

AGENDA ITEM #: \_\_\_\_\_

DATE: November 6, 2017

CAR #: 17-6195ws

**CITY OF GOODYEAR  
COUNCIL ACTION REPORT (CAR)**

<b>SUBJECT: Traffic Signals Update</b>	<b>STAFF PRESENTER:</b> Rebecca Zook, Engineering Director and Luke Albert, City Traffic Engineer  <b>CASE NUMBER:</b> None.  <b>OTHER PRESENTER:</b> None.
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**PROPOSED ACTION:**

Staff will provide Mayor and Council with an update on traffic signal projects for Fiscal Year (FY) 2018 and receive feedback on proposed alternatives. (Rebecca Zook, Engineering Director and Luke Albert, City Traffic Engineer)

**BACKGROUND AND PREVIOUS ACTIONS:**

On August 29, 2016 during a City Council work session, staff proposed the use of enhanced ADOT style traffic signal poles in certain areas throughout the city; this proposed change was subsequently incorporated into the city's Engineering Design Standards in August 2017. In addition, the city adopted the FY 2017 budget which included funding for two traffic signals and the FY 2018 budget which included funding for one traffic signal.

The FY 2018 Capital Improvement Plan (CIP) also includes a project to add a pedestrian crossing under Camelback Road just west of 147<sup>th</sup> Drive at the Bullard wash; staff is currently evaluating alternatives for this project.

**STAFF ANALYSIS:**

**CIP Traffic Signals**

Below is a summary of the status of traffic signals funded in FY 2017, FY 2018, and FY 2019:

<b>Fiscal Year</b>	<b>Location</b>	<b>Status</b>
FY17	Cotton Lane and Lower Buckeye Road	Activated on September 27, 2018
FY17	135 <sup>th</sup> Avenue and Thomas Road	Under design - anticipated construction start in early 2018
FY18	Location to be determined – 146 <sup>th</sup> Avenue and Camelback Road	146 <sup>th</sup> Avenue and Camelback Road currently meets traffic signal warrants and also would provide a pedestrian crossing location on Camelback Road.
FY19	Location to be determined	Traffic count data at various locations will be collected and evaluated in early 2018 after traffic has redistributed following the opening of SR-303

The city boundary between Avondale and Goodyear is between Dysart and Litchfield roads on Thomas Road; Engineering staff evaluated both Goodyear and Avondale traffic signal styles in this area to determine the most appropriate traffic signal style for the intersection of 135<sup>th</sup> Avenue and Thomas Road.

Below is a table summarizing traffic signal pole styles, by jurisdiction, at each intersection of Thomas Road (from west to east) between Litchfield and Dysart roads:

<b>Operating Jurisdiction</b>	<b>Location</b>	<b>Signal Type</b>
Goodyear	Litchfield Road and Thomas Road	Modular style
Goodyear	137 <sup>th</sup> Avenue and Thomas Road	Enhanced ADOT style (Recommended When Warranted)
Goodyear	135 <sup>th</sup> Avenue and Thomas Road	Enhanced ADOT style (Recommended)
Avondale	Dysart Road and Thomas Road	Trombone style

The attachment (Exhibit 1) shows existing and proposed traffic signals on Thomas Road between Dysart Road and Litchfield Road.

Currently, there is an existing Modular style traffic signals at Litchfield and Thomas roads and existing trombone style traffic signals at Dysart and Thomas roads. There may be a future traffic signal at 137<sup>th</sup> Avenue and Thomas Road, which is a Goodyear intersection that provides access to development in Avondale. If this signal is installed it is recommended that the intersection be constructed with an enhanced ADOT style traffic signal that is potentially funded by both Goodyear and Avondale. The intersection of 135<sup>th</sup> Avenue and Thomas Road is located ¼ mile east of the intersection of 137<sup>th</sup> Avenue and Thomas Road and is a Goodyear intersection that serves Goodyear development. In order for consistency along this corridor, it is recommended that the intersection of 135<sup>th</sup> Avenue and Thomas Road be constructed as an enhanced ADOT style traffic signal.

### **Camelback Road Pedestrian Crossing**

There is currently a project in FY 2018 of the city's adopted CIP that will provide a pedestrian crossing under Camelback Road just west of 147<sup>th</sup> Drive adjacent to Bullard Wash; this pedestrian crossing was planned to connect to the pedestrian walkway existing in Bullard Wash. The project was included in the CIP because a traffic signal was not, at the time, warranted at the entrances into Palm Valley North (Phase 9), and there was a need for pedestrians to cross Camelback Road in this area.

Traffic signal warrant studies were completed in March and September of 2017; there was a 27% increase in traffic entering Camelback Road at 146<sup>th</sup> Avenue during this six-month period. In addition, there was a 52% increase in traffic entering Camelback Road during the AM Peak Period between 6:00 AM and 9:00 AM. The traffic signal warrant study completed in September 2017 determined that both the peak hour and four hour warrants were met thus a traffic signal is now warranted.

At this time there is a need for pedestrians to cross Camelback Road from Palm Valley North, and with the significant increase in traffic volumes, an additional need to create gaps for vehicles to enter Camelback Road. Therefore, one option to consider is not constructing the Camelback Road Pedestrian Crossing and utilizing the FY18 traffic signal funding on a traffic signal at 146<sup>th</sup> Avenue and Camelback Road. When the pedestrian crossing was added to the budget there was no anticipation of a signal being warranted at this location. The addition of this signal negates the need for the currently planned pedestrian crossing.

### **FISCAL ANALYSIS:**

Listed below are two options for the projects previously discussed.

1. FY 2018 Budget Plan – Two traffic signals (135<sup>th</sup> Avenue/Thomas Road and 146<sup>th</sup> Avenue/Camelback Road) and Camelback Road pedestrian underpass
2. Two traffic signals (135<sup>th</sup> Avenue/Thomas Road and 146<sup>th</sup> Avenue/Camelback Road) and no pedestrian underpass.

The second option listed above is recommended from an Engineering standpoint and shown in the table below.

### Construct Two Traffic Signals and No Pedestrian Underpass

Item	Budget	Updated Estimate	New Cost (Savings)
Carried over 135 <sup>th</sup> Avenue and Thomas Road Traffic Signal <sup>1</sup>	\$532,100	\$355,000	(\$177,100) <sup>2</sup>
FY 18 TBD Traffic Signal - 146 <sup>th</sup> Avenue and Camelback Road Traffic Signal	\$551,400	\$385,000	(\$166,400)
Pedestrian Underpass	\$244,200	\$0	(\$244,200)
<b>Total</b>	<b>\$1,327,700</b>	<b>\$730,000</b>	<b>(\$587,700)</b>

<sup>1</sup> Includes ADOT style traffic signal.

<sup>2</sup> Savings on this project could potentially provide an opportunity of constructing the conduit and/or fiber connection to Litchfield Road fiber optic backbone as part of this signal project as opposed to a separate project. The cost of this conduit and fiber is not currently included in the estimate above and is estimated at \$90,000.

### **RECOMMENDATION:**

Discussion only.

### **ATTACHMENT:**

Exhibit 1: Proposed Traffic Signal Locations and Styles