



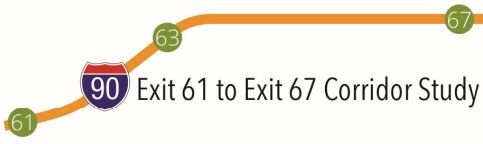
# I-90 Corridor Exit 61 to Exit 67 Corridor Study

Public Meeting #3

March 6, 2017

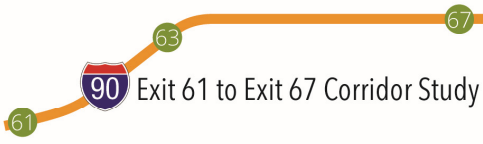
BHSU Rapid City Center

---



# Introduction

- Welcome
  - Housekeeping Items
  - Methods of Commenting
    - Comment Card tonight
    - Comment Card later
    - Conversation with project representatives
    - Correspondence after the meeting
  - Comments due by September 29
-



# Project Contacts

## SDDOT Project Manager:

Steve Gramm, PE

Planning Engineer

Ph: (605)773-6641

[steve.gramm@state.sd.us](mailto:steve.gramm@state.sd.us)

## FHU Project Contacts:

Lyle DeVries

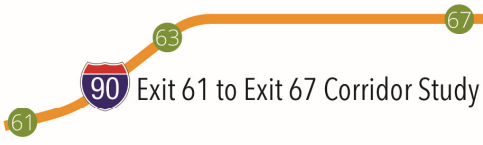
Todd Frisbie

Ph: (303)721-1440

[lyle.devries@fhueng.com](mailto:lyle.devries@fhueng.com)

## Study Advisory Team Entities:

- Federal Highway Administration (FHWA)
  - City of Box Elder
  - Rapid City Area MPO
-



# Project Background

- Recommended in BESTPlan as a more focused study of important corridor
- Positioned to:
  - Answer key questions in advance of I-90 rehab/reconstruction (8 yrs. out)
  - Address future of Exit 63
- Collaborative effort among several entities



# Study Area & Project Goals & Needs

## Study Goals:

Complete a list of transportation issues and needs facing the I-90 corridor within the study area

Develop feasible solutions to address those issues and needs that meet current design standards and/or traffic level of service expectations under both the current and predicted future traffic conditions while promoting a livable community that will enhance the economic and social well-being of all users of the corridor.

Two primary areas of need will be investigated in this study.

### 1. I-90 Corridor Capacity

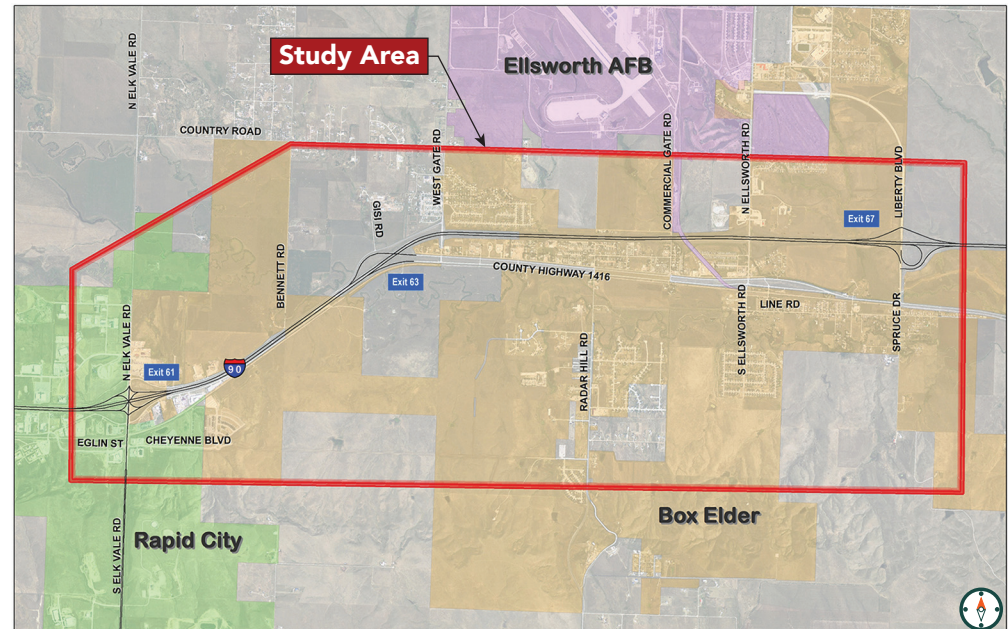
The need for I-90 and the surrounding roadway network to provide acceptable traffic operations and safety now and into the long range future.

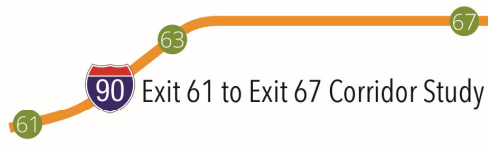
Traffic counts, forecasts and analyses may support:

- The need for an additional travel lane along I-90 for all or part of the study corridor
- The need for particular regional roadway network improvements to accommodate vehicle-trips and support I-90
- The need for other multimodal mobility enhancements

### 2. Interchange Access

The current half movement interchange provides only for movements to and from the west, not in compliance with current Federal Highway Administration (FHWA) policy requiring that service interchanges provide for all movements. The study will investigate options to bring Exit 63 into compliance with FHWA policy.



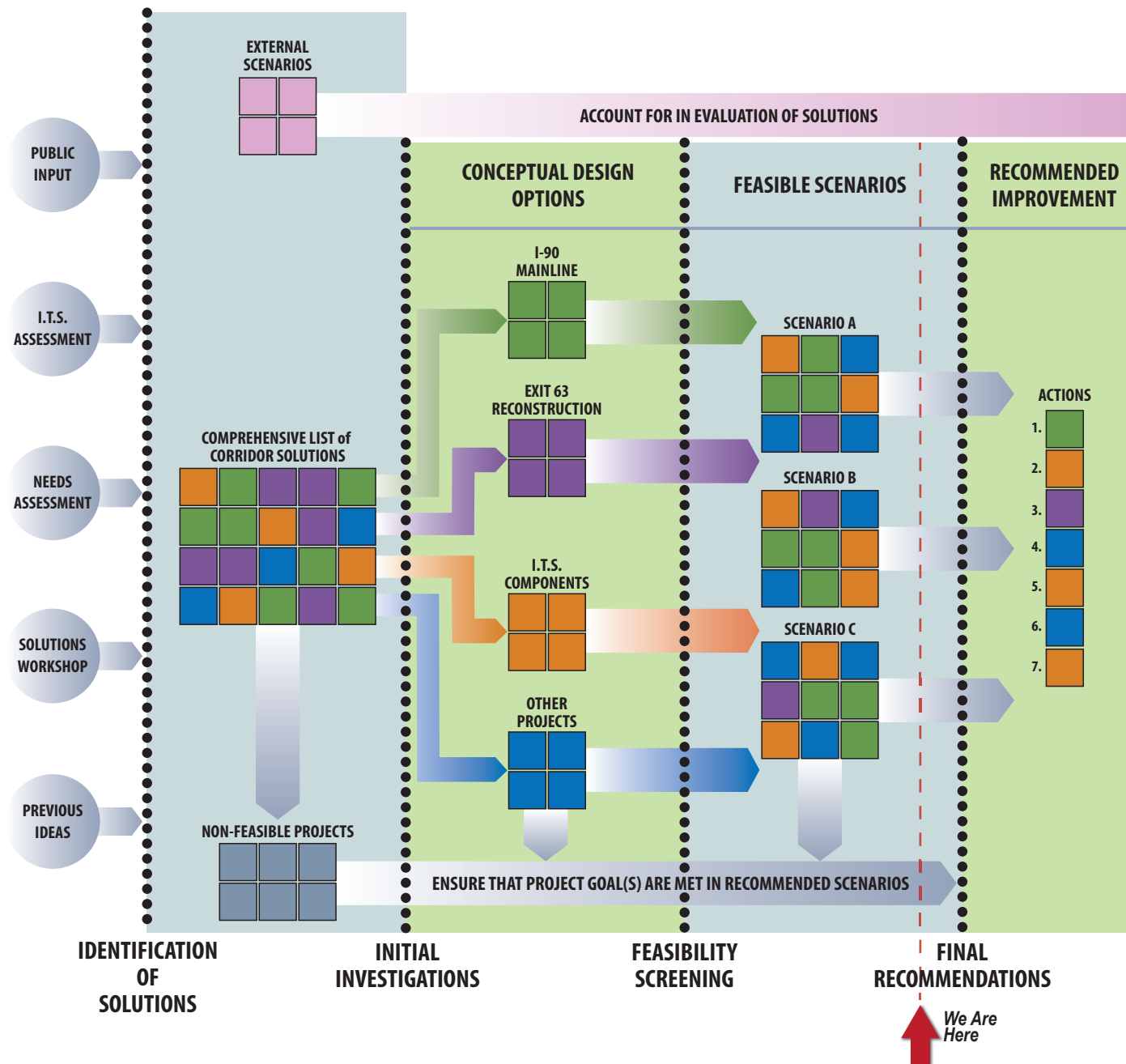


# Project Update

- Public Meeting held March 6, 2017 to present project and existing conditions information, input included:
    - Need for east-west connections supporting I-90
    - Favor for new Exit 63 slightly west of current location
    - Maintain business access
  - Project efforts:
    - Further analyses/screening to identify feasible solutions
    - Coordination with Study Advisory Team
  - Now presenting findings to public for review and input
-

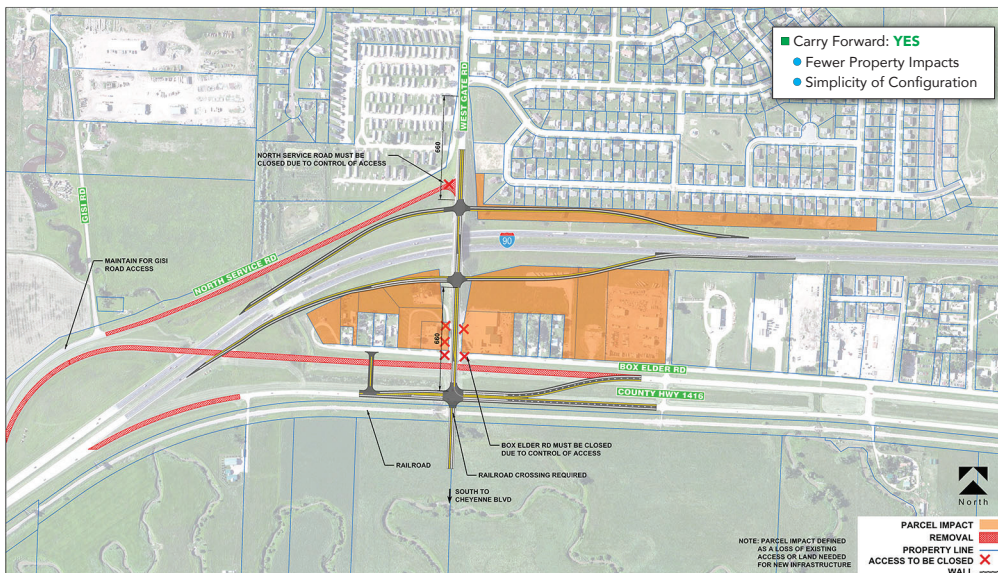


# Solutions Process

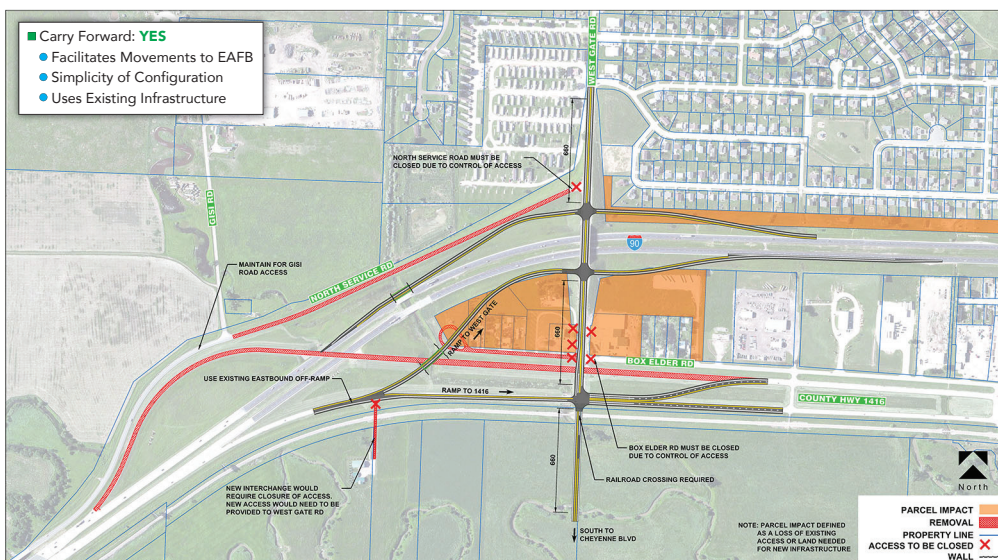




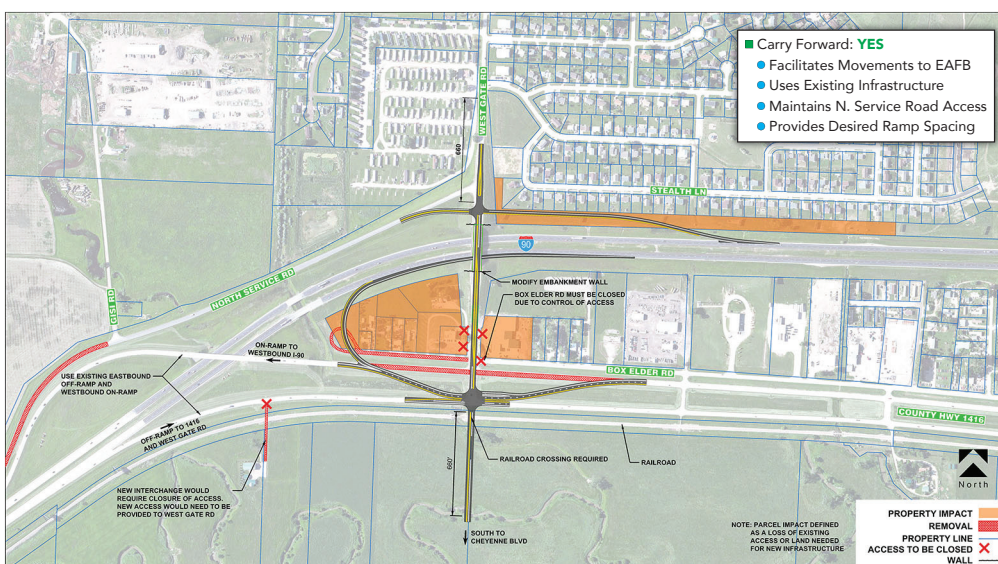
# Exit 63 Alternatives Carried Forward for Further Evaluation



I-90 Exit 63  
Alternative 1  
Interchange at  
West Gate



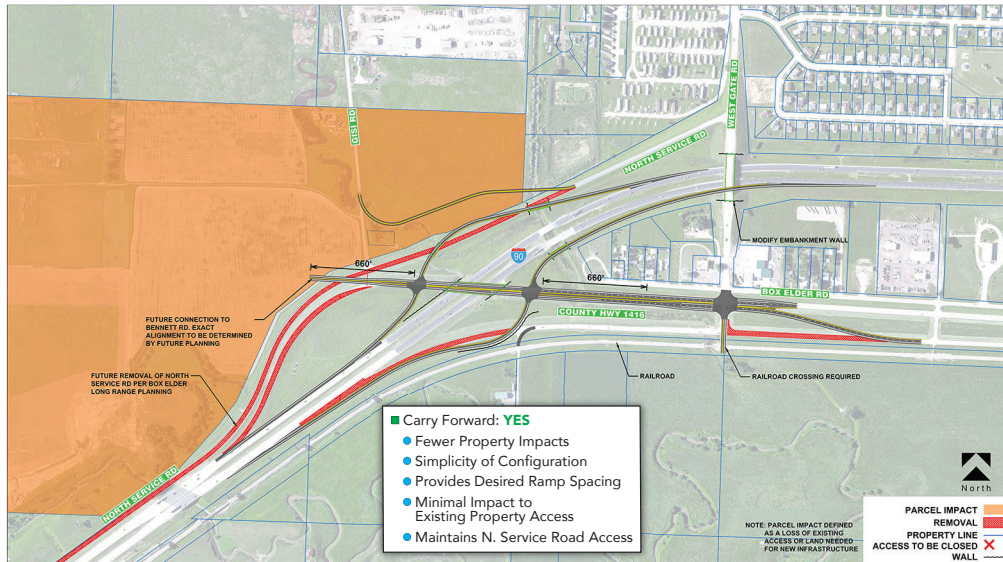
I-90 Exit 63  
Alternative 2  
Interchange at  
West Gate Rd.  
with Direct Access to  
Eastbound 1416



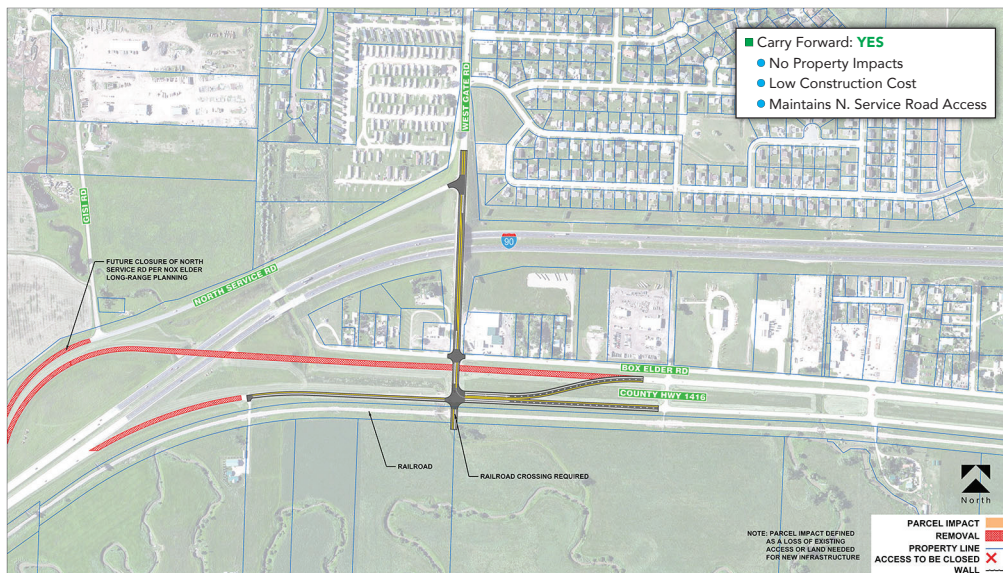
I-90 Exit 63  
Alternative 3  
Interchange at  
West Gate Rd. with  
Existing West Ramps  
and New East Ramps



# Exit 63 Alternatives Carried Forward for Further Evaluation



I-90 Exit 63  
 Alternative 4  
 Diamond Interchange  
 at Highway 1416



I-90 Exit 63  
 Alternative 11  
 Exit 63 Removal  
 at County Hwy 1416

# I-90 Exit 63

## Evaluation of Options Carried Forward

EXIT 63 INTERCHANGE RECONSTRUCTION ALTERNATIVES		ADDRESS THE NEED FOR THE PROJECT	ENVIRONMENTAL IMPACTS	PRIVATE PROPERTY AND ROW IMPACTS	FACILITATES MOVEMENTS TO AND FROM EAFB	CONSTRUCT-ABILITY	CONSTRUCTION COSTS	CONNECTIVITY WITH EXISTING ROAD NETWORK	DRIVER EXPECTANCY	DESIGN CRITERIA	CONTROL OF ACCESS	PUBLIC COMMENT	CARRY FORWARD?
#	NAME & LOCATION	1	2	3	4	5	6	7	8	9	10	11	
	NO ACTION	↓	NOT SCORED - DOES NOT MEET PURPOSE AND NEED										●
1	WESTGATE DIAMOND	↑	→	→	↘	↑	↘	→	↑	↘	↘	↘	●
2	WESTGATE DIAMOND WITH DIRECT ACCESS TO EAFB	↑	↓	↓	↘	→	↘	→	↘	↘	↓	→	●
3	WESTGATE WITH LOOP RAMP	↑	↓	↘	↑	→	→	↘	↓	→	↘	→	●
4	HIGHWAY 1416 DIAMOND	↑	→	↑	→	↓	↓	↑	↑	↑	↑	↑	●
11	REMOVE EXIT 63	↘	↑	↘	↓	↘	↑	↓	↘	↓	↑	↓	●

Best meets driver expectancy

Best utilizes existing infrastructure

Easiest to construct

Alternatives have most impacts on private property

Control of access cannot be achieved

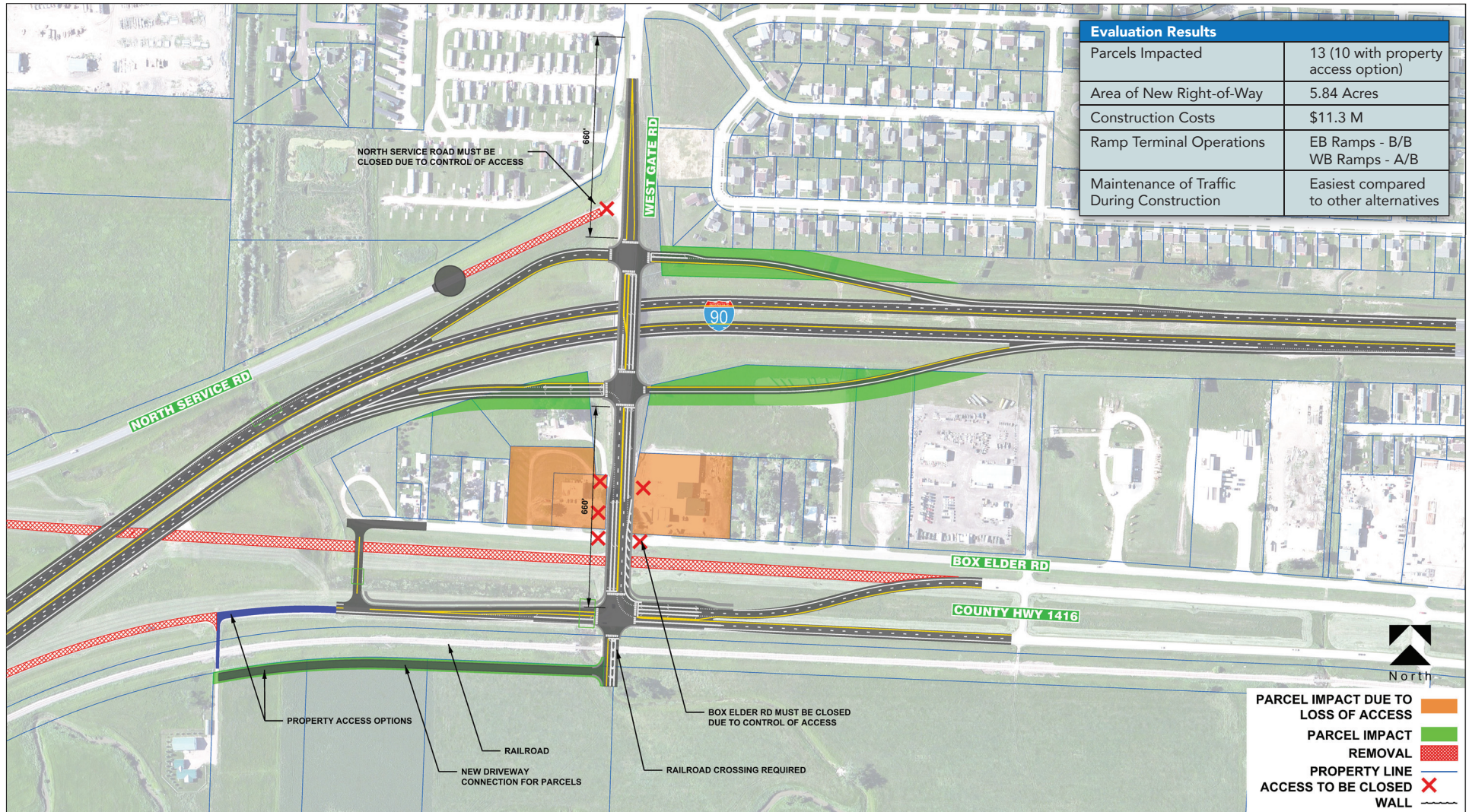
Lowest driver expectancy

### LEGEND

- ↓ Point Value = 0 *Least meets criterion*
- ↘ Point Value = 1
- Point Value = 2
- ↗ Point Value = 3
- ↑ Point Value = 4 *Best meets criterion*

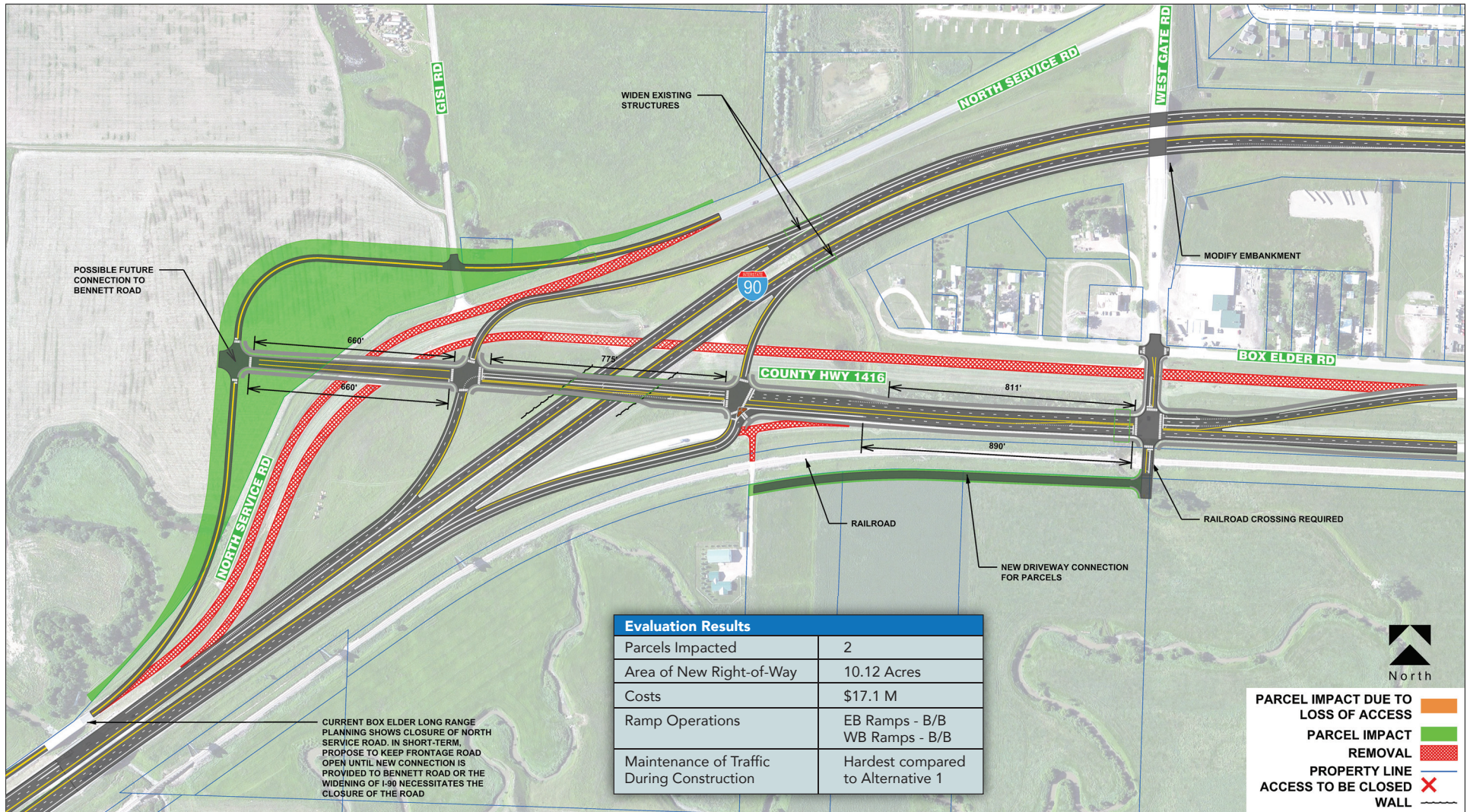


# Feasible Option 1 - Westgate Diamond



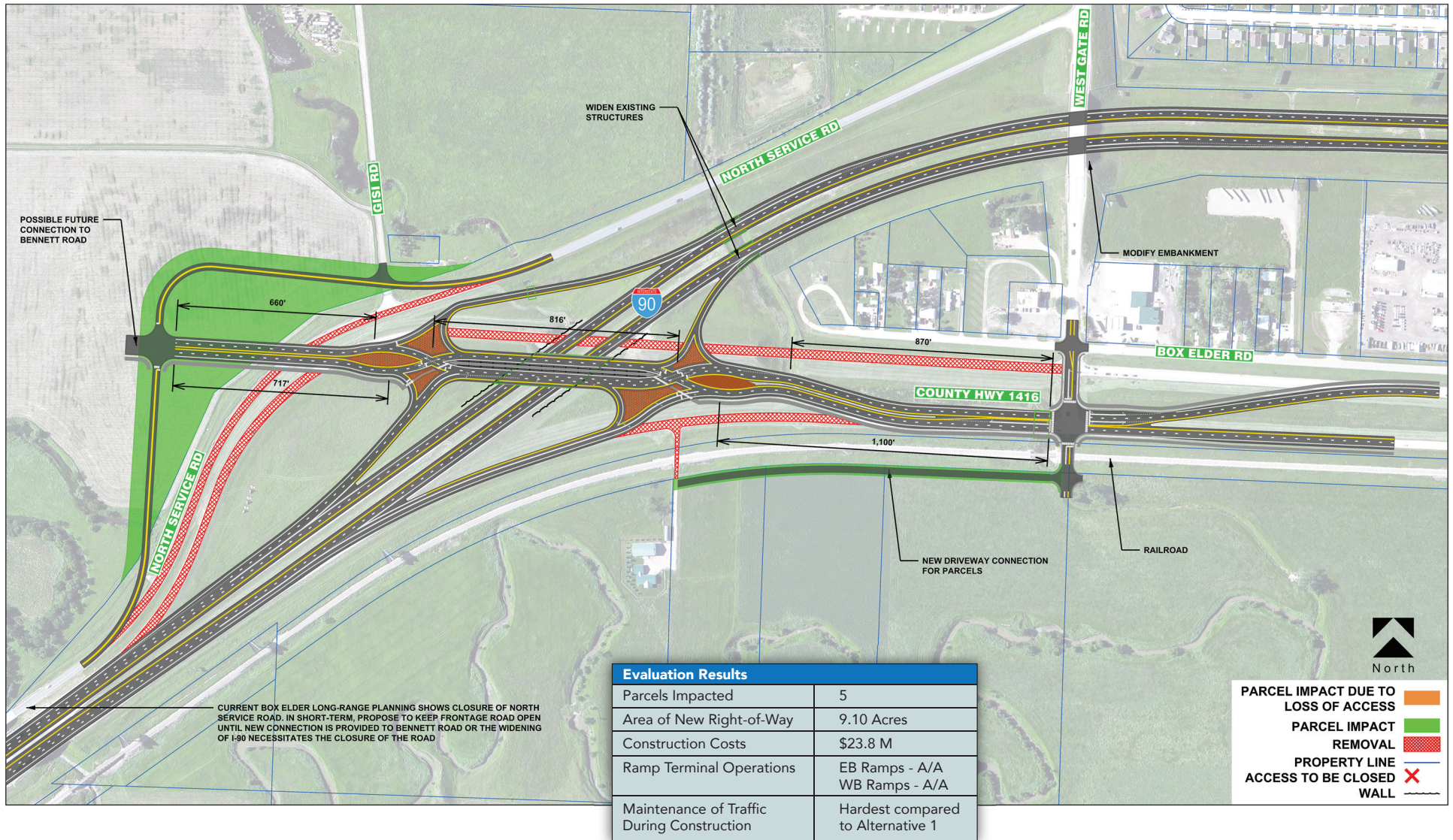


# Feasible Option 4a - Highway 1416 Diamond

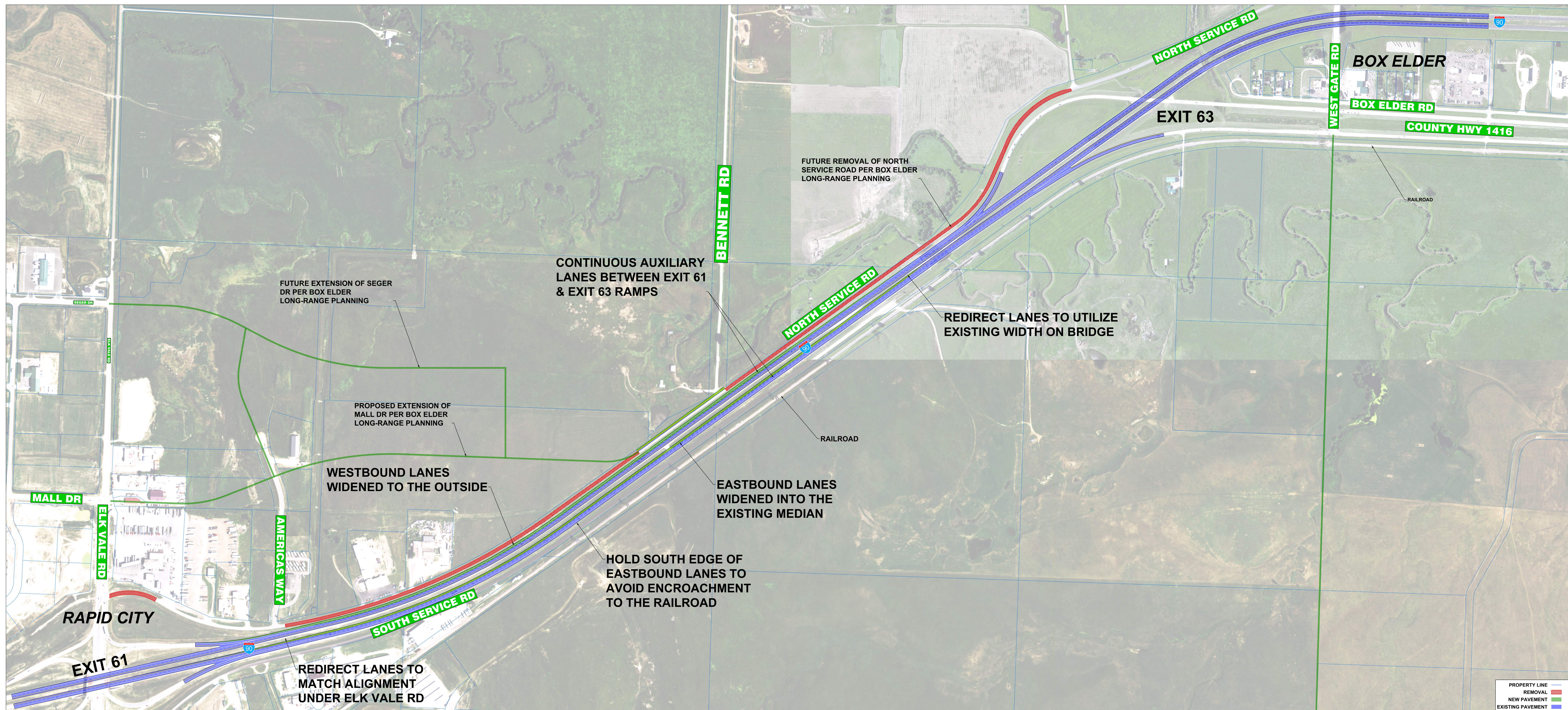




# Feasible Option 4b - Highway 1416 Diverging Diamond Interchange (DDI)





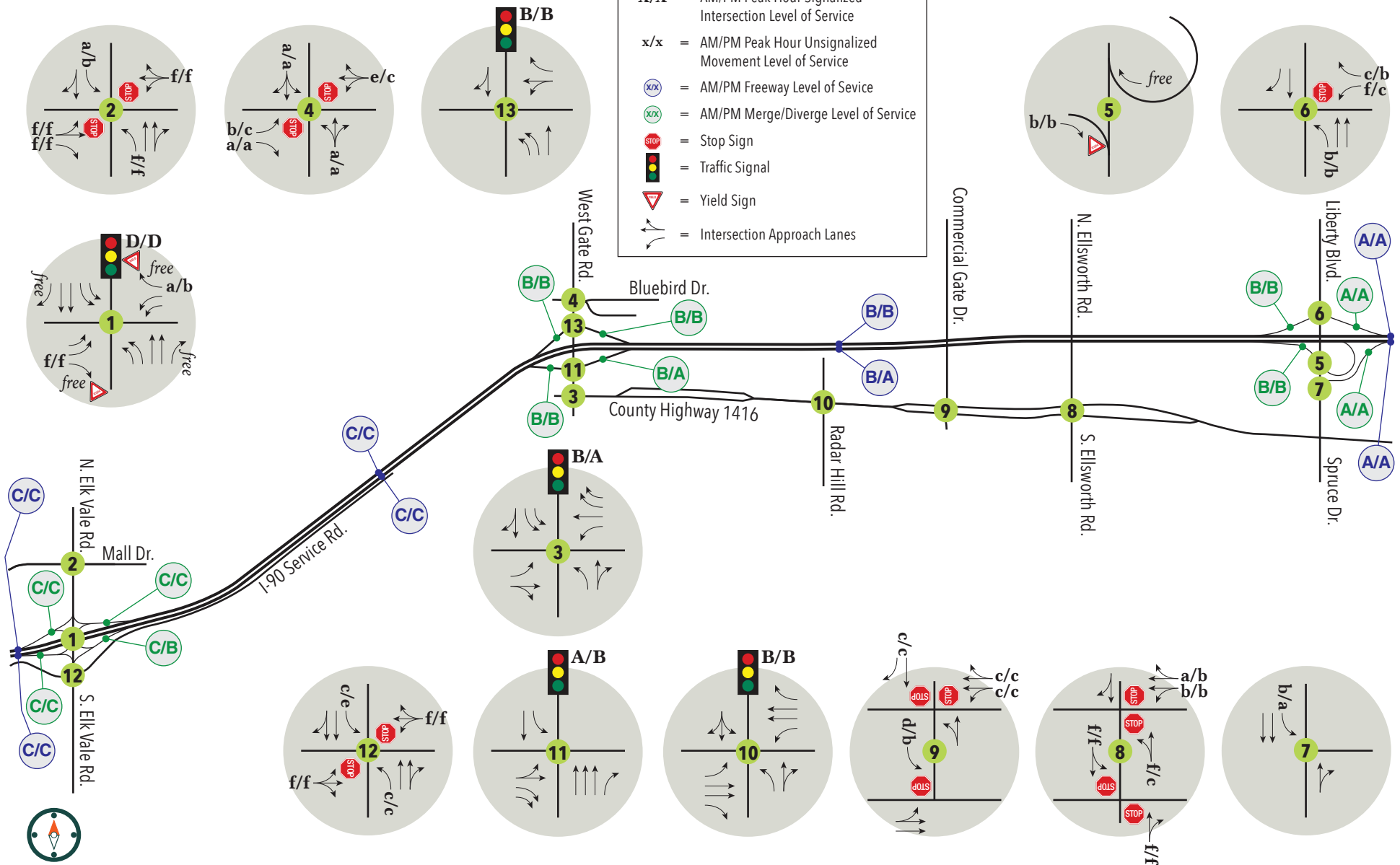




# Alternative 1 2045 Projected Traffic Conditions

**LEGEND**

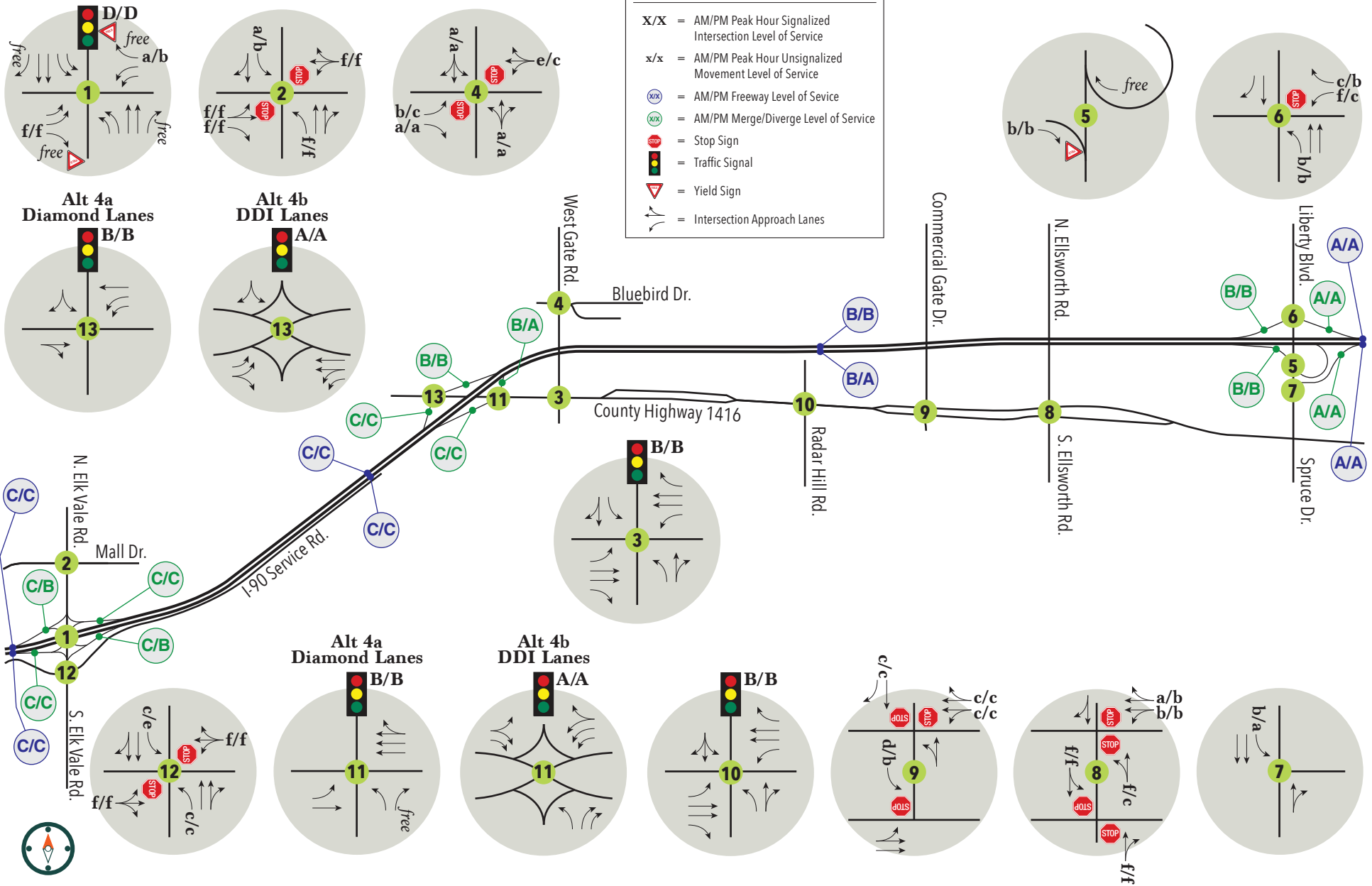
- X/X = AM/PM Peak Hour Signalized Intersection Level of Service
- x/x = AM/PM Peak Hour Unsignalized Movement Level of Service
- XXX = AM/PM Freeway Level of Service
- XXX = AM/PM Merge/Diverge Level of Service
- STOP = Stop Sign
- Traffic Signal
- Yield Sign
- Intersection Approach Lanes



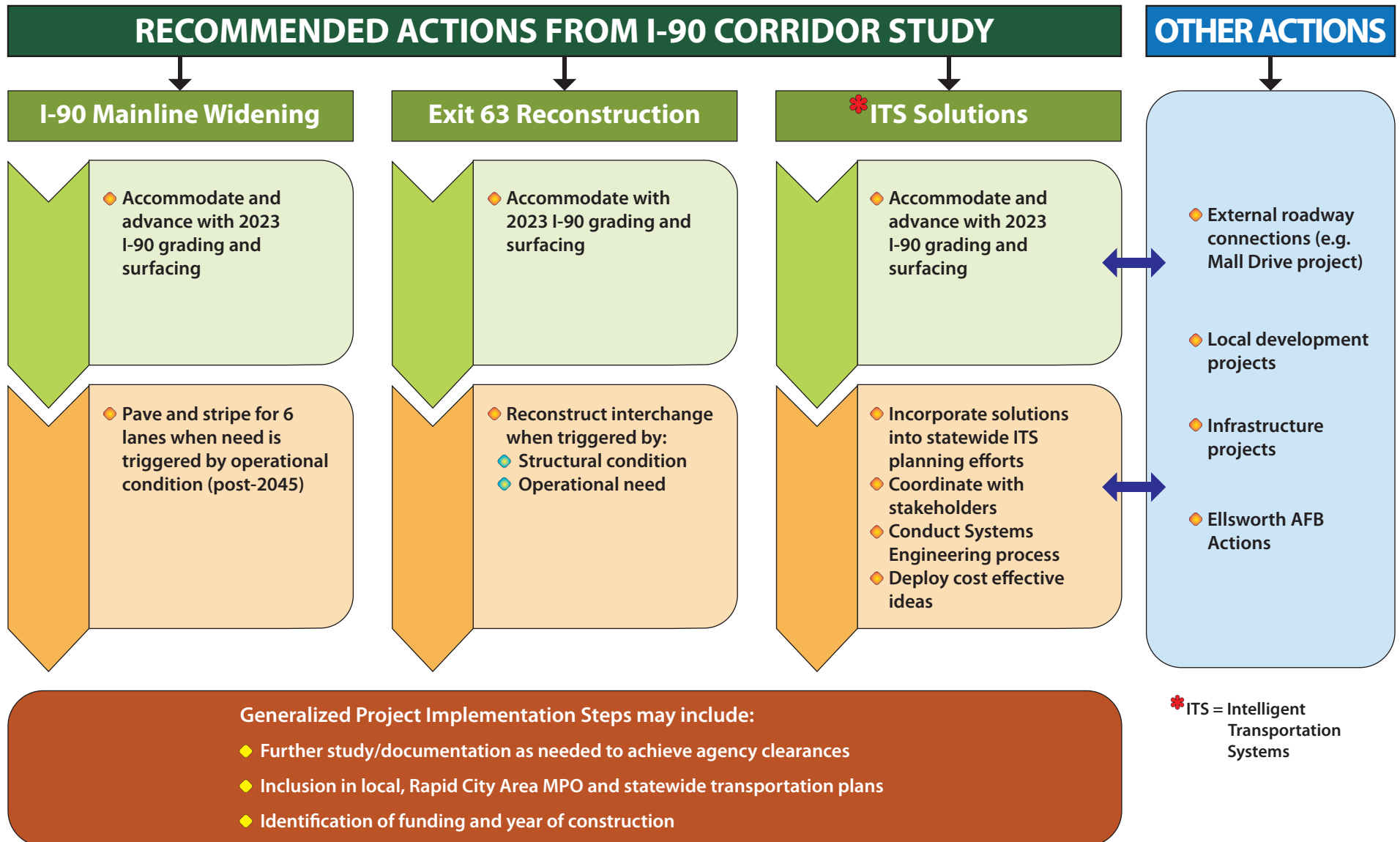
# Alternatives 4a and 4b 2045 Projected Traffic Conditions

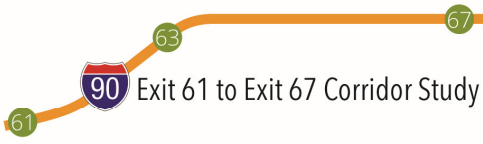
**LEGEND**

- X/X = AM/PM Peak Hour Signalized Intersection Level of Service
- x/x = AM/PM Peak Hour Unsignalized Movement Level of Service
- (X/X) = AM/PM Freeway Level of Service
- (x/x) = AM/PM Merge/Diverge Level of Service
- STOP = Stop Sign
- TL = Traffic Signal
- YIELD = Yield Sign
- ↔ = Intersection Approach Lanes



# Study Area Project Implementation



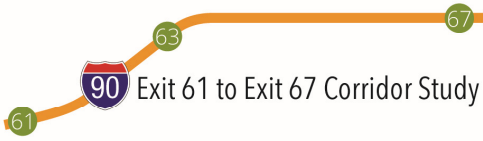


## Next Steps

- Update Rapid City Area MPO Committees 9/14
- Incorporate public and MPO input
- Formulate final recommendations
- Develop draft and final reports

### **Ongoing input appreciated!**

- Visit the project website at [www.i90corridor61to67.com](http://www.i90corridor61to67.com)
    - Contact the project team
    - Fill out a comment card
-



# I-90 Corridor Exit 61 to Exit 67 Corridor Study

## OPEN HOUSE PORTION

---