



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Dolan Beckel
Julia H. Cooper
Rob Lloyd
Jim Shannon

SUBJECT: SEE BELOW

DATE: October 10, 2019

Approved

Date

10/11/19

SUBJECT: ACTIONS RELATED TO THE AGREEMENTS BETWEEN THE CITY OF SAN JOSE AND THE EAST SIDE UNION HIGH SCHOOL DISTRICT AND SMARTWAVE TECHNOLOGIES LLC FOR A COMMUNITY WIRELESS NETWORK

RECOMMENDATION

Adopt a resolution authorizing the City Manager to:

- a. Execute the First Amendment to the Agreement between the City of San José and East Side Union High School District to revise costs to reflect actual costs for the James Lick attendance area and updated estimated costs for the William C. Overfelt High School and Yerba Buena High School attendance areas.
- b. Execute the First Amendment to the Agreement for East Side Union High School District Community Wi-Fi Deployment between the City of San José and SmartWAVE Technologies LLC (Alpharetta, GA) to increase maximum compensation by \$1,006,633 to expand the East Side Union High School District Community Wireless Network to the William C. Overfelt High School attendance area, including all required hardware, software, materials, professional services, maintenance and support, and applicable sales tax, for a revised maximum compensation amount not to exceed \$2,258,548 for the Initial Term ending December 31, 2021, subject to the appropriation of funds.
- c. Negotiate and execute amendments and change orders to the Agreement with SmartWAVE Technologies LLC and increase contingency by \$80,000 to cover any unanticipated changes for a total contingency not to exceed \$200,000 during the initial term ending on December 31, 2021, subject to the appropriation of funds.

- d. Adopt the following 2019-2020 Appropriation Ordinance and Funding Source Resolution amendments in the General Fund to:
- 1) Increase the estimate for Revenue from Local Agencies by \$1,350,000; and
 - 2) Establish the East Side Union High School District Community Wireless Network Project appropriation to the Public Works Department in the amount of \$1,350,000.

OUTCOME

Provide greater internet access and services to underserved students in the East Side Union High School District (“District”) to facilitate advancing students’ academic achievement through internet-based learning technologies and instruction and to provide access for non-student households within the attendance areas to help ensure that all residents, businesses, and organizations can participate in and benefit from the prosperity and culture of innovation in Silicon Valley.

BACKGROUND

Across the United States, school districts are investing in laptops and digital learning platforms and using funding mechanisms such as federal E-Rate funds to deliver lightning-fast broadband to the classroom. Those investments make a huge difference—but only on school grounds. Students who do not have home broadband are getting left behind in the digital learning revolution as having internet access at home advances educational, career, medical, and financial outcomes including:

- Teenagers with home broadband are 6-8% more likely to graduate from high school according to the Chicago Public School System;
- Over 38% fewer hospital admissions in telemedicine trial according to the Journal of Managed Care; and
- Over a 0.3% employment increase for every +1% of digital inclusion according to the Brookings Institute.

At three of the District high schools, James Lick, William C. Overfelt (“Overfelt”), and Yerba Buena, it is estimated that the majority of the students do not have broadband at home. Schools are aware of this “digital inequity,” but with no control over the broadband infrastructure in their surrounding communities, most districts struggle to find solutions.

On June 28, 2016,¹ City Council adopted a resolution authorizing the City Manager to negotiate and execute an Agreement between the City of San José and the East Side Union High School District to access District funds for the installation and maintenance of a Community Wireless Network for a period of five years in an amount not to exceed \$2,700,000. These services are an extension of the City’s public Wi-Fi network that is maintained by the City’s Information

¹ Council Memo 6/28/16: http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=2142&meta_id=583300

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Technology Department. The Agreement, executed in October 2016, provided the City with \$2.7 million in funding from the District to implement the network within two service areas (James Lick and Overfelt) and to maintain service in the James Lick attendance area for one year and the Overfelt attendance area for three years, subject to the appropriation of funds. Further, the Agreement identified an estimated \$1.6 million in additional funding necessary to implement the third attendance area (Yerba Buena) and maintain service for all three attendance areas for the five-year period.

On September 20, 2016,² Council authorized the City Manager to execute an Agreement with SmartWAVE Technologies LLC for East Side Union High School District Community Wi-Fi Deployment for the James Lick attendance area which went live for James Lick students on October 31, 2017 and was later extended to the public in April 2019 after a successful evaluation of the technical and educational performance. This project provides approximately 1,700 James Lick students free internet access at home to further their educational and quality of life outcomes. In addition, approximately 6,000 non-student (public) households in the James Lick coverage area have free internet access at home. A District-approved video about the project can be viewed at <https://www.youtube.com/watch?v=7x9loo1nD3g>. The student access Wi-Fi is administered by the District, and non-student, community access Wi-Fi is administered by the City.

ANALYSIS

The District's Community Wireless Network project is already having a major impact on the lives of their students. The network supports thousands of high-speed connections and the movement of terabytes of data every month with most of the data coming from research and other education-based web sites. Low-income students who did not have online access to do their schoolwork at home now have access to digital curriculum and school-provided laptops. At the same time, the District is realizing more value from their digital learning investments, knowing that more students are using these tools to work and learn more effectively.

City staff collaborated with Silicon Valley Talent Partnership (SVTP) and PayPal to evaluate the usage and uptime of the Wi-Fi. Since the installation of the Community Wireless Network, the volume of data transferred has been significant. Since November 2017, it has averaged over 1.5 terabyte (TB) of data per month, and since April 2019, the total amount of data transfer for community public access Wi-Fi has been over 5 TB per month. The amount of data transfer from the District's community public access is five (5) times greater than the usage of Wi-Fi data transfer occurring downtown and at the convention center and airport combined. SVTP and PayPal evaluated uptime based on access points in the wireless mesh network to determine network reliability and concluded that the Wi-Fi was 99.4% reliable.

Based on the positive performance of the James Lick attendance area Community Wireless Network ("Network"), the District has asked the City to pursue expansion of the Network to the Overfelt High School attendance area utilizing funds still available under the funding agreement

² Council Memo 9/20/16: http://sanjose.granicus.com/Viewer.php?view_id=&event_id=2154&meta_id=592460

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executed with the District in October 2016. SmartWAVE performed pre-project design and planning services in anticipation of the Overfelt implementation. Approval of the recommendations in this Memorandum allows staff to execute amendments with ESUHSD and SmartWAVE that: (1) update costs to reflect final costs for James Lick; (2) update estimates for Overfelt, including pre-work for design and planning services previously performed by the vendor for Overfelt; and (3) update estimated funding gap for Yerba Buena and ongoing maintenance and support for all attendance areas.

Potential Technologies:

The James Lick attendance area is using two different technologies to help close the access barrier of the digital divide: (1) outdoor Wi-Fi through the Community Wireless Network project and (2) 4G/LTE hotspots provided by the Sprint 1 Million Project Grant. Alternative technologies that have been evaluated for the Overfelt attendance area include wired options, fixed wireless options, and other telecommunications discount plans. The District and City jointly agreed to continue to provide outdoor community Wi-Fi for the non-student households that reside within the Overfelt attendance area. Other potential technology options will be assessed for the Yerba Buena attendance area.

EVALUATION AND FOLLOW-UP

To ensure that the District's Wi-Fi projects support student academic outcomes, the City's Library Department and the District will evaluate the educational outcomes data tracked for the James Lick attendance area on an annual basis. This data will create a baseline against which before and after academic performance will be measured for the Overfelt attendance area. In addition, overall maintenance and replacement costs will need to be evaluated and addressed to meet long-term Community Wi-Fi needs.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the October 22, 2019 City Council meeting.

COORDINATION

This memo was coordinated with the City Attorney's Office, the Departments of Public Works and the Library, and the East Side Union High School District.

COMMISSION RECOMMENDATION/INPUT

This item does not have input from a board or commission.

FISCAL/POLICY ALIGNMENT

This action aligns with the City's Broadband and Digital Inclusion Strategy³ approved by City Council in November of 2017⁴ which is focused on helping to ensure that all residents, businesses, and organizations can participate in and benefit from the prosperity and culture of innovation in Silicon Valley by broadening access to basic digital infrastructure to all residents, especially our youth, through enabling free or low cost, high-speed broadband service in several low-income communities, and increasing access to hardware, including tablets and laptops, for low-income students.

COST SUMMARY/IMPLICATIONS

For each attendance area implementation, there are costs associated with the SmartWAVE contract to install equipment on City streetlight poles, costs for City staff to administer and deliver the project, and annual operating and maintenance payments for a five-year term (the first year is included in the SmartWAVE contract). Table 1 below summarizes committed funding sources and costs for implementation at the James Lick and Overfelt Attendance Areas. The District previously committed \$2.7 million to implement community wireless networks within these two attendance areas. To supplement project funding for James Lick, 2018-2019 year-end appropriation actions were taken to reallocate savings within the Office of the City Manager, a portion of which was rebudgeted into 2019-2020, to fund the final two years of the operations and maintenance payments. As a result, implementation and ongoing maintenance for five years at James Lick is fully funded by the City.

The District will contribute its remaining obligation of \$1.35 million to fund the Overfelt implementation. As shown in Table 1, there may not be enough project funding to fully pay the final two years for operations and maintenance. However, if some or all of the contingency is not needed, then project savings could be applied toward operations and maintenance.

³ Digital Inclusion and Broadband Strategy: <https://www.sanjoseca.gov/index.aspx?NID=5557>

⁴ November 17 Council Special Meeting:
http://sanjose.granicus.com/GeneratedAgendaViewer.php?event_id=113bec85-c328-4a67-95d6-d05b81f36249

Table 1. ESUHSD Community Wireless Network Project Funding

	Prior Years	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Source of Funds						
Carryover from Prior Year		-	186,243	87,072	37,472	(12,128)
East Side Union High School District	1,350,000	1,350,000				
City Funds - James Lick	94,286	99,142				
City Funds - Overfelt	37,472					
Total Source	1,481,758	1,449,142	186,243	87,072	37,472	(12,128)
Use of Funds						
James Lick (Total \$1,499,990)						
SmartWave	1,072,756	-	-	-	-	-
Project Delivery	233,806	-	-	-	-	-
Operations & Maintenance	94,286	49,571	49,571	-	-	-
Overfelt (Total \$1,492,638)						
SmartWave	80,910	861,854	-	-	-	-
Project Delivery	-	245,075	-	-	-	-
Operations & Maintenance	-	-	49,600	49,600	49,600	49,600
Contingency	-	106,399	-	-	-	-
Remaining Funding to Carryover	-	186,243	87,072	37,472	(12,128)	(61,728)
Total Use	1,481,758	1,449,142	186,243	87,072	37,472	(12,128)

Implementation costs for the third attendance area, Yerba Buena, are estimated as follows:

• SmartWAVE installation	\$ 942,764
• Project Delivery	245,075
• Operations and Maintenance	198,400
• Contingency	106,399
Total:	\$1,492,638

The total funding gap based on current estimates for Overfelt and Yerba Buena is approximately \$1.6 million. It is important to note that the recommended actions included with this Memorandum do not obligate the City to fully fund the remaining project costs. However, the City and District will work together to close the funding gap over the next year using strategies such as, but not limited to, the following:

- Assess other technology options which may be less expensive or may leverage technologies such as street light smart controller Wi-Fi funded from other sources;
- Identify grants and/or other school districts contributions;
- Submit proposals for Digital Inclusion Fund grants;
- Pursue private sector opportunities including broadband provider negotiations;
- Pursue opportunities as part of a larger Citywide Community Wi-Fi strategy that seeks to fund a sustainable revenue source for the installation, maintenance, and associated replacement costs of all Community Wi-Fi services;

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- Pursue community benefit partnerships;
- Approach other feeder school districts within the East Side Union High School District service area about funding the network and pursue agreements with these districts to access the network; and
- Pursue additional district funding with ESUHSD.

BUDGET REFERENCE

The table below identifies the fund and appropriations proposed to fund the contract costs recommended as part of this memorandum.

Fund #	Appn #	Appn Name	Total Appn	Amt. of Increase	2019-2020 Proposed Operating Budget Page*	Last Budget Action (Date, Ord. No.)
001	0112	City Manager's Office Non-Personal/Equipment	\$4,737,759	\$0	VIII-59	06/18/2019, 30286
001	7860	East Side Union High School District Community Wireless Network Project	N/A	\$1,350,000	N/A	N/A
001	R090	Revenue from Local Agencies	\$14,980,210	\$1,350,000	III-15	06/25/2019, 79174

* The 2019-2020 Proposed Operating Budget was adopted by City Council on June 18, 2019.


CEQA

Categorically Exempt, File No. PP19-024, CEQA Guidelines Section 15303(d), New Construction of Small Structures.

/s/
DOLAN BECKEL
Director, Civic Innovation & Digital Strategy

/s/
JULIA H. COOPER
Director of Finance

/s/
ROB LLOYD
Chief Information Officer


JIM SHANNON
Budget Director

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I hereby certify that there will be available for appropriation in the General Fund in the Fiscal Year 2019-2020 moneys in excess of those heretofore appropriated there from, said excess being at least \$1,350,000.

A handwritten signature in cursive script, reading "Jim Shannon".

JIM SHANNON
Budget Director

For questions regarding the Access East Side Project, please contact Dolan Beckel, Director, Office of Civic Innovation, at (408) 535-8260. For questions regarding the SmartWAVE Agreement, please contact Lisa Taitano, Assistant Director of Finance, at (408) 535-7041.