

Memorandum



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kip Harkness
Jill Bourne
Julia H. Cooper
Jim Shannon

SUBJECT: SEE BELOW

DATE: June 25, 2021

Approved

Date

6/25/2021

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

RECOMMENDATION

1. Adopt a resolution authorizing the City Manager to:

- a) Negotiate and execute the Third Amendment to the Funding Agreement between the City of San José and East Side Union High School District Relating to Installation of a Community Wireless Network in the District to decrease funding by \$478,974 for a revised total funding amount of \$3,619,468 for deployment, maintenance, support, and operations costs at the James Lick, William C. Overfelt, and Yerba Buena High School attendance areas for the term ending December 31, 2021, subject to the appropriation of funds;
- b) Negotiate and execute a Funding Agreement between the City of San José and East Side Union High School District Relating to Maintenance and Technology Refresh of the Community Wireless Network at the James Lick, William C. Overfelt, and Yerba Buena High School attendance areas for a maximum District funding amount of \$2,281,965 for a five-year term beginning January 1, 2022 through December 31, 2026, subject to the appropriation of funds;
- c) Negotiate and execute the Third 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 ("SmartWAVE") (Alpharetta, GA) to (1) reflect final deployment costs for the William C. Overfelt and Yerba Buena High School attendance areas, (2) decrease compensation by \$98,725 for a revised maximum compensation of \$3,208,265 for the initial term ending December 31, 2021, and (3) add scope of work and estimated costs for technology refreshes and maintenance and support at the James Lick,

William C. Overfelt and Yerba Buena High School attendance areas during agreement option terms through December 31, 2026, subject to the appropriation of funds; and

- d) Negotiate and execute a Funding Agreement between the City of San José and East Side Union High School District Relating to Installation of a Community Wireless Network in the District to design, build, and/or maintain a Community Wireless Network in the District for a term of five (5) years through 2026, with the City's contribution amount not to exceed \$3,900,000 to fund the implementation, maintain services and replacement of technology for five attendance areas: Independence, Andrew P. Hill, Oak Grove, Mt. Pleasant, and Silver Creek.
2. Adopt the following 2021-2022 Appropriation Ordinance and Funding Source Resolution amendments in the General Fund:
- a) Increase the East Side Union High School District Community Wireless Network Project appropriation to the Public Works Department in the amount of \$170,906; and
 - b) Increase the estimate for Revenue from Local Agencies by \$170,906.

OUTCOME

This action will allow additional cost-sharing between East Side Union High School District (ESUHSD, District) and the City of San José (City) for the purpose of building and maintaining community wi-fi networks in ESUHSD attendance areas for the benefit of students and residents. This recommended action enables the City to invest available resources to provide broadband services to unconnected and under-connected students and residents experiencing hardship and significant barriers to access for distance learning and critical services due to the impacts of the COVID-19 emergency.

BACKGROUND

Prior to the COVID-19 pandemic, school districts throughout the United States were investing in laptops and digital learning platforms using funding sources such as the federal E-Rate program to deliver broadband to the classroom. Those investments have made great impacts on educational outcomes for students, but only extended to school grounds. Traditional sources of information technology funding for schools such as E-Rate have not allowed for investment in activities that are not tied to a school campus. Students who do not have home broadband were left behind in the digital learning environment, a disparity referred to by many as the "homework gap." 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 occurred in a telemedicine trial, according to the Journal of Managed Care; and
- A 0.3% employment increase occurs for every +1% of digital inclusion, according to the Brookings Institute.

ESUHSD serves more than 24,000 students who are San José residents in grades 9-12 at eleven (11) comprehensive high schools, seven (7) alternative education sites, seven (7) child development centers and seven (7) independent charter schools. The District has the seventh-largest high school student enrollment in California and the largest in Northern California. The ESUHSD voters passed a general obligation technology bond measure in November 2014 to increase student access to computers and modern technology, referred to as a “tech bond”. At three of the District’s high schools, James Lick, William C. Overfelt (Overfelt), and Yerba Buena, it is estimated that the majority of students lack broadband at home.

Using the proceeds of the tech bond, ESUHSD and City entered into a partnership to construct and install an outdoor wi-fi network within targeted areas of the three previously mentioned high schools. The project proposed to leverage City properties and infrastructure such as community centers, light poles, traffic signals, other structures to construct the network, with District funding to pay for the network infrastructure and other implementation costs. The following Council actions have been taken to advance this project:

- June 28, 2016¹: Authorized the City Manager to negotiate and execute an Agreement between the City and ESUHSD to use ESUHSD 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.
- September 20, 2016²: Authorized the City Manager to execute an Agreement with SmartWAVE for wi-fi deployment for the James Lick attendance area.
- October 22, 2019³: Executed the First Amendment of the funding and SmartWAVE agreements to expand community wi-fi in William C. Overfelt High School attendance area.
- June 30, 2020⁴: Execute a Second amendment to the existing funding and SmartWAVE agreements to expand the community wi-fi deployment in the Yerba Buena attendance area.

The James Lick attendance area was opened to students in November 2017 and opened for public access in April 2019. The community wi-fi deployment at William C. Overfelt attendance

¹ https://sanjose.granicus.com/MetaViewer.php?view_id=52&clip_id=9197&meta_id=583849

² http://sanjose.granicus.com/MetaViewer.php?view_id=2&clip_id=9286&meta_id=592958

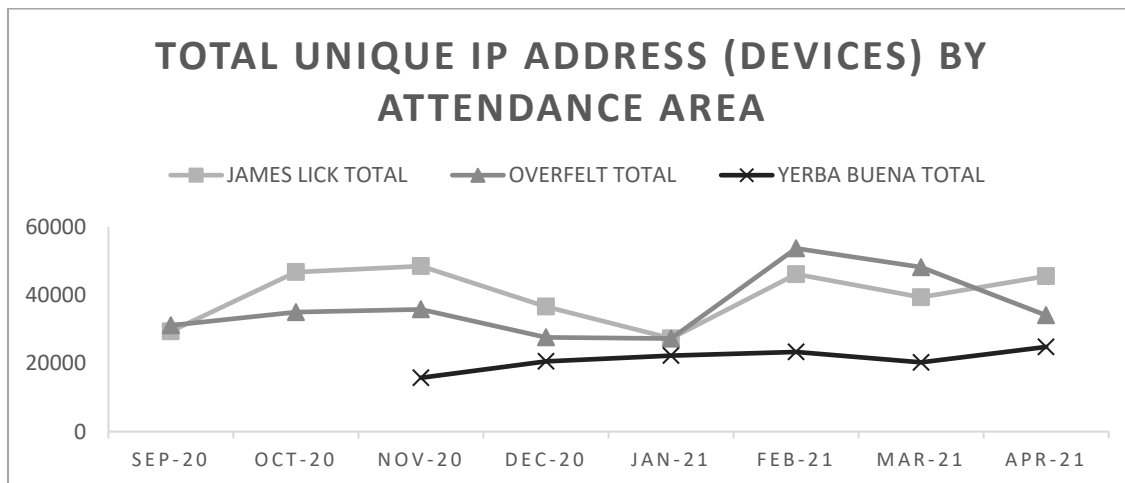
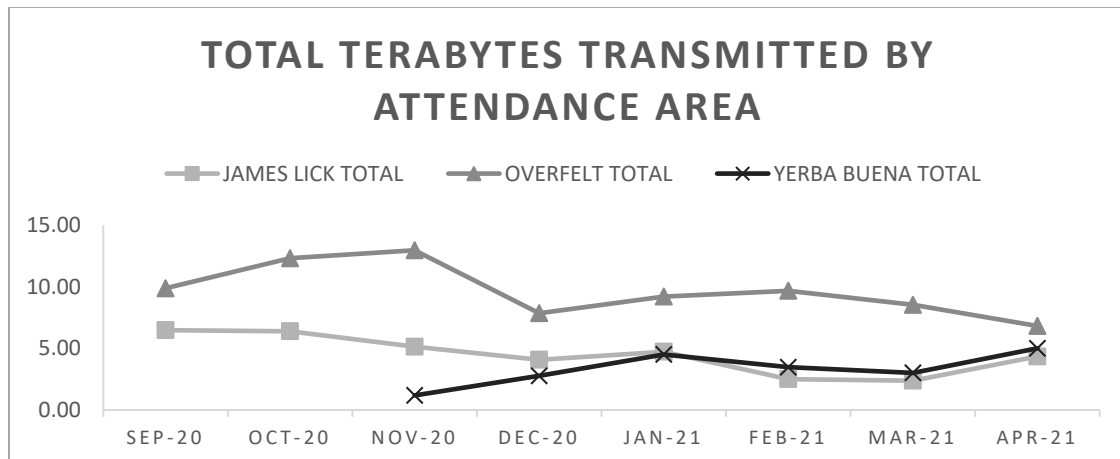
³ <https://sanjose.legistar.com/View.ashx?M=F&ID=7780092&GUID=6882BFB9-D343-4808-A2C7-50F9012A99F9>

⁴ <https://sanjose.legistar.com/View.ashx?M=F&ID=8628463&GUID=936F1096-5498-437F-A487-2C6ACCB920B7>

area went live on June 30, 2020. The Yerba Buena attendance area opened for use in January 2021.

The District reports that the Community Wireless Network project is having a positive impact on the lives of their students. The network supports thousands of high-speed connections and 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 curricula. Separately, the District has also provided laptops for at-home use.

In Fall 2020, in conjunction with the distribution of 15,800 hotspot devices to residents and student households, the attendance area networks were renamed to “SJ Access”. SJ Access will be the common name for connectivity solutions in San José moving forward and will be applied to future networks and devices.



Network data indicates a sustained use of the networks in each attendance area, though seasonal variations in volume are evident in the data. The charts above visualize the total amount of data transmitted in each attendance area, as well as the total number of unique IP addresses (devices) accessing the network each month. This data includes student and community users. Staff is investigating the decrease in data transmission and users in the Overfelt area; data related to the functionality of the equipment does not indicate failure or network outages. During the month of April 2021, the three networks reported the following outputs:

	Unduplicated Users	User Traffic (Terabytes)
James Lick	45,588	4.35
Overfelt	34,110	6.83
Yerba Buena	28,840	5.02

The City is continuing to analyze information about the use of the community network to inform additional outreach efforts and identify areas where signal strength may need to be amplified to meet user needs and expectations. City staff conducted a survey of the three (3) operational SJ Access networks in Spring 2021 to gauge community awareness and functionality. The survey had a low number of responses and will be re-advertised in July 2021. Staff expects to add capacity early in FY 2021-22 to create and maintain a stronger compilation of reports and analytics tools, which will provide a more thorough understanding of the network conditions and operations.

COVID-19 Acceleration and Expansion to New Attendance Areas

In March 2020, the COVID-19 pandemic necessitated County of Santa Clara Shelter-In-Place mandates, and consequent school closures, throughout Santa Clara County. In April 2020, the City activated the Digital Inclusion Branch of the Emergency Operations Center (“EOC”) to manage all pandemic-related digital inclusion efforts. The urgency to expand the outdoor wi-fi prompted the ESUHSD-City team to consider expanding the project scope to include additional attendance areas. ESUHSD identified five (5) additional attendance areas that would benefit from community wi-fi: Independence, Oak Grove, Andrew P. Hill, Mt. Pleasant and Silver Creek attendance areas.

On June 23, 2020, Council approved the funding strategy proposed by EOC Digital Inclusion Branch (City) and ESUHSD to expand the community wi-fi projects to five (5) additional attendance areas (see Table 1) with the use of City General Funds, Community Development Block Grant (“CDBG”) funds, and ESUHSD funding. In addition to the cost associated with installing community wi-fi network in the individual attendance areas, \$500,000 was allocated for supplemental wireless access nodes in the attendance areas that are not built out or do not have a completed network design. The additional nodes will be deployed as needed to ensure the attendance areas have sufficient, robust coverage to support the digital access needs of residents.

ESUHSD is responsible for funding ongoing operations, maintenance, and replacement of the technology. City funds will not be required to support the ongoing operation of the network nor technology updates. ESUHSD has committed over \$9 million dollars to the successful completion, operation, maintenance, technology refresh, and fiber installation of the networks in this partnership. The City has committed approximately \$4.25 million from the General Fund and City grant funds received in the CDBG Fund.

On November 5, 2020, Council adopted the resolution authorizing the City Manager to negotiate and execute five (5) master agreements that can be used for federal and non-federal funding requirements to expedite the design for future community wi-fi infrastructure until December 31, 2023. The Independence, Oak Grove, and Andrew P. Hill attendance areas are currently in the network design phase.

ANALYSIS

In 2019, ESUHSD agreed to pay for ongoing operations and maintenance of the wi-fi equipment, and the cost of replacing the equipment as it reaches the end of its useful life. The actions in the recommendation would amend the existing agreements to reflect the final installation and other costs through December 31, 2021; and provide for a new funding agreement to pay for the operations and maintenance, support, and technology refresh components for the scope of work beginning January 1, 2022 through December 31, 2026. This action recognizes and appropriates funding for the maintenance and support for calendar year 2022 for the three (3) operational networks (Lick, Overfelt, Yerba Buena). Further details for the fiscal impact of the new agreement and the amended agreement with the ESUHSD can be found in Attachment A.

Separate from the contract amendments for the existing networks, this action authorizes the City Manager to enter into a new funding agreement with ESUHSD to reflect the ongoing partnership to construct the additional five (5) attendance area networks. This work includes the design, construction, ongoing operations and maintenance, and future technology refresh of each area, as well as the fiber installation to the Mt. Pleasant attendance area. The operations, maintenance, and technology refresh costs will be paid for by ESUHSD. Staff will return to Council in the fall to recognize and appropriate the funding related to the additional five (5) attendance area networks.

City staff evaluated school attendance areas for alignment with CDBG funding criteria; the Mt. Pleasant attendance area had the highest need. Approximately 15,000 feet of new fiber will be installed from Aborn/White Road to East Hills/White Road area that will support wi-fi access for the Mt. Pleasant attendance area and City's traffic signal communication along White Road. Silver Creek attendance area will also benefit from the installation of the fiber in White Road. It is estimated to cost approximately \$300,000 and may require up to 6 months to procure materials and complete installation and testing. This project is included in the funding agreement for the new attendance area projects. Approval of the new funding agreement will allow the City to share 50% of the cost of the fiber installation project with ESUHSD. Once the installation project

has been completed, the Mt. Pleasant and Silver Creek areas will move into the network design phase.

City staff is currently working with SmartWAVE on the network design of the Independence High School attendance area. This attendance area is significantly larger in comparison to the previous attendance areas that have been completed, with denser vegetation that will require additional access points to provide adequate signal coverage. It is estimated that a total of 340 access points instead of 200 access points will be installed for this attendance area. The City utilized data from the Digital Inclusion Priority Index to prioritize the areas that have the highest concentrations of childhood poverty, K-12 enrollment, and low levels of access to broadband or a computer at home. Funding for design and construction will be provided by CDBG and General Fund. ESUHSD agreed to provide additional funding for ongoing operations and maintenance support for these additional access nodes. The Independence network is expected to be operational in February 2022.

The preliminary design of the Andrew P. Hill network includes 200 access points. The network is expected to be operational in April 2022. The design and construction of the network in this attendance area is funded entirely by the City's General Fund.

Oak Grove attendance area is on schedule to be completed on or before June 2022. This project area is expected to be served by 243 wireless access points, a slight increase from the 200 wireless access points that were previously estimated and budgeted for.

CONCLUSION

Funded by resources provided by the General Fund, federal government via CDBG, and ESUHSD, the City (both Finance and Public Works departments) will oversee the design & construction contracts with SmartWAVE, Infinity Communications, and Studio 151 to expand community wi-fi to students (especially underserved) and the non-student households within all eight attendance areas. Three of the five new networks, Independence, Andrew P. Hill and Oak Grove are expected to be completed between January 2022 and June 2022.

EVALUATION AND FOLLOW-UP

To ensure that the District's wi-fi projects support student academic outcomes, the Library Department, Information Technology Department and the District will evaluate educational outcomes data for the attendance areas on an annual basis. These datasets will create a baseline against which before and after academic performance will be measured for all eight attendance areas.

CLIMATE SMART SAN JOSE

The recommendation in this memo has no effect on Climate Smart San José energy, water, or mobility goals.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the June 29, 2021 City Council meeting.

COORDINATION

This memorandum was coordinated with the City Attorney's Office, the Public Works, Information Technology, Transportation, and Housing departments, and the ESUHSD.

COMMISSION RECOMMENDATION/INPUT

No commission recommendation or input is associated with this action.

FISCAL/POLICY ALIGNMENT

This action aligns with the City's Broadband and Digital Inclusion Strategy approved by City Council in November 2017. This strategy focuses 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 the community's youth. This will enable free or low cost, high-speed broadband service in several low-income communities and increase access to hardware, including tablets and laptops, for low-income students.

This action also supports the Education and Digital Literacy Initiative and is aligned with the City's Education Policy, Council Policy 0-30. The City's efforts to advance educational outcomes for children and youth are advanced by ensuring at-home internet access is available to complete schoolwork, and access information and materials that advance healthy development.

Lastly, this action advances the "Digital Equity" item on the City Roadmap.

COST SUMMARY/IMPLICATIONS

For each attendance area implementation, there are costs associated with the design, construction, ongoing maintenance, technology refresh, as well as costs for City staff to administer and deliver the project. For James Lick, William C. Overfelt, and Yerba Buena High School attendance areas, these costs are approximately \$6.1 million as shown in Attachment A and are reflected in funding agreements with ESUHSD and SmartWAVE through December 31, 2026. The District is committed to providing \$5.9 million for implementation, technology refreshes, ongoing maintenance, and technical support for these three attendance areas. The budget actions recommended in this memorandum is to recognize and appropriate funds of \$170,906 for the maintenance of the Community Wireless Network at the James Lick, William C. Overfelt, and Yerba Buena High School attendance areas as detailed in the new funding agreement between the City of San José and ESUHSD. This represents only the cost for calendar year 2022. Future budget actions to recognize revenue from ESUHSD and to appropriate the funds for the remaining four years at these three attendance areas will be brought forward as part of a future budget process. In total, the maintenance and technology refresh will cost approximately \$2.3 million over the five-year period and will be funded by ESUHSD.

On June 23, 2020 the City Council approved a funding strategy for Access East Side Community Wi-Fi project which included using CDBG and the General Fund to expend up to \$1.25 million per attendance area on the design and construction of Independence, Andrew P. Hill, and Oak Grove attendance area networks. The implementation, ongoing operations, maintenance, and technology refresh in each of the three attendance areas is proposed to be paid for by ESUHSD. As proposed, the City will be responsible for the costs that lead to the network becoming operational. ESUHSD will fund all future ongoing costs moving forward for the life of the agreement. The funding agreement also authorizes the expenditure of up to \$150,000 to fund the installation of fiber cable to the Mt. Pleasant attendance area. Combined, the total cost to the City is not to exceed \$3.9 million, which will pay for design, construction, and 50% of the fiber installation to the Mt. Pleasant attendance area. A summary of these costs is shown in the table below. All budget actions to recognize revenue from ESUHSD and to appropriate the funds for the District's portion for the additional five attendance areas will be brought forward for City Council approval in the fall.

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Table 1: Sources of Funding for the Five New Attendance Area Networks

	City Funding: Design & Construction			ESUHSD Funding			Total Per Attendance Area
ESUHSD Attendance Area	City Grant Funds (CDBG)	General Fund	Total City Commitment	Design & Construction	Ongoing Maintenance, Tech Refresh, and Power	Total ESUHSD Commitment	
Independence	\$1,000,000	\$250,000	\$1,250,000	-	\$ 657,385	\$ 657,385	\$1,907,385
Oak Grove	\$1,000,000	\$250,000	\$1,250,000	-	\$ 657,385	\$ 657,385	\$1,907,385
Andrew P. Hill		\$1,250,000	\$1,250,000	-	\$ 657,385	\$ 657,385	\$1,907,385
Silver Creek	-	-	-	\$1,250,000	\$ 657,385	\$1,907,385	\$1,907,385
Mt. Pleasant	-	-	-	\$1,250,000	\$ 657,385	\$1,907,385	\$1,907,385
Fiber Installation to Mt. Pleasant	-	\$150,000	\$150,000	\$150,000	-	\$150,000	\$300,000
Total	\$2,000,000	\$1,900,000	\$3,900,000	\$2,650,000	\$3,286,925	\$5,936,925	\$9,836,925

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	Current Total Appn.	Rec. Budget Action	Amt. for Contract	2021-2022 Proposed Operating Budget Page*	Last Budget Action (Date, Ord. No.)
001	7860	East Side Union High School District Community Wireless Network Project	\$0	\$170,906	\$170,906	N/A	N/A
001	R090	Revenue from Local Agencies	\$18,784,335	\$170,906	\$170,906	V1-31	6/22/2021, 80109

*The 2021-2022 Proposed Operating Budget was reviewed by the City Council on June 15, 2021 and adopted on June 22, 2021.

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CEQA

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

/s/

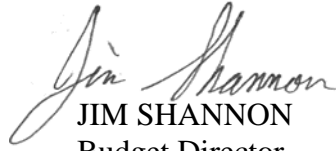
KIP HARKNESS
Deputy City Manager



JILL BOURNE
Director, EOC Digital Inclusion Branch

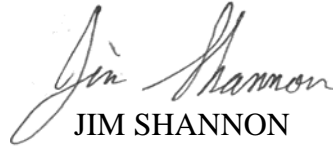
/s/

JULIA H. COOPER
Director of Finance



JIM SHANNON
Budget Director

I hereby certify that there will be available for appropriation in the General Fund in the Fiscal Year 2021-2022 moneys in excess of those heretofore appropriated there from, said excess being at least \$170,906.



JIM SHANNON
Budget Director

For questions, please contact Ann Grabowski, Assistant Director – EOC Digital Inclusion Branch at ann.grabowski@sjlibrary.org.