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## **APPENDIX E. PROJECT INFORMATION SHEETS**

Project Number	Project Location	Jurisdiction(s)	GFA(s)
1	<a href="#">Main Street (SR 130) from 3000 North to South I-15 Interchange</a>	Cedar City, UDOT	Cedar City GFA
2	<a href="#">SR 289/SUU Loop</a>	Cedar City, UDOT	Cedar City GFA
3	<a href="#">600 South, 800 South, 860 West School Area</a>	Cedar City	Cedar City GFA
4	<a href="#">Cross Hollow Road from SR 56 to Royal Hunte Drive/Providence Court Drive</a>	Cedar City	Cedar City GFA
5	<a href="#">Westview Drive from SR 56 to 2700 South</a>	Cedar City, Iron County	Cedar City GFA, East Iron County GFA
6	<a href="#">SR 56 from Iron Springs Road to Airport Road</a>	Cedar City, UDOT	Cedar City GFA
7	<a href="#">SR 56 and Airport Road Intersection</a>	Cedar City, UDOT	Cedar City GFA
8	<a href="#">SR 56 from Airport Road to Main Street (SR 130)</a>	Cedar City, UDOT	Cedar City GFA
9	<a href="#">Midvalley Road from Lund Highway to Old Highway 91</a>	Enoch City, Iron County	Enoch City GFA, West Iron County GFA
10	<a href="#">SR 130 from 3000 North to Midvalley Road</a>	Enoch City, UDOT	Enoch City GFA
11	<a href="#">SR 130 from Midvalley Road to 6400 North</a>	Enoch City, UDOT	Enoch City GFA
12	<a href="#">4200 North from SR 130 to Half Mile Road</a>	Enoch City	Enoch City GFA
13	<a href="#">3600 North from Bulldog Road to SR 130</a>	Enoch City	Enoch City GFA
14	<a href="#">Old Highway 91 from SR 130 to Midvalley Road</a>	Enoch City	Enoch City GFA
15	<a href="#">Comstock and Pinto intersections with SR 56</a>	Iron County, UDOT	East Iron County GFA, West Iron County GFA
16	<a href="#">SR 56 Rural Local Intersections (7700 West)</a>	Iron County, UDOT	East Iron County GFA
17	<a href="#">SR 56 from Comstock Road to Iron Springs Road</a>	Iron County, UDOT	East Iron County GFA, West Iron County GFA
18	<a href="#">200 South (SR 143) from I-15 to SR 143</a>	Parowan City, UDOT	East Iron County GFA
19	<a href="#">Main Street (SR 274) from I-15 to 300 South</a>	Parowan City, UDOT	East Iron County GFA
20	<a href="#">SR 143 from Dry Lakes Road to Vasels Road</a>	Brian Head Town, Iron County, UDOT	East Iron County GFA
21	<a href="#">Brian Head, SR 143 Intersections (Snowshoe Village Road and Vasels Road)</a>	Brian Head Town, UDOT	East Iron County GFA
22	<a href="#">SR 20 from Burnt Peak Road to Bear Valley Road</a>	Iron County, UDOT	East Iron County GFA
23	<a href="#">SR 56 from 2400 West to Main Street (New Castle)</a>	Iron County, UDOT	West Iron County GFA
24	<a href="#">SR 56 &amp; SR 18 (Beryl Junction)</a>	Iron County, UDOT	West Iron County GFA
25	<a href="#">Bench Road from SR 56 to Newcastle Hills</a>	Iron County	West Iron County GFA
26	<a href="#">SR 56 from Main Street (New Castle) to Comstock Road</a>	Iron County, UDOT	West Iron County GFA, East Iron County GFA
27	<a href="#">Iron Springs Road from SR 56 to Comstock Road</a>	Iron County, Cedar City	West Iron County GFA
28	<a href="#">Lund Highway from SR 56 to Midvalley Road</a>	Iron County, Cedar City	West Iron County GFA
29	<a href="#">Lund Highway from Midvalley Road to 7000 North</a>	Iron County, Cedar City	West Iron County GFA



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## **APPENDIX E.1. CEDAR CITY GFA PROJECT INFORMATION SHEETS**

## LOCATION CHARACTERISTICS

**Location:** Main Street (SR 130)

**Project Extents:** 3000 North to South I-15 Interchange

**Roadway Classification:** Other Principal Arterial, State Route

**Jurisdiction(s):** Cedar City, UDOT

**Underserved Community:** Yes

**PROJECT NUMBER: 1**

**Safety Action Plan GFA(s):** Cedar City GFA

**GFA Emphasis Areas:** Intersections, Older Drivers, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	6.23
Speed Limit:	30-45 mph
Roadway Lanes:	4
Daily Traffic Volume (AADT):	18,600
Median Type:	TWLT
Number of Key Intersections	11











#### Why was this location identified?

High Crash Network:	Yes ✓
High Injury Network:	Yes ✓
Network Screening:	Yes ✓
Conflict Areas:	No ✗
Risk Characteristics:	Yes ✓
Community Feedback:	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	2
Serious Injury Crashes:	15
Minor Injury Crashes:	106
Possible Injury Crashes	131
No Injury/PDO Crashes:	589
<b>Total Crashes:</b>	<b>843</b>
<b>Equivalent Property Damage Crashes:</b>	<b>7,095</b>

#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
6%	43%	36%	2%	30%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
1%	1%	9%	31%	13%















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 1

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
Old Highway 91	24		8	10	12		2	1		
Fir Street	29		14	12	5	2	7	1		
300 West	19		10	2	5		1	3		1
600 South	35	1	17	10	13		3			
200 South	29	1	20	12	9					
Center Street	36	1	14	5	13	1	2	2	2	
200 North (SR 56)	105		57	48	23	2	13	4	2	2
Coal Creek Road	19		8	7	9			1		
1045 North	36	1	14	8	15		3			1
1925 North	41	2	19	16	12	1	3	1	1	
3000 North	52		28	29	14	6	1			1

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	0%
	 Distracted Driving	9%
	 Impaired Driving	1%
	 Use of Safety Restraints	2%
	 Speed Management	5%
	 Teen Driving Safety	34%
	 Senior Safety	21%
Crash Types	 Roadway Departure Crashes	6%
	 Intersection Safety	64%
Vulnerable Users	 Motorcycle Safety	2%
	 Pedestrian Safety	1%
	 Bicycle Safety	1%

### Other Applicable Locations/Scenarios:

- Principal arterial, four lane roadways with a center two-way left-turn limit and speed limits between 30 and 45 mph with numerous driveway access locations and intersections may benefit from similar safety countermeasures. Locations may include SR 56 (200 North) in Cedar City and SR 130 in Enoch City.

### Comments, Feedback, Ongoing Projects:

- Pedestrian and bicycle conflicts with vehicles
- Vehicle speeding
- Lack of protected crossings
- High (and increasing) Vehicle traffic volumes
- Access management and control

## EXISTING CONDITIONS

PROJECT NUMBER: 1

### Notes:

- ROW may need to be acquired to accommodate bicycle lanes and/or turn lanes



*1925 North Intersection Southbound, near Canyon View High School*



*Historic Downtown Midblock Crossing at Night*



*Google Street View image of Southbound Approach 200 South, Typical Signalized Intersection ([www.googlemaps.com](http://www.googlemaps.com))*



*Typical Five-Lane Cross Section, Northbound near Canyon Center Drive*



*Typical Five-Lane Cross Section, Southbound near Cemetery*

# LOCATION RECOMMENDATIONS

## Project Description

**PROJECT NUMBER: 1**

This project recommends a series of safety countermeasures to improve pedestrian, bicyclist, and vehicle mobility while addressing crash trends and community concerns. Sidewalks, buffered bike lanes, and lighting all improve active transportation safety. To improve intersection safety and traffic flow, right-turn lanes on and off Main Street are recommended at several key intersections. High-visibility crosswalk markings are recommended at multiple locations and a pedestrian hybrid beacon at a midblock location near Canyon View High School. Leading Pedestrian Intervals (LPI) at signalized intersections for pedestrians to establish themselves in the crosswalk before vehicle movements are recommended. Additionally, it is recommended that left-turn signal timing be adjusted to Flashing Yellow Arrows at signalized intersection that are permissive only to help reduce the risk of left-turn crashes. A Roadway Safety Audit is recommended for the entire project limits to involve UDOT, the City, and the community in the discussion of additional improvements and safety needs along the corridor. Improvements that will require further evaluation include, center medians, bulbouts, and additional midblock crossing locations.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
<b>Sidewalk</b>	DI Sargent Drive to 3000 North and from Interstate Drive to Desert Pines Drive
<b>Buffer Bicycle Lanes</b>	Entire corridor
<b>Highway Lighting</b>	Old Highway 91 to Desert Pines Drive
<b>Road Safety Audit</b>	Entire corridor
<b>Right Turn Lanes, Left Turn Lanes</b>	Old Highway 91 northbound, 800 South north and southbound, 300 West north and southbound, 600 South north and southbound, 200 South all approaches, Center Street north, south, and eastbound, 200 North and southbound, Coal Creek Road south and eastbound, 1045 North and southbound
<b>Left Turn Lanes</b>	Fir Street, 300 West
<b>High-Visibility Crosswalks with RRFB</b>	Midblock between Harding Avenue and Hoover Drive
<b>Leading Pedestrian Intervals</b>	800 South, Center Street, 200 North, and 1925 North
<b>Intersection Control Evaluation</b>	300 South
<b>Flashing Yellow Arrows</b>	200 South, 800 South, Coal Creek Road, 1045 North, and 3000 North
<b>Pedestrian Hybrid Beacon or HAWK</b>	Midblock by Canyon View High School

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
<b>Install 6 ft. Sidewalk (both sides of roadway)</b>	1.75	MILE	\$761,000	\$1,331,750
<b>Install Buffered Bicycle Lanes (Curb Separated)</b>	6.23	MILE	\$651,000	\$4,055,730
<b>Install Highway Lighting</b>	0.511	MILE	\$300,000	\$153,300
<b>Conduct a Road Safety Audit</b>	1	LOC	\$25,000	\$25,000
<b>Install Right-Turn Lanes</b>	20	LANE	\$127,000	\$2,540,000
<b>Implement Leading Pedestrian Interval (LPI) Signal Timing</b>	4	INT	\$3,000	\$12,000
<b>Perform an Intersection Control Evaluation and Implement</b>	1	INT	\$225,000	\$225,000
<b>Change Left-turn Timing from Permissive Only to Flashing Yellow Arrow</b>	4	INT	\$8,000	\$32,000
<b>Change a 5-section "Doghouse" to Flashing Yellow Arrow</b>	1	INT	\$8,000	\$8,000
<b>Install Pedestrian Hybrid Beacons (PHB) or HAWK</b>	1	EACH	\$250,000	\$250,000
<b>Install Pedestrian Hybrid Beacons (PHB) or HAWK</b>	1	EACH	\$250,000	\$250,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

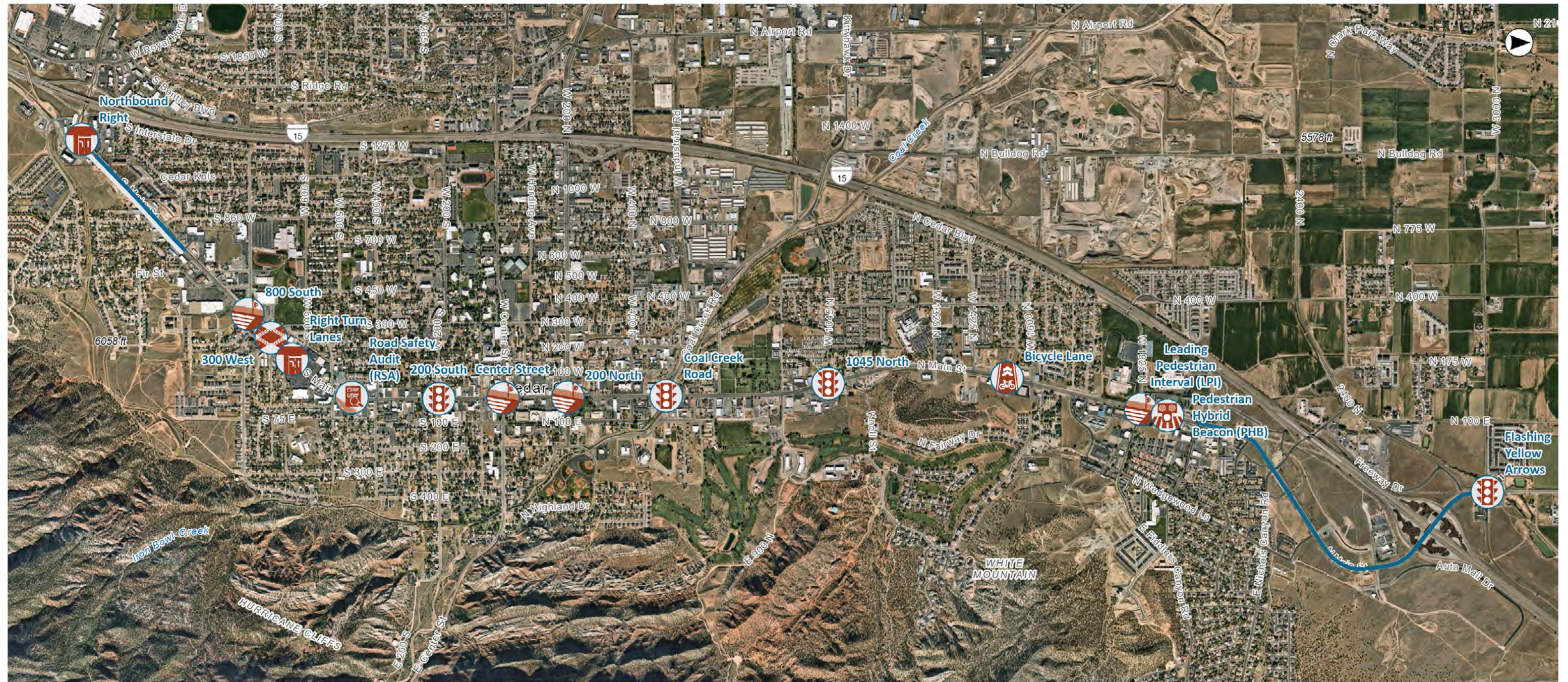
3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$8,632,780</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$11,729,253</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$14,165,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$2,833,000</b>


















## LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 1**



Main Street (SR 130) from 3000 North to South I-15 Interchange

- |  | 800 South   | 300 West  | 200 South  | Center Street   | 200 North  | Coal Creek Road   | 1045 North   |
|--|---|---|--|---|--|---|--|
|  Road Safety Audit (RSA), Entire Corridor |  Leading Pedestrian Interval (LPI)     |  Intersection Control Evaluation (ICE) |  Flashing Yellow Arrow            |  Leading Pedestrian Interval (LPI)             |  Leading Pedestrian Interval (LPI)      |  Flashing Yellow Arrow                 |  Flashing Yellow Arrow                  |
|  Bike Lanes, Entire Corridor              |  Flashing Yellow Arrow                 |  North and Southbound Right Turn Lanes |  Right Turn Lanes, All Approaches |  Right Turn Lanes, North, South, and Eastbound |  Right Turn Lanes, North and Southbound |  Right Turn Lanes, South and Eastbound |  Right Turn Lanes, North and Southbound |
|  Highway Lighting                         |   |   |  |   |  |   |  |
|  Sidewalk                                 |  North and Southbound Right Turn Lanes |   |  |   |  |   |  |



## LOCATION CHARACTERISTICS

**Location:** SUU Loop, SR 289

**Project Extents:** 1150 West to Highland Drive

**Roadway Classification:** Minor Arterial, State Route

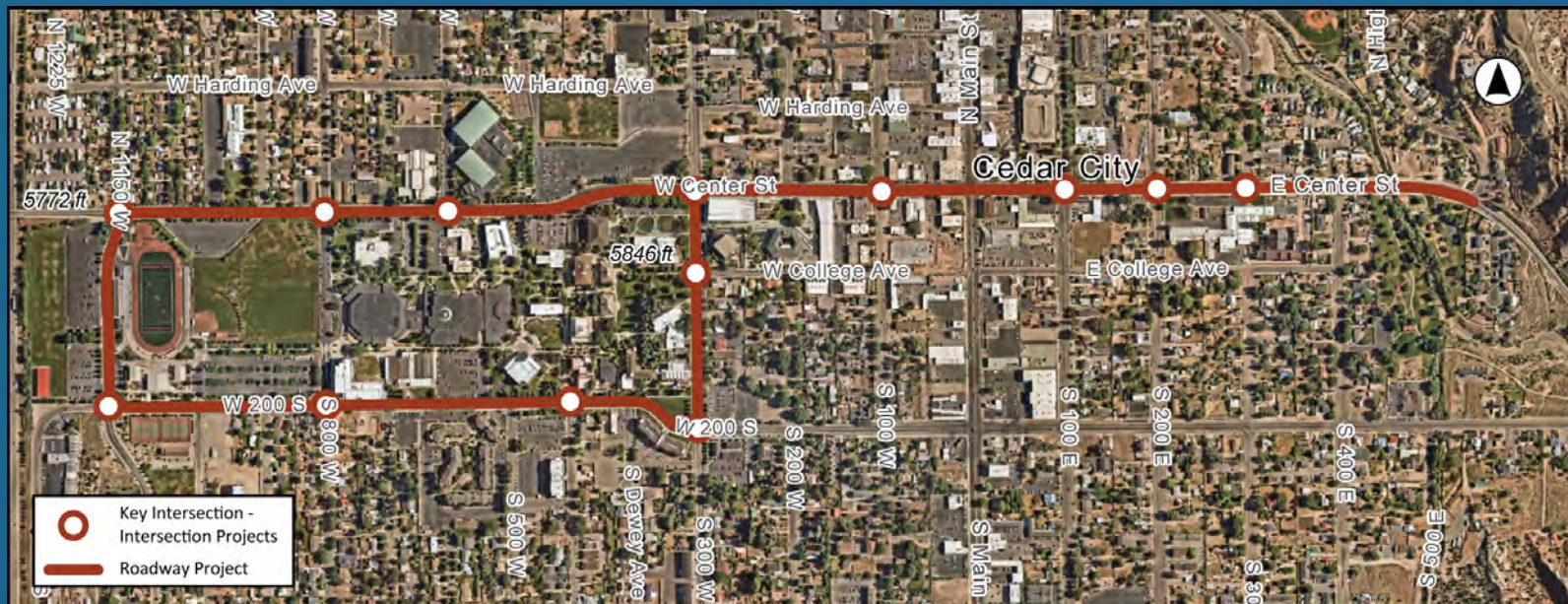
**Jurisdiction(s):** Cedar City, UDOT

**Underserved Community:** Yes

**PROJECT NUMBER: 2**

**Safety Action Plan GFA(s):** Cedar City GFA

**GFA Emphasis Areas:** Intersections, Older Drivers, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	2.44
Speed Limit:	25-30 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	4,500
Median Type:	TWLT
Number of Key Intersections	13











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	Yes	✓
Network Screening:	Yes	✓
Conflict Areas:	No	✗
Risk Characteristics:	Yes	✓
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	2
Minor Injury Crashes:	21
Possible Injury Crashes:	21
No Injury/PDO Crashes:	108
<b>Total Crashes:</b>	<b>152</b>
<b>Equivalent Property Damage Crashes:</b>	<b>916</b>

#### Location Crash Type













Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
7%	47%	18%	0%	21%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
3%	2%	9%	22%	12%

## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 2

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
1100 West & Thunderbird Way										
1150 West & Center Street	34		19	1	8		2	1		2
800 West & Center Street	5		3	1	2					
600 West & Center Street	3				1					1
300 West & Center Street	14		8	3	3		1	1	2	
Shakespeare Lane & 300 West	6				5					
300 West & Thunderbird Way	7	1	4	1	1		1			
450 West & Thunderbird Way	7				2		1	3		

Utah Emphasis Areas		
Behavioral		Aggressive Driving 1%
		Distracted Driving 8%
		Impaired Driving 3%
		Use of Safety Restraints 1%
		Speed Management 10%
		Teen Driving Safety 43%
		Senior Safety 13%
Crash Types		Roadway Departure Crashes 10%
		Intersection Safety 67%
Vulnerable Users		Motorcycle Safety 3%
		Pedestrian Safety 2%
		Bicycle Safety 3%

### Other Applicable Locations/Scenarios:

Minor arterial, state routes (25-30 mph) that serve school locations with a need for improved pedestrian crossing safety may benefit from similar safety countermeasures. Other school locations may include the following. Please note that similar countermeasures may be used for other areas with identified pedestrian crossing needs.

- 100 North and Main Street (SR 274) roadways, (Parowan Elementary and High School)
- 400 South, 500 South, and 450 West roadways (South Elementary)
- 400 North, 600 West, and 500 West roadways (Cedar North Elementary)
- 200 East and East Center Street roadways (Cedar East Elementary)
- 400 West, 1925 North, Fiddlers Canyon, and Wedgewood Lane roadways (Canyon View Middle and High Schools, Fiddler's Canyon Elementary)
- Midvalley Road, Wagon Wheel Drive and Deer Hollow Drive roadways (Enoch Elementary and Three Peaks Elementary)
- 4050 West and surrounding roadways (Iron Springs Elementary)
- Royal Hunte Drive and Cove Drive roadways (Cedar Middle School)

### Comments, Feedback, Ongoing Projects:

- Roadway Safety Audit previously completed in September 2024
- Roundabout planned at 1150 West and University Boulevard intersection



## EXISTING CONDITIONS

PROJECT NUMBER: 2

### Notes:

- Need additional crossing locations, safer crossings, or Pedestrian refuge islands
- Explore way finding or Pedestrian fences to redirect pedestrians to crossings
- Re-evaluate speeds and on street parking



*100 West & University Boulevard Crossings*



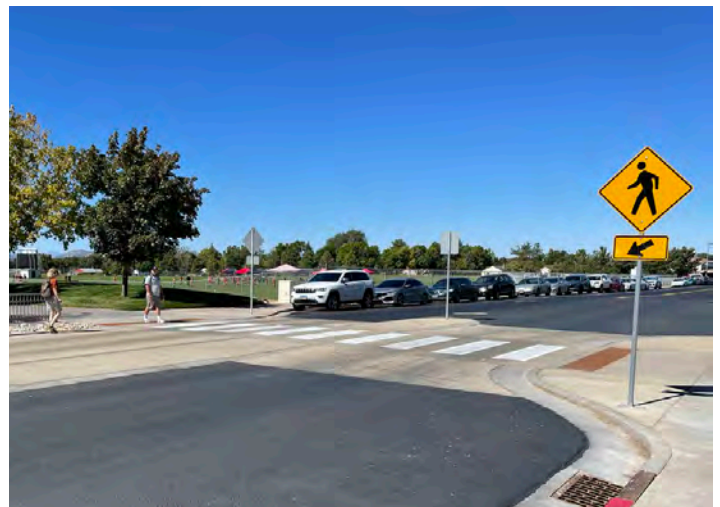
*5000 West Pedestrian Hybrid Beacon*



*Eastbound SR 14, Crossing to East Cedar Elementary*



*Pedestrian Crossing University Boulevard*



*SUU Raised Crossing on 800 West*

# LOCATION RECOMMENDATIONS

## Project Description

**PROJECT NUMBER: 2**

This project builds upon recommendations included in a Roadway Safety Audit (RSA) completed by UDOT in September 2024. Proposed roadway safety improvements include medians and pedestrian refuge islands, narrowing lanes to reduce vehicle speeds, and improved pedestrian ramps. Proposed intersection safety improvements include a raised crosswalk at 450 West, high-visibility crosswalks along 1150 West, Leading Pedestrian Intervals (LPI), and improved lighting. Rectangular Rapid Flashing Beacons (RRFBs) are recommended at 300 West & Shakespeare Lane to replace malfunctioning units. Right-turn lanes to reduce congestion at multiple intersections.

These recommendations aim to address concerns related to pedestrian crossings, speeding, insufficient pedestrian crossing times, and traffic movements at four-way stops. Additional recommendations included in the RSA should be considered and implemented.

An improved crossing such as a PHB or a high-visibility crossing with RRFBs should be considered on SR 14 between Main Street and Canyon Park, to facilitate the East Elementary, planned growth and connections north of Center Street, and Coal Creek shared-use path active transportation connections.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Median and Pedestrian Refuge Islands	Surrounding SUU
Lane Narrowing	Surrounding SUU
Highway Lighting	Surrounding SUU
High-Visibility Crosswalk	Thunderbird Way (Dewey Avenue, 450 West, 700 West, 800 West, 1150 West) University Blvd (1150 West, 600 West)
Right Turn Lanes	1150 West & Thunderbird Way and 100 West & Center Street
Leading Pedestrian Intervals	All signalized intersections
Rectangular Rapid Flashing Beacons (RRFB)	300 West & Shakespeare Lane to replace malfunctioning units
Raised Crosswalk	450 West

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Medians and Pedestrian Refuge Islands	1.08	MILE (URBAN)	\$871,000	\$940,680
Lane Narrowing	1.08	MILE	\$37,000	\$39,960
Install Highway Lighting	1.08	MILE	\$300,000	\$324,000
Install High Visibility Crosswalk Markings and Signage	17	XING	\$7,000	\$119,000
Install Right-Turn Lanes	2	LANE	\$127,000	\$254,000
Implement Leading Pedestrian Interval (LPI) Signal Timing	3	INT	\$3,000	\$9,000
Install Rectangular Rapid Flashing Beacons (RRFB)	1	XING	\$10,000	\$10,000
Install Raised Crosswalk and Signage	1	EACH	\$41,000	\$41,000
Install High-Visibility Crosswalk (including RRFB)	3	XING	\$17,000	\$51,000
Install Bulbouts (2)	1	EACH	\$54,000	\$54,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$1,842,640</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$2,562,564</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$2,986,000</b>

**Local Match<sup>3</sup>** **\$597,200**










# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 2



SUU Loop, SR 289 from 1150 West to Highland Drive

- 
 Lighting, Surrounding SUU
- 
 Enhanced Crossings
- 
 High-Visibility Crossing
- 
 Rectangular Rapid Flashing Beacon (RRFB)
- 
 Leading Pedestrian Intervals (LPI)
- 
 Turn Lanes
- 
 Medians and Lane Narrowing



## LOCATION CHARACTERISTICS

PROJECT NUMBER: 3

**Location:** 600 South

**Project Extents:** Sage Drive to Main Street (SR 130)

**Roadway Classification:** Major Collector, Federal Aid Route

**Jurisdiction(s):** Cedar City

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** Cedar City GFA

**GFA Emphasis Areas:** Intersections, Older Drivers, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	1.81
Speed Limit:	25 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	6,200
Median Type:	NA
Number of Key Intersections	7











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	Yes	✓
Network Screening:	No	✗
Conflict Areas:	Yes	✓
Risk Characteristics:	No	✗
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	5
Minor Injury Crashes:	15
Possible Injury Crashes	14
No Injury/PDO Crashes:	77
<b>Total Crashes:</b>	<b>111</b>
<b>Equivalent Property Damage Crashes:</b>	<b>971</b>

#### Location Crash Type













Fixed-object  9%	Angle  48%	Left Turn  31%	Head-on  2%	Rear-end  26%
Motorist-bicyclist  1%	Motorist-pedestrian  3%	Sideswipe  7%	Front to Rear  29%	Single Vehicle  11%

## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 3

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
Sage Drive	10		3	4	4	1	1	1		
1100 West	22		18	8	3					
860 West	5	1	2	2				1	1	
700 West	3		1				1			
300 West	9	1	6		1			1		1

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	2%
	 Distracted Driving	16%
	 Impaired Driving	0%
	 Use of Safety Restraints	0%
	 Speed Management	8%
	 Teen Driving Safety	47%
	 Senior Safety	19%
Crash Types	 Roadway Departure Crashes	7%
	 Intersection Safety	73%
Vulnerable Users	 Motorcycle Safety	2%
	 Pedestrian Safety	3%
	 Bicycle Safety	1%

### Other Applicable Locations/Scenarios:

Local or collector streets (25 mph) adjacent or surrounding school areas with school pedestrian traffic to and from school, and crossing the roadways, may benefit from similar safety countermeasures. Other locations school include the following (please note any area with pedestrian traffic seeking improved crossing may benefit from similar countermeasures):

- 400 South, 500 South, and 450 West roadways (South Elementary)
- 400 North, 600 West, and 500 West roadways (Cedar North Elementary)
- 200 East and East Center Street roadways (Cedar East Elementary)
- 400 West, 1925 North, Fiddlers Canyon, and Wedgewood Lane roadways (Canyon View Middle and High Schools, Fiddler's Canyon Elementary)
- Midvalley Road, Wagon Wheel Drive and Deer Hollow Drive roadways (Enoch Elementary and Three Peaks Elementary)
- 4050 West and surrounding roadways (Iron Springs Elementary)
- Royal Hunte Drive and Cove Drive roadways (Cedar Middle School)
- 100 North and Main Street (SR 274) roadways, (Parowan Elementary and High School)
- Beryl Highway (Escalante Valley School)

### Comments, Feedback, Ongoing Projects:

- Eastbound buses turning off of Main Street onto 860 West must slow down suddenly in order to make the turn
- The project includes 860 West and 800 South as they are common bus routes and walking paths for students
- Improved crossings needed.



## EXISTING CONDITIONS

PROJECT NUMBER: 3

### Notes:

- Wide crossing distances
- Faded striping
- On street parking on either side
- “Crossing ahead signage” and speed feedback signs already existing on 600 South



*600 South and 860 West Crossing*



*600 South Cross Section*



*Rectangular Rapid Flashing Beacon Crossing on 600 South at 700 West Intersection*



*Rectangular Rapid Flashing Beacon Crossing on 800 South*



*Southbound 860 West, Typical Cross Section*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 3**

## Project Description

This project recommends safety countermeasures in the school areas between 600 South, 800 south, and 860 West. Completing sidewalk gaps provides a safe route for pedestrians, particularly students walking to and from Cedar High School. High-visibility crosswalks with Rectangular Rapid Flashing Beacons (RRFBs) are recommended at several locations connecting the high school, seminary building, and technical college to facilitate safe pedestrian crossings. Curb bulb outs should be considered to enhance pedestrian visibility and encourage slower vehicle speeds. To address crash patterns at 1100 West and 600 South, roadway restriping to accommodate left-turn lanes is proposed for the eastbound and westbound approaches of 1100 West and the northbound approach of Sage Drive. Intersection lighting at 1100 West improves nighttime visibility. New or refreshed center and edge line striping on along the entire project is recommended to create a narrower feel for vehicles and help mitigate vehicle speeds in the area, as well as delineate on-street parking vs. travel lanes. These improvements aim to mitigate safety concerns including speeding, pedestrian crossings, and angle or left-turn crashes.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
<b>Sidewalk</b>	Surrounding the overpass where there are gaps
<b>Center and edge line striping</b>	Entire corridor
<b>High-Visibility Crosswalk</b>	Sage Drive, near 940 West, 700 West, 450 West, and 860 West
<b>Positive Off-Set at Intersections</b>	1100 West and Sage Drive
<b>Intersection Lighting</b>	1100 West

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
<b>Install 6 ft. Sidewalk (both sides of roadway)</b>	0.26	MILE	\$761,000	\$197,860
<b>Install 4" Centerline and Edge Line Striping (Paint)</b>	1.77	MILE	\$73,000	\$129,210
<b>Install High-Visibility Crosswalk (including RRFB)</b>	5	XING	\$17,000	\$85,000
<b>Create Positive Off-Set of Existing Left-Turn Lanes (pavement markings and curb work, no widening)</b>	2	INT	\$16,000	\$32,000
<b>Install Intersection Lighting</b>	1	INT	\$35,000	\$35,000
<b>Install Bulbouts (2)</b>	3	EACH	\$54,000	\$162,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$641,070</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$929,555</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$1,228,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$245,600</b>



Center and Edge Lines, Entire Project

High-Visibility Crosswalk with RRFB

Restriping Right Turn Lanes

Intersection Lighting

Sidewalk



## LOCATION CHARACTERISTICS

**Location:** Cross Hollow Road

**Project Extents:** SR 56 to Royal Hunte Drive/Providence Center Drive

**Roadway Classification:** Minor Arterial, Federal Aid Route

**Jurisdiction(s):** Cedar City

**Underserved Community:** Yes

**PROJECT NUMBER: 4**

**Safety Action Plan GFA(s):** Cedar City GFA

**GFA Emphasis Areas:** Intersections, Older Drivers, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	2.8
Speed Limit:	45 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	5,600
Median Type:	NA-TWLTL
Number of Key Intersections	2











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	Yes	✓
Network Screening:	Yes	✓
Conflict Areas:	Yes	✓
Risk Characteristics:	No	✗
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	1
Serious Injury Crashes:	4
Minor Injury Crashes:	4
Possible Injury Crashes:	11
No Injury/PDO Crashes:	47
<b>Total Crashes:</b>	<b>67</b>
<b>Equivalent Property Damage Crashes:</b>	<b>1,467</b>

#### Location Crash Type













Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
15%	46%	36%	7%	10%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
1%	0%	4%	12%	28%

## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 4

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
Walmart Driveway	10	1	7	1	1			1		
Silver Silo Driveway	3		1				1	2		

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	1%
	 Distracted Driving	12%
	 Impaired Driving	3%
	 Use of Safety Restraints	3%
	 Speed Management	18%
	 Teen Driving Safety	31%
	 Senior Safety	25%
Crash Types	 Roadway Departure Crashes	22%
	 Intersection Safety	39%
Vulnerable Users	 Motorcycle Safety	4%
	 Pedestrian Safety	0%
	 Bicycle Safety	1%

### Other Applicable Locations/Scenarios:

Minor arterial, higher speed (45 mph), two lane roadways may benefit from similar safety countermeasures. This location includes horizontal curves and higher than typical active transportation use due to the proximity to existing trails. Similar locations include:

- Westview Drive
- Lund Highway
- Old Highway 91
- Iron Springs Road
- SR 56
- South Mountain Drive

### Comments, Feedback, Ongoing Projects:

- Many comments regarding the curve near the Silver Silo Bakery
- Comments on the Cross Hollow Trail and the connection to the Roadway
- Bicyclist activity along the entire corridor
- Speeding issues concentrated around the curves and more rural area south of the Silver Silo Bakery



## EXISTING CONDITIONS

PROJECT NUMBER: 4

### Notes:

- Pedestrian level lighting along portions of the east side
- Highway lighting near the intersection with SR 56
- Crashes due to adverse roadway conditions



*Cross Hollow Road, Typical Curve*



*Northbound Approach to Silver Silo Bakery Access*



*Typical Cross Section Between Walmart and Silver Silo Bakery*



*Typical Cross Section Northbound Between Silver Silo Bakery and SR 56*



*Typical Cross Section Southbound Between Silver Silo Bakery and SR 56*

# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 4**

## Project Description

Proposed safety countermeasures to Cross Hollow Road help address vehicle and active transportation safety. Safety countermeasures include a high-visibility crosswalk for a Cross Hollow Trail crossing, delineated bicycle lanes, and curve delineation improvements for roadway curves. Enhanced lighting and roadway delineation like signage, rumble strips, and striping are recommended. Driver feedback speed limit signs may improve speed limit compliance. Medians are recommended in the section of roadway from the Silver Silo to the I-15 interchange for access management purposes.

Note, the current South Cedar Interchange project is planned to improve the Royal Hunte Drive intersection and surround accesses in the area.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Buffered or Striped Bicycle Lanes	Silver Silo Bakery to SR 56
Curve Signage	Near the Silver Silo Bakery curve, and the two curves south.
Driver Feedback Speed Limit Signs	Westbound from Walmart, northbound near the bakery, southbound from SR 56, and eastbound from the bakery
Post Mounted Delineators	From Silver Silo Bakery and southeast
Medians (back-to-back curb)	Silver Silo Bakery to Royal Hunte Drive/Providence Center Drive
Intersection Lighting	Cody Drive and near the Silver Silo Bakery
High-Visibility Crosswalk	At the connection to the Cross Hollow Trail
Centerline and Edge Lines	Silver Silo Bakery to SR 56

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Bicycle Lanes	1.35	MILE	\$44,000	\$59,400
Convert Traditional/Buffered Bike Lanes to Separated Lane with Flexible Delineator Posts	1.35	MILE	\$106,000	\$143,100
Install 4" Retroreflective Centerline and Edge Lines	1	MILE	\$96,000	\$96,000
Install and/or Upgrade Curve Signage to Enhanced Delineations	3	CURVE	\$3,000	\$9,000
Install Driver Feedback Speed Limit Signs	4	EACH	\$11,000	\$44,000
Install Post-Mounted Delineators	1.2	MILE	\$4,000	\$4,800
Install Medians (Back-To-Back Curb)	1	MILE	\$654,000	\$654,000
Install Intersection Lighting	2	INT	\$35,000	\$70,000
Install High-Visibility Crosswalk (including RRFB)	1	XING	\$17,000	\$17,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$1,097,300</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$1,556,355</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$2,055,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$411,000</b>



Diagram illustrating various traffic safety measures:

- Bike Lane, Entire Corridor
- Dynamic Speed Limit Signs
- High-Visibility Crosswalk with RRFB
- Intersection Lighting
- Retroreflective Center and Edge Lines, Median (Back-to-Back Curb)
- Enhanced Curve Signage



## LOCATION CHARACTERISTICS

**Location:** Westview Drive

**Project Extents:** SR 56 to Old Highway 91

**Roadway Classification:** Major Collector, Federal Aid Route

**Jurisdiction(s):** Cedar City, Unincorporated Iron County

**Underserved Community:** Yes

**PROJECT NUMBER: 5**

**Safety Action Plan GFA(s):** Cedar City GFA, East Iron County GFA

**GFA Emphasis Areas:** Intersections, Older Drivers, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	4.51
Speed Limit:	45-50 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	2,200
Median Type:	NA
Number of Key Intersections	2











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	Yes	✓
Network Screening:	No	✗
Conflict Areas:	Yes	✓
Risk Characteristics:	No	✗
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	8
Possible Injury Crashes	5
No Injury/PDO Crashes:	18
<b>Total Crashes:</b>	<b>31</b>
<b>Equivalent Property Damage Crashes:</b>	<b>226</b>

#### Location Crash Type

Fixed-object  42%	Angle  16%	Left Turn  19%	Head-on  0%	Rear-end  16%
Motorist-bicyclist  0%	Motorist-pedestrian  0%	Sideswipe  3%	Front to Rear  16%	Single Vehicle  65%















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 5

Intersection Roadway	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
800 South	4			1	1			2	
South Mountain Drive	6		1	1				5	

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	0%
	 Distracted Driving	32%
	 Impaired Driving	3%
	 Use of Safety Restraints	6%
	 Speed Management	13%
	 Teen Driving Safety	61%
	 Senior Safety	23%
Crash Types	 Roadway Departure Crashes	39%
	 Intersection Safety	52%
Vulnerable Users	 Motorcycle Safety	0%
	 Pedestrian Safety	0%
	 Bicycle Safety	0%

### Other Applicable Locations/Scenarios:

Major collector, higher speed (45-50 mph) roadways may benefit from similar safety countermeasures. This location serves residential areas, has roadway curvature with minimal shoulders, direct driveway accesses and intersections, and is located in a fast growing residential area of the County. Other locations may include:

- Lund Highway
- Iron Springs Road
- Cross Hollow Road
- Old Highway 91
- Midvalley Road
- South Mountain Drive
- Bulldog Road
- 5700 West
- 2400 North
- Airport Road
- 2300 West

### Comments, Feedback, Ongoing Projects:

- Turn lanes are needed for busier intersections
- Nighttime visibility concerns
- Lack of shoulders and High bicycle traffic
- Consider the quieter sinusoidal rumble strips as opposed to typical grooved rumble strips



## EXISTING CONDITIONS

PROJECT NUMBER: 5

Notes:



*Culvert South of the South Mountain Drive Intersection*



*Northbound near South Mountain Drive, Typical Cross Section*



*Southbound Curves Near 400 South*



*Southbound near 800 South, Typical Cross Section*



*Southbound near Center Street*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 5**

## Project Description

This project recommends several safety countermeasures to address roadway departures, visibility, and intersection safety concerns. Proposed countermeasures include installing driver feedback speed limit signs to encourage safer speeds, wider shoulders, edge line rumble strips, and wider 6" edge lines to help address roadway departure crashes. Curve warning signage is recommended for four major curves on the corridor. Intersection lighting is also proposed to improve nighttime visibility as many crashes have occurred in dark, unlit conditions. To reduce the risk of angle crashes and highway crossover incidents, turn lanes are recommended at the key intersections.

Note, the Cedar City Transportation Master Plan shows a capital improvement project for Westview Drive of Widen with Bike Lane to be completed 2021-2030.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Driver Feedback Speed Limit Signs	On each major curve
6" Edge Lines	Full corridor
Edge Line Rumble Strips	Full corridor
Curve Signage	All curves along the corridor
Roadway Widening and TWLTL	Full corridor
4 ft Paved Shoulder	Full corridor
Bicycle Lanes	Full corridor
Left-Turn Lanes	Southbound on South Mountain Drive, northbound on 800 South
Right-Turn Lanes	Westbound on South Mountain Drive, southbound and eastbound on 800 South
Intersection Lighting	South Mountain Drive, 1800 South, 1125 South, 800 South, Benson Way

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs on Rural Curves	4	EACH	\$11,000	\$44,000
Install 6" Edge Line (Both Sides of Road)	4.51	MILE	\$8,000	\$36,080
Install Edge Line Rumble Strips	4.51	MILE	\$5,000	\$22,550
Install and/or Upgrade Curve Signage to Enhanced Delineations	4	CURVE	\$3,000	\$12,000
Widen Roadway and Install Two-Way Left-Turn Lane	4.51	MILE	\$1,560,000	\$7,035,600
Install 4-ft Paved Shoulder (both sides of roadway)	4.51	MILE	\$709,000	\$3,197,590
Install Bicycle Lanes	4.51	MILE	\$44,000	\$198,440
Install Left-Turn Lanes	2	LANE	\$153,000	\$306,000
Install Right-Turn Lanes	3	LANE	\$127,000	\$381,000
Install Intersection Lighting	5	INT	\$35,000	\$175,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

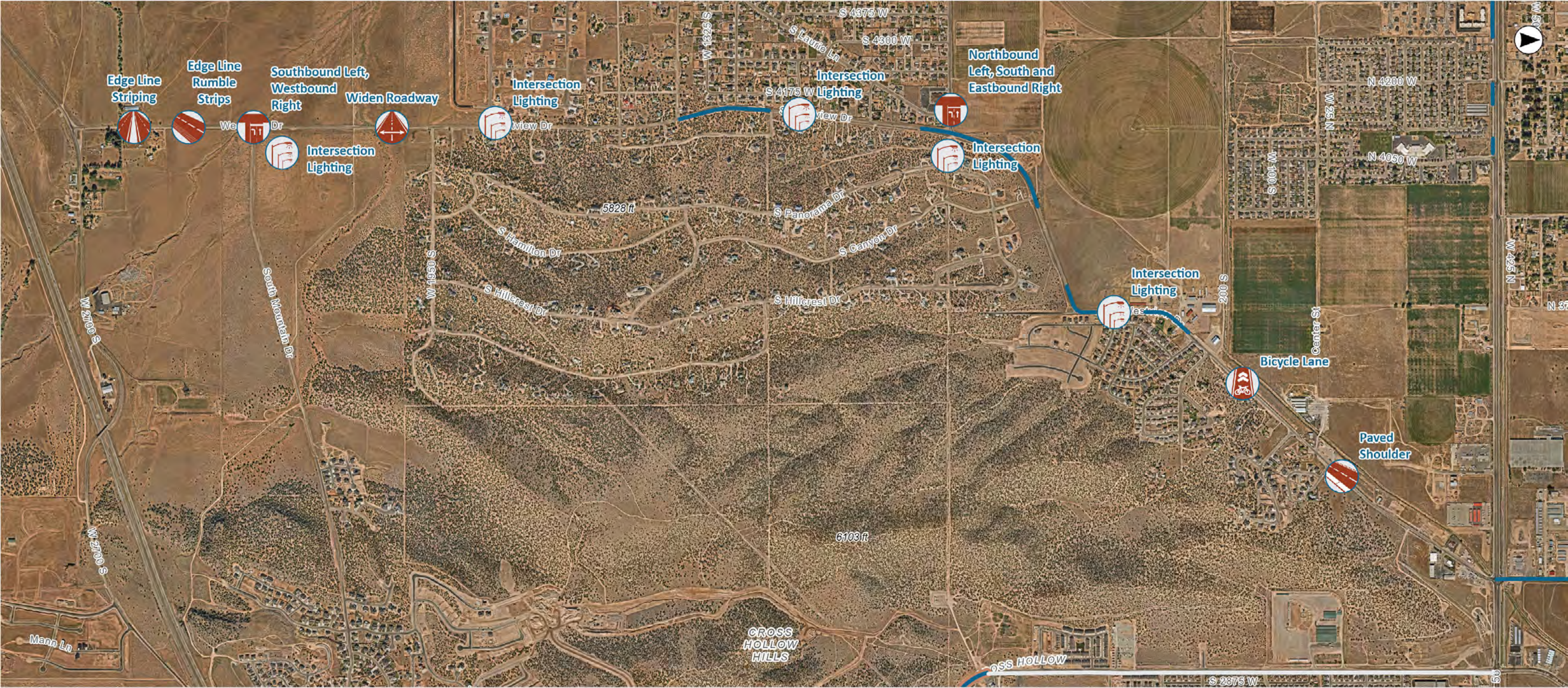
3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$11,408,260</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$15,476,151</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$20,729,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$4,145,800</b>



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 5



Westview Drive from SR 56 to Old Highway 91

- Enhanced Curve Delineation
- 6" Edge Lines, Entire Corridor
- Edge Line Rumble Strips, Entire Corridor
- Roadway Widening and TWLTL, Entire Corridor
- Bike Lane, Entire Corridor
- 4 foot Pave Shoulder, Entire Corridor
- Turn Lanes
- Intersection Lighting



## LOCATION CHARACTERISTICS

**Location:** SR 56

**Project Extents:** Iron Springs Road to Airport Road

**Roadway Classification:** Other Principal Arterial, State Route

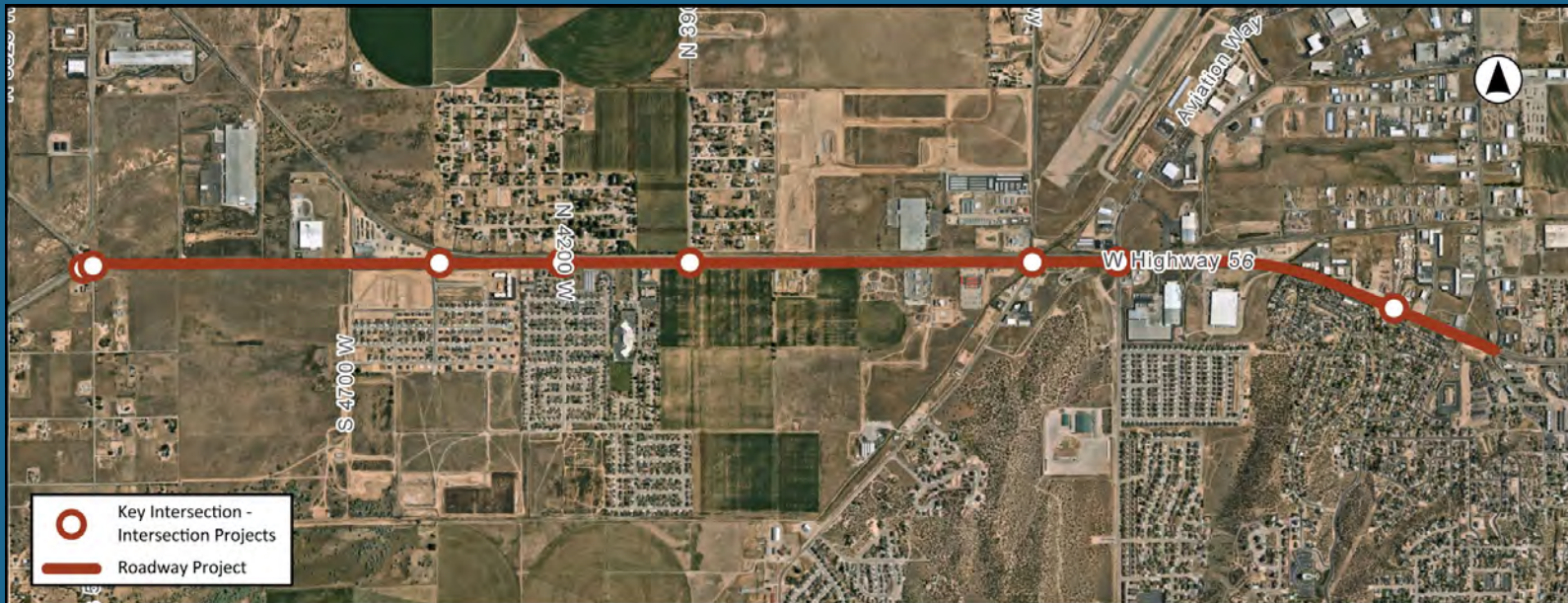
**Jurisdiction(s):** Cedar City, UDOT

**Underserved Community:** Yes

**PROJECT NUMBER: 6**

**Safety Action Plan GFA(s):** Cedar City GFA

**GFA Emphasis Areas:** Intersections, Older Drivers, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

<b>Length:</b>	4.2
<b>Speed Limit:</b>	50 mph
<b>Roadway Lanes:</b>	4
<b>Daily Traffic Volume (AADT):</b>	6,500
<b>Median Type:</b>	TWLTL
<b>Number of Key Intersections</b>	8











#### Why was this location identified?

<b>High Crash Network:</b>	Yes	✓
<b>High Injury Network:</b>	Yes	✓
<b>Network Screening:</b>	Yes	✓
<b>Conflict Areas:</b>	Yes	✓
<b>Risk Characteristics:</b>	Yes	✓
<b>Community Feedback:</b>	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
<b>Fatal Crashes:</b>	2
<b>Serious Injury Crashes:</b>	9
<b>Minor Injury Crashes:</b>	20
<b>Possible Injury Crashes</b>	30
<b>No Injury/PDO Crashes:</b>	90
<b>Total Crashes:</b>	151
<b>Equivalent Property Damage Crashes:</b>	3,339

#### Location Crash Type

<b>Fixed-object</b>  <b>15%</b>	<b>Angle</b>  <b>35%</b>	<b>Left Turn</b>  <b>28%</b>	<b>Head-on</b>  <b>3%</b>	<b>Rear-end</b>  <b>32%</b>
<b>Motorist-bicyclist</b>  <b>0%</b>	<b>Motorist-pedestrian</b>  <b>0%</b>	<b>Sideswipe</b>  <b>5%</b>	<b>Front to Rear</b>  <b>33%</b>	<b>Single Vehicle</b>  <b>24%</b>















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 6

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
Iron Springs Road	11	3	8	6			1	2		
5300 West	3			1		1		2		
4500 West	3									
4200 West	6	1	3	2	2			1		
3900 West	6	1	4	2	1					
Westview Drive	27	1	11	9	15			1		
Cross Hollow Road	41	2	23	18	9	1	3	1		
Cove Drive	8		3	3	4			1		

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	1%
	 Distracted Driving	8%
	 Impaired Driving	4%
	 Use of Safety Restraints	5%
	 Speed Management	9%
	 Teen Driving Safety	35%
	 Senior Safety	16%
Crash Types	 Roadway Departure Crashes	13%
	 Intersection Safety	66%
Vulnerable Users	 Motorcycle Safety	1%
	 Pedestrian Safety	0%
	 Bicycle Safety	0%

### Other Applicable Locations/Scenarios:

State route, two lanes each direction and a center two-way left-turn lane in an suburban to rural area with a 50 mph speed limit type roadways may benefit from similar safety countermeasures. This location serves industrial, commuting, and typical residential traffic. There is planned residential and commercial growth all along and immediately adjacent to the corridor. Similar locations in the County include SR 130 (Main Street) in Cedar City, SR 56/200 North in Cedar City, and SR 130 in Enoch City.

### Comments, Feedback, Ongoing Projects:

- Planned commercial (industrial) and residential development in the area and immediately adjacent the roadway. The current unsignalized intersections are going to see an increase in traffic.
- Planned residential and regional park development south of SR 56.
- Evaluate intersections for traffic signals as development continues.
- Considerations should be taken near the Iron County Elementary School for pedestrian safety and vehicle traffic congestion.
- Increased bicyclist activity in the area.



## EXISTING CONDITIONS

PROJECT NUMBER: 6

### Notes:

- Incomplete sections of sidewalk
- E-scooter observed on the shoulder



*Eastbound SR 56 Near 4700 West*



*E-Scooter using the Shoulder*



*Incomplete Sidewalk near 4050 West*



*SR 56 and 4050 West Intersection*



*Westbound SR 56 near 4700 West*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 6**

## Project Description

This project recommends safety countermeasures including driver feedback speed limit signs, in-filling sidewalk gaps, and wider edge lines. Several intersections along SR 56 experience angle, left-turn, and rear-end crashes. To help mitigate these crash types, traffic signal warrants should be evaluated at multiple intersections. Right-turn lanes are recommended on SR 56 at multiple intersections. Installing a painted bicycle lane in the shoulder, as recommended in the Cedar City Active Transportation Plan, improves active transportation facilities in the area.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Driver Feedback Speed Limit Signs	Between 4200 West and 3100 West
Sidewalk	Segments between 4500 West and 4050 West
6" Edge Line	Full corridor
Road Safety Audit	Full corridor
Bicycle Lanes	Full corridor
Right-Turn Lanes	Eastbound at Cross Hollow Road, Eastbound at 4200 West, Eastbound at 4050 West, Westbound at 3900 West, Westbound at 4200 West

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs	2	EACH	\$11,000	\$22,000
Install 6 ft. Sidewalk (both sides of roadway)	0.352272727	MILE	\$761,000	\$268,080
Install 6" Edge Line (Both Sides of Road)	4.23	MILE	\$8,000	\$33,840
Conduct a Road Safety Audit	1	LOC	\$25,000	\$25,000
Install Bicycle Lanes	4.23	MILE	\$44,000	\$186,120
Install Right-Turn Lanes	5	LANE	\$127,000	\$635,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

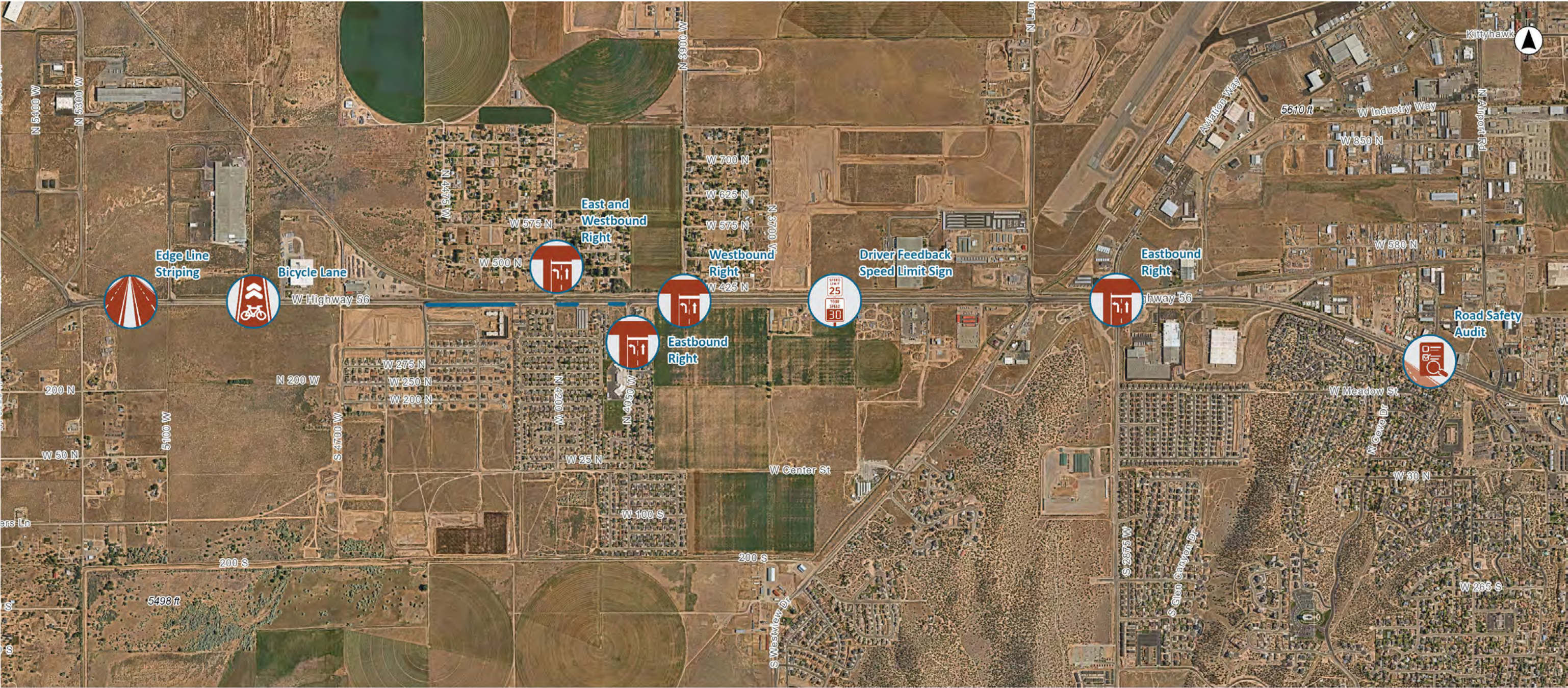
3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$1,170,040</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$1,654,553</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$2,178,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$435,600</b>



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 6



SR 56 from Iron Springs Road to Airport Road

- 6" Edge Line, Entire Corridor
- Bike Lane, Entire Corridor
- Road Safety Audit, Entire Corridor
- Turn Lanes
- Dynamic Speed Limit Sign
- Sidewalk



## LOCATION CHARACTERISTICS

**Location:** SR 56 & Airport Road Intersection

**Project Extents:** NA

**Intersection Control:** Signalized

**Jurisdiction(s):** Cedar City, UDOT

**Underserved Community:** Yes

**PROJECT NUMBER:** 7

**Safety Action Plan GFA(s):** Cedar City GFA

**GFA Emphasis Areas:** Intersections, Older Drivers, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Intersection Characteristics

<b>Intersection Control Type:</b>	Signalized
<b>Speed Limits (major, minor):</b>	35 mph, 40 mph
<b>Approaches:</b>	4
<b>Daily Entering Volume:</b>	21,000
<b>Turn Lanes (Y/N):</b>	Yes
<b>Lighting:</b>	Yes

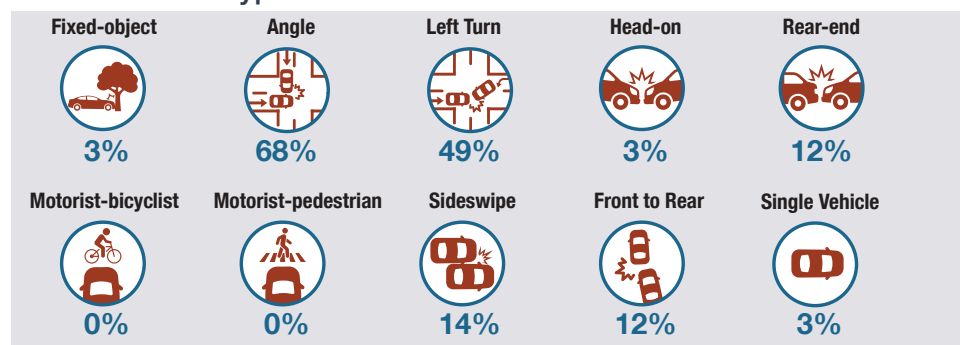
#### Why was this location identified?

<b>High Crash Network:</b>	Yes ✓
<b>High Injury Network:</b>	Yes ✓
<b>Network Screening:</b>	Yes ✓
<b>Conflict Areas:</b>	Yes ✓
<b>Risk Characteristics:</b>	Yes ✓
<b>Community Feedback:</b>	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
<b>Fatal Crashes:</b>	0
<b>Serious Injury Crashes:</b>	4
<b>Minor Injury Crashes:</b>	12
<b>Possible Injury Crashes</b>	9
<b>No Injury/PDO Crashes:</b>	44
<b>Total Crashes:</b>	69
<b>Equivalent Property Damage Crashes:</b>	738













#### Location Crash Type





## LOCATION INFORMATION

PROJECT NUMBER: 7

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
1% Impaired Driving 	6% Distracted Driving 	22% Teen Driving Safety 	0% Aggressive Driving 	7% Roadway Departure Crashes 	1% Motorcycle Safety 	0% Pedestrian Safety 
1% Speed Management 	1% Use of Safety Restraints 	22% Senior Safety 		90% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Multi-lane signalized intersections with existing turn lanes and long distance pedestrian crossings may benefit from similar safety countermeasures. Similar locations include:

- Existing signalized intersections along SR 56 (Aviation Way, Cove Drive, 3100 West, 300 West, etc.)
- Existing signalized intersections along SR 130/Main Street (200 South, 1045 North, etc.)

### Comments, Feedback, Ongoing Projects:

- Left-turn crashes were common (including those disregarding the signal)
- Sight distance concerns for turning vehicles



# EXISTING CONDITIONS

PROJECT NUMBER: 7

Notes:



*Eastbound Signal Heads*



*Southbound Approach on Airport Road*



*Maverik Access Driveway on Airport Road*



*Eastbound Approach on SR 56*



*Northbound Approach on College Way*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 7

## Project Description

Proposed safety countermeasures are targeted to address the high number of left-turn and angle related crashes at this intersection. Adjusting the left-turn signal timing from permissive-protected to protected only phasing reduces left-turn conflicts and driver hesitation. Installing an extended time push button on the crosswalks crossing SR 56 help improve pedestrian safety for users that may need extra time to cross five lanes of traffic on SR 56. It is also proposed to convert the existing all-movement access (southern access to Maverik) to a right-in, right-out only type access driveway. An Intersection Control Evaluation is recommended to identify additional issues and solutions for this location.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Protected Left Turn Phasing	SR 56 & Airport Road
Extended Time Pushbutton	SR 56 & Airport Road
Right-in-Right-out Access Treatment	Maverik driveway north of SR 56 & Airport Road

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Change left-turn Timing from Permissive to Protected	1	INT	\$8,000	\$8,000
Install a Extended Time Pushbutton	4	EACH	\$500	\$2,000
Right-in-Right-out Access Treatment	1	DRIVEW	\$11,000	\$11,000

1: Includes mobilization (10%0, traffic control (5%), items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design

3: 20% of estimated project total toward Safe Streets for All implementation grants

Improvement Subtotal	\$21,000
Estimated Construction Cost Total <sup>1</sup>	\$30,850
Estimated Project Total <sup>2</sup>	\$36,000
Local Match <sup>3</sup>	\$7,200






LOCATION RECOMMENDATIONS

PROJECT NUMBER: 7



SR 56 & Airport Road Intersection

-  Crosswalk Improvements
-  Signal Timing Improvements
-  Access Management Improvements



## LOCATION CHARACTERISTICS

**PROJECT NUMBER: 8**

**Location:** SR 56

**Project Extents:** Airport Road to Main Street (SR 130)

**Roadway Classification:** Other Principal Arterial, State Route

**Jurisdiction(s):** Cedar City, UDOT

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** Cedar City GFA

**GFA Emphasis Areas:** Intersections, Older Drivers, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	1.34
Speed Limit:	35 mph
Roadway Lanes:	4
Daily Traffic Volume (AADT):	16,100
Median Type:	TWLT
Number of Key Intersections	12

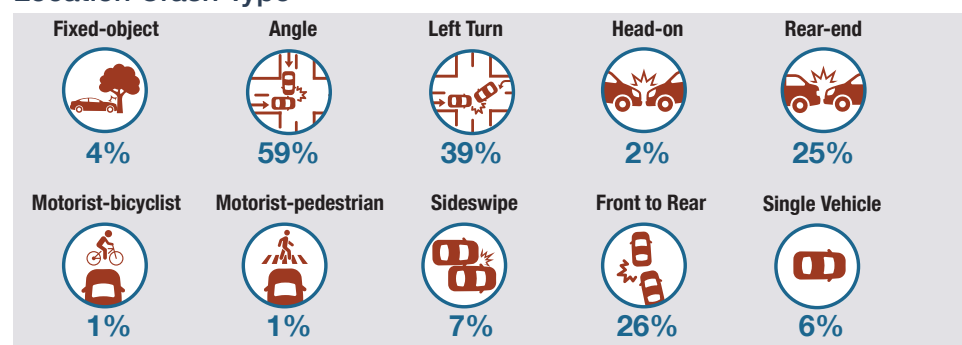
#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	Yes	✓
Network Screening:	Yes	✓
Conflict Areas:	Yes	✓
Risk Characteristics:	Yes	✓
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	2
Minor Injury Crashes:	32
Possible Injury Crashes	34
No Injury/PDO Crashes:	147
<b>Total Crashes:</b>	<b>215</b>
<b>Equivalent Property Damage Crashes:</b>	<b>1,302</b>

#### Location Crash Type

















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 8

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
1600 West	6		4	4	1					
1550 West	6		5	4	1					
1400 West	30		13	11	13		1	1	1	
1150 West	8		5	4	3					
1100 West	14		11	6	2		1			
1050 West	7		5	3	1		1			
1000 West	10	1	7	4			2	1	1	
800 West	25		15	7	7	1	2	1		
700 West	10		6	3	2	1				
400 West	6		1	1	2		1	2		
300 West	30	1	16	3	10		2		1	1
100 West	20		15	5	2	1				2

#### Utah Emphasis Areas

Behavioral		Aggressive Driving	0%
		Distracted Driving	13%
		Impaired Driving	1%
		Use of Safety Restraints	0%
		Speed Management	2%
		Teen Driving Safety	30%
		Senior Safety	18%
Crash Types		Roadway Departure Crashes	3%
		Intersection Safety	81%
Vulnerable Users		Motorcycle Safety	1%
		Pedestrian Safety	1%
		Bicycle Safety	1%

#### Other Applicable Locations/Scenarios:

State route, two lanes each direction and a center two-way left-turn lane in an urban area with a 35 mph speed limit type roadways may benefit from similar safety countermeasures. In addition to typical vehicle and pedestrian traffic, this location serves schools and commercial areas with numerous access driveways. Similar locations in the County include SR 130 (Main Street) in Cedar City and SR 130 in Enoch City

#### Comments, Feedback, Ongoing Projects:

- Desire for additional and better visible crosswalks
- Concern of Vehicle speed in the area
- Concerns with all the Access driveways and turning vehicles into and out of those locations
- Vegetation noted as an issue on the sidewalks
- No designated space for bicyclists



## EXISTING CONDITIONS

PROJECT NUMBER: 8

### Notes:

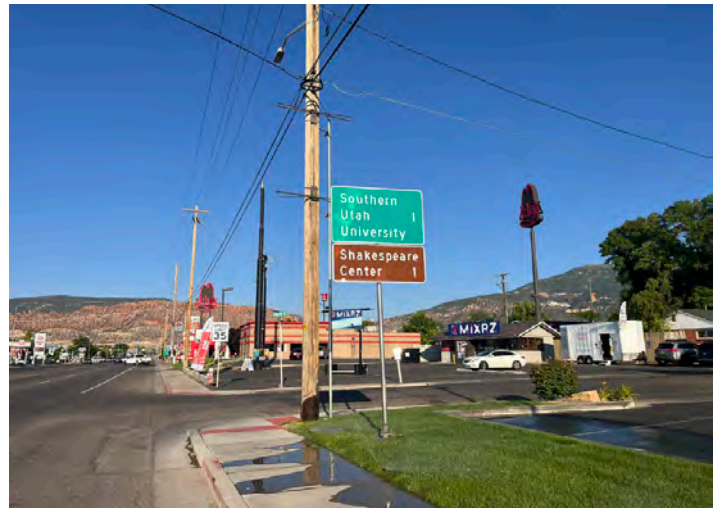
- Almost every minor street intersection has Pedestrian ramps but No marked crosswalks



*1225 West Crossing*



*1225 West Intersection Curbed Median, Westbound*



*Eastbound 35 MPH Speed Limit and Driveways*



*Pedestrian Ramp to the Sidewalk*



*Westbound Queue near 1150 West and Turning Vehicles*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 8

## Project Description

This project includes various safety countermeasures and includes recommendations from the Cedar City Active Transportation Plan. Recommendations include medians and pedestrian refuge islands, curbed center medians, bulbouts, and extended time pushbuttons to improve crossings and limit vehicle conflict points. High-visibility crosswalks and painted bicycle lanes are also recommended. Adjusting left-turn signal timing to flashing yellow arrows or protected at intersections along the corridor help mitigate angle and left turn crashes.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Medians and Pedestrian Refuge Islands	600 West
Road Safety Audit	Full corridor
Medians (Back-To-Back Curb)	Eastbound and westbound approaches of the following: 800 West, 300 West, Main Street
Bicycle Lanes	Full corridor
Pedestrian Hybrid Beacon or HAWK	600 West
Flashing Yellow Arrow	800 West, 300 West
Protected Left-Turn Timing	1400 West
Extended Time Pushbutton	Each signalized intersection
Bulbouts	600 West
High-Visibility Crosswalk	1000 West
Pedestrian Refuge Island	1000 West

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Medians and Pedestrian Refuge Islands	0.07	MILE (URBAN)	\$871,000	\$60,970
Conduct a Road Safety Audit	1	LOC	\$25,000	\$25,000
Install Medians (Back-To-Back Curb)	0.321969697	MILE	\$654,000	\$210,568
Install Bicycle Lanes	1.34	MILE	\$44,000	\$58,960
Install Pedestrian Hybrid Beacons (PHB) or HAWK	1	EACH	\$250,000	\$250,000
Change left-turn timing from permissive only to Flashing Yellow Arrow	2	INT	\$8,000	\$16,000
Change left-turn Timing from Permissive to Protected	1	INT	\$8,000	\$8,000
Install a Extended Time Pushbutton	6	EACH	\$500	\$3,000
Install Bulbouts (2)	1	EACH	\$54,000	\$54,000
Install High-Visibility Crosswalk (including RRFB)	1	XING	\$17,000	\$17,000
Install Pedestrian Refuge Island	1	EACH	\$75,000	\$75,000
Install Pedestrian Refuge Island	1	EACH	\$75,000	\$75,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

Improvement Subtotal	\$778,498
Estimated Construction Cost Total <sup>1</sup>	\$1,125,973
Estimated Project Total <sup>2</sup>	\$1,312,000
Local Match <sup>3</sup>	\$262,400



## LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 8**



SR 56 from Airport Road to Main Street (SR 130)



Road Safety Audit (RSA),  
Entire Corridor



- Bike Lanes, Entire Corridor



### Curbed Medians





### Protected Left Turns



Extended Time  
Pushbutton

600 West

 Pedestrian Hybrid Beacon (PHB) Pedestrian Refuge Island

### Bulb Outs





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## **APPENDIX E.2. ENOCH CITY GFA PROJECT INFORMATION SHEETS**



## LOCATION CHARACTERISTICS

**Location:** Midvalley Road

**Project Extents:** Lund Highway to Old Highway 91

**Roadway Classification:** Major Collector, Federal Aid Route

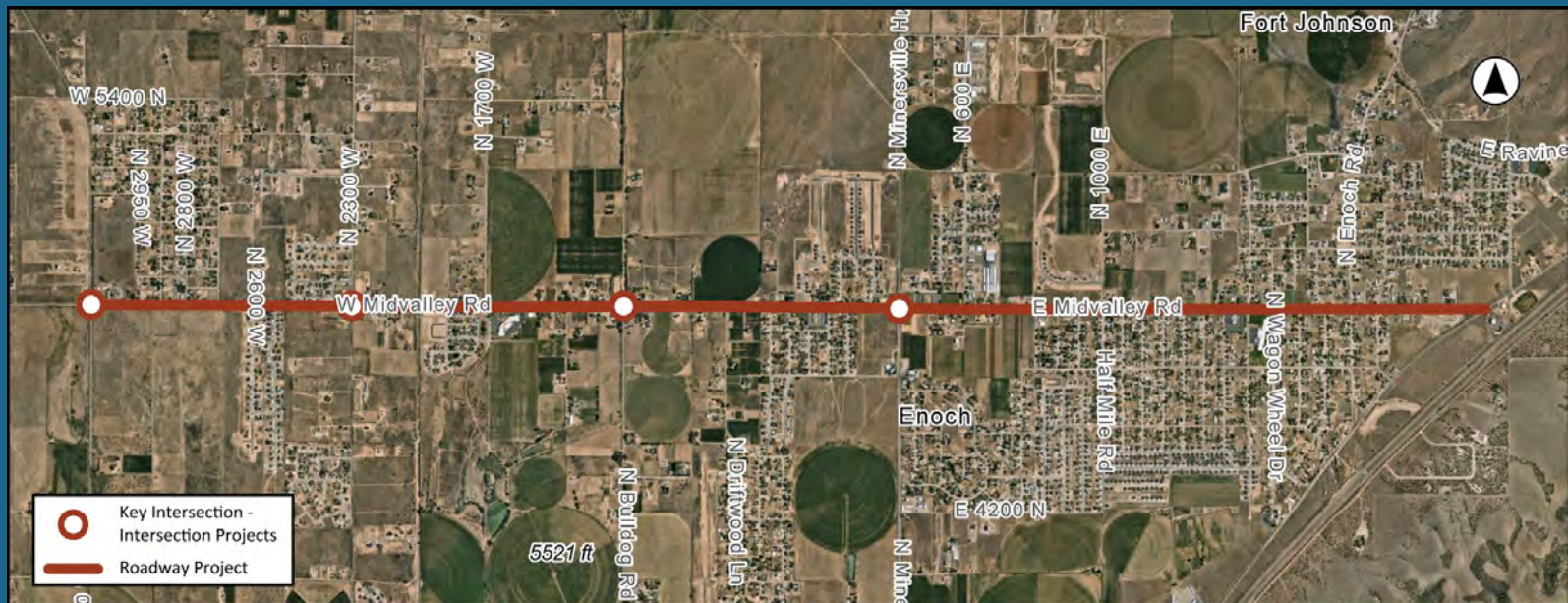
**Jurisdiction(s):** Enoch City, Unincorporated Iron County

**Underserved Community:** Yes

**PROJECT NUMBER:** 9

**Safety Action Plan GFA(s):** Enoch City GFA,  
West Iron County GFA

**GFA Emphasis Areas:** Safety Restraints,  
Intersections, Older Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	5.18
Speed Limit:	35 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	4,000
Median Type:	NA
Number of Key Intersections	4











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	No	✗
Network Screening:	No	✗
Conflict Areas:	Yes	✓
Risk Characteristics:	No	✗
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	2
Serious Injury Crashes:	3
Minor Injury Crashes:	5
Possible Injury Crashes	13
No Injury/PDO Crashes:	25
<b>Total Crashes:</b>	<b>48</b>
<b>Equivalent Property Damage Crashes:</b>	<b>2,258</b>

#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
23%	54%	19%	4%	4%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	4%	4%	31%















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 9

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
Lund Highway	7	1	7	1						
2300 West	4		2		1					
Bulldog Road	3		2	1		1				
SR 130	17	3	13	4	1	1		1		

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	0%
	 Distracted Driving	10%
	 Impaired Driving	6%
	 Use of Safety Restraints	6%
	 Speed Management	6%
	 Teen Driving Safety	29%
	 Senior Safety	15%
Crash Types	 Roadway Departure Crashes	19%
	 Intersection Safety	75%
Vulnerable Users	 Motorcycle Safety	0%
	 Pedestrian Safety	0%
	 Bicycle Safety	0%

### Other Applicable Locations/Scenarios:

Major collector, 35 mph speed limit, two-lane roadways may benefit from similar safety countermeasures. This location serves schools, commercial, and residential areas. Other locations may include:

- Lund Highway
- Airport Road
- Westview Drive
- Iron Springs Road
- 200 South (Parowan)
- South Mountain Drive
- Old Highway 91

### Comments, Feedback, Ongoing Projects:

- Traffic queuing at the Lund Highway intersection
- Consider a signal or all-way stop intersection at Lund Highway and Midvalley Road; warrant studies are recommended
- School improvements should be prioritized near Three Peaks and Enoch Elementary
- Drainage and utility conflicts for potential curb and gutter on both sides of the roadway
- Vehicle speeding concerns on the corridor
- Need pavement markings and striping refreshed



## EXISTING CONDITIONS

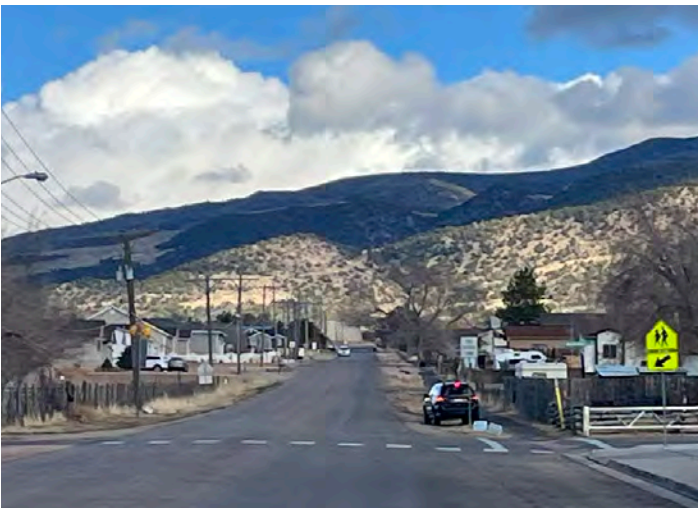
PROJECT NUMBER: 9

### Notes:

- Consider the potential of a two way left turn lane where there is right of way



*Eastbound Approach to 2700 West*



*Eastbound Approach to Wagon Wheel Crossing*



*Eastbound near Three Peaks Elementary School*



*Westbound Approach to Lund Highway Intersection*



*Westbound Cross Section and Unpaved Shoulder*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 9**

## Project Description

This project recommends safety countermeasures including driver feedback speed limit signs, enhanced visibility crosswalks with RRFB signage, and raised crosswalks aimed at mitigating speeds in the school area. A combination of bicycle lanes and paved 4-ft shoulders is recommended to provide pedestrian and bicycle facilities. The project includes filling sidewalk gaps connecting existing sidewalk and paved shoulder on undeveloped sections of Midvalley Road. Refreshed pavement markings, stop-controlled intersection improvements, and intersection lighting is recommended at key locations on the corridor.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Driver Feedback Speed Limit Signs	1810 East westbound, Deer Hollow Drive eastbound and westbound
Bicycle Lanes	Full corridor
Sidewalk	Completing gaps around developments
4 ft Paved Shoulder	Completing gaps where there is not development
Center and Edge Line Striping	Full corridor
Intersection Lighting	Lund Highway
Stop-Control Signage	2300 West, Bulldog Lane
High-Visibility Crosswalk	Wagon Wheel Drive School Crossing
Raised Crosswalk	Wagon Wheel Drive School Crossing

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs	3	EACH	\$11,000	\$33,000
Install Bicycle Lanes	5.14	MILE	\$44,000	\$226,160
Install 6 ft. Sidewalk (both sides of roadway)	1	MILE	\$761,000	\$761,000
Install 4-ft Paved Shoulder (both sides of roadway)	2.2	MILE	\$709,000	\$1,559,800
Install 4" Centerline and Edge Line Striping (Paint)	5.14	MILE	\$73,000	\$375,220
Install Intersection Lighting	1	INT	\$35,000	\$35,000
Stop-Control Intersection Signage	2	INT	\$4,000	\$8,000
Install High-Visibility Crosswalk (including RRFB)	1	XING	\$17,000	\$17,000
Install Raised Crosswalk and Signage	1	EACH	\$41,000	\$41,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

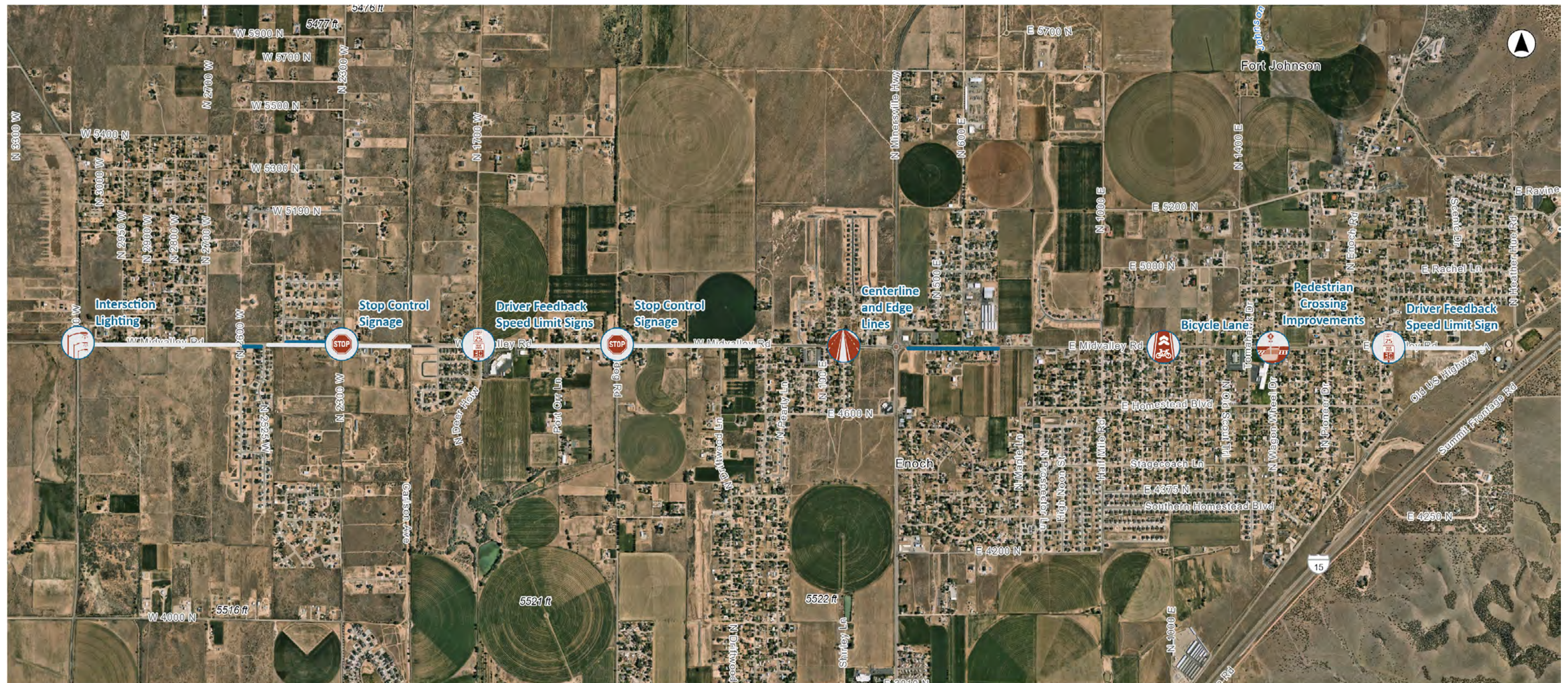
3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$3,056,180</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$4,200,843</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$5,546,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$1,109,200</b>



## LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 9**



Midvalley Road from Lund Highway to Old Highway 91



Center and Edge Lines,  
Entire Corridor



Bike Lane, Entire Corridor




### Dynamic Speed Limit Signs



Enhanced Stop  
Control Signage



## Intersection Lighting



High Visibility,  
Raised Crossing

4 foot Paved  
Shoulder



- Sidewalk



## LOCATION CHARACTERISTICS

PROJECT NUMBER: 10

**Location:** SR 130

**Project Extents:** 3000 North to Midvalley Road

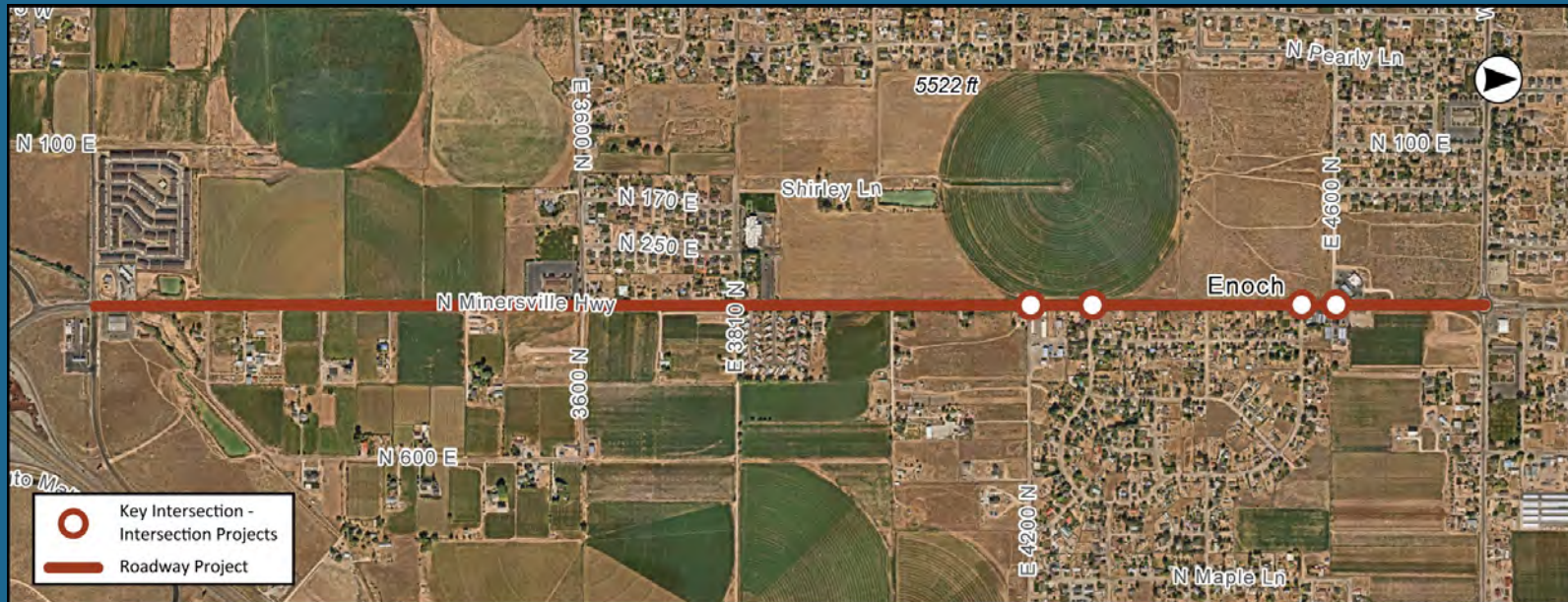
**Roadway Classification:** Other Principal Arterial, State Route

**Jurisdiction(s):** Enoch City, UDOT

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** Enoch City GFA

**GFA Emphasis Areas:** Safety Restraints, Intersections, Older Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	2.3
Speed Limit:	55 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	10,900
Median Type:	TWLT
Number of Key Intersections	4

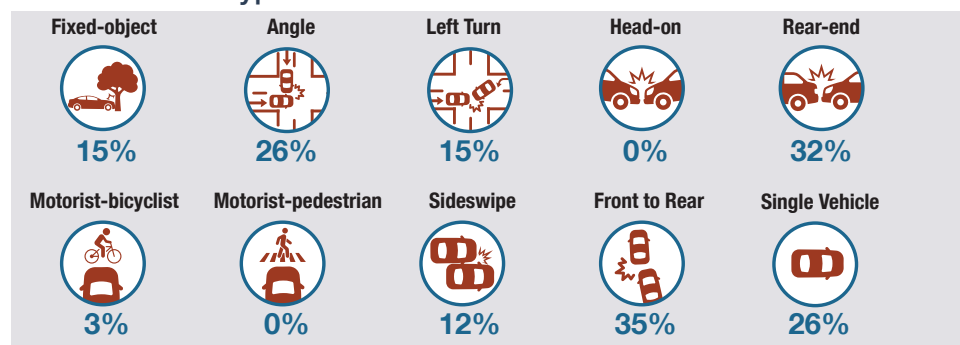
#### Why was this location identified?

High Crash Network:	Yes ✓
High Injury Network:	Yes ✓
Network Screening:	No ✗
Conflict Areas:	Yes ✓
Risk Characteristics:	Yes ✓
Community Feedback:	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	2
Minor Injury Crashes:	5
Possible Injury Crashes:	8
No Injury/PDO Crashes:	19
<b>Total Crashes:</b>	<b>34</b>
<b>Equivalent Property Damage Crashes:</b>	<b>381</b>

#### Location Crash Type

















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 10

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
4200 North	3		2	1			1			
Blue Sky Drive South	3		2	1						
Blue Sky Drive North	4				1		1	1		
4600 North	3	1			1			1		1

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	0%
	 Distracted Driving	12%
	 Impaired Driving	0%
	 Use of Safety Restraints	12%
	 Speed Management	6%
	 Teen Driving Safety	50%
	 Senior Safety	6%
Crash Types	 Roadway Departure Crashes	15%
	 Intersection Safety	56%
Vulnerable Users	 Motorcycle Safety	3%
	 Pedestrian Safety	0%
	 Bicycle Safety	3%

### Other Applicable Locations/Scenarios:

Principal arterial, two-lane with a center two-way left-turn lane, higher speed (55 mph) roadways may benefit from similar safety countermeasures. This location serves residential, commercial, and active transportation traffic and is a primary connecting route used for commuting between Cedar City and Enoch City. Other locations may include:

- Midvalley Road
- Lund Highway
- Iron Springs Road
- SR 56
- Cross Hollow Road
- Westview Drive

### Comments, Feedback, Ongoing Projects:

- Large residential developments are planned for the area and adjacent to SR 130.
- Trail feasibility study may determine a trail/path should be located on SR 130 or Old Highway 91.
- Vehicle speeding along the corridor.
- Increased pedestrian and bicycle activity along the corridor



## EXISTING CONDITIONS

PROJECT NUMBER: 10

Notes:



*Blue Sky North Drive Intersection with SR 130*



*Northbound Approaching 4200 North*



*Northbound Cross Section near Cottonwood Lane*



*Northbound near 3850 North*



*Southbound near Blue Sky South Drive*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 10**

## Project Description

This project recommends several safety countermeasures to improve visibility, address roadway departure type crashes, and increase driver awareness. Proposed improvements include installing intersection lighting, delineators and retroreflective pavement striping, and driver feedback speed limit signs. Additionally, intersection ahead signs are recommended to improve driver awareness and reduce the risk of angle-related crashes.

Note, the Enoch City Transportation Master Plan lists plans for SR 130 (to be completed between 2021-2030) as a widened roadway with a separated path. The current cross-section of the road is one lane in each direction and a two-way left-turn lane, with right-turn lanes at some intersecting roadways.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Post-Mounted Delineators	Entire corridor
Driver Feedback Speed Limit Signs	Northbound and Southbound approaches of 3800 North
Sidewalk	Entire corridor
Bicycle Lanes	Entire corridor
2 ft Paved Shoulder	Entire corridor
Stop-Control Signage	4200 South, Blue Sky Drive South, Blue Sky Drive North, 4600 North
Right-Turn Lanes	Southbound acceleration lane at Thoroughbred Way, northbound acceleration lane at Blue Sky Drive North
Intersection Lighting	4200 South, Blue Sky Drive South, Blue Sky Drive North, 4600 North

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Post-Mounted Delineators	2.3	MILE	\$4,000	\$9,200
Install Driver Feedback Speed Limit Signs	2	EACH	\$11,000	\$22,000
Install 6 ft. Sidewalk (both sides of roadway)	2.3	MILE	\$761,000	\$1,750,300
Install Bicycle Lanes	2.3	MILE	\$44,000	\$101,200
Install 4-ft Paved Shoulder (both sides of roadway)	2.3	MILE	\$709,000	\$1,630,700
Install 4" Retroreflective Centerline and Edge Lines	2.3	MILE	\$96,000	\$220,800
Stop-Control Intersection Signage	4	INT	\$4,000	\$16,000
Install Right-Turn Lanes	2	LANE	\$127,000	\$254,000
Install Intersection Lighting	4	INT	\$35,000	\$140,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

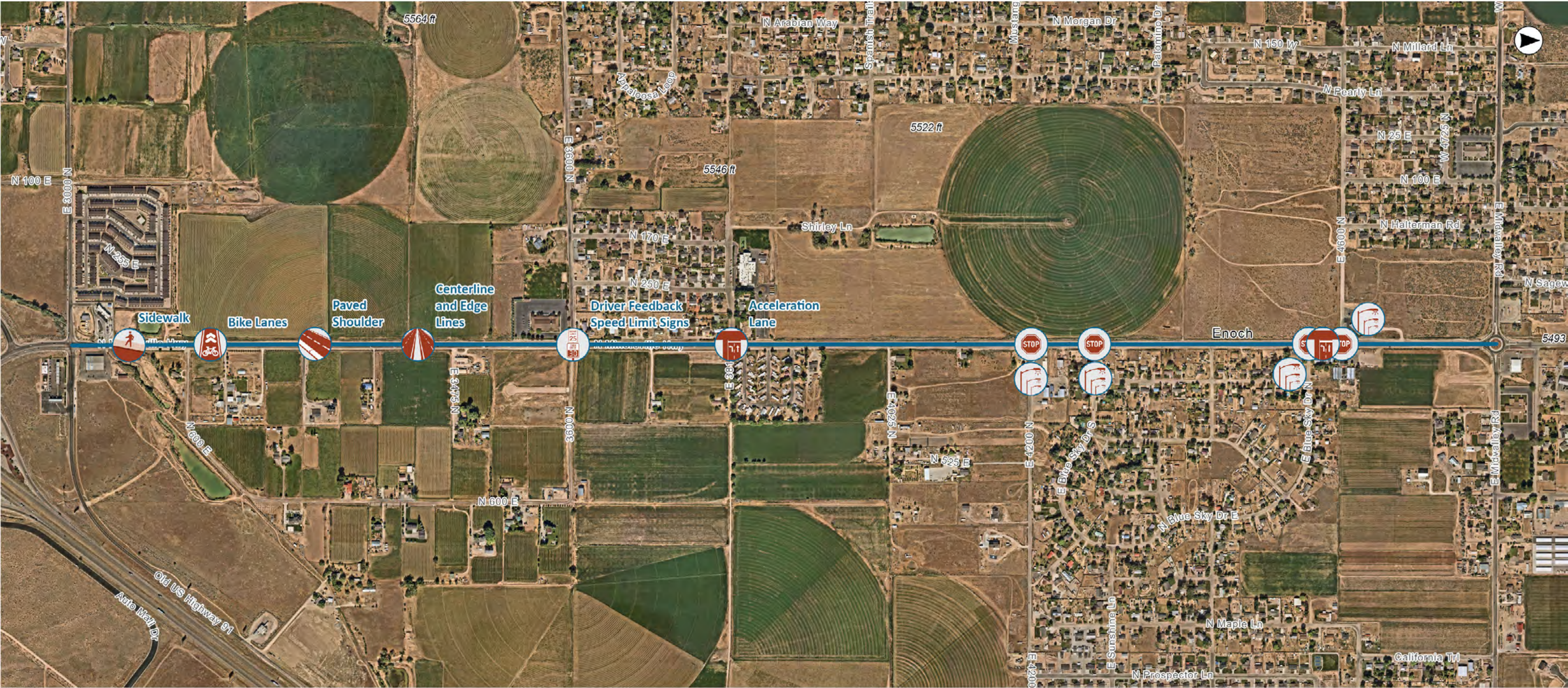
3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$4,144,200</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$5,669,670</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$7,006,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$1,401,200</b>



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 10



SR 130 from 3000 North to Midvalley Road

- Sidewalk, Entire Corridor
- Bike Lane, Entire Corridor
- 4 foot Paved Shoulder, Entire Corridor
- Retroreflective Center and Edge Lines, Entire Corridor
- Dynamic Speed Limit Sign
- Acceleration Lanes
- Intersection Ahead Signage
- Intersection Lighting
- Post-Mounted Delineators



## LOCATION CHARACTERISTICS

**Location:** SR 130

**Project Extents:** Midvalley Road to 6400 North

**Roadway Classification:** Minor Arterial, State Route

**Jurisdiction(s):** Enoch City, UDOT

**Underserved Community:** Yes

**PROJECT NUMBER: 11**

**Safety Action Plan GFA(s):** Enoch City GFA,  
East Iron County GFA

**GFA Emphasis Areas:** Safety Restraints,  
Intersections, Older Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	2.15
Speed Limit:	55 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	2,800
Median Type:	NA
Number of Key Intersections	1

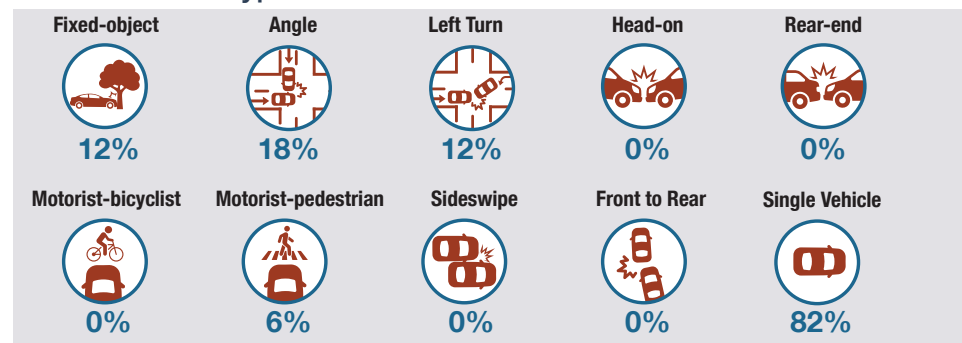
#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	No	✗
Network Screening:	Yes	✓
Conflict Areas:	Yes	✓
Risk Characteristics:	Yes	✓
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	1
Possible Injury Crashes	4
No Injury/PDO Crashes:	12
<b>Total Crashes:</b>	<b>17</b>
<b>Equivalent Property Damage Crashes:</b>	<b>72</b>

#### Location Crash Type

















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 11

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
6400 North	5							1		

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	0%
	 Distracted Driving	12%
	 Impaired Driving	0%
	 Use of Safety Restraints	18%
	 Speed Management	6%
	 Teen Driving Safety	0%
	 Senior Safety	12%
Crash Types	 Roadway Departure Crashes	29%
	 Intersection Safety	12%
Vulnerable Users	 Motorcycle Safety	0%
	 Pedestrian Safety	6%
	 Bicycle Safety	0%

### Other Applicable Locations/Scenarios:

Minor arterial, higher speed (55 mph), two lane roadways may benefit from similar safety countermeasures. This location includes horizontal curves with narrow shoulders and a number of minor road connections. Similar locations include:

- Westview Drive
- Lund Highway
- Old Highway 91
- Iron Springs Road
- SR 56
- South Mountain Drive
- Cross Hollow Road
- 5700 West

### Comments, Feedback, Ongoing Projects:

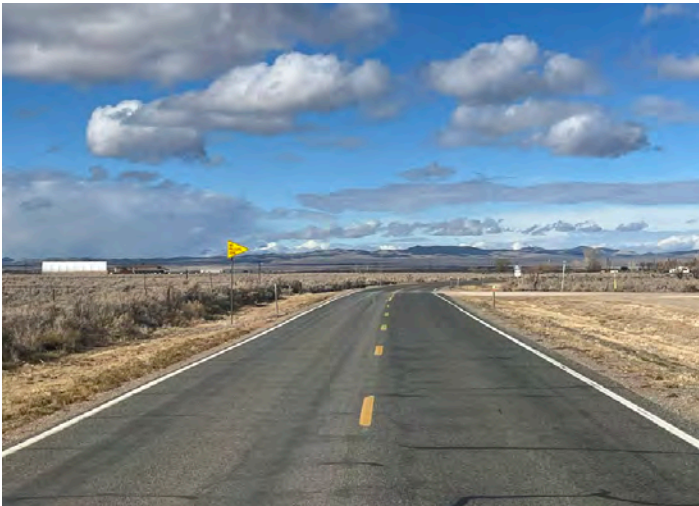
- Recommendations to align with the Enoch City Active Transportation Plan
- Some improvements identified may be led by Planned development in the area
- Consider sinusoidal rumble strips for areas near residential or Planned residential.
- Sight distance at intersections is difficult.



# EXISTING CONDITIONS

PROJECT NUMBER: 11

Notes:



*Northbound approaching 5600 North and curves*



*Northbound Curves*



*Northbound Typical Roadway Cross Section*



*Southbound Approaching Curve Between 6400 North and 5600 North*



*Southbound near 5600 North*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 11

## Project Description

This project recommends several safety countermeasures to enhance roadway visibility, alert drivers to roadway departures, and improve intersection operations. Proposed enhancements include installing a 4-foot paved shoulder with edge line rumble strips, to alert drivers of roadway departures and provide additional space for recovery and bicycles. Turn lanes at 5600 North and 6400 North are recommended to address public concerns and separate speed differentials of vehicles. Intersection lighting is recommended to improve nighttime visibility and reduce the frequency of crashes occurring in dark, unlit conditions. Additionally, a driver speed feedback sign southbound before entering the curve, along with installing curve signage on each approach alerting drivers of their speed and upcoming roadway configuration is recommended.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
2 ft Paved Shoulder	Full corridor
Edge Line Rumble Strips	Full corridor
Curve Signage	Curves along corridor
Driver Feedback Speed Limit Signs	Southbound approaching first horizontal curve
Right-Turn Lanes	5600 North and 6400 North
Left-Turn Lanes	Southbound at 5600 North
Intersection Lighting	6400 North

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install 4-ft Paved Shoulder (both sides of roadway)	2.15	MILE	\$709,000	\$1,524,350
Install Edge Line Rumble Strips	2.15	MILE	\$5,000	\$10,750
Install and/or Upgrade Curve Signage to Enhanced Delineations	2	CURVE	\$3,000	\$6,000
Install Driver Feedback Speed Limit Signs	1	EACH	\$11,000	\$11,000
Install Right-Turn Lanes	2	LANE	\$127,000	\$254,000
Install Left-Turn Lanes	1	LANE	\$153,000	\$153,000
Install Intersection Lighting	1	INT	\$35,000	\$35,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

Improvement Subtotal	\$1,994,100
Estimated Construction Cost Total <sup>1</sup>	\$2,767,035
Estimated Project Total <sup>2</sup>	\$3,374,000
Local Match <sup>3</sup>	\$674,800



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 11



SR 130 from Midvalley Road to 6400 North

- 2 foot Paved Shoulder, Entire Corridor
- Edge Line Rumble Strips, Entire Corridor
- Turn Lanes
- Enhanced Curve Signage
- Dynamic Speed Limit Sign
- Intersection Lighting



## LOCATION CHARACTERISTICS

PROJECT NUMBER: 12

**Location:** 4200 North

**Project Extents:** SR 130 to Half Mile Road

**Roadway Classification:** Local, Local Route

**Jurisdiction(s):** Enoch City

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** Enoch City GFA

**GFA Emphasis Areas:** Safety Restraints, Intersections, Older Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	0.75
Speed Limit:	25 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	400
Median Type:	NA
Number of Key Intersections	0











#### Why was this location identified?

High Crash Network:	No	✗
High Injury Network:	No	✗
Network Screening:	No	✗
Conflict Areas:	No	✗
Risk Characteristics:	No	✗
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	0
Possible Injury Crashes	1
No Injury/PDO Crashes:	1
<b>Total Crashes:</b>	<b>2</b>
<b>Equivalent Property Damage Crashes:</b>	<b>11</b>













#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
100%	0%	0%	0%	0%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	0%	0%	100%



## LOCATION INFORMATION

PROJECT NUMBER: 12

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
50% Impaired Driving 	0% Distracted Driving 	0% Teen Driving Safety 	0% Aggressive Driving 	100% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
50% Speed Management 	0% Use of Safety Restraints 	0% Senior Safety 		50% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

4200 North is a local roadway, 25 mph that serves primarily residential areas but connects to a major arterial. This location is representative of many locations throughout the County and cities/towns within. Other local, residential neighborhood type roadways with future planned residential growth immediately surrounding may benefit from similar safety countermeasures.

### Comments, Feedback, Ongoing Projects:

- Need for a consistent Cross section for the Roadway
- New developments Planned to the south
- Noted by the community as an area of Concern in regards to speeding and anticipated future traffic volumes



## EXISTING CONDITIONS

PROJECT NUMBER: 12

### Notes:

- Existing northbound turn lane with SR 130, consider westbound right turn lane from 4200 North



*Eastbound near Gold Dust Trail*



*Eastbound near Prospector Lane*



*Northbound Right Turn Lane onto 4200 North*



*Westbound Approaching SR 130*



*Westbound near High Noon Street*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 12

## Project Description

This project recommends installing 4" reflective centerline and edge lines to improve lane visibility and installing driver speed feedback signs for driver awareness of vehicle speeding. Infilling sidewalk gaps on the north side of the roadway is also recommended. This segment was identified in community outreach as a typical local roadway with high vehicle speeding activity and growth potential with future developments nearby.

Note, the Enoch City Transportation Master Plan lists future plans for 4200 North as a new roadway with a side path. The current cross-section of the road is 28 feet of pavement for travel lanes and a separated 6 foot sidewalk on the north side of the roadway.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Retroreflective Center and Edge Lines	Full corridor
Sidewalk	525 East to High Noon Street
Driver Feedback Speed Limit Signs	High Noon Street and Triple Deuce Circle

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install 4" Retroreflective Centerline and Edge Lines	0.77	MILE	\$96,000	\$73,920
Install 6 ft. Sidewalk (both sides of roadway)	0.185	MILE	\$761,000	\$140,785
Install Driver Feedback Speed Limit Signs	2	EACH	\$11,000	\$22,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

Improvement Subtotal	\$236,705
Estimated Construction Cost Total <sup>1</sup>	\$343,232
Estimated Project Total <sup>2</sup>	\$454,000
Local Match <sup>3</sup>	\$90,800





# LOCATION RECOMMENDATIONS



PROJECT NUMBER: 12



4200 North from SR 130 to Half Mile Road

 Retroreflective Center and Edge lines, Entire Corridor

 Dynamic Speed Limit Signs

 Sidewalk 



## LOCATION CHARACTERISTICS

PROJECT NUMBER: 13

**Location:** 3600 North

**Project Extents:** Bulldog Road to SR 130

**Roadway Classification:** Minor Collector, Federal Aid Route

**Jurisdiction(s):** Enoch City

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** Enoch City GFA

**GFA Emphasis Areas:** Safety Restraints, Intersections, Older Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	1.02
Speed Limit:	30 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	3,100
Median Type:	NA
Number of Key Intersections	0











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	No	✗
Network Screening:	No	✗
Conflict Areas:	Yes	✓
Risk Characteristics:	No	✗
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	1
Possible Injury Crashes:	1
No Injury/PDO Crashes:	2
<b>Total Crashes:</b>	<b>4</b>
<b>Equivalent Property Damage Crashes:</b>	<b>32</b>

#### Location Crash Type













Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
0%	25%	0%	0%	50%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
25%	0%	0%	50%	25%



## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 13

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	25% Distracted Driving 	50% Teen Driving Safety 	0% Aggressive Driving 	0% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
0% Speed Management 	0% Use of Safety Restraints 	0% Senior Safety 		75% Intersection Safety 	25% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

3600 North is a minor collector, 30 mph roadway that serves primarily residential areas but also churches and schools and connects to a major arterial. This location is representative of many locations throughout the County and cities/towns within. Other minor collector roadways that connect residential and other uses, with future planned growth immediately surrounding may benefit from similar safety countermeasures.

### Comments, Feedback, Ongoing Projects:

- Adjacent areas are Planned for residential growth
- School buses travel this route to and from the School
- Serves School transport for kids walking, biking, and vehicles dropping-off/picking-up.



# EXISTING CONDITIONS

PROJECT NUMBER: 13

Notes:



*Eastbound Approaching SR 130*



*Eastbound near Driftwood Lane*



*South Side of Roadway Approaching 250 East*



*Westbound Between SR 130 and 250 East*



*Westbound near Driftwood Lane*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 13**

## Project Description

This project recommends installing driver feedback speed limit signs to encourage safer speeds and retroreflective centerline and edge lines to improve nighttime visibility and lane guidance. These enhancements aim to address safety concerns by increasing driver awareness and reducing vehicle speeds. A 4-ft paved shoulder and bike lanes is recommended to improve bicyclist safety. This segment was identified in community outreach as a typical collector roadway with high vehicle speeding activity and growth potential from nearby developments.

Note, the Enoch City Transportation Master Plan lists future plans for 3600 North as a widened roadway with a bicycle lane. The current cross-section of the road is 28 feet of pavement for travel lanes and separated 6 foot sidewalk on the north side of the roadway.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Driver Feedback Speed Limit Signs	Cottonwood Drive and 250 East
Retroreflective Center and Edge Lines	Full corridor
4 ft Paved Shoulder	Full corridor
Bicycle Lanes	Full corridor

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs	2	EACH	\$11,000	\$22,000
Install 4" Retroreflective Centerline and Edge Lines	1.02	MILE	\$96,000	\$97,920
Install 4-ft Paved Shoulder (both sides of roadway)	1.02	MILE	\$709,000	\$723,180
Install Bicycle Lanes	1.02	MILE	\$44,000	\$44,880

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$887,980</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$1,273,773</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$1,732,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$346,400</b>



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 13



3600 North from Bulldog Road to SR 130

-  Dynamic Speed Limit Signs
-  4 foot Paved Shoulder, Entire Corridor
-  Retroreflective Center and Edge Lines, Entire Corridor
-  Bike Lane, Entire Corridor



## LOCATION CHARACTERISTICS

**Location:** Old Highway 91

**Project Extents:** SR 130 to Midvalley Road

**Roadway Classification:** Major Collector, Federal Aid Route

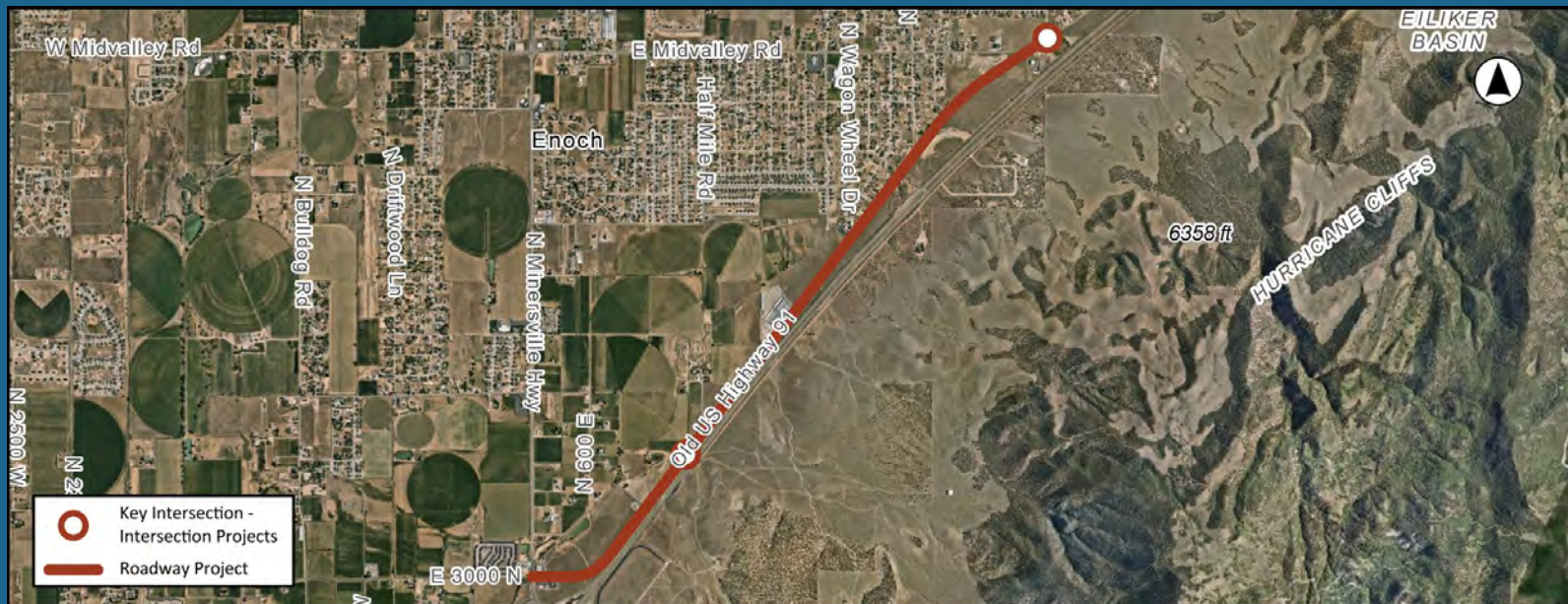
**Jurisdiction(s):** Enoch City

**Underserved Community:** Yes

**PROJECT NUMBER:** 14

**Safety Action Plan GFA(s):** Enoch City GFA

**GFA Emphasis Areas:** Safety Restraints, Intersections, Older Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

<b>Length:</b>	3.37
<b>Speed Limit:</b>	45-55 mph
<b>Roadway Lanes:</b>	2
<b>Daily Traffic Volume (AADT):</b>	6,100
<b>Median Type:</b>	NA
<b>Number of Key Intersections</b>	2

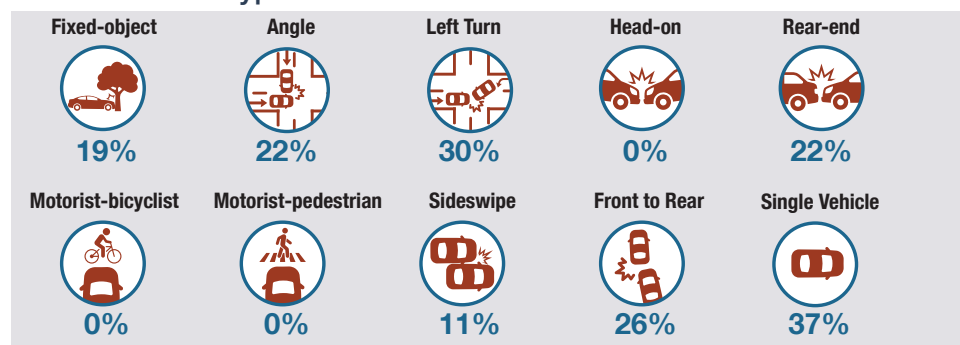
#### Why was this location identified?

<b>High Crash Network:</b>	Yes ✓
<b>High Injury Network:</b>	Yes ✓
<b>Network Screening:</b>	No ✗
<b>Conflict Areas:</b>	No ✗
<b>Risk Characteristics:</b>	No ✗
<b>Community Feedback:</b>	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
<b>Fatal Crashes:</b>	0
<b>Serious Injury Crashes:</b>	1
<b>Minor Injury Crashes:</b>	1
<b>Possible Injury Crashes</b>	3
<b>No Injury/PDO Crashes:</b>	22
<b>Total Crashes:</b>	27
<b>Equivalent Property Damage Crashes:</b>	163

#### Location Crash Type

















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 14

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
Summit Frontage Road	5		2	1	1					
Heather Hue Road	3		2		1					

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	4%
	 Distracted Driving	4%
	 Impaired Driving	0%
	 Use of Safety Restraints	4%
	 Speed Management	11%
	 Teen Driving Safety	48%
	 Senior Safety	11%
Crash Types	 Roadway Departure Crashes	19%
	 Intersection Safety	30%
Vulnerable Users	 Motorcycle Safety	4%
	 Pedestrian Safety	0%
	 Bicycle Safety	0%

### Other Applicable Locations/Scenarios:

Major collector, higher speed (45-55 mph), two-lane roadways may benefit from similar safety countermeasures. This location has higher traffic volumes (compared to other areas within the County) due to being a major connection between Cedar City and Enoch City, and sees more bicyclists than typical. Other locations may include:

- Lund Highway
- SR 271 between Paragonah and Parowan
- Airport Road
- Westview Drive
- Iron Springs Road
- Midvalley Road
- 200 South (Parowan)
- Old Highway 91 (Summit, Kanarraville)
- South Mountain Drive
- Bench Road

### Comments, Feedback, Ongoing Projects:

- There is a current trail (shared-use path) feasibility study for Enoch to Cedar City via a portion of Old Highway 91. The study will help identify the route for a trail connecting to Cedar City.
- A planned mill and fill pavement reconstruction for Old Highway 91 is planned for the near term (before 2027), helping to address pavement condition and striping concerns heard in the Safety Action Plan outreach.
- No current crossing at the Enoch City recreational Complex
- Expected growth due to the ice rink, veterans museum, and housing developments in the area
- High bicycle activity along the roadway
- Vehicle speeding issues



## EXISTING CONDITIONS

PROJECT NUMBER: 14

### Notes:

- Several skewed intersections with side streets
- Right of way potentially need to widen the Roadway or provide bicycle lanes



*Google Street View image of Northbound Approach to Heather Hue Road and Enoch Rec Complex*



*Google Street View image of Southbound Approach to Midvalley Road*



*Southbound at Enoch Road*



*Google Street View image of Typical Cross Section Southbound*



*Typical Cross Section*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 14

## Project Description

Safety countermeasures are aimed to help address vehicle and bicycle safety by separating movements for users. Proposed improvements include a shared-use path along Old Highway 91, shoulder widening, and striping for a bicycle lane. Intersection turn lanes are proposed to separate slowing vehicles from through traffic vehicles. Skewed approaches to Old Highway 91 are recommend to be realigned. A high-visibility crossing with RRFBs is proposed between the existing trail and the Enoch Rec Complex near Heather Hue Road.

Note, there is a current trail feasibility study for Enoch to Cedar City via a portion of Old Highway 91. The study will help identify the route for a trail connecting to Cedar City. Additionally, it is assumed a mill and fill pavement reconstruction will occur on Old Highway 91 in the near term (before 2027) helping to address pavement condition and striping concerns heard in the Safety Action Plan outreach.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
12 ft Shared-use Path	Full corridor
4 ft Paved Shoulders	Full corridor
Bicycle Lanes	Full corridor
Realigned Intersection	Wagon Wheel Drive, Heather Hue Road, Southern Homestead Boulevard
Left-Turn Lanes	Midvalley Road and 1810 East
Right-Turn Lanes	Midvalley Road, 1810 East, Enoch Road, Southern Homestead Boulevard, and Wagon Wheel Drive
High-Visibility Crosswalk	Near Heather Hue Road to the Enoch Rec Complex

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install a Separated 12 ft. Shared-use Path	3.37	MILE	\$627,000	\$2,112,990
Install 4-ft Paved Shoulder (both sides of roadway)	3.37	MILE	\$709,000	\$2,389,330
Install Bicycle Lanes	3.37	MILE	\$44,000	\$148,280
Realign Intersection Approach to Reduce or Eliminate Skew	2	LEG	\$329,000	\$658,000
Install Left-Turn Lanes	2	LANE	\$153,000	\$306,000
Install Right-Turn Lanes	5	LANE	\$127,000	\$635,000
Install High-Visibility Crosswalk (including RRFB)	1	XING	\$17,000	\$17,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

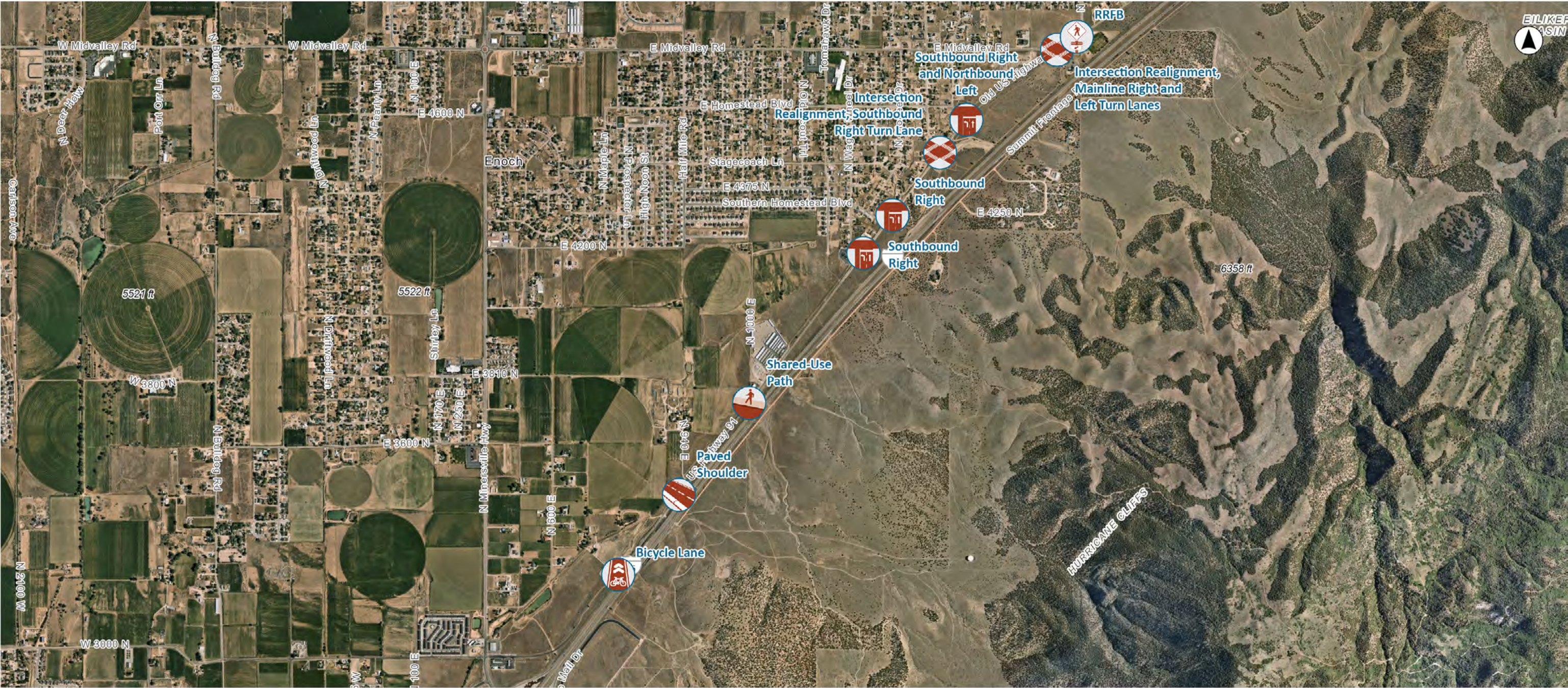
3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

Improvement Subtotal	\$6,266,600
Estimated Construction Cost Total <sup>1</sup>	\$8,534,910
Estimated Project Total <sup>2</sup>	\$11,467,000
Local Match <sup>3</sup>	\$2,293,400



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 14



Old Highway 91 from SR 130 to Midvalley Road

- 

Bike Lane,  
Entire Corridor
- 

4 foot Paved Shoulder,  
Entire Corridor
- 

12 foot Shared-Use Path  
Entire Corridor
- 

Turn Lanes
- 

Intersection Realignment and  
Turn Lanes
- 

Rectangular Rapid Flashing Beacon (RRFB)





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## **APPENDIX E.3. EAST IRON COUNTY GFA PROJECT INFORMATION SHEETS**



## LOCATION CHARACTERISTICS

PROJECT NUMBER: 15

**Location:** Comstock Road and Pinto Road

**Project Extents:** Comstock Road & SR 56 and Pinto Road & SR 56

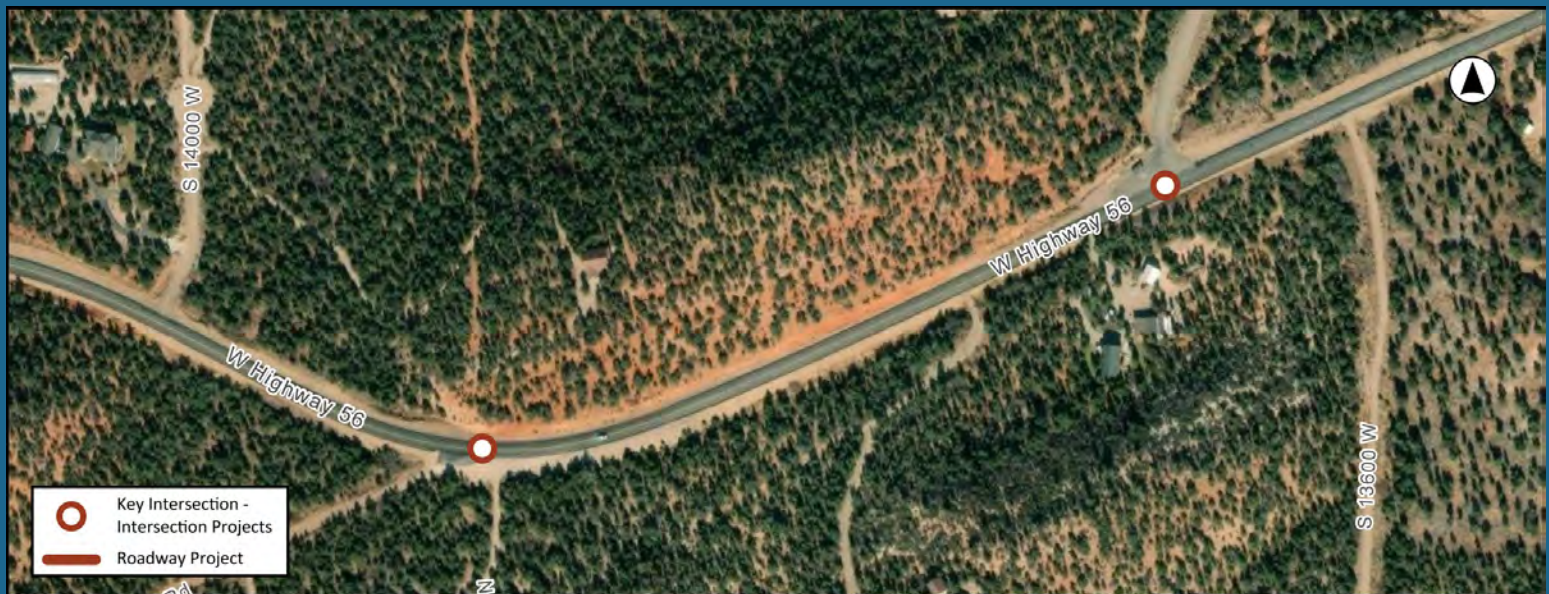
**Intersection Control:** Two-way Stop Controlled

**Jurisdiction(s):** Unincorporated Iron County, UDOT

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** East Iron County GFA, West Iron County GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Motorcycles



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Intersection Characteristics

<b>Intersection Control Type:</b>	Two-way Stop Controlled
<b>Speed Limits (major, minor):</b>	65 mph, 35 mph
<b>Approaches:</b>	3
<b>Daily Entering Volume:</b>	3,500
<b>Turn Lanes (Y/N):</b>	No
<b>Lighting:</b>	No











#### Why was this location identified?

<b>High Crash Network:</b>	No	✗
<b>High Injury Network:</b>	No	✗
<b>Network Screening:</b>	No	✗
<b>Conflict Areas:</b>	Yes	✓
<b>Risk Characteristics:</b>	Yes	✓
<b>Community Feedback:</b>	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
<b>Fatal Crashes:</b>	0
<b>Serious Injury Crashes:</b>	1
<b>Minor Injury Crashes:</b>	0
<b>Possible Injury Crashes</b>	0
<b>No Injury/PDO Crashes:</b>	3
<b>Total Crashes:</b>	4
<b>Equivalent Property Damage Crashes:</b>	95













#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
25%	0%	0%	0%	0%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	0%	0%	100%



## LOCATION INFORMATION

PROJECT NUMBER: 15

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	0% Distracted Driving 	0% Teen Driving Safety 	0% Aggressive Driving 	25% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
25% Speed Management 	0% Use of Safety Restraints 	25% Senior Safety 		50% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Other skewed intersections with a high-speed, rural, two-lane highway or along a curve may benefit from similar safety countermeasures. Locations include intersections with the following roadways:

- SR 56 (Bumblebee Drive, 9300 West, 8900 West, 7700 West, etc.)
- Iron Springs Road
- Lund Highway
- Old Highway 91
- SR 130 North of Enoch City
- SR 18

### Comments, Feedback, Ongoing Projects:

- Shift changes at the mines cause congestion
- Limited sight distance and difficulty turning onto SR 56
- Blind turn into Pinto from SR 56



## EXISTING CONDITIONS

PROJECT NUMBER: 15

### Notes:

- Consider deceleration and acceleration lanes to separate vehicles making turning /merging movements from the main travel lanes



*Comstock Road intersection with SR 56*



*Eastbound Approach to Comstock Road Intersection*



*Looking East from the Pinto Road Intersection*



*Looking west on SR 56 from the Pinto Road intersection*



*Westbound at Comstock Road Intersection*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 15

## Project Description

Safety countermeasures are recommended at the intersections of Pinto Road and Comstock Road with SR 56. Pinto Road approaches SR 56 at a skew - removing obstacles and clearing and grubbing the area will help improve sight distance. A proposed westbound right-turn lane at Comstock Road and eastbound right-turn lane at Pinto will separate speed differentials of vehicles turning from the higher speed through movement lanes. An eastbound acceleration lane from Comstock to SR 56 will also help vehicles accepting less than ideal gaps in traffic and give them space to accelerate. Improvements to the curves include installing transverse rumble strips and pavement marking and upgrading or refreshing the chevron signs with retroreflectivity or speed activated flashers to catch motorists' attention. Intersection lighting at Comstock Road is recommended to illuminate the mail boxes and trash pick up area at this intersection. These improvements aim to address the high number of run-off the road crashes and risk characteristics of high speed roadways and curves.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Transverse Rumble Strips	Comstock Road and Pinto Road
Curve Signage	Comstock Road and Pinto Road
In-Lane Curve Warnings	Comstock Road and Pinto Road
Speed Activated Flashers on Chevrons	Between Comstock Road and Pinto Road
Right-Turn Lanes	Westbound into Comstock Road, eastbound into Pinto Road
Clear and Grub	Comstock Road and Pinto Road
Intersection Lighting	Comstock Road
Acceleration Lane	Eastbound from Pinto Road

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Transverse Rumble Strips Prior to Curve	2	CURVE	\$1,000	\$2,000
Install and/or Upgrade Curve Signage to Enhanced Delineations	2	CURVE	\$3,000	\$6,000
Install In-Lane Curve Warning Pavement Markings	2	CURVE	\$3,000	\$6,000
Install Speed Activated Flashers on Chevron Signs	6	EACH	\$6,000	\$36,000
Install Right-Turn Lanes	2	LANE	\$127,000	\$254,000
Clear and Grub	2	LEG	\$1,000	\$2,000
Install Intersection Lighting	1	INT	\$35,000	\$35,000
Acceleration Lane	1	LANE	\$153,000	\$153,000

1: Includes mobilization (10%), traffic control (5%), items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design

3: 20% of estimated project total toward Safe Streets for All implementation grants

Improvement Subtotal	\$494,000
Estimated Construction Cost Total <sup>1</sup>	\$716,300
Estimated Project Total <sup>2</sup>	\$985,000
Local Match <sup>3</sup>	\$197,000



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 15



Comstock Road and Pinto Road

- 

Turn Lanes
- 

Transverse Rumble Strips
- 

Acceleration Lane
- 

Intersection Lighting
- 

Clear and Grub
- 

Enhance Curve Delineation, Speed Activated Chevrons, In-Lane Curve Warnings



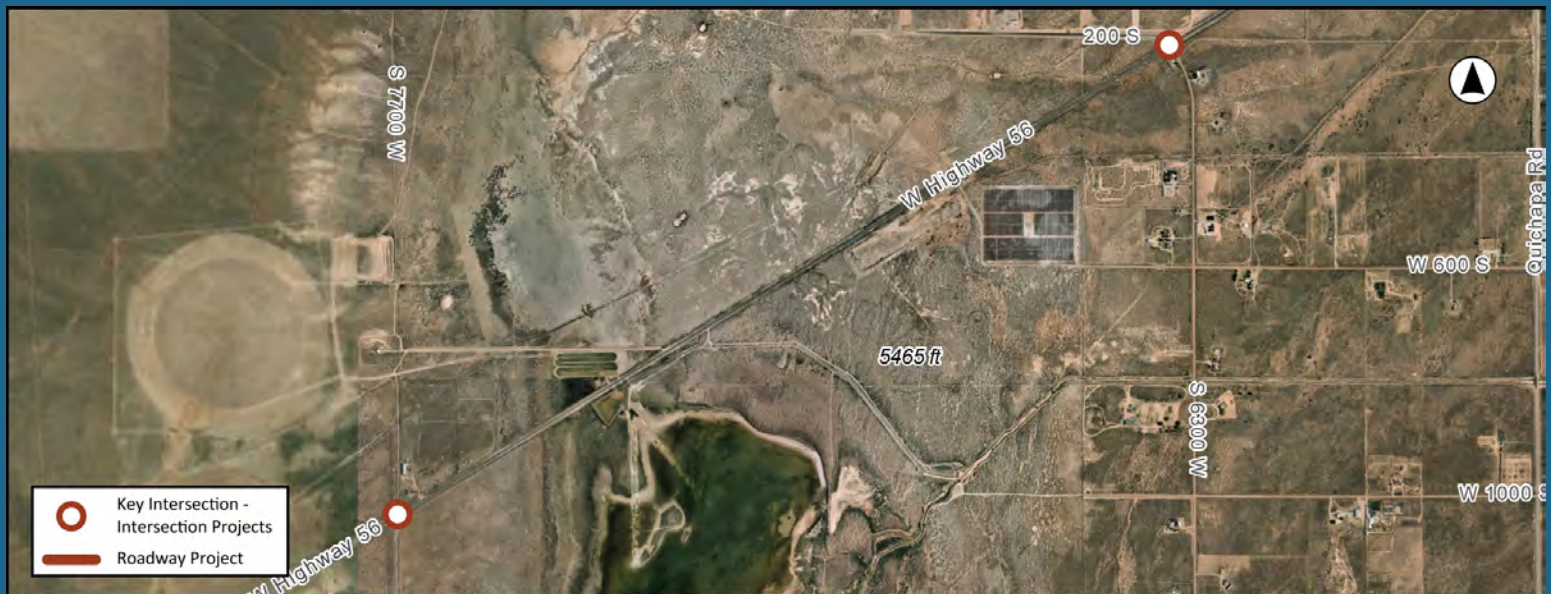
## LOCATION CHARACTERISTICS

PROJECT NUMBER: 16

**Location:** SR 56 Rural, Local Skewed Intersections  
**Project Extents:** 7700 West, 6300 West  
**Intersection Control:** Two-way Stop Controlled  
**Jurisdiction(s):** Unincorporated Iron County, UDOT  
**Underserved Community:** No

**Safety Action Plan GFA(s):** East Iron County  
 GFA

**GFA Emphasis Areas:** Roadway Departures,  
 Speed-Related, Motorcycles



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Intersection Characteristics

<b>Intersection Control Type:</b>	Two-way Stop Controlled
<b>Speed Limits (major, minor):</b>	65 mph, 25 mph
<b>Approaches:</b>	3
<b>Daily Entering Volume:</b>	3,800
<b>Turn Lanes (Y/N):</b>	No
<b>Lighting:</b>	No











#### Why was this location identified?

<b>High Crash Network:</b>	No	✗
<b>High Injury Network:</b>	Yes	✓
<b>Network Screening:</b>	Yes	✓
<b>Conflict Areas:</b>	Yes	✓
<b>Risk Characteristics:</b>	Yes	✓
<b>Community Feedback:</b>	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
<b>Fatal Crashes:</b>	0
<b>Serious Injury Crashes:</b>	2
<b>Minor Injury Crashes:</b>	2
<b>Possible Injury Crashes</b>	0
<b>No Injury/PDO Crashes:</b>	4
<b>Total Crashes:</b>	8
<b>Equivalent Property Damage Crashes:</b>	227













#### Location Crash Type

<b>Fixed-object</b>  <b>13%</b>	<b>Angle</b>  <b>0%</b>	<b>Left Turn</b>  <b>50%</b>	<b>Head-on</b>  <b>0%</b>	<b>Rear-end</b>  <b>25%</b>
<b>Motorist-bicyclist</b>  <b>0%</b>	<b>Motorist-pedestrian</b>  <b>0%</b>	<b>Sideswipe</b>  <b>13%</b>	<b>Front to Rear</b>  <b>63%</b>	<b>Single Vehicle</b>  <b>25%</b>



## LOCATION INFORMATION

PROJECT NUMBER: 16

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	25% Distracted Driving 	50% Teen Driving Safety 	0% Aggressive Driving 	38% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
25% Speed Management 	13% Use of Safety Restraints 	0% Senior Safety 		63% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Minor road approaches to a two-lane, high speed (55-65 mph) rural type arterial may benefit from similar safety countermeasures. This intersection is common throughout the County in rural areas. This location mimics improvements in place at the SR 56 and 5700 West intersection. Other applicable locations include:

- Multiple intersections with SR 56 (Bumblebee Road, Comstock Road, Main Street in Newcastle, etc.)
- Intersections with SR 130 north of Enoch City (6400 North, etc.)
- Intersections to Lund Highway, Iron Springs Road, SR 143, SR 18, SR 14, Old Highway 91, etc.

### Comments, Feedback, Ongoing Projects:

- Turning onto or off of SR 56 feels scary due to vehicles traveling at high speeds
- Intersections can “sneak up on” drivers if they are not attentive



# EXISTING CONDITIONS

PROJECT NUMBER: 16

Notes:



*6300 West Approach to SR 56*



*7700 West, Aerial View*



*Northbound 7700 West Approach to SR 56*



*Turning from 6300 West to SR 56 Eastbound*



*Westbound SR 56 Approaching 6300 West*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 16

## Project Description

At skewed intersections with SR 56 safety countermeasure can include right- and left- turn lanes to separate traffic movements and address turning and rear-end crash types. Intersection lighting is also recommended to improve nighttime visibility and address crashes occurring in dark, unlit conditions. The intersection of 7700 West may also be realigned to eliminate the skew with SR 56. Intersection ahead signage is proposed at each intersection.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Left-Turn Lanes	Westbound at 6300 West, westbound at 7700 West
Intersection Lighting	6300 West
Right-Turn Lanes	Westbound at 6300 West, eastbound at 7700 West
Realigned Intersection	7700 West

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Left-Turn Lanes	2	LANE	\$153,000	\$306,000
Install Intersection Lighting	1	INT	\$35,000	\$35,000
Install Right-Turn Lanes	2	LANE	\$127,000	\$254,000
Realign Intersection Approach to Reduce or Eliminate Skew	1	LEG	\$329,000	\$329,000
Upgrade Signs and Pavement Markings (Paved Approach)	4	LEG	\$3,000	\$12,000

1: Includes mobilization (10%), traffic control (5%), items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design

3: 20% of estimated project total toward Safe Streets for All implementation grants

Improvement Subtotal	\$936,000
Estimated Construction Cost Total <sup>1</sup>	\$1,338,600
Estimated Project Total <sup>2</sup>	\$1,760,000
Local Match <sup>3</sup>	\$352,000



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 16



SR 56 Rural, Local Skewed Intersections: 7700 West, 6300 West

- Intersection Realignment
- Intersection Lighting
- Stop-Controlled Intersection Sign Improvements
- Turn Lanes



## LOCATION CHARACTERISTICS

**Location:** SR 56

**Project Extents:** Iron Springs Road to Comstock Road

**Roadway Classification:** Minor Collector, State Route

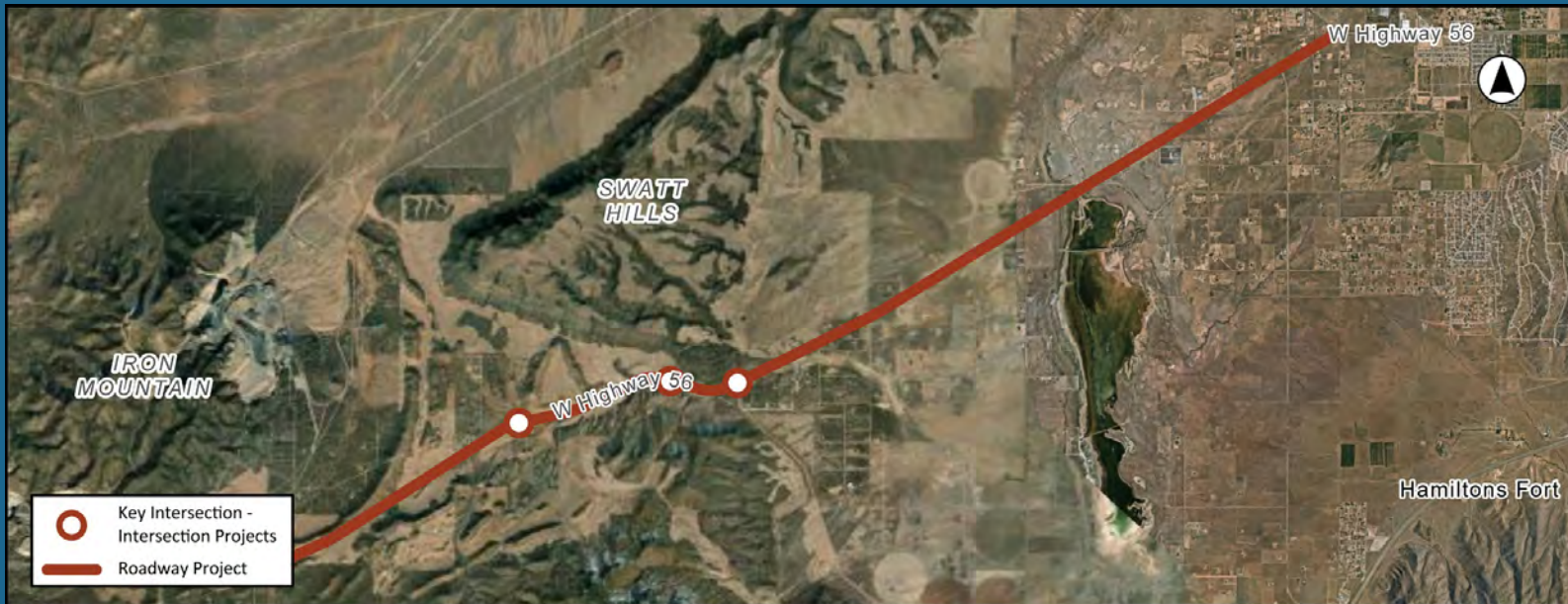
**Jurisdiction(s):** Unincorporated Iron County, UDOT

**Underserved Community:** Social Vulnerability Index

**PROJECT NUMBER: 17**

**Safety Action Plan GFA(s):** East Iron County GFA, West Iron County GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Motorcycles



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	11.91
Speed Limit:	65 mph
Roadway Lanes:	4
Daily Traffic Volume (AADT):	2,300
Median Type:	NA-TWLTL
Number of Key Intersections	3











#### Why was this location identified?

High Crash Network:	Yes ✓
High Injury Network:	Yes ✓
Network Screening:	Yes ✓
Conflict Areas:	Yes ✓
Risk Characteristics:	Yes ✓
Community Feedback:	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	3
Minor Injury Crashes:	9
Possible Injury Crashes	8
No Injury/PDO Crashes:	72
<b>Total Crashes:</b>	<b>92</b>
<b>Equivalent Property Damage Crashes:</b>	<b>605</b>

#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
23%	1%	2%	0%	5%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	3%	5%	90%















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 17

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
11600 West	4							2		
Bumblebee Drive (west)	3		1					1		
Bumblebee Drive (east)										

Utah Emphasis Areas		
Behavioral		Aggressive Driving 1%
		Distracted Driving 2%
		Impaired Driving 1%
		Use of Safety Restraints 3%
		Speed Management 15%
		Teen Driving Safety 15%
		Senior Safety 13%
Crash Types		Roadway Departure Crashes 20%
		Intersection Safety 5%
Vulnerable Users		Motorcycle Safety 2%
		Pedestrian Safety 0%
		Bicycle Safety 0%

### Other Applicable Locations/Scenarios:

Minor arterial, two-lane, higher speed (65 mph) roadways in a rural setting may benefit from similar safety countermeasures. This location includes vertical climbing and horizontal roadway curvature for vehicles to navigate. Other locations may include:

- Other portions of SR 56
- SR 143
- SR 20
- SR 130 north of Enoch City
- Old Highway 91

### Comments, Feedback, Ongoing Projects:

- Increasing popularity for bicyclists.
- Many curves to navigate at high speeds.
- Vehicles speeding through canyons and curves.
- High number of animal related crashes; consider the need for additional signage or animal fencing.
- Concerns with crashes occurring in dark, unlit conditions.



## EXISTING CONDITIONS

PROJECT NUMBER: 17

### Notes:

- Bus stops:
- East of Bumblebee Dive
- Beryl Fire department
- 2400 West



*Bus Stop Warning Signage*



*Iron Springs Road Southbound*



*Typical SR 56 Cross Section Eastbound*



*Typical SR 56 Cross Section Westbound*



*Westbound Approaching Curves*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 17

## Project Description

This project recommends safety countermeasures on SR 56 to help address roadway departure, nighttime visibility issues, and intersection safety concerns. Proposed countermeasures include edge line rumble strips, shoulder widening, and centerline rumble strips to help address roadway departure crash types. Curve signage (chevron signs) should be installed or updated before curves both eastbound and westbound. Additionally, intersection lighting is recommended to improve visibility and reduce the risk of crashes occurring in dark, unlit conditions. Westbound left-turn and eastbound right-turn lanes are proposed at Bumblebee Drive to separate vehicles making those movements.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Edge Line Rumble Strips	Full corridor
2 ft Paved Shoulders	Full corridor (2 miles of shoulder pre-existing)
Centerline Rumble Strips	Full corridor
Curve Signage	Eastbound and westbound on curves near Bumblebee Drive
Climbing Lane	MP 46.2 to MP 45.2
Intersection Lighting	Bumblebee Drive
Left-Turn Lanes	Westbound at Bumblebee Drive
Right-Turn Lanes	Eastbound at Bumblebee Drive

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Edge Line Rumble Strips	12.07	MILE	\$5,000	\$60,350
Install 4-ft Paved Shoulder (both sides of roadway)	10	MILE	\$709,000	\$7,090,000
Install Centerline Rumble Strips	12	MILE	\$5,000	\$60,000
Install and/or Upgrade Curve Signage to Enhanced Delineations	4	CURVE	\$3,000	\$12,000
Widen Roadway to Install Climbing Lane	1	MILE	\$1,070,000	\$1,070,000
Install Intersection Lighting	1	INT	\$35,000	\$35,000
Install Left-Turn Lanes	1	LANE	\$153,000	\$153,000
Install Right-Turn Lanes	1	LANE	\$127,000	\$127,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

Improvement Subtotal	\$8,607,350
Estimated Construction Cost Total <sup>1</sup>	\$11,694,923
Estimated Project Total <sup>2</sup>	\$13,625,000
Local Match <sup>3</sup>	\$2,725,000



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 17



SR 56 from Iron Springs Road to Comstock Road

- Center and Edge Line Rumble strips, Entire Corridor
- 4 foot Paved Shoulder, Entire Corridor
- Turn Lanes
- Intersection Lighting
- Climbing Lane
- Enhanced Curve Delineation



## LOCATION CHARACTERISTICS

**Location:** 200 South (SR 143)  
**Project Extents:** I-15 to Main Street/SR 143  
**Roadway Classification:** Minor Arterial, State Route  
**Jurisdiction(s):** Parowan City, UDOT  
**Underserved Community:** No

**PROJECT NUMBER:** 18

**Safety Action Plan GFA(s):** East Iron County  
 GFA

**GFA Emphasis Areas:** Roadway Departures,  
 Speed-Related, Motorcycles



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	2.14
Speed Limit:	50-40 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	3,600
Median Type:	TWLTL
Number of Key Intersections	1











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	No	✗
Network Screening:	No	✗
Conflict Areas:	Yes	✓
Risk Characteristics:	Yes	✓
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	1
Possible Injury Crashes:	1
No Injury/PDO Crashes:	6
<b>Total Crashes:</b>	<b>8</b>
<b>Equivalent Property Damage Crashes:</b>	<b>36</b>

#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
38%	0%	13%	0%	13%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	25%	13%	50%















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 18

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
NB I-15 Off Ramp	5				1		1	3		

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	0%
	 Distracted Driving	13%
	 Impaired Driving	0%
	 Use of Safety Restraints	25%
	 Speed Management	38%
	 Teen Driving Safety	13%
	 Senior Safety	13%
Crash Types	 Roadway Departure Crashes	50%
	 Intersection Safety	13%
Vulnerable Users	 Motorcycle Safety	0%
	 Pedestrian Safety	0%
	 Bicycle Safety	0%

### Other Applicable Locations/Scenarios:

State Route, minor arterial roadways with a center two-way left-turn lane and a 40-50 mph speed limit may benefit from similar safety countermeasures. This location serves a mix of traffic including local, visitors, and vehicles passing through to a destination (in this case Brian Head). Other locations may include:

- SR 14, Cedar City
- Midvalley Road, Enoch City
- Old Highway 91 through Summit and Kanarraville
- SR 271, Paragonah Town

### Comments, Feedback, Ongoing Projects:

- Recommendations are similar to those identified in the Parowan Active Transportation Plan (2024)
- Sidewalk infill project in progress from the Grace Christian Church to 1000 West
- Desire for improved traffic counts in peak winter/ski season
- Consider a speed limit study
- Priorities are as follow: complete the south sidewalk first. After, lane additions, crossing improvements, and the path along the north side of the roadway.
- 200 South from Main Street to SR 143 also required improvements and is identified as a long-term project. It is currently used too often as a cut-through from Main Street to SR 143 Canyon Road



## EXISTING CONDITIONS

PROJECT NUMBER: 18

### Notes:

- 200 South from Main Street to SR 143 also required improvements and is identified as a long-term project. It is currently used too often as a cut-through from Main Street to SR 143 Canyon Road



*Eastbound Approaching Main Street (SR 130)*



*Eastbound at Main Street (SR 130) Intersection*



*End of South Sidewalk*



*Three-Lane Cross Section*



*Two-Lane Cross Section*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 18**

## Project Description

This project builds upon concepts and recommendations for 200 South (SR 143) found in the Parowan Active Transportation Plan (2024). Proposed safety countermeasures include filling sidewalk gaps, adding a shared use path, and roadway widening with a two way left turn lane and new edge line striping. Intersection improvements include high-visibility crosswalks, lighting, and flashing beacons on crosswalks at key intersections on the corridor. Pedestrian refuge islands, raised crosswalk, and bulb-outs at the entering intersections from each side of the corridor are recommended to create a gateway to the City and alert motorists of pedestrian activity.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
12 ft Shared-use Path	Entire corridor
Retroreflective center and edge lines	Entire corridor
Sidewalk	1000 West to Phillips 66 Station
Roadway Widening and TWLTL	Main Street to 400 West
High-Visibility Crosswalk	Frontage Road Intersection, 1375 West, 1000 West, 500 West, 200 West, Main Street
Pedestrian Refuge Island	Main Street, Frontage Road
Rectangular Rapid Flashing Beacon (RRFB)	Frontage Road Intersection, 1375 West, 1000 West, 500 West, 200 West, Main Street
Bulbouts	Main Street, Frontage Road
Raised Crosswalk	Main Street, Frontage Road

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install a Separated 12 ft. Shared-use Path	2.14	MILE	\$627,000	\$1,341,780
Install 4" Retroreflective Centerline and Edge Lines	2.14	MILE	\$96,000	\$205,440
Install 6 ft. Sidewalk (both sides of roadway)	0.4	MILE	\$761,000	\$304,400
Widen Roadway and Install Two-Way Left-Turn Lane	0.5	MILE	\$1,560,000	\$780,000
Install High-Visibility Crosswalk (including lighting)	6	XING	\$38,000	\$228,000
Install Pedestrian Refuge Island	2	EACH	\$75,000	\$150,000
Install Rectangular Rapid Flashing Beacons (RRFB)	6	XING	\$10,000	\$60,000
Install Bulbouts (2)	2	EACH	\$54,000	\$108,000
Install Raised Crosswalk and Signage	2	EACH	\$41,000	\$82,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$3,259,620</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$4,475,487</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$5,214,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$1,042,800</b>



## LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 18**



200 South (SR 143) from I-15 to Main Street/SR 143





Retroreflective Center  
and Edge Lines,  
Entire Corridor




Shared-Use Path,  
Entire Corridor




Frontage Road

 Pedestrian Refuge  
Island, Raised Crossing

High Visibility  
Crosswalk with RRFB

 Bulb Outs


1375 West



High Visibility  
Crosswalk with  
RRFB




1000 West



High Visibility  
Crosswalk with  
RRFB




500 West



High Visibility  
Crosswalk with  
RRFB





200 West




High Visibility  
Crosswalk  
with RRFB




Main Street

 Pedestrian Refuge Island, Raised Crossing

High Visibility  
Crosswalk with RRFB



### Bulb Outs



Roadway Widening

 Sidewalk



## LOCATION CHARACTERISTICS

**Location:** Main Street (SR 274)  
**Project Extents:** I-15 to 300 South  
**Roadway Classification:** Minor Arterial, State Route  
**Jurisdiction(s):** Parowan City, UDOT  
**Underserved Community:** No

**PROJECT NUMBER: 19**

**Safety Action Plan GFA(s):** East Iron County  
 GFA

**GFA Emphasis Areas:** Roadway Departures,  
 Speed-Related, Motorcycles



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	1.36
Speed Limit:	30 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	2,700
Median Type:	TWLT
Number of Key Intersections	0











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	No	✗
Network Screening:	No	✗
Conflict Areas:	No	✗
Risk Characteristics:	Yes	✓
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	1
Possible Injury Crashes:	2
No Injury/PDO Crashes:	3
<b>Total Crashes:</b>	<b>6</b>
<b>Equivalent Property Damage Crashes:</b>	<b>43</b>













#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
17%	17%	33%	0%	0%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	33%	0%	17%



## LOCATION INFORMATION

PROJECT NUMBER: 19

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	33% Distracted Driving 	67% Teen Driving Safety 	0% Aggressive Driving 	33% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
17% Speed Management 	0% Use of Safety Restraints 	17% Senior Safety 		50% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

State Routes or similar types of roadways that serve as Main Street for smaller or rural communities with pedestrian use may benefit from similar safety countermeasures. This location serves both a school area (High School with students crossing the road often) and the business-focused part of the City. Other similar locations throughout the County may include:

- Main Street (SR 271), Paragonah Town
- Old Highway 91, Kanarraville
- SR 143, Brian Head
- Midvalley Road, Enoch City
- SR 14, Cedar City
- Main Street (SR 130), Cedar City

### Comments, Feedback, Ongoing Projects:

- Recommendations are similar to those identified in the Parowan Active Transportation Plan (2024); intent to create a pedestrian priority zone from 400 North to 200 South
- High number of crossing pedestrians to the High School, restaurant, pools, parks, fairgrounds, etc.
- Speeding vehicles in the area
- Need additional crossings south of center Street
- Brian Head and resorts are expecting and planning for growth and visitorship in the future, most of those people pass through Parowan Main Street.



## EXISTING CONDITIONS

PROJECT NUMBER: 19

### Notes:

- Pedestrians observed crossing at unmarked locations



*100 North Crossing near Parowan High School*



*200 North Crossing*



*Northbound Approach to 200 South*



*SR 271 Approach to Main Street*



*Typical Cross Section with On Street Parking*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 19**

## Project Description

This project builds upon concepts and recommendations for Main Street (SR 274) found in the Parowan Active Transportation Plan (2024). The safety countermeasures are intended to create a pedestrian priority zone on Main Street (400 North to 200 South) in Parowan, including gateway type intersections and improvements to capture motorist's attention. Intersection improvements include high visibility crosswalks, bulbouts, pedestrian hybrid beacons or rectangular rapid-flashing beacons, refuge islands, and lighting. Re-aligning the skewed approach of SR 271 to SR 274 and repainting edge line striping are also recommended.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Retroreflective Center and Edge Lines	Entire corridor
High-Visibility Crosswalk	400 North, 300 North, 200 North, 100 North, 100 South, 200 South
Pedestrian refuge Island	400 North, 200 South
Rectangular Rapid Flashing Beacon (RRFB)	400 North, 100 North, 200 South
Raised Crosswalk	400 North, 200 South
Bulbouts	400 North, 200 North, 100 North, Center Street, 200 South
Pedestrian Hybrid Beacon or HAWK	Center Street
Realign Intersection	Intersection of SR 271 and SR 274

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install 4" Retroreflective Centerline and Edge Lines	1.36	MILE	\$96,000	\$130,560
Install High-Visibility Crosswalk (including lighting)	6	XING	\$38,000	\$228,000
Install Pedestrian Refuge Island	2	EACH	\$75,000	\$150,000
Install Rectangular Rapid Flashing Beacons (RRFB)	3	XING	\$10,000	\$30,000
Install Raised Crosswalk and Signage	2	EACH	\$41,000	\$82,000
Install Bulbouts (2)	10	EACH	\$54,000	\$540,000
Install Pedestrian Hybrid Beacons (PHB) or HAWK	1	EACH	\$250,000	\$250,000
Realign Intersection Approach to Reduce or Eliminate Skew	1	LEG	\$329,000	\$329,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$1,739,560</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$2,423,406</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$2,824,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$564,800</b>



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 19



Main Street (SR 274) from I-15 to 300 South

- Retroreflective Center and Edge Lines, Entire Corridor
- Intersection Approach Realignment

- 200 South
- Raised Crosswalk with Refuge Island

- 100 South
- High Visibility Crosswalk

- Center Street
- Pedestrian Hybrid Beacon (PHB)
  - Bulb Outs

- 100 North
- High Visibility Crosswalk with RRFB
  - Bulb Outs

- 200 North
- High Visibility Crosswalk
  - Bulb Outs

- 300 North
- High Visibility Crosswalk

- 400 North
- Raised Crosswalk with Refuge Island
  - Rectangular Rapid Flashing Beacon (RRFB)
  - Bulb Outs



## LOCATION CHARACTERISTICS

PROJECT NUMBER: 20

**Location:** SR 143

**Project Extents:** Dry Lakes Road to Vasels Road

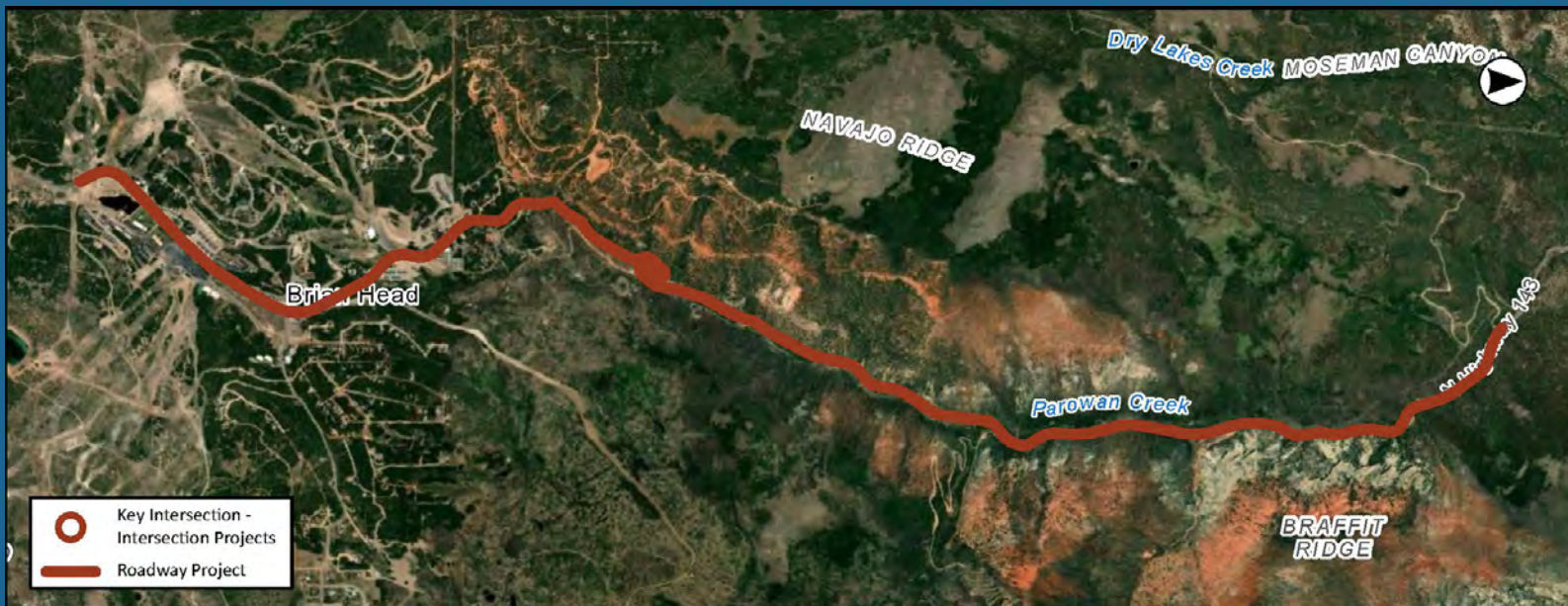
**Roadway Classification:** Minor Arterial, State Route

**Jurisdiction(s):** Brian Head, Unincorporated Iron County, UDOT

**Underserved Community:** No

**Safety Action Plan GFA(s):** East Iron County GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Motorcycles



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	5.4
Speed Limit:	50 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	1,000
Median Type:	NA
Number of Key Intersections	0











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	No	✗
Network Screening:	Yes	✓
Conflict Areas:	No	✗
Risk Characteristics:	Yes	✓
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	1
Minor Injury Crashes:	2
Possible Injury Crashes:	2
No Injury/PDO Crashes:	17
<b>Total Crashes:</b>	<b>22</b>
<b>Equivalent Property Damage Crashes:</b>	<b>168</b>













#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
59%	0%	0%	0%	9%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	14%	9%	73%



## LOCATION INFORMATION

PROJECT NUMBER: 20

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	0% Distracted Driving 	9% Teen Driving Safety 	0% Aggressive Driving 	64% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
41% Speed Management 	5% Use of Safety Restraints 	9% Senior Safety 		0% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Two-lane, higher speed (50 mph) roadways in a canyon setting with curves and minimal shoulders may benefit from similar safety countermeasures. Within Brian Head, the roadway serves as Main Street including multiple driveway accesses and minor road intersections. Other locations may include:

- SR 20
- SR 14
- SR 56
- Old Highway 91

### Comments, Feedback, Ongoing Projects:

- Recommendations similar to those identified in the Brian Head Commercial Corridor Transportation Study (2022)
- Brian Head and Resort are forecasting and planning for large increases the number of annual visitors
- Improvements should be coordinated closely with the identified intersection improvements within Brian Head Town.
- Brian Head and resorts are expecting and planning for growth and visitorship in the future



## EXISTING CONDITIONS

PROJECT NUMBER: 20

### Notes:

- Severe S curve, Consider dynamic curve warning signage



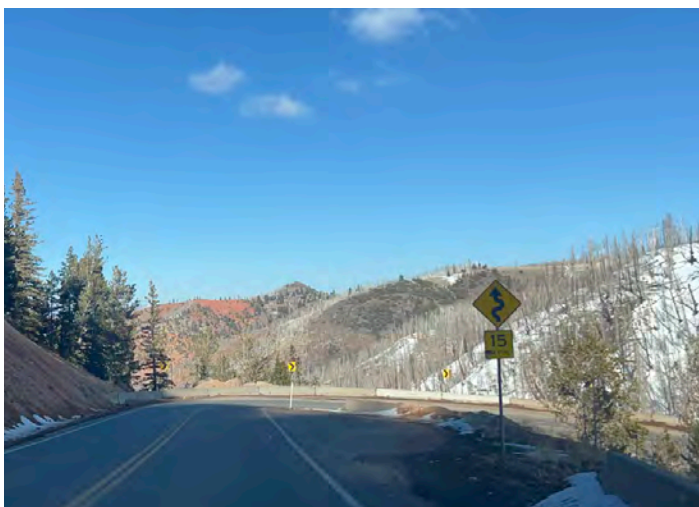
*ATV Trail Connection*



*Curve Advisory Speed Limit*



*Northbound S Curve*



*S Curve Advisory Speed Limit*



*Typical Cross Section*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 20

## Project Description

This project builds upon the Brian Head Commercial Corridor Transportation Study completed in 2022 and also includes areas of SR 143 between Parowan and Brian Head. The SR 143 safety countermeasures include installing concrete barrier and enhancing delineation for curves to help address run off the road crashes that are common in areas of SR 143. The recommendations also includes widening the roadway for a center two-way left-turn lane from Vasels Road to Steam Engine Drive and Navajo Lodge to Hunter Ridge Drive, including shoulder improvements (widening and landscaping rocks) for the length of the Town. These improvements aim to improve access management, pedestrian safety, reduce vehicle speeds, and improve mobility in Brian Head Town for all users.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Curve Signage	The S curve and any curves less than ~90 degrees
Concrete Barrier	MP 11.6-MP 11.9 and MP 12.1-MP 12.7
Extend Unpaved Shoulder 2 ft	Vasels Road to Hunter Ridge Drive
6" Edge Lines	Vasels Road to Hunter Ridge Drive
Roadway Widening and TWLTL	Vasels Road to Steam Engine Drive and Navajo Lodge to Hunter Ridge Drive

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install and/or Upgrade Curve Signage to Enhanced Delineations	8	CURVE	\$3,000	\$24,000
Install Concrete Barrier	0.9	MILE	\$915,000	\$823,500
Extend Unpaved Shoulder 2 ft. (both sides of roadway)	1.2	MILE	\$27,000	\$32,400
Install 6" Edge Line (Both Sides of Road)	1.2	MILE	\$8,000	\$9,600
Widen Roadway and Install Two-Way Left-Turn Lane	0.9	MILE	\$1,560,000	\$2,800,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

Improvement Subtotal	\$3,689,500
Estimated Construction Cost Total <sup>1</sup>	\$5,055,825
Estimated Project Total <sup>2</sup>	\$5,891,000
Local Match <sup>3</sup>	\$1,178,200







# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 20



SR 143 from Dry Lakes Road to Vasels Road

-  Curve Signage
-  Roadway Widening, 2 foot Unpaved Shoulder, and 6" Edge Lines
-  2 foot Unpaved Shoulder and 6" Edge Lines
-  Concrete Barrier



# LOCATION CHARACTERISTICS

PROJECT NUMBER: 21

**Location:** Brian Head, SR 143 Intersections  
**Project Extents:** Snowshoe Village Road and Vasels Road  
**Intersection Control:** Two-way Stop Controlled  
**Jurisdiction(s):** Brian Head Town, UDOT  
**Underserved Community:** No

**Safety Action Plan GFA(s):** East Iron County GFA  
**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Motorcycles



# LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY











## Improvement Location Information & Safety Analysis Summary

Intersection Characteristics	
Intersection Control Type:	Two-way Stop Controlled
Speed Limits (major, minor):	50 mph, 25 mph
Approaches:	3
Daily Entering Volume:	1,700
Turn Lanes (Y/N):	No
Lighting:	Yes

Why was this location identified?	
High Crash Network:	No <span style="color: red;">✗</span>
High Injury Network:	No <span style="color: red;">✗</span>
Network Screening:	No <span style="color: red;">✗</span>
Conflict Areas:	No <span style="color: red;">✗</span>
Risk Characteristics:	Yes <span style="color: green;">✓</span>
Community Feedback:	Yes <span style="color: green;">✓</span>

Location Crash History	
Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	0
Possible Injury Crashes:	0
No Injury/PDO Crashes:	0
Total Crashes:	0
Equivalent Property Damage Crashes:	0













## Location Crash Type

Fixed-object  0%	Angle  0%	Left Turn  0%	Head-on  0%	Rear-end  0%
Motorist-bicyclist  0%	Motorist-pedestrian  0%	Sideswipe  0%	Front to Rear  0%	Single Vehicle  0%



## LOCATION INFORMATION

PROJECT NUMBER: 21

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	0% Distracted Driving 	0% Teen Driving Safety 	0% Aggressive Driving 	0% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
0% Speed Management 	0% Use of Safety Restraints 	0% Senior Safety 		0% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Other intersections located along a Main Street of a rural or smaller town, higher speed, gateway-type intersections to a pedestrian and active transportation area may benefit from similar safety countermeasures. Also two-lane roadways in a Main Street setting that require improved pedestrian crossings. Other locations may include:

- 200 South (SR 143), Parowan City
- Main Street (SR 274), Parowan City
- Main Street (SR 271), Paragonah Town
- Main Street (Old Highway 91), Kanarraville
- SR 14, Cedar City
- High pedestrian areas on two-lane roadways (Schools, commercial areas, etc.)

### Comments, Feedback, Ongoing Projects:

- Recommendations similar to those identified in the Brian Head Commercial Corridor Transportation Study (2022)
- Brian Head and Resort are forecasting and planning for large increases the number of annual visitors
- Improvements should be coordinated closely with the identified roadway segment improvements identified in Brian Head Town and portions of SR 143 in the canyon.
- Brian Head and resorts are expecting and planning for growth and visitorship in the future



## EXISTING CONDITIONS

PROJECT NUMBER: 21



*Navajo Lodge Entrance*

### Notes:

- Intersections with difficult Sight distance due to hills, curves, etc.



*Northbound near Vasels Road*



*Snowshow Village Road*



*Southbound near Vasels Road*



*Typical Cross Section and Pedestrian in Shoulder*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 21

## Project Description

This project builds upon the Brian Head Commercial Corridor Transportation Study completed in 2022. The proposed safety countermeasures include converting traditional intersections to roundabouts at the Navajo Lodge intersection (Snowshoe Village Road) and South Loop Road (Vasels Road). In addition, driver feedback speed limit signs can accompany the roadway in approach to the roundabouts. These improvements serve as gateways to Brian Head Town to slow motorists and capture motorists attention. These improvements aim to address pedestrian safety, vehicle speeding, and serve as gateways to Brian Head Town.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
High-Visibility Crosswalk	In construction
Bulbouts	In construction
Roundabout	Snowshoe Village Road, South Loop Road
Rectangular Rapid Flashing Beacon (RRFB)	Snowshoe Village Road, South Loop Road
Install Driver Feedback Speed Limit Signs	Snowshoe Village Road, South Loop Road

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs	2	EACH	\$11,000	\$22,000
Convert Existing Intersection to Modern Roundabout (Single Lane)	2	INT	\$1,900,000	\$3,800,000

1: Includes mobilization (10%0, traffic control (5%), items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design

3: 20% of estimated project total toward Safe Streets for All implementation grants

Improvement Subtotal	\$3,822,000
Estimated Construction Cost Total <sup>1</sup>	\$5,234,700
Estimated Project Total <sup>2</sup>	\$6,299,000
Local Match <sup>3</sup>	\$1,259,800



LOCATION RECOMMENDATIONS

PROJECT NUMBER: 21



Brian Head, SR 143 Intersections





## LOCATION CHARACTERISTICS

PROJECT NUMBER: 22

**Location:** SR 20

**Project Extents:** Burnt Peak Road to Bear Valley Road

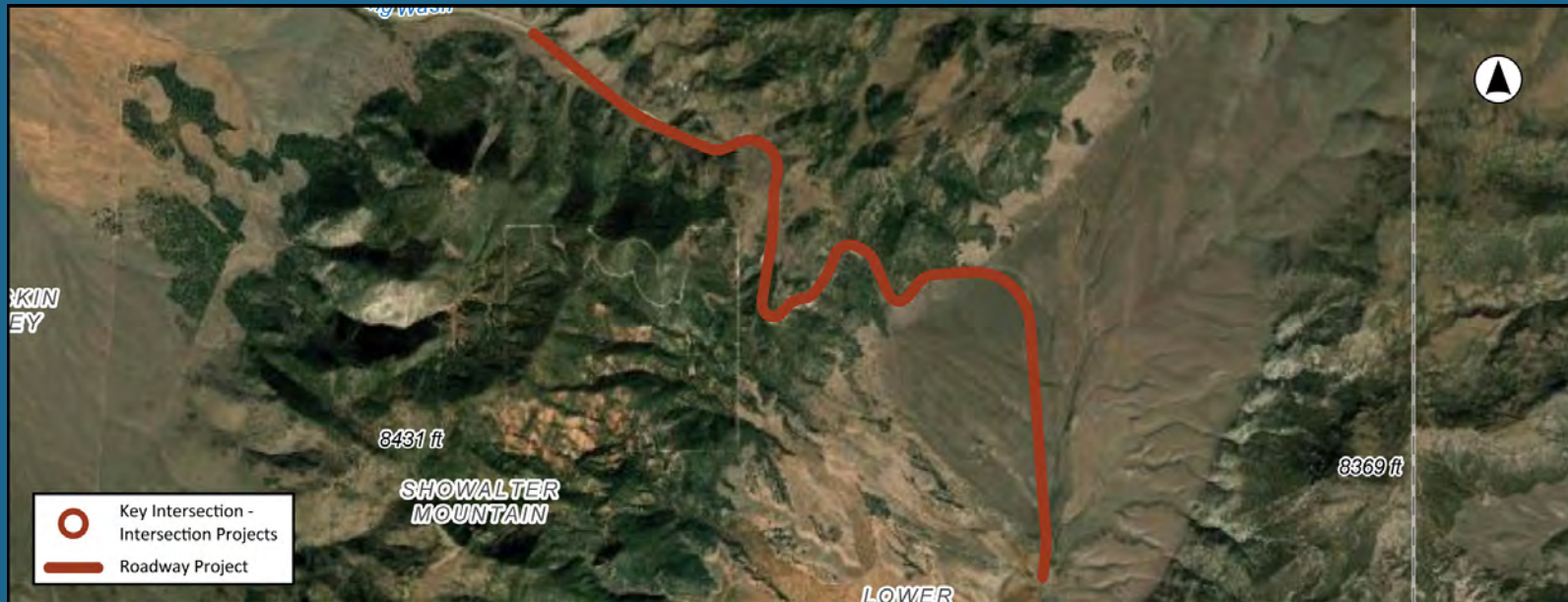
**Roadway Classification:** Other Principal Arterial, State Route

**Jurisdiction(s):** Unincorporated Iron County, UDOT

**Underserved Community:** No

**Safety Action Plan GFA(s):** East Iron County GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Motorcycles



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	4.74
Speed Limit:	35-65 mph
Roadway Lanes:	4
Daily Traffic Volume (AADT):	2,500
Median Type:	Passing lanes
Number of Key Intersections	0











#### Why was this location identified?

High Crash Network:	Yes ✓
High Injury Network:	Yes ✓
Network Screening:	Yes ✓
Conflict Areas:	No ✗
Risk Characteristics:	Yes ✓
Community Feedback:	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	3
Serious Injury Crashes:	6
Minor Injury Crashes:	13
Possible Injury Crashes	3
No Injury/PDO Crashes:	61
<b>Total Crashes:</b>	<b>86</b>
<b>Equivalent Property Damage Crashes:</b>	<b>3493</b>













#### Location Crash Type

Fixed-object  67%	Angle  2%	Left Turn  0%	Head-on  1%	Rear-end  1%
Motorist-bicyclist  0%	Motorist-pedestrian  1%	Sideswipe  2%	Front to Rear  1%	Single Vehicle  91%



## LOCATION INFORMATION

PROJECT NUMBER: 22

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
3% Impaired Driving 	1% Distracted Driving 	14% Teen Driving Safety 	0% Aggressive Driving 	66% Roadway Departure Crashes 	9% Motorcycle Safety 	1% Pedestrian Safety 
59% Speed Management 	1% Use of Safety Restraints 	9% Senior Safety 		2% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

High-speed curved roadways, particularly in mountainous areas such as this location may benefit from similar safety countermeasures:

- SR 143 between Parowan to Brian Head
- SR 14 east of Cedar City
- SR 56 west portion of the County

### Comments, Feedback, Ongoing Projects:

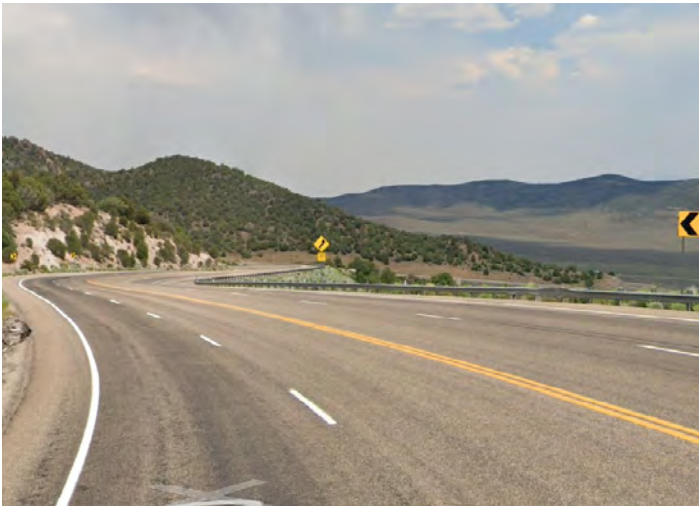
- Existing Eastbound driver speed limit feedback signs but none in the westbound direction
- Speed limit to be evaluated and the reduced speed limit extended to include additional curves in the Roadway
- Motorcycle speeding prevalent
- Area has had improvements in the past



## EXISTING CONDITIONS

PROJECT NUMBER: 22

Notes:



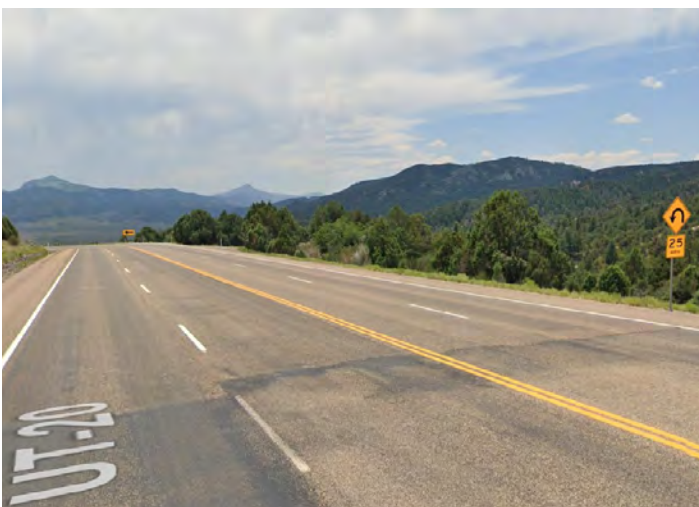
*Google Street View image of Curve Advisory Speed Limit*



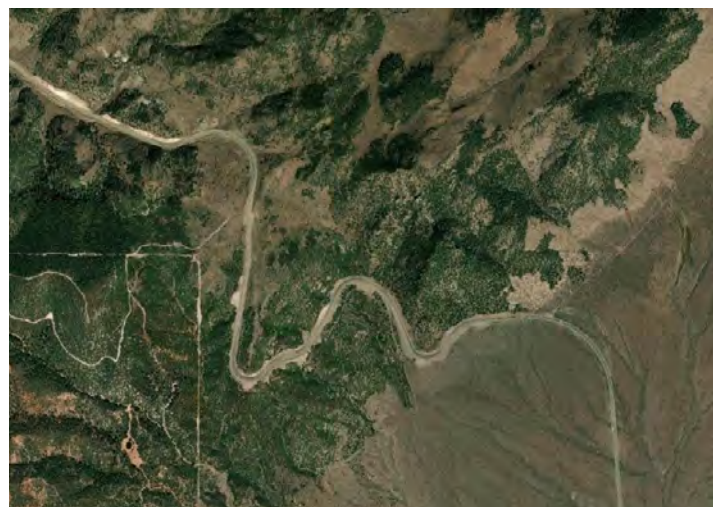
*Google Street View image of Guardrail and Chevrons*



*Google Street View image of Passing Lane Cross Section*



*Google Street View image of Southbound Curve Warnings*



*SR 20 Curves*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 22**

## Project Description

This project recommends safety countermeasures to help address curve-related, roadway departure, and speeding-related crashes. Countermeasures include installing dynamic (speed-activated) flashing beacons on chevron and curve warning signs, driver feedback speed limit signs to encourage safer speeds, and in-lane curve warning pavement markings to provide additional visual guidance for drivers. Transverse rumble strips are recommended before curves to alert drivers to reduce speed. Additionally, a high-friction surface treatment is proposed on curves to improve traction and reduce the likelihood of skidding. The 35 MPH reduced speed limit may be extended to include additional curved portions of the roadway experiencing high crash totals and injuries.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
<b>Driver Feedback Speed Limit Signs</b>	Southbound on major curve, eastbound on first curve, westbound beginning of curves, northbound straightaway
<b>In-lane Curve Warning Pavement Markings</b>	All curves on corridor
<b>Transverse Rumble Strips Prior to Curves</b>	All curves on corridor
<b>Guardrail</b>	MP 9.5 - MP 9.75
<b>High Friction Surface Treatment</b>	All curves on corridor
<b>Speed Activated Flashers on Chevron Signs</b>	All curves on corridor

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
<b>Install Driver Feedback Speed Limit Signs</b>	4	EACH	\$11,000	\$44,000
<b>Install In-Lane Curve Warning Pavement Markings</b>	16	CURVE	\$3,000	\$48,000
<b>Install Transverse Rumble Strips Prior to Curve</b>	16	CURVE	\$1,000	\$16,000
<b>Install Guardrail</b>	0.25	MILE	\$188,000	\$47,000
<b>Install High Friction Surface Treatment (HFST) on Curve</b>	8	CURVE	\$53,000	\$424,000
<b>Install Speed Activated Flashers on Chevron Signs</b>	8	EACH	\$6,000	\$48,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$627,000</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$909,150</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$1,060,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$212,000</b>



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 22



SR 20 from Burnt Peak Road to Bear Valley Road

Dynamic Speed Limit Signs

Guardrail

Enhanced Curve Signage





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# **APPENDIX E.4. WEST IRON COUNTY GFA PROJECT INFORMATION SHEETS**



## LOCATION CHARACTERISTICS

**PROJECT NUMBER: 23**

**Location:** SR 56

**Project Extents:** 2400 West to Main Street (New Castle)

**Roadway Classification:** Minor Arterial, Major Collector, State Route

**Jurisdiction(s):** Unincorporated Iron County, UDOT

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** West Iron County GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	9.71
Speed Limit:	65 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	1,100
Median Type:	NA
Number of Key Intersections	0











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	No	✗
Network Screening:	Yes	✓
Conflict Areas:	Yes	✓
Risk Characteristics:	Yes	✓
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	2
Possible Injury Crashes	6
No Injury/PDO Crashes:	12
<b>Total Crashes:</b>	<b>20</b>
<b>Equivalent Property Damage Crashes:</b>	<b>111</b>













#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
20%	20%	15%	0%	5%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	0%	5%	75%



## LOCATION INFORMATION

PROJECT NUMBER: 23

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
5% Impaired Driving 	5% Distracted Driving 	20% Teen Driving Safety 	0% Aggressive Driving 	40% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
10% Speed Management 	0% Use of Safety Restraints 	10% Senior Safety 		20% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Minor arterial, two-lane, higher speed (65 mph) roadways with minimal shoulders in a rural setting may benefit from similar safety countermeasures. Other locations may include:

- Other portions of SR 56
- SR 18
- Lund Highway
- Iron Springs Road
- SR 130 north of Enoch City
- Old Highway 91
- SR 271

### Comments, Feedback, Ongoing Projects:

- Steep shoulders; additional feel or work may be required for widening shoulders
- Vehicles speeding through the area
- More major intersections feel less safe due to vehicle speeds
- Concerns regarding buses and school children; currently stop and load/unload kids directly on SR 56
- High number of animal related crashes; consider the need for additional signage or animal fencing



# EXISTING CONDITIONS

PROJECT NUMBER: 23

Notes:



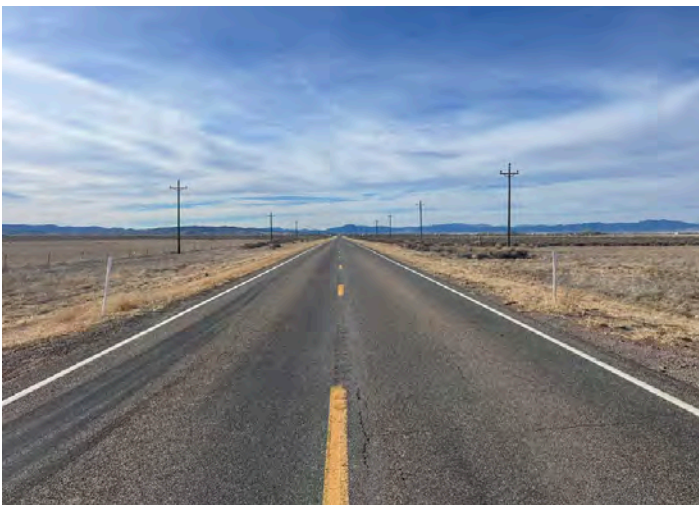
*Bar V Road Intersection*



*Eastbound at Beryl Junction*



*Northbound at Newcastle Main Street Intersection*



*Typical Cross Section*



*Westbound at Beryl Junction*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 23

## Project Description

This project includes safety countermeasures on SR 56 to address speeding and roadway departure related crashes. Proposed improvements include installing 4-foot paved shoulders for additional vehicle recovery space. Installing edge line rumble strips also help address run off the road crashes and wider edge lines are recommended to enhance visibility. Additionally, driver feedback speed limit signs are proposed near Beryl Junction and the intersection of SR 56 and Newcastle Main Street to address concerns about speeding. Paved bus-stop pullouts are included along the corridor based on feedback received - exact locations will need to be determined in coordination with the school.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
2 ft Paved Shoulder	Full corridor
Edge Line Rumble Strips	Full corridor
Driver Feedback Speed Limit Signs	Eastbound and westbound near Beryl Junction, eastbound and westbound near Newcastle Main Street
6" Edge Line	Full corridor
Bus Pullouts	Will be determined in coordination with the school.

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install 4-ft Paved Shoulder (both sides of roadway)	9.71	MILE	\$709,000	\$6,884,390
Install Edge Line Rumble Strips	9.71	MILE	\$5,000	\$48,550
Install Driver Feedback Speed Limit Signs	2	EACH	\$11,000	\$22,000
Install 6" Edge Line (Both Sides of Road)	9.71	MILE	\$8,000	\$77,680
Install Paved Bus Pullout	6	EACH	\$20,000	\$120,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

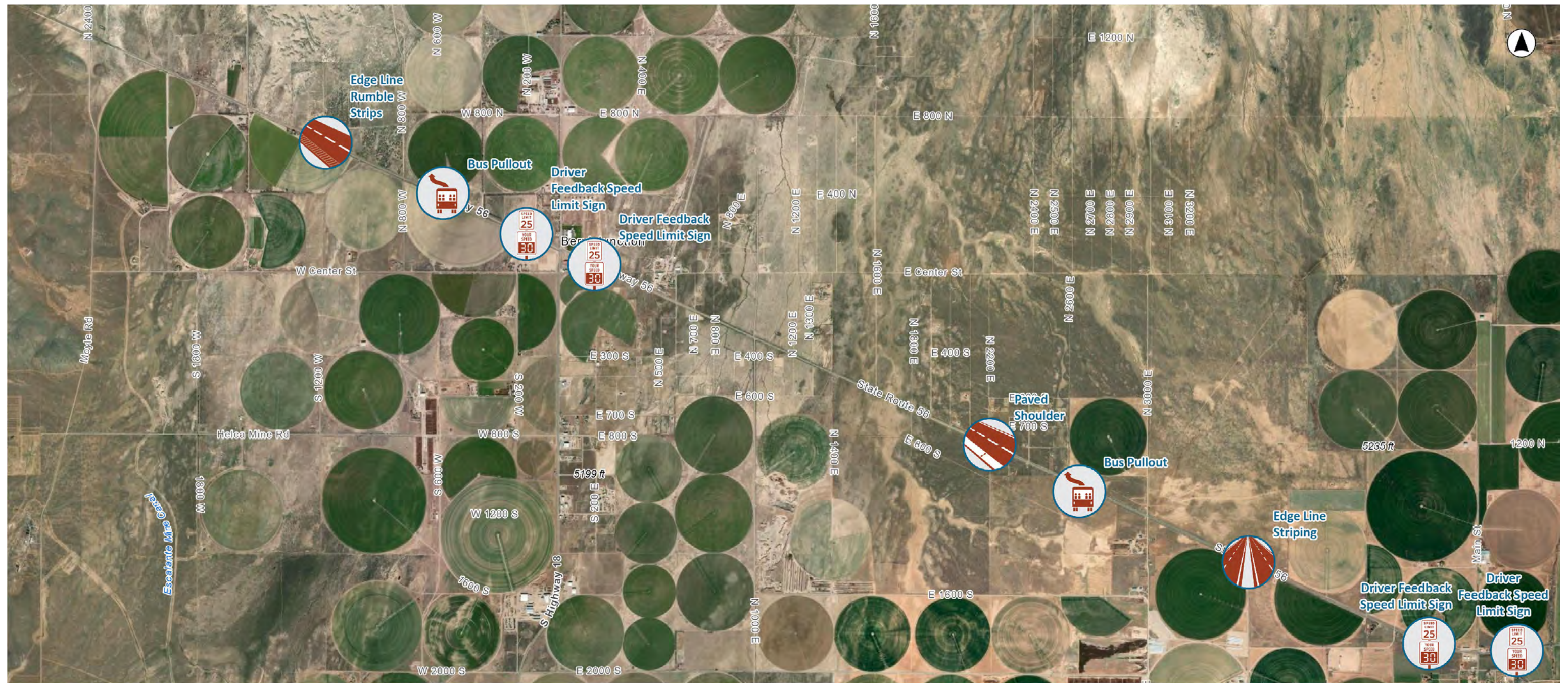
3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

Improvement Subtotal	\$7,152,620
Estimated Construction Cost Total <sup>1</sup>	\$9,731,037
Estimated Project Total <sup>2</sup>	\$11,537,000
Local Match <sup>3</sup>	\$2,307,400



## LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 23**



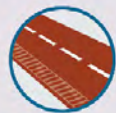
SR 56 from 2400 West to Main Street (New Castle)



2 foot Paved Shoulder,  
Entire Corridor



6" Edge Lines,  
Entire Corridor



Edge Line Rumble Strips,  
Entire Corridor



### Dynamic Speed Limit Signs



Bus Pullouts,  
To be placed at existing bus stops



## LOCATION CHARACTERISTICS

PROJECT NUMBER: 24

**Location:** Beryl Junction

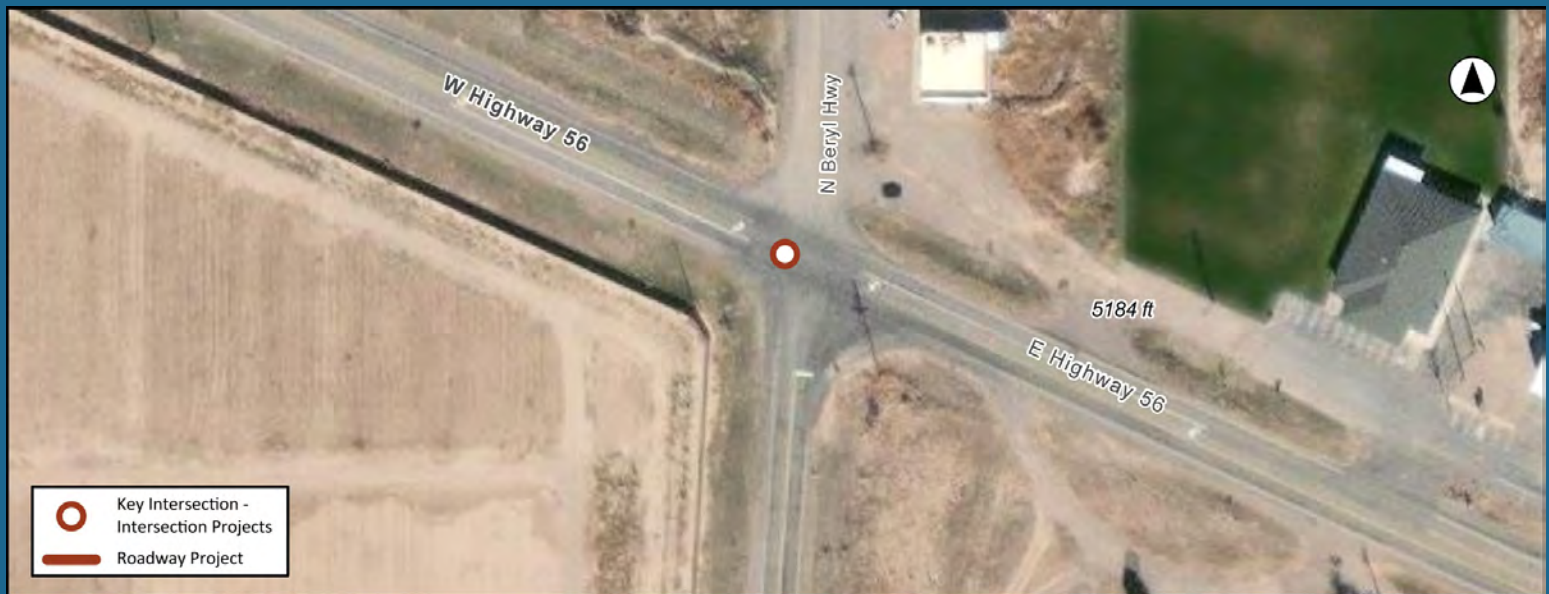
**Project Extents:** SR 56 & SR 18

**Intersection Control:** Two-way Stop Controlled

**Jurisdiction(s):** Unincorporated Iron County, UDOT

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** West Iron County GFA  
**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Intersection Characteristics

<b>Intersection Control Type:</b>	Two-way Stop Controlled
<b>Speed Limits (major, minor):</b>	65 mph, 65 mph
<b>Approaches:</b>	4
<b>Daily Entering Volume:</b>	2,000
<b>Turn Lanes (Y/N):</b>	Yes
<b>Lighting:</b>	Yes











#### Why was this location identified?

<b>High Crash Network:</b>	Yes ✓
<b>High Injury Network:</b>	Yes ✓
<b>Network Screening:</b>	Yes ✓
<b>Conflict Areas:</b>	No ✗
<b>Risk Characteristics:</b>	Yes ✓
<b>Community Feedback:</b>	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
<b>Fatal Crashes:</b>	0
<b>Serious Injury Crashes:</b>	0
<b>Minor Injury Crashes:</b>	1
<b>Possible Injury Crashes</b>	0
<b>No Injury/PDO Crashes:</b>	6
<b>Total Crashes:</b>	7
<b>Equivalent Property Damage Crashes:</b>	26













#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
0%	86%	14%	0%	14%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	0%	14%	0%



## LOCATION INFORMATION

PROJECT NUMBER: 24

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	14% Distracted Driving 	14% Teen Driving Safety 	0% Aggressive Driving 	0% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
0% Speed Management 	0% Use of Safety Restraints 	14% Senior Safety 		100% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

- Two-way, stop-controlled intersections of two higher speed rural (two-lane) highways may benefit from similar improvements.
- There are many locations similar to this throughout the County. SR 56, SR 130, Iron Springs Road, etc. all have many minor roadway intersections.

### Comments, Feedback, Ongoing Projects:

- Nighttime visibility concerns
- Concerns with vehicles pulling out in front of others that are traveling too fast
- Major intersection to the school (bus traffic)



## EXISTING CONDITIONS

PROJECT NUMBER: 24



*Aerial View*

### Notes:

- Lacking shoulders
- Consider a Rural intersection Conflict Warning system



*Eastbound at Beryl Junction*



*Northbound at Beryl Junction*



*Southbound on Beryl Highway*



*Westbound at Beryl Junction*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 24

## Project Description

Lower-cost rural stop controlled intersection countermeasures include installing secondary stop signs, 'Stop Ahead' signs, beacons, transverse rumble strips, and accompanying pavement markings indicating that an intersection is ahead. Transverse rumble strips on approaches to the intersection provide a physical alert to drivers approaching the intersection that a stop is upcoming. Additional lighting improves visibility at night and retroreflective strips on sign posts may also be included. Turn lanes are recommended to help separate vehicle speed differentials for vehicles traveling through and making a turn. A Rural Intersection Control Warning System (RICWS) should be considered at the junction to provide advanced warning to vehicles on SR 56 of any slow or stopped vehicles entering SR 56 from the intersection.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Intersection Lighting	Highway 56 and Highway 18
Transverse Rumble Strips on Minor Approaches	Southbound Approach
Upgraded Signs and Pavement Markings	Northbound and Southbound Approaches
RICWS	Highway 56 and Highway 21
Right-Turn Lanes	Westbound Approach

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Intersection Lighting	1	INT	\$35,000	\$35,000
Install Transverse Rumble Strips on Minor Approach	1	LEG	\$1,000	\$1,000
Upgrade Signs and Pavement Markings (Paved Approach)	4	LEG	\$3,000	\$12,000
Install Second Stop Sign and Stop Ahead Sign	2	LEG	\$1,500	\$3,000
Install Beacon on Stop Sign	1	EACH	\$5,000	\$5,000
Install Right-Turn Lanes	1	LANE	\$127,000	\$127,000
Install a Rural Intersection Control Warning System (RICWS)	1	INT	\$100,000	\$100,000

1: Includes mobilization (10%0, traffic control (5%), items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design

3: 20% of estimated project total toward Safe Streets for All implementation grants

Improvement Subtotal	\$283,000
Estimated Construction Cost Total <sup>1</sup>	\$410,350
Estimated Project Total <sup>2</sup>	\$529,000
Local Match <sup>3</sup>	\$105,800



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 24



Beryl Junction (SR 56 & SR 18)

Systemic Low-Cost Stop-Controlled Intersection Countermeasures

- Upgraded Signs
- Refresh Pavement Markings
- Transverse Rumble Strips on Minor Approaches
- Rural Intersection Control Warning Systems (RICWS)

Stop Sign Advanced Warnings

Westbound Right Turn Lane

Intersection Lighting



## LOCATION CHARACTERISTICS

**Location:** Main Street/Bench Road

**Project Extents:** SR 56 to Newcastle Hills

**Roadway Classification:** Minor Arterial, Federal Aid Route

**Jurisdiction(s):** Unincorporated Iron County

**Underserved Community:** Yes

**PROJECT NUMBER:** 25

**Safety Action Plan GFA(s):** West Iron County GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

<b>Length:</b>	2.63
<b>Speed Limit:</b>	30 mph
<b>Roadway Lanes:</b>	2
<b>Daily Traffic Volume (AADT):</b>	1,100
<b>Median Type:</b>	NA
<b>Number of Key Intersections</b>	0











#### Why was this location identified?

<b>High Crash Network:</b>	Yes ✓
<b>High Injury Network:</b>	No ✗
<b>Network Screening:</b>	No ✗
<b>Conflict Areas:</b>	No ✗
<b>Risk Characteristics:</b>	No ✗
<b>Community Feedback:</b>	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
<b>Fatal Crashes:</b>	0
<b>Serious Injury Crashes:</b>	0
<b>Minor Injury Crashes:</b>	0
<b>Possible Injury Crashes</b>	1
<b>No Injury/PDO Crashes:</b>	4
<b>Total Crashes:</b>	5
<b>Equivalent Property Damage Crashes:</b>	14













#### Location Crash Type

<b>Fixed-object</b>  20%	<b>Angle</b>  20%	<b>Left Turn</b>  20%	<b>Head-on</b>  0%	<b>Rear-end</b>  20%
<b>Motorist-bicyclist</b>  0%	<b>Motorist-pedestrian</b>  0%	<b>Sideswipe</b>  0%	<b>Front to Rear</b>  20%	<b>Single Vehicle</b>  60%



## LOCATION INFORMATION

PROJECT NUMBER: 25

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	0% Distracted Driving 	60% Teen Driving Safety 	0% Aggressive Driving 	40% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
0% Speed Management 	0% Use of Safety Restraints 	0% Senior Safety 		20% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Minor arterial roadways (30 mph speed limit) that transverse through both residential and rural areas may benefit from similar safety countermeasures. Similar locations include:

- Airport Road
- Westview Drive
- Iron Springs Road
- Midvalley Road
- 200 South (Parowan)
- Old Highway 91
- South Mountain Drive

### Comments, Feedback, Ongoing Projects:

- Concerns with lack of or faded roadway paint striping
- High vehicle speeds in the area, particularly as vehicles use Bench Road as a cutoff between SR 18 and Newcastle (don't slow down once they enter Newcastle)
- High number of animal related crashes south of Newcastle. Wildlife fencing may be considered.



## EXISTING CONDITIONS

PROJECT NUMBER: 25

### Notes:

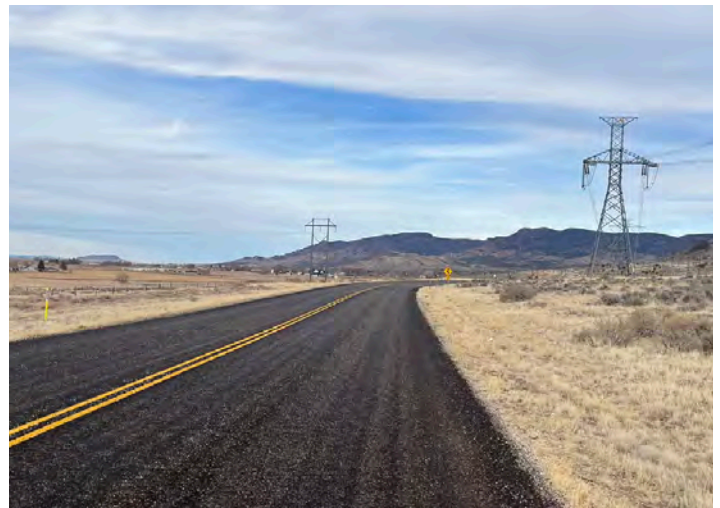
- Existing light at 300 South



*Bench Road Cross Section*



*Cross Section near 300 South*



*Northbound Approaching Bench Road Curves*



*Northbound Approaching SR 56*



*Northbound Curve near 300 South*



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 25

## Project Description

This project recommends safety countermeasures to mitigate vehicle speeds and roadway departure crashes. Driver feedback speed limit signs are recommended to regulate the transitioning speeds in and out of Newcastle. As the gateway to Newcastle from the south, enhanced lighting is recommended at 300 South. Along the curves of Bench Road wider edge lines and extending the unpaved shoulder may help mitigate severe roadway departure crashes.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Driver Feedback Speed Limit Signs	Entering Newcastle from SR 56, south of 300 South (both directions)
6" Edge Line	300 South to end of project limits
Extend Unpaved Shoulder 2 ft	300 South to end of project limits
Intersection Lighting	300 South

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs	3	EACH	\$11,000	\$33,000
Install 6" Edge Line (Both Sides of Road)	1.7	MILE	\$8,000	\$13,600
Extend Unpaved Shoulder 2 ft. (both sides of roadway)	1.7	MILE	\$27,000	\$45,900
Install Intersection Lighting	1	INT	\$35,000	\$35,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

Improvement Subtotal	\$127,500
Estimated Construction Cost Total <sup>1</sup>	\$184,875
Estimated Project Total <sup>2</sup>	\$245,000
Local Match <sup>3</sup>	\$49,000



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 25



Main Street/Bench Road from SR 56 to Newcastle Hills

- Dynamic Speed Limit Signs
- 6" Edge Line from 300 South
- 2 foot Unpaved Shoulder from 300 South
- Intersection Lighting



## LOCATION CHARACTERISTICS

PROJECT NUMBER: 26

**Location:** SR 56

**Project Extents:** Comstock Road to Main Street (New Castle)

**Roadway Classification:** Minor Arterial, State Route

**Jurisdiction(s):** Unincorporated Iron County, UDOT

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** West Iron County GFA, East Iron County GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	12.52
Speed Limit:	65 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	2,300
Median Type:	NA
Number of Key Intersections	0











#### Why was this location identified?

High Crash Network:	Yes ✓
High Injury Network:	No ✗
Network Screening:	Yes ✓
Conflict Areas:	Yes ✓
Risk Characteristics:	Yes ✓
Community Feedback:	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	1
Minor Injury Crashes:	3
Possible Injury Crashes:	7
No Injury/PDO Crashes:	39
<b>Total Crashes:</b>	<b>50</b>
<b>Equivalent Property Damage Crashes:</b>	<b>260</b>













#### Location Crash Type

Fixed-object	Angle	Left Turn	Head-on	Rear-end
				
18%	4%	2%	0%	6%
Motorist-bicyclist	Motorist-pedestrian	Sideswipe	Front to Rear	Single Vehicle
				
0%	0%	2%	6%	88%



## LOCATION INFORMATION

PROJECT NUMBER: 26

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
2% Impaired Driving 	4% Distracted Driving 	4% Teen Driving Safety 	0% Aggressive Driving 	20% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
4% Speed Management 	2% Use of Safety Restraints 	8% Senior Safety 		8% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Minor arterial, two-lane, higher speed (65 mph) roadways with minimal shoulders in a rural setting may benefit from similar safety countermeasures. This location includes vertical climbing and horizontal roadway curvature for vehicles to navigate. Other locations may include:

- Other portions of SR 56
- SR 143
- SR 20
- SR 130 north of Enoch City
- Old Highway 91

### Comments, Feedback, Ongoing Projects:

- Increasing popularity for bicyclists
- Many curves to navigate at high speeds
- Concerns regarding buses and school children
- Vehicles speeding through canyons and curves
- High number of animal related crashes; consider the need for additional signage or animal fencing
- Concerns with crashes occurring in dark, unlit conditions



# EXISTING CONDITIONS

PROJECT NUMBER: 26

Notes:



*Curve Warnings*



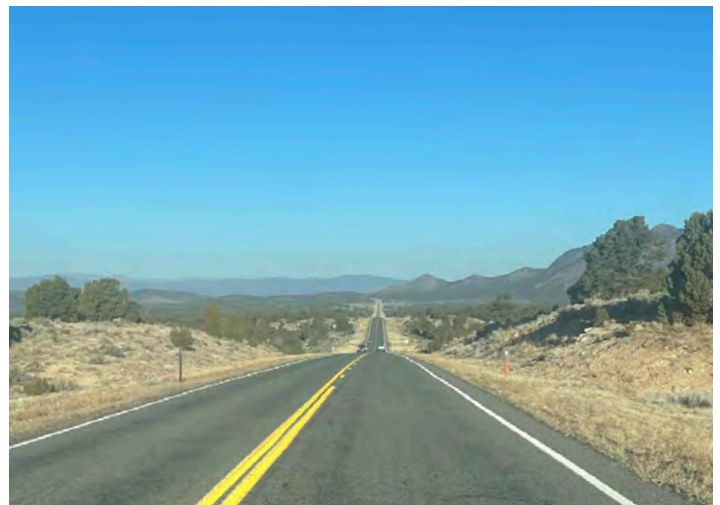
*Curves Near Pinto Road Intersection*



*Eastbound Approaching Comstock Road*



*Typical Cross Section*



*Westbound Passing Areas*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 26**

## Project Description

Sections of SR 56 have recently been resurfaced, but additional safety countermeasures including shoulder widening, edge line rumble strips, and wider edge lines are recommended. Infilling centerline rumble strips are also recommended. Upgraded curve signage is recommend throughout the corridor especially in locations surrounding Comstock Road and Pinto Road. A passing lane westbound from milepost 44 to mile post 43 is recommended to mitigate passing and speeding through the canyon. Driver feedback speed limit signs are also recommended to address speeding. Intersection lighting is recommended at Main Street (Newcastle) and near milepost 42 where there is an unpaved electrical energy facility access and nighttime crashes have occurred. A bus pull out may also be paved near New Castle for the local school buses.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
2 ft Paved Shoulder	Full corridor
6" Edge Line	Full corridor
Edge Line Rumble Strips	Full corridor (approximately 2.5 miles of pre-existing rumble strips)
Centerline Rumble Strips	Wherever not present
Curve Signage	All curves on the corridor
Driver Feedback Speed Limit Signs	Newcastle Main Street
Bus Pullouts	In coordination with school district
Climbing Lanes	MP 44-43
Intersection Lighting	Newcastle Main Street

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install 4-ft Paved Shoulder (both sides of roadway)	12.52	MILE	\$709,000	\$8,876,680
Install 6" Edge Line (Both Sides of Road)	12.52	MILE	\$8,000	\$100,160
Install Edge Line Rumble Strips	10	MILE	\$5,000	\$50,000
Install Centerline Rumble Strips	2	MILE	\$5,000	\$10,000
Install and/or Upgrade Curve Signage to Enhanced Delineations	10	CURVE	\$3,000	\$30,000
Install Driver Feedback Speed Limit Signs	1	EACH	\$11,000	\$11,000
Install Paved Bus Pullout	2	EACH	\$20,000	\$40,000
Widen Roadway to Install Climbing Lane	1	MILE	\$1,070,000	\$1,070,000
Install Intersection Lighting	1	INT	\$35,000	\$35,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$10,222,840</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$13,875,834</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$16,266,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$3,253,200</b>



# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 26



SR 56 from Comstock Road to Main Street (New Castle)

- Enhanced Curve Delineation
- 4 foot Paved Shoulder, Entire Corridor
- Center and Edge Lines, Entire Corridor
- Center and Edge Line Rumble Strips, Entire Corridor
- Dynamic Speed Limit Sign
- Intersection Lighting
- Bus Pullouts
- Passing Lane



## LOCATION CHARACTERISTICS

**Location:** Iron Springs Road

**Project Extents:** SR 56 to Comstock Road

**Roadway Classification:** Major Collector, Federal Aid Route

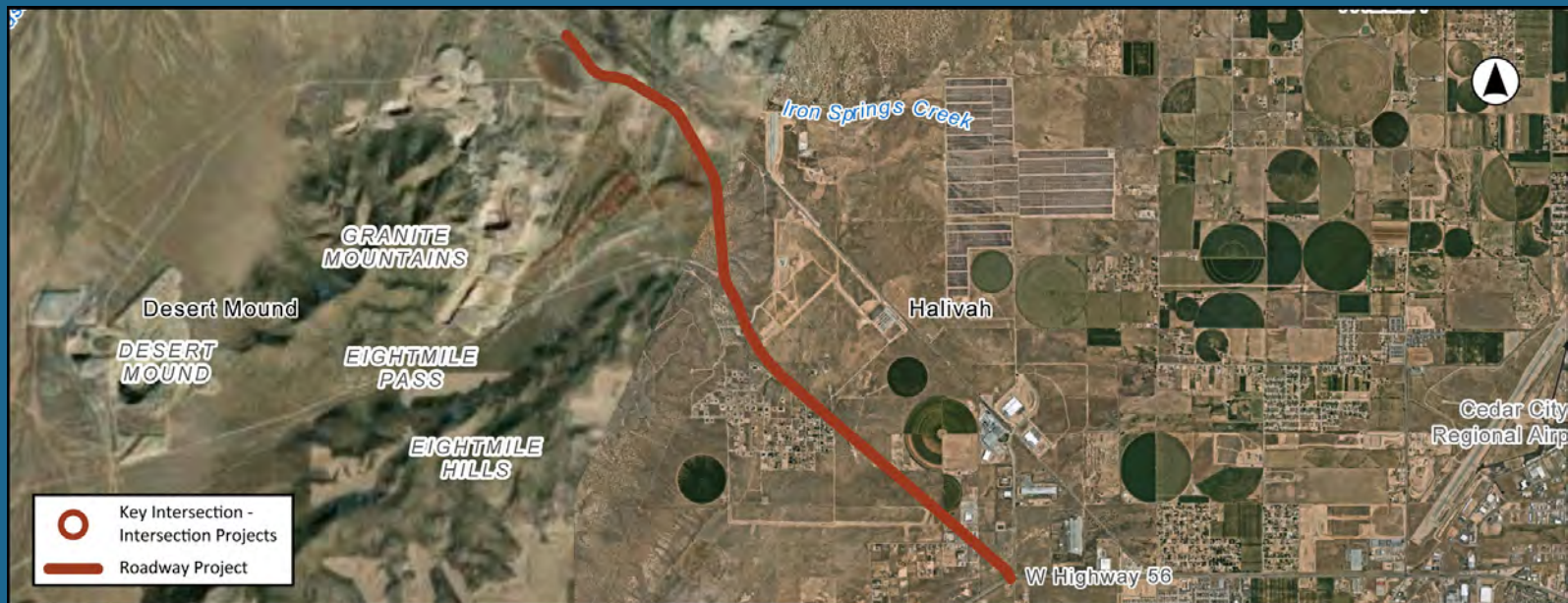
**Jurisdiction(s):** Unincorporated Iron County, Cedar City

**Underserved Community:** Yes

**PROJECT NUMBER:** 27

**Safety Action Plan GFA(s):** West Iron County GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	5.17
Speed Limit:	55 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	1,900
Median Type:	NA
Number of Key Intersections	0











#### Why was this location identified?

High Crash Network:	Yes	✓
High Injury Network:	No	✗
Network Screening:	Yes	✓
Conflict Areas:	No	✗
Risk Characteristics:	No	✗
Community Feedback:	Yes	✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	0
Minor Injury Crashes:	1
Possible Injury Crashes:	2
No Injury/PDO Crashes:	10
<b>Total Crashes:</b>	<b>13</b>
<b>Equivalent Property Damage Crashes:</b>	<b>50</b>













#### Location Crash Type

Fixed-object  <b>31%</b>	Angle  <b>0%</b>	Left Turn  <b>8%</b>	Head-on  <b>0%</b>	Rear-end  <b>0%</b>
Motorist-bicyclist  <b>0%</b>	Motorist-pedestrian  <b>0%</b>	Sideswipe  <b>0%</b>	Front to Rear  <b>0%</b>	Single Vehicle  <b>100%</b>



## LOCATION INFORMATION

PROJECT NUMBER: 27

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	8% Distracted Driving 	0% Teen Driving Safety 	0% Aggressive Driving 	38% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
8% Speed Management 	0% Use of Safety Restraints 	0% Senior Safety 		8% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Major Collector, higher speed (55 mph), two lane roadways that connect many residential areas and have adjacent growth planned may benefit from similar safety countermeasures. This location has an increase growth in the immediate surroundings. Similar locations include:

- SR 130 in Enoch
- Westview Drive
- Lund Highway
- Old Highway 91
- South Mountain Drive

### Comments, Feedback, Ongoing Projects:

- A lot of planned industrial growth; anticipating higher truck traffic than typical
- Vehicle speeding in the area
- Turns from or to Iron Springs are difficult to complete
- Access management should be implemented
- Nighttime visibility concerns.
- High number of animal related crashes; consider animal fencing in areas
- Bicyclist use along Iron Springs Road mixing with high speed vehicle traffic.



## EXISTING CONDITIONS

PROJECT NUMBER: 27

Notes:



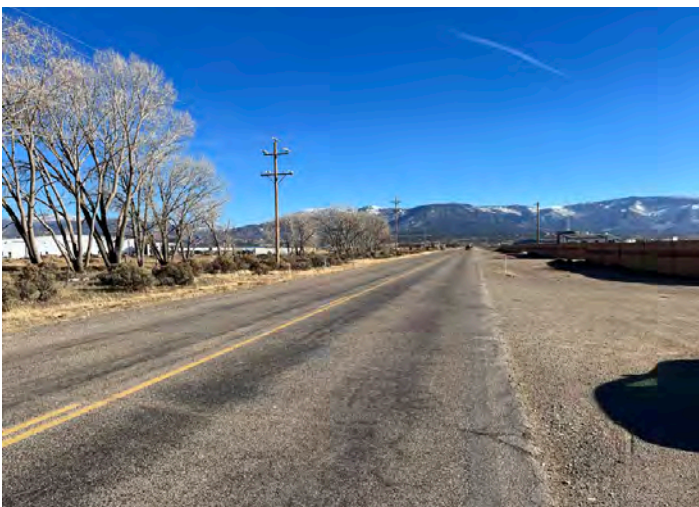
*Iron Springs & SR 56 Intersection*



*Northbound Approaching Bowman's Cowboy Kitchen*



*Typical Approaches to Intersections*



*Temporary Traffic Signal*



*Typical Cross Section (2)*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 27**

## Project Description

Safety countermeasures identified for Iron Springs Road include driver feedback speed limit signs, wider edge lines with rumble strips, and shoulder widening. Along the curves, post-mounted delineators and upgraded curve signage is recommended. At multiple intersections with minor streets intersection lighting and turn lanes are recommended to increase visibility and separate slowing vehicles from mainline traffic. The area is experience residential and commercial (industrial growth) and access management as development continues will be beneficial to enhance safety for all users.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Driver Feedback Speed Limit Signs	5300 West
6" Edge Line	Full corridor
4 ft Paved Shoulder	Full corridor
Edge Line Rumble Strips	Full corridor
Post-Mounted Delineators	Full corridor
Curve Signage	All curves along corridor
Intersection Lighting	6400 West, 6300 West, Iron Springs Resort RV Park Intersection
Right-Turn Lanes	Bowman's Cowboy Kitchen Intersection, 5600 West, New Development Access
Left-Turn Lanes	5600 West, New Development Access, 6300 West, Paiute Avenue

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs	2	EACH	\$11,000	\$22,000
Install 6" Edge Line (Both Sides of Road)	5.15	MILE	\$8,000	\$41,200
Install 4-ft Paved Shoulder (both sides of roadway)	5.15	MILE	\$709,000	\$3,651,350
Install Edge Line Rumble Strips	5.15	MILE	\$5,000	\$25,750
Install Post-Mounted Delineators	5.15	MILE	\$4,000	\$20,600
Install and/or Upgrade Curve Signage to Enhanced Delineations	6	CURVE	\$3,000	\$18,000
Install Intersection Lighting	3	INT	\$35,000	\$105,000
Install Right-Turn Lanes	3	LANE	\$127,000	\$381,000
Install Left-Turn Lanes	4	LANE	\$153,000	\$612,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$4,876,900</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$6,658,815</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$8,790,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$1,758,000</b>



## LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 27**



Iron Springs Road from SR 56 to Comstock Road



### Enhanced Curve Delineation



6" Edge Lines and  
Delineators,  
Entire Corridor



4 foot Pave Shoulder,  
Entire Corridor



Edge Line Rumble  
Strips,  
Entire Corridor



### Turn Lanes



## Intersection Lighting



### Dynamic Speed Limit Sign



## LOCATION CHARACTERISTICS

**PROJECT NUMBER: 28**

**Location:** Lund Highway

**Project Extents:** SR 56 to Midvalley Road

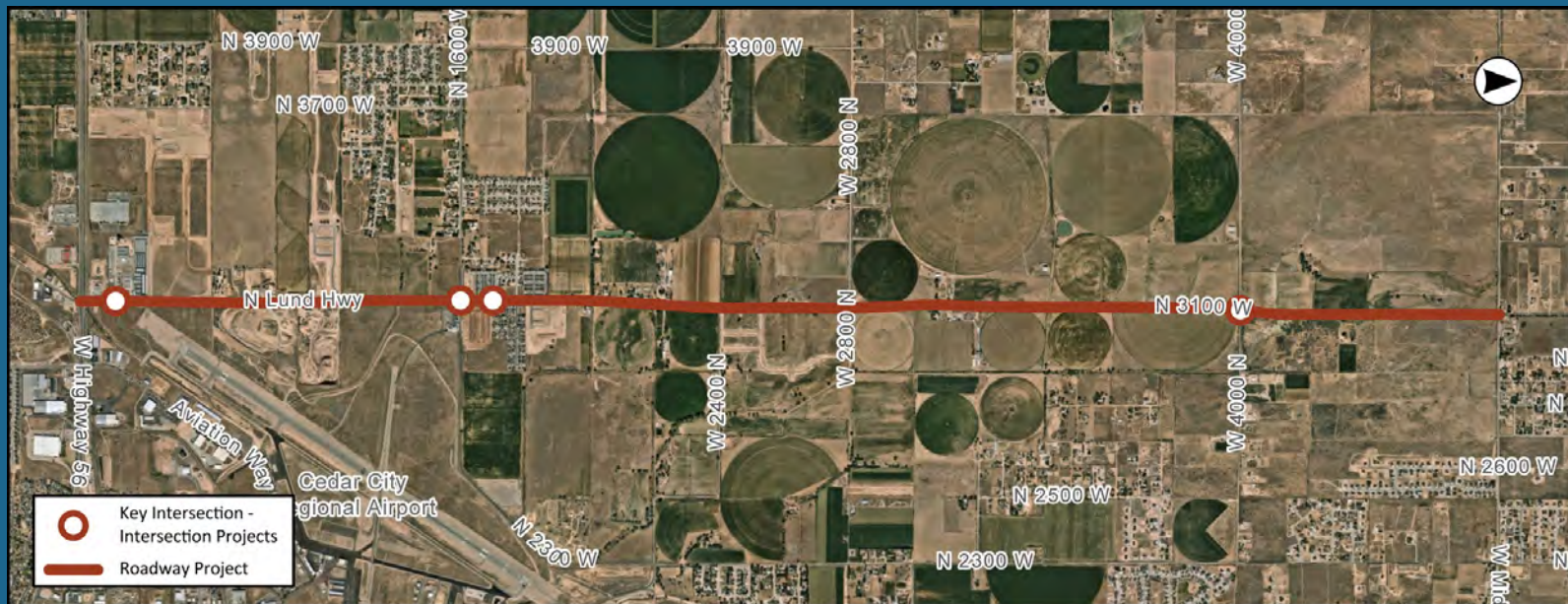
**Roadway Classification:** Local, Federal Aid Route

**Jurisdiction(s):** Unincorporated Iron County, Cedar City

**Underserved Community:** Yes

**Safety Action Plan GFA(s):** West Iron County GFA, Cedar City GFA

**GFA Emphasis Areas:** Roadway Departures, Speed-Related, Teen Drivers



## LOCATION INFORMATION & SAFETY ANALYSIS SUMMARY

### Improvement Location Information & Safety Analysis Summary

#### Segment Characteristics

Length:	5.51
Speed Limit:	50 mph
Roadway Lanes:	2
Daily Traffic Volume (AADT):	2,900
Median Type:	NA
Number of Key Intersections	4











#### Why was this location identified?

High Crash Network:	Yes ✓
High Injury Network:	Yes ✓
Network Screening:	No ✗
Conflict Areas:	No ✗
Risk Characteristics:	No ✗
Community Feedback:	Yes ✓

#### Location Crash History

Crash Severity (2019 - 2023)	
Fatal Crashes:	0
Serious Injury Crashes:	2
Minor Injury Crashes:	7
Possible Injury Crashes	8
No Injury/PDO Crashes:	31
<b>Total Crashes:</b>	<b>48</b>
<b>Equivalent Property Damage Crashes:</b>	<b>432</b>

#### Location Crash Type

Fixed-object  <b>23%</b>	Angle  <b>25%</b>	Left Turn  <b>17%</b>	Head-on  <b>2%</b>	Rear-end  <b>17%</b>
Motorist-bicyclist  <b>0%</b>	Motorist-pedestrian  <b>0%</b>	Sideswipe  <b>4%</b>	Front to Rear  <b>21%</b>	Single Vehicle  <b>48%</b>















## LOCATION INFORMATION

### Key Intersection Crash History

PROJECT NUMBER: 28

Intersection Roadway	Total Crashes	Fatal and Serious Injury Crashes	Angle	Left Turn	Rear End	Head On	Sideswipe	Roadway Departure	Pedestrian	Bike
500 North	3				2			1		
1600 North	14		11	3		1		2		
Acacia Lane	3			1						
4000 North	3	1			1					

Utah Emphasis Areas		
Behavioral	 Aggressive Driving	2%
	 Distracted Driving	15%
	 Impaired Driving	0%
	 Use of Safety Restraints	0%
	 Speed Management	10%
	 Teen Driving Safety	27%
	 Senior Safety	13%
Crash Types	 Roadway Departure Crashes	25%
	 Intersection Safety	46%
Vulnerable Users	 Motorcycle Safety	4%
	 Pedestrian Safety	0%
	 Bicycle Safety	0%

### Other Applicable Locations/Scenarios:

Major Collector, higher speed (50 mph), two lane roadways that connect many residential areas and have adjacent growth planned may benefit from similar safety countermeasures. This location has an increase growth in the immediate surroundings. Similar locations include:

- SR 130 in Enoch
- Westview Drive
- Iron Springs Road
- Old Highway 91
- South Mountain Drive
- Cross Hollow Road
- 2300 West
- Bulldog Road
- Airport Road

### Comments, Feedback, Ongoing Projects:

- Area has a lot of residential growth planned and currently in construction
- All way stop or signal warrant at the intersection with Midvalley Road
- High vehicle speeds through the area
- Popular road bicycling route
- Nighttime visibility concerns
- Intersection with 1600 North becoming very busy



## EXISTING CONDITIONS

PROJECT NUMBER: 28



*Cross Section north of 1775 North*

Notes:



*Cross Section north of SR 56*



*Curves north of 2800 North*



*Northbound Approaching Acacia Lane*



*Northbound Approaching Midvalley Road*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 28**

## Project Description

This project includes safety countermeasures to mitigate speeding, roadway departure, and intersection related crashes. Improvements typical to rural highways include shoulder widening, wider edge line striping, and edge line rumble strips. Driver feedback speed limit signs and advanced stop-controlled intersection may help mitigate vehicle speeds along the roadway. Additional intersection lighting and transverse rumble strips on the minor approaches are recommended to increase driver awareness at intersections with Lund Highway.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Driver Feedback Speed Limit Signs	Between: Midvalley Road & 4000 North, 4000 North & 2800 North (2 signs), 2800 North & 2400 North, 2400 North & 1600 North, 1600 North & Highway 56
4 ft Paved Shoulders	Entire corridor
6" Edge Lines	Entire corridor
Edge Line Rumble Strips	Entire corridor
Bicycle Lanes	Highway 56 to 1600 North
Intersection Lighting	Pointe West Way, 1600 North, Sycamore Lane/1775 North, 2400 North, 2800 North, 4000 North
Stop-Control Signage	Pointe West Way, 1600 North, Sycamore Lane/1775 North, 2400 North, 2800 North, 4000 North
Transverse Rumble Strips on Minor Approaches	1600 North, 2800 North, 4000 North

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs	6	EACH	\$11,000	\$66,000
Install 4-ft Paved Shoulder (both sides of roadway)	5.56	MILE	\$709,000	\$3,942,040
Install 6" Edge Line (Both Sides of Road)	5.56	MILE	\$8,000	\$44,480
Install Edge Line Rumble Strips	5.56	MILE	\$5,000	\$27,800
Install Bicycle Lanes	1.45	MILE	\$44,000	\$63,800
Install Edge Line Rumble Strips	5.56	MILE	\$5,000	\$27,800
Install Intersection Lighting	6	INT	\$35,000	\$210,000
Stop-Control Intersection Signage	6	INT	\$4,000	\$24,000
Install Transverse Rumble Strips on Minor Approach	6	LEG	\$1,000	\$6,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$4,411,920</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$6,031,092</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$7,962,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$1,592,400</b>




## LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 28**



Lund Highway from SR 56 to Midvalley Road

- | Corridor  |  | Pointe W Way  |                           | 1600 North  |                            | 1775 North  |                            | 2400 North  |                            | 2800 North  |                            | 4000 North  |                            |
|---|--|---|---------------------------|---|----------------------------|---|----------------------------|---|----------------------------|---|----------------------------|---|----------------------------|
|  | 4 foot Paved Shoulder, Entire Corridor   |  | Dynamic Speed Limit Signs |  | Intersection Lighting      |  | Transverse Rumble Strips   |  | Intersection Lighting      |  | Intersection Lighting      |  | Transverse Rumble Strips   |
|  | 6" Edge Lines, Entire Corridor           |  | Bike Lane                 |  | Intersection Ahead Signage |  | Intersection Lighting      |  | Intersection Ahead Signage |  | Intersection Ahead Signage |  | Intersection Ahead Signage |
|  | Edge Line Rumble Strips, Entire Corridor |  |                           |  | Intersection Ahead Signage |  | Intersection Ahead Signage |  | Intersection Ahead Signage |  | Intersection Ahead Signage |  | Intersection Ahead Signage |



















## LOCATION INFORMATION

PROJECT NUMBER: 29

Utah Emphasis Areas						
Behavioral				Crash Types	Vulnerable Users	
0% Impaired Driving 	14% Distracted Driving 	29% Teen Driving Safety 	0% Aggressive Driving 	71% Roadway Departure Crashes 	0% Motorcycle Safety 	0% Pedestrian Safety 
71% Speed Management 	0% Use of Safety Restraints 	0% Senior Safety 		0% Intersection Safety 	0% Bicycle Safety 	

### Other Applicable Locations/Scenarios:

Minor collector, higher speed (40 or 50 mph), two lane roadways may benefit from similar safety countermeasures. This location includes horizontal curves and numerous access driveways or minor road intersections. Similar locations include:

- Westview Drive
- Old Highway 91
- Iron Springs Road
- 2300 West
- Airport Road
- Bulldog Road
- Bench Road
- SR 271
- SR 18
- SR 56
- Old Iron Town Road
- Comstock Road
- Bumblebee Lane

### Comments, Feedback, Ongoing Projects:

- Roadway traffic is increasing due to growth in the area
- Speeding along the corridor
- Shoulders often used for walking or bicyclists
- Visibility limited at intersections



## EXISTING CONDITIONS

PROJECT NUMBER: 29

Notes:



*Chevron Signs*



*Curve near 5300 North*



*Curve Warnings north of 7000 North*



*Northbound from 5400 North*



*Typical Cross Section*



# LOCATION RECOMMENDATIONS

**PROJECT NUMBER: 29**

## Project Description

Safety countermeasures to encourage safer speeds transversing curves include driver feedback speed limit signs in both directions. Widening shoulders, installing edge line rumble strips, and installing wider edge line striping help mitigate roadway departure crashes. Several unpaved roadways intersect Lund Highway at an angle and may benefit from additional signage or delineation at intersections. Delineating each access allows vehicles traveling on Lund Highway to better anticipate intersecting traffic. Installing (and upgrading existing) curve signage at the curves north of 7000 North is proposed. As development continues to grow in the area, more stop-controlled intersection countermeasures or turn lanes should be considered.

Note, improvements for the Midvalley Road and Lund Highway intersection are included on the Midvalley Road project information sheet.

*This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.*

Recommended Improvements	Location
Driver Feedback Speed limit Signs	5400 North curve
4 ft Paved Shoulder	Entire corridor
6" Edge Lines	Entire Corridor
Post-Mounted Delineators	Entire Corridor
Edge Line Rumble Strips	Entire corridor
Curve Signage	Both curves north of 7000 North

## Opinion of Probable Cost

Improvement	QTY.	Unit	Unit Price	Item Cost
Install Driver Feedback Speed Limit Signs on Rural Curves	2	EACH	\$11,000	\$22,000
Install 4-ft Paved Shoulder (both sides of roadway)	4.62	MILE	\$709,000	\$3,275,580
Install 6" Edge Line (Both Sides of Road)	4.62	MILE	\$8,000	\$36,960
Install Post-Mounted Delineators	4.62	MILE	\$4,000	\$18,480
Install Edge Line Rumble Strips	4.62	MILE	\$5,000	\$23,100
Install and/or Upgrade Curve Signage to Enhanced Delineations	2	CURVE	\$3,000	\$6,000

1: Includes mobilization, traffic control (5%), and items not estimated / contingency (30%). Mobilization is 10% +/- of the subtotal with minimum of \$2,500 and a maximum of \$75,000.

2: Includes preconstruction engineering/design (12%) and construction engineering/management (15%). Utilities and right of way not included and should be evaluate during feasibility study/ design.

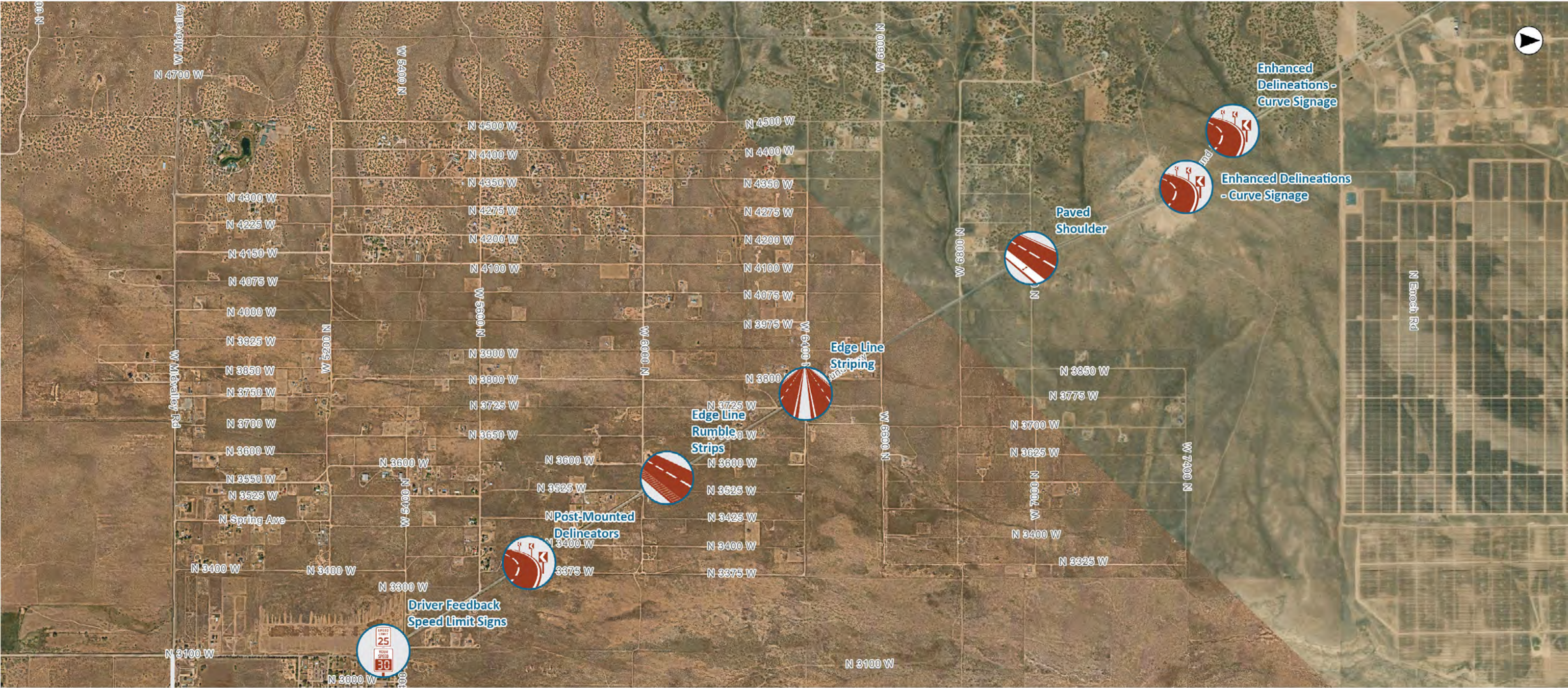
3: 20% of estimated project total toward Safe Streets for All Implementation Grants.

<b>Improvement Subtotal</b>	<b>\$3,382,120</b>
<b>Estimated Construction Cost Total<sup>1</sup></b>	<b>\$4,640,862</b>
<b>Estimated Project Total<sup>2</sup></b>	<b>\$6,126,000</b>
<b>Local Match<sup>3</sup></b>	<b>\$1,225,200</b>

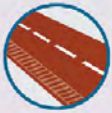






# LOCATION RECOMMENDATIONS

PROJECT NUMBER: 29



Lund Highway from Midvalley Road to 8000 North

-  Edge Line Rumble Strips, Entire Corridor
-  6" Edge Line, Entire Corridor
-  4 foot Paved Shoulder Entire Corridor
-  Dynamic Speed Limit Sign
-  Enhanced Delineations, Curves and Driveways