

## Sentinel Peak Road Safety Review – Finalized 12/28/2018

### SAFETY REVIEW TEAM

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### OBSERVATION PERIODS

Monday, October 29, 2018 9:00 a.m. – 12:00 p.m.

Tuesday, October 30, 2018 5:00 p.m. – 7:00 p.m.

### SENTINEL PEAK GATE HOURS

Lower Gate: 7 a.m.

Upper Gate: 9 a.m. – 8 p.m. Mon-Sat; 9 a.m. – 6 p.m. Sun

### SUMMARY OF ENGINEERING RECOMMENDATIONS BASED ON OBSERVATIONS

Each recommendation has been categorized into a short-term, mid-term, or long-term implementation phase. See attached chart for a summary of recommendations by phase.

#### Cuesta Road Vicinity

- Remove RIGHT TURN ONLY sign along southbound Cuesta at Cedar. (Short)
- Rotate STOP sign at Sentinel Peak and Silverbell to proper angle. (Short)
- Add a speed hump or speed table between Cedar and Congress St. (Mid)
- Support neighborhood efforts to add a traffic circle and green infrastructure at/near Cedar and Cuesta Avenue. (Mid)
- Consider mumble strips (possibly inverted) along Sentinel Peak Rd, between speed humps. Discussion with neighbors needed. (Long)



*Speed hump recommended on Cuesta between Congress and Cedar.*



Neighborhood is working on a traffic circle and chicane.



Steep drop-off demonstrated here.

### Two Way Park Access Road

- Confirm lanes widths and consider 10-foot wide lanes to maximize shoulder space. (Long)
- Install KEEP RIGHT sign on uphill approach to 'Y'. (Short)
- Existing speed limit sign on uphill approach to 'Y' is on the left (wrong) side of the road. (Short)
- Install additional (both sides) DO NOT ENTER and WRONG WAY signs at the downhill road segment at the 'Y'. (Short)
- Turn the asphalt area at the base of the Loop Rd into a desert landscaped area. (Mid)



Additional signage recommended to re-inforce one-way road.



Guard rail segments, better object markers, and/or delineators recommended to better guide vehicles in the narrow road.

### Loop Road

- Add additional speed limit signs (at park entrance and also at beginning of Y) (Complete)
- Consider warrants for guard rail. (Mid)
- Add advance curve warning sign for downhill approach. (Short)
  - Consider Two-Direction Large Arrow Sign (W1-7) on far-side of intersection, intended to be visible for downhill approach. (Short)
  - Consider flexible delineators along/near curve edge line for downhill approach. (Mid)

### Upper Parking Lot

- Include lane markings and directional signs where the outbound loop road meets the upper parking lot entrance and exit lanes. Include parking lot directional signs. (Short)
- Separate the DO NOT ENTER and STOP signs at the upper parking lot exit road. Add an additional DO NOT ENTER sign on the other side of the roadway. (Short)

- Include a NO RIGHT TURN sign on the STOP sign at the upper parking lot exit road. (Short)
- Install edge line markings along the upper parking lot exit and entrance roads. Consider a 10-foot marked lane to result in a paved shoulder area for pedestrians. (Mid)
- Consider diagonal parking lot stall markings to reinforce the exit direction. (Long)
- Add DO NOT ENTER signs where the upper parking lot entrance meets the parking area. (Short)
- Add directional exit signs for the upper parking lot. (Short)
- Replace ONE WAY arrow that is visible when exiting the exit driveway. (Short)
- Depending on the result of the hours/time of day discussion, consider modest lighting in the upper parking lot to help crime reduction. (Long)

#### Lower Parking Lot

- If “day of the week” road closures are implemented, consider the potential impacts of overflow parking at the lower lot. Consider reconfiguring the lower lot so that traffic can loop through the lot. (Long)
- Replace worn and painted object markers on both gates. (Short)
- Install new reflective markings on the inside of the top gate (to warn bicyclists when gate is closed). (Short)

#### All Areas

- Consider pedestrian and bicycle warning signs at various locations along the park roads. These can be creative. (Mid)
- Consider curve warning signs at appropriate locations. (Short)
- Consider shared lane markings where appropriate. (Mid)



*Example of creative warning sign.*

#### Maintenance Items (all these are short-term items)

- Trim vegetation throughout park as needed to improve sight distance, with special consideration to trimming at/near curves. Trimming will also help ensure people biking and walking are not forced into the travel lane.
- Restripe existing pavement markings.
- Replace all object markers (PVC and otherwise).
- Sweep sand/debris in the shoulder.
- Maintain the speed humps. [Streets Division is already aware of this and it should be complete soon.]
- Replace all damaged and worn signs.
- Adjust orientation of existing speed limit sign for drivers approaching the loop road.
- Evaluate pavement for needed maintenance (which would complement small changes to lane widths).



*Object markers to be replaced.*

## **TUCSON POLICE DEPARTMENT REPORTED INCIDENTS ON SENTINEL PEAK**

Tucson Police Department has provided a summary of both traffic collisions reported and other types of incidences reported from 2011 – 2018 (as of October 19). TPD's summary of the traffic collisions is attached as Exhibit A. The data shows there is an average of 2 reported collisions per year.

In addition to reported traffic collisions, TPD pulled data on all reported incidents from a six month period (dates of incidents range from 4/29/2018 – 10/27/2018). There were a total of 173 reported incidents for an average of 29 per month. The nature of these reports includes things like alarms, shootings, burglaries, vehicle break-ins, collisions, and more.

## **ENFORCEMENT**

Neighbors regularly report illegal and/or dangerous behavior on Sentinel Peak. The incident data over the six month period suggests that there is a reported incident almost daily. Also, during the evening Tuesday observation period, members of the Safety Team observed concerning behavior.

The Safety Team agrees that Sentinel Peak would benefit from an increased presence of officers. The new Community Service Officer/Park Ranger program could have a big impact on the safety of this road/park.

## **CHANGES TO GATE HOURS/DAYS**

The team recognized safety challenges with having cars, bikes, and pedestrians sharing the space on the narrow Sentinel Peak Road. The recommended treatments can help but will not solve all safety concerns. The most effective way to eliminate the conflicts with sharing the limited space is to separate the uses. However, construction of a multi-use path/bike lane/sidewalk is not feasible due to cost and environmental disruption.

One option to improve safety would be to change vehicle access to the park on specific full days or hours of a day. The team supports further community conversations on this topic.

Whatever the decision on the gate hours, there needs to be more consistency with the gate opening and closing so that the public knows what to expect.

## **TRAFFIC VOLUME AND SPEED SUMMARY**

Traffic volume and speed data for Sentinel Peak and Cuesta Roads were collected November 7 – 13, 2018. It is important to note that Monday, November 12 was Veterans Day. More detailed information showing the count data is attached as exhibit B.

*Traffic Data Collection Location 1: 1000-feet up from second gate (In the Park Data)*

Volume Summary:

- 2,283 vehicles entered Sentinel Park over a week period
- Saturday and Sunday are the busiest days
- Tuesday and Wednesday were the least busy days
- Average of 256 cars per day during the week (Tuesday – Friday)

- Average of 441 cars per day during a weekend day
- Evening time (4-6 p.m.) is the busiest time for vehicles.

Speed Summary:

- The majority of vehicles in the park during the collection week traveled between 25-34 mph
- 892 (an average of 127 per day) traveled at a speed at or above 35 mph
- Of the 892, 198 were traveling at a speed at or above 40 mph
- 85<sup>th</sup> percentile speed downhill: 36 mph

*Traffic Data Collection Location 2: 400-feet south of Congress Street on Cuesta*

Volume Summary:

- 8,239 vehicles traveled on Cuesta over a week period
- Most of the traffic on Cuesta is residential rather than cut-through traffic traveling to the park. During the week roughly 24% of the traffic continued to A Mountain and on weekends roughly 32% continues.
- Evening time (4-6 p.m.) is the busiest time for vehicles during the weekday.

Speed Summary:

- During the week of collection most cars traveled under 30 mph
- 479 (an average of 68 per day) traveled at 30 mph or above
- 78 traveled at a speed at or above 35 mph
- 85<sup>th</sup> percentile speed downhill (exiting): 29 mph

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