



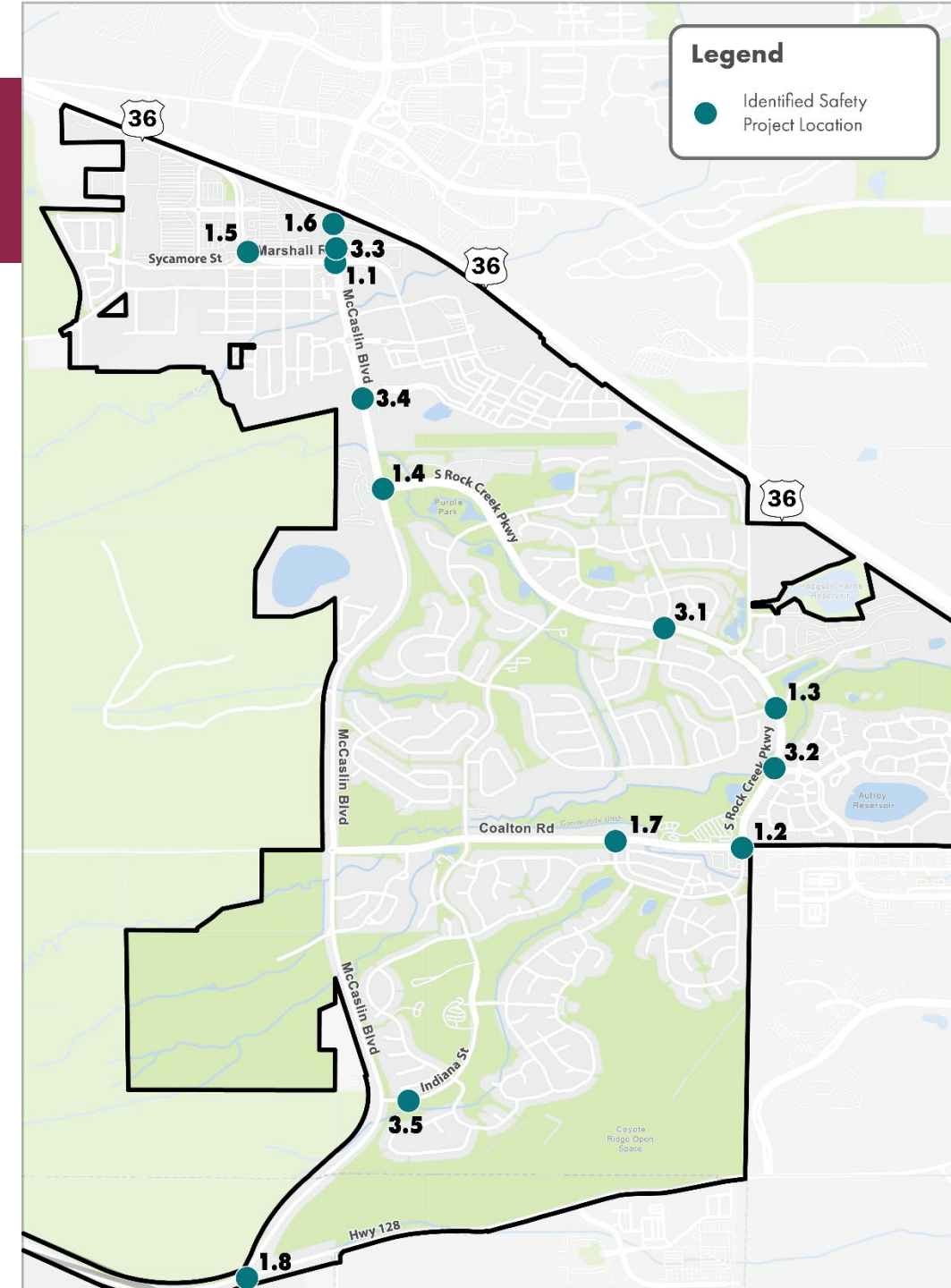
APPENDIX D

PROJECT ANALYSIS SHEETS

Location-Specific Projects

The subsequent Project Sheets detail the recommendations at each location identified in Safer Roads Strategy 1 and Strategy 3. A crash analysis was completed and is presented as part of the Project Sheets for each location on the High Injury Network.

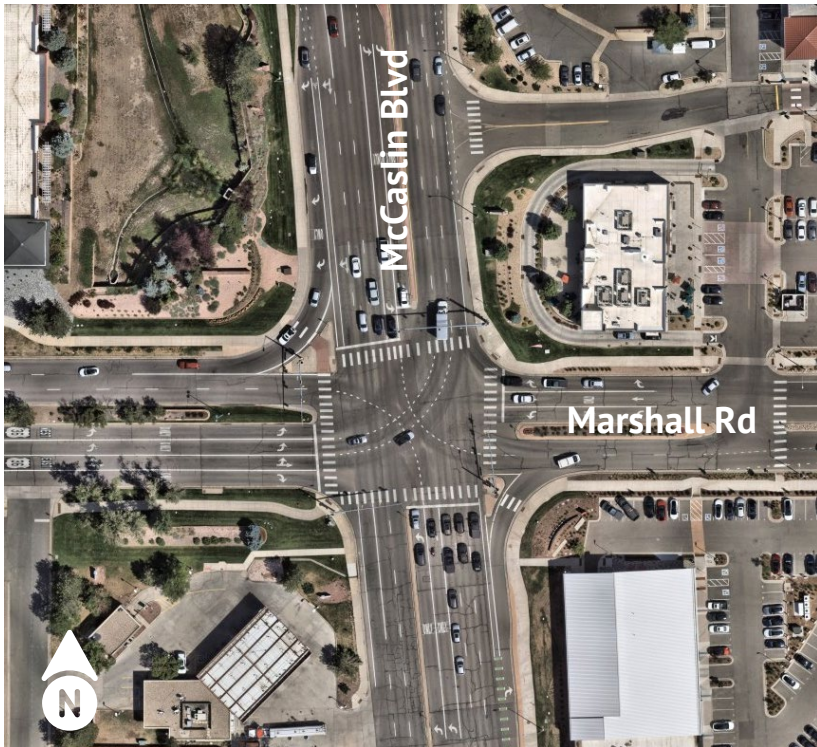
<u>1.1 McCaslin Blvd & Marshall Rd.....</u>	<u>2</u>
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SR1.1 McCaslin Boulevard & Marshall Road

Observations/Analysis

Traffic Control: Signal



- A serious injury approach turn crash occurred at McCaslin Boulevard & Marshall Road on October 25, 2013 when a northbound left-turning vehicle failed to yield right-of-way and was struck by a southbound vehicle traveling straight.
- **Northbound – six lane approach**
 - Two left-turn lanes
 - Three thru lanes
 - One right-turn lane
- **Southbound – six lane approach**
 - Two left-turn lanes
 - Three thru lanes
 - One right-turn lane
- **Eastbound – four lane approach**
 - Two left-turn lanes
 - One left/thru lane
 - One right-turn lane
- **Westbound – three lane approach**
 - Left-turn lane
 - Thru lane
 - Right-turn lane

Total Crashes: 93

Serious Injury Crashes: 1

Minor Injury Crashes: 4

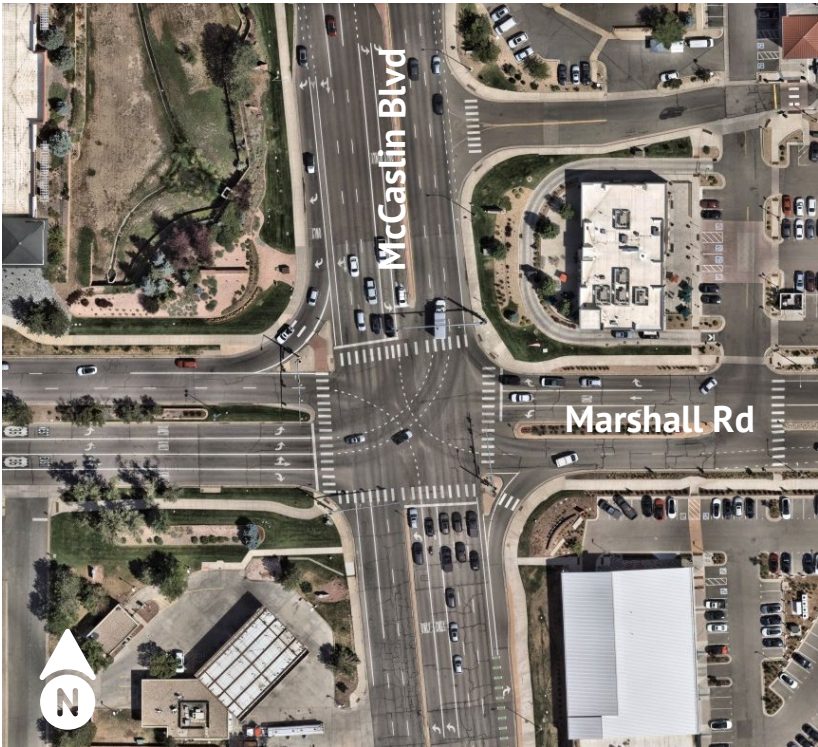
Left-turn Operations:

Northbound	Southbound	Eastbound	Westbound
Protected	Protected	Protected	Protected

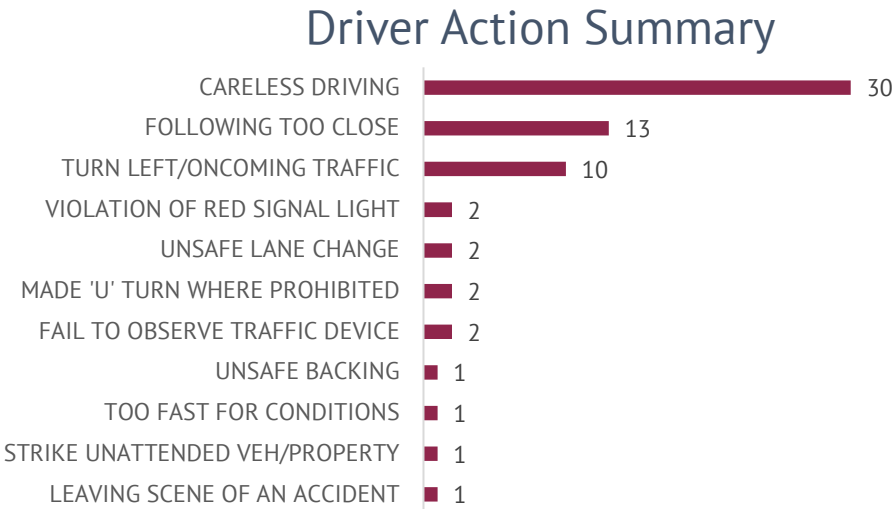
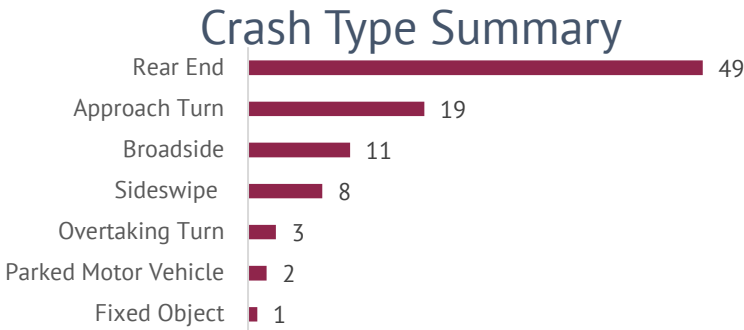
SR1.1 McCaslin Boulevard & Marshall Road

Observations/Analysis

Traffic Control: Signal



Total Crashes: 93
Serious Injury Crashes: 1
Minor Injury Crashes: 4



Left-turn Operations

Northbound	Southbound	Eastbound	Westbound
Protected	Protected	Protected	Protected

Crash Type Directionality

Crash Type	Direction	# Crashes
Rear End	East	22
	North	12
	South	14
	West	1

Crash Type	Direction	# Crashes
Broadside	East	3
	North	1
	South	6
	West	1

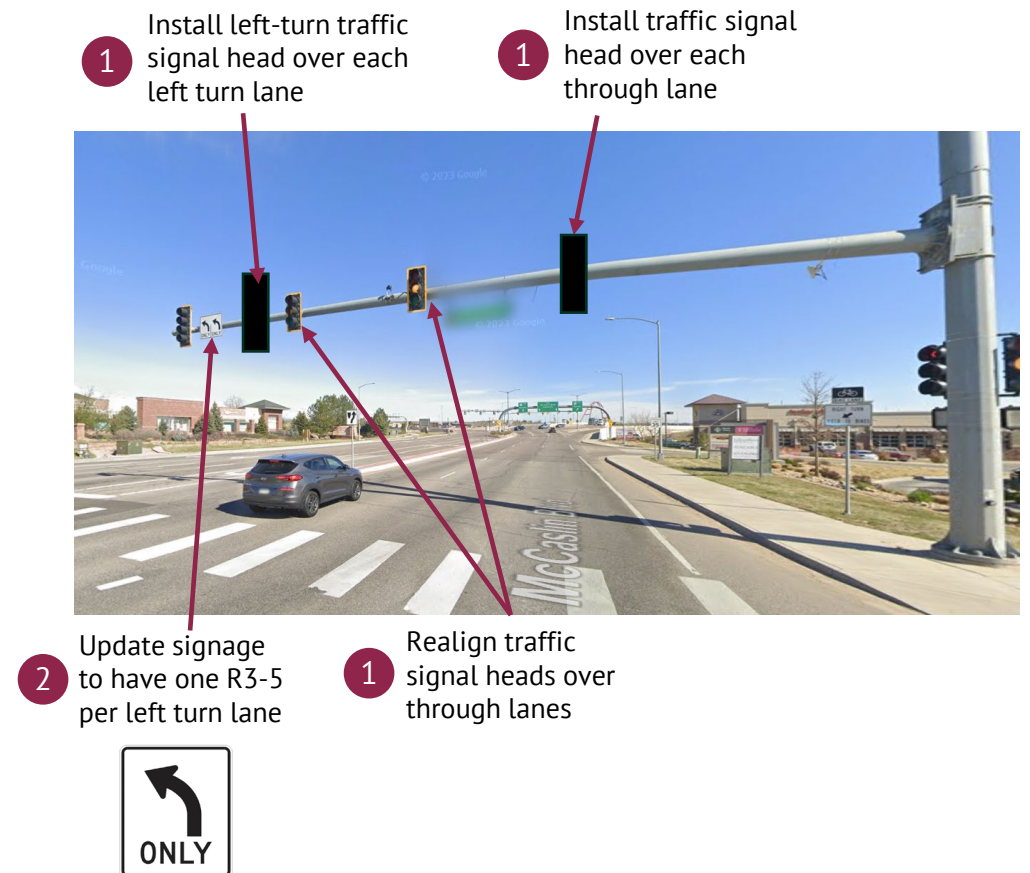
Crash Type	Direction	# Crashes
Approach Turn	North	15
	South	3
	West	1

Note: 12 out of 15 approach turn crashes occurred in 2013 and 2014; the other 3 were in 2018 and 2019. The northbound and southbound AM and PM signal operations are operating as protected in Spring 2025.

SR1.1 McCaslin Boulevard & Marshall Road

Recommendations

1. Modify signal to install one traffic signal head indication over each travel lane for northbound and southbound approaches
2. Upgrade intersection lane control signs to have one R3-5 over for each left-turn lane
3. Evaluate upgrading pedestrian ramps to directional pedestrian ramps on SW corner
4. Evaluate raised pedestrian crossing across channelized right-turn lane
5. Check northbound/southbound left-turn phasing
6. Implement Leading Pedestrian Interval or "No Right Turn on Red" sign (similar to Louisville) for south crosswalk (north crosswalk to be removed)
7. Analyze location for potential systemwide safety improvements, such as treatments to enhance bicycle and pedestrian comfort, and implement applicable countermeasures



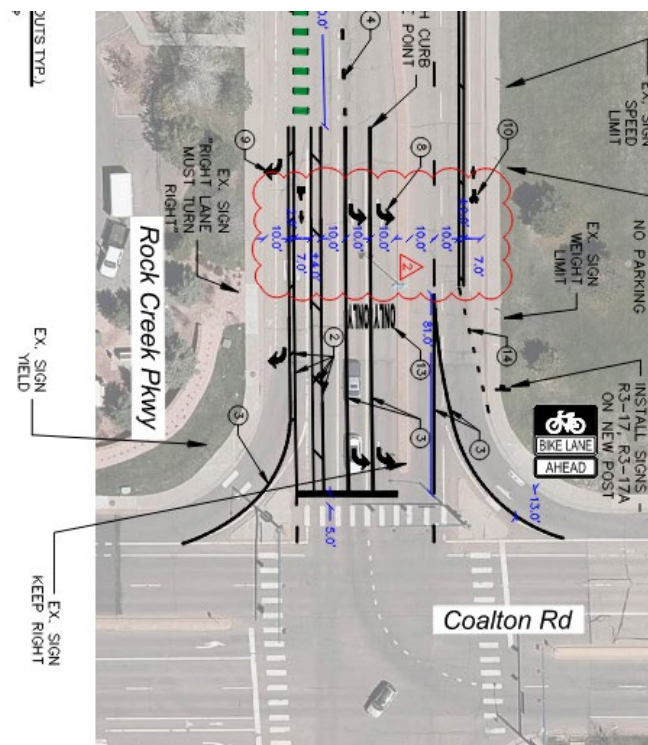
SR1.2 Rock Creek Parkway & Coalton Road

Observations/Analysis

Traffic Control: Signal



Rock Creek Parkway Design Plans



- **Northbound – three lane approach**
 - Left-turn lane
 - Thru lane
 - Right-turn lane
- **Southbound – four lane approach**
 - Dual left-turn lane
 - Thru lane
 - Right-turn lane
- **Eastbound – five lane approach**
 - Left-turn lane
 - Two thru lanes
 - Right-turn lane
- **Westbound – five lane approach**
 - Left-turn lane
 - Two thru lanes
 - Right-turn lane

Total Crashes: 26

Serious Injury Crashes: 0

Minor Injury Crashes: 4

Left-turn Operations:

Northbound	Southbound	Eastbound	Westbound
Permitted/Protected	Permitted/Protected	Permitted/Protected	Permitted/Protected

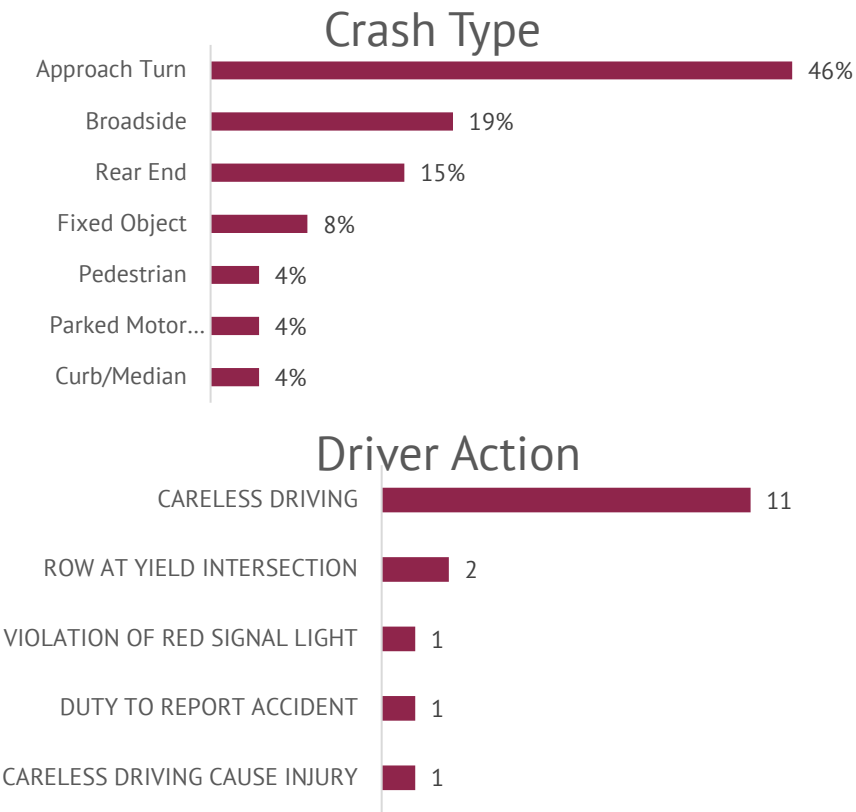
SR1.2 Rock Creek Parkway & Coalton Road

Observations/Analysis

Traffic Control: Signal



Total Crashes: 26
Serious Injury Crashes: 0
Minor Injury Crashes: 4



Crash Type Directionality

Crash Type	Direction	# Crashes
Approach Turn	East	4
	North	1
	South	7
Crash Type	Direction	# Crashes
Broadside	East	2
	South	2
	West	1
Crash Type	Direction	# Crashes
Rear End	South	2
	West	2

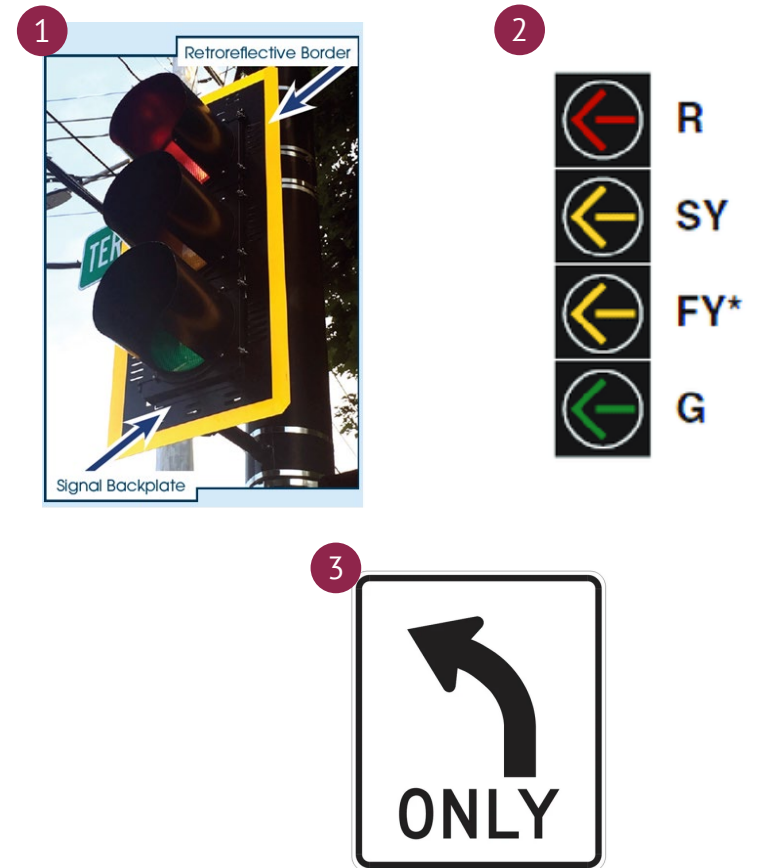
Left-turn Operations:

Northbound	Southbound	Eastbound	Westbound
Permitted/Protected	Permitted/Protected	Permitted/Protected	Permitted/Protected

SR1.2 Rock Creek Parkway & Coalton Road

Recommendations

1. Upgrade eastbound and westbound "doghouse" style signal heads to 4-section FYA
2. Install left-turn (R3-5) signage on eastbound, westbound, and southbound approaches
3. Install raised crossings at channelized right-turn islands in northeast and northwest corners
4. Evaluate protected-only by time of day for dual southbound left-turn
5. Install ADA-compliant and directional curb ramps
6. Analyze location for potential systemwide safety improvements, such as treatments to enhance bicycle and pedestrian comfort, and implement applicable countermeasures



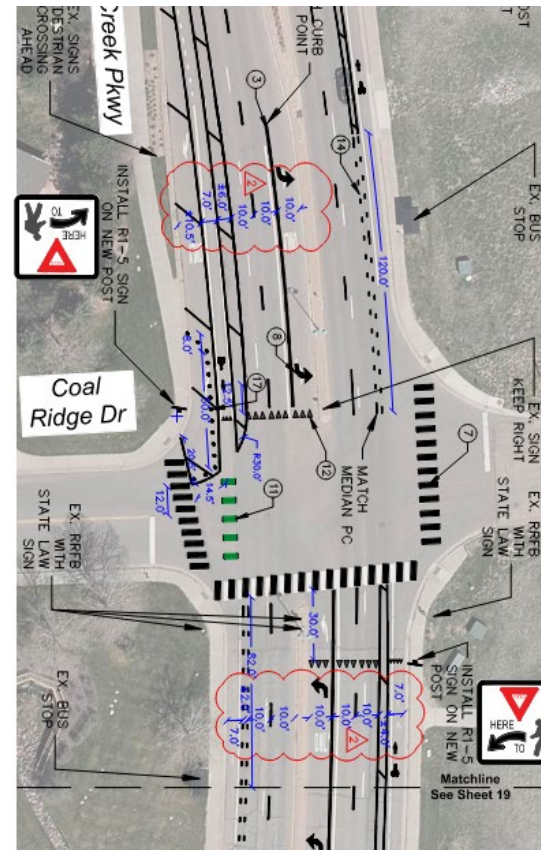
SR1.3 Rock Creek Parkway & Honey Creek/Coal Ridge

Observations/Analysis

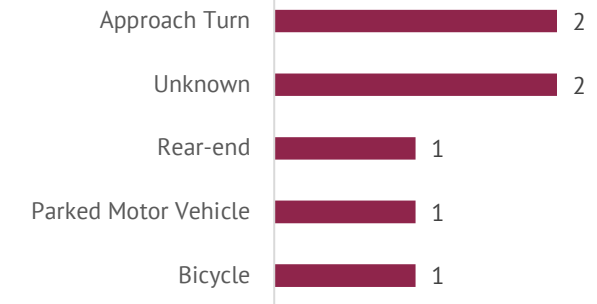
Traffic Control: Unsignalized with Rectangular Rapid Flashing Beacon (RRFB)



Rock Creek Parkway Design Plans



Crash Type



- **Northbound – three lane approach**

- Left-turn lane
- Thru lane
- Thru/right

- **Westbound – one lane approach**

- Left/thru/right

- **Southbound – three lane approach**

- Left-turn lane
- Thru lane
- Thru/right

- **Eastbound – one lane approach**

- Left/thru/right

Total Crashes: 7

Serious Injury Crashes: 1

Minor Injury Crashes: 1

SR1.3 Rock Creek Parkway & Honey Creek/Coal Ridge

Recommendations

1. Remove "State Law Yield" signs and install W11-15 (combined bicycle/pedestrian warning sign) with W16-7PL/W16-7PR (down left/down right warning sign) at Rectangular Rapid Flashing Beacon crossing location
2. Install ADA-compliant curb ramps on the northwest and southwest corners
3. Analyze location for potential systemwide safety improvements, such as treatments to enhance bicycle and pedestrian comfort, and implement applicable countermeasures



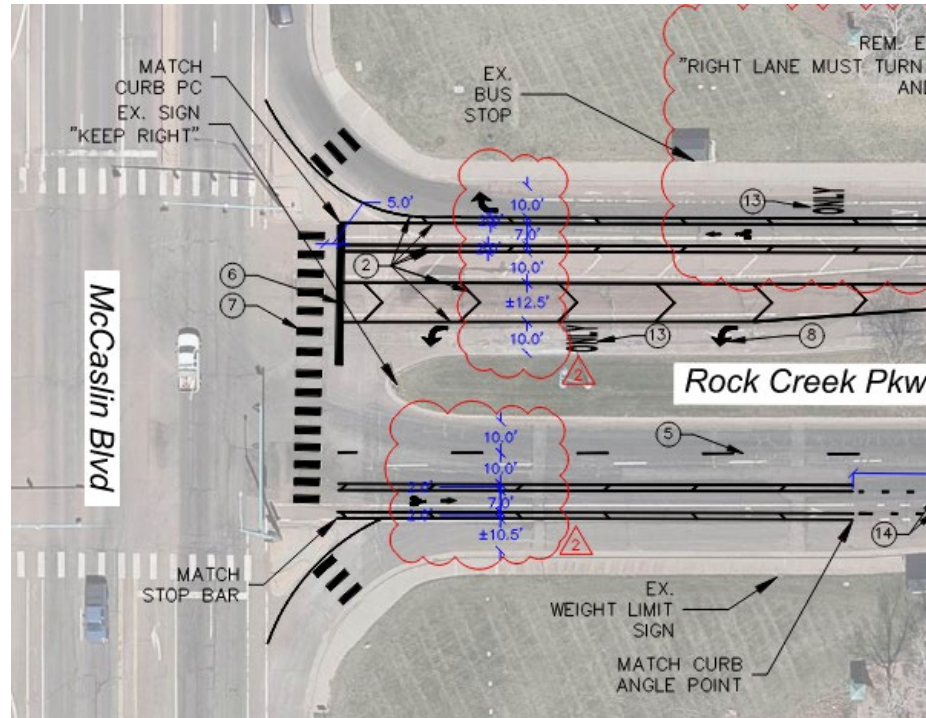
SR1.4 McCaslin Boulevard & Rock Creek Parkway

Observations/Analysis

Traffic Control: Signal



Rock Creek Parkway Design Plans



- **Northbound – 3 lane approach**
 - Left-turn lane
 - Two dual lanes
 - Right-turn lane
- **Southbound – 3 lane approach**
 - Left-turn lane
 - Two dual lanes
 - Right-turn lane
- **Eastbound – 3 lane approach**
 - Left-turn lane
 - Thru lane
 - Right-turn slip lane
- **Westbound – 3 lane approach**
 - Left-turn lane
 - Thru lane
 - Right-turn lane

Total Crashes: 15

Serious Injury Crashes: 0

Minor Injury Crashes: 2

Left-turn Operations:

Northbound	Southbound	Eastbound	Westbound
Permitted/Protected	Permitted/Protected	Permitted	Permitted

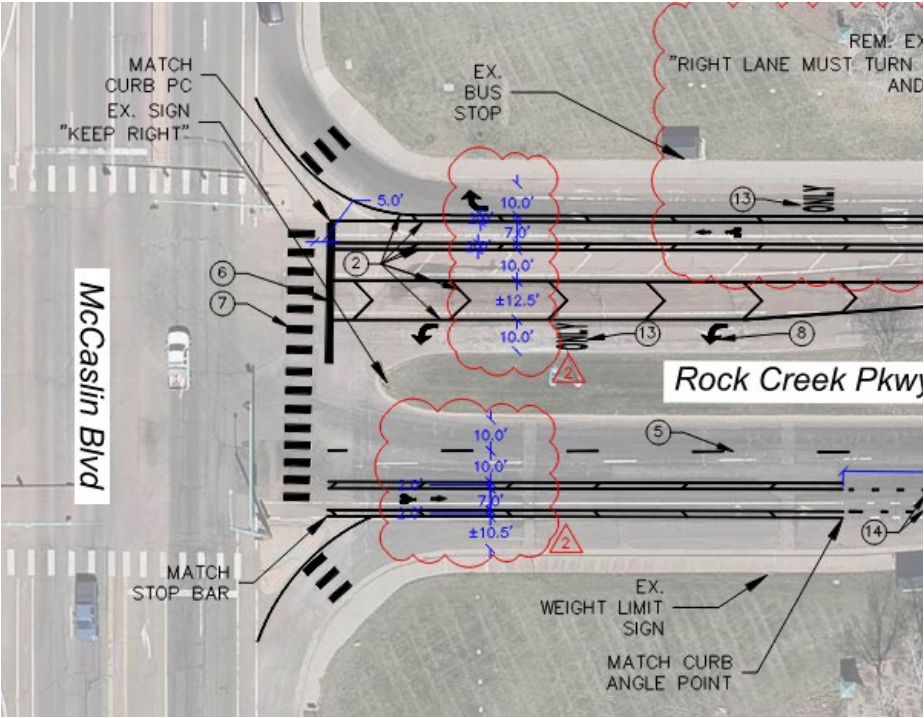
SR1.4 McCaslin Boulevard & Rock Creek Parkway

Observations/Analysis

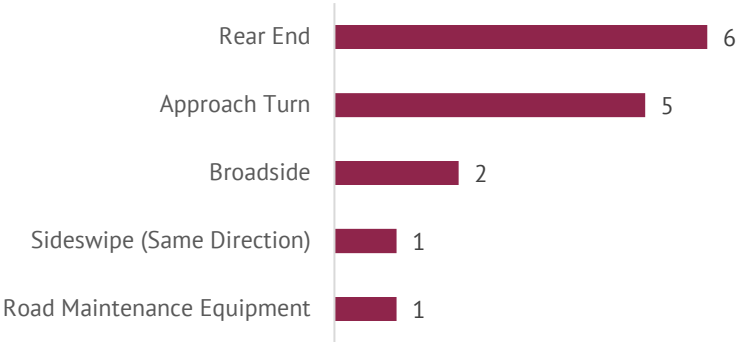
Traffic Control: Signal



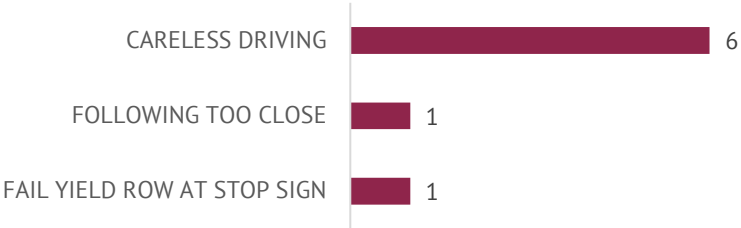
Rock Creek Parkway Design Plans



Crash Type



Driver Action



Total Crashes: 15
Serious Injury Crashes: 0
Minor Injury Crashes: 2

Left-turn Operations:

Northbound	Southbound	Eastbound	Westbound
Permitted/Protected	Permitted/Protected	Permitted	Permitted

SR1.4 McCaslin Boulevard & Rock Creek Parkway

Recommendations

1. Update "doghouse" style signal heads to 4-section FYA
2. Install raised crossings at channelized right-turn islands on northeast, northwest, southeast, and southwest corners
3. Install additional traffic signal head to northbound through lane
4. Analyze location for potential systemwide safety improvements, such as treatments to enhance bicycle and pedestrian comfort, and implement applicable countermeasures



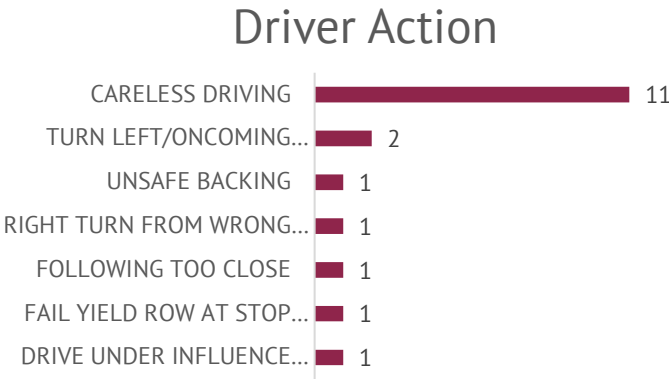
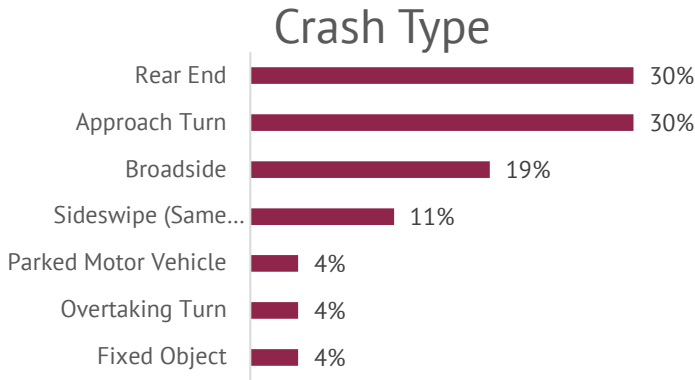
SR1.5 Sycamore Street & Marshall Road

Observations/Analysis

Traffic Control: Signal



Total Crashes: 27
Serious Injury Crashes: 0
Minor Injury Crashes: 4



- ### Crash Type Directionality
- Northbound (Sycamore) – two lane approach**
 - Left/thru lane
 - Right only lane
 - Southbound (Sycamore) – two lane approach**
 - Left only lane
 - Thru/right lane
 - Eastbound (Marshall) – three lane approach**
 - Left only lane
 - Through lane
 - Through/right lane
 - Bike lane
 - Westbound (Marshall) – four lane approach**
 - Left only lane
 - Two thru lanes
 - Right only lane

Left-turn Operations: Sycamore Street (Northbound/Southbound); Marshall Road (Eastbound/Westbound)

Northbound	Southbound	Eastbound	Westbound
Permitted	Permitted/Protected	Permitted/Protected	Permitted/Protected

SR1.5 Sycamore Street & Marshall Road

Recommendations

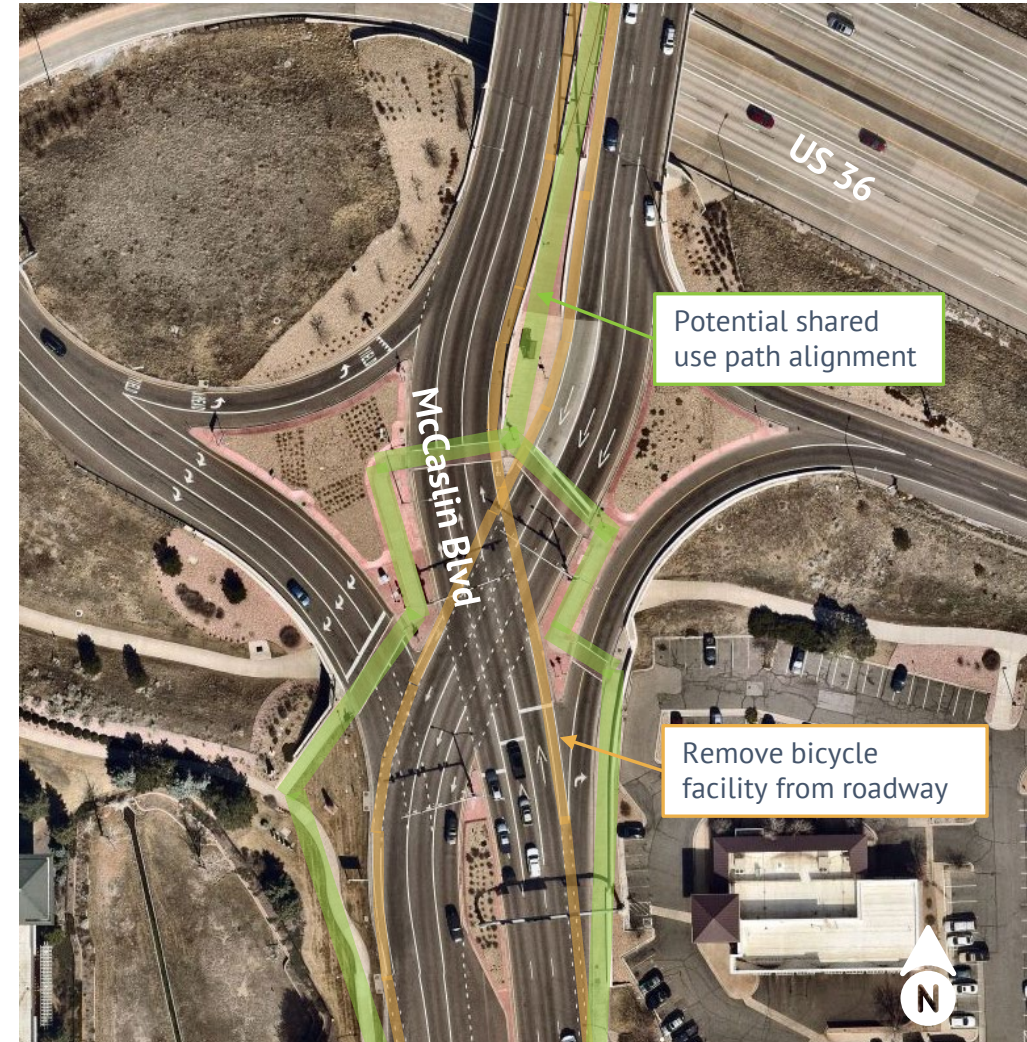
1. Update southbound, eastbound, and westbound left-turn "doghouse" style signal heads to 4-section FYA
2. Add left-only signage for westbound
3. Shift traffic signal indications to be over the center of the northbound receiving lanes
4. Analyze location for potential systemwide safety improvements, such as treatments to enhance bicycle and pedestrian comfort, and implement applicable countermeasures



SR1.6 US 36 Interchange

Recommendations

1. Construct a bicycle/pedestrian shared use path at the US 36 interchange and connect it to the McCaslin Boulevard shared use path underpass



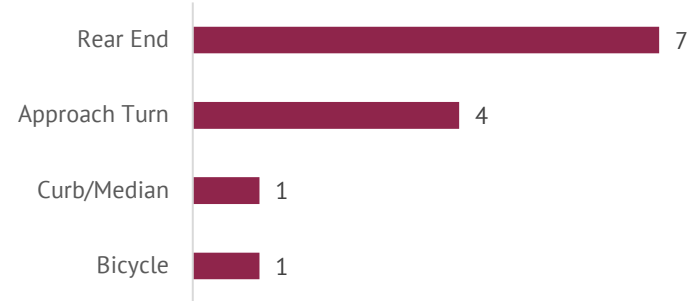
SR1.7 Rock Creek Circle & Coalton Road

Observations/Analysis

Traffic Control: Signal



Crash Type



Driver Action



- **Northbound – two approach lanes**
 - Left-turn lane
 - Right-turn lane
- **Eastbound – three approach lanes**
 - Two thru lanes
 - Right-turn lane
- **Westbound – three approach lanes**
 - Left-turn lane
 - Two thru lanes

Total Crashes: 13

Serious Injury Crashes: 1

Minor Injury Crashes: 0

Left-turn Operations:

Northbound	Eastbound	Westbound
N/A	N/A	Permitted

SR1.7 Rock Creek Circle & Coalton Road

Recommendations

1. Install directional and ADA-compliant ramps
2. Analyze location for potential systemwide safety improvements, such as treatments to enhance bicycle and pedestrian comfort, and implement applicable countermeasures

SR1.8 McCaslin Boulevard & CO 128

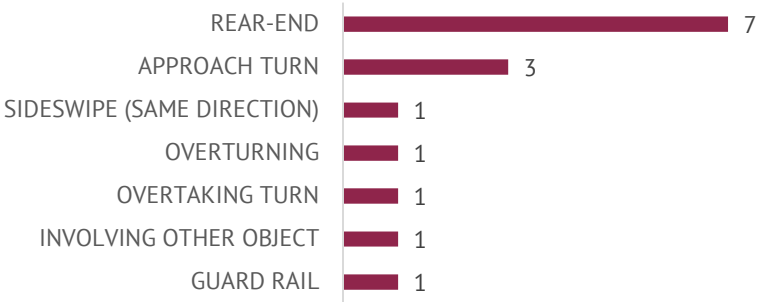
Observations/Analysis

Traffic Control: Signal

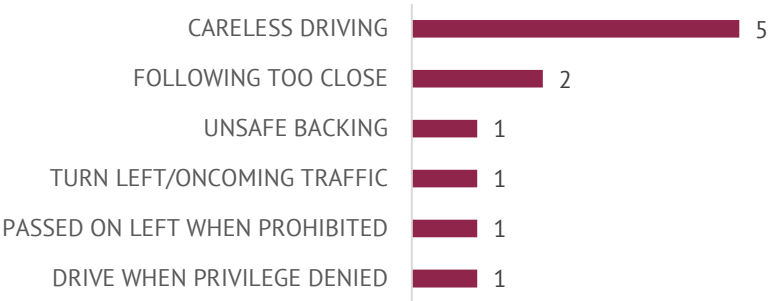


Total Crashes: 15
Serious Injury Crashes: 0
Minor Injury Crashes: 2

Crash Type



Driver Action



- **Southbound – two lane approach**
 - 128 WB slip lane
 - Left-turn lane
- **Eastbound – two lane approach**
 - Left-turn lane
 - Thru lane
- **Westbound – two lane approach**
 - McCaslin NB slip lane
 - Through lane

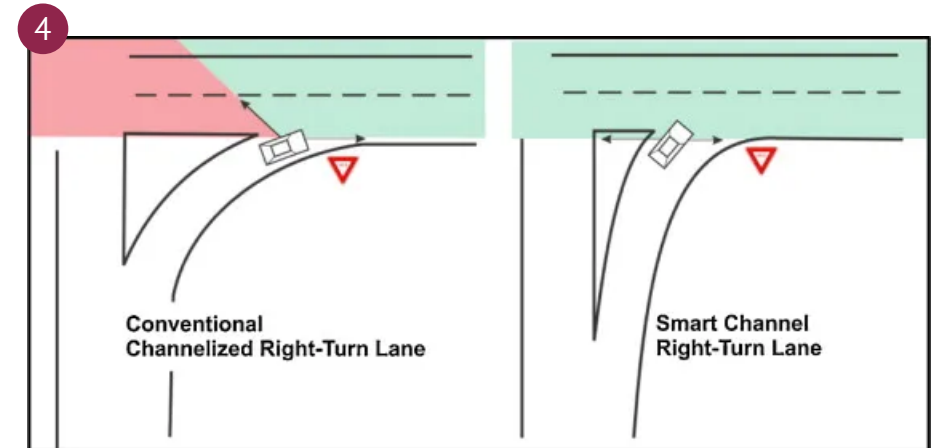
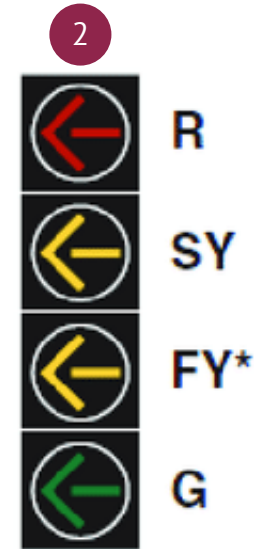
Left-turn Operations:

Southbound	Eastbound	Westbound
N/A	Permitted/Protected	N/A

SR1.8 McCaslin Boulevard & CO 128

Recommendations

1. Update "doghouse" style signal head to 4-section FYA
2. Update mast arm signal
3. Change geometry of southbound slip lane to 30-60-90
4. Analyze location for potential systemwide safety improvements, such as treatments to enhance bicycle and pedestrian comfort, and implement applicable countermeasures



SR3.1 Rock Creek Parkway & Coal Creek Drive

Recommendations

1. Replace state law signs with W11-15 signage



2. Add “Arrow Down Right” sign under the Rectangular Rapid Flashing Beacon located on the center median



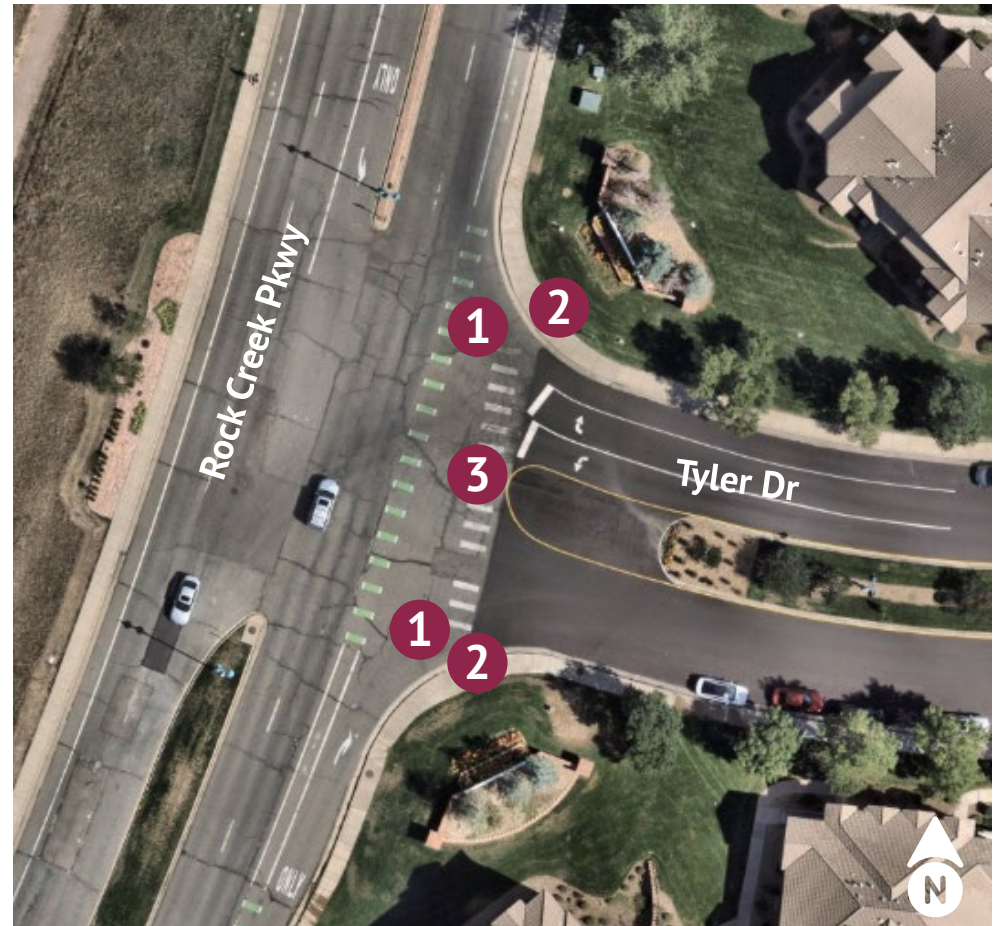
3. Remove existing cross walk on the south leg or install Rectangular Rapid Flashing Beacon on south crosswalk



SR3.2 Rock Creek Parkway & Tyler Drive

Recommendations

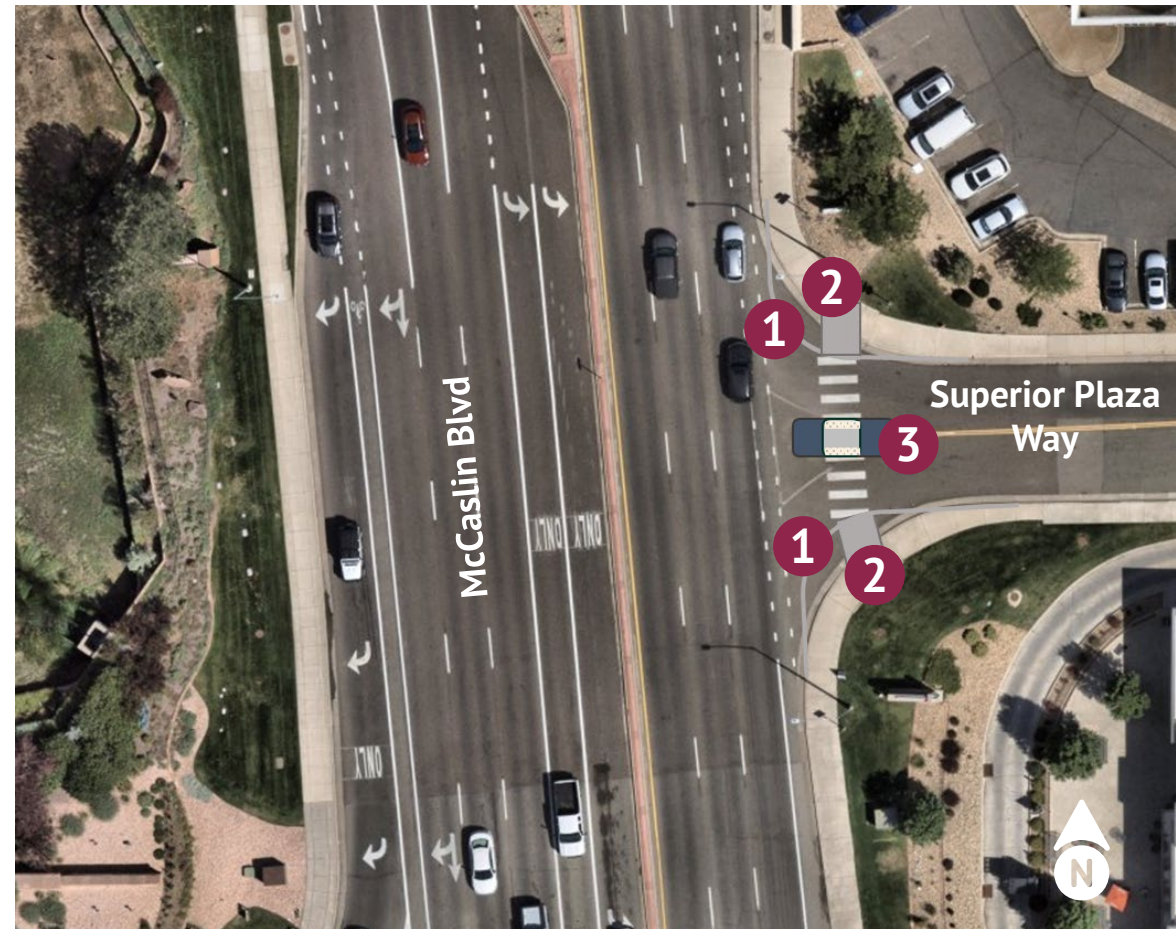
1. Install bulbouts (using paint and post or concrete) on the northeast and southeast corners to slow turning vehicles and shorten pedestrian crossing distance
2. Install directional pedestrian ramps on the northeast and southeast corners
3. Extend concrete median to provide pedestrian refuge area for a two stage crossing
4. Add stop bar for westbound approach



SR3.3 McCaslin Boulevard & Superior Plaza Way

Recommendations

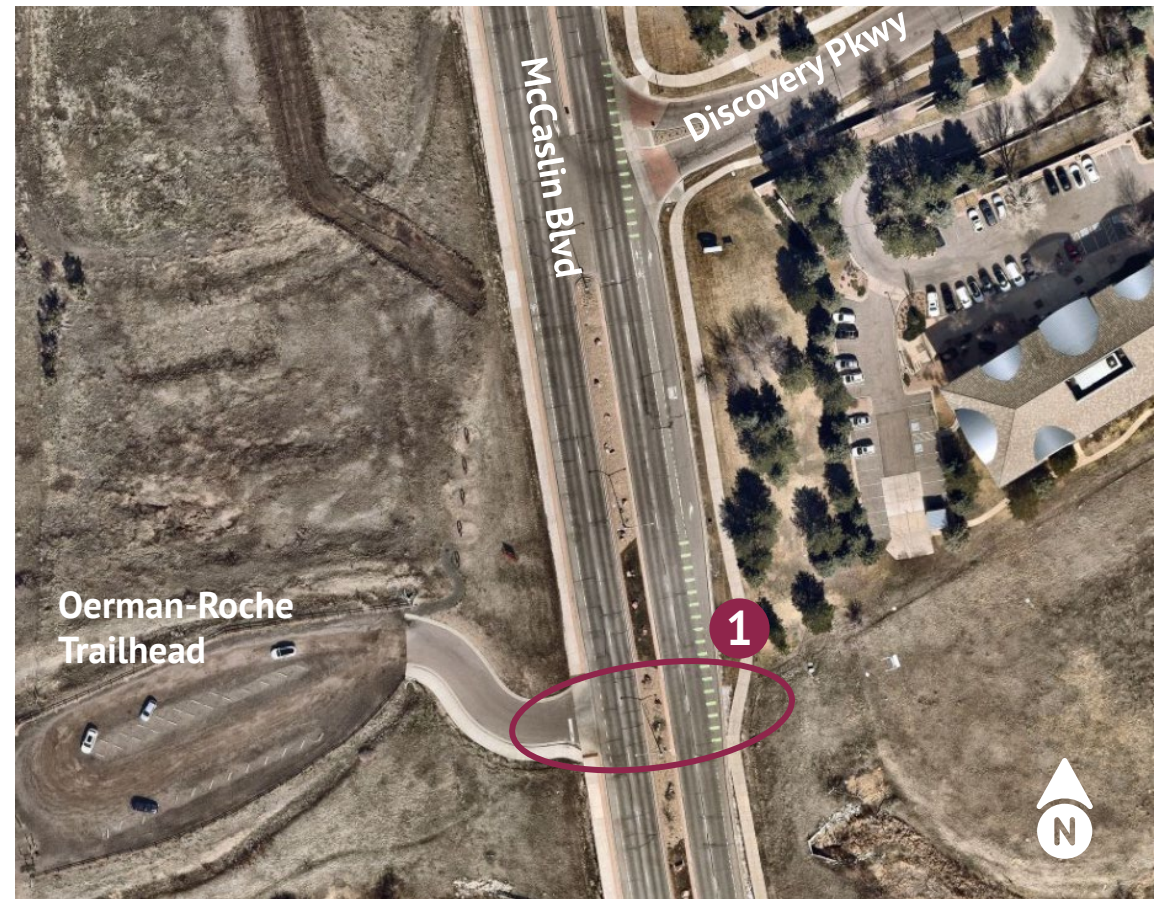
1. Reduce curb radii on northeast and southeast corners to slow turning vehicles and shorten pedestrian crossing distance
2. Install directional pedestrian ramps on the northeast and southeast corners
3. Install pedestrian refuge island on the east leg to allow pedestrians to cross in two stages



SR3.4 McCaslin Boulevard South of Discovery Parkway

Recommendations

1. Install a pedestrian hybrid beacon (PHB) at McCaslin Boulevard south of Discovery Parkway.



SR3.5 Indiana Street East of McCaslin Boulevard

Recommendations

1. Install median refuge island and crossing markings at location of existing midblock pedestrian ramps
2. Install W11-15 sign at the crosswalk

