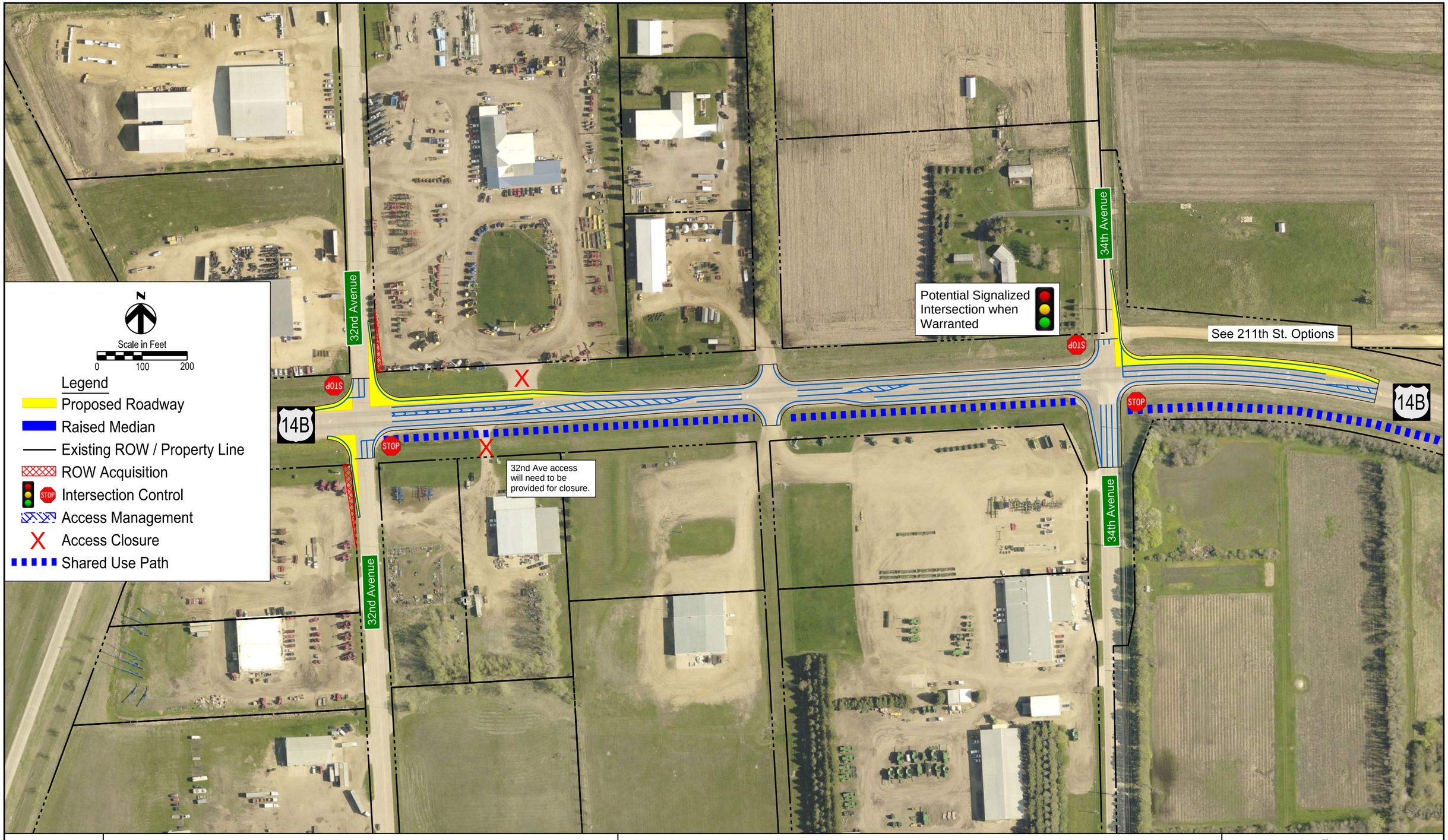
US14 Bypass – I-29 to US14 (east) Scenarios

Scenario A: Existing 3-Lane with Intersection Improvements

Scenario includes:

- Maintain existing 3-lane between 32nd Avenue and 34th Avenue.
- Maintain existing 2-lane between 34th Avenue and US14 (east).
- 32nd Avenue intersection improvements.
- 34th Avenue intersection improvements.
- US14/US14 Bypass intersection (east) improvements (three options).
- 211th Street/18th Street intersection improvements (two options).
- Shared-use path on south side.



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US Bypass - I-29 to US14 (East) Scenarios
Existing 3-Lane Cross-Section with Intersection Improvements

US14 / US14B Corridor Study

Brookings, SD

Figure

US14 Bypass - I-29 to US14 (East)
Scenario A

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US14 Bypass - I-29 to US14 (East) Scenarios
Existing 2-Lane Cross-Section

US14 / US14B Corridor Study

Brookings, SD

Figure

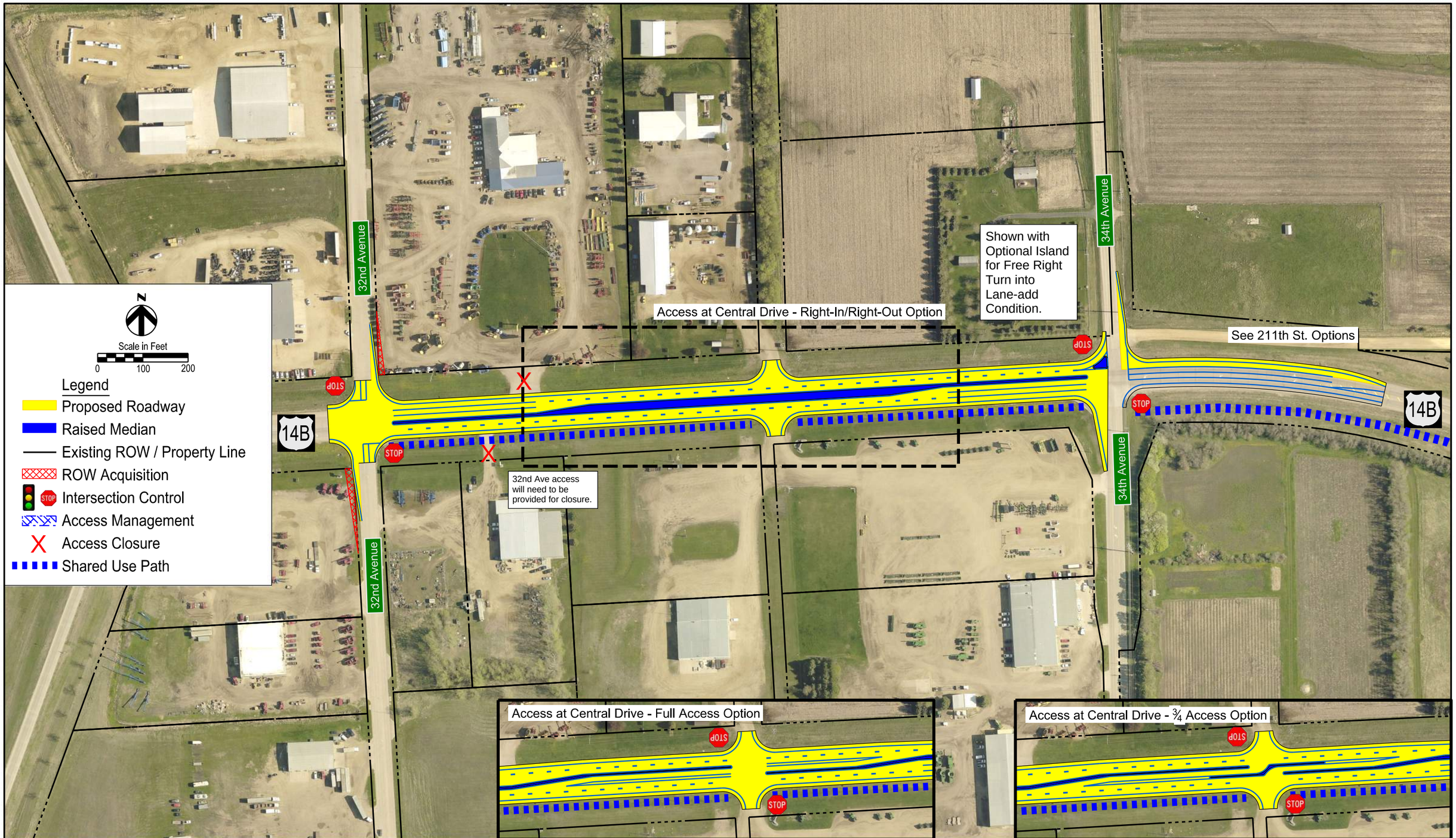
US14 Bypass - I-29 to US14 (East)
Scenarios A and B

US14 Bypass – I-29 to US14 (east) Scenarios

Scenario B: 4-Lane Divided (32nd Avenue to 34th Avenue) with Intersection Improvements

Scenario includes:

- 4-lane divided between 32nd Avenue and 34th Avenue.
- Maintain existing 2-lane between 34th Avenue and US14 (east) (similar to Scenario A).
- 32nd Avenue intersection improvements.
- 34th Avenue intersection improvements.
- US14/US14 Bypass intersection (east) improvements (three options).
- 211th Street/18th Street intersection improvements (two options).
- Shared-use path on south side.



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US14 Bypass - I-29 to US14 (East) Scenarios
4-Lane Divided Cross-Section with Intersection Improvements

US14 / US14B Corridor Study

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Figure

US14 Bypass - I-29 to US14 (East)
Scenario B

US14 Bypass – I-29 to US14 (east) Scenarios

211th Street/18th Street Intersection Options

Options include:

A. Realign 211th Street/18th Street to provide 250 feet separation from US14 Bypass.
B. Realign 211th Street/18th Street to create intersection US14 Bypass ¼ mile east of 34th Avenue.

N

Scale in Feet

0 100 200

Legend

- Proposed Roadway
- Roadway Removal
- Existing ROW / Property Line
- ROW Acquisition
- Intersection Control
- Access Management
- Access Closure

STOP

250 ft

211th Street

14B

34th Avenue

Intersection option shown at US14 Bypass 1/4 spacing from 34th Avenue.

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US14 Bypass - I-29 to US14 (East) 211th Street / 18th Street Intersection Options

US14 / US14B Corridor Study

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Figure
US14 Bypass - I-29 to US14 (East) 211th Street / 18th Street Intersection Options

US14 Bypass – I-29 to US14 (east) Scenarios

US14/US14 Bypass (east) Intersection Options

Options include:

A. Intersection improvements (existing configuration).
B. Intersection improvements (free right turn).
C. Intersection improvements (urban intersection, all movements at main intersection).

All options include an acceleration lane for southbound to eastbound left turn movements.

N

Scale in Feet

0 125 250

Legend

- Proposed Roadway
- Raised Median
- Existing ROW / Property Line
- ROW Acquisition
- Intersection Control
- Access Closure
- Shared Use Path

14B

Potential Signalized Intersection when Warranted

STOP

14

14

US14 Bypass - I-29 to US14 (East) Scenarios
Intersection Improvements (Existing Configuration)

US14 / US14B Corridor Study

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Federal Highway Administration

Figure

US14/US14 Bypass (East) Intersection - Option A

N

Scale in Feet

0 125 250

Legend

- Proposed Roadway
- Roadway Removal
- Existing ROW / Property Line
- ROW Acquisition
- Intersection Control
- Access Closure
- Shared Use Path

14B

Potential Signalized Intersection when Warranted

STOP

14

14

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N

Scale in Feet

0 125 250

Legend

- Proposed Roadway
- Roadway Removal
- Existing ROW / Property Line
- ROW Acquisition
- Intersection Control
- Access Closure
- Shared Use Path

14B

Potential Signalized Intersection when Warranted

STOP

14

14

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US14 Bypass - I-29 to US14 (East) Scenarios
Intersection Improvements (Urban Intersection)

US14 / US14B Corridor Study

Brookings, SD

Figure

US14/US14 Bypass (East)
Intersection - Option C

US14 Bypass – I-29 to US14 (east) Scenarios

Improvement Scenarios

Scenario A: Existing 3-Lane with Intersection Improvements

Scenario B: 4-Lane Divided (32nd Ave to 34th Ave) with Intersection Improvements

US14/US14 Bypass (East) Intersection Option A: Intersection Improvements (existing configuration)

US14/US14 Bypass (East) Intersection Option B: Intersection Improvements (free right turns)

US14/US14 Bypass (East) Intersection Option C: Intersection Improvements (urban intersection, all movements at main intersection)

211th Street / 18th Street Realignment Options: to 34th Avenue (Option A) or to US14 Bypass (Option B)

Preliminary Summary Matrix

Scenario	Central Driveway Access Treatment (33rd Ave ROW)	2050 Traffic Operations	Predictive Safety		ROW & Costs		Environmental Resources
		Intersection Operations (LOS)	F&I Crashes	Total Crashes	ROW Acquisition	Construction & ROW Costs	Potential Impacts
		AM / PM	*Average Annual # Crashes*	*Average Annual # Crashes*	*Acres*	*$ mil*	*Low, Medium, High*
Scenario A	Full	LOS B or better	0.8	2.2	< 0.5	$0.5	Low
Scenario B	RIRO	LOS B or better	0.8	2.2	< 0.5	$2.5	Low
	Full	LOS B or better	0.8	2.2	< 0.5	$2.5	Low
	¾	LOS B or better	0.8	2.2	< 0.5	$2.5	Low
Corridor No Build	Full	LOS B or better	1.1	2.9	0	0	Low
Intersection Option A	-	LOS B or better	1.2	3.0	< 0.5	$0.5	Low
Intersection Option B	-	LOS B or better	1.1	2.9	< 0.5	$0.5	Low
Intersection Option C	-	LOS B or better	0.6	1.6	< 0.5	$0.5	Low
Intersection No Build	-	LOS B or better	1.2	3.2			Low
Realignment Option A	-	-	-	-	4.5	$0.75	Low
Realignment Option B	-	-	-	-	1.0	$0.5	Low

Central driveway access control showed negligible differences in predictive safety due to low volumes. It is expected that if a public-access 33rd Avenue is constructed at this location in the future and volumes increase accordingly, the treatment of this access will have more of an impact on predictive safety results.