# Agenda Request Form

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| **Requestor:** | JANET THELEN |
| **Department:** | COMMUNITY DEVELOPMENT |
| **Date of Meeting:** | JANUARY 27, 2020 |
| **Subject:** | REPLACING SIGNAL CONTROLLER AT HILLCREST AT BABCOCK |

**Caption:**

**DISCUSSION ALTERNATIVES AND AUTHORIZE STAFF TO PROCEED WITH UPGRADING THE TRAFFIC SIGNAL AT HILLCREST DRIVE AND BABCOCK ROAD.**

**Background:**

The traffic signal at the intersection of Hillcrest Drive and Babcock Road is frequently failing and switching into the default mode which flashes red in all directions. The traffic signal is decades old and no longer consistently functions. The camera traffic detection system on the signal does not function which causes the lights to operate only in a timed cycle. The pedestrian crossing portion of the signal does not meet ADA standards for accessibility. Over the past few months, the controller is failing more frequently. Levy Company has been called out several times to repair and reset the traffic controller module. On October 31, 2019 Levy noted on the repair invoice that "the controller is very old and was not working properly. Recommend full signal upgrade." Levy repair crews have repeatedly verbalized that parts are not available for the controller. Levy has cannibalized parts from discarded controller units at their warehouse and from TXDOT.

In December, Levy was called to again bring the light out of flash and return to regular mode, the controller could not be reverted back to normal mode. The Levy technician was able to "borrow" a discarded used controller from TXDOT to bring the signal back online. Unfortunately, the light has continued to default periodically to "all way" red flash even with the replacement controller. Mr. Mackey in Public Works has met with the Levy technicians and now is aware of how to reset the controller without having to put in a work order with Levy. Mr. Mackey has shared this information with Chief Jahanara. If the light goes into default flash, dispatch is directed to contact Mr. Mackey during regular business hours and patrol after hours to reset the controller to bring the light back into normal function quickly and avoid over-time costs incurred bring Mr. Mackey back to the city or initiating a repair request with Levy.

Staff has initiated conversation with City Engineer Jess Swaim with 6S Engineering and subconsultant Angel Gonzalez with GKW Engineering regarding design and replacement of the traffic signal. The conversations have led to a broader view of both the intersection and the needed reconstruction of Hillcrest Drive. As with all infrastructure projects, funding and funding sources are of the utmost consideration. The proposals offer three alternatives. Alternative I replaces the controller which requires the replacement of the traffic signal controller cabinet. Estimated cost - $72,292.58

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Alternative I allows the city to make upgrades to the troublesome traffic signal equipment which is a portion of Alternative II and Alternative III. In other words, we can do a portion of the job now and upgrade the rest of the system at a later date. Alternative I can be funded with existing monies in the Special Revenue Funds: Traffic Safety and Child Safety (the close proximity to Baskin Elementary and the multiple bus pick up locations along Hillcrest for upper level SAISD student qualify this project for funding).

Alternative II replaces the controller, upgrades the pedestrian functions to include audible pedestrian signals, and adds radar advanced detection (replacing the defunct camera system of vehicle detection). Estimated cost - $177,112.62.

Alternative III is a reconstruction of Hillcrest with signalization upgrades to the entire intersection as part of the project. See attached Opinion of Probable Cost Estimates and Budget Sheet for Professional Services. Total estimated costs - $4,998,633.92

Alternative III option is a project that will require funding from multiple sources. One such funding source is the Alamo Area Metropolitan Planning Organization (MPO) funds. The City has applied in the past for MPO funds, and the projects did not score and rank high enough to secure funding. During our conversations with the city engineers, the discussions included utilizing the City of San Antonio traffic signal specifications (versus the current TXDOT specs.) when upgrading the traffic signal equipment to aid in the timing of the traffic lights to coincide with the traffic signal patterns established for the area by the City of San Antonio (COSA). By doing so, traffic flows more efficiently which in turn reduces idle times, lowers emissions and allows the City of Balcones Heights to contribute to area wide air quality improvements for attainment of compliance with federal air quality regulatory standards. Expanding the project with improvements to Hillcrest Drive with traffic calming designs, ADA pedestrian upgrades, traffic signal improvements and coordinating traffic flow patterns with COSA and TXDOT enhances not only the overall effects of the project, but increase the potential for MPO grant awards. MPO grants are typically based on an 80/20 funding (20% city match).

The city engineers and staff are arranging meetings with COSA to initiate conversation regarding the possibly of an Interlocal Agreement with COSA to maintain and operate the traffic control signals on a contractual basis. All of these steps could aid an MPO grant application in scoring higher as the efforts show a broader commitment by Balcones Heights to pedestrian/vehicular mobility and air quality compliance.

6S Engineering has developed Opinion or Probable Cost Estimates to allow the council to address immediate concerns and aid in the long-range planning. The Hillcrest Drive street project is a portion of the projects outlined in strategic planning.

**Fiscal Impact:**

Alternative I - $72,292.58

Alternative II - $177,112.62

Alternative III - $4,998,633.92

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Available funding sources (fiscal year beginning):

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| Traffic Safety Fund | $ 170,467 (Red Light Camera fund) |
| Child Safety Fund | $ 29,954 (to fund pedestrian amenities due to proximity to Baskin Elementary) |
| Capital Projects Fund | $741,223 |
| Streets Fund | $ 232,220 |

See attached Snapshot of FY 2019-20 Budget Special Funds.

The Finance Committee is scheduled to meet and discuss this item Monday at 12 noon and provide the Council with a recommendation.

**Recommendation:**

Minimum recommendation is Alternative I replacing the controller unit and cabinet utilizing COSA traffic signal specifications and initiate conversation with COSA for maintenance and future control of the signal timing once the radar traffic detection system is installed. The costs and equipment for this project are also reflected in Alternatives II and III. This smaller project alleviates the immediate issue of signal malfunctions without expending funds on portions of a project which would be removed or replaced during the reconstruction of Hillcrest Drive.

Alternative II would require the cutting or boring of the intersection to install the required underground cables. The city would then need to mill and overlay the intersection. These efforts and expenses would require 100 percent funding by the City of Balcones Heights. Due to the costs of Alternative III, the reconstruction of Hillcrest including total replacement of the traffic signal at Hillcrest Drive and Babcock Road, the city should pursue grant funding as a fiscally wise approach to funding such a large project that benefits not only the City of Balcones Heights, but serves as a major regional arterial roadway benefiting many out of city users on a daily basis. It is staff's recommendation to continue the background efforts to have Alternative III positioned for submission during the next MPO call for projects. The MPO call for projects will occur in October 2020.

This item will be discussed in the Finance Committee Monday at 12 noon. A recommendation will come from the committee and will be presented to Council that night.

**Attachment(s):**

Opinion of Probable Cost Estimate – Alternative I Signal Controller
Opinion of Probable Cost Estimate – Alternative II Signal Controller
Opinion of Probable Cost Estimate – Hillcrest Drive
Estimate for Professional Services
Balcones Heights Historical CDBG Funding 1986 to 2019