommodate expansion of Spearfish or development driven transportation network.



Duke Parkway to Crook City Road/Pendo Road

- Extend existing typical section to Crook City Rd/Pendo Rd
- Urbanized, 4-lane divided with turn lanes
- No-build



Centennial Road

- Southbound right-turn lane, Northbound left-turn lane, and skew correction
- RCI

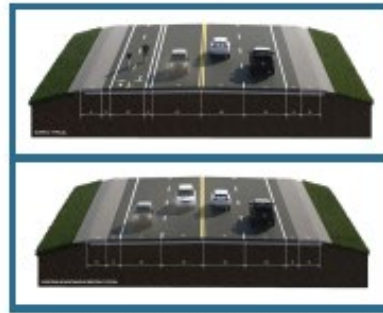
Additional Corridor Alternatives

Crook City Road/Pendo Road to US14A

The Ridge development driveway intersections

Pedestrian connection to The Lodge at Deadwood

US14A Intersection



Crook City Road/Pendo Road to US14A

- Super 2
- No-build

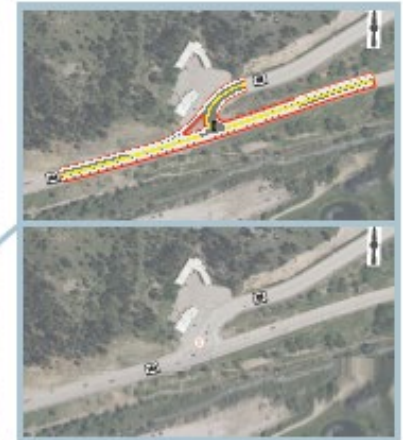
The Ridge development driveway intersections (3 locations)

- Northbound right-turn lanes



Pedestrian Connection to The Lodge at Deadwood

- 5 alternatives



US14A Intersection

- Continuous green T intersection
- No-build



THANK YOU FOR JOINING US TODAY

Stay up-to-date on the project at

<https://www.us85spearfishtodeadwood.com/>