



# I-90 EXIT 63

INTERCHANGE MODIFICATION STUDY, ENVIRONMENTAL REVIEW & DESIGN

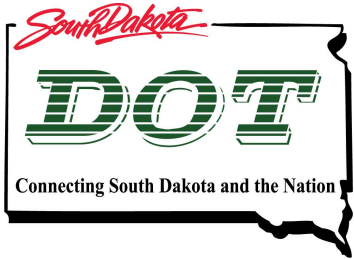


PLAN

DEFINE

DELIVER

# Introduction



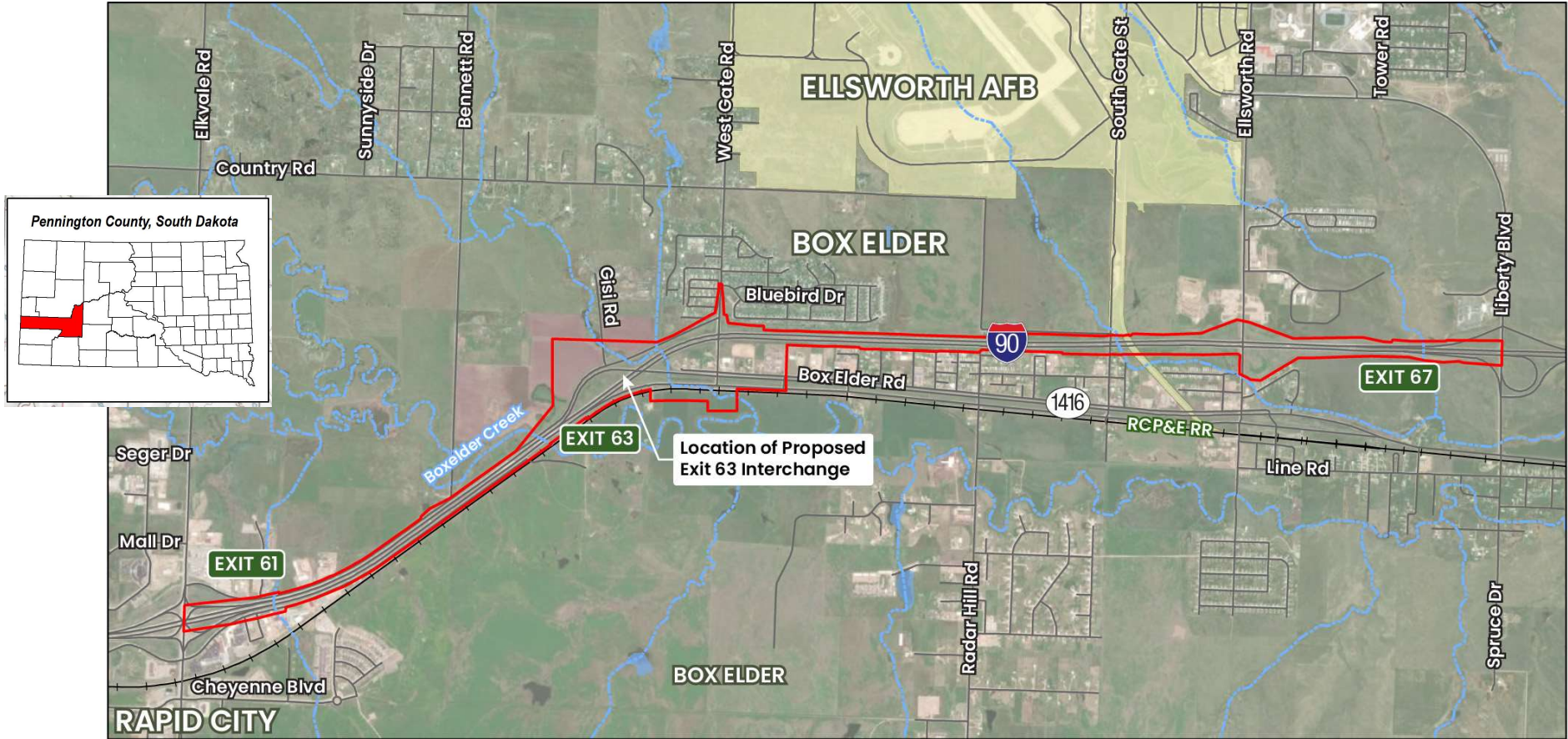
I-90 EXIT 63

PLAN

DEFINE

DELIVER

# Project Overview



I-90 EXIT 63

PLAN > DEFINE > DELIVER

# Current Conditions



I-90 EXIT 63

PLAN

DEFINE

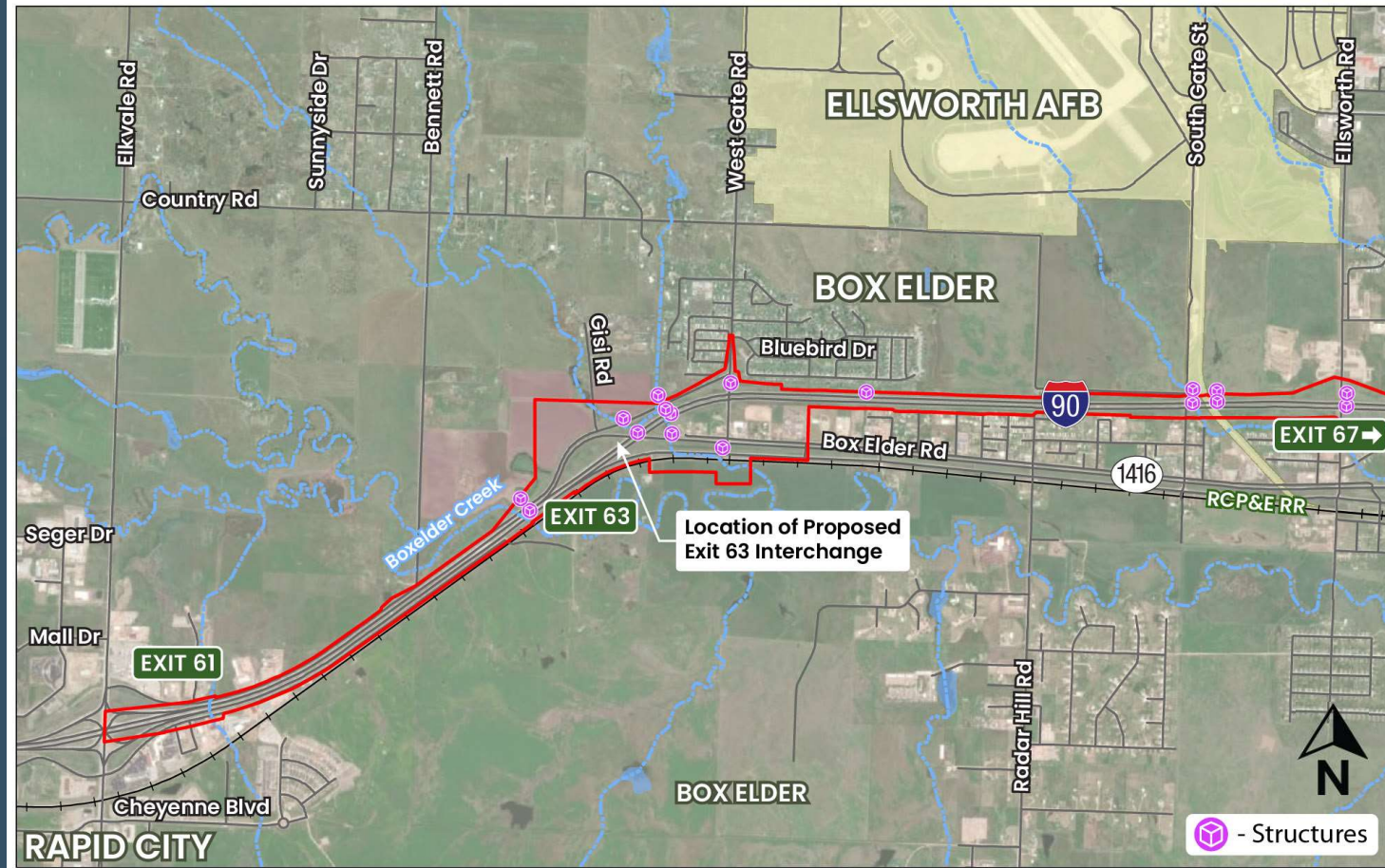
DELIVER

# Project Need

- Additional I-90 Lanes
- Provide Interstate Access
- Improve Safety
- Minimize Traffic Congestion
- Accommodate Bicycle / Pedestrian

# Project Area

- Box Elder, SD
- I-90 from Exits 61 to 67
- Exit 63 Interchange



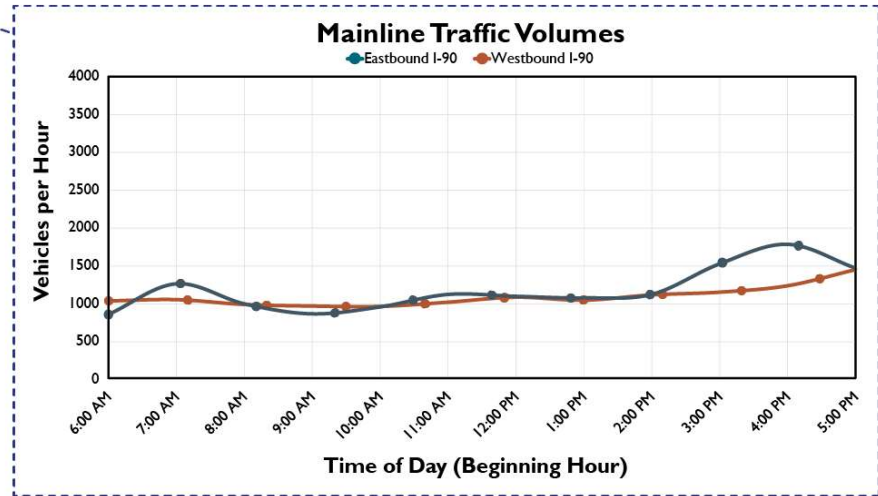
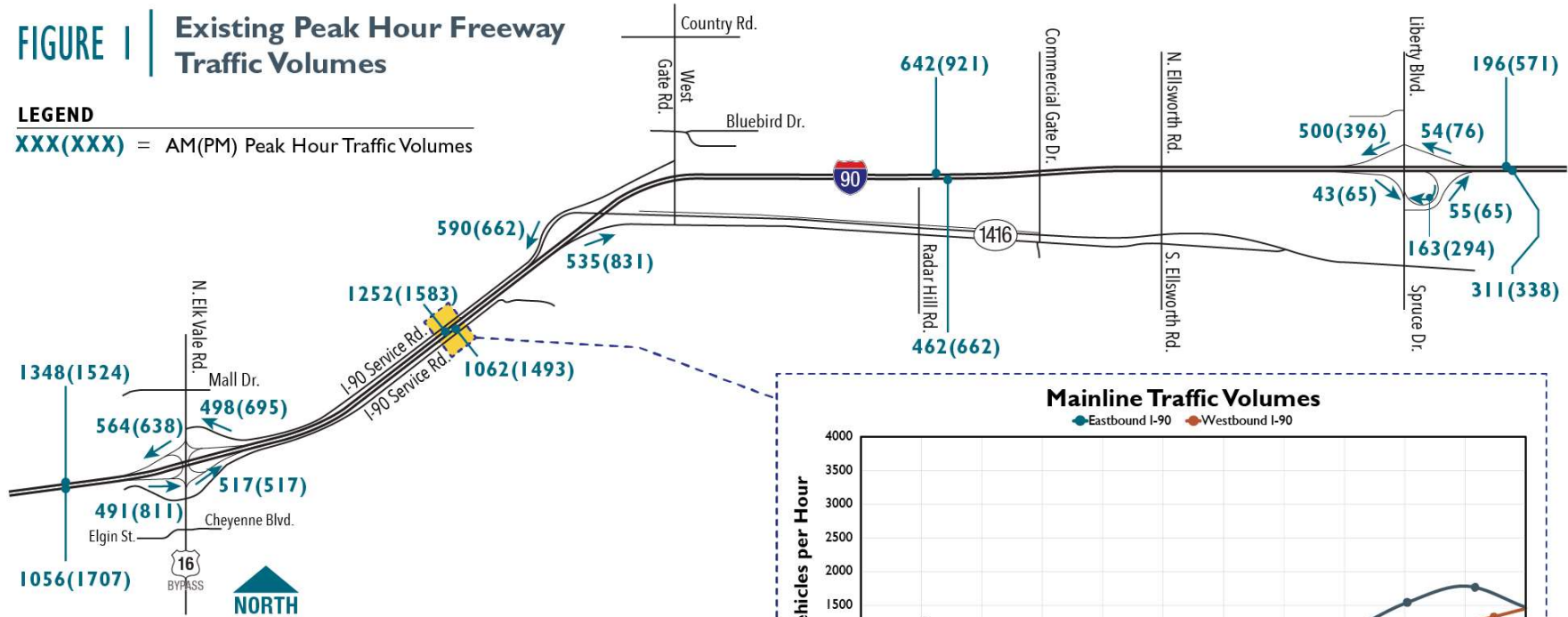
I-90 EXIT 63

# Traffic Criteria for Proposed Improvements

**FIGURE 1** Existing Peak Hour Freeway Traffic Volumes

**LEGEND**

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes



**I-90 EXIT 63**

PLAN

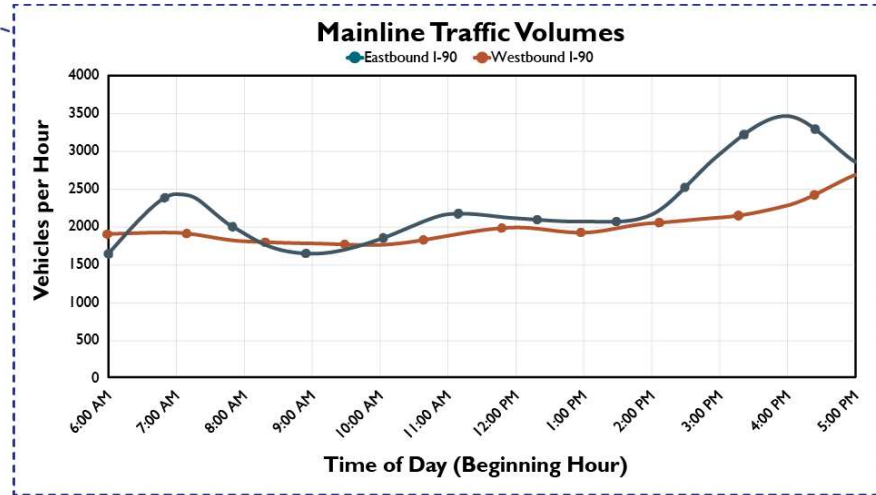
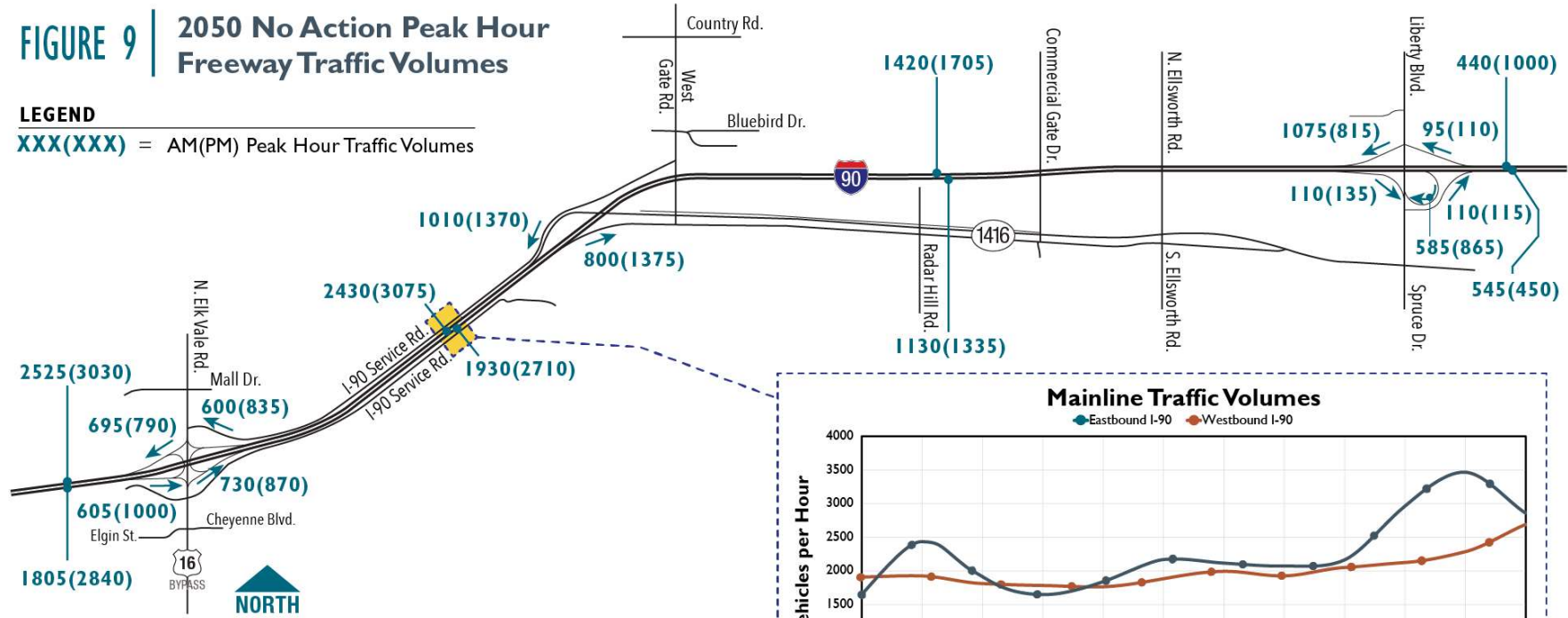
DEFINE

DELIVER

# Traffic Criteria for Proposed Improvements

**FIGURE 9** | 2050 No Action Peak Hour Freeway Traffic Volumes

**LEGEND**  
 XXX(XXX) = AM(PM) Peak Hour Traffic Volumes



**I-90 EXIT 63**

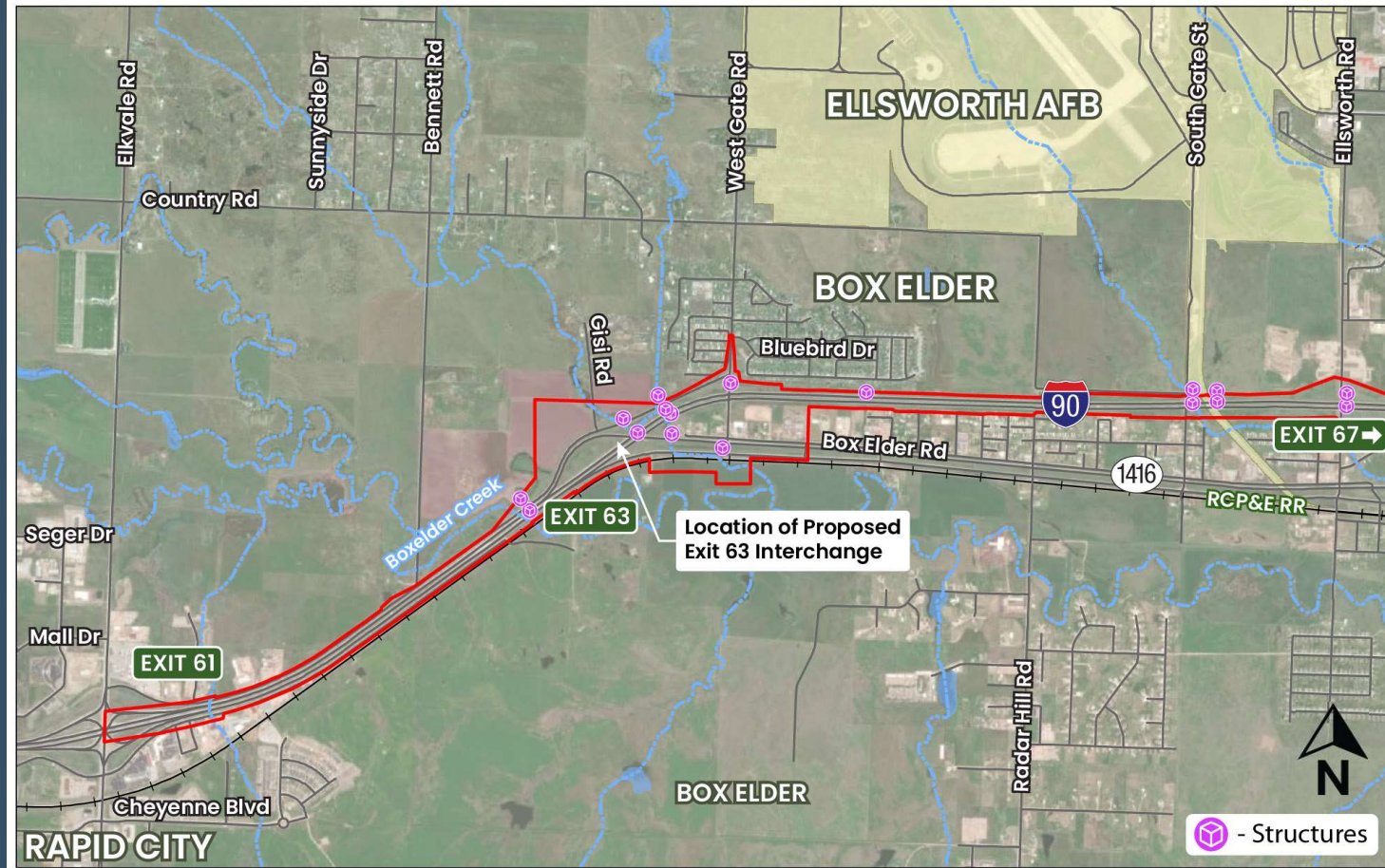
PLAN

DEFINE

DELIVER

# Proposed Roadway Improvements – Ultimate Goal

- Prepare for the Future
- Improve Traffic Operations
- Increase Safety
- Provide Bicycle & Pedestrian Accessibility





# Feasible Alternatives

## Westgate Road Diamond Interchange

- South Hwy 1416 Section (1a)
- North Hwy 1416 Section (1b)

## Hwy 1416 Diamond Interchange

- South Hwy 1416 Section (2a)
- North Hwy 1416 Section (2b)

## Hwy 1416 Diverging Diamond Interchange (DDI)

- South Hwy 1416 Section (3a)
- North Hwy 1416 Section (3b)



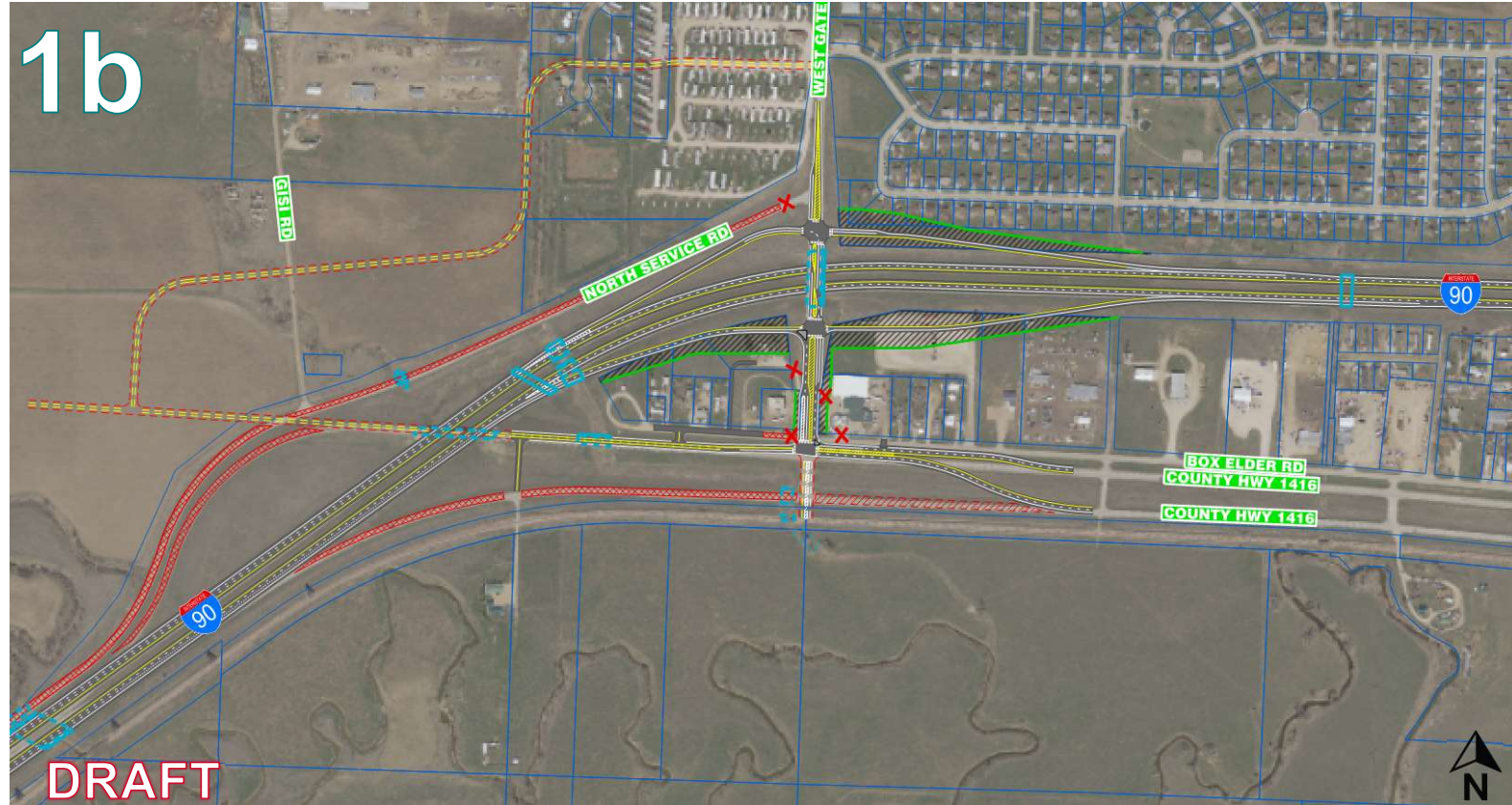
# Feasible Interchange Alternative – West Gate Road (1a/1b)

- Densely Populated
- Brand New Footprint
- Increase Congestion on West Gate Rd
- Hwy 1416 travelers experience out – of direction travel
- Heavy travel demand to the West



# Feasible Interchange Alternative – West Gate Road (1a/1b)

- Densely Populated
- Brand New Footprint
- Increase Congestion on West Gate Rd
- Hwy 1416 travelers experience out – of direction travel
- Heavy travel demand to the West



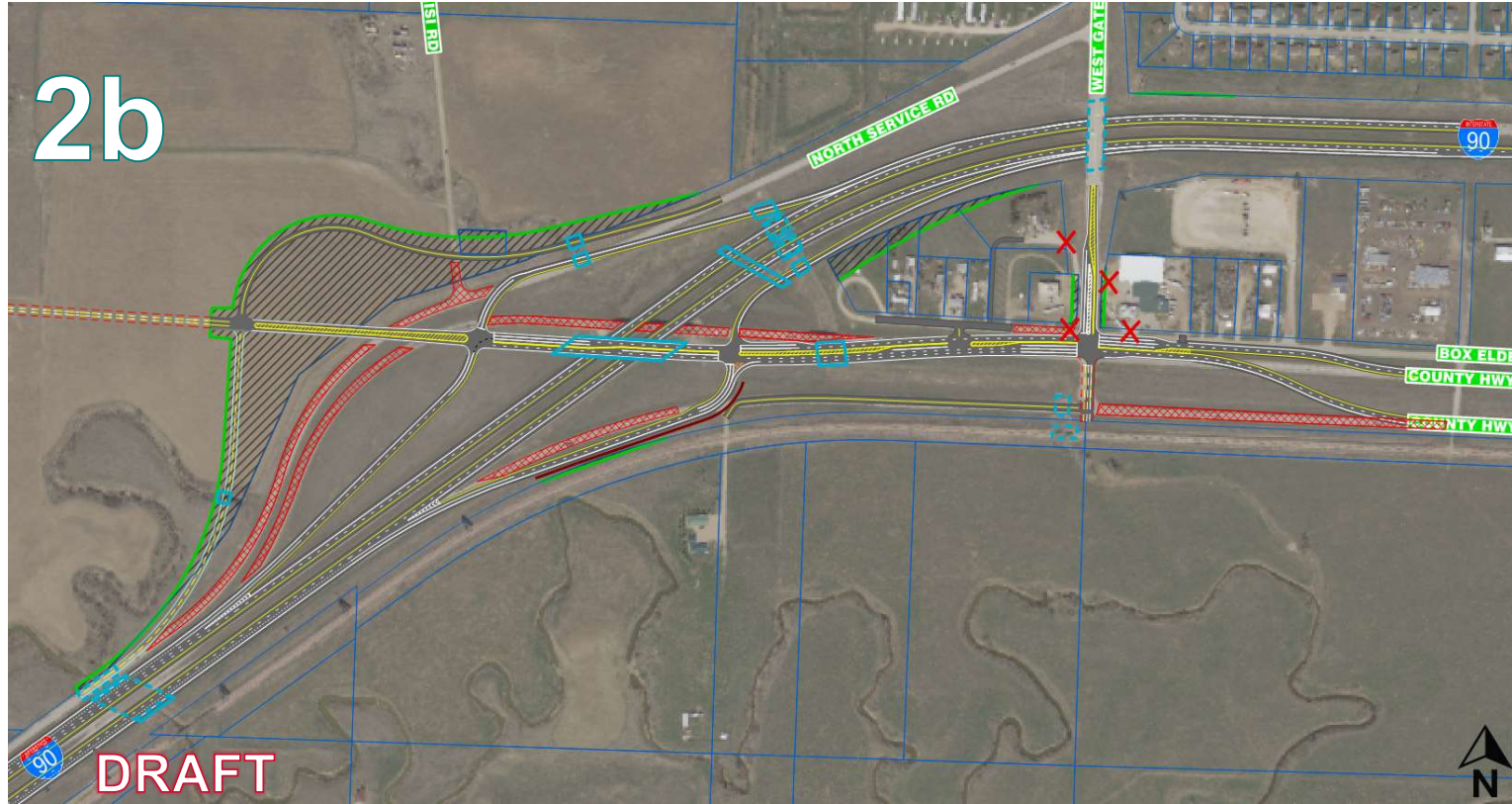
## Feasible Interchange Alternative – Hwy 1416 Standard Diamond (2a/2b)

- Existing Exit 63 location
- Heavy travel demand to the West
- Hwy 1416 pattern remains
- Additional Hwy 1416 EB lane
- RCP&E Railroad Impacts



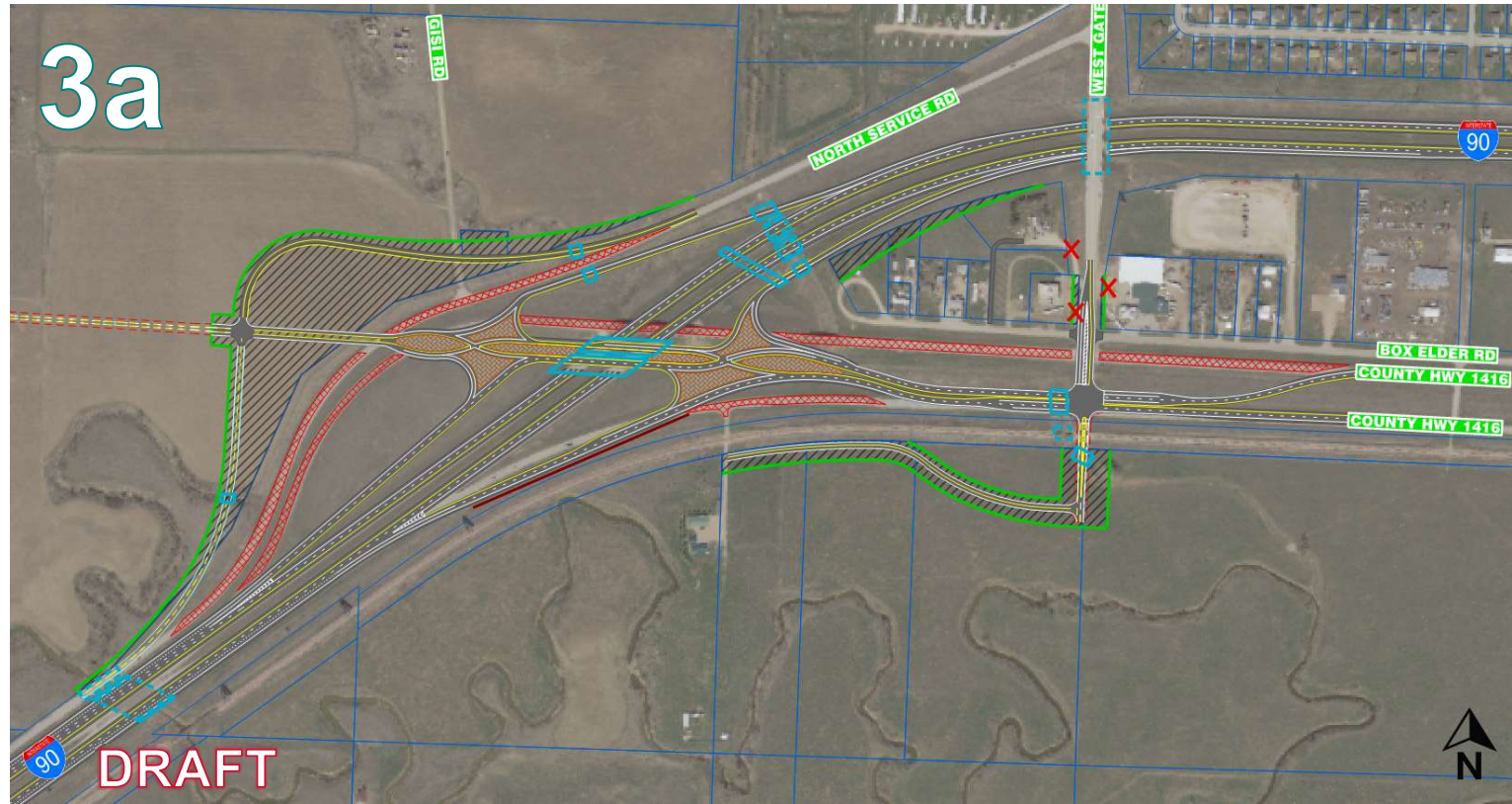
## Feasible Interchange Alternative – Hwy 1416 Standard Diamond (2a/2b)

- Existing Exit 63 location
- Heavy travel demand to the West
- Hwy 1416 pattern remains
- Additional Hwy 1416 EB lane
- RCP&E Railroad Impacts



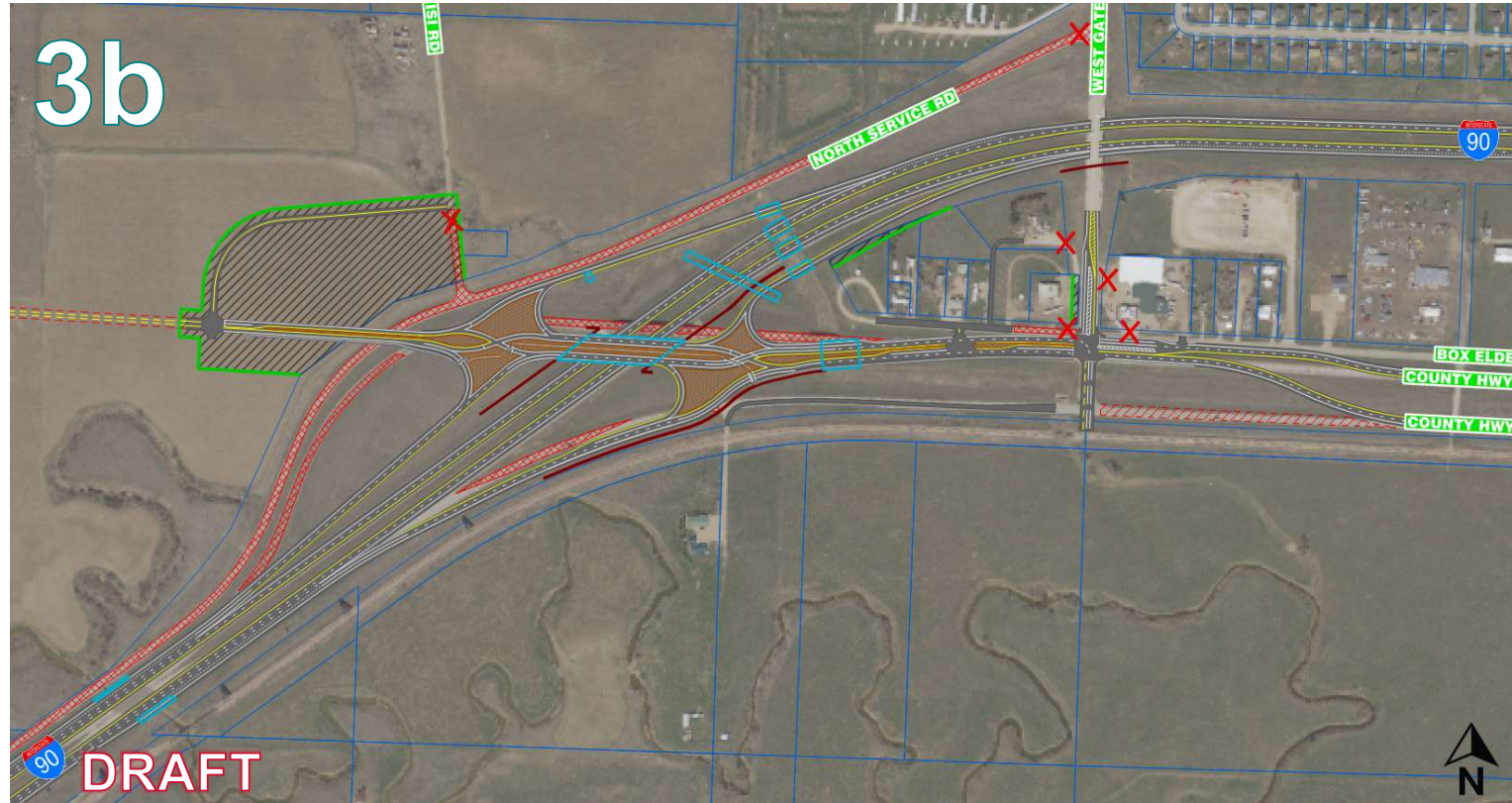
## Feasible Interchange Alternative – Hwy 1416 Diverging Diamond Interchange (3a/3b)

- Existing Exit 63 location
- Heavy travel demand to the West
- Hwy 1416 pattern remains
- Best minimized congestion
- Improves safety



## Feasible Interchange Alternative – Hwy 1416 Diverging Diamond Interchange (3a/3b)

- Existing Exit 63 location
- Heavy travel demand to the West
- Hwy 1416 pattern remains
- Best minimized congestion
- Improves safety



# Feasible Interchange Alternative Screening Criteria

- Safety & Traffic Operations ★
- Ellsworth AFB
- Physical Impacts ★
- Compatibility with Existing Community Plans
- Construction Phasing and Implementation
- Design Criteria
- Pedestrian and Bicycle

REVISED DRAFT OPTION EVALUATION CATEGORIES AND CRITERIA	1A WEST GATE DIAMOND (SOUTH)	1B WEST GATE DIAMOND (NORTH)	2A HWY 1416 DIAMOND (SOUTH)	2B HWY 1416 DIAMOND (NORTH)	3A HWY 1416 DDI (SOUTH)	3B HWY 1416 DDI (NORTH) ★
CRITERIA						
SAFETY AND TRAFFIC OPERATIONS	Yellow	Yellow	Blue	Blue	Green	Blue
ELLSWORTH AFB IMPACTS	Orange	Orange	Blue	Blue	Green	Green
PHYSICAL IMPACTS	Orange	Orange	Orange	Orange	Yellow	Green
COMPATIBILITY WITH EXISTING COMMUNITY PLANS	Red	Orange	Yellow	Green	Yellow	Green
CONSTRUCTION PHASING AND IMPLEMENTATION	Red	Red	Red	Orange	Red	Orange
DESIGN CRITERIA	Red	Red	Yellow	Yellow	Yellow	Yellow
MULTI-MODAL ACCOMMODATIONS	Blue	Blue	Blue	Blue	Blue	Blue
	ELIMINATED	ELIMINATED	ELIMINATED	ELIMINATED	ELIMINATED	RETAINED

Most Meets Criteria → Least Meets Criteria

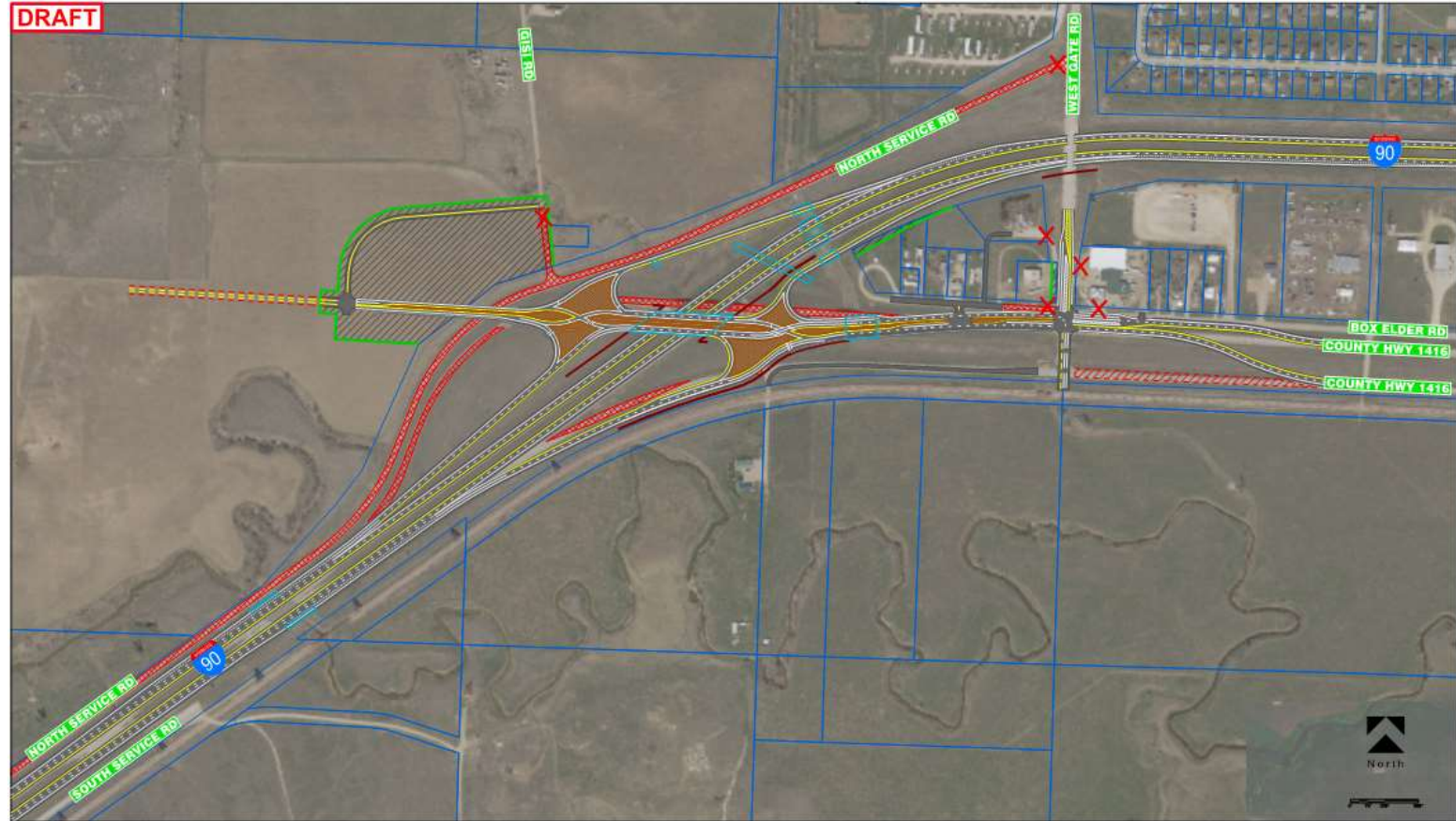


I-90 EXIT 63



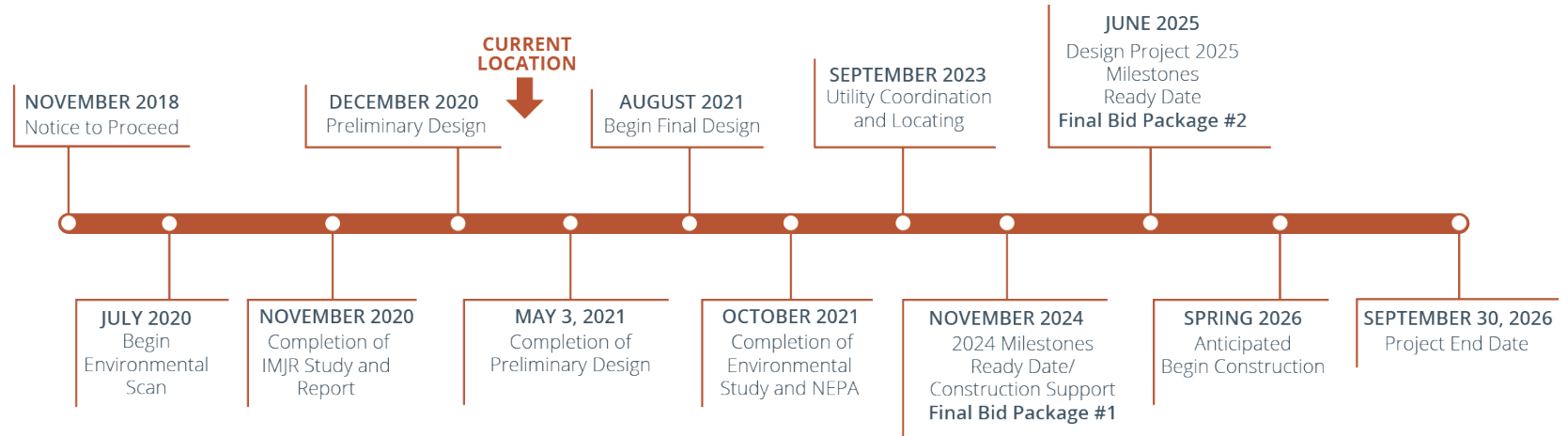
# Most Technically Feasible Interchange Alternative – Hwy 1416 Diverging Diamond Interchange (3b)

- Decrease Traffic Congestion
- Increase Safety
- Fewer Impacts to the property owners
- Fewer impacts to RCP&E RR
- In line with Community Plans
- Ability to maintain traffic during construction



# Next Steps & Project Timeline

- IMJR (2020)
- Environmental Study (2021)
- Preliminary Design (2021)
- Final Design (2022 – 2025)
- Construction (2026 - 2029)



I-90 EXIT 63

# Providing Project Feedback

Please contact:

**Steve Gramm, PE**  
Planning Engineer  
South Dakota Department of Transportation  
(605) 773-6641

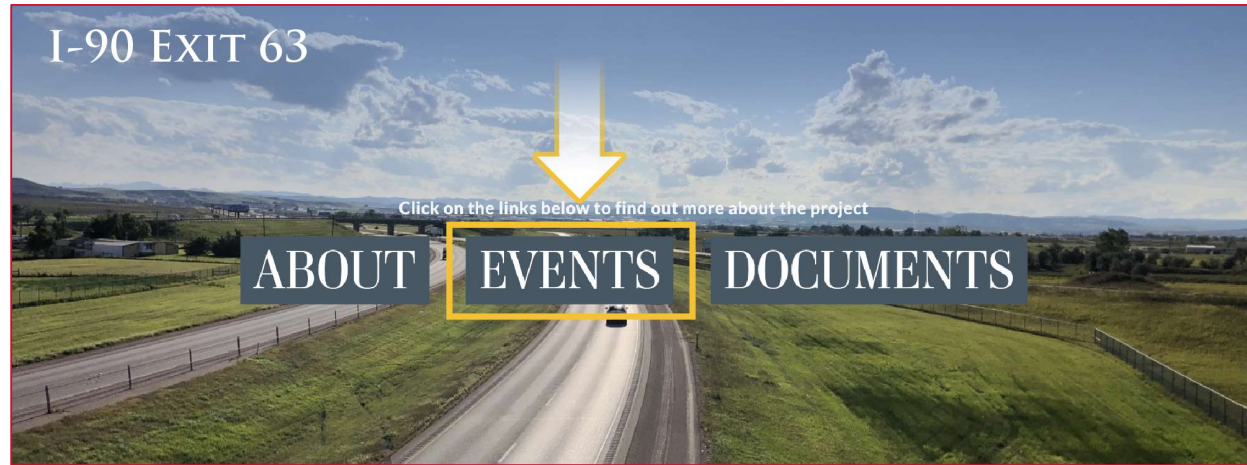
**Jennica M. Wilcox, PE**  
Transportation Engineer  
Felsburg Holt & Ullevig  
(605) 777-1973

*or visit the project website:*

**[www.i90exit63.com](http://www.i90exit63.com)**



## I-90 EXIT 63



— GET INVOLVED —

The South Dakota Department of Transportation (SDDOT) will hold open house style public meetings for the I-90 Exit 63 (Box Elder/Ellsworth AFB Commercial Gate) Interchange Modification Study, Environmental Review and Design project. To attend the public meetings, please see the information below: