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Date	Ver.	Action By	Action	Result

Report to Mayor and City Council

Tuesday, June 07, 2022

Consent

SUBJECT:

UPDATE ON TRAFFIC CAMERA AND BROADBAND PROJECT ON AVALON BOULEVARD AND DIRECTION ON RFP

I. SUMMARY

The analysis of the traffic camera and broadband system for Avalon Boulevard has been completed and an RFP is ready to be advertised. Staff is seeking approval of City Council to move forward based on the Consultant recommendations.

Staff is recommending a camera and broadband RFP move forward along Avalon Blvd. There are three fundamental components that that are required to provide a robust system to meet City Council's and the Sheriff's expectations. The first is related to the Broadband type, the second related to the types and locations of the cameras and the third is the Sheriff's computer equipment and software. Related to Broadband, the following attributes are required:

- Expandable, so that additional cameras and networks are possible
- Independent of and does not interfere with the City's broadband network

- Secure, so that the Sheriff does not need to be concerned about data reliability
- Technology that does not rely on a clear “line of sight” and resists obstructions due to trucks, trees, and potential earthquakes
- Robust enough to handle the significant amount of data transfer required from the license plate cameras
- Reliable and considered state-of-the-art

Related to cameras, the expectations are that the system would include both surveillance cameras and Automatic License Plate Readers (APLR) with 24/7 Operations with Zoom Capability. Related to the computer equipment and software, the Sheriff’s station would need a server for data storage, two spare drives, storage for 60-days and 13 TB usable storage. Further, there a Video Management System (VMS) Software would be required.

The broadband system that is recommended is the “5G low-band/mid band” cellular system. This system is very different from the microwave technology and is considered the best broadband system for the City of Carson. This system is manufactured by CradlePoint and meets all the Broadband attributes listed above. This system can be deployed at any intersection in the City and is commonly used across the country by cities like Los Angeles, Las Vegas, and Hawthorne.

II. RECOMMENDATION

1. DIRECT Staff to issue an RFP for the camera and broadband system on Avalon Boulevard.

1.

III. ALTERNATIVES

TAKE another action the City Council deems appropriate that is consistent with the requirements of the law.

IV. BACKGROUND

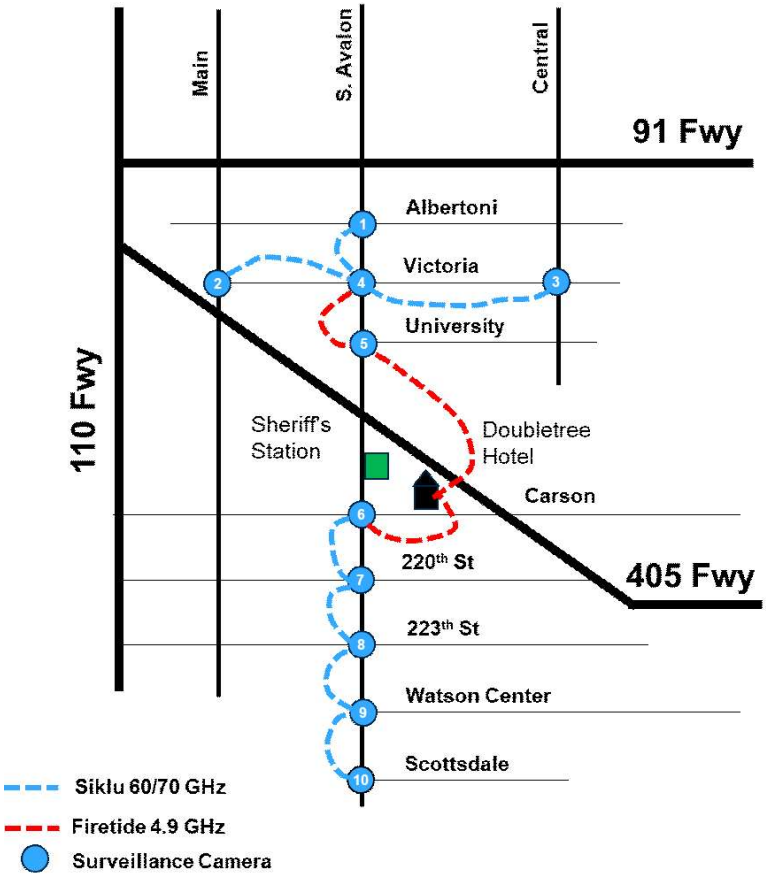
In December, staff engaged a firm with broadband and security expertise to evaluate various technologies and recommend an appropriate technology for the City of Carson. Using one of its On-call Consultants, and their subconsultant, a global engineering company with extensive municipal and private client broadband experience (the “Consultants”). Their scope included the following:

- Determine the existing system of public safety cameras

- Define the existing broadband network and technology
- Describe the current server and computer software currently used in the LA County Sheriff's office
- Assist in writing the camera and broadband system RFP

The Consultants developed a comprehensive overview of the existing system, met with the Sheriff's IT manager, met with the City's IT Manager, and provided a detailed overview of the broadband options and technology available to the City.

The City of Carson currently utilizes 8 surveillance cameras to monitor traffic along Avalon Blvd. between Scottsdale Street and the 91 freeway and on Victoria Street between Main Street and Central Avenue. In addition, there are two other cameras on Victoria, at the intersections of Main and Central. In addition, there are five traffic license plate readers along Avalon. The video data generated from the surveillance cameras along Avalon are conveyed wirelessly through a combination of 5GHz, 60GHz or 70GHz microwave transmitters and 4.9 GHz microwave transmitters to a receiver at the Double Tree Hotel and then to the Sheriff's Station located near the corner of Desford Street and Avalon Blvd.



According to interviews with the Sheriff's department, the cameras do not function well and the video is intermittent. The cameras were installed several years ago and are considered antiquated technology. The microwave transmission system along Avalon used

to convey data from one camera site to the other is fragile since if one transmitter or receiver fails, data from any of the upstream cameras will not be conveyed. This can happen if a truck, tree or other tall object blocks the signals or if there is a system issue.

Another weak link is the 4.9 GHz Firetide System that conveys the data from the last camera to the Double Tree roof and then to the Sheriff station. This 4.9 GHz microwave system is a very congested band width and thus is also susceptible to interference from other 4.9 GHz microwave systems.

Last, the current Sheriff's server used to receive and store the data was installed in 2012 and uses the original software, Microsoft Windows 2008 with the original Video Management Software (VMS), and has had multiple drive failures.

V. FISCAL IMPACT

None. Going out to a RFP does not have a fiscal impact. The camera system for Avalon Blvd. currently has a budget of $200,000. Public Works will work with IT on the broadband approach and come back to City Council for additional funds, as required.

VI. EXHIBITS

Exhibit 1 - Memorandum for Cameras and Broadband along Avalon Blvd.

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