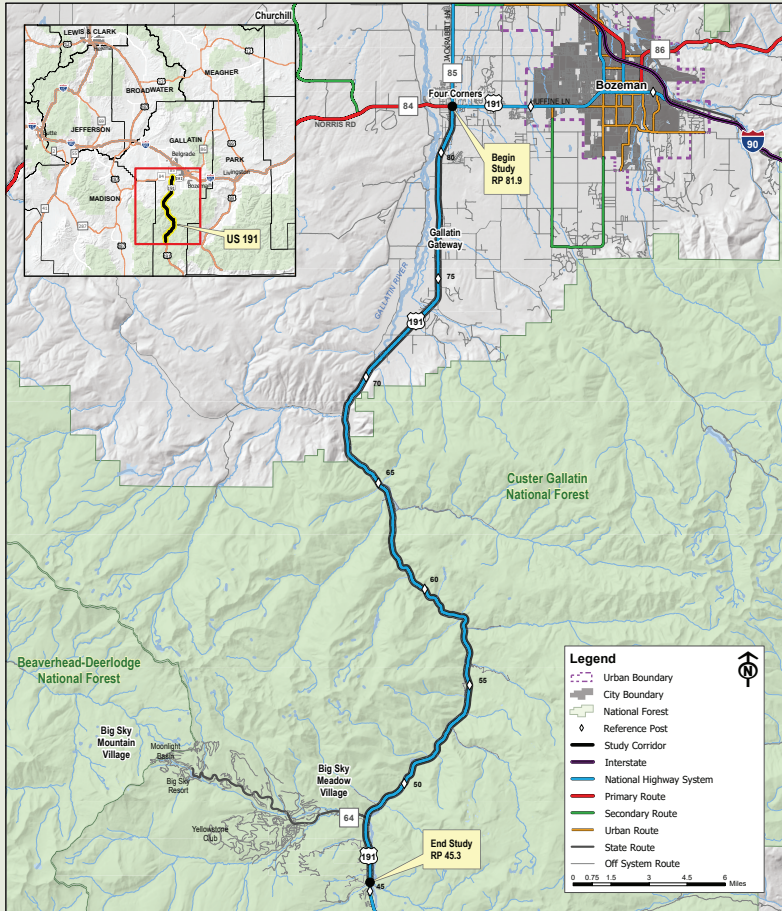




## US 191 Corridor Study

Four Corners to Beaver Creek

### STUDY AREA



#### US 191 provides access to:

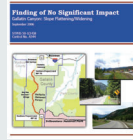
- Unincorporated communities:
  - Four Corners
  - Gallatin Gateway
  - Big Sky
- Private residences
- Agricultural lands
- Commercial operations
- National Forest lands
- Yellowstone National Park
- Recreational opportunities:
  - Hiking
  - Camping
  - Rock climbing
  - Rafting
  - Fishing
  - Hunting
  - Skiing
  - Snowmobiling



### PAST PLANNING

#### Gallatin Canyon Safety Improvements

- Phase 1 completed in 1998
- Phase 2 completed in 2014
- Phase 3 under review and not yet advanced



#### Gallatin County Park and Trails Comprehensive Plan

Recommendations include:

- Shared use path - Gallatin Gateway to Four Corners
- Pedestrian accommodations at Zachariah Lane, Gooch Hill Road, Cottonwood Road, and Little Bear Subdivision

#### Gallatin Triangle Planning Study

- Area between Bozeman, Belgrade, and Four Corners
- Efforts are currently underway to develop a Community Plan for the area



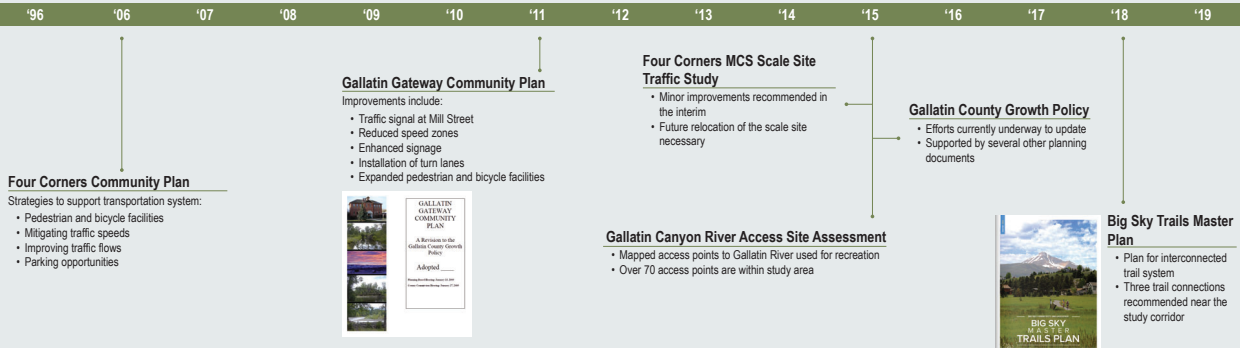
#### Custer Gallatin National Forest Plan Revision

- Natural resource management activities for the National Forest
  - Separate Travel Management Plan
- US 191 is not under Forest Service jurisdiction



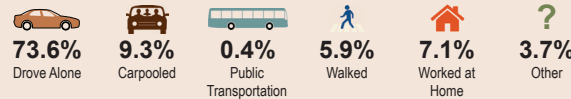
#### Big Sky Transportation Study

- MT 64 corridor between US 191 and Big Sky
- Includes analysis of US 191/MT 64 intersection
- Improvements pending awarded \$10.3 M TIGER grant

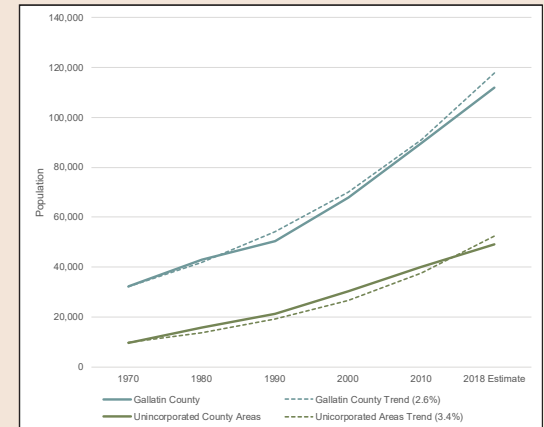
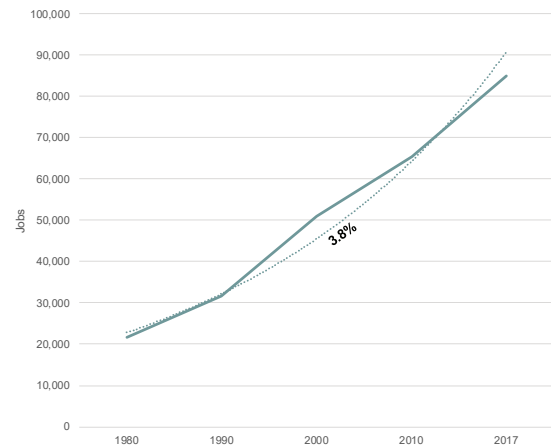


### POPULATION AND ECONOMIC TRENDS

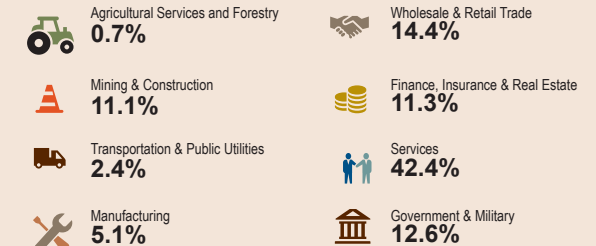
#### Mode of Transportation to Work (Gallatin County)



#### Gallatin County Total Full/Part-Time Employment

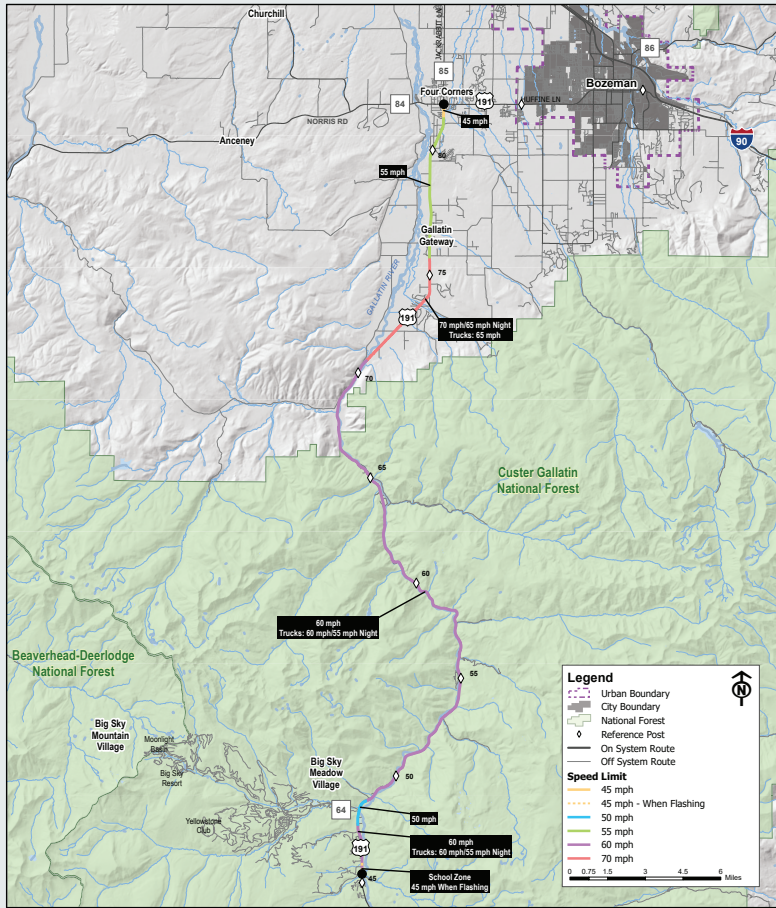


#### Employment by Industry (Gallatin County)

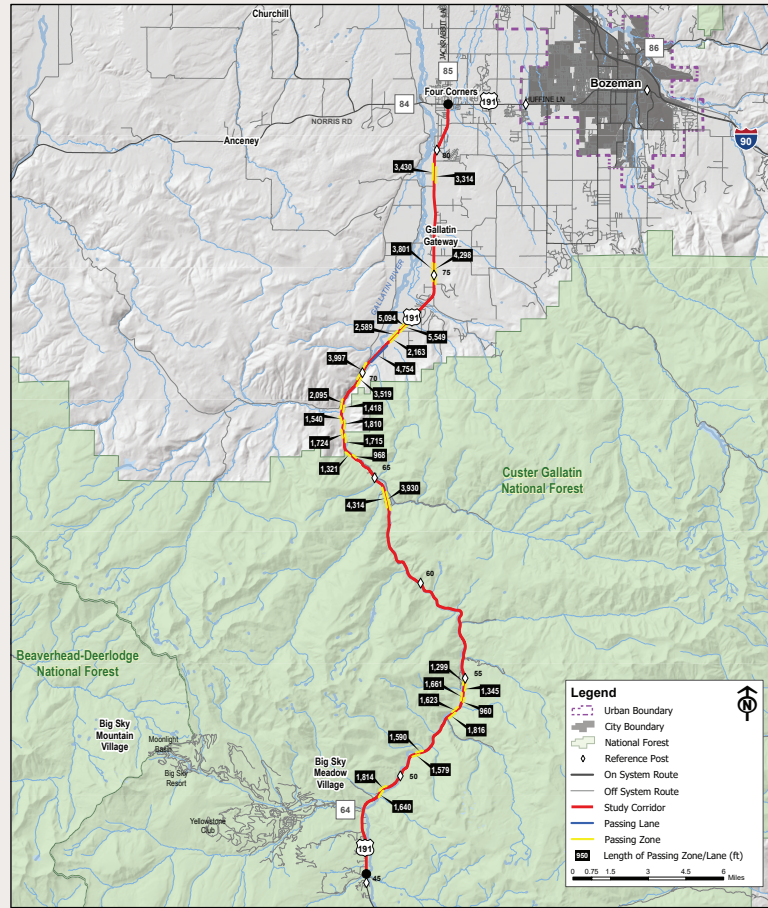




## POSTED SPEEDS



## PASSING ZONES



## ACCESS POINTS

Segment	Begin RP	End RP	Length (mi)	Access Points					Density (per mi)	Skewed (<60°)
				Public	Private	Farm	Rec	Turnout		
Four Corners to Gallatin Gateway	81.9	76.3	5.6	28	57	16	--	--	18.04	0
Gallatin Gateway to Gallatin South Road	76.3	70.4	5.9	13	17	26	1	--	9.66	2
Gateway South Road to Squaw Creek Bridge	70.4	65.2	5.2	5	16	5	7	--	6.35	3
Squaw Creek Bridge to Cascade Creek Road	65.2	61.4	3.8	8	38	1	5	6	15.26	2
Cascade Creek Road to Moose Creek Road	61.4	56.2	5.2	3	3	1	7	9	4.42	2
Moose Creek Road to Deer Creek	56.2	51.5	4.7	4	20	--	11	6	8.72	2
Deer Creek to MT 64	51.5	47.9	3.6	4	20	--	9	--	9.17	1
MT 64 to Beaver Creek Road	47.9	45.3	2.6	14	25	--	1	--	15.38	0
<b>Total</b>			<b>36.6</b>	<b>79</b>	<b>196</b>	<b>49</b>	<b>40</b>	<b>22</b>	<b>10.55</b>	<b>12</b>



- Access control plan on US 191 from Four Corners to Gateway South Road
- Turnouts used for river access and other recreational purposes

## MAINTENANCE AND OPERATIONS



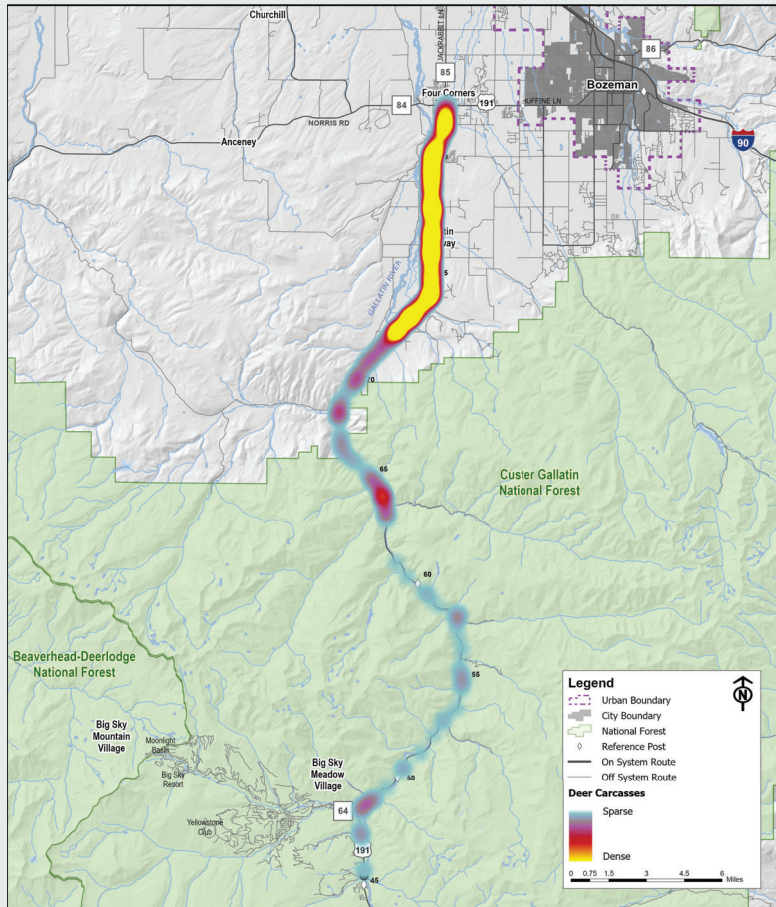
- Level I Winter Maintenance
  - Four Corners to mouth of Gallatin Canyon
  - Eligible for 24 hour coverage during winter storm
- Level II Winter Maintenance
  - Gallatin Canyon through end of study area
  - Eligible for 17-hour coverage (5 AM to 10 PM)
- MCS Scale Site (RP 81.8)
- 3 VMS Boards (RP 72.1, 55.1, and 48.2)



- Limited Cell Coverage through Canyon
  - 3 Emergency Call Boxes (RP 61, 56, and 55)
- Emergency Services – Gallatin County Emergency Management
  - Gallatin Gateway Rural Fire District
  - Big Sky Fire Department
  - West Gallatin National Forest Fire Management Zone



## DEER CARCASSES

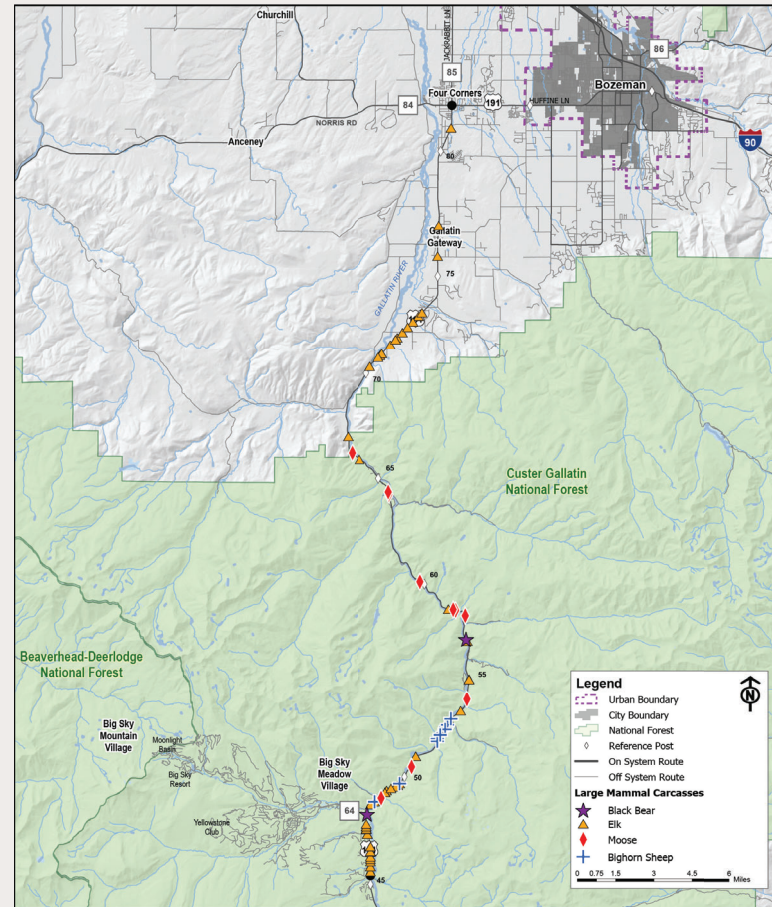


## GEOLOGICAL CONSIDERATIONS

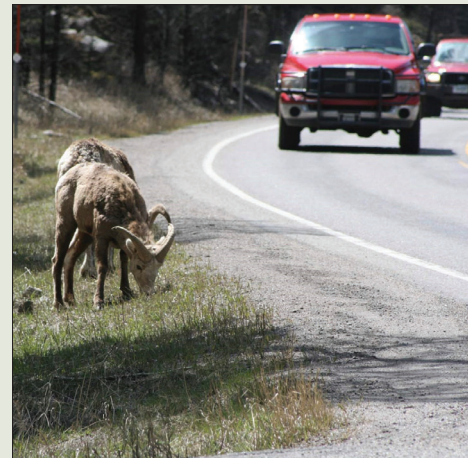


- Moderately seismic area - six mapped faults
- Known landslide at Karst's Camp (RP 54.5)
- Steep cut slopes within Gallatin Canyon
- Mechanically stabilized earth walls used to reduce roadway footprint and impacts to sensitive areas
- Numerous locations with rockfall slope conditions rated as "poor"
- No physical barriers (nets, rockfall retention structures/fences, etc.) are currently used

## LARGE MAMMAL CARCASSES



## BIOLOGICAL RESOURCES



- 6 bird species protected under BCC, MBTA, or BGEPA known in study area
- 3 mammals, 1 plant proposed or listed on Endangered Species Act found in/near study area
- Several noxious weeds found in study area - concern about infestation or expansion
- Gallatin Range provides quality habitat and connectivity for wildlife
  - *Habitats being converted to commercial/residential uses*

## WATER FEATURES



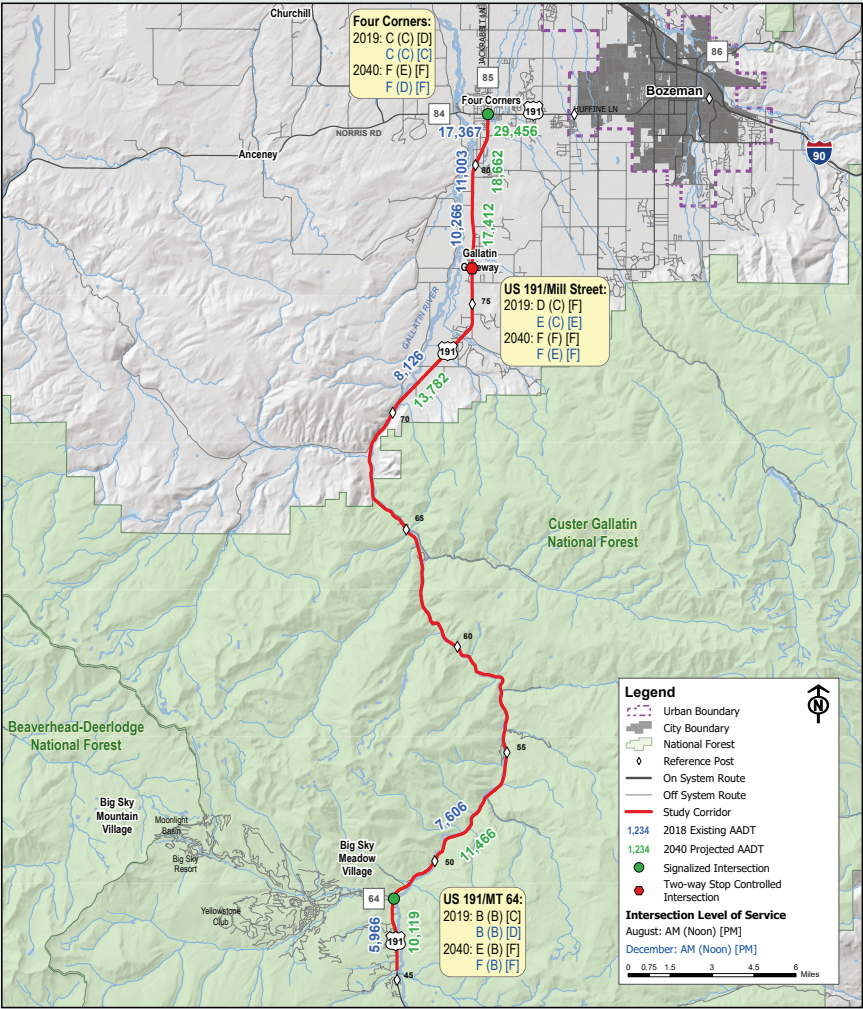
- 21 major stream/river crossings along US 191 study corridor
  - 7 Bridges
  - 14 Culverts
  - 2 Irrigation Canal/Ditch Bridges
- 9 Total Bridges
  - 2 meet standards for new bridges (Swan Creek, West Fork Gallatin)
  - Others meet standards to remain in place



- Impaired or threatened waters in study area:
  - Gallatin River
  - South Cottonwood Creek
  - Storm Castle Creek
  - West Fork Gallatin River
- Gallatin River eligible for Wild and Scenic Rivers designation - monitored within National Forest
- On-going local efforts to designate Gallatin River as an Outstanding Resource Water
- US 191 crosses delineated floodplains and wetlands
- Streams/ivers support a variety of Montana native and game fish



TRAFFIC OPERATIONS



**Freight and Heavy Vehicles**

- MCS scale site in Four Corners
- 2008-2010: US 191 closed to semi-trucks during improvement project
- 1994: hazardous material transport prohibited (in YNP)

**Pedestrians and Bicyclists**

- Gateway SUP – Zachariah Lane to Rabel Lane
- Big Sky Trail SUP – MT 64 to Beaver Creek Road
- Bike/Ped activity low in canyon, higher in communities

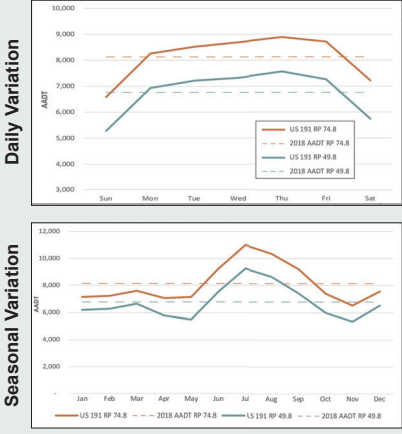
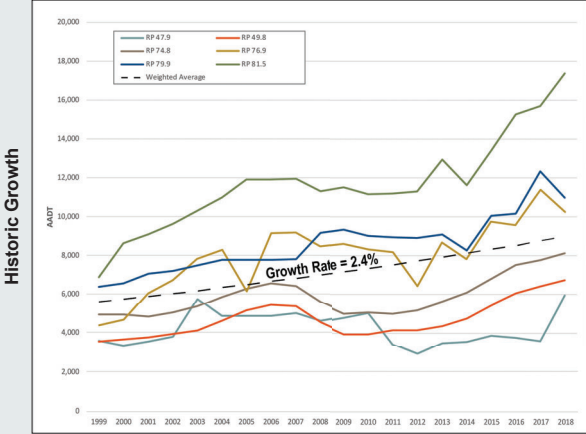
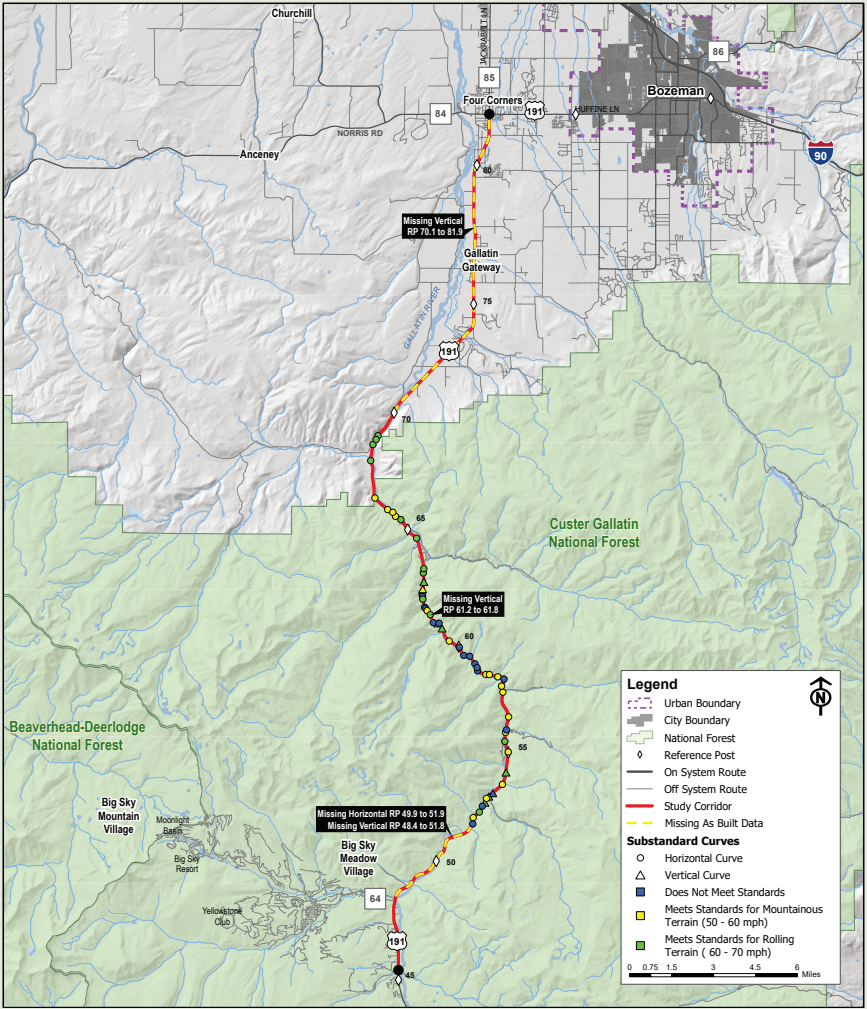
**Transit**

- Transport via airport and Big Sky/ YNP
- Skyline Bus – Bozeman to Big Sky, 957,565 rides FY 2019
- West Yellowstone Foundation Bus – 1,273 rides FY 2019

**Air Service**

- Bozeman Yellowstone International Airport – several shuttles to surrounding areas
- Briar Creek Airport – Gallatin Gateway, private
- Yellowstone Airport – May to Oct, West Yellowstone
- Ennis–Big Sky Airport – helicopter shuttle/Jack Creek Road to Big Sky

GEOMETRICS



There are several curves along the study corridor with limited sight distance due to steep side slopes.



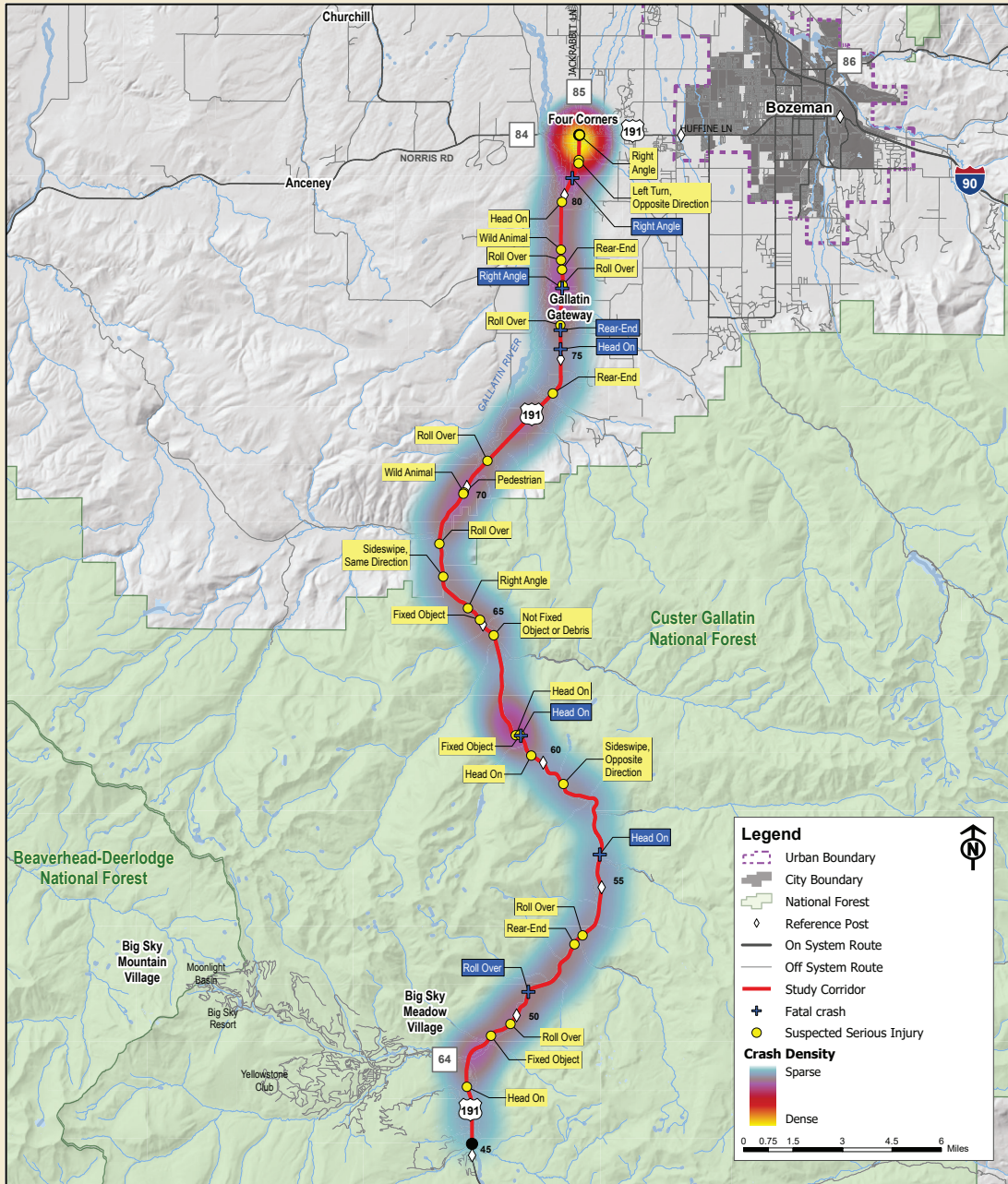
The study corridor has areas with narrow clear zones and limited sight distances particularly within Gallatin Canyon.



# SAFETY



## US 191 Corridor Study Four Corners to Beaver Creek



**16%**  
Rear End Crashes



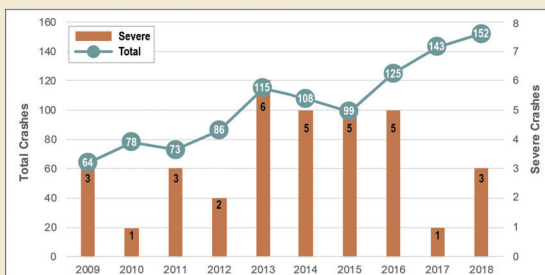
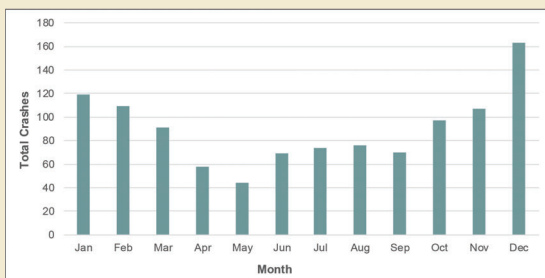
**22%**  
Fixed Object Crashes



**24%**  
Wild Animal Crashes



**12%**  
Roll Over Crashes



**1,077**  
Total Crashes



**40%**  
Adverse Road Conditions  
(Snow, wet, ice, frost)



**7**  
Fatalities



**35%**  
Dark Unlit Lighting  
Conditions



**32**  
Suspected Serious  
Injuries



**11%**  
Involved Impaired Driver  
(56% of Severe Crashes)



## WHAT IS A CORRIDOR STUDY?



A corridor study is conducted before design, right-of-way acquisition, environmental compliance, and construction.

## GOALS AND PURPOSE



Identify needs and objectives



Identify potential impacts and constraints



Identify short-, mid-, and long-range improvements



Develop planning-level cost estimates and potential funding sources



Develop information and data to be forwarded into the environmental process if a project moves forward from the study (dependent on available funds)

## STUDY SCHEDULE

### US Highway 191 Corridor Study

#### STUDY SCHEDULE

