

# ELK RIDGE SPEED LIMITS STUDY

Counts Conducted Sept – Nov 2016

By Utah County

Presentation by Shawn Eliot

# SETTING SPEED LIMITS

- Speed limits are commonly set using 85th percentile rule, 85% of drivers drive at or under this speed
- Allows speeds to be set by engineering judgment and policy rather than emotion
- The MUTCD (adopted by all cities) supports 85<sup>th</sup> percentile rule as does UDOT, FHWA, ITE and numerous studies
- 85<sup>th</sup> rule, accident data, and hazardous conditions are used to set final limits
- If speed limits are set too low for the design and functional type of the road, most drivers ignore it (Payson, Orem studies)
- Collector/Arterial roads with homes or schools are typically not posted at 25mph
- Speed limits must be practical to enforce, enforcement should be focused on egregious speeders

# RAISING SPEED LIMIT WILL CAUSE PEOPLE TO DRIVE FASTER AND CAUSE MORE CRASHES?

- The Federal Highway Administration studied nearly 200 roads with speed limit changes
- Changes were proposed due to unjustified speed limits leading to, on average, 55 percent of drivers exceeding posted speed limits
- After limits were changed (based on speed study 85<sup>th</sup> percentile data), there was a slight change in speeds, but generally less than 1 mph
- There were no significant changes in crashes, although crashes tended to decrease where speed limits were increased to realistic levels
- Speed limits are set to inform motorists of appropriate driving speeds under favorable conditions and to the design of the road
- Most drivers behave in a safe and reasonable manner, do not drive at excessive speeds and do not want to get into crashes

# ELK RIDGE DEVELOPMENT STANDARDS

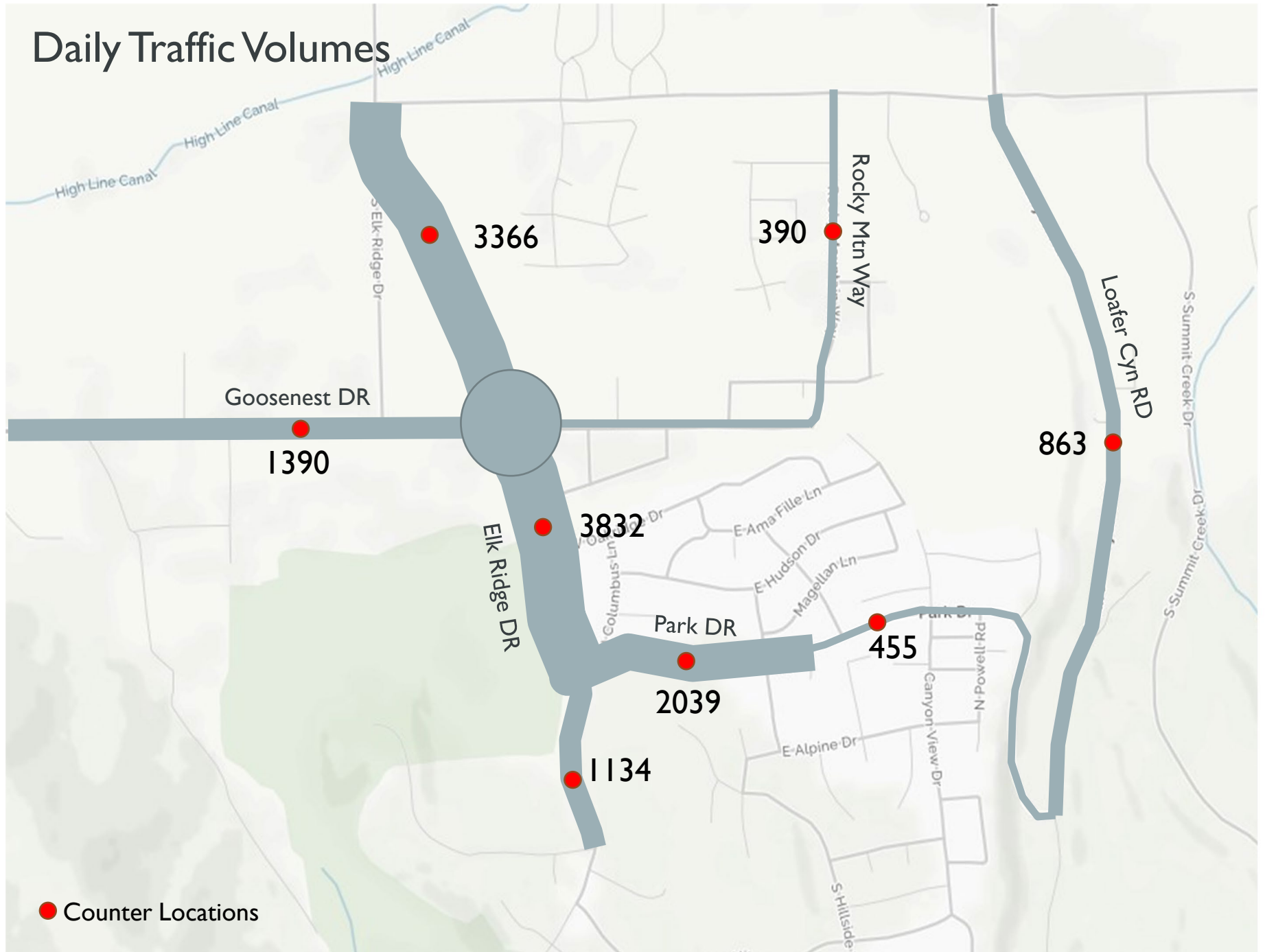
Setting speed limits is discussed on (pdf) page 95

- Speed Limits in Elk Ridge range between 25 and 40 mph.
- The City Council can adjust limits on streets to reflect local needs and conflicts
- In general, speed limits should be set to protect the functionality of each road type
- All local streets and Minor Collectors shall be posted as 25 MPH
- Major Collectors should have speed limits set between 30 and 35 MPH
- All Arterials should have speed limits set between 35 and 40 MPH

# STUDY RESULTS

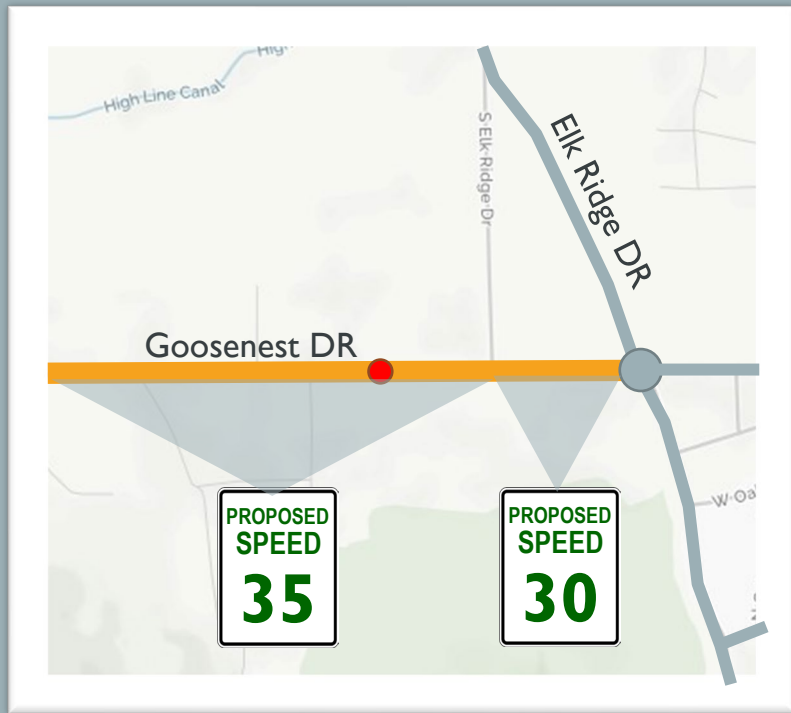
- All roads studied are Major Collectors and Arterials in the Elk Ridge Transportation Plan
- These roads are all 10 feet wider (when fully built)
- Code requires special driveways on these corridors
- 79% to 97% of drivers drive faster than current speed limits
- Best time to ticket the egregious speeders is 3 to 6pm
- Only in one location (Park DR-East) did downhill traffic go noticeably faster than uphill
- Elk Ridge DR – North (the new road) had the least compliance to the posted speed limit

# Daily Traffic Volumes



● Counter Locations

# Goosenest DR | West



- Speed Bumps not recommended for collector road
- Adding shoulders in rural area should be a priority
- Rural area has similar speeds as rural Utah County roads
- 35 in rural area, 30MPH in developed area
- 26 vehicles over 50MPH, 0.3%

## Speed Compliance

## Notes

CURRENT  
SPEED  
**25**

**10%**  
920

90% of drivers currently break the law

PREVIOUS  
SPEED  
**30**

**28%**  
2614

Almost three quarters drive over this speed

PROPOSED  
SPEED  
**30**

**28%**  
2614

Almost three quarters drive over this speed

PROPOSED  
SPEED  
**35**

**77%**  
7275

Three quarters drive under this speed

85<sup>th</sup> PERCENTILE  
SPEED  
**37**

**85%**  
8040

Speed should be within 5 MPH of this speed

ENFORCE  
SPEED  
**40**

**7%**  
622

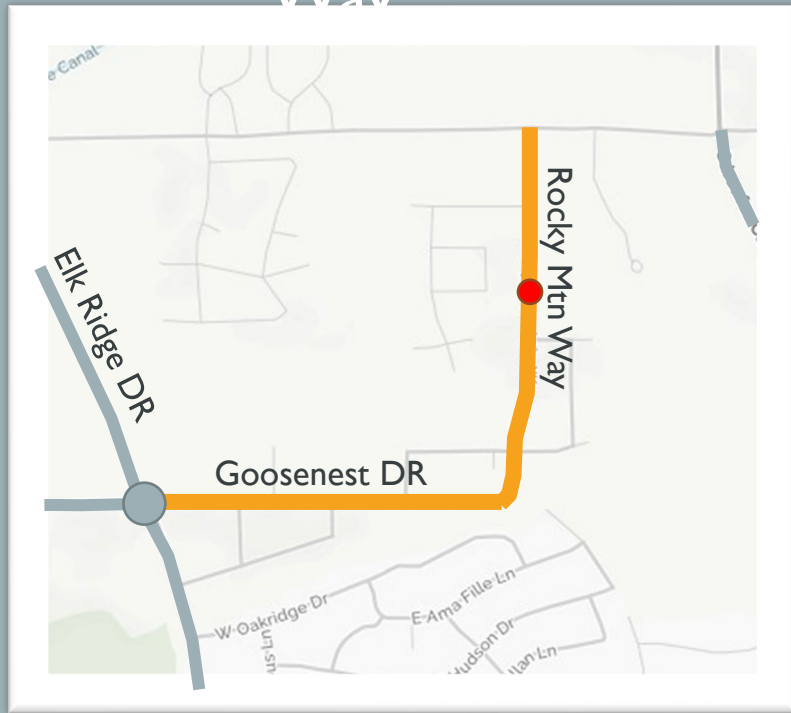
Use enforcement to focus on this group

9460 = Total Week Trips

1390 = Average Daily Traffic

# Gooseneck DR/Rocky Mtn

Way



- Collector road designed for higher speed
- Fewer homes front this road or have special driveways
- Downhill speed 3 MPH vs. uphill, most difference
- Speed will slow down when area builds up
- Traffic volumes will grow with new homes and connection to Salem
- 5 vehicles went over 50 MPH, 0.01%

## Speed Compliance

## Notes



21%  
717

79% of drivers currently break the law



45%  
1453

Three quarters drive under this speed



85%  
2720

Speed should be within 5 MPH of this speed



6%  
210

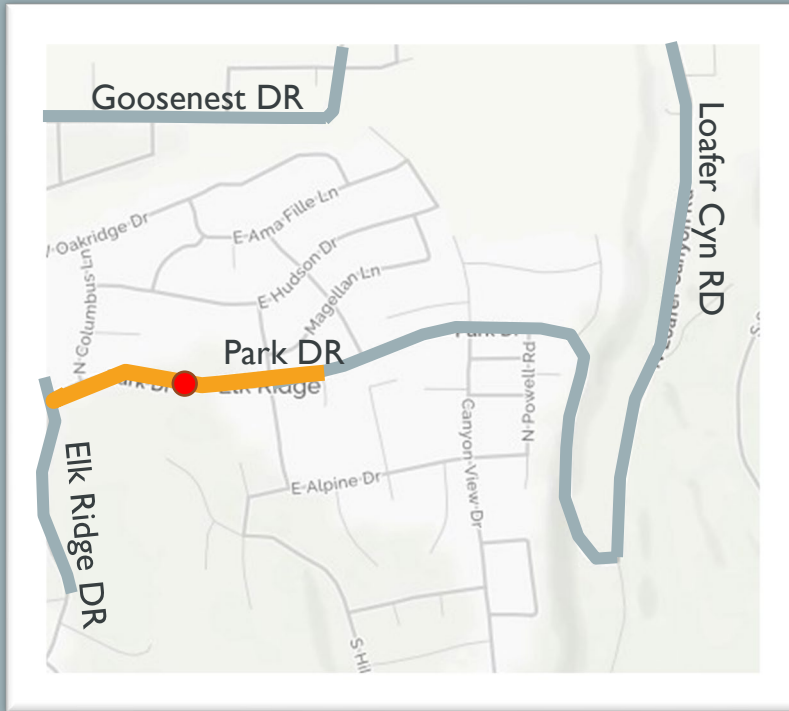
Use enforcement to focus on this group

3202 = Total Week Trips

390 = Average Daily Traffic



# Park DR | West



- Collector road designed for higher speed
- Fewer homes front this road
- Downhill speed 5 MPH vs. uphill, most difference
- Speed will slow down when area builds up
- 5 vehicles went over 50 MPH, 0.04%

## Speed Compliance

## Notes



**21%**  
2849

79% of drivers currently break the law



**48%**  
6601

Almost half drive over this speed



**85%**  
11780

Speed should be within 5 MPH of this speed

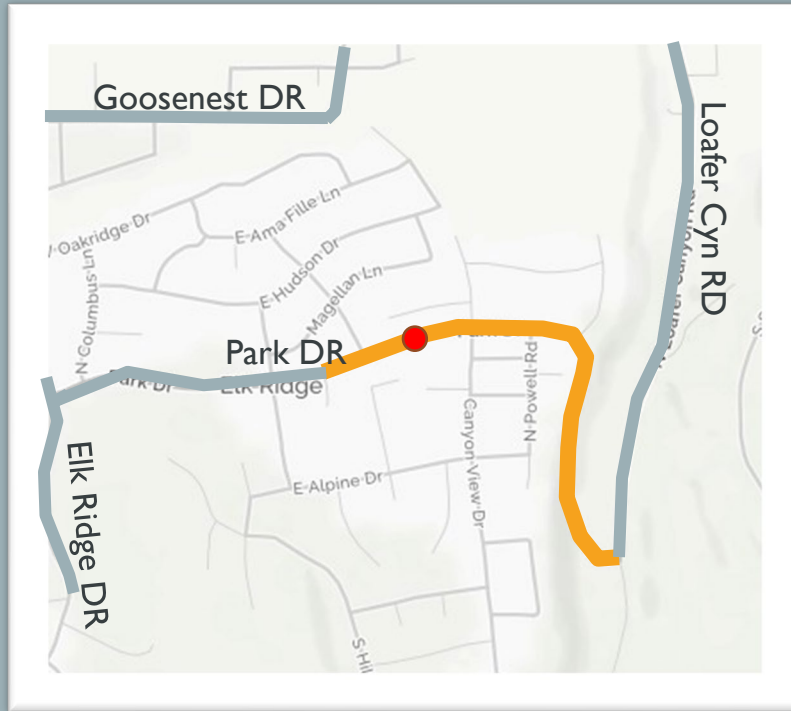


**3%**  
373

Use enforcement to focus on this group

13858 = Total Week Trips  
2039 = Average Daily Traffic

# Park DR | East



- Collector road designed for higher speed
- Main east/west road in town
- Fewer homes front this road
- 1 vehicle went over 50 MPH, 0.01%

## Speed Compliance

## Notes



**19%**  
597

81% of drivers currently break the law



**53%**  
1657

Half drive over this speed



**85%**  
2652

Speed should be within 5 MPH of this speed

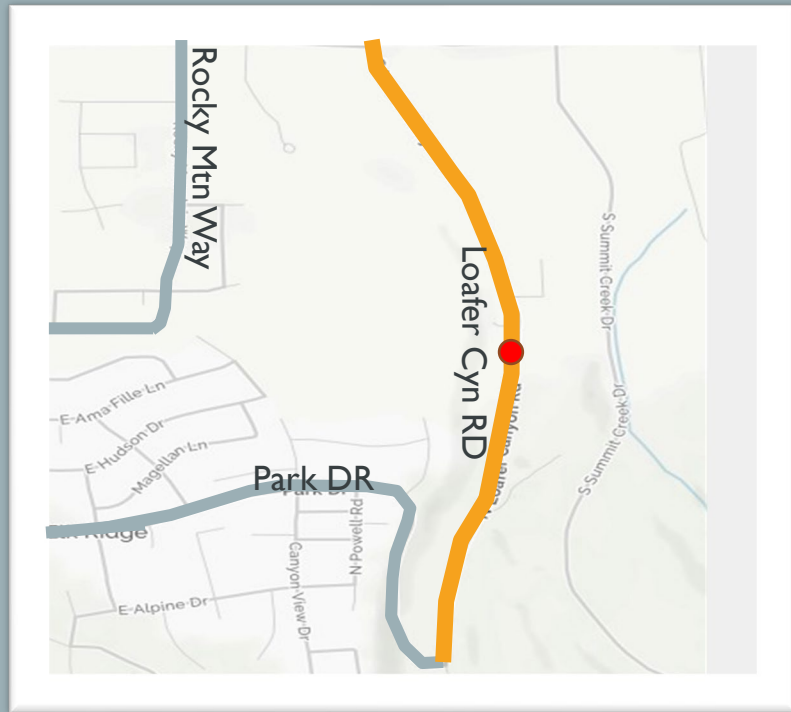


**1%**  
30

Use enforcement to focus on this group

3120 = Total Week Trips  
455 = Average Daily Traffic

# Loafer Canyon RD

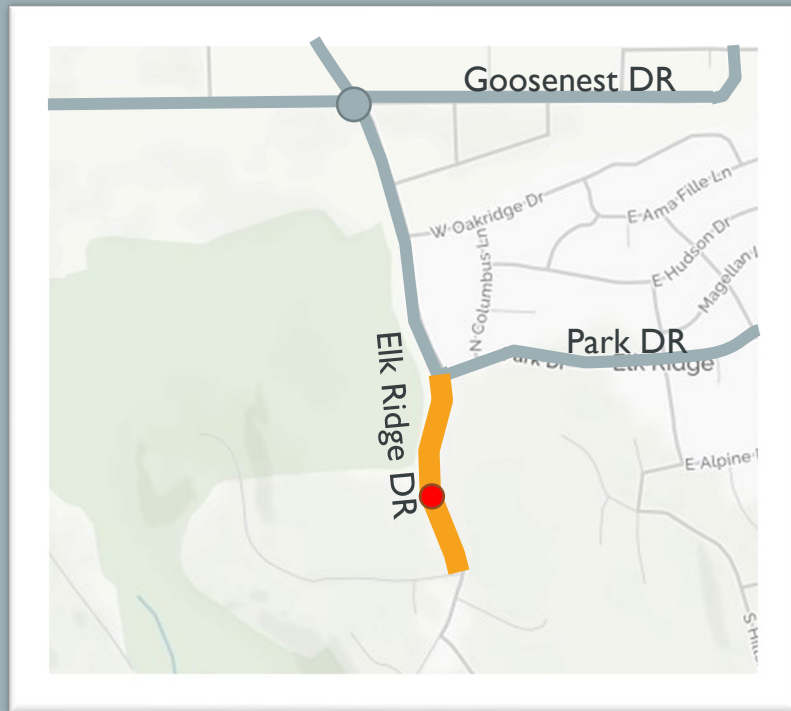


- Collector road designed for higher speed
- Homes set back, road similar to UC rural areas
- Downhill speeds 1 MPH higher than uphill
- 27 vehicles went over 50 MPH, 0.3%
- 11 vehicles went over 67 MPH

Speed	Compliance	Notes
<b>CURRENT SPEED</b> <b>25</b>	<b>17%</b> 1596	83% of drivers currently break the law
<b>SPEED</b> <b>30</b>	<b>39%</b> 3561	Almost three quarters drive over this speed
<b>PROPOSED SPEED</b> <b>35</b>	<b>80%</b> 7313	More than three quarters drive under this speed
<b>85<sup>th</sup> PERCENTILE SPEED</b> <b>36</b>	<b>85%</b> 7785	Speed should be within 5 MPH of this speed
<b>ENFORCE SPEED</b> <b>40</b>	<b>8%</b> 719	Use enforcement to focus on this group

9159 = Total Week Trips  
863 = Average Daily Traffic

# Elk Ridge DR | South



- Arterial road designed for higher speed
- No homes or driveways front this road
- Downhill speeds 1 MPH higher vs. uphill
- Has a higher 85<sup>th</sup> speed, speeds will slow down with development
- 24 vehicles went over 50 MPH, 0.2%

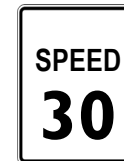
## Speed Compliance

## Notes



**15%**  
1494

85% of drivers currently break the law



**25%**  
2534

Three quarters drive over this speed



**64%**  
6344

Two thirds drive under this speed



**85%**  
8450

Speed should be within 5 MPH of this speed



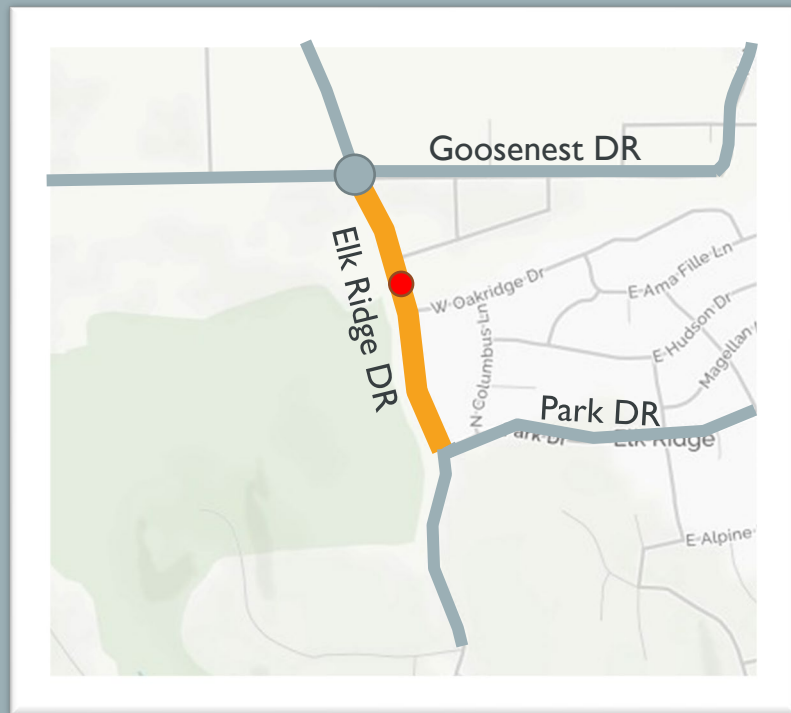
**13%**  
1273

Use enforcement to focus on this group

9945 = Total Week Trips

1134 = Average Daily Traffic

# Elk Ridge DR | Center



- Arterial road designed for higher volumes/speed
- Limited homes or driveways front this road
- Downhill speeds 2 MPH higher vs. uphill
- Replace white 15 MPH signs at Roundabout with yellow Roundabout signs / yellow 15 MPH
- 26 vehicles went over 50 MPH, 0.1%

## Speed Compliance

## Notes

CURRENT  
SPEED  
**25**

**18%**  
4611

82% of drivers currently break the law

PREVIOUS  
SPEED  
**30**

**40%**  
10566

Almost two thirds drive over this speed

PROPOSED  
SPEED  
**35**

**77%**  
20090

Three quarters drive under this speed

85<sup>th</sup> PERCENTILE  
SPEED  
**36**

**85%**  
22295

Speed should be within 5 MPH of this speed

ENFORCE  
SPEED  
**40**

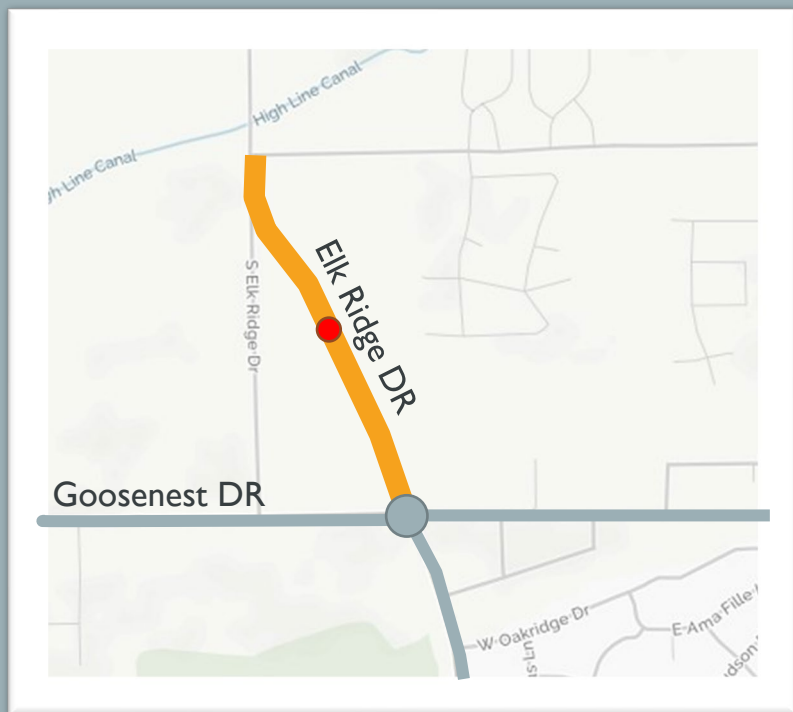
**4%**  
1078

Use enforcement to focus on this group

26238 = Total Week Trips

3832 = Average Daily Traffic

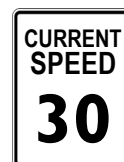
# Elk Ridge DR | North



- Highest speeds of all roads studied
- Arterial road designed for higher speed
- No homes or driveways front this road
- No difference in uphill speed vs. downhill
- Skyhawk Way curve blind spot has issues
- Speed will slow down when area builds up
- 182 vehicles went over 50 MPH, 0.7%

## Speed Compliance

## Notes



**3%**  
813

97% of drivers currently break the law



**39%**  
10522

More drive over this speed than under



**73%**  
19782

Almost three quarters drive under this speed



**85%**  
21795

Speed should be within 5 MPH of this speed



**8%**  
2136

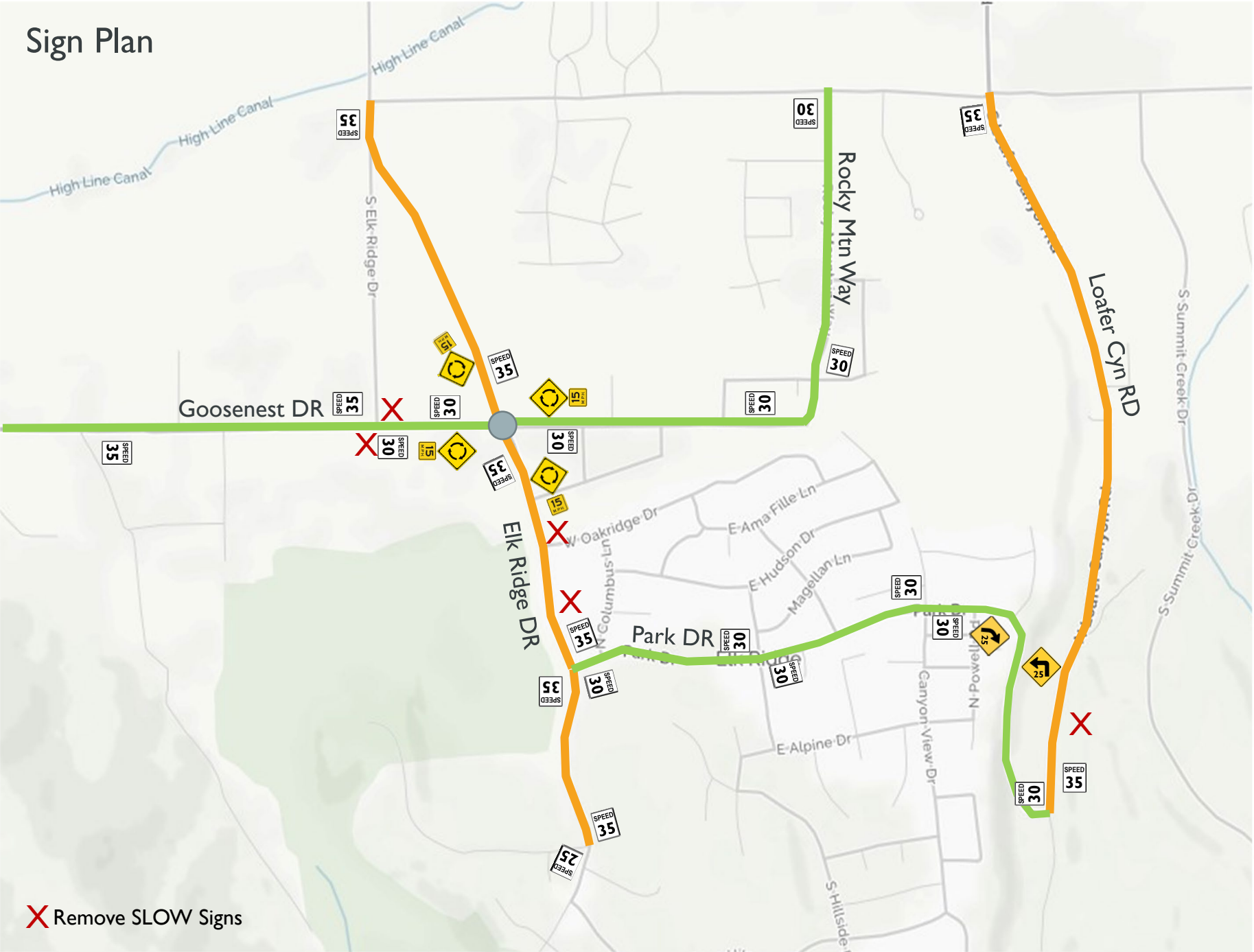
Use enforcement to focus on this group

27244 = Total Week Trips  
3366 = Average Daily Traffic

# RECOMMENDATION

1. Before making final decision, drive each road at the proposed speeds and see if it seems safe and reasonable to drive at this speed
2. Set speed limits by traffic standards (MUTCD, ITE, FHWA, ER Development Standards), not by emotion or hearsay
3. In 6 months, after new speed limits, redo speed studies to show after results
4. Allow law enforcement to go after egregious speeders

# Sign Plan



X Remove SLOW Signs