MEMORANDUM

Date: December 9, 2013

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

Re: **Board of Supervisor's November 19, 2013 Agenda Items 16 and 17, Sunset Road; and Thornydale Road, Item 24**

During land use hearings before the Board of Supervisors on November 19, 2013, the Board inquired of the Department of Transportation as to traffic issues related to Sunset and Thornydale Roads.

Attached please find a report from Transportation Director Priscilla Cornelio on the issues raised and questions asked.

CHH/anc

Attachment

c: John Bernal, Deputy County Administrator for Public Works
Priscilla Cornelio, Director, Transportation Department

PIMA COUNTY
TRANSPORTATION

MEMORANDUM (*REVISED)

DATE: December 6, 2013

TO: C.H. Huckelberry, County Administrator

FROM: Priscilla S. Cornelio, P.E., Director of Transportation

SUBJECT: **Board of Supervisor's November 19, 2013 Agenda Items 16 and 17; Sunset Road and Thornydale Road; Item 24**

At the BOS meeting on November 19, 2013, DOT was asked to provide additional information on three items. This information is provided below.

Item 16. The item was for a Comprehensive Plan Amendment to the Sunset Road Plan. The change in plan could result in a greater density of development for 71.5-acres and subsequent increase in traffic to Sunset Road. The site is currently platted for a 22-lot subdivision called Desert Senna Estates. The ITE Trip Generation Manual for Single-Detached Housing indicates the 22-lots would generate:

17 AM peak hour trips (4 entering, 13 exiting)
22 PM peak hour trips (14 entering, 8 exiting)
210 daily trips (105 entering, and 105 exiting).

The request will allow the 3.3 acre lots to be changed to a minimum of one acre lots. Based on an estimated 46-lots (dwelling units), the development under the comprehensive plan amendment would generate a doubling in daily trips:

96 AM peak hour trips (24 entering, 72 exiting)
*46 PM peak hour trips (*29 entering, 17 exiting)
438 daily trips (219 entering, 219 exiting).

Sunset Road, between Silverbell Road and Park Ridge Road is approximately 2.68 miles in length. Sunset Road runs east to west and has several intersecting roadways. The terrain is rolling and crosses several drainage ways. The existing traffic volume on Sunset Road was counted in 2011 as 950 average daily traffic. Build out of the proposed development would increase this to 1338 average daily traffic.

Traffic crashes on the existing Sunset Road and its intersections were reviewed. Crashes are generally looked at as segment crashes and intersection crashes. The entire segment of Sunset Road reported only 5 crashes in the last five year period of crash data. In addition, of the intersections along Sunset Road, most had no crashes, but there were crashes at Silverbell Road (4), Camino de Oeste (2), and

Park Ridge/Sunset Road (1). The total crashes add up to 12. Oddly enough, 2008 was the year with the most crashes with 4 segment and 2 intersection crashes which accounted for half the five year total. The 2008 crashes also contained the highest severity crashes which were a Type 4, Serious Injury, and a Type 3 Injury. The majority of crashes involved a single vehicle running off the road. Five crashes occurred in the dark and the remaining 7 crashes in the daylight. The segment ranked 192 on our last Safety Management System Report, so is well down in the crash rankings.

Concerns were expressed at the BOS meeting by residents regarding sight distance issues at some of the intersections along Sunset Road due to the rolling terrain. It was mentioned that there had been as many as five fatalities. DOT reviewed the crash data for the previous ten years and discovered that there have only been two fatalities recorded, one in 2007, and another in 2002.

In response to the fatality and other injury crashes, a sight distance improvement was constructed in 2005 to lower the intersection at Sunset Road and Sunray Drive. This improvement cost $1,336,000. There are 8 to 10 other dip sections along Sunset Road. Accommodation of existing utilities, narrow right of way and drainage considerations contribute to the cost of sight distance improvements. A rough estimate to improve the dips by lowering the roadway on either side is $300,000 to $500,000 per dip and at intersections the cost might rise to the +$1,000,000 cost similar to the cost at Sunray Road.

Item 17. A request was made also for a change in the N. Thornydale Road Plan to increase the density of development on the 18-acre parcel located in the SE corner of Thornydale Road and Linda Vista Boulevard. It is unclear what type of development will be built on the parcel but 128 lots or dwelling units was assumed to allow an estimate of traffic would be generated:

96 AM peak hour trips (24 entering, 72 exiting)
128 PM peak hour trips (81 entering, 47 exiting)
1219 daily trips (610 entering, 609 exiting).

These trips would be distributed to the streets accessing the subdivision and the adjacent roadway network. The adjacent Thornydale Road traffic is 18,190 average daily traffic, counted in 2013. Linda Vista Blvd. was counted as 10,574 average daily traffic in 2010. These existing traffic counts indicate that each road is carrying a high volume of traffic for a two-lane facility and operating at a poor level of service. The five-year crashes in the vicinity of the proposed development are all recorded as intersection crashes at the two major adjacent intersections of Thorndale with Overton (62), and Thornydale with Linda Vista (26). More than 65% of the recorded crashes are rear-ends, which is associated with both intersections and roadways that are carrying above capacity traffic.

At build out, the proposed development will add the estimated 1219 trips per day to the daily traffic. If evenly divided between Thornydale and Linda Vista, this will result in increasing Thornydale to 18,800 average daily traffic and Linda Vista to 11,180 average daily traffic.

A roadway improvement project to upgrade Thornydale Road from Cortaro Farms Road to Linda Vista Blvd. was designed and estimated to cost $9,700,000 in 1999, but was put on hold because of funding, environmental, right of way and drainage concerns. This segment of Thornydale Road ranks at Number

15 on the yearly SMS Report. The Pima County Traffic Section estimated the cost of a project to add just the basic extra lanes and safety shoulders without creating an all-weather road. That cost was $10,200,000 in 2012 dollars.

Item 24. This item was adoption of a Traffic Ordinance limiting parking on Sabino Canyon Roadway. Information was requested on the involvement of the Forest Service in the prohibition of parking. There had been meetings between the Pima County (DOT and the Sheriff's Dept.,) Supervisor Miller's Office, USDA/FS and the Catalina Foothills School District regarding safety issues around the two schools and park. It had been unanimously agreed that the existing no parking restrictions should remain in effect and be supported through ordinance. Note that the no parking signs on Sabino Canyon Road had been installed for several years and this action by the Board simply legitimized the signage so that the signs could be enforced.

Please advise if you have any questions.

PSC:WS:dg

c: John M. Bernal, Deputy County Administrator – Public Works
Seth Chalmers, Traffic Engineering Division Manager
Mo Farhat, Traffic Engineering Civil Engineer
William Strickler, *Civil Engineer