

# Wyoming Connects



## Corridor 5 Plan

RAWLINS TO JACKSON



MAY 2013



**The Integrated Planning Framework** describes the planning process in detail, including the linkage between strategic goals and project programming - and all the steps in between.



**The Long Range Transportation Plan** evaluates the state transportation needs from a systems level, describes the issues and problems facing the State including future revenue and programming, and presents options for future investments, all within the context of the Integrated Planning Framework.



**Corridor Visions** are created for each State Significant Corridor (SSC) as a supplement to the LRTP. These define long term goals and objectives for each corridor based on the strategic goals of the Department, the investment goals of the LRTP, and the specific context of each corridor. The SSC system represents high volume routes in the state that connect major activity centers to each other and to points external to Wyoming. Urban areas are also evaluated as a group.



**Corridor Plans** build on the Corridor Visions by providing a more detailed look at specific needs and location-based solutions. The plans identify a set of solutions and a recommended program of improvements to be implemented over time that address specific, documented needs.

## CORRIDOR PLAN PURPOSE

This Corridor Plan is part of a set of documents created through a comprehensive planning process entitled Wyoming Connects. This set of documents captures consistent, transparent, and repeatable planning steps, analysis, and results designed to provide information to guide project selection and programming decision makers. Each document is designed to build upon prior documents and cascade the Strategic Goals of WYDOT forward from the overarching Strategic Plan to the system wide Long Range Transportation Plan, applied in the development of Corridor Visions, and the definition of Needs and potential Solutions to achieve the vision in Corridor Plans.

### PERFORMANCE BASED NEEDS

The Corridor Plan utilizes a performance based approach to needs definition. A system of performance measures is used to evaluate the corridor. The architecture of this tiered system is focused on the three Investment Categories identified in the Long Range Transportation Plan: System Preservation, Safety, and Mobility. Performance measures include both absolute and comparative targets. Absolute measures gauge progress towards long term goals, while comparative measures between corridor and system performance provide information to assist in prioritization.

A need is defined as a deviation between these targets and measured performance. The first tier of the system allows for rapid identification of need in each of the Investment Categories through a Performance Indicator. The second tier provides additional information to qualify potential causes through a set of Performance Qualifiers. GIS based Mapping Analysis tools provide for a spatial analysis of these measurements to further investigate causes and identify overlapping needs.

### TIERED APPROACH:

A method to evaluate performance goals at a general level and then advance through the system/hierarchy to filter data and define needs.

#### INVESTMENT CATEGORY

##### PERFORMANCE INDICATOR:

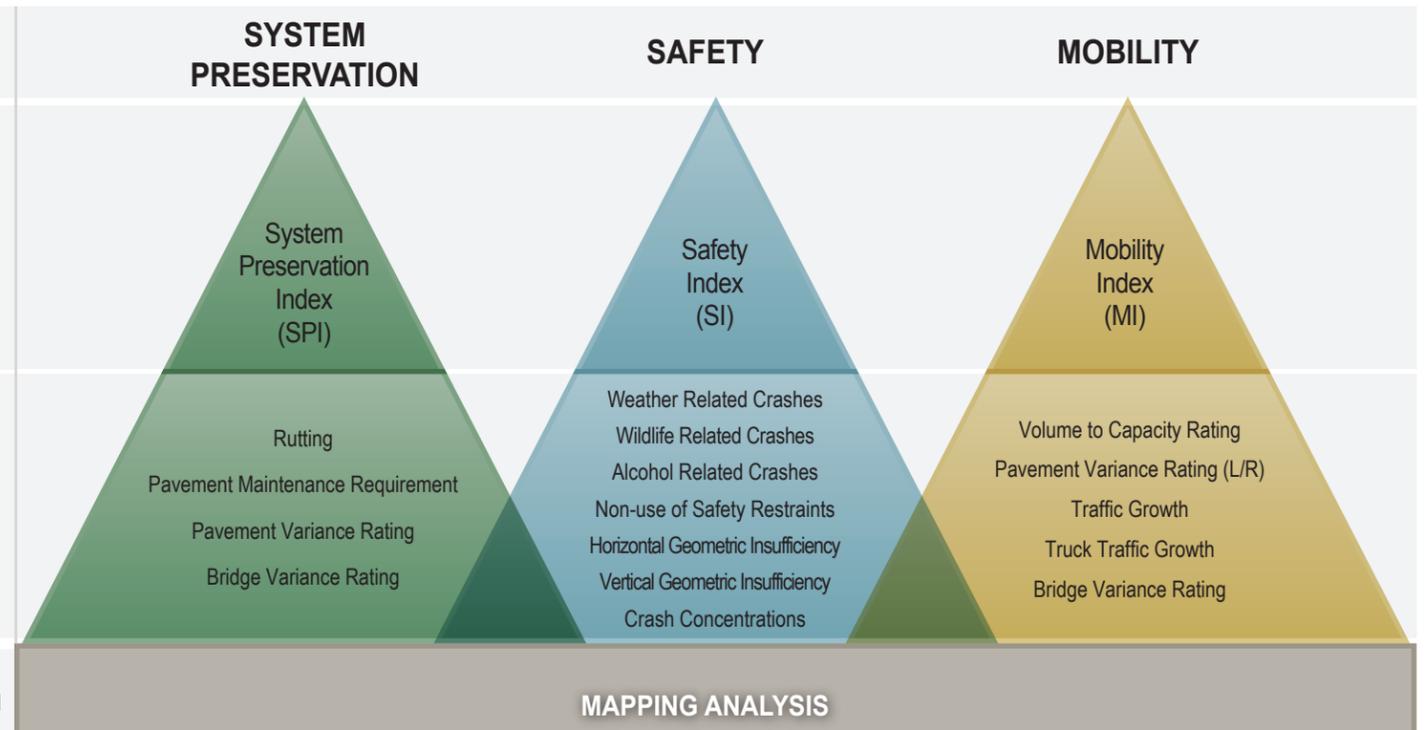
These are quantifiable and repeatable measurements that reflect the overall performance of the transportation corridor being analyzed. Targets for these indicators may be absolute and indicate a desired condition or comparative to current performance of the overall system to indicate relative priority.

##### PERFORMANCE QUALIFIER:

These measures include items that may contribute to the results of the indicator. These variables are measurable and actionable. They are used to qualify the need so that solution sets may be applied.

##### MAPPING ANALYSIS:

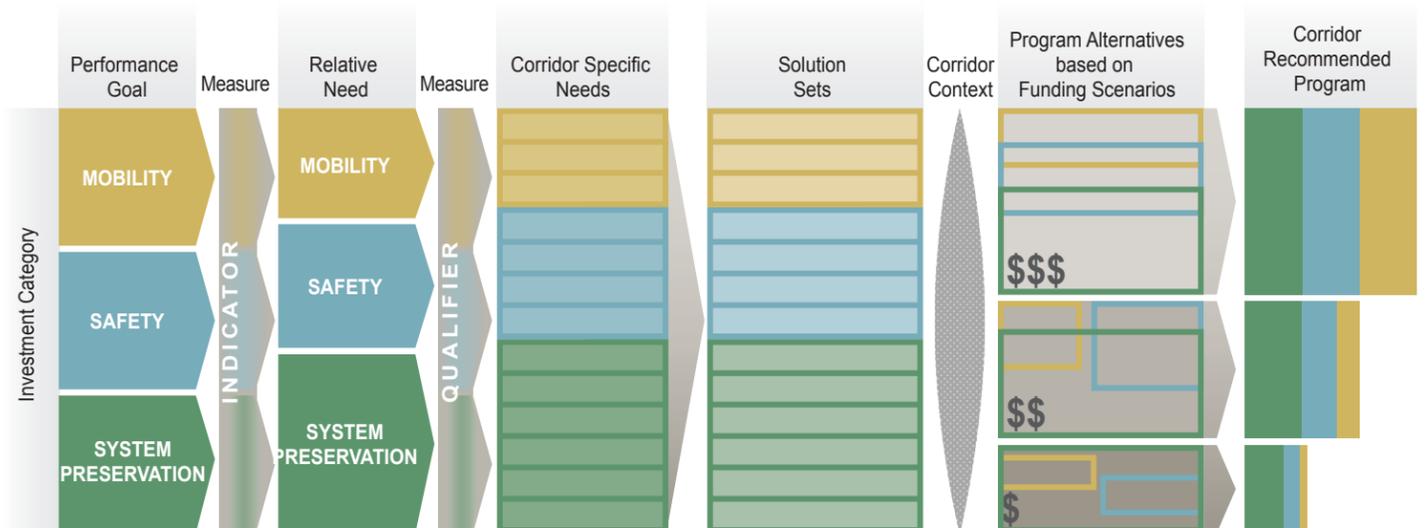
Mapping the deviated performance qualifiers against several factors to effectively prioritize, locate, and identify needs.



### NEEDS DRIVEN SOLUTIONS:

Performance based needs are captured and documented. These needs remain until the performance is changed. This approach also separates the discussion of need from the discussion of projects, which enhances the transparency of prioritization.

From WYDOT's list of preferred remedies to specific problems, preliminary solutions sets are developed for the identified needs. These sets may be tailored by the specific context of the corridor. For each of the three funding scenarios of the long range plan, the solutions to be considered may vary and the size of the program change. A recommended program can be selected based on anticipated funding levels.



## SSC 5 - RAWLINS TO JACKSON - US 287/US 26 CORRIDOR PLAN

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## I. STATE SIGNIFICANT CORRIDOR 5 - DESCRIPTION

### CORRIDOR DESCRIPTION

The 287 mile long Rawlins to Jackson Corridor passes through four WYDOT Districts and four counties. From its urban beginning in the Town of Jackson, the corridor is defined by US89/191 and heads north to the unincorporated community of Moran Junction. From there, as US 287, it leads southeast through Dubois, Lander, and Muddy Gap to Rawlins and its terminus at the I-80 junction.

SSC 5 spans a diversity of topography and economy. The area between Jackson and Moran Junction is surrounded by picturesque vistas and recreational opportunities. The Grand Teton National Park is within this section and is operated under National Park jurisdiction. The northwest part of the corridor is characterized by dense forest and wildlife including elk, moose, deer and bear. The Wind River Indian Reservation lies in the central section of SSC 5. The 2.3 million acre reservation is the third largest in the nation. There has been recent growth in job related traffic due to oil and gas development from Riverton and Lander to Thermopolis. The southeastern

portion of the corridor primarily consists of high plains and flat to rolling terrain, much of which is managed by the Bureau of Land Management. There are numerous deer and antelope migration routes that cross this section of the corridor. Due to its open topography, this portion of the corridor experiences high winds and severe weather in the winter. WYDOT has placed numerous snow fences to mitigate for the blowing and drifting snow that accumulates on US 287. Additionally, this section of the corridor has experienced an increase in volume of traffic due to a casino and gas and oil field development.

State Significant Corridor 5 passes through three urban areas with a population of 5,000 or greater. Jackson, Lander and Rawlins each have unique characteristics and clearly separate themselves from the rural corridor. US 287 is the main street through each of these urban areas. Jackson experiences the highest percentage of tourism year round as it is one of the gateways to Grand Teton and Yellowstone

National Park and to Jackson Hole Mountain Resort. Lander also experiences a high volume of tourism with the town as a launching point for camping, hunting, fishing, wilderness travel, climbing and mountaineering in the Wind River Mountains. Rawlins economy is less related to tourism and serves as a transportation waypoint for travelers on both SSC 5 and I-80 (SSC 1). Ranching and energy development characterize much of the land use.

Additional information including environmental context, key issues, and emerging trends is provided in Corridor Visions and LRTP phases of Wyoming Connects. This Corridor Plan focuses on the identification of the corridor needs through the analysis of corridor performance.

### CORRIDOR SEGMENTS

SSC 5 has been divided into 14 planning segments. Planning segments identify generally consistent sections of the corridor for planning level analysis. The planning segments vary in length depending on the context of the corridor. The corridor was segmented at all urban areas and at the intersection of other SSCs. Other context changes may include: roadway typical section (through lanes, shoulders, etc.), average daily traffic, intersecting routes, and terrain. Each segment break or endpoint was assigned as closely as possible to the nearest maintenance section endpoint; segments generally encompass multiple maintenance sections. The planning segments allow for an appropriate analysis and evaluation of corridor needs at a planning level while still providing geographic reference.

Table 1 and the accompanying map on the next page describe general characteristics of each corridor segment.



Traveling east on US 287, looking into Muddy Gap

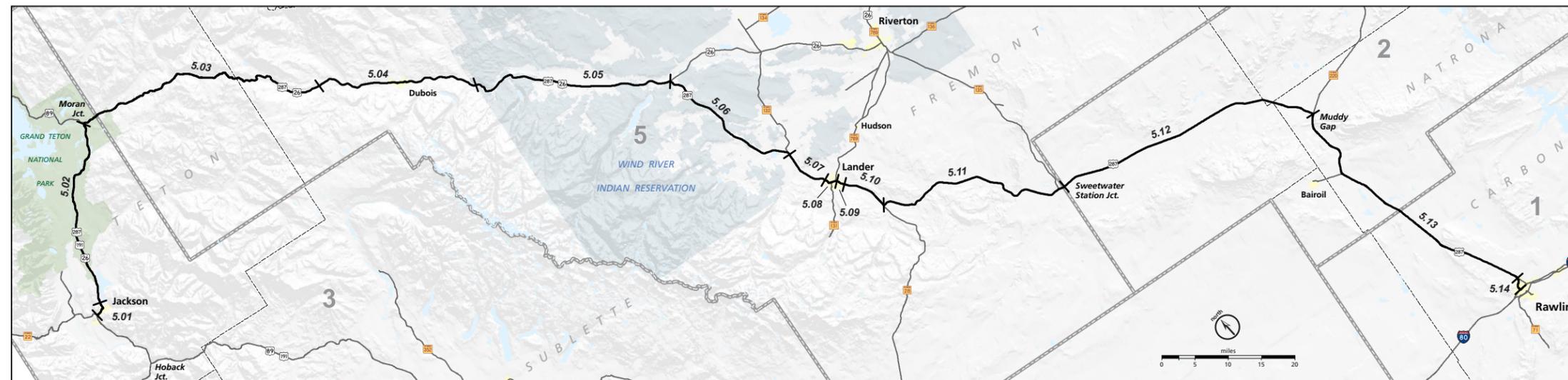
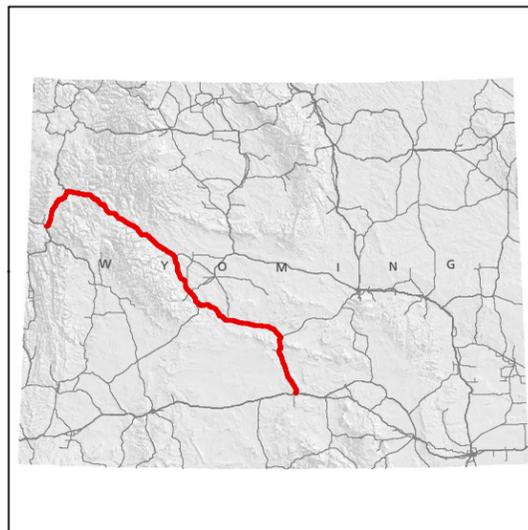


Table 1 - Segments for State Significant Corridor 5

Segment	ML Route	Begin	End	Length	Description
5.01	10	152.61	155.12	2.51	<b>Jackson Urban Area (pop. 9,806).</b> Features: 4- to 5-lane section through urban area with curb/gutter/sidewalks; Segment begins approximately at the intersection with WYO 22 and ends at the city limits; Flat Creek; heavily developed with many accesses; changeable message sign; southern gateway to Grand Teton and Yellowstone National Parks; National Elk Refuge; Centennial Scenic Byway; tourism (Jackson Information Center), TransAmerica Bicycle Route, recreation, and employment center; Jackson Hole Airport; intercity bus and bus station; local public fixed route bus system; urban terrain.
5.02	10	155.12	184.58	29.46	<b>Jackson to Moran Jct (through Grand Teton NP).</b> Features: transition from multi-lane section to two lane cross section, with paved shoulders and a ditch swale; terminates at intersection with US 287; Gros Ventre River, North Branch Gros Ventre River, Spread Creek, Buffalo Fork River; Centennial Scenic Byway; TransAmerica Bicycle Route, National Elk Refuge, Grand Teton National Park; wildlife migration corridor; flat terrain.
5.03	30	0.00	40.71	40.71	<b>Moran Jct to Shoshone National Forest.</b> Features: 2-lane facility with shoulders, ditch swales and periodic passing lanes; Buffalo Fork River, Brooks Lake Creek; road closure gate; tourism and dispersed recreation, Centennial Scenic Byway, TransAmerica Bicycle Route, Grand Teton National Park, Teton National Forest; predominantly mountainous terrain.
5.04	30	40.71	67.25	26.54	<b>Edge of Shoshone National Forest to Wind River IR (through Dubois).</b> Features: 2-lane section, with shoulders, 3/4-lane section in Dubois urban zone; Long Creek, Wind River (5), Wagon Gulch Creek, Horse Creek, Jakey's Fork, N. & S. Fork Torrey Creek; changeable message sign; Centennial Scenic Byway; TransAmerica Bicycle Route; Shoshone National Forest; dispersed recreation; rolling terrain.
5.05	30	67.25	98.79	31.54	<b>Wind River IR west to Jct US 26.</b> Features: Predominantly 2-lane, wide shoulders, with 3-lane turn sections; intersects Regional Route WYO 22; Little Red Creek, Red Creek, Dinwoody Creek, Dinwoody Canal, Little Dry Creek, Big Dry Creek, Smith Draw, Meadow Creek, Willow Creek, Sand Creek, Indian Creek, Bull Lake Creek; Diversion Dam Rest Area; Wind River Indian Reservation; TransAmerica Bicycle Route; ranching and prairie; rolling to flat terrain.
5.06	15	31.60	9.04	22.56	<b>Jct US 26 to Wind River IR South.</b> Features: 2-lane section with narrow shoulders; intersect Local Route WYO 132; Little Wind River, Trout Creek; Wind River Indian Reservation; TransAmerica Bicycle Route; ranching and prairie; rolling to flat terrain.
5.07	15	9.04	2.00	7.04	<b>North of Lander.</b> Features: 2-lane section with wide shoulders and ditch swales; multiple driveway intersections approaching Lander; Popo Agie River; Wind River Indian Reservation; TransAmerica Bicycle Route; ranching and prairie; flat terrain.
5.08	15	2.00	0.00	2.00	<b>Lander Urban Area.</b> Features: Segment begins at north city limits and ends at the intersection with SSC 10 (WYO 789); curbed multi-lane facility with some painted medians; multiple residential and business access points; multi-use trails and pedestrian crossings; local public fixed-route transit; TransAmerica Bicycle Route; urban terrain.
5.09	20	81.05	79.20	1.85	<b>Lander Urban Area.</b> Features: Segment begins at the intersection with SSC 10 (WYO 789) and ends at the east city limits; curbed multi-lane facility with some painted medians; multiple residential and business access points; multi-use trails and pedestrian crossings; local public fixed-route transit; TransAmerica Bicycle Route; urban terrain.
5.10	20	79.20	72.87	6.33	<b>South of Lander.</b> Features: Segment begins at the east city limit and ends at the intersection with Regional Route WYO 28; curbed multi-lane facility transitions to 2-lane segment with wide shoulders and a swale; changeable message sign; driveway accesses; Willow Creek; TransAmerica Bicycle Route; flat terrain.
5.11	20	72.87	41.14	31.73	<b>Jct. WYO 28 to District 3/5 Boundary East of Sweetwater Station Jct.</b> Features: Segment begins at the intersection with WYO 28 and ends at the intersection at Local Route (WYO 135) in Sweetwater Station; 2-lane section with shoulders and a ditch swale; road closure gate (2); Little Popo Agie River, Twin Creek (3), Beaver Creek, Antelope Creek, Sweetwater River; Sweetwater Station Rest Area; TransAmerica Bicycle Route; rolling to flat terrain.
5.12	20	41.14	0.00	41.14	<b>District 3/5 Boundary East of Sweetwater Station Jct. to WYO 789.</b> Features: Segment begins in Sweetwater Station at Local Route WYO 135 and ends at the intersection with SSC 11 (WYO 789); 2-lane facility with shoulders and a ditch swale; road closure gates (2), Ice Slough Creek, Obrian Creek, Cottonwood Creek; town of Jeffrey City; ranching and range land; TransAmerica Bicycle Route; flat terrain.
5.13	21	44.31	2.28	42.03	<b>Jct WYO 789 to Rawlins.</b> Features: Segment begins at the intersection with SSC 11 (WYO 789) and ends at north city limits; cross-section varies 2-4 lane with intervals of 3-lane passing areas, wide shoulders; road closure gates; Muddy Creek, Bell Springs Draw, intersects Local Route WYO 73; ranching and range land; TransAmerica Bicycle Route; flat to rolling terrain.
5.14	21	2.28	0.20	2.08	<b>Rawlins Urban Area.</b> Features: Segment begins at the north City limits of Rawlins and ends at the Intersection with I-80; intersects US 287 Bypass, changeable message signs; multi-lane cross section with curbs, gutter, and some raised medians; pedestrian crossings, multiple urban type residential, commercial accesses; fixed route local transit intercity bus station; TransAmerica Bicycle Route; urban terrain.

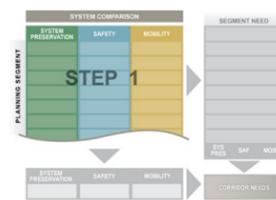
Source: URS Windshield Survey June 2012; Maintenance Section Reference Book 2012; Wyoming Connects: LRTP and Corridor Visions. Note: Descriptions of beginning and endpoints are approximate.



## II. EVALUATION OF CORRIDOR PERFORMANCE

This section describes the evaluation of specific corridor needs based on the performance based process defined in the IPF. The Performance Based Needs Process, shown below, illustrates the steps followed for this corridor plan. Indicative Performance measures based on existing or simply defined index measurements for each investment category of System Preservation, Safety, and Mobility were evaluated to preliminarily identify need relative to long term goals. Qualifying performance measures were evaluated to better assess contributing factors to the primary need indicators. The indicators and qualifiers were evaluated and analyzed relative to system averages and, when available, previously specified performance targets. This gap analysis identifies locations where needs exist, qualifies the nature of the need, and provides information on the priority relative to the system of SSCs and available funding.

Many of the measures were established as comparisons to the system average, therefore good performance indicates performance better than the system average. The reverse is also true, poor performance indicates that performance is below the average or rated as poor for a particular indicator or qualifier. As additional corridors are evaluated, specific performance targets may be set to measure absolute performance. The IPF process recommends a mix of absolute measures to evaluate true need relative to long term goals and comparative measures to assist in determining priority.



### STEP 1: SUMMARY OF INDICATOR AND QUALIFIER PERFORMANCE MEASURES

This corridor plan evaluates System Preservation, Safety, and Mobility performance using the process described in the Integrated Planning Framework, published separately. The plan analyzes the performance of planning segments described in Table 1 as compared to system averages. It identifies good, fair, poor or less, average, more performance for each segment in an overall index and for each contributing qualifier measurement.

Throughout this report, the color green is used to represent System Preservation, blue represents Safety, and yellow represents Mobility. Lighter shades represent better performance and darker shades represent worse performance compared to the system average.

Table 2 summarizes the results for each performance index and qualifier for each planning segment on the corridor.

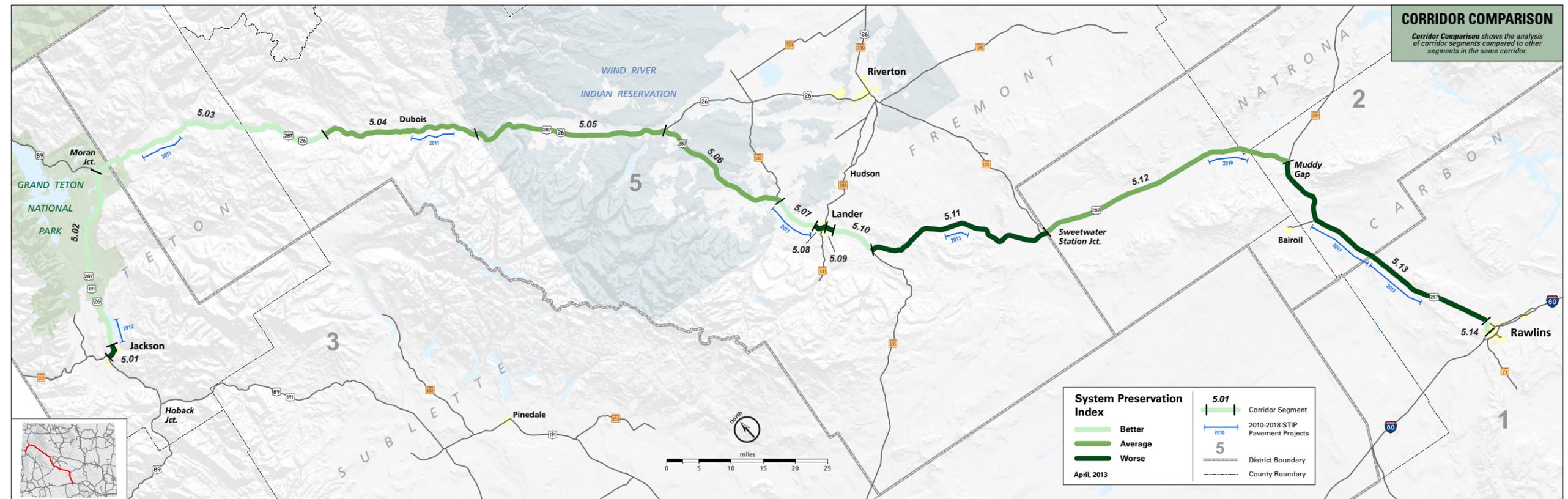
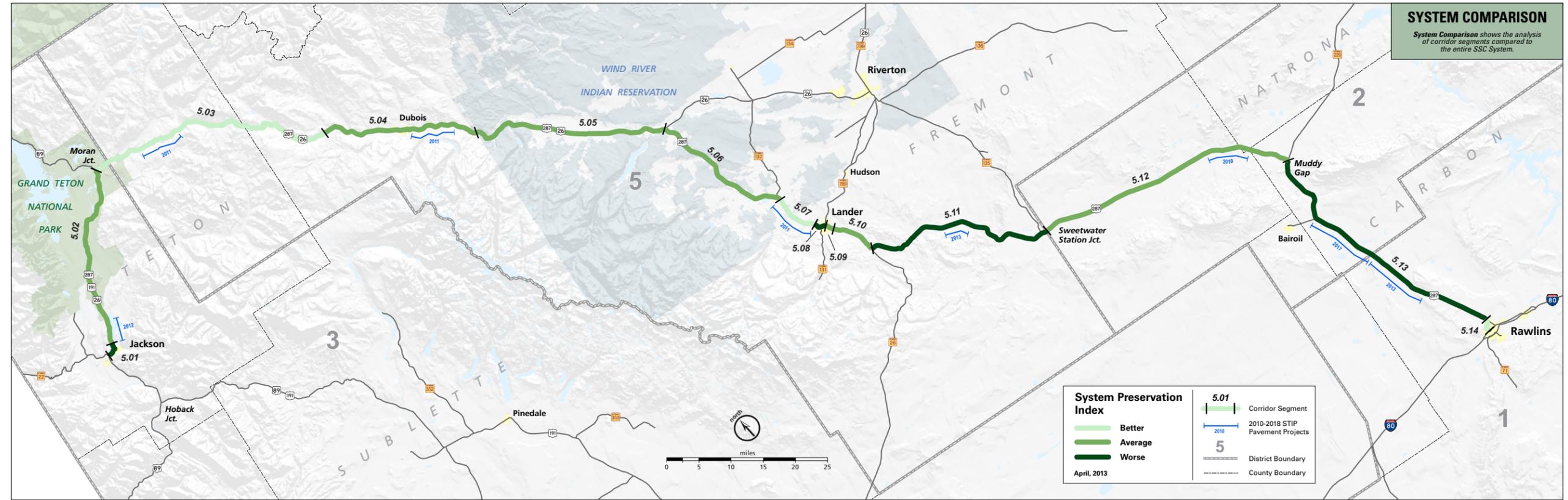
Table 2 - Indicator and Qualifier Performance of SSC 5

Segment	SYSTEM PRESERVATION					SAFETY								MOBILITY					
	System Preservation Index	Rutting	Pavement Maint. Requirement	Pavement Variance Rating	Bridge Variance Rating	Safety Index	Weather Related Crashes	Wildlife Related Crashes	Alcohol Related Crashes	Non-use of Safety Restraints	Horizontal Geometric Insufficiency	Vertical Geometric Insufficiency	Crash Concentrations	Mobility Index	Volume to Capacity Rating	Pavement Variance Rating (L/R)	Traffic Growth	Truck Traffic Growth	Bridge Variance (L/R)
5.01	Worse	Poor	More	Poor	Less	Poor	Average	Less	Average	More	Less	Average	Good	Worse	Good	Good	More	Average	Less
5.02	Average	Good	Less	Good	Less	Poor	Average	More	Average	Less	Average	Less	Good	Average	Good	Fair	Average	Average	Less
5.03	Better	Good	Less	Good	Less	Fair	Average	Average	Average	Average	Average	Average	Poor	Better	Good	Fair	Average	Average	Less
5.04	Average	Good	Average	Fair	Less	Fair	Average	More	Average	Less	Average	Less	Fair	Better	Good	Fair	Average	Less	Less
5.05	Average	Good	Average	Fair	Less	Good	Less	More	Less	Less	Average	Less	Good	Better	Good	Fair	Less	Less	Less
5.06	Average	Good	Average	Fair	Less	Fair	Less	Average	More	Average	Average	Less	Fair	Average	Good	Poor	Less	Less	Less
5.07	Better	Good	Less	Good	Less	Poor	Less	Average	Average	Less	Less	More	Fair	Average	Good	Poor	Average	Less	Less
5.08	Worse	Poor	More	Poor	Less	Poor	Average	Less	Average	More	Less	Less	Good	Better	Good	Good	Average	Average	Less
5.09	Average	Fair	More	Fair	Less	Good	Average	Average	Average	Average	Less	More	Good	Better	Good	Fair	Average	Average	Less
5.10	Average	Good	Average	Good	Less	Poor	Less	More	Average	Less	Less	Less	Good	Worse	Good	Fair	Average	Average	Less
5.11	Worse	Fair	More	Poor	Less	Good	Average	More	Average	Less	Average	Average	Good	Worse	Good	Fair	Less	Less	Less
5.12	Average	Good	Average	Fair	Less	Good	Average	Average	Average	Average	Less	Less	Good	Better	Good	Fair	Less	Less	Less
5.13	Worse	Good	More	Fair	Average	Fair	Average	Average	Average	Average	Less	Average	Poor	Better	Good	Poor	Less	Average	Less
5.14	Better	Good	Less	Good	Less	Fair	Average	Average	More	Less	Less	Less	Good	Better	Good	Good	Average	Average	Less



# CORRIDOR 5

SYSTEM PRESERVATION - INDEX





**Performance Index**

The System Preservation Index is average or better, with the exception of segments 5.01, 5.08, 5.11, and 5.13, which are worse than average.

Performance qualifiers with a negative effect on the System Preservation Index:

- The Pavement Maintenance Requirement is more than average on segments 5.01, 5.08, 5.09, 5.11, and 5.13.
- The Pavement Variance Rating is poor on segments 5.01, 5.08, and 5.11 is poor.

Refer to the sections below for more information.

SYSTEM PRESERVATION					
Segment	System Preservation Index	Rutting	Pavement Maint. Requirement	Pavement Variance Rating	Bridge Variance Rating
5.01	Worse	Poor	More	Poor	Less
5.02	Average	Good	Less	Good	Less
5.03	Better	Good	Less	Good	Less
5.04	Average	Good	Average	Fair	Less
5.05	Average	Good	Average	Fair	Less
5.06	Average	Good	Average	Fair	Less
5.07	Better	Good	Less	Good	Less
5.08	Worse	Poor	More	Poor	Less
5.09	Average	Fair	More	Fair	Less
5.10	Average	Good	Average	Good	Less
5.11	Worse	Fair	More	Poor	Less
5.12	Average	Good	Average	Fair	Less
5.13	Worse	Good	More	Fair	Average
5.14	Better	Good	Less	Good	Less

**Performance Qualifiers**

**Rutting**

There are three locations where rutting falls within the poor category: 3 miles on ML 10 between route marker (RM) 151 and 154 in segment 5.01, almost 1 mile on ML 15 between RM 1 and 2 in segment 5.08, and 1 mile on ML 20 between RM 80 and 81 in segment 5.09.

**Pavement Maintenance Requirements**

The pavement maintenance sections that were recommended by the Pavement Management System (Agile Assets) and not yet selected to receive funding within the STIP will continue to decline. If not treated fairly soon, the treatments will become more costly as conditions deteriorate.

Approximately 14% of SSC 5 has been identified as having a 1S need. This represents 41 miles of pavement. Segments 5.02, 5.03, 5.04, 5.05, 5.06, 5.10, and 5.13 had 1S treatments recommended by the Pavement Management System. Based upon current available funding, no projects have been selected to be completed within the next several years.

Approximately 36% of SSC 5 has been identified as having a 2S need. This represents 103 miles of pavement. Segments 5.03, 5.04, 5.05, 5.06, 5.08, 5.09, 5.10, 5.11, and 5.12 have 2S treatment recommended by the Pavement Management System. Based upon current available funding, only one project, representing 10.6 miles of pavement, has been selected to be completed within the next several years.

Approximately 19% has been identified as having a 3S need. This represents 54 miles of pavement. Segments 5.05, 5.08, 5.09, 5.11, and 5.13 have 3S treatment recommended by the Pavement Management System. Based upon current available

funding, only three projects, representing 15.1 miles of pavement, have been selected to be completed within the next several years.

**Pavement Variance Rating**

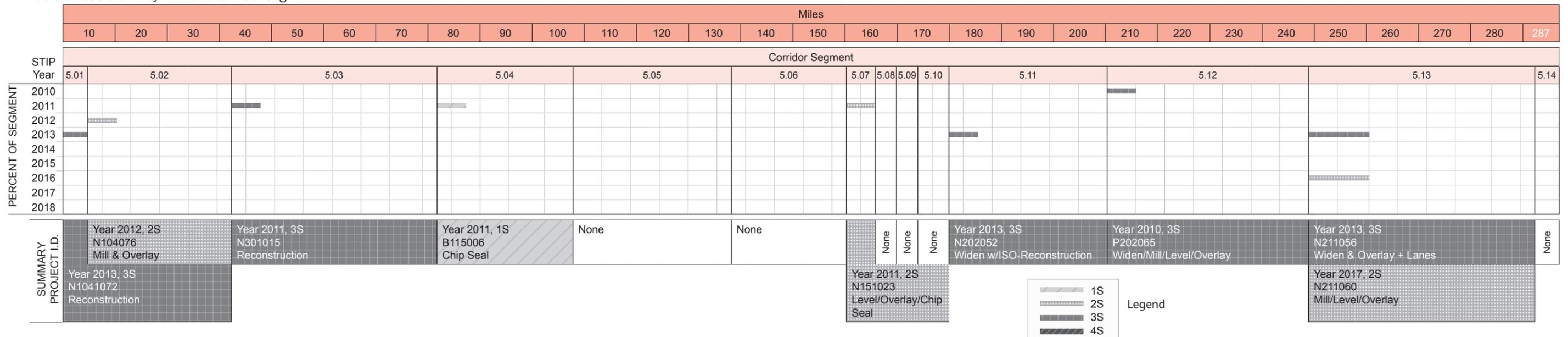
The Pavement Variance Rating is fair or better for the entire corridor with the exception of poor ratings in segments 5.01 (Jackson), 5.08 (Lander), and 5.11 (Sweetwater Station Junction). Pavement hotspots, identified by length and severity, occur in Jackson, segment 5.01 (most severe), three locations in Lander, segments 5.08 and 5.09 (most or moderately severe), and four other locations (moderately or least severe).

**Bridge Variance Rating**

The Bridge Variance Rating for all of the corridor is average or better than the system average. All segments have at least one bridge, except segments 5.09 and 5.14. There is one structurally deficient bridge in segment 5.13, with a bridge deck of 4915 ft<sup>2</sup> and the lowest WYDOT severity rating, resulting in a Bridge Variance Rating of average when compared to the system average.

NOTE: See Appendix for maps documenting each performance qualifier.

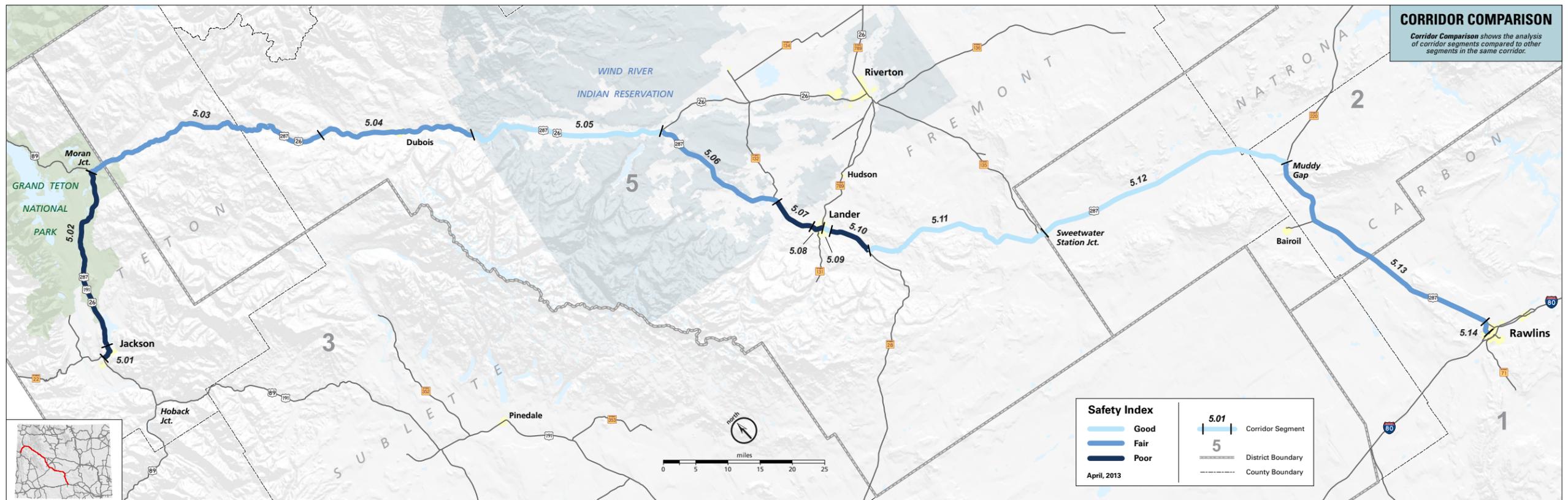
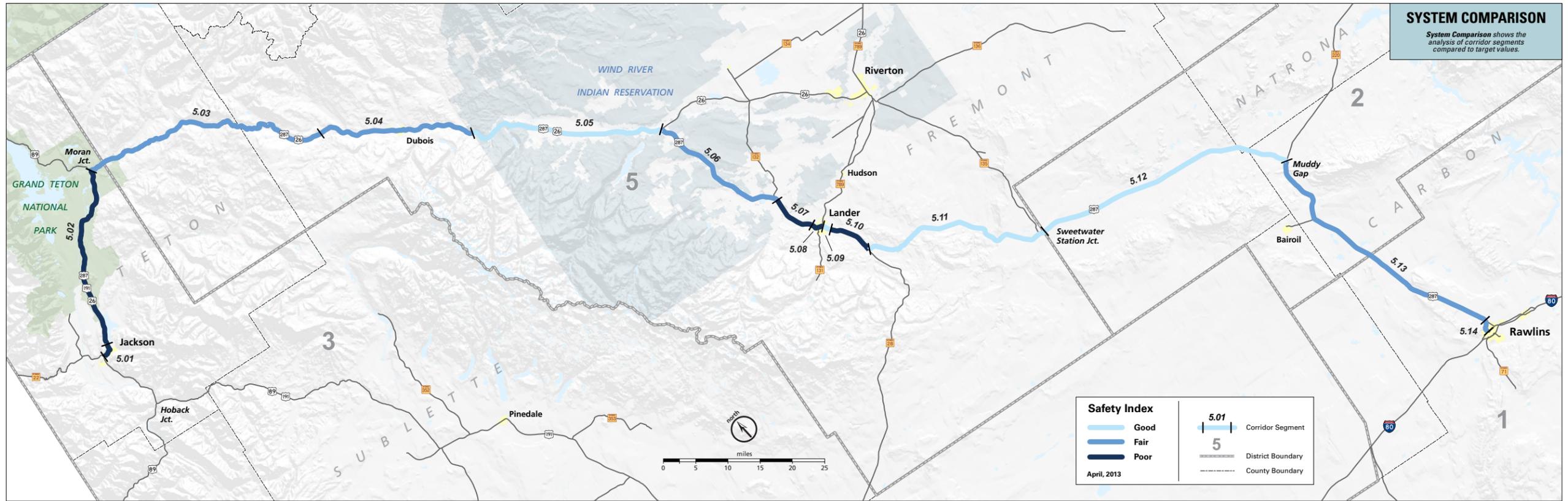
Table 3 - SSC 5 STIP by Year and Corridor Segment

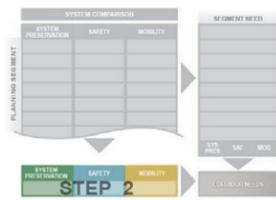




# CORRIDOR 5

SAFETY - INDEX





**Performance Index**

The Safety Performance Index ranges from good to poor across the corridor. Segments rated poor include 5.01, 5.02, 5.07, 5.08, and 5.10.

Performance qualifiers with poor performance include:

- Wildlife Related Crashes are more than the average on segments 5.02, 5.04, 5.05, 5.10, and 5.11.
- Alcohol Related Crashes are more than the average on segments 5.06 and 5.14.
- Non-Use of Safety Restraints is more than the average on segments 5.08.
- Crashes on Vertical Geometric Insufficient Curves are more than the average on segments 5.07 and 5.09.
- Crash Concentrations are rated poor on segments 5.03 and 5.13.

Refer to the sections below for more information.

Segment	SAFETY							
	Safety Index	Weather Related Crashes	Wildlife Related Crashes	Alcohol Related Crashes	Non-use of Safety Restraints	Horizontal Geometric Insufficiency	Vertical Geometric Insufficiency	Crash Concentrations
5.01	Poor	Average	Less	Average	More	Less	Average	Good
5.02	Poor	Average	More	Average	Less	Average	Less	Good
5.03	Fair	Average	Average	Average	Average	Average	Average	Poor
5.04	Fair	Average	More	Average	Less	Average	Less	Fair
5.05	Good	Less	More	Less	Less	Average	Less	Good
5.06	Fair	Less	Average	More	Average	Average	Less	Fair
5.07	Poor	Less	Average	Average	Less	Less	More	Fair
5.08	Poor	Average	Less	Average	More	Less	Less	Good
5.09	Good	Average	Average	Average	Average	Less	More	Good
5.10	Poor	Less	More	Average	Less	Less	Less	Good
5.11	Good	Average	More	Average	Less	Average	Average	Good
5.12	Good	Average	Average	Average	Average	Less	Less	Good
5.13	Fair	Average	Average	Average	Average	Less	Average	Poor
5.14	Fair	Average	Average	More	Less	Less	Less	Good

**Performance Qualifiers**

**Weather Related Crashes**

The ratio of weather related crashes to total crashes varied within SSC 5 from below the system average to slightly above the system average. Segment 5.03 had the highest percentage of weather related crashes, with 33% of the total crashes occurring during adverse weather conditions, which were primarily identified as snowing with snow and ice/frost on the roads. Segment 5.10 had the lowest percentage rate with just 8% of the total crashes related to adverse weather conditions, half of which were during snowfall and half during rainfall.

**Wildlife Related Crashes**

SSC 5 is varied in its wildlife related collisions. Segments 5.02, 5.04, 5.05, 5.10, and 5.11 have a high rate of accidents involving wildlife, all over 60%, compared to the statewide average (31%). Segment 5.05 had the highest likelihood of an accident involving wildlife (73%).

Segment 5.05 is a rural highway where a majority of the wildlife related crashes are related to deer. The wildlife related crashes occurred mostly during darkness and throughout the segment. These crashes do not correlate with migration routes documented by the Wyoming Game and Fish Department. Seven percent of the crashes were with cows, which is a small amount compared to deer; however, the cow incidents occurred within a localized area between RM 83 and 85.

**Alcohol Related Crashes**

The percentage of alcohol related crashes varies within the corridor. Segment 5.05 did not have any alcohol related crashes, while the percentage rating of alcohol related crashes for segments 5.06 and 5.14 is more than twice the system average.

**Non-use of Safety Restraint**

The ratio of crashes in which a restraint device was not worn to total crashes varies within SSC 5 from below the system average to higher than the system average. Segments 5.01 (78.4%) and 5.08 (78.85%) had the highest percentage of crashes in which seat belts were not worn. These segments correspond to the Jackson and Lander urban areas.

**Horizontal Geometry Insufficiency**

Several horizontal alignments were found to be insufficient based on the associated posted speed and an assumed emax of 8%. Segments 5.02, 5.03, 5.04, 5.05, 5.06, and 5.11 has the most insufficient horizontal alignments within the segment. Further study will need to take place to determine specific needs of each alignment and the constraints to which it was designed and built.

Following is a summary of locations where a horizontal insufficiency corresponded to a crash. The data is not clear if the crash was directly related to geometry. However, locations with several accidents should be further studied. Table 4 summarizes locations of insufficient curves with more than one crash in near vicinity within the 5 year accident analysis period.

Table 4 - Horizontal Geometry Insufficiency

Segment	ML Route	Route Marker	# of Crashes
5.03	ML30	0.50	7
5.03	ML30	8.70	2
5.03	ML30	23.52	2
5.06	ML15	9.22	3
5.11	ML20	67.88	5

**Vertical Geometry Insufficiency**

Several vertical alignments were found to be insufficient based on the associated posted speed and the length of the curve for stopping sight distance. Segments 5.07 and 5.09 have the most insufficient vertical alignments within the segment. Further study will need to take place to determine specific needs of each alignment and the constraints to which it was designed and built.

Table 5 summarizes locations of insufficient profiles with more than one crash in the near vicinity within the 5 year crash analysis. The data is not clear if the crash was directly related to the geometry. However, locations with several crashes should be studied further.

Table 5 - Vertical Geometry Insufficiency

Segment	ML Route	Route Marker	Curve Type	# of Crashes
5.03	ML30	25.86	CREST	3
5.07	ML15	3.53	CREST	7
5.09	ML20	80.97	SAG	4
5.11	ML20	67.32	SAG	2

**Crash Concentrations**

Crash concentrations are identified by locating spatially significant clusters of individual crash events that are of a similar severity level. The concentrations fall into one of two severity types: Critical, which consists of only "Critical" level crashes, and Other, which consists of "Severe" and "Damage" level crashes.

There are seven Critical concentrations on Corridor 5, which are listed in Table 6. Additionally, there is one Other type concentration. Segments 5.03 and 5.13 exhibit the most crash concentrations with 4 Critical concentrations, which occur between RM 8.2 and 8.8, RM 35.6 and 36, RM 15.6 and 16.8, and RM 8.4 and 8.8. Segment 5.14 has Other type concentrations resulting primarily from Damage level crashes.

Table 6 - Critical Crash Concentrations

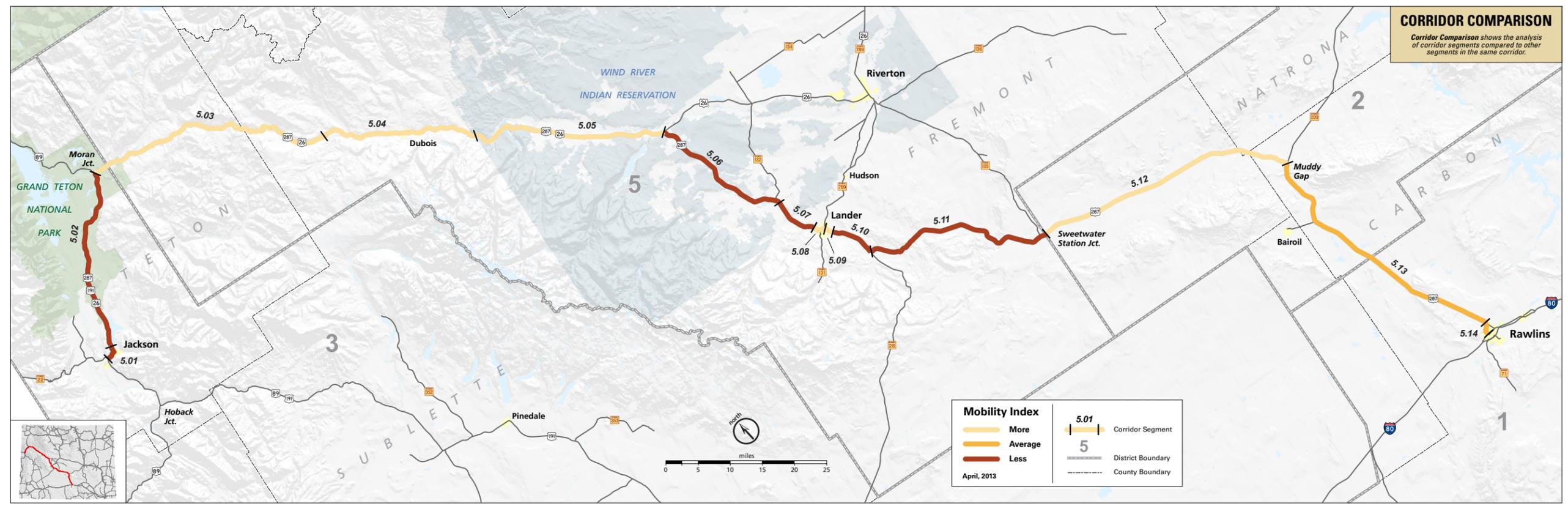
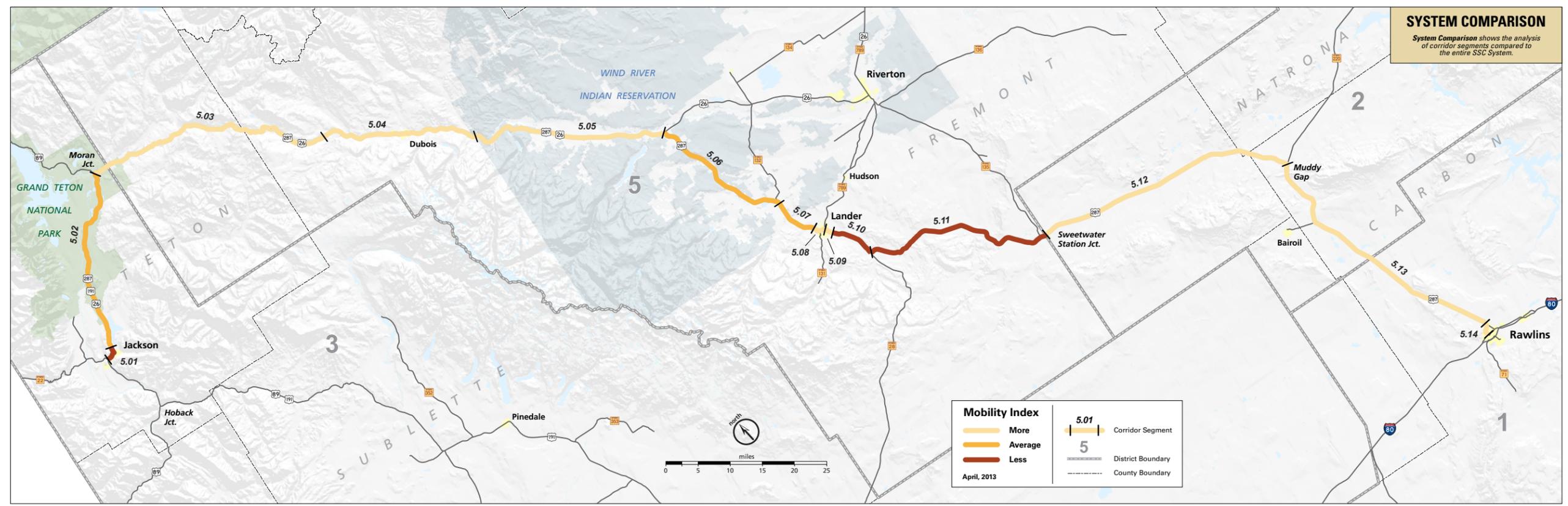
Segment	ML Route	Route Marker	
		From	To
5.03	ML30	8.2	8.8
5.03	ML30	35.6	36
5.04	ML30	57	57.5
5.06	ML15	9.1	9.7
5.07	ML15	5.9	6.3
5.12	ML20	2	2.5
5.13	ML21	15.6	16.8
5.13	ML21	8.4	8.8

NOTE: See Appendix for maps documenting each performance qualifier.

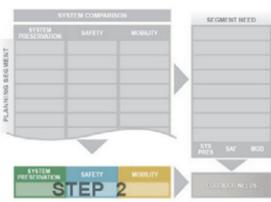


# CORRIDOR 5

MOBILITY - INDEX



## STEP 2: ANALYSIS OF INVESTMENT CATEGORY NEEDS - MOBILITY



### Performance Index

The Mobility Performance Index for segments on SSC 5 ranges from better to worse than average. Segments rated worse than average include 5.10 and 5.11.

Segment	MOBILITY					
	Mobility Index	Volume to Capacity Rating	Pavement Variance Rating (L/R)	Traffic Growth	Truck Traffic Growth	Bridge Variance (L/R)
5.01	Worse	Good	Good	More	Average	Less
5.02	Average	Good	Fair	Average	Average	Less
5.03	Better	Good	Fair	Average	Average	Less
5.04	Better	Good	Fair	Average	Less	Less
5.05	Better	Good	Fair	Less	Less	Less
5.06	Average	Good	Poor	Less	Less	Less
5.07	Average	Good	Poor	Average	Less	Less
5.08	Better	Good	Good	Average	Average	Less
5.09	Better	Good	Fair	Average	Average	Less
5.10	Worse	Good	Fair	Average	Average	Less
5.11	Worse	Good	Fair	Less	Less	Less
5.12	Better	Good	Fair	Less	Less	Less
5.13	Better	Good	Poor	Less	Average	Less
5.14	Better	Good	Good	Average	Average	Less

Three regional routes connect to SSC 5. The condition of each local and regional route is associated with a planning segment and directly influences the mobility of that segment. The condition of these local and regional routes is for the most part in fair to poor condition. There are currently no structurally deficient bridges on the local and regional routes.

SSC 5 is a significant route to National Parks and other public lands recreation areas. SSC 5 also carries a substantial amount of traffic related to gas and oil development on the southern end of the corridor. Shoulder widths vary from 2' to 4' with some rumble strips noted. This is adequate for low volume highways.

Table 7 - Major Traffic Generators

Major Traffic Generators
Yellowstone & Grand Teton National Parks
Employment centers - Jackson, Lander, Rawlins
Other dispersed local/regional recreation on public lands
Sinks Canyon State Park - Lander
Oil/gas production and transport

### Performance Qualifiers

#### Volume to Capacity Rating

Volume to Capacity Ratio (V/C) is a measure that reflects mobility and quality of travel of a corridor or section of a corridor. It compares roadway demand (vehicle volumes) with roadway supply (carrying capacity). The volume to capacity rating for the entire SSC 5 is good.

### Traffic Growth

The average traffic growth within the SSC System is 1.42%. The majority of segments in this corridor are below this average. Segment 5.01 has the highest average annual traffic growth rate. This segment is located in the urban area of Jackson on ML10.

Table 8 - Traffic Growth

Segment	AADT 2010	Average 20 Year Growth
5.01	21,960	2.26%
5.02	6,025	1.65%
5.03	986	1.00%
5.04	2,002	1.60%
5.05	1,376	0.52%
5.06	1,211	0.23%
5.07	3,823	1.17%
5.08	11,300	1.45%
5.09	6,692	1.39%
5.10	2,935	1.00%
5.11	813	-0.43%
5.12	953	0.38%
5.13	3,321	0.93%
5.14	4,414	1.19%

### Truck Traffic Growth

The average truck traffic growth within the SSC System is 1.34%. The majority of SSC 5 are below this average. The majority of the corridor is a 2-lane rural roadway classification. Segment 5.13 has the highest average annual truck growth rate. This segment is from Muddy Gap to just north of Rawlins via ML21.

Table 9 - Truck Traffic Growth

Segment	AADTT 2010	% Trucks 2010	Truck Traffic Growth
5.01	814	4.01%	1.52%
5.02	256	4.58%	0.99%
5.03	112	11.72%	0.62%
5.04	126	6.65%	0.19%
5.05	114	8.37%	-1.17%
5.06	57	5.97%	-1.50%
5.07	140	3.73%	0.22%
5.08	379	3.34%	0.90%
5.09	414	6.35%	1.59%
5.10	385	13.75%	1.59%
5.11	130	16.33%	0.03%
5.12	128	13.43%	0.14%
5.13	598	18.78%	1.71%
5.14	323	7.89%	1.53%

### Local and Regional Roads

Local and Regional Routes that connect to the SSC affect the Mobility Performance Indicator. These routes serve the important function of connecting rural areas to the primary routes. While traffic volumes are typically low on these secondary routes, maintaining them in acceptable condition is important to general mobility for the state. This analysis includes pavement and bridge condition as qualifiers.

### Local and Regional Roads Impacting Pavement Variance Rating (L/R)

The Mobility Index may be affected by local and regional routes that have poor pavement condition as reflected by the Pavement Variance Rating (PVR). The PVR is the product of Pavement Sufficiency Rating (PSR) calculated as the deviation from the system average. Poor PSR is reported on local/regional routes associated with segments 5.06, 5.07, 5.11, and 5.13. Table 10 lists the local/regional routes with poor PSR.

Table 10 - Local/Regional Routes with Poor PSR

Segment	Average PVR	ML Route	Route Marker		Average PSR
			Begin	End	
5.06	0.78	ML703	0.00	6.98	2.47
5.07	0.78	ML703	0.00	6.98	2.47
5.11	0.90	ML708	17.58	34.59	2.35
5.11	1.01	ML709	17.55	19.00	2.24
5.13	1.13	ML406	0.00	4.64	2.12

### Bridge Variance Rating (L/R)

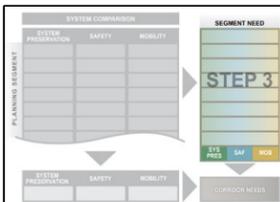
The bridge variance rating for local and regional routes on SSC 5 shows no structurally deficient bridges.

Table 11 - SSC 5 Structurally Deficient Bridges on Local/Regional Routes

Segment	ML Route	Route Marker
No deficient bridges		

NOTE: See Appendix for maps documenting each performance qualifier.

STEP 3: ANALYSIS OF PLANNING SEGMENT NEEDS



**5.02 Jackson to Moran Jct.**

- System Preservation Index – Average, with good performance in all performance qualifiers.
- Safety Index – Poor, with more than average number of wildlife-related crashes. There were 264 total reported crashes during the 5-year planning period, with 4 fatalities.
- Mobility Index – Average, with average or better than average performance across all performance qualifiers. The segment reports AADT 6,025 with 5% trucks.

**5.04 Shoshone Nat'l Forest to Wind River (through Dubois)**

- System Preservation Index – Average, with good performance in all performance qualifiers. There is 1 pavement hotspot south of Dubois.
- Safety Index – Fair, with more than average wildlife-related crashes, and 1 critical crash concentration. There were 147 total reported crashes during the 5-year planning period, with 7 fatalities.
- Mobility Index – Better than average, with average or better than average performance across all performance qualifiers. The segment reports AADT 2,002 with 7% trucks.

**5.06 Jct. US 26 to Wind River South**

- System Preservation Index – Average, with good performance in all performance qualifiers.
- Safety Index – Fair, with more than average alcohol-related crashes, 1 deficient horizontal curve with 3 crashes, and 1 critical crash concentration at the intersection of WY 132. There were 40 total reported crashes during the 5-year planning period, with 1 fatality.
- Mobility Index – Average, with poor performance in the pavement variance rating for local/regional roads. There is 1 local/regional route with poor PSR. The segment reports AADT 1,211 with 6% trucks.

**5.08 Lander Urban**

- System Preservation Index – Worse than average, with poor performance in all pavement performance qualifiers. There are 2 pavement hotspots in the Lander urban area.
- Safety Index – Poor, with more than average number of non-use of safety restraint crashes. There were 201 total reported crashes during the 5-year planning period, with 0 fatalities.
- Mobility Index – Better than average, with average or better performance in all performance qualifiers. The segment reports AADT 11,300 with 3% trucks.

**5.10 South of Urban**

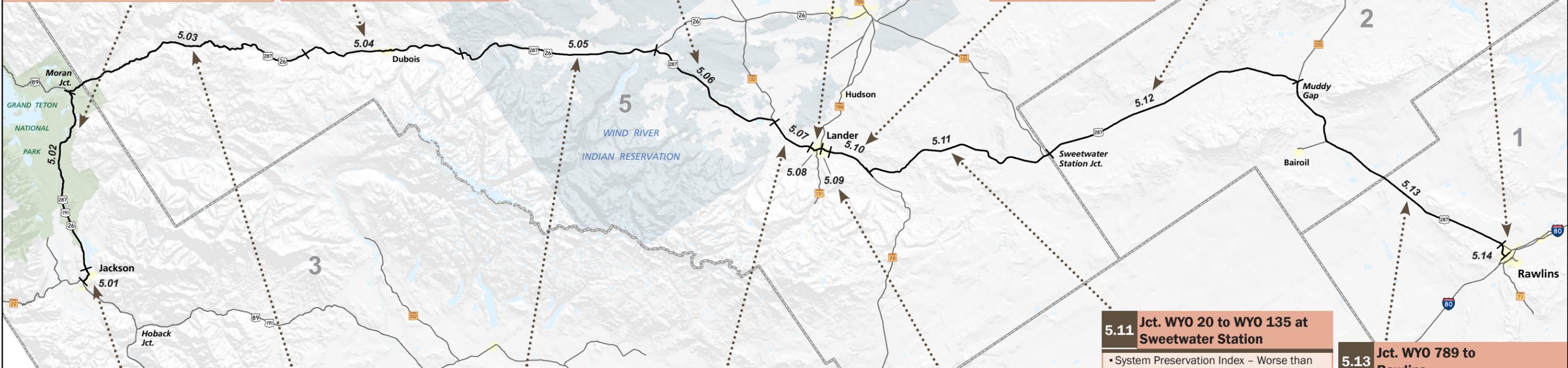
- System Preservation Index – Average, with average or better performance in all performance qualifiers.
- Safety Index – Poor, with more than average wildlife-related crashes. There were 52 total reported crashes during the 5-year planning period, with 1 fatality.
- Mobility Index – Worse than average due to the high percentage of trucks on the low volume highway. The segment reports AADT 2,935 with 14% trucks.

**5.12 WYO 135 to Jct. WYO 789**

- System Preservation Index – Average, with average or better performance in all performance qualifiers.
- Safety Index – Good, with average or better performance in all performance qualifiers. There were 62 total reported crashes during the 5-year planning period, with 4 fatalities.
- Mobility Index – Better than average, with average or better performance on all performance qualifiers. The segment reports AADT 953 with 13% trucks.

**5.14 Rawlins Urban**

- System Preservation Index – Better than average, with average or better performance in all performance qualifiers.
- Safety Index – Fair, with more than average alcohol-related accidents. There were 28 total reported crashes during the 5-year planning period, with 0 fatalities.
- Mobility Index – Better than average, with average or better performance on all performance qualifiers. The segment reports AADT 4,414 with 8% trucks.



**5.01 Jackson Urban Area**

- System Preservation Index – Worse than average, with poor performance in all pavement-related performance qualifiers. There is 1 pavement hotspot in Jackson; a pavement project is scheduled on the segment in 2013.
- Safety Index – Poor, with more than average number of crashes reporting non-use of safety restraints. There were 324 total reported crashes during the 5-year planning period, with 0 fatalities.
- Mobility Index – Worse than average, with more than average traffic growth. The segment reports AADT 21,960 with 4% trucks.

**5.03 Moran Jct. to edge of Shoshone Nat'l Forest**

- System Preservation Index – Better than average, with good performance in all performance qualifiers.
- Safety Index – Fair, with 11 crashes on 3 deficient horizontal curves, 3 crashes on 1 deficient vertical curve, and 2 critical crash concentrations. There were 157 total reported crashes during the 5-year planning period, with 5 fatalities.
- Mobility Index – Better than average, with average or better than average performance across all performance qualifiers. The segment reports AADT 986 with 12% trucks.

**5.05 Wind River to Jct. US 26**

- System Preservation Index – Average, with good performance in all performance qualifiers. There is 1 pavement hotspot north of the junction with US 26.
- Safety Index – Fair, with more than average wildlife-related crashes. There were 102 total reported crashes during the 5-year planning period, with 1 fatality.
- Mobility Index – Better than average, with average or better than average performance across all performance qualifiers. The segment reports AADT 1,376 with 8% trucks.

**5.07 North of Lander**

- System Preservation Index – Better than average, with good performance in all performance qualifiers.
- Safety Index – Poor, with 1 deficient vertical curve with 7 crashes, and 1 critical crash concentration. There were 96 total reported crashes during the 5-year planning period, with 3 fatalities.
- Mobility Index – Average, with poor performance in the pavement variance rating for local/regional roads. There is 1 local/regional route with poor PSR. The segment reports AADT 3,823 with 4% trucks.

**5.09 North of Lander**

- System Preservation Index – Average, with more than average pavement maintenance requirement. There is 1 pavement hotspot in the Lander urban area.
- Safety Index – Good, with 4 crashes on a deficient vertical curve. There were 22 total reported crashes during the 5-year planning period, with 0 fatalities.
- Mobility Index – Better than average, with more than average or better performance in all performance qualifiers. The segment reports AADT 6,692 with 6% trucks.

**5.11 Jct. WYO 20 to WYO 135 at Sweetwater Station**

- System Preservation Index – Worse than average, with more than average pavement maintenance requirement and poor pavement variance rating. There are 2 pavement hotspots; a pavement project is scheduled on the segment in 2013.
- Safety Index – Good, with more than average wildlife-related crashes. The segment reports 5 crashes on 1 deficient horizontal curve and 2 crashes on 1 deficient vertical curve. There were 73 total reported crashes during the 5-year planning period, with 0 fatalities.
- Mobility Index – Worse than average due to the high percentage of trucks on the low volume highway and 2 local/regional routes with poor PSR. The segment reports AADT 813 with 16% trucks.

**5.13 Jct. WYO 789 to Rawlins**

- System Preservation Index – Worse than average, with more than average pavement maintenance requirement. Pavement projects are scheduled on the segment in 2013 and 2017. There is 1 structurally deficient bridge on the segment.
- Safety Index – Fair, with 2 critical crash concentrations north of Rawlins. There were 230 total reported crashes during the 5-year planning period, with 4 fatalities.
- Mobility Index – Better than average, with poor performance in the pavement variance rating for local/regional roads. There is 1 local/regional route with poor PSR. The segment reports AADT 3,321 with 19% trucks.



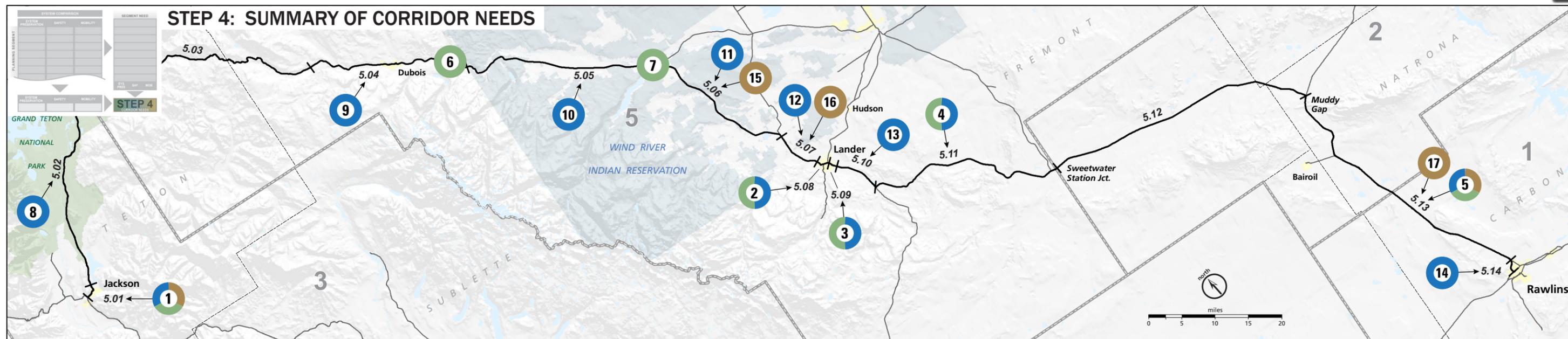
**Environmental Overview**

The Wyoming Interagency Spatial Database and Online Management System (WISDOM) was queried to identify natural resources that could be impacted by transportation projects. The following summary lists the general type of potentially impacted resources. The project development phase should investigate these resources in more detail to determine if mitigation activities are required. Please see Appendix and <http://wisdom.wygisc.org/> for detailed information.

There are ten different terrestrial habitat types located throughout the ten special management areas within SSC 5. Ten federally listed species within the corridor fall into one of three categories, candidate, endangered, and threatened. Five big game species and twenty-one raptor species are found in SSC 5. There are five different categories that fall under the aquatic habitat. There are forty watersheds, six aquatic crucial priority areas, nine aquatic enhancement priority areas, three combined crucial priority areas, and five combined enhancement priority areas. See Table 12 for general locations.

Table 12 - Environmental Considerations

Category	WEST (Jackson - West Boundary Indian Reservation)	CENTRAL (West Boundary Indian Reservation - Lander)	EAST (Lander - Rawlins)
Big Game Crucial Range	Bighorn Sheep Elk Moose Mule Deer Pronghorn Antelope	Mule Deer Pronghorn Antelope	Moose Mule Deer Pronghorn Antelope
Big Game Migration Route	Elk Moose Mule Deer	na	Elk Mule Deer Pronghorn Antelope
WGFD Aquatic Crucial Priority Areas SHP	Snake River Upper Spread Creek Wind River Basin Burbot	Wind River Basin Sauger	Wind River Basin Sauger
WGFD Terrestrial Crucial Priority Areas SHP	Greys-Hoback River 6th Order Hydrologic Units Gros Ventre 6th Order Hydrologic Units Snake Headwaters 6th Order Hydrologic Units	Popo Agie-Beaver Creek River Watershed	Lower Sweetwater River Watershed North Rawlins Popo Agie-Beaver Creek River Watershed
WGFD Combined Crucial Priority Areas SHP	Upper Wind River Basin	Upper Wind River Basin	na
Occurrence & Distribution (Federally Listed Species)	Canada Lynx Gray Wolf Greater Sage Grouse Grizzly Bear North American Wolverine Whooping Crane	Gray Wolf Greater Sage Grouse Grizzly Bear Whooping Crane	Gray Wolf Greater Sage Grouse



**Summary of Needs**

This section summarizes needs by planning segment for each of the three performance indicators and the supporting performance qualifiers. The summary identifies overlapping needs, which provides guidance in the efficient prioritization of projects to best address deficiencies. The practice of completing projects that simultaneously address multiple needs may present cost savings as well as being most effective in improving performance indexes across the system. The summary also lists other needs in each of the three performance measurement areas. For more information about needs at the corridor level, see the maps in the appendix which compare both system level and corridor level needs.

SSC 5 needs occur across all categories: within System Preservation, pavement needs are noted on 7 of 14 segments. Within Safety, high levels of wildlife related crashes are noted on five segments. Alcohol and non-use of safety restraint related crashes are also reported, along with crashes on several curves with deficient geometry. Two areas of crash concentrations occur on the north end of the corridor and two on the south end, all in rural areas. Traffic growth rates in the Jackson area are associated with a high level of pavement need in that area. Pavement needs are also especially noted in the Lander area.

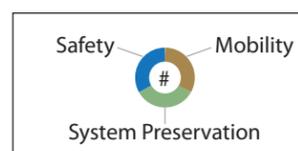
Big game crucial range and migration routes intersect much of the corridor and should be investigated for concurrence with wildlife related crashes. The entire Upper Wind River Basin is considered a Combined Crucial Priority Area by the Wyoming Game and Fish Department. Numerous federally listed endangered species are found in the corridor and should be considered in all project planning.

Based on the needs identified in this analysis and the recommended strategies and solution sets, this plan does not identify specific needs to preserve or acquire additional rights of way to accommodate needed improvements. Local and specific ROW requirements based on urban on needs in urban areas should be evaluated in the Urban Areas Corridor Plan in cooperation with local governments and planning organizations. Frequent driveway accesses, lack of access controls, and pedestrian traffic on US 191 in the Jackson urban area present challenges for traffic management. ROW in the Jackson and Lander areas should be evaluated for future improvements.

**Overlapping Needs**

Overlapping needs are identified on five segments:

- 1 5.01 - SYSTEM PRESERVATION/SAFETY/MOBILITY: Rutting, Pavement Maintenance Requirement, Pavement Variance Rating, Pavement Hotspots, Non-use of Safety Restraint, Traffic Growth
- 2 5.08 - SYSTEM PRESERVATION/SAFETY: Rutting, Pavement Maintenance Requirement, Pavement Variance Rating, Pavement Hotspots, Non-use of Safety Restraints
- 3 5.09 - SYSTEM PRESERVATION/SAFETY: Pavement Maintenance Requirement, Non-use of Safety Restraint
- 4 5.11 - SYSTEM PRESERVATION/SAFETY: Pavement Maintenance Requirement, Pavement Variance Rating, Pavement Hotspots, Wildlife Related Crashes
- 5 5.13 - SYSTEM PRESERVATION/SAFETY/MOBILITY: Pavement Maintenance Requirement, Crash Concentrations



**Other Performance Index Needs**

**System Preservation**

- 6 5.04 - Pavement Hotspots
- 7 5.05 - Pavement Hotspots

**Safety**

- 8 5.02 - Wildlife Related Crashes
- 9 5.04 - Wildlife Related Crashes
- 10 5.05 - Wildlife Related Crashes
- 11 5.06 - Alcohol Related Crashes
- 12 5.07 - Curves with Vertical Horizontal Deficiency
- 13 5.10 - Wildlife Related Crashes
- 14 5.14 - Alcohol Related Crashes

**Mobility**

- 15 5.06 - Pavement Variance Rating (L&R)
- 16 5.07 - Pavement Variance Rating (L&R)
- 17 5.13 - Pavement Variance Rating (L&R)



### III. SOLUTION SETS

A solutions menu was created to address the needs identified in the previous sections. This menu identifies potential solution strategies grouped by performance measure categories. The strategies are a preliminary list based on industry accepted approaches and the efforts to date of WYDOT programs to document preferred approaches. This list is not intended to be all-inclusive, but represents types of improvements that may be employed to address documented needs.

Section IV recommends how the solution sets may be efficiently grouped depending on funding availability.

Table 13 - Recommended Solution Sets to Improve Performance in Each Index

System Preservation	Safety		Mobility	
<p><i>Pavement Maintenance Requirement &amp; Pavement Variance Rating</i></p> <p><i>Rutting</i> Mill Mill and overlay</p> <p><i>1S Treatments</i> Mill and overlay Seal Coat Cleaning and sealing joints Patching pavement Micro surfacing</p> <p><i>2S Treatments</i> Roadway Restoration</p> <p><i>3S Treatments</i> Reconstruct Roadway Roadway widening Upgrade geometric design</p> <p><i>Bridge Variance Rating</i> Bridge Replacement Channel reconstruction Cleaning and sealing bridge members Lower weight limits Restore drainage systems Scour countermeasures</p>	<p><i>Weather Related</i> Signage Automated anti-icing systems Grooved pavement ITS Larger signs Snow berms/grading Snow fencing Warning beacons</p> <p><i>Wildlife Related</i> Animal detection systems Animal jump-out or one-way gates ITS Remove brush from ROW Signage Warning beacons Wildlife bridge/underpass Wildlife fencing</p> <p><i>Alcohol Related</i> Centerline rumble strips ITS Law Enforcement Media campaign Shoulder rumble strips</p>	<p><i>Horizontal Geometry</i> Centerline rumble strips Dynamic curve warning system Guardrail Improve/restore superelevation Lighting Oversize/length restrictions Reconstruction/realignment Reduce posted speed Reflectors Shoulder rumble strips Signage Warning beacons</p> <p><i>Vertical Geometry</i> Larger signs Reconstruction/realignment Reduce posted speed Reflectors Signage Warning beacons</p> <p><i>Safety Restraints</i> ITS Law Enforcement Media campaign</p>	<p><i>Volume to Capacity Rating &amp; Traffic Growth / Truck Traffic Growth</i> Acceleration lane Capacity improvements Deceleration lane Increase lane width Intersection/interchange improvements Multimodal improvements Passing lanes Shoulder widening Through lanes Turn lane</p> <p><i>Bridge Variance (L/R)</i> Bridge Replacement Channel reconstruction Cleaning and sealing bridge members Lower allowable weight limits on bridge Restore drainage systems Scour countermeasures</p>	<p><i>Pavement Variance Rating (L/R)</i></p> <p><i>Rutting</i> Mill Mill and overlay</p> <p><i>1S Treatments</i> Cleaning and sealing joints Micro surfacing Mill and overlay Patching pavement Seal Coat</p> <p><i>2S Treatments</i> Roadway Restoration</p> <p><i>3S Treatments</i> Reconstruct Roadway Roadway widening Upgrade geometric design</p>



## IV. RECOMMENDATIONS

This section describes recommendations for strategies and priorities to address corridor needs. The selected strategies address the needs described in previous sections and are organized by the three strategic performance areas: System Preservation, Safety, and Mobility. These recommendations provide information and guidance consistent with the Strategic and Long Range Plans to help WYDOT select projects in coordination with the STIP process.

The recommended strategies have been packaged into solution sets that recognize the inherent overlap that investments may have across performance areas. For example, truck passing lanes may simultaneously improve traffic flow (Mobility) and reduce crashes (Safety).

The solution sets are tiered to the three Funding Scenarios identified in the Long Range Transportation Plan. The funding scenarios describe a progressively increasing budget, with generally defined allocations to System Preservation, Safety, and Mobility. With each succeeding level of investment, additional funding is allocated to address shortfalls in performance-based goals.

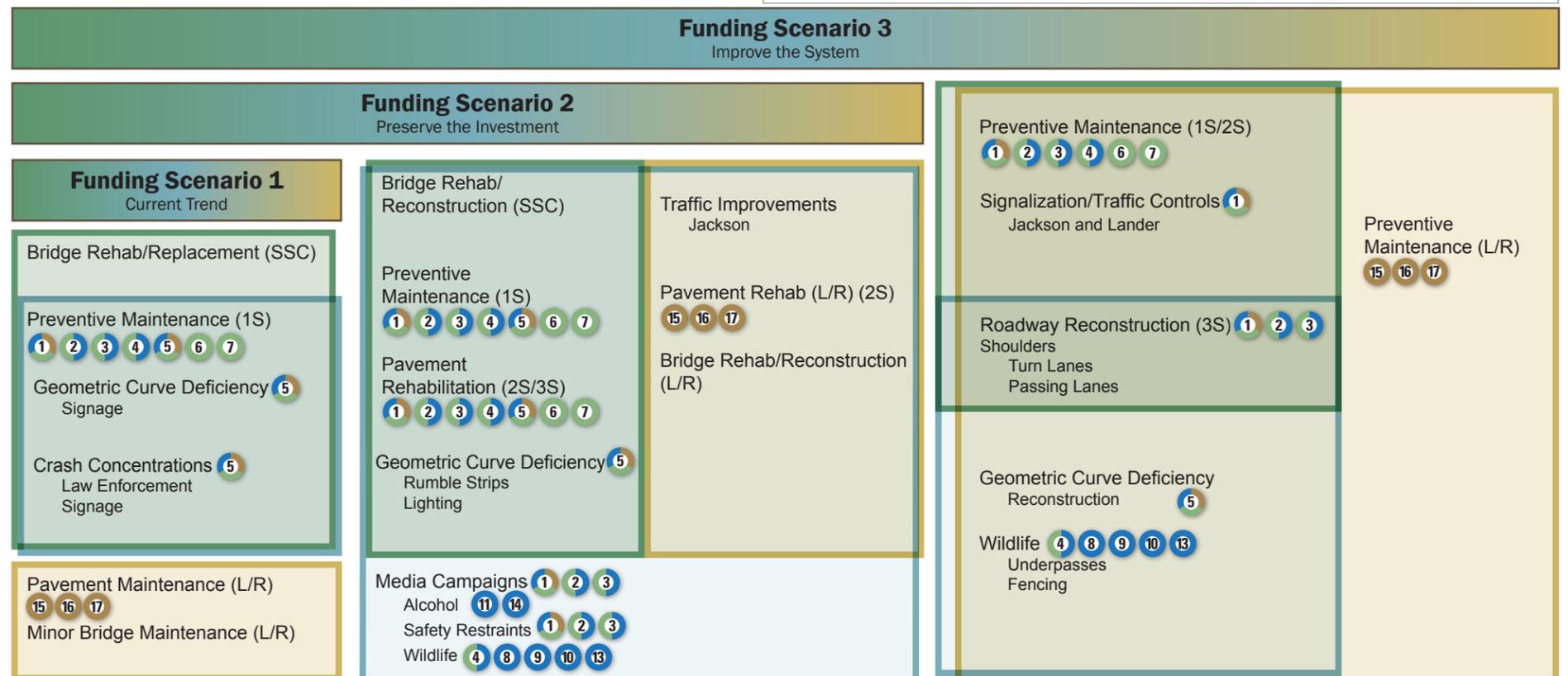
- Funding Scenario 1 – The continuation of program funding at current levels. Most funding is directed to System Preservation needs. System characteristics are expected to decline with inflation and increasing construction costs over time. Few major projects to address Safety, other than with specially restricted and allocated funds, or Mobility would be implemented.
- Funding Scenario 2 – Funding over and above the base level would allow additional investments in pavement and bridge projects to meet WYDOT goals.
- Funding Scenario 3 – Additional funding over and above Scenario 2 would allow WYDOT to maintain and improve existing conditions, achieve pavement and bridge condition goals, plus invest in major projects to improve Mobility.

### Funding Scenario 1

Funding Scenario 1, defined as the continuation of current program funding, is focused primarily on addressing System Preservation needs through preventive maintenance efforts. For this corridor, the plan recommends that these funds remain allocated to preventive pavement maintenance, along with reserving a portion to address identified safety needs. Safety needs include specific wildlife-related crash prone areas, alcohol-related crashes, and the non-use of safety restraints. In addition, geometric insufficiencies related to critical crashes are documented at nine locations and seven areas are identified as critical crash concentrations. These needs may be only partially met under current funding and should be focused on areas with documented overlapping needs. Additional needs that cannot be met under Scenario 1 may be delayed pending additional funds under Scenarios 2 or 3.

- Minor surface treatments on the SSC mainline, including mill and overlay, including pavement hotspots.
- Bridge rehabilitation and replacement of structurally deficient bridges on the SSC mainline.
- Minor projects to improve safety not involving major construction, such as signage on deficient curves and wildlife crash areas, as well as alcohol/seatbelt related law enforcement.

Table 14 - SSC 5 Recommended Strategies for Long Range Plan Funding Scenarios



### Funding Scenario 2

If sufficient funds to preserve the system in at least its current operational form are made available, WYDOT will direct funding to strengthen pavement and bridge conditions across the system, including on local and regional routes. SSC 5 has significant pavement condition needs on the route as a result of heavy truck traffic. This scenario would allow investments to fully achieve WYDOT goals in the System Preservation investment category. Additional investments should be made to improve safety for wildlife/alcohol related crashes and the non-use of safety restraints.

- Preventive maintenance could be deferred and/or advanced, depending on life cycle, as recommended by the Pavement Management System.
- Reconstruction (2S) to address geometric insufficiencies on the SSC mainline.
- Reconstruction (2S/3S) to address higher traffic volumes in Jackson, Lander, and between Lander and Sweetwater Junction.
- Improvement of pavement condition of Local and Regional Routes, to include preventive maintenance or mill and overlay.
- Minor projects to improve safety not involving major construction, such as rumble strips, lighted signage (geometric deficiencies and wildlife-related crashes), and alcohol-related media campaigns.

### Funding Scenario 3

If additional funds are made available to WYDOT under Funding Scenario 3, opportunities would be created to address all three investment categories, thus preserving the investment and improving the overall “health” of the system. Additional funds allow project selection to address overlapping needs, therefore investing funds most effectively. The additional funds would expand to include other items to improve performance in the Mobility Index.

- Roadway reconstruction (3S) to meet long term goals, including correction of geometric deficiencies.
- Turn lanes, passing lanes, and other auxiliary lanes to address spot congestion and safety issues in Jackson and Lander.
- Intersection and signalization improvements in Jackson and Lander.

### Performance Measurement Over Time

As these performance measures are continually monitored over time it will become evident how the recommended solution strategies and the selected projects address the needs of the corridor and the overall system. Addressing deficiencies documented in the corridor plan will effectively improve the System Preservation, Safety, and Mobility indexes at both the corridor and system level.

Ongoing performance measure documentation is critical to identify trends, capture the existing health of the system, and allowing an accurate forecast of the future health of Wyoming’s Transportation system. The need for additional funding and/or more aggressive solutions will become evident if performance measures fail to meet WYDOT goals.

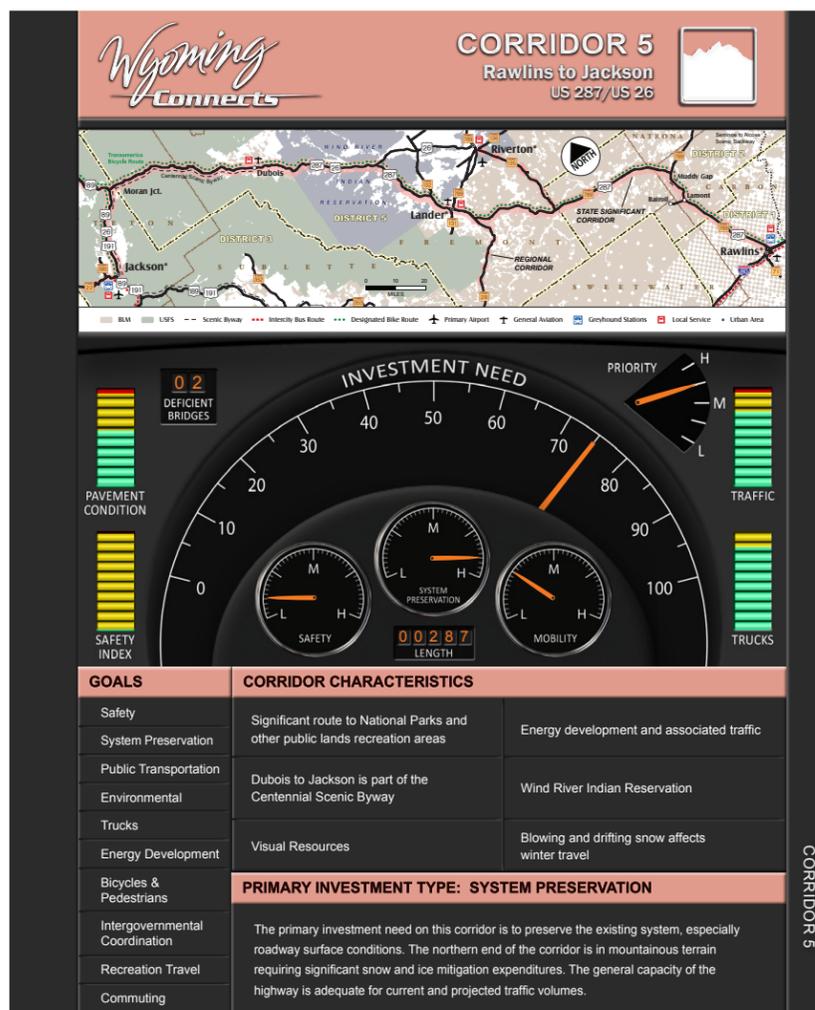


## REALIZING THE CORRIDOR VISION

As part of the statewide Wyoming Connects and Long Range Transportation Plan, the Corridor Vision for SSC 5 - and all SSCs - focuses on the identification of overall system performance aggregated from the evaluations of each individual corridor's "health" relative to WYDOT's long-term Strategic Goals. The identified types of investment needs (system preservation, safety, and mobility) expressed in the Corridor Vision are reflected in the three primary need indicators of this Corridor Plan. The analysis of each investment type generated goals representing corridor health issues as communicated by the planning and public process used in development of the Vision. See *Wyoming Connects: Corridor Visions* for more information.

### Corridor Vision Goals

The Rawlins to Jackson Corridor Vision captured Key Issues and Emerging Trends of critical importance and how SSC 5 could best serve the communities it connects over the long term. While issues were identified relative to each investment type, the Primary Investment Type is System Preservation:



Dashboard from Corridor Visions

*The primary investment need on this corridor is to preserve the existing system, especially roadway surface conditions. The northern end of the corridor is in mountainous terrain requiring significant snow and ice mitigation expenditures. The general capacity of the corridor is adequate for current and projected volumes.*

Additional goals which reflect the full context, character, and issues of SSC 5 were set as high priority goals as indicated in Table 15. A review of these Vision Goals compared to the findings of this Corridor Plan provides for a conformance check and identifies additional issues to be considered when evaluating potential projects and implementation plans.

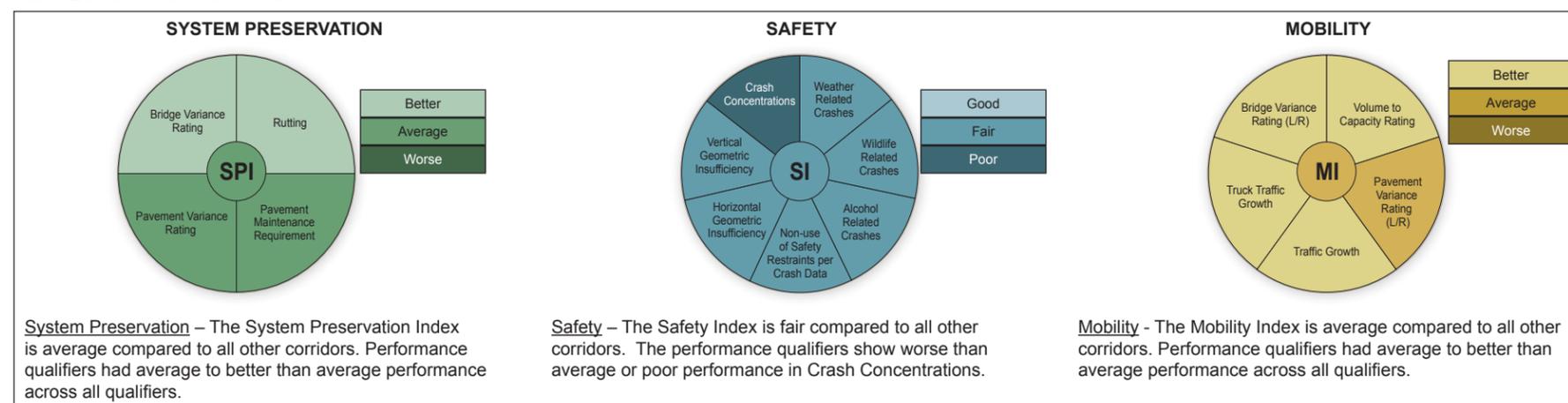
Table 15 - Review of Corridor Vision Goals and Other Considerations

Investment Category	Corridor Visions Goal	High Priority	Other Considerations
System Preservation	Preserve the existing transportation system	✓	Vision identified System Preservation as the primary investment need due to the pavement being in good condition Plan confirms direction and identifies segments requiring improvements to maintain condition
	Plan for continuing energy industry impacts to road system	✓	Vision identified truck traffic due to the oil and gas development around Lander and use of US287 as an Interstate shortcut Corridor Plan identifies pavement maintenance as a priority
	Promote environmentally responsible transportation improvements		Vision identifies migration routes, view sheds, wetlands, recreational areas and cultural resources as important Corridor plan uses WYGIS to locate sensitive areas and identify endangered species
	Promote intergovernmental coordination		Ongoing communication with the urban communities of Jackson, Lander and Rawlins their unique needs for preserving their main street in regards to sidewalks, intersections, and multimodal options Other stakeholders with unique needs include the Wind River Indian Reservation, Nation Park Service, US Forest Service, Bureau of Land Management, and Wyoming Game and Fish Department
Safety	Reduce fatalities, injuries and property damage crash rate		In the Corridor Vision analysis, Safety for SSC 5 did not prioritize as high as other corridors A review of the Corridor Plan Safety Index confirmed and develops specific recommendations to improve the rating, especially with regard to wildlife, alcohol-related crashes, a crash concentrations.
Mobility	Accommodate growth in truck freight transportation		Issues identified in the Vision not specifically related to volumes, but included the potential need for passing lanes, parking areas, and impacts on urban sections The corridor plan considers trucks as a percentage (based on facility type) built into the VCR calculation for the Mobility Index
	Support recreation travel		Vision identifies dispersed recreation on public lands as being of economic importance to the region and state
	Improve access to public lands		Look for overlapping needs which might require signage, turn lanes, and parking areas
	Support commuter travel		The Corridor Plan safety and mobility performance supports the need to implement these strategies Vision suggests addressing this goal with Auxiliary Lane, snow mitigation, and/or VMS/ITS
	Provide for bicycle/pedestrian travel		Transcontinental Bicycle Route follows most of the corridor Bicycle/pedestrian mobility is significant in and around Jackson and Grand Teton National Park
	Improve public transportation opportunities		Wind River Indian Reservation, Jackson, Dubois, Lander, and Rawlins

## CORRIDOR PERFORMANCE

Table 16 shows SSC 5 corridor performance compared to the system. The center of each chart indicates the value of the performance index, with each section indicating the performance qualifier for each measure.

Table 16 - Corridor Performance



### Coordination with System Priorities

The corridor comparison can be used to help assign a priority level to entire corridors, if conditions warrant. The Corridor Plans – Executive Summary is published under separate cover and provides an overview of corridor comparisons. The summary identifies areas of greatest need within all performance indexes and for performance qualifiers across the state system. By addressing these areas of greatest need, whether by program, corridor, or corridor segment WYDOT will ensure positive changes in reported conditions throughout Wyoming.