



Western Yankton County Subarea Study

PUBLIC MEETING #1

December 1, 2022

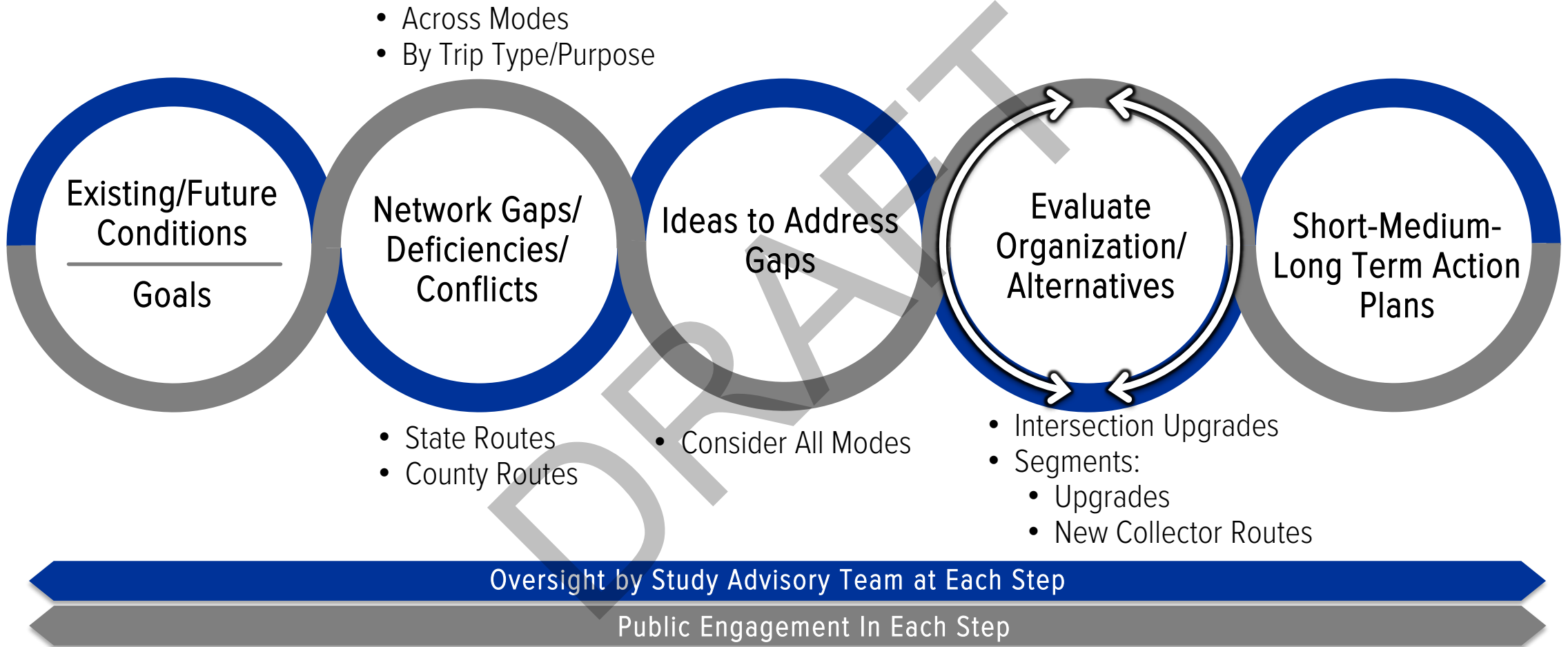
Yankton County Subarea Study



Agenda

1. Team Introductions
2. Purpose of the First Public Meeting
3. Overview of the Study:
 - Location
 - Work Plan
4. Current Conditions
5. Mitigation Toolbox
5. Schedule
6. Open Discussion/Questions
7. Wrap-up

Applying Our Approach – Work Plan



Key Areas Evaluated to Understand Needs

Traffic Operations



- Evaluate Both Summer and School In-session Conditions
- Road Segment
- Key Intersections
- Today – 2035 - 2050

Crashes

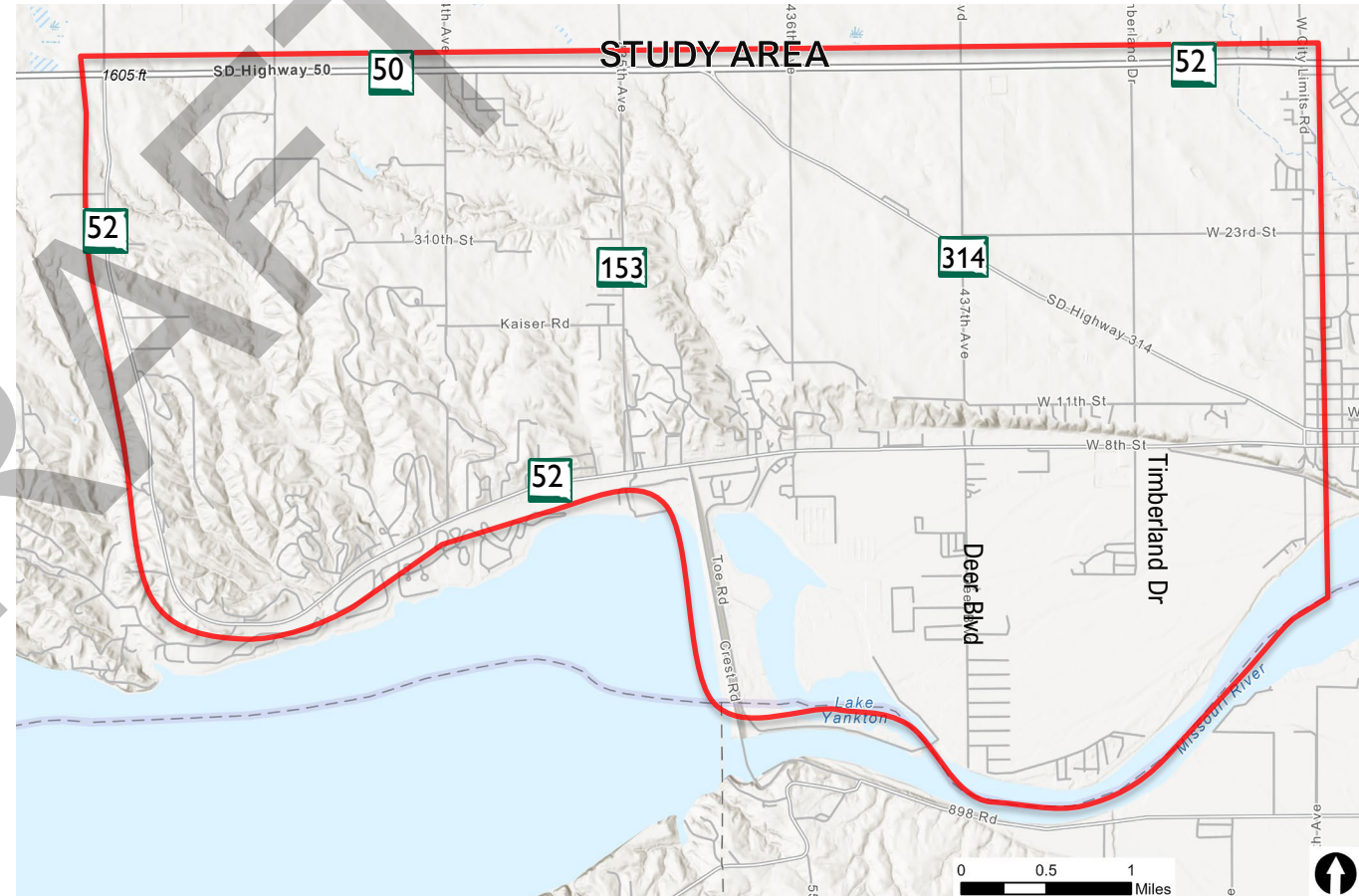


- Period from 2017-2022
- Rate by Intersection/Segment
- Severity/Contributing Factors

Access



- State Highways
- Public and Private Access Point
- Compare to SDDOT Guidelines





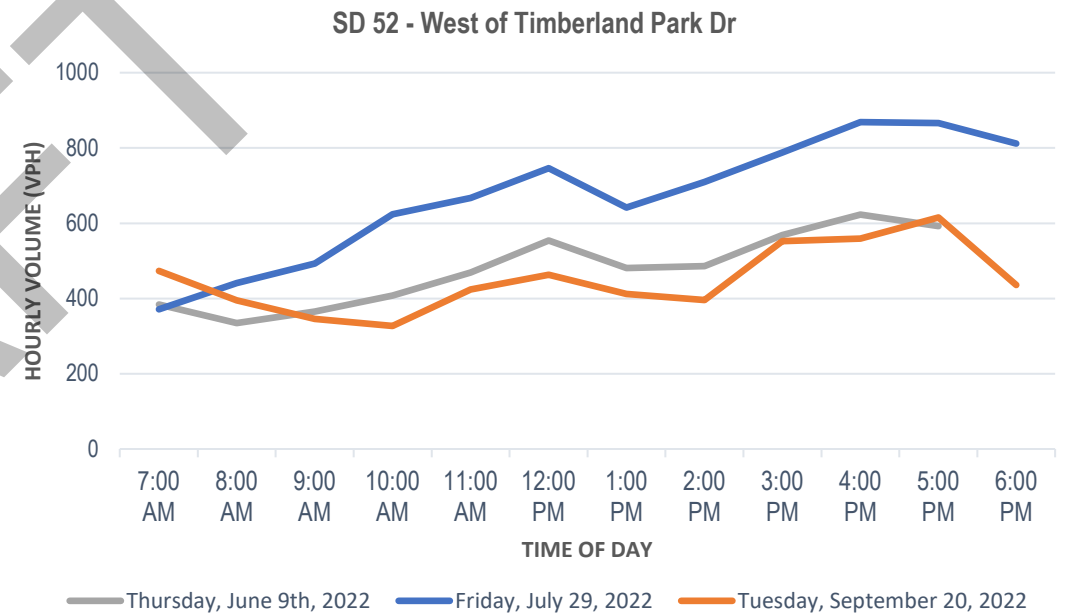
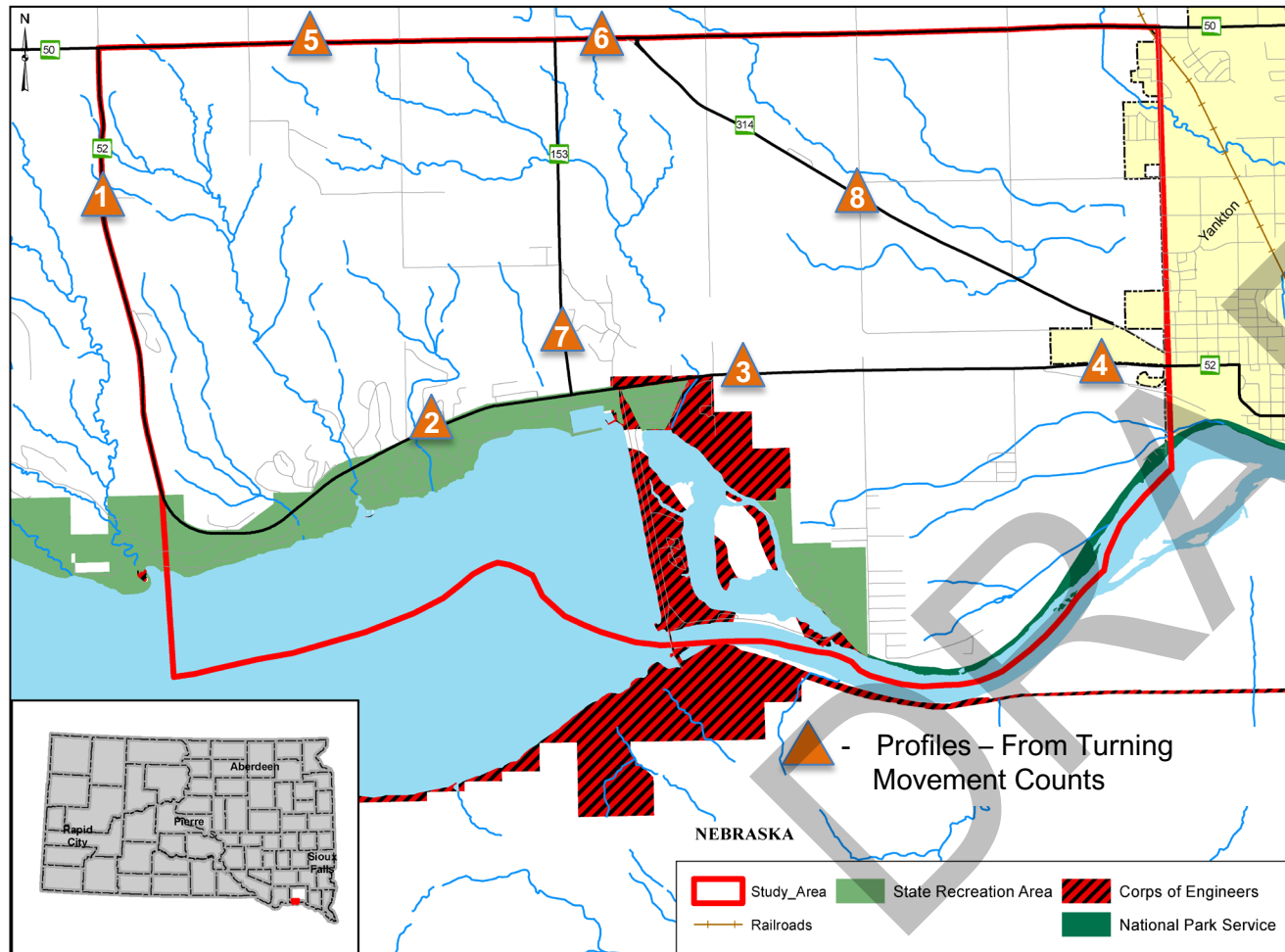
Traffic Data and Operations

December 1, 2022

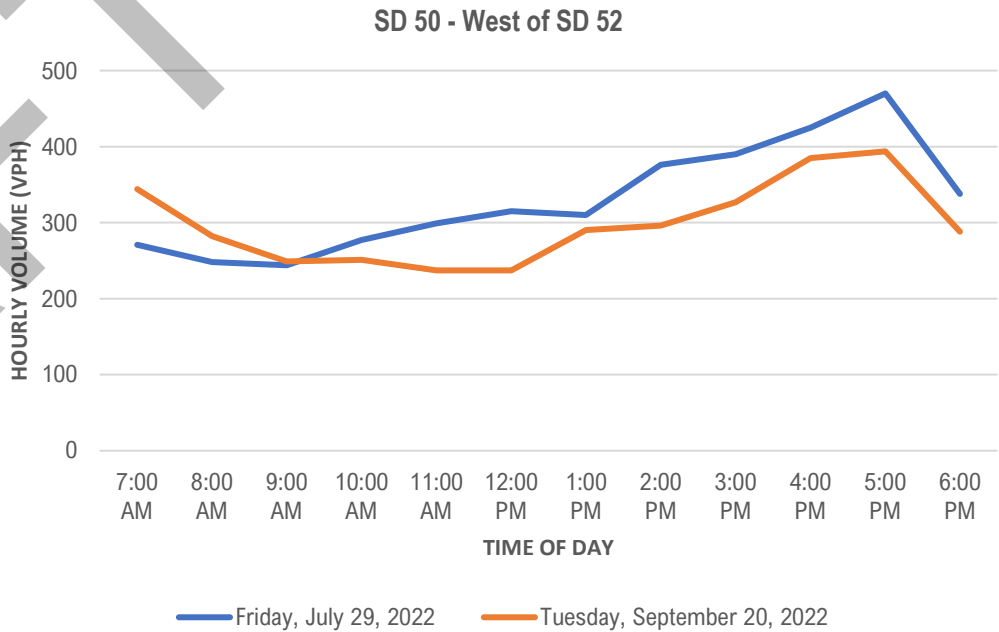
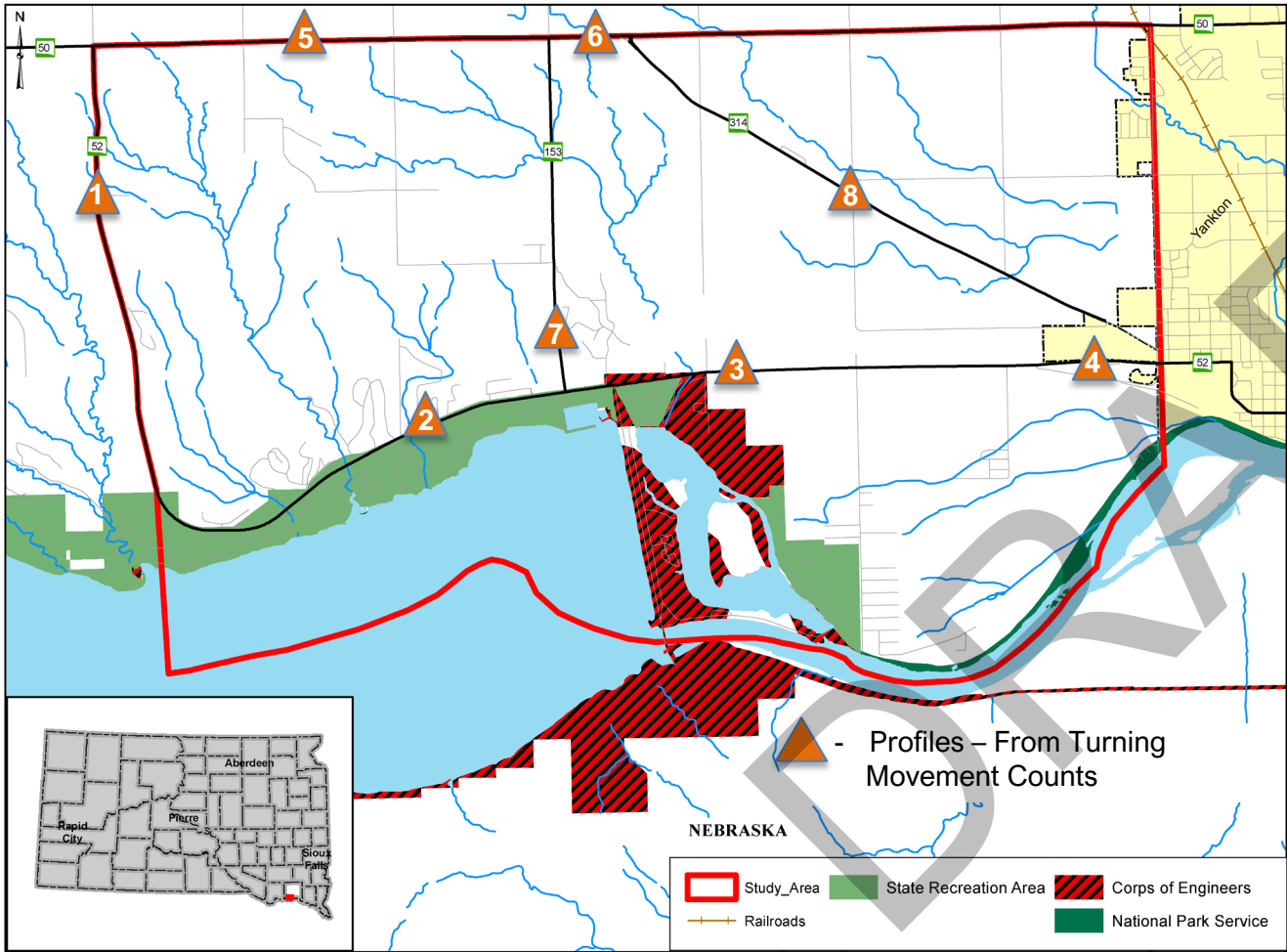
Yankton County Subarea Study



Route Segment Count Locations



Route Segment Count Locations



North

LEGEND

- XX - Typical Weekday A.M. Peak Hour Volume
- (XX) - Typical Weekday P.M. Peak Hour Volume
- [XX] - Summer P.M. Peak Hour Volume
- X,XXX - Typical Weekday Average Daily Traffic Volume
- - Side-Street Stop Control
- - LOS A or B
- - LOS C or D
- - LOS E or F
- - Overall LOS Followed by Worst Movement

Note: LOS shown represents the worst peak hour operations

Speed Data
Avg - 60 mph
85 % - 66 mph
4,350

Speed Data
Avg - 50 mph
85 % - 57 mph
500

Speed Data
Avg - 60 mph
85 % - 66 mph
5,600

Speed Data
Avg - 50 mph
85 % - 56 mph
1,650

Speed Data
Avg - 57 mph
85 % - 63 mph
1,650

Speed Data
Avg - 42 mph
85 % - 49 mph
1,450

Speed Data
Avg - 47 mph
85 % - 52 mph
2,900

Speed Data
Avg - 46 mph
85 % - 51 mph
5,400

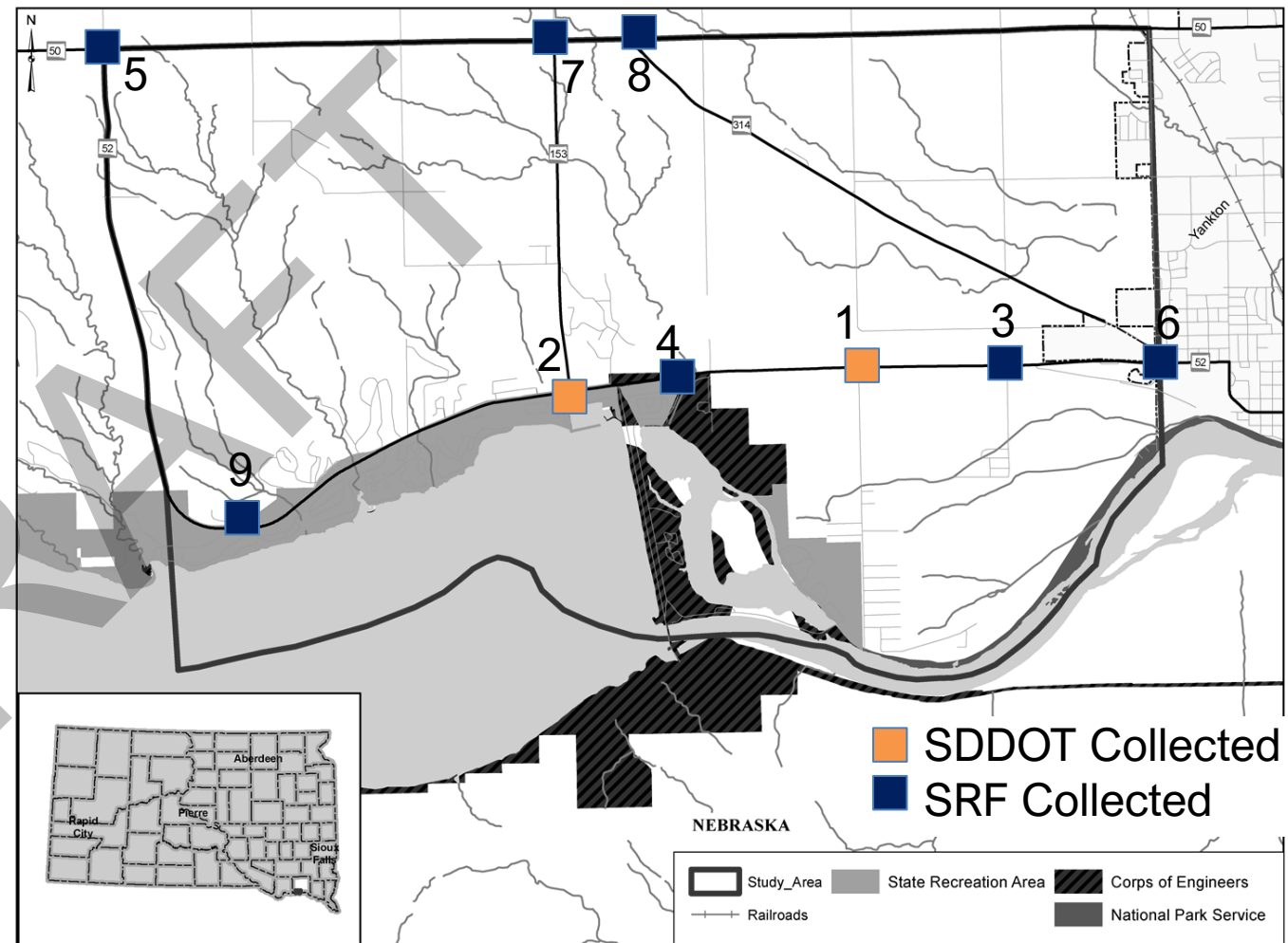
Speed Data
Avg - 42 mph
85 % - 47 mph
7,780

Intersection Details:

- SD 56 / SD 59:** [1] (0) 0 [164] (160) 222 [22] (9) 7; 0 (0) [0] 1 (0) [0]; 1 (2) (2) [1] 111 (249) [260] 2 (6) (6) [5]
- SD 59 / SD 133:** [1] (0) 0 [183] (180) 222 [17] (9) 7; 0 (0) [3] 1 (0) [8]; 1 (2) (2) [16] 111 (249) [283] 2 (6) (6) [55]
- SD 59 / SD 344:** [146] (159) 195 [65] (63) 158; 88 (268) [252] 1 (1) [3]; [04] (8) 37 [1] (0) 3
- Gavin's Point Rd / SD 52:** [33] (15) 19 [0] (3) 1; 15 (26) [40] 11 (20) [38]; [2] (2) 2 [28] (6) 21
- SD 52 / SD 133:** [13] (8) 13 [139] (112) 86 [13] (5) 2; 2 (13) [28] 43 (39) [44]; 11 (33) [55] 45 (121) [166] 14 (18) [57]
- Toe Rd / SD 52:** [0] (2) 0 [232] (122) 183 [20] (2) 7; 1 (4) [1] 2 (2) [5]; 0 (2) (2) [3] 74 (199) [342] 9 (16) [73]
- Deer Blvd / SD 52:** [7] (5) 7 [214] (171) 150 [41] (3) 12; 3 (5) [12] 1 (6) [2] 4 (1) [11]; 4 (5) (6) [6] 77 (240) [375] 36 (155) [150]
- Timberland Park Dr / SD 52:** [3] (1) 0 [358] (231) 371 [11] (4) 3; 1 (0) [0] 2 (0) [0]; 3 (4) (2) [2] 156 (378) [539] 6 (23) [21]
- West City Limits Rd / SD 52:** [102] (69) 150 [270] (184) 265 [0] (0) 0; 61 (168) [233] 6 (2) [2] 56 (40) [43]; 57 (54) [54] 101 (240) [337] 3 (8) [12]

Intersection Count Locations Operations Summary

Intersection ⁽¹⁾	Level of Service (Delay)		
	School-in-Session Weekday		Peak Summer PM
	AM Peak Hour	PM Peak Hour	
SD 52 / Gavin's Point Road	A/A (9 sec.)	A/A (9 sec.)	A/A (9 sec.)
SD 52 / SD 153	A/B (10 sec.)	A/B (11 sec.)	A/B (13 sec.)
SD 52 / Toe Road	A/A (10 sec.)	A/A (10 sec.)	A/C (16 sec.)
SD 52 / Deer Boulevard	A/B (11 sec.)	A/C (16 sec.)	A/C (16 sec.)
SD 52 / Timberland Park Road	A/B (12 sec.)	A/A (10 sec.)	A/B (13 sec.)
SD 52 / West City Limits Road	A/E (46 sec.)	A/C (19 sec.)	A/D (26 sec.)
SD 50 / SD 52	A/B (12 sec.)	A/B (12 sec.)	A/B (13 sec.)
SD 50 / SD 153	A/B (15 sec.)	A/B (14 sec.)	A/C (17 sec.)
SD 50 / SD 314	A/B (12 sec.)	A/B (14 sec.)	A/B (14 sec.)





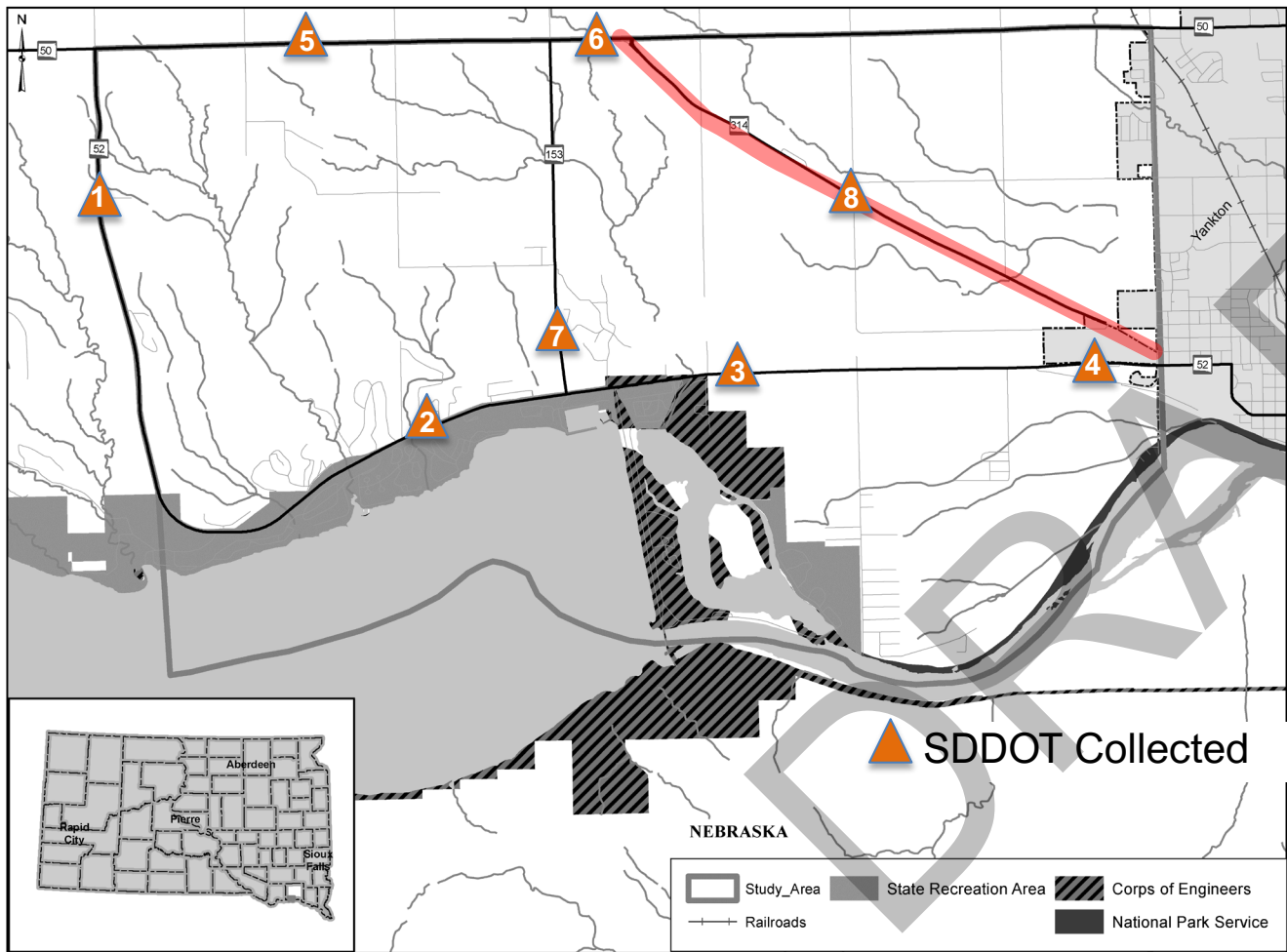
Speed Assessment

December 1, 2022

Yankton County Subarea Study



Route Segment Operating Speed Review



Segment Number	Posted Speed Limit (MPH)	Average Speed (MPH)	85th Percentile Speed (MPH)
1 (SD 52)	55	50	57
2 (SD 52)	50	47	52
3 (SD 52)	50	46	51
4 (SD 52)	40/50 ⁽¹⁾	42	47
5 (SD 50)	65	60	66
6 (SD 50)	65	50	56
7 (SD 153)	45/55 ⁽²⁾	42	49
8 (SD 314)	55	57	63

(1) Speed limit is 40-mph immediately west of West City Limits Road and transitions to 50-mph approximately ¼-mile west of the West City Limits Road.
 (2) Speed limit is 45-mph south and 55-mph north of Horeshoe Hollow Drive.



Access Point Review

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Access Locations – State Routes



Access Point Assessment

Segment	Side of Roadway	Access Points	Segment Length (miles)	Access Density (points/mile)
1 – SD 52: SD 50 to Gavin's Point Rd	North	19	3.5	6
	South	18		5
2 – SD 52: Gavin's Point Rd to SD 153	North	20	2.6	8
	South	4		2
3 – SD 52: SD 153 to Deer Blvd	North	29	1.9	15
	South	5		3
4 – SD 52: Deer Blvd to West City Limits Rd	North	16	2.0	8
	South	14		7
5 – SD 50: SD 52 to SD 153	North	14	3.0	5
	South	21		7
6 – SD 50: SD 153 to SD 314	North	4	0.5	8
	South	3		6
7 – SD 153: SD 52 to SD 50	East	15	2.4	6
	West	16		7
8 – SD 314: SD 50 to West City Limits Rd	North	37	4.2	9
	South	21		5



Mitigation Options

- Consolidate Driveways:
 - Multiple per Parcel
 - Adjacent Properties
- Frontage/Backage Roads
- Eliminate Duplicating Drives



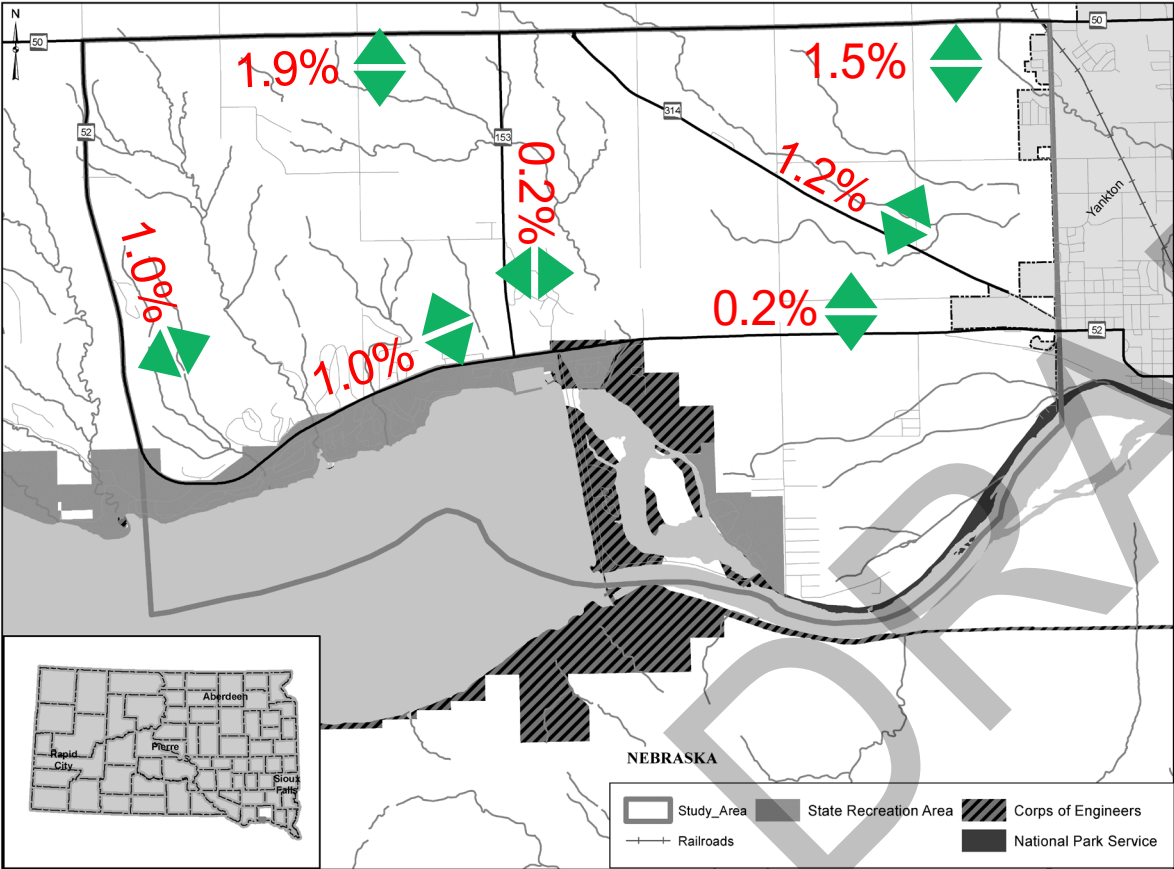
Traffic Growth Rates

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Yankton County Subarea Study

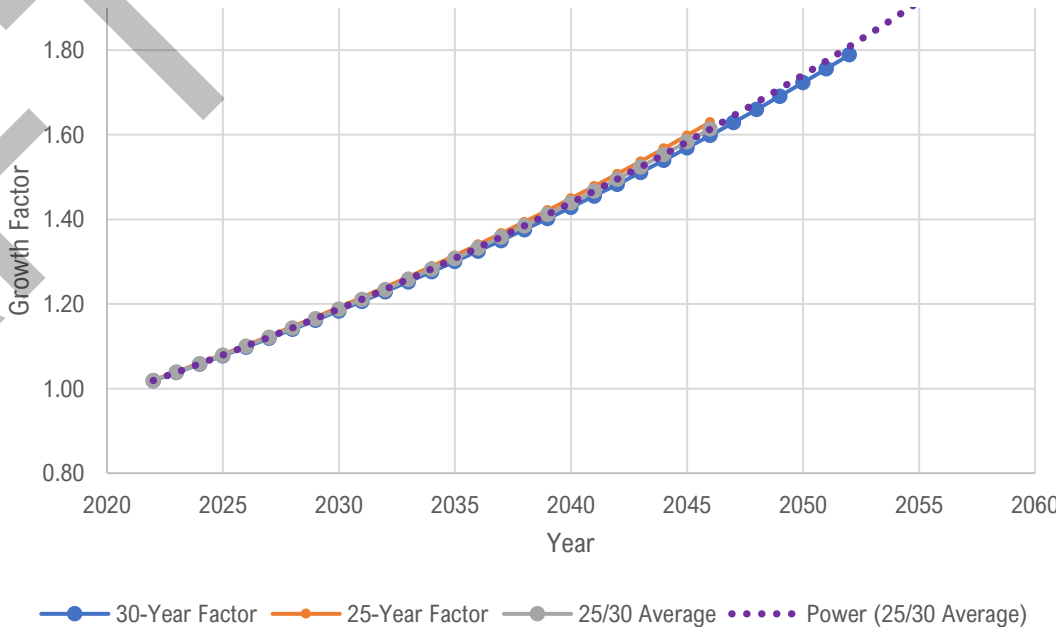


Historic and Proposed Traffic Growth By Route



**HISTORICAL ANNUAL CHANGE
(2012-2021)**

- ▲ - Steady Growth
- ▼ - Steady Decline
- ◄ - Mix of Increases and Decreases





Crash Data Assessment

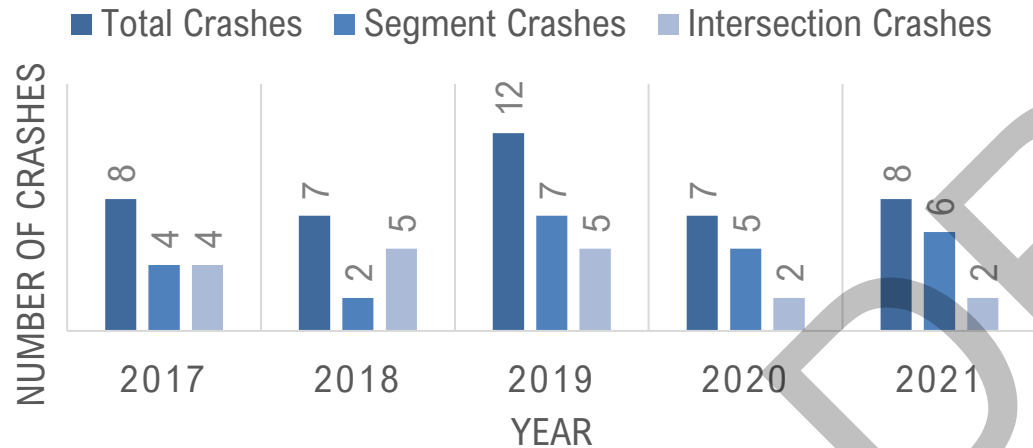
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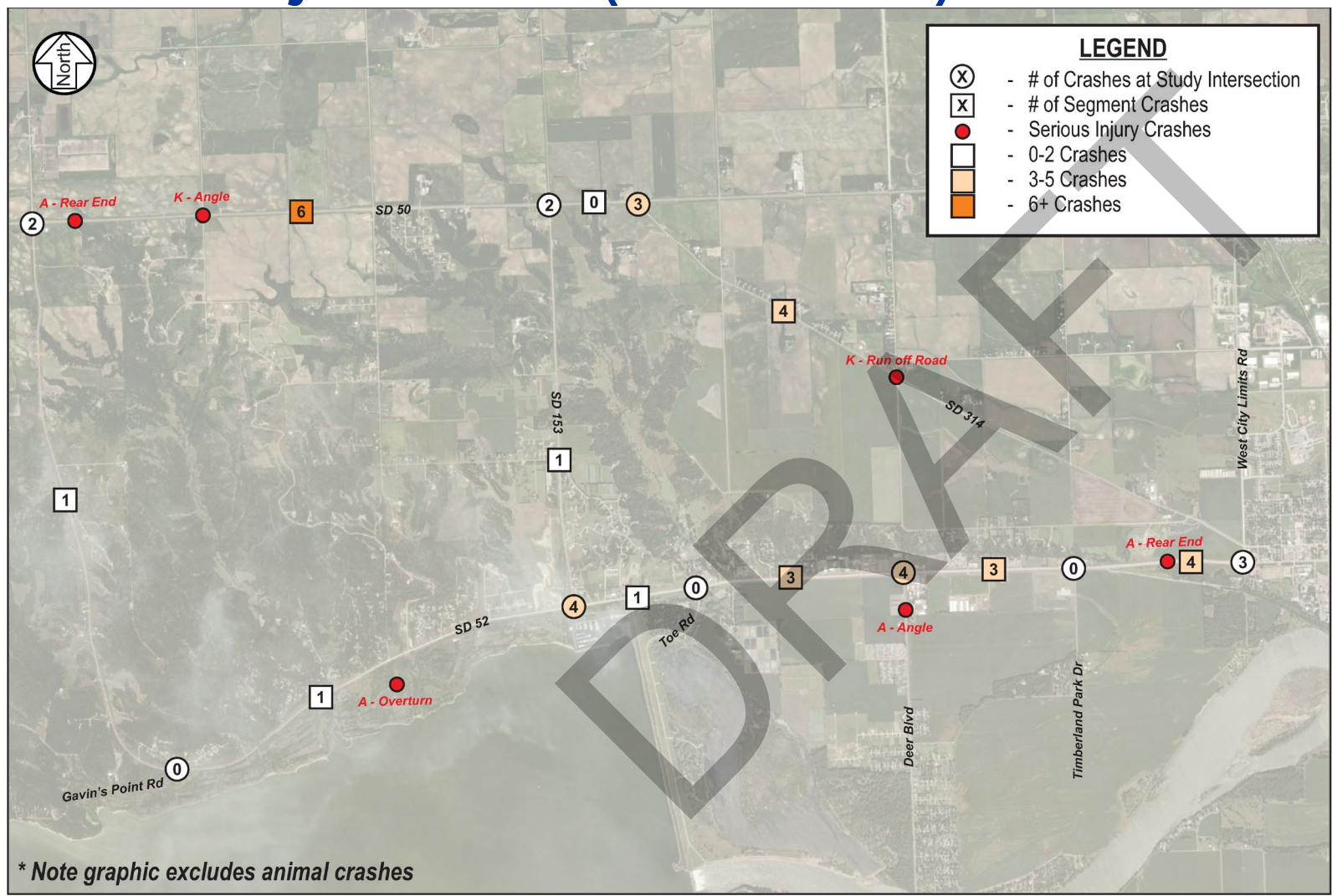
Crash Assessment

CRASH FREQUENCY BY YEAR (1)



	Single Vehicle Crashes		Multiple Vehicle Crashes		Total
	Animal	Ran off Road	Angle	Rear End	
SD 52 / Gavin's Point Road	-	-	-	-	0
SD 52 / SD 153	1	2	2	-	5
SD 52 / Toe Road	3	-	-	-	3
SD 52 / Deer Boulevard	1	-	2	2	5
SD 52 / Timberland Drive	1	-	-	-	1
SD 52 / West City Limits Road	3	1	2	-	6
SD 50 / SD 52	2	1	1	-	4
SD 50 & SD 153	3	-	1	1	5
SD 50 & SD 314	3	1	2	-	6
Intersection Totals	17	5	10	3	35

Crashes by Location (2017-2022)





Mitigation

December 1, 2022

Yankton County Subarea Study



Mitigation Toolbox

Traffic Operations



- Add Local Road Network
- Add Frontage/Backage Roads
- Add Turn Lanes
- Intersection Control:
 - Four-way Stop
 - Signalize
- Modify Access Locations

Correctable Crashes

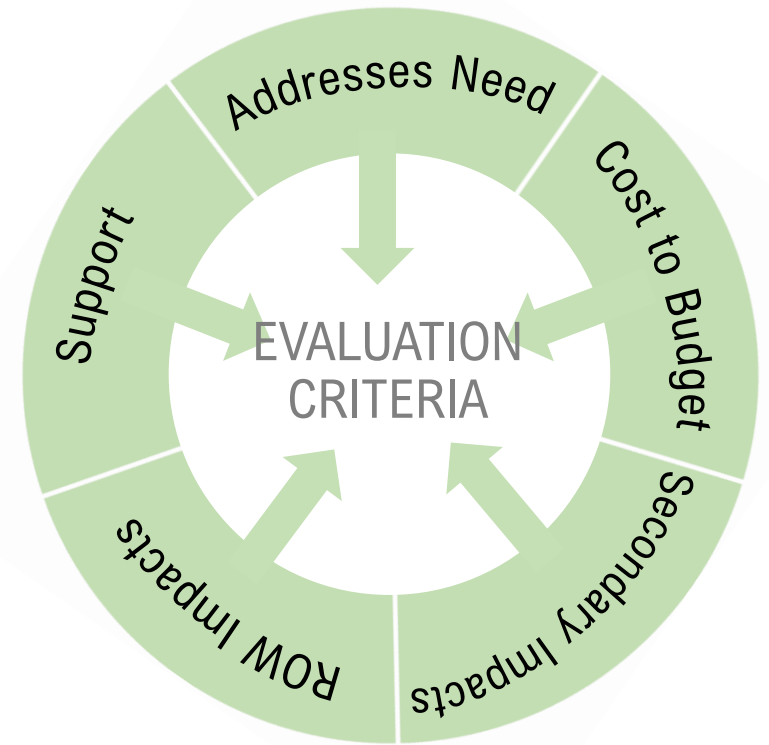


- Shoulder Improvements
- Modify Access Locations
- Enhanced Ped Xing
- Speed Reductions
- Add Rumble Strips
- Pavement Edge Treatment
- Design Changes:
 - Extend Sight Distance
 - Lengthen Curves
- Curve Delineators
- Modify Ditch Slopes
- Improve Lighting

Access Management



- Add Frontage/Backage Roads
- Relocate Access to Cross Route/ Frontage/Backage Road
- Consolidate Drives
- Reduce Drives
- Assess Median on SD 52



All Mitigation Concepts Reviewed Relative to Consistent Criteria

What are Your Concerns/Observations/Suggestions?



In Your Daily Travel:

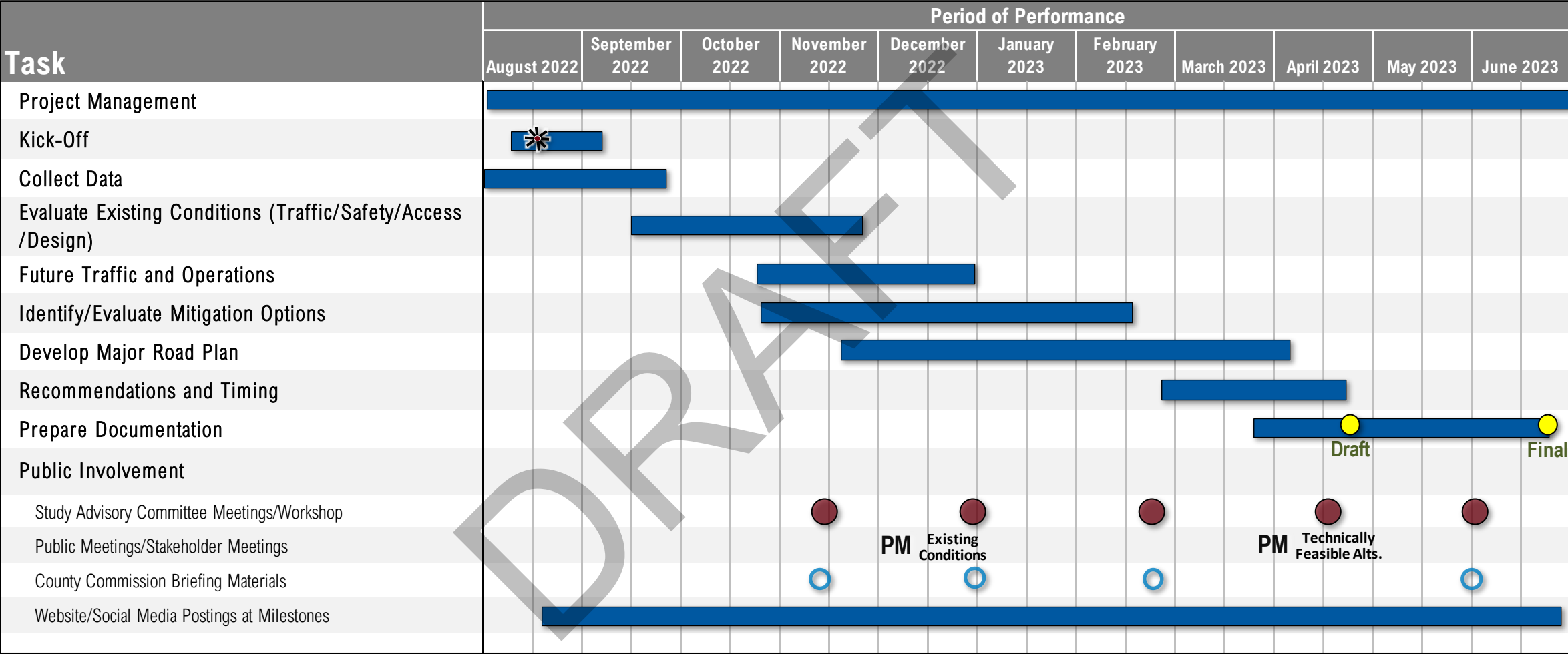
- Are there locations where you encounter daily congestion?
- Are there areas you are more cautious?
- Are there gaps in the MULTIMODAL network to fill?
- What should we know that you know?



Schedule

December 1, 2022

Schedule



Wrap Up

- Open Discussion – Anyone Have Questions?
- Next Steps

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