



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: David Sykes

**SUBJECT: INNOVATIVE LED STREETLIGHT
REPLACEMENT RFP**

DATE: May 22, 2017

Approved

Date

5/22/17

REPLACEMENT

REASON FOR REPLACEMENT

Staff's recommendation has changed due to changes in key assumptions and policy considerations since the release of the staff report on the Innovative LED Streetlight Replacement Request for Proposals. For the reasons discussed in this report, staff now recommends that the City Council reject all proposals and provide the direction to the City Manager as outlined below. This Replacement Memorandum reflects the updated recommendation and staff analysis.

RECOMMENDATION

It is recommended that the City Council:

- 1) Reject all proposals submitted for the Innovative LED Streetlight Replacement RFP;
- 2) With respect to LED streetlight conversion: Direct the City Manager to return to Council following completion of the City's Broadband Strategy with requirements, financing strategies, and procurement recommendations for converting the approximately 40,000 remaining streetlights to LED luminaires;
- 3) With respect to LED streetlight controller units: Direct the City Manager to evaluate alternatives regarding the deployment of LED streetlight controller units citywide, which may include potential demonstration and testing of emerging technologies;
- 4) With respect to the Broadband Strategy: Direct the City Manager to include in the Broadband Strategy:

- a. Recommendations regarding technology, governance, process, and policy for the City's broadband digital infrastructure including fiber/coax, streetlight poles, and small cells, including an analysis of the costs and benefits of combining proactive streetlight pole make-ready activities with installation of new streetlights; and
- b. Requirements, policy considerations, and procurement recommendations for Internet of Things network, platform, and devices.

OUTCOME

Council approval of the recommendation will provide a path forward for:

- Converting approximately 40,000 streetlights citywide to energy-efficient, brighter and whiter, light-emitting diode (LED) streetlights;
- Working in partnership with industry to select the next-generation of integrated streetlight control and IoT units for the LED streetlights and ultimately develop a procurement strategy for new controller units citywide; and
- Development of policies and strategies for broadband and the Internet of Things.

BACKGROUND

San José has approximately 64,400 active streetlights citywide. Since the City Council adopted San José's Green Vision in 2007, the City has been at the forefront of streetlight innovation, collaborating with industry to pilot new designs for LED streetlights and smart controller units. To date, more than 24,000 lights have been converted to LEDs (approximately 39 percent of the inventory), and approximately 40,000 lights remain to be converted. Attachment 1 provides a map showing where those lights are located.

Purchasing and converting the lights to LEDs with smart controller units is estimated to cost approximately \$36.7 million. Given the other pressing infrastructure needs the City has, Council directed staff to turn this funding challenge into an opportunity for creative solutions.

The City initially paid for LED streetlight conversions using funds from the Traffic Capital Improvement Program and grants, including stimulus funding from the American Recovery and Reinvestment Act and federal Energy Efficient Community Block Grant funding. In 2014 and 2015, the City bundled the installation of 18,127 LED streetlights into a larger package of energy efficiency projects being financed through a contract with OpTerra Energy Services (formerly Chevron Energy Solutions), an energy services company (ESCO). Under the ESCO model, the ESCO manages the design, engineering, financing, and installation of a package of energy upgrades for the client. In theory, the capital costs of the upgrades are paid for by the energy savings realized after the project is completed. In practice, however, that didn't work out in San José. This was because San José's existing streetlights were primarily low-pressure sodium lights, which are relatively efficient, and because of program management costs. The ESCO

project required the streetlight portion of the project to be underwritten by other components of the project, such as energy efficiency projects on city buildings.

The Innovative LED Streetlight Replacement RFP has its roots in a 2013 unsolicited proposal from Philips Lighting offering to convert San José's streetlights to LED at no charge to the City in exchange for the right to install its SmartPoles in the public right-of-way. (SmartPoles are streetlights with wireless telecommunications built into the pole. Wireless carriers are able to lease space from the company to provide service to their customers.)

As with any unsolicited proposal, staff took a proactive approach to understanding the proposal and working with the company to vet the concepts. Throughout this process, staff looked for creative options to balance the desire to help enable innovation and the need to follow procurement requirements and policies put in place by the City Council and by the voters of San José in the City Charter. San José's procurement rules are designed to ensure transparency and fairness when spending taxpayer dollars and entering contracts for use of City-owned property.

To support and encourage civic innovation, the City's procurement policies include provisions for creating demonstration partnerships¹. In accordance with the Framework for Establishing Demonstration Partnerships, the Council approved a demonstration partnership pilot with Philips under which the company installed 50 SmartPoles in San José and, in exchange, the company converted 750 streetlights to LED lights with smart controller units (a ratio of 15 streetlights converted for each SmartPole installed). The company bore the risk for installation costs and investment of capital, not the City.

Other companies approached City staff, as well as the Mayor and Council, proposing ideas for converting the remaining streetlights through ESCO or other financing models, while others have sought to place Internet of Things/Smart City equipment on the streetlight poles or in the public right-of-way.

On February 24, 2015, Council directed staff to issue a call for proposals looking for ways to use the City's assets, including the streetlight poles, to convert the City's remaining lights with little or no impact to the General Fund.

This had never been done before in the City. Staff put together a team to develop a Request for Proposals. On August 3, 2015, the City issued the "Innovative LED Streetlight Replacement RFP." Respondents were invited to submit proposals to use valuable City assets in exchange for converting the remaining approximately 39,285 streetlights to LED with smart controls.

A history and timeline of the RFP process, staff review and due diligence, interviews, and Requests for Best and Final Offers is provided in Attachment 2. An overview of the proposals, how they scored, and additional analysis is provided in Attachments 5 and 6.

¹ Council Policy 0-40, Framework for Establishing Demonstration Partnerships:
<http://www.sanjoseca.gov/DocumentCenter/View/3835>

On January 11, 2017, staff issued a report recommending entering into a pilot project with the top-ranked proposer (Siemens) and, if the pilot were to be successful, entering into contract negotiations with the company. The item was placed on the City Council agenda for January 24, 2017. On January 23, 2017, the City of San Jose received a protest to RFP 15-16-01 from Philips Lighting of North America, one of the proposers. The Council deferred hearing the item until the City completed the protest review process and requested staff return with answers to questions posed at the meeting by the Mayor and Councilmembers, as well as outlined in memorandums from Mayor Sam Liccardo and Councilmember Donald Rocha. Those questions are answered in Attachment 7.

The City's procurement authority reviewed the bid protest in accordance with the San José Municipal Code and administrative procedures. A written decision on the protest was issued on April 3, 2017² by the Deputy Director of the Department of Finance, serving as the hearing officer. The decision found after careful review, "that the City's RFP process was followed, Siemens' proposal was responsive, and there is no evidence to support allegations that there was any oversight or negligence on the part of the evaluation team that resulted in over-scoring of either Siemens' or B&V's proposal."

On April 12, 2017, Philips filed a timely appeal of the decision on the bid protest with the City Clerk. Under the Code, the City Council hears and rules on such appeals. In this matter, however, given staff's amended recommendation to reject all proposals, there is no need to hold a hearing on the appeal.

ANALYSIS

Changes to the Original Recommendation – New Considerations

Since staff issued its original report in January, several factors have emerged to change staff's analysis and recommendations. Most significantly, the streetlight poles may be a more valuable real estate asset than previously assumed.

The City's new Office of Civic Innovation and Digital Strategy (Innovation Team) has been working to identify citywide gaps in broadband infrastructure. On February 14, 2017, the City Council approved a consulting contract with PwC to address access to the City's broadband digital infrastructure including home internet access and mobile (LTE) internet access. This consultant provided a preliminary read-out to the Civic Innovation Cabinet on April 13, 2017, and identified the light pole as the most critical City asset in the Broadband Strategy and recommended deferring any action that might jeopardize the City's ability to fully monetize the value of the light pole real estate.

² It should be noted that response to the protest was delayed due to key staff being deployed to the Emergency Operations Center for response and recovery related to the Coyote Creek Flood.

Staff plans to bring forward a Broadband Strategy for Council consideration in the fall. Moving forward with any of the installation proposals now in advance of the completion of the Broadband Strategy could tie up the streetlight poles and prevent implementation of the Strategy.

The RFP did require companies to indicate up-front if they were requesting exclusive access to the streetlight, pole, or right-of-way in their proposals. The RFP also advised respondents of the City's usage fees for small-scale telecommunications installations and that proposals would be evaluated based on adherence or variance from the established rates. The following chart outlines the exclusivity requested by each installation finalist and demonstrates that none of the proposers agreed to meet the City's existing rates for small-scale telecommunications facilities on city-owned property (see Attachment 3 for the usage fee schedule).

Proposer	Exclusivity Requested	Price Point vs. City's Master Agreement Usage Fee Schedule
Siemens	None, however any COMM controller units are on every streetlight.	City has no rates specific to femtocells; proposers rate is significantly below master agreement fee rate
Black & Veatch	Exclusivity requested for sites on which small cells are attached, up to 2,500 poles impacted	Half price
Philips	Exclusivity requested for SmartPole sites, up to 1,000 SmartPoles would be installed	At Master Lease price "only if the carriers will agree"

However, it is important to note, that in addition to actual contractual exclusivity, there is also the potential for de facto exclusivity, in which market share is absorbed by the proposer's units.

Furthermore, Digital Inclusion is a key component of the Broadband Strategy. The strategy will look at ways to improve access to broadband and mobile technology for all San José residents. These may include incentives or other methods to bring service to neighborhoods that the marketplace has overlooked.

Digital inclusion was a factor in rating the community benefit aspects of the RFP responses, however, the current proposals rely on the marketplace to determine which neighborhoods to serve. None of the proposals guaranteed digital inclusion or provided much detail about how residents in underserved neighborhoods would benefit from expansions in service or access to broadband or mobile technology.

Initial Concerns Are Amplified

It is important to note that staff's original recommendation was measured and provided Council with two cautious policy alternatives, one of which was to reject all proposals. The alternative was to conduct a pilot with the top-ranked proposer prior to negotiating a contract.

Staff's initial caution was due to fundamental challenges with the RFP responses that have not changed. However, when combined with the concerns outlined above, staff believes that the following original concerns become more significant than originally stated:

- 1) **All proposals bear significant risk to the General Fund. In all of the finalists' proposals, the City bears the risk of paying the loan for construction of the lights should revenue projections, energy savings, or other fiscal components of the project not come to fruition.**

None of the proposals place the financing risk for installing the lights on the proposer (as in the former Philips pilot). No proposer came forward with a simple "convert X lights in exchange for Y small cell units" formula in their proposal.

If the City were to finance and procure conversion of the lights, the City would bear risks (for example, if energy savings were not as robust as projected), however, the City would also not have given up the valuable real estate of the streetlight poles.

- 2) **The Internet of Things is Immature and Evolving and the City Has Not Developed Policies or Plans for its Use.** The IoT space is immature, both in the development of actual use cases and in the marketplace. Each IoT device works on a network, uses a software platform, and performs certain functions (such as detecting gunshots or car crashes). The City has not yet determined what problems we can or should solve through IoT.

There is serious policy work that the City needs to do to identify what problems IoT devices can solve and how such devices might be deployed in a way that benefits our residents and economy. This work would include how City staff would use and analyze data gathered, as well as policies around privacy, data storage, public or private use of data, and more. Staff believes it would be premature to commit to a particular IoT device, network, or platform without a plan or basic policies in place.

- 3) **The In-Lieu Proposal is Premature.** As shown in Attachment 6, the In-Lieu Proposal from Allvision/Outdoor Media, proposes to install electronic billboards on City property. The Council on May 16, 2017 made policy changes with respect to the outdoor advertising and electronic billboards. However, the in-lieu proposal predates that policy work and the work that still must be done to develop an electronic billboard program that works for San José's residents and businesses, including developing a revenue model and other policies.

Staff believes a more prudent course would be to allow the policy work to be completed, then if Council wished to pursue a contract for such advertising on City properties, issue a procurement specific to electronic advertising.

Additionally, it is important to note that this proposal received the lowest score of the four finalists. Under the terms of the RFP, the contract must be awarded to the top ranked proposer.

Opportunities Emerging from the RFP: Alternative Ways to Convert Streetlights

Staff knows how much San José residents want LED streetlights. The team has worked diligently to find a path forward with this RFP. However, with innovation comes risk, as many of our Valley's great innovators often say. Frequently, those risks don't pan out, but in the process something critical is learned.

That is true with this RFP. While the outcome did not meet the original goals, staff has learned a great deal through the process, including:

- Installing (and financing the installation of) LED streetlights is a big lift for companies not working in that space. This limited the number of proposers responding to the RFP. For example, telecommunications carriers expressed initial interest in the RFP, but none submitted Phase 2 proposals, indicating that while they wish to place small cell equipment on the streetlight poles, they aren't willing to go the extra mile and install the lights. Conversely, many construction companies that the City has seen bid on past procurements for lighting and installation did not bid on this proposal because they didn't have an innovative revenue-generating component that would have covered the costs of installation.
- There are opportunity costs and risks to a bundled proposal, such as preventing other users and uses from accessing the streetlights.
- The streetlight poles could be a critical asset for realizing the City's goals around digital inclusion.
- The traditional procurement model may now be the City's best option for converting the streetlights. LED lighting technology continues to become more efficient, longer-lasting, and cost-effective. As a result, the Base Case (in which the City would finance and procure installation of the LED streetlights under a traditional model) has become more viable as outlined below.
- The streetlighting controller space may be more valuable than previously thought and this space may be rapidly changing.

For these reasons, staff recommends that Council reject all proposals and direct staff to de-couple the components and, following the completion of the Broadband Strategy, proceed with developing procurement and financing strategies.

Next Steps: Converting Streetlights, Piloting Controller Units, Developing Policies

There are distinct components to the proposals received:

- Streetlight luminaires (the light itself);
- Smart controller units that, at a minimum, turn the lights on and off, dim the lights, monitor energy use and report it to PG&E, and report outages. Emerging models of the controller units include IoT/smart city functions, and these uses are projected to grow;
- Small cell devices for telecommunications use and WiFi; and
- Internet of Things devices that could include sensors, cameras, air monitors, traffic monitors, warning systems, and other uses. Many of these devices are stand-alone today, but may be included within smart lighting controller units in the future.

Each of these components is at a different stage in terms of product development, use case, and marketplace readiness and maturity. The table below provides an overview of the product maturity and ways the component may either save, earn or cost the City revenue.

Component	Maturity	Benefits, Costs & Concerns
LED streetlight luminaires	Mature, but advancing	<u>Benefits:</u> <ul style="list-style-type: none"> • Energy savings • PG&E rebates • Improved visibility for pedestrians and motorists, public safety considerations <u>Costs & Concerns:</u> <ul style="list-style-type: none"> • Financing costs and/or upfront capital investment • Costs to purchase and install the lights
Smart lighting controller units: basic model	Mature	<u>Benefits:</u> <ul style="list-style-type: none"> • Energy savings from dimming the lights • Report outages • Monitor and report energy use • Dimming lights benefits Lick Observatory <u>Costs & Concerns:</u> <ul style="list-style-type: none"> • Cost of unit (approximately \$6 million for remaining lights)
Smart lighting controller units: next generation	Immature	<u>Benefits:</u> <ul style="list-style-type: none"> • IoT/smart city components combined with controller functions <u>Costs & Concerns:</u>

Component	Maturity	Benefits, Costs & Concerns
		<ul style="list-style-type: none"> City has not determined business case or use cases yet; hasn't determined what problems IoT devices might solve Staff likely will be needed to evaluate data from various IoT functions; could result in staffing costs Privacy concerns regarding cameras and other monitoring equipment
Telecommunications: Small cell units	Emerging	<u>Benefits:</u> <ul style="list-style-type: none"> Revenue City's Master Agreement simplifies process for carriers interested in installing small cell equipment on streetlight poles or other City facilities <u>Costs & Concerns:</u> <ul style="list-style-type: none"> De facto exclusive use of poles vs. multiple carriers on a pole Digital inclusion, ensuring access to mobile technology and broadband citywide Aesthetics Pole safety and integrity (wind factors) Increasing complexity to streetlight and traffic signal maintenance, which in turn increases worker skill demand and costs Telecom equipment may need more electricity than is available on streetlight circuit Access to fiber backhaul
Internet of Things: Devices	Immature	<u>Benefits:</u> <ul style="list-style-type: none"> Many features geared to help municipal operations (e.g., graffiti detection or air monitoring) <u>Costs & Concerns:</u> <ul style="list-style-type: none"> Business use case models not well-developed, although may exist in the future City has not determined business or use cases yet; hasn't determined what problems IoT devices might solve Staff likely will be needed to evaluate data from various IoT functions; could result in staffing costs

Component	Maturity	Benefits, Costs & Concerns
		<ul style="list-style-type: none"> Privacy concerns regarding cameras and other monitoring equipment
Internet of Things: Network & software platforms	Immature	<u>Benefits:</u> <ul style="list-style-type: none"> Potential to connect various tools on a single software platform or network <u>Costs & Concerns:</u> <ul style="list-style-type: none"> Networks and software platforms likely to have ongoing costs

Following are the approaches staff proposes to take in each of the above areas.

LED Streetlight Conversion: Following the completion of the Broadband Strategy, staff proposes to do the following:

- 1) Complete a more detailed financial analysis of potential energy savings with various lighting conversion scenarios;
- 2) Analyze and develop recommendations regarding capital funding sources and/or financing options, including issuing commercial paper and other alternatives;
- 3) Analyze the costs and benefits of performing other improvements at the time the lights are converted to make ready the poles for future broadband and mobile needs; and
- 4) Return to Council with a plan for financing and procurement of the LED streetlight luminaires.

Attachment 4: The Base Case provides an overview of what would be required if the City were to convert the streetlights using a traditional process (i.e., obtaining financing, designing the systems in-house, and bidding and contracting for installation).

The procurement process for converting the streetlight luminaires likely would be led by the Departments of Transportation and Public Works, in partnership with the Finance Department's Purchasing Division, as with most standard construction bid processes. The Finance Department, coordinating with the City Manager's Budget Office, would need to develop and analyze financing options. Staff may adapt portions of the technical specifications in the Innovative LED Streetlight RFP to build a new RFP for procurement.

During the process of developing the Broadband Strategy, staff will evaluate the cost efficiency of including other pole-specific "make ready" proactive tasks to enable more efficient and effective deployment of small cells and IoT devices at the same time that the lights are converted. These could include power, cabling, and documenting light pole characteristics. This is an emerging best practice policy some cities are calling "one touch – make ready."

Smart Controller Units: A key question staff must evaluate is whether to move forward with converting the streetlights with or without the smart controller units.

Many other cities use an old-fashioned photo cell to turn streetlights on and off, rather than a smart controller unit. However, many cities also do not have a major research observatory on a mountain above them. Council Policy 4-2 *Public Streetlights* calls for the City to use programmable lights to reduce lighting levels of selected streetlights in the late-night hours in consideration of the needs of Lick Observatory on Mt. Hamilton.

The controller unit field is evolving. The controller unit model in use on San Jose's existing LED streetlights is an early generation model.

One option would be to open an opportunity for companies manufacturing controller units to demonstrate their technology in San Jose. Once the technology becomes more mature, the City could issue a procurement for controller units.

The City had a pilot agreement with anyCOMM, the manufacturer of the controller unit designated in the Siemens proposal. This pilot was paused during the RFP process and terminated on December 31, 2016, however, it could be revived under the direction of the Innovation Team and Department of Transportation with clear goals and metrics. The pilot could be expanded to others developing next-generation controller units.

Such a pilot would take into consideration the policies and practices the City needs to develop around the use of IoT devices (as discussed below), as well as shape decision-making about whether the best long-term option for the City's streetlights are deployment of photo cells, simple controllers, or an integrated/IoT controller unit.

The advantage to this approach is helping shape the marketplace for smart controller units and pilot alternatives that might contain various IoT or small cell components within the controller units. The City could also save the cost of purchasing and installing the controller units (approximately \$150/unit or \$6 million for the entire project).

The disadvantage to this approach is that the City would lose the energy savings from dimming the new lights during the period of time when pilot testing takes place. Also, staff would not be automatically notified of outages or malfunctions, which though rare with LED lights, do occur during this time. However, the City's new Customer Relationship Management (CRM) application will allow the residents of San Jose to report outages or malfunctions using their smart phone or other device.

Additional cost factors related to controller units can be found in Attachment 4: The Base Case, which discusses the requirements should the City convert the lights using a traditional process.

Small Cell Installation: The Innovation Team is planning to return to Council in the fall with a draft Broadband Strategy that looks comprehensively at the City's current and future broadband and wireless needs, including the needs of residents, businesses, and underserved populations. The Broadband Strategy will include options for improving service to all San Jose residents. In the interim, prior to development and adoption of the Broadband Strategy, wireless carriers may continue to install small cell equipment on city-owned streetlights and other facilities under the Master Agreement for (Small-Scale) Telecommunications Facilities on City-owned Property. Staff is instead recommending that Council would defer any citywide small cell procurement process or deployment until the Broadband Strategy is completed.

Internet of Things Devices: While the LED RFP did not set out to include IoT devices as a component of the bid response, it certainly allowed for proposers to include such devices. However, this field is in the very early stages of development, and it isn't clear what the marketplace for various devices might be. Additionally, as discussed elsewhere in this memorandum, the City has not yet developed privacy policies for deployment of certain types of IoT capabilities.

The City has just received a \$200,000 from the Knight Foundation to conduct an assessment and do planning in this area. The Innovation Team plans to return to Council in the fall with a draft strategy and policies around the deployment of Internet of Things devices in San Jose. This will allow for comprehensive assessment of how, when, and where to utilize such devices in our city. Under the staff recommendation, Council would defer any citywide deployment of IoT devices until this strategy is brought forward. In the interim, companies developing IoT applications could continue to work through the Innovation Team on demonstration projects, using the City's existing Demonstration Partnership policy.

EVALUATION AND FOLLOW-UP

Staff plans to bring forward the draft Broadband Strategy for Council review and approval in Fall 2017. Following that process, staff proposes to bring to Council a financing and installation plan for the LED Streetlight Conversion, as well as policy options regarding controller units.

PUBLIC OUTREACH

Following the release of the RFP, staff held a pre-proposal conference on August 26, 2015 with potential proposers. A webpage about the project was created at www.sanjoseca.gov/ledrfp. A unique email address (ledrfp@sanjoseca.gov) was created for proposers and others interested in learning about the RFP. Council was regularly updated via Informational Memorandum. This memorandum will be posted on the City's Council Agenda website for the June 6, 2016 Council Meeting.

May 22, 2017

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COORDINATION

This memorandum was coordinated with the Departments of Finance; Information Technology; Planning, Building and Code Enforcement; Public Works; Transportation; the Office of Civic Innovation; the Office of Economic Development; and the City Attorney's Office.

COMMISSION RECOMMENDATION/INPUT

No commission recommendation or input is associated with this action.

CEQA

Exempt, File No. PP11-002, Street Lighting Design Guidelines, CEQA Guidelines Section 15301 Existing Facilities.

/s/

DAVID SYKES

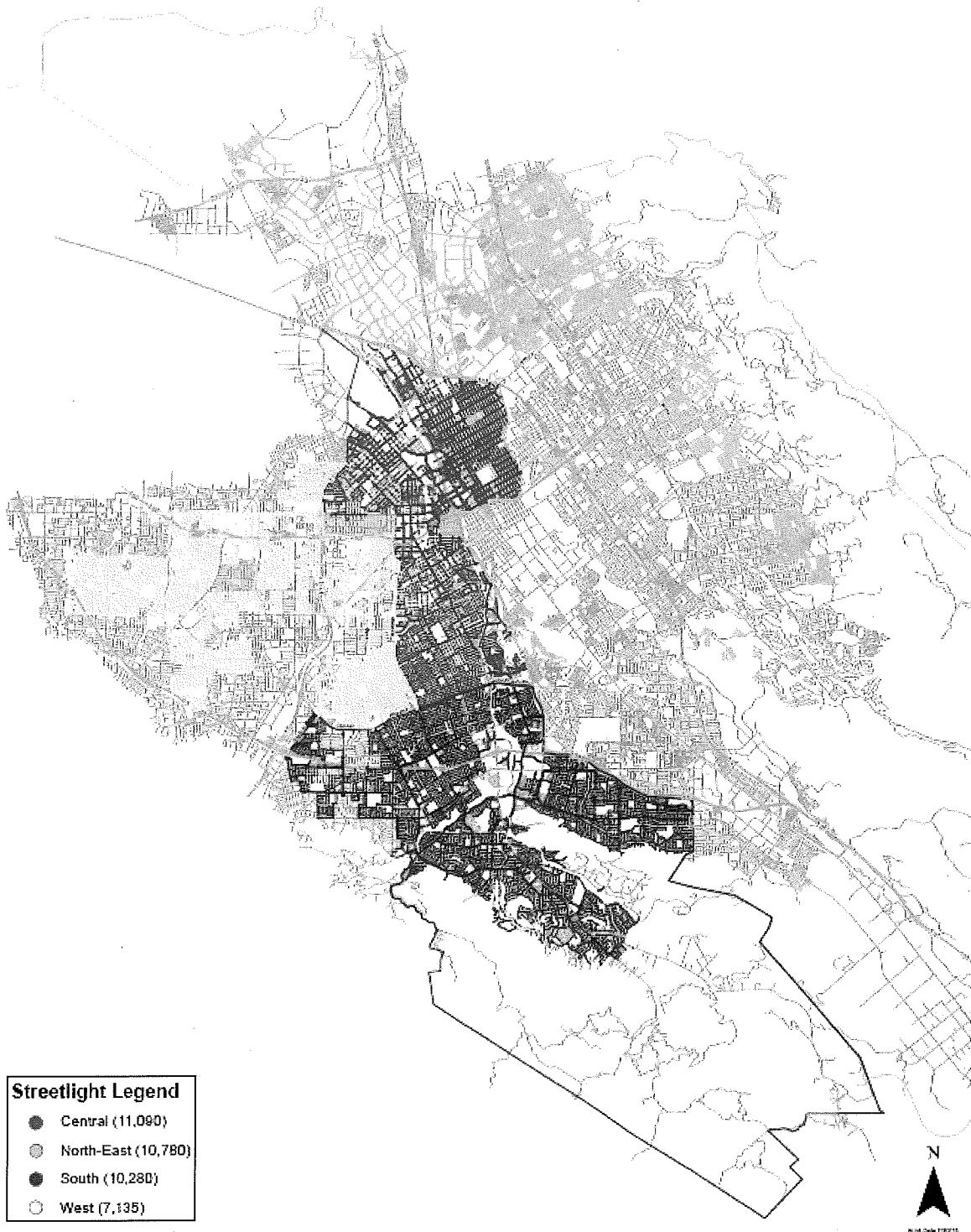
Assistant City Manager

For questions, please contact Michelle McGurk, Assistant to the City Manager, at (408) 535-8254.

Attachments:

- 1 – Streetlight Map
- 2 – Timeline: Innovative LED Streetlight Replacement RFP
- 3 – Master Agreement for (Small-Scale) Telecommunications Facilities on City-owned Property
- 4 – The Base Case (City Installation of Remaining LED Streetlights)
- 5 – The Installation Proposals and Scoring
- 6 – The In-Lieu Proposal and Scoring
- 7 – Responses to Questions from the Mayor and City Council

Attachment 1
Streetlight Conversion Map



Note: The RFP gave proposers the option of proposing to convert lights in a single zone, multiple zones, or citywide.

Attachment 2

Innovative LED Streetlight Replacement RFP: History and Timeline

On February 24, 2015, Council directed staff to issue a call for proposals looking for ways to use the City's assets, including the streetlight poles, to convert the City's remaining lights with little or no impact to the General Fund.

This had never been done before in the City. Staff put together a team to develop a Request for Proposals. On August 3, 2015, the City issued the "Innovative LED Streetlight Replacement RFP." Respondents were invited to submit proposals to use valuable City assets in exchange for converting the remaining approximately 40,000 streetlights to LED with smart controls.

Potential assets RFP respondents could propose to use included:

- Real estate that could be leased or developed;
- Sites that could be used by the telecommunications industry for small-cell technology;
- Facilities that could be reused or repurposed;
- Buildings or properties—such as an animal shelter, playground, or community room—that could be named in honor or recognition of a person or entity;
- Some existing conduit that could be used for fiber or the potential to build new; and
- Other additional opportunities for partnership.

The City did not limit responses to any particular type of partnership (i.e., telecommunications, naming rights, etc.). However, the RFP also stated that the City was not simply seeking a financing mechanism to convert the remaining streetlights, nor was the RFP a procurement for the City to directly purchase streetlights.

Proposers had two options for their responses:

- **Installation Proposal:** Install the new lights and controller units themselves. In keeping with Council's direction to allow for multiple successful bidders to take portions of the City's retrofit initiative, the RFP allowed proposers to bid on installation in one or more of four zones, each containing between 7,000 and 10,000 streetlights; or
- **In-Lieu Proposal:** Make an in-lieu cash payment (minimum of \$2 million) for the City to do the installation.

Staff did outreach to business and industry with an emphasis on companies that manufacture lighting and controller units, construction companies that perform streetlight conversions, and companies in the fields of telecommunications, broadband, mobile data, IoT, real estate, as well as to trade and business media. A dedicated webpage was created: www.sanjoseca.gov/LEDrfp. A printed postcard went out to potential proposers and was provided to the Mayor and Council offices for their outreach and use.

More than 40 people attended a pre-proposal conference on August 26, 2015. Due to industry requests, the City amended the RFP to a phased approach.

Phase 1 closed on September 30, 2015, and the City received 11 conceptual proposals.

PHASE 1 PROPOSERS		
Proposer	Type of Company	Proposal Type
Allvision/Outfront Media	Outdoor Advertising	In-Lieu
AT&T	Telecommunications Carrier	Installation
Black & Veatch	Engineering/consulting/construction	Installation
Crown Castle	Telecommunications Neutral Host	Installation
McKinstry	Construction	Installation
Philips Lighting	Lighting	Installation
Siemens	Construction division	Installation
STSC Enterprise Solutions	Renewable energy	Installation
Tanko Lighting	Construction	Installation
Village Green Global	Green energy consulting	Installation
Vimoc Technologies	Edge computing/IoT	In-Lieu

On January 8, 2016, the City review team invited all 11 proposers to submit full proposals in Phase 2. On March 30, 2016, Phase 2 closed with six proposers submitting full proposals. Two were deemed to be non-responsive for failure to meet minimum qualifications, and four proceeded to the full review and scoring process.

PHASE 2 PROPOSERS		
Proposer	Proposal Type	Next Steps
Allvision/Outfront Media	In-Lieu	Finalist
Black & Veatch	Installation	Finalist
Philips	Installation	Finalist
Siemens	Installation	Finalist
STSC Enterprise Solutions	Installation	Failed to meet Minimum Qualifications ¹
Village Green Global	Installation	Failed to meet Minimum Qualifications ²

The cross-departmental review team was assembled, under the leadership of the Assistant City Manager, with representation from the departments of Transportation, Public Works, Finance, and Information Technology, as well as the offices of the City Manager, Economic

¹ STSC Enterprise Solutions Inc. failed to meet the following Minimum Qualifications required in the RFP: The proposer's installation partner is not licensed by the California Contractor's State Licensing Board; the proposer did not provide references for the installation partner; and the proposer did not provide information about the project engineer, therefore the requirement that the proposer or installation partner must "possess any required professional engineering licenses to design and engineer the project, including signature of plans" could not be verified.

² Village Green Global failed to meet the following Minimum Qualifications required in the RFP: The proposer did not provide any references for Village Green Global, only for projects completed by the proposer's installation partner; project team information and resumes were not provided as required by the RFP, therefore staff could not verify that the proposer or installation partner meets the requirement to "possess any required professional engineering licenses to design and engineer the project, including signature of plans."

Development, and Civic Innovation and Digital Strategy. An overview of the proposals, how they scored, and additional analysis is provided in Attachments 5 and 6.

This RFP covers uncharted territory. In researching and developing the RFP, staff was unable to find another city that had developed a call for proposals that was so fluid and with so many different possible outcomes .

Given the unique and open-ended nature of the RFP, the proposals received were complex and required careful review for a number of components: financial viability, technical viability, risk to the General Fund, and other factors. Due diligence activities included:

- Interviews with all four finalists;
- Site visit and demonstration testing with one proposer’s controller unit partner;
- Photo simulation exercise to demonstrate size, scale, and visual impacts of small cell telecom equipment;
- Two rounds of submission and review of Best and Final Offer financial documents.

The timeline below provides additional details about the RFP process.

Date	Action
2008-2014	San José pioneered conversion of sodium vapor streetlights to LED light fixtures with “smart” controls.
2014-2015	Approximately 18,000 streetlights converted to LED through energy service company (ESCO) agreement with OpTerra Energy Services.
February 24, 2015	<p>City Council approved a Master Agreement with Philips for the installation of up to 50 SmartPoles in exchange for installing 750 LED streetlights (a ratio of 15 LED luminaires for every one SmartPole). The SmartPole is Philips’ integrated unit that combines the equipment, cabinets, and meter equipment needed for small-cell cellular installations with a city streetlight.</p> <p>The Master Agreement with Philips was not intended to be an exclusive agreement, and any vendor developing or deploying similar technology could propose an unsolicited offer to the City for consideration. In approving the Master Agreement, the City Council also directed staff to move forward on a competitive process soliciting proposals for replacements of the remaining non-LED lights citywide with a goal of installing the lights at little or no cost to the City.</p> <p>The Council adopted a memo³ from Mayor Sam Liccardo, Vice Mayor Rose Herrera, and Councilmember Ash Kalra dated February 20, 2015 that directed staff to draft a Request for Proposals that:</p> <ol style="list-style-type: none"> 1) Is flexible and severable in nature, allowing for multiple successful bidders to take portions of the City's retrofit initiative; 2) Allows for different approaches to financing LED retrofits, with an openness to meaningful evaluation of competing proposals with differing models; 3) Explores the use of the roughly \$9 million in available Qualified Energy Conservation Bonds (QECB) bonds to finance LED retrofits⁴;

³ <http://www.sanjoseca.gov/ArchiveCenter/ViewFile/Item/2546>

⁴ Use of QECB bonds for this project will require approval from the California Energy Commission. To approach the Commission about using San José’s allocation for this project, the City must first have a project defined. Should Council give direction to move forward with negotiating an installation contract, staff will explore further adding this source to the financing mix.

	<p>4) Calls for minimal capital outlay by the city, but permits some allocation through the budget process where appropriate. Where capital dollars are used, the prevailing bidders must leverage greater savings in General Fund dollars through energy and maintenance cost savings and PG&E rebates.</p> <p>Staff was further directed to solicit and explore other technology.</p>
August 3, 2015	Innovative LED Streetlight Replacement RFP is
August 26, 2015	Pre-proposal conference. More than 40 representatives of various sectors of the industry attend.
September 30, 2015	<p>At the request of the businesses that participated in a pre-proposal conference meeting, the City amended the RFP to create a phased approach that still worked with the City's procurement process:</p> <ul style="list-style-type: none"> • Phase 1: Respondents submitted a short (maximum of two pages) Conceptual Proposal. Respondents were allowed to turn in multiple Conceptual Proposals. Conceptual Proposals were reviewed for feasibility or infeasibility, and feedback shared with the proposer. • Phase 2: Applicants whose proposals were deemed feasible were invited to submit a complete RFP application. The schedule allowed sufficient time for teams to develop more complete strategies around viable ideas.
	Phase 1 closed with 11 proposals submitted from a broad range of industries including advertising, telecommunications, and solar. All of the Phase 1 proposers were invited to submit full proposals.
March 29, 2016	City Council adopts the Smart City Vision ⁵ with a goal of transforming San José into the most innovative City in America by 2020. The Smart City Vision articulates broad outcomes spanning five domains—to make San Jose as safe, inclusive, user-friendly, and sustainable as possible, and demonstrate the possibilities of technology and innovation along the way.
March 30, 2016	Phase 2 closed with the City receiving six proposals.
May-July 2016	Due to departure of key staff, Assistant City Manager assumes project lead and appoints a cross-departmental review team comprised of staff from the departments of Transportation, Public Works, Finance, and Information Technology, as well as the offices of the City Manager and Economic Development Team begins to review proposals.
July 2016	Creation of the Office of Civic Innovation and Digital Strategy in the City Manager's Office. The new Director of Civic Innovation joined the review team in July 2016.
July 18, 2016	Interviews held with the four finalists—three installation proposals and one in-lieu proposal.
August – September 2016	Due to questions about cutting edge controller unit technology, review team members do site visit and do demonstration testing with one proposer's controller unit partner.
August 24, 2016	<p>To better compare the ways proposers intended to use the public right-of way and the visual impacts of the proposals, staff provided the three installation finalists with two photographs of sites in San José and asked them to provide photographic simulations showing:</p> <ul style="list-style-type: none"> • Any telecommunications equipment or other equipment they proposed to place on or inside the pole; • Any variations from the standard/existing light pole if they planned to alter or use a different light pole; and • Any other equipment proposed to be placed on the sidewalk or park strip.

⁵Smart City Vision: <http://sanjoseca.gov/index.aspx?nid=5289>

October 28, 2016	City issued a request for Best and Final Offers (BAFO) from the three installation finalists.
November 16, 2016	Finalists submit BAFO.
December 6, 2016	After reviewing the BAFO documents, the review team agreed to several changes to the Base Case model. Staff issued a second request for BAFO.
December 15, 2016	Second Best and Final Offers received.
December 15-22, 2016	Review team scores proposals.
January 11, 2017	Notices issued to proposers and original staff report released.
January 23, 2017	Protest received from Philips Lighting.
January 24, 2017	Council defers consideration of RFP 15-16-01.
February 14, 2017	City Council approves a consulting contract with PwC to address access to broadband digital infrastructure, including home internet access and mobile access.
April 3, 2017	Hearing officer issues written decision regarding protest from Philips, finding “ that the City’s RFP process was followed, Siemens’ proposal was responsive, and there is no evidence to support allegations that there was any oversight or negligence on the part of the evaluation team that resulted in over-scoring of either Siemens’ or B&V’s proposal.”
April 12, 2017	Philips files timely appeal of the decision on the bid protest with the City Clerk.
April 13, 2017	PwC consultant provides preliminary information to the Civic Innovation Cabinet, identifying the streetlight pole as the most critical City asset in the Broadband Strategy.

Attachment 3: Master Agreement for (Small-Scale) Telecommunications

Facilities on City-owned Property

USAGE FEE SCHEDULE

The Site License Agreement fee schedule below is effective July 1, 2015 through June 30, 2016. Usage Fees shall increase by 3% (three percent) annually on each July 1. The annual payment shall be payable and due in advance on July 1 of each year. The initial payment shall be payable and due on the 1st day of the month following mutual execution of the Site License Agreement and prorated for the months remaining through June 30 of that year.

Zone 1

Effective Radiated Power (ERP) Output

<i>Enclosure Size</i>	0-20 Watts	21-100 Watts	101-360 Watts
0-30 Cu. Ft.	\$ 2,625	\$ 5,250	\$ 10,875
31-125 Cu. Ft.	\$ 5,063	\$ 6,938	\$ 13,313

Zone 2

Effective Radiated Power (ERP) Output

<i>Enclosure Size</i>	0-20 Watts	21-100 Watts	101-360 Watts
0-30 Cu. Ft.	\$ 2,975	\$ 5,950	\$ 12,325
31-125 Cu. Ft.	\$ 5,738	\$ 7,863	\$ 15,088

Zone 3

Effective Radiated Power (ERP) Output

<i>Enclosure Size</i>	0-20 Watts	21-100 Watts	101-360 Watts
0-30 Cu. Ft.	\$ 3,500	\$ 7,000	\$ 14,500
31-125 Cu. Ft.	\$ 6,750	\$ 9,250	\$ 17,750

The above referenced pricing schedule is for antenna facilities containing four (4) or fewer antennas and attaching to existing structures. Antenna facilities requiring a new, non-existing vertical structure will be approved by CITY on a case-by-case basis. Antenna facilities with enclosure size or ERP parameters that do not conform to the above reference pricing will be approved by CITY on a case-by-case basis.

The above referenced schedule is subject to change as approved by CITY. Any changes or modifications to the schedule will not affect Site License Agreements in effect prior to the date of any such change.

Attachment 4: The Base Case

Following is the “Base Case” outlining what would be required if the City were to convert the streetlights using a traditional process (i.e., obtaining financing, designing the systems in-house, and bidding and contracting for installation).

Base Case – Traditional Funding and Installation

To provide a baseline for review of the proposals, staff developed the “Base Case” model. Under this model, staff identified what it would cost the City to pay for procuring and installing the streetlights, as well as the lifecycle costs for the new light fixtures and controller units. The total initial costs for the project are estimated to be \$36.7 million. Staff also calculated various savings from the new streetlights and applied them over the lifetime of the project.

The components that went into the Base Case included the following:

Baseline Costs: Purchasing, permitting, and installing approximately 40,000 luminaires and controller units, as well as disposing of the old light fixtures. These costs were based on the City’s costs for the previous installation under the ESCO.

One note: Many cities are installing LED luminaires, but not the smart controller units. Beyond the functionality offered by a photocell, which turns lights on and off, a smart controller unit allows the lights to be dimmed, a feature developed in partnership with the University of California’s Lick Observatory, which is located on the summit of Mt. Hamilton, east of San José. In addition to monitoring the streetlight’s energy usage, smart controllers also alert the City when there is an outage due to system malfunctions or exceptional events such as copper-wire theft or other failure causes.

Project Lifespan: 24 years

Staff initially projected, based on the ESCO project, that the LED streetlights will last for 10-to 15-years, and that any contracts lasting longer than that timeframe would require a major replacement program at approximately year 12. However, based on manufacturer’s specifications and ratings for the lights proposed by the installation finalists, staff has updated the Base Case model to have a lifespan of 24 years. It is important to note that most luminaires are only warrantied for 10 years, so there is risk to this approach.

Financing Costs: As the City does not have capital funds available for this project, staff evaluated the cost of financing the streetlight conversion using readily available municipal financing mechanisms, such as commercial paper. Because all of the finalists included some private use of the City’s streetlights (e.g., placing telecommunications equipment on/in the light poles), the City cannot use tax-exempt financing. The projected interest rate for taxable financing would be 3 percent. For the purpose of the Base Case, if the City were to finance \$36.7 million (plus a standard 10 percent contingency) at an interest rate of 3 percent over 12 years, the annual payments plus interest would total approximately \$3.7 million per year.

Energy Savings: LED streetlights are more energy efficient than traditional streetlights. In many cities, energy savings alone quickly pay for the upfront costs of converting the lights. However,

other cities have high-pressure sodium or mercury vapor lights, which use more energy than the yellow-colored low-pressure sodium lights San José first installed after the energy crisis of the 1970s.

To estimate the annual energy savings from LED replacements, staff computed before and after energy costs/savings for each type and quantity of streetlight using PG&E tariff tables and manufacturers specifications for the LED lighting most recently installed in San José.

Total energy savings for the Base Case is approximately 10.7 million kilowatt hours/year, or approximately \$1.66 million annually.

In addition, San José dims selected streetlights for five hours each night. This provides another 20 percent in energy savings, saving an additional approximately 2.1 million kilowatt hours/year, or approximately \$330,000 per year (in the first year). (This compares to an annual capital cost for the current model controller units of \$503,000 per year if financed over 15 years.)

PG&E Rebates: PG&E has a rebate program for cities installing LED streetlights. The one-time rebates vary depending on the wattage of the light fixture from \$40 per luminaire to \$200 per luminaire⁶. Based on the type and quantity of lights to be installed, staff projected PG&E rebates of approximately \$1.9 million at this point in time. It should be noted that the utility determines the amount of the rebate for LED streetlights, and the amount may diminish with time as use of the LED lights becomes more widespread.

Operations & Maintenance Cost Savings: LED fixtures last longer than traditional streetlights, so the City will no longer have to replace burned out bulbs. Staff calculated equipment and labor savings at \$247,000 annually.

Revenues: The Base Case does not include any revenues from other sources, such as telecommunications equipment on or in light poles. However, the Base Case doesn't preclude the City from entering into standard real estate contracts with entities wishing to co-locate telecommunications equipment in or on light poles. The City Council has approved standard lease rates for small-cell telecommunications equipment, which are used when a telecommunications company wishes to place facilities on City property (for Council-approved lease rates, see Attachment 3: Master Agreement for (Small-Scale) Telecommunications Facilities on City-owned Property Usage Fee Schedule).

Smart City Elements: The Base Case also does not include any Internet of Things/Smart City elements beyond the wireless controller units. However, the Base Case does not preclude future Smart City projects that use the light poles.

Staff provided all of the Base Case assumptions to the three installation finalists through the Best and Final Offer (BAFO) process and provided each finalist with spreadsheets comparing their proposal to the Base Case. These finalists were asked if there were any concerns or disagreements with the City's assumptions and to address those when submitting their BAFO.

⁶ https://www.pge.com/en_US/business/save-energy-money/business-solutions-and-rebates/lighting/led-street-lighting/led-streetlight-rebates.page.

Staff then revisited several key assumptions (e.g., the project lifespan) and issued a second request for BAFO to the three finalists. The installation finalists' proposals outlined below encompass information provided in their response to the RFP and the two Best and Final Offers.

Attachment 5: Installation Proposals

Following is an overview of the three proposals to install LED streetlights and smart controllers, including scoring and evaluation.

SCORING: INSTALLATION PROPOSALS				
ITEM	POINTS AVAILABLE	Black & Veatch	Philips	Siemens
Highest Verified Value	35	27.3	22.8	23.5
Practicality of Implementation	30	20.7	24.3	26.1
Experience	10	8.1	9.4	7.9
Community Benefits & Impacts	10	6.7	4.0	5.9
Environmental Stewardship	5	4.3	5.0	4.2
Local Business Enterprise Small Business Enterprise	5 (LBE)	0	0	0
	5 (SBE, only eligible if LBE)			
Total Points (100 possible)		67.1	65.5	67.6

Siemens Installation Proposal

Lead Proposer	Siemens Industry Inc., Building Technologies
Partners	anyCOMM
Installation by	Siemens Industry Inc., Building Technologies
Timeframe	24 years
Initial Cost	\$34,462,805; controller units are at no cost

Siemens, headquartered in Berlin and Munich, is a global electrical engineering and electronics corporation with 348,000 employees worldwide. The Siemens Industry Inc., Building Technologies division would oversee the engineering, design, and installation of approximately 40,000 LED streetlights. Siemens has partnered on this proposal with anyCOMM, an Internet of Things startup that recently relocated to San José.

AnyCOMM has invented a controller unit (the “node”) that includes the smart streetlight controls and a variety of Smart City features, including the capacity to accommodate up to four video cameras with digital recording devices, four color tunable LED indicator lights, audio sensor (for gunshot, car crash, and graffiti detection), and can also expand to include two-way public address for emergencies. Through partnerships with third-party providers, the company states that Wi-Fi hotspots, LTE small cells, and wireless backhaul could be provided via the node.

In June 2015, the City of San José entered into a demonstration partnership with anyCOMM, in which the company was going to place 166 nodes on San José streetlights and test sensor features. To date, anyCOMM has installed five nodes on streetlights on Almaden Boulevard between Santa Clara and St. John streets downtown and is running preliminary demonstration tests. The company has installed approximately 300 nodes in pilot locations across North America, including in the cities of Concord, California and Stratford in Ontario, Canada, as well as at an auto mall in Elk Grove, California. The technology was also recently used at hotspots in downtown Cleveland during the Republican National Convention.

Under this proposal, Siemens would convert the remaining approximately 40,000 streetlights at a cost of \$34.4 million, which the City would finance via a tax-exempt municipal lease-purchase agreement and energy savings. The proposal includes letters of intent from potential financiers.

The anyCOMM nodes—valued by anyCOMM at approximately \$26MM— would be provided to the City at no cost, and anyCOMM proposes to upgrade the nodes as needed at no cost. The company also proposes to provide nodes for free to retrofit the 23,000 streetlights that the City has already converted to LED. AnyCOMM proposes to pay \$12/node in annual rent to the City with a 12 percent annual escalator for the first 18 years and 3 percent for years 19 to 24.

The nodes contain femtocells with capacity for up to four wireless carriers; however, the company does not have existing contracts or relationships with wireless carriers. Should this function be fully deployed, the \$12/node rental rate is significantly lower than the Council-adopted telecommunications rates. It does, however, expand potential cellular capacity citywide by placing it on every streetlight. This potential, however, will only be realized if the carriers choose to use this capacity.

The company also proposes revenue sharing with the City of 15 percent of net profits from other revenues derived from the anyCOMM devices (e.g. Internet of Things backhaul, broadband gateway fees, new applications, etc.). However, the company has yet to monetize any of these revenue streams or develop partner relationships.

In Siemens’ Best and Final Offer documents, the company proposes separate contracts between Siemens and the City and between anyCOMM and the City. This approach adds additional risk to the City. For this reason and because of the relatively untested nature of the anyCOMM nodes, staff is recommending an extensive pilot process to test the technology and development of contract terms with Siemens that include appropriate guarantees of anyCOMM’s performance.

Black & Veatch Installation Proposal

Lead Proposer	Black & Veatch
Partners	5 Bars (telecommunications) Smart City Media (kiosks) Bostonia Group (financing)
Installation by	Black & Veatch
Timeframe	24 years
Initial Costs	\$34,764,185 (plus \$9,466,632 over life of contract for project management)

Black & Veatch, founded in 1915, is a global engineering, consulting and construction company headquartered in Overland Park, Kansas, with regional offices in Dublin, California. The company has approximately 10,000 employees in 100 countries, and specializes in the areas of energy, water, telecommunications, federal projects, and management consulting.

Black & Veatch proposes to install approximately 40,000 LED streetlights citywide. Construction would be done by Black & Veatch Construction with additional subcontractors. In addition to converting the streetlights, Black & Veatch has partnered with 5 Bars and Smart City Media to include telecommunications and digital media components, and as a result, potential ancillary revenues.

The 5 Bars component of the project proposes to install small-cell telecommunications equipment on up to 2,500 streetlights. The company would, in turn, re-sell or lease capacity to broadband providers. The company is a neutral-host provider, which means that various wireless carriers could lease space from 5 Bars. The company proposes to pay the City \$1,950 per cell annually, with an inflation adjuster. This rate is approximately 65 percent of the rate charged to carriers under the City's Master Lease Agreement for Telecommunications.

Another partner, Smart City Media proposes to install 150 information kiosks around the City, primarily in the Downtown area, as well as 400 interactive digital banners on streetlight poles. Smart City Media would sell advertising on the kiosks as well as display public service messages about City activities and programs. The company is deploying similar kiosks in Kansas City, Missouri's Smart City transportation corridor⁷ along its new streetcar line.

City staff would be able to use the banners and kiosks to provide information to residents and visitors. The kiosks have Wi-Fi capabilities, and users can use them to call 9-1-1 or 3-1-1.

Smart City Media also proposes to install up to 1,000 mobile sensors and beacons on streetlights. These devices would have the capacity to monitor air quality, weather conditions, and other conditions. Smart City Media proposes to install the mobile sensors, beacons, and Smart City kiosks and banners at no cost to the City and to pay the City 33 percent of gross revenues from advertising.

⁷ <http://www.smartmedia.city/media/mk/assets/player/KeynoteDHTMLPlayer.html#27>

It is important to note that implementation of the advertising component of this proposal may require changes to the General Plan, Municipal Code and Council Policy.

The Black & Veatch proposal would create a Special Purpose Entity through which the project would be financed. The financing model relies on both energy savings and revenues to fund the project. If energy savings do not materialize at the levels projected, those costs are the responsibility of the Special Purpose Entity. There is an annual fee for Black & Veatch to manage the Special Purpose Entity, which is projected to total \$9.4 million over the 24-year life of the contract.

Based on the company's Best and Final Offers, the proposal projects the highest amount of revenue to the City from the installation of telecommunications devices and the Smart City sensors, beacons, and kiosks. However, the proposal includes no revenue guarantees, which have been a standard component of public agency advertising contracts⁸, and the partner companies are relative newcomers in their fields. In addition, because there are no other digital kiosk/streetlight banner proposals to compare to this proposal, staff is unsure of the actual marketplace and rental rates for this commodity. One option is to attempt to mitigate this risk by pursuing guarantees through the contract negotiation process. By contrast, if the City were to issue a procurement for digital signage/advertising through traditional procurement channels, staff could better determine the feasibility of the marketplace.

Philips Lighting Installation Proposal

Lead Proposer	Philips
Partners	Ericsson (telecommunications) Rosendin Electric (installation) WMH (engineering)
Installation by	Rosendin Electric
Timeframe	24 years
Initial Costs	\$32,403,225 for lighting installation, plus \$4,257,000 over 10 years for service costs for the CityTouch smart controller units

Philips Lighting is a global leader in lighting products, systems and services, that serves professional and consumer markets, leveraging the Internet of Things to transform homes, buildings and urban spaces. The company has approximately 36,000 employees in more than 70 countries.

⁸ By comparison, the Santa Clara Valley Transit Authority's advertising contract with Outfront Media Group requires payment of the greater of \$2.45 million or 65 percent of annual net sales annually, while Mineta San José International Airport's contract with Clear Channel Outdoor, Inc. requires payment of the greater of the Minimum Annual Guarantee (\$1.8 million in FY 2017-2018) or: 65 percent of gross revenue from fixed display in-terminal advertising, 65 percent of gross revenue from outdoor advertising; and 50 percent gross revenue from transit/bus shelter; as well as sponsorships/promotions/naming rights/licensing to be separately negotiated.

On February 24, 2015, the San José City Council authorized the City Manager to enter into a demonstration partnership Master Agreement with Philips for the installation of up to 50 SmartPoles for a term of up to ten years on a trial basis. A SmartPole is an integrated unit manufactured by Philips that combines the equipment, cabinets and meter equipment needed for small-cell cellular installations with a city's streetlights. The goal of the SmartPole is to both reduce clutter in the right-of-way and to increase the availability of sites for cell-phone carriers.

Under the demonstration pilot, for every SmartPole installed, Philips upgraded 15 streetlights in the surrounding neighborhood to modern LED streetlights⁹.

San José currently has 50 SmartPoles installed in Downtown, North San Jose, and on The Alameda through the pilot. Feedback from the community about the SmartPole pilot has been positive with respect to increased cellular coverage. With respect to the appearance of the SmartPoles, the City has received concerns about their appearance, size, and scale. Currently, one carrier (Verizon) has contracted for SmartPole use in the San José pilot.

This proposal is different from the pilot. For the RFP, Philips proposes to convert approximately 40,000 LED streetlights citywide and install up to 1,000 SmartPoles citywide. The first 200 SmartPoles would be installed for an upfront payment from Philips of \$2 million. For SmartPoles numbers 201 through 1,000, Philips would pay the City \$3,000 in rent per pole per year (with annual increases for inflation) *if telecommunications carriers agree to pay that rate*. That rate is equal to the City's current rate for small cell installations, however the uncertain nature of the "if carriers agree" caveat in the offer is of concern to staff.

This proposal is the simplest of the three and has the potential to be deployed most quickly, however beyond the initial \$2 million, it contains no revenue guarantees. Other than the potential to improve cellular service, it contains no elements that would advance the City's Smart City Vision.

The Philips proposal includes a job training partnership with the Santa Clara County International Brotherhood of Electrical Workers (IBEW), National Electrical Contractors Association (NECA), and Rosendin Electric to link qualified graduates of Work2Future's Trades Orientation Program with pre-apprenticeship positions working on the installation project through the construction phase of the project.

Proposal Evaluation: Installation Proposals

Staff initially anticipated proposers would bear or finance the costs of installing lights in exchange for the use of valuable City assets (i.e., streetlights or other real estate) for a free or a reduced rate over a set period of time. These were the types of unsolicited proposals the City had received prior to developing the RFP.

⁹ Note: This was not intended to be an exclusive agreement, and any vendor developing or deploying similar technology was able propose an unsolicited offer to the City for consideration.

A critical goal of the RFP was to reduce costs to the City over time via reduced energy and maintenance costs. The RFP gave additional weight to proposals that brought in new revenues to the City.

In evaluating the installation proposals, the RFP looked at the following critical factors:

- 1) Highest Verified Value: What is the cost/value to the City over time? What is the potential for generating revenue and how realistic is the revenue model?
- 2) Practicality of Implementation: What is the tradeoff between leading-edge technology and industry standards? Is the proposed solution stable and reliable? How quickly can the proposal be deployed?
- 3) Community Benefit and Impact: How do proposals reduce (or increase) physical clutter or affect aesthetics? How do proposals create opportunities to generate revenue (or increase demand on City resources)? Are there any other second-order benefits and impacts to City, including residents and businesses?
- 4) Experience: Does the proposer (or their installation partner) have the experience and are they capable of accomplishing the installation? Does the proposed technology work as it should?

Highest Verified Value – 35 percent of Final Score

Per the RFP, Highest Verified Value was to be determined based on the following:

- Information provided by the proposer, including the Proposal Valuation;
- Ability to generate ongoing revenue;
- Total value to the City over time;
- Cost realism vs. revenue realism, including ability in the marketplace to cogenerate revenue.

In addition, any telecommunications proposals were required to be evaluated using the City's adopted telecommunications rates as a baseline.

To determine final scores for Highest Verified Value, the review team staff looked at the above factors. The BAFO process fleshed out additional information from the three installation finalists regarding initial costs for each proposal, projections for costs and revenue over the life of the project, and revenue guarantees.

First, it is important to note that none of the proposers is self-financing the project or simply installing LED streetlights in exchange for use of the City's assets. The proposals either include a financing partner who would lend the money to finance the project or require the City to obtain financing.

Second, revenue projections vary widely, and in all cases, much of the revenue is **projected**, not **guaranteed**.

Overview of Installation Proposal Costs and Revenues

Costs/Revenues	Black & Veatch	Philips	Siemens
Initial Costs (Installation)	\$34,764,185	\$32,403,225	\$34,462,805
Program Administration or Other Service Charges	\$9,466,632 over 24 years	\$4,257,000 over 10 years; future TBD	None
Telecommunications lease revenues	\$1,950/unit, up to 2,500 units, 3% annual escalator	\$2 million one-time for units 1-200; \$3,000/unit for units 201-1,000 if carriers are willing to pay rate, 3% annual escalator	\$12/unit, 63,000 units, 12% annual escalator for Years 1-18, 3% Years 19-24
Other ancillary revenues	33% of gross revenues from digital kiosks and light pole banners; no guarantees; projection is \$2.9 million in Year 1	None	15% of net profits from any monetization of the anyCOMM node (i.e. lease of femtocell by carriers; purchase of video or data; etc.). No projections provided in RFP response.

Siemens's proposal uses energy savings and telecommunications lease revenues to pay for the project. Key to this proposal is that proposal partner anyCOMM would provide controller units to the City for free on all streetlights citywide, not just the approximately 40,000 not yet converted to LEDs with smart controller units. The company also proposes to upgrade the units at no cost every few years as the technology evolves.

AnyCOMM proposes to pay the City \$12 per year per node with a 12 percent escalator in the first 18 years, then reverting to 3 percent per year. In addition, the company would pay 15 percent of net profits (as opposed to gross revenues) from monetizing any of the capabilities of the node. However, the proposal does not provide evidence that the company has monetized the technology, or that it has customers for its services or partnerships with telecommunications carriers. Information about the company or its financial status is not readily available from public sources. If the company fails to develop the product or bring it to market, the City could be left with an obsolete device on every streetlight. (This was a risk the City took when it first pioneered smart controller units on LED streetlights a decade ago.)

Black & Veatch proposes to pay for the conversion through a combination of energy savings and revenues from telecommunications equipment and digital advertising. The company would

create a Special Purpose Entity through which the project would be financed. The financing model relies on both energy savings and revenues to fund the project. If energy savings do not materialize at the levels projected, those costs are the responsibility of the Special Purpose Entity.

Based on the company's Best and Final Offers, the proposal estimates the highest amount of revenue to the City from the installation of telecommunications devices and the Smart City sensors, beacons, and kiosks. Proposal partners seek to install 2,500 small-cell telecommunications devices on streetlights; 150 interactive (touchscreen) digital kiosks on city sidewalks/property; 400 interactive (touchscreen) digital banners on city streetlights; and 1,000 mobile beacons on other city property or right-of-way.

In return, the proposal projects that the City would receive per-device annual payments from the telecommunications lease as well as 33 percent of gross revenues from digital advertising. Projected revenues are significant, however, the proposal contains no minimum guarantee, and the advertising partner and the technologies are quite new to market. In addition, using the kiosks and banners for getting the word out about City events and for other public purposes offers marketing opportunities for the City, but would require staffing to develop and update the content.

Philips proposes to pay for the conversion through energy savings and revenue from installing up to 1,000 SmartPoles. The Philips proposal would finance the cost of streetlight installation through energy savings and any revenues received for SmartPoles. Under the financing model, the City would continue to pay PG&E for the cost of energy used to fuel the streetlights. The energy savings (or the difference between the City's electricity costs before installation of the LED lights and the post-installation electricity costs for the lights) would be paid to an unnamed financier. Philips would pay rent to the City for any SmartPoles installed beyond the first 200.

Under this proposal, Philips would make an upfront payment of \$2 million, which would cover lease payments to the City for the first 200 SmartPoles. Lease payments for any SmartPoles beyond the 200 (up to 1,000) would start at the City's current rate of \$3,000 per year per pole if the carriers are willing to pay that rate.

Practicality of Implementation – 30 percent of Final Score

Per the RFP, Practicality of Implementation was to be determined using the following criteria: Analysis of modernity of technology vs. industry standards; stability and reliability; and speed to deployment. Practicality of Implementation would also weigh whether the project aligned with existing City Council Policies, the San José Municipal Code, or otherwise faced legal or policy hurdles.

At a minimum, each installation proposal was required to include lighting and smart controller units that met the City's specifications. Additionally, proposers could include other elements, such as telecommunications equipment that could enhance cellular service in San José and Smart City functions.

All of the installation finalists met the minimum requirement for lighting specifications and smart controller units. Additional features include the following:

- Siemens: anyCOMM node on each light pole, which combines the functionality of a smart controller unit with various Smart City elements, including gunshot detection, traffic counting, 24/7 digital video recording from four cameras mounted inside the unit, emergency announcements, and evacuation alerts. The node also includes femtocell telecommunications capabilities. This node is new technology.
- Black & Veatch: up to 2,500 telecommunications devices attached to streetlight poles, 150 Smart City interactive digital kiosks, 400 interactive digital streetlight banners, and 1,000 mobile beacons that could improve cellular coverage, help with wayfinding, and share information about City services and programs, as well as events and activities. These kiosks and beacons have Wi-Fi capabilities and can dial 9-1-1 and 3-1-1 in an emergency. The Smart City features are fairly new technology. Implementation of the digital kiosks and streetlight banners may require changes to the General Plan, Municipal Code and Council Policy.
- Philips: up to 1,000 SmartPoles, which are streetlights with small-cell telecommunications equipment inside, and have been piloted in San José and Los Angeles in large-scale pilots.

Staff believes that the Siemens proposal meets a number of the City's adopted Smart City and other goals. For example, the City has been looking for ways to alert residents in an emergency and the nodes include public address and warning light capabilities.

However, staff is concerned that the anyCOMM technology is not market-proven and has only been deployed in 300 test locations worldwide. Because Siemens proposes separate contracts between Siemens and the City and between anyCOMM and the City, the proposal carries additional risk should anyCOMM fail to realize or bring to market its technology.

Should Council go forward with the recommendation to reject all bids, staff proposes to resurrect the prior anyCOMM pilot project and to invite other manufacturers of smart controller units to participate in similar Demonstration Partnership Pilots looking to test the next generation of controllers.

Experience – 10 percent of Final Score

Per the RFP, Experience was to be rated both on the expertise of proposer (and contractor or installation partner) in installing LED streetlights, as well as experience/expertise in deploying any other solutions that might be proposed as part of the proposal.

The three installation finalists (or their installation partners) all have experience in installing LED streetlights. Black & Veatch and Siemens propose to perform the work themselves through their construction subsidiaries, while Philips proposes to contract with Rosendin Electric.

One note of caution regarding project complexity: San José's streetlights were installed over decades, and there is not a comprehensive or updated database of the existing streetlights, their electrical components, and field conditions may differ greatly than what is recorded. For this reason, the project must include a comprehensive pre-construction phase and strong quality assurance elements.

Siemens provided the most thorough plan for managing what will be a complex project, including in its plan phases for field work and auditing of the existing conditions, engineering and permitting, as well as installation. The company reports completion of the largest number of LED streetlight installations. Philips proposal was the next most detailed in this area and the company has also completed significant installations. Black and Veatch provided fewer details and had less experience in LED streetlight installation, but is a highly experienced contractor with a significant track record of managing complex projects.

With respect to the deployment of other technology solutions, the Philips solution has been deployed widely in Los Angeles and in a pilot in San José, Black & Veatch's partner Smart City Media has deployed its solution recently in Kansas City; and Siemens' partner anyCOMM has had limited deployment of its node technology.

This element also includes the results of reference checks.

Community Benefits and Impacts – 10 percent of Final Score

Per the RFP, Community Benefit and Impact was to include evaluation of additional public benefit derived from proposed project as well as aesthetics. Community Benefits might include potential for reducing clutter in the public right-of-way; opportunities to generate multiple streams of revenue from a single source; and other benefits to the City, its residents and businesses. Community Impacts might include increased clutter in the public right-of-way, visual or aesthetic impacts, construction impacts, use of civic resources, or other impacts to the City, its residents and businesses.

A key benefit that emerged in looking at the three finalists' proposals was the potential to help the City realize goals outlined in the Council-adopted Smart City Vision.

Community benefits of the Siemens proposal include:

- Multiple functions are contained within one node, avoiding visual blight;
- Multiple VLAN networks for use by City departments;
- LEDs on nodes can be used for emergency and wayfinding functions;
- Nodes have potential to detect gunshots, gathering crowds, traffic issues, as well as to issue warnings and evacuation orders in emergencies (separate speakers required);

- Each node contains four cameras and 24/7 digital video recording capabilities, which could be used for a variety of purposes, including criminal investigations, traffic analysis, or neighborhood assessment in an emergency or natural disaster;
- Potential for Wi-Fi hotspots via a third-party provider;
- Potential for improved cellular service via a third-party provider;
- Internet of Things gateway on every streetlight;
- Siemens Community Outreach will develop a Sustainability in STEM Education Program through which youth can participate in opportunities to develop new uses for the anyCOMM nodes.

Community benefits of the Black & Veatch proposal include:

- Improved cellular coverage (5 Bars solution)
- Free public Wi-Fi hotspots (5 Bars and Smart City Media solutions);
- Potential use of the smart streetlights as a platform for future Smart City initiatives, such as the collection of sensor data for environmental, smart transportation, public safety, and way-finding;
- Improved citizen engagement/civic collaboration through the Smart City Media kiosks.

Community benefits of the Philips proposal include:

- Improved cellular coverage from the SmartPoles;
- Job training program with Santa Clara County International Brotherhood of Electrical Workers (IBEW), National Electrical Contractors Association (NECA), and Rosendin Electric to link qualified graduates of Work2Future's Trades Orientation Program with pre-apprenticeship positions working on the installation project;
- Potential for providing fiber access to the SmartPoles and provision of two strands of fiber for City non-commercial use;
- Avoidance of personal privacy issues by not using data analytics, monetizing data collection from sensors, cameras, or other methods.

Depending on perspective, the Black & Veatch proposal impacts the built environment as it attaches digital banners and telecommunications fixtures to some streetlight poles, as well as placing kiosks to the right of way. However, the City would receive revenues from these features. The Philips SmartPoles reduce clutter on the streetlight pole, however, they take up additional space on the sidewalk. The Siemens proposal has the least visual or clutter impact, however, there may be community-based privacy concerns about the possible implications of various Smart City features of the anyCOMM nodes, such as the cameras, video recorders, and sensors contained within each node.

The Siemens proposal may meet multiple goals of the City's Smart City Vision. It has the potential to save the City money on other projects on the horizon, such as developing a mass warning system for natural or other disasters. However, the device and its use is untested on a large scale. The costs of third-party devices and software integration services needed to realize

some of the possible functionality (e.g., video capture) may be extra costs to the City. Additionally, the City would need to conduct community outreach and develop policies for use of certain functionalities before some of these features could be deployed. Finally, the company has not completed its pilot in San Jose while this RFP was in process and the full capabilities of the device are unproven, and for this reason staff would recommend requiring a large-scale testing of the technology prior to embarking on citywide deployment.

Environmental Stewardship – 5 percent of Final Score

The Environmental Stewardship category is a standard City requirement for all RFPs. Proposers are required to fill out the City's Environmentally Preferred Procurement Program (EP3) Information Sheet attesting that products to be used are independently certified (e.g., Energy Star); that products contain recycled content; that products reduce energy consumption, toxicity, water consumption, and waste. The Black & Veatch and Siemens proposals received slight reductions for recycled content, while the Siemens proposal received a reduction for certifications. The Philips proposal received the maximum points available.

Local Business Enterprise and Small Business Enterprise – 5 percent of Final Score (each)

Under the Municipal Code, the City gives additional points in the RFP process for Local and Small Businesses. Local Business Enterprise requires a proposer to have a current San José Business Tax Certificate Number and to have an office in Santa Clara County with at least one employee. Small Business Enterprise is only awarded to proposers who first qualify as a Local Business Enterprise and have fewer than 35 employees total.

None of the three installation finalists is a local or small business enterprise, and no points were awarded in this category.

Conclusion

Comparing these three installation proposals has been challenging. The proposals are significantly different, and staff found all proposers to be capable of completing the basic installation work. At the conclusion of the scoring process, Siemens had a slight edge over Black & Veatch, with Philips a couple of points behind. However, all of the proposers only scored in the two-thirds range, with only 2.1 points separating the highest and lowest final proposal scores. Staff now believes the option that would be most beneficial to the City and its residents would be to reject all bids and pursue a traditional procurement option.

It is possible that all three of these proposers would respond to a traditional procurement, either as the contractor themselves, or as the lighting supplier in partnership with a construction firm.

Attachment 6: In-Lieu Proposals

In addition to the installation proposals discussed in Attachment 5, the City received one in-lieu proposal in response to the Innovative LED Streetlight Replacement RFP.

In-lieu proposals were designed as an option for proposers who might want to provide cash in exchange for use of City property or assets, but did not want to install streetlights.

Scoring: In-Lieu Proposal		
Item	POINTS AVAILABLE	Allvision/ Outfront Media
Highest Verified Value	35	25
Practicality of Implementation	30	15
Experience	10	10
Community Benefits and Impacts	10	0
Environmental Stewardship	5	0
Local Business Enterprise	5 (LBE)	0
Small Business Enterprise	5 (SBE, only eligible if LBE)	
Total Points (100 possible)		50

Outfront/Allvision In-Lieu Proposal

Lead Proposer	Outfront/Allvision LLC
Partners	None
Installation by	N/A
Timeframe	25 years
Initial Costs	In-Lieu proposal

This is a joint partnership proposal from Allvision and Outfront Media, leading companies in the out-of-home advertising space. Founded in 2002, Allvision is the largest manager of outdoor advertising assets in North America, managing more than 3,000 advertising displays on behalf of

its clients. Services include consulting, development, and management for municipalities and public agencies to maximize revenue through outdoor advertising initiatives. Outfront Media (NYSE: OUT) designs, sells, and services more than 400,000 digital and static displays across North America. The company is the advertising partner of choice for major municipal transit systems, reaching millions of commuters daily in the largest U.S. cities.

The two companies have submitted a joint in-lieu proposal under which they would build eight Digital Billboards on high-visibility City property in commercial or industrial zoned freeway areas along Interstates 280, 680, and/or 880, as well as along Highways 101, 237, 85, and/or 87. The proposers would remove eight static billboard faces in San José. The proposers would also install free electric vehicle charging stations at City-owned locations (such as at libraries).

In return, the proposer would pay the City 20 percent of gross advertising revenues generated from the billboards over a 25-year period. The proposal projects that the eight billboards will generate \$38 million for the City over the 25-year period, however, the proposal contains no minimum annual guarantee of revenue. The proposal also does not identify which City-owned properties would be used for installation of billboards, therefore staff is unable to analyze the feasibility of these sites.

The proposers are aware that Council Policy 6-4, adopted June 28, 1971, which prohibits the use of billboards on City-owned land and required that all existing billboards on City-owned land be removed within five years. Under Title 23 of the Municipal Code (the Sign Code), “freeway signs” are allowed on parcels within 250 feet from a freeway travel lane that are either:

- a shopping center of more than 15 acres in size; or
- a research and development site of ten acres or more in the North San José signage area.

On May 16, 2017, the Council heard an update on the workplan for exploring options for public and private property that will allow electronic digital off-site advertising signs or billboard installations. Staff is currently working on updating ordinances related to electronic billboards and a downtown sign district.

Proposal Evaluation: In-Lieu Proposal

The in-lieu proposal submitted by Outfront/Allvision requires changes to the General Plan, Council Policy and amendment of Title 23 of the Municipal Code. Making those amendments requires public outreach and CEQA review. While this staff work is underway, staff has not determined eligible sites for installation of electronic billboards, nor has the Council made a decision about whether to move forward with allowing such advertising on City property or private property.

Awarding a contract in advance of completion of the policy work, or without a competitive procurement for outdoor advertising, would not be prudent. Instead, staff recommends rejecting this bid as well as the installation proposals.

Attachment 7: Responses to Council Questions

Questions from Councilmembers

At the January 24, 2017 Council meeting, the City Council requested that staff return with answers to several questions raised at the meeting as well as those outlined in memoranda from Mayor Liccardo and Councilmember Rocha. Since that time, questions have arisen from Councilmembers and proposers about the options available to the City Council in making a decision. Following are responses to questions posed at the meeting and to staff since the meeting.

1. Can the City Council award a contract to a proposer other than the top-ranked proposer?

According to the RFP, the City may award a contract to the top-ranked proposer. If contract negotiations with the top-ranked proposer are unsuccessful, the City may then proceed to negotiate with the second-highest ranked proposer. If those negotiations are unsuccessful, then the City may negotiate with third-highest ranked proposer.

Alternately, the Council may reject all bids. The Council also has the option to request that proposers work together. This would then be subject to the negotiation process.

With this particular procurement, staff is recommending that Council reject all bids.

2. Where are the approximately 40,000 streetlights that still need to be converted to LEDs?

Attachment 1 includes a map with the lights remaining to be converted. A more detailed PDF map is available at www.sanjoseca.gov/LEDrfp.

3. How quickly can streetlights be installed?

Each of the proposers has provided a project timeline for installation once a contract is awarded.

Proposer	Timeline for Installation
Black and Veatch	19 months
Philips	32 months
Siemens	24 months

4. How did a billboard proposal end up in with these streetlight proposals?

The Innovative LED Streetlight RFP allowed proposers to propose ways they would use the City's real estate assets in exchange for installing streetlights OR providing revenue that could be used to pay for the streetlights. As an example, a proposer could have submitted a proposal

offering to pay an annual fee to name a city building after their late grandmother, or to place their corporate logo on every streetlight in exchange for an annual fee. While unconventional, such proposals would likely have met the broad parameters of the RFP.

5. Can the Council set aside the billboard proposal until the policy issues around signage are decided, then review and determine next steps with that proposal?

The billboard proposal is the lowest-ranked proposal. Under the terms of the RFP, Council may only award a contract to the top ranked proposer. If Council wishes to explore leasing property for electronic billboards or other advertising uses, staff would recommend issuing a procurement seeking competitive proposals for such a project. This is the path that is most likely to maximize revenues and ensure that Council's goals are met.

6. What is anyCOMM's track record on similar deployments?

Deployments to date are as follows:

Location	User	# of units	Features deployed*
Cleveland, Ohio	Cleveland Public Power	20	V,S,L,W
San José, CA		6	L,W
Pacheco, CA	Transit Hub	40	V,S,L,W,C
Martinez, CA	Hidden Valley Park	37	V,S,L,W,C
Atlanta, GA	TDK Pilot	29	V,S,L,W
Stratford, Ontario	ICF Pilot	20	L
Concord, CA	Enea Corporate Park	134	V,S,L,W
Elk Grove, CA	Auto Mall	160	V,S,L,W,C
Yuma, AZ		2	
Yountville, CA		2	
Total		450	

* V = video DVR, S = video streaming, L = lighting control, W = wireless networking (hotspots), C = wifi cellular offload testing

The company is in discussion with some of the above users and other jurisdictions regarding larger deployments, however, as the above demonstrates, anyCOMM's technology, including the smart streetlight controller and the suite of Smart City features, has not been deployed on a scale as large as proposed under this RFP. For this reason, staff recommends conducting a thorough pilot evaluation project to ensure the product meets our primary LED lighting needs, as well as secondary Smart City goals.

7. Who owns the data that is collected? Does the city own the data or does the private company own the data? If the company owns the data are they allowed to sell the data? Where is the data stored? Is it going to be stored at their facilities, ours or onsite?

This would depend on the terms and conditions of a contract (if Council chose not to reject all bids). Any contract of this size would require Council approval.

The Siemens proposal envisions that data collected by the anyCOMM controller unit would be owned by anyCOMM. The company would store this data on their servers. The company envisions having the ability to sell data and would share some portion of revenues with the City. The terms and conditions are still to be negotiated and would come back to Council for approval.

With the Black & Veatch proposal, data collected by the SmartCity Media beacons is envisioned to be owned by SmartCity Media. The company would store this data on their servers. The company envisions having the ability to sell data and would share some portion of revenues with the City. The terms and conditions are still to be negotiated and would come back to Council for approval.

The Philips proposal does not include data or Internet of Things components beyond functionalities related to the lighting.

8. What would happen if anyCOMM gets bought? Is our contract still valid?

Mergers and acquisitions do happen in the business world. For that reason, City contracts typically include provisions for changing circumstances, such as a change of ownership. However, staff is recommending to reject all bids and not enter into a contract at this time.

9. Can the lights talk to each other? If so, how do they communicate? Is it WiFi?

Lighting control communication occurs via a central management system (CMS). Each streetlight talks to the CMS either directly (as in the systems offered in the Siemens and Philips proposals) or through a device called a gateway (as with the system offered in the Black and Veatch proposal).

Communication to individual streetlights is typically wireless, and different systems use different communication frequencies. In some systems (such as that offered by Black and Veatch), neighboring streetlights form a mesh network that helps to relay the control signal to and from the CMS. This improves the robustness of the communication path.

10. Can anyone access the lights wirelessly?

No. As with the controller units on our existing LED streetlights, only City staff and those individuals authorized by the City would be allowed to access the software that controls the lights. Each proposal's controller units were required to meet security specifications outlined in the RFP.

11. Who is responsible for the maintenance of the hardware once installed?

Maintenance of the controller units varied among the proposers, as outlined below:

- Siemens: Hardware and software maintenance would be provided by anyCOMM, the provider of the controller unit.
- Black & Veatch: Hardware and software maintenance would be the responsibility of the Special Purpose Entity that would be created to manage the lighting project.
- Philips: Hardware maintenance would be provided by the City. Software maintenance would be provided by Philips for 10 years, after which it would need to be negotiated.

12. If the software crashes will the lights still work?

Yes. With all proposals, the lights have a “default on” provision should a controller unit or software fail.

13. Can some of the features such as cameras be turned off (but the lights still work)?

Yes. Only the Siemens proposal includes cameras. The cameras are contained within the anyCOMM controller unit. This feature (and others) could be turned off without impacting the ability to control the lights.

14. What are the privacy policies that will be utilized?

The Internet of Things and connected devices are new, and the City has not yet developed privacy policies. To do so will require a community conversation and, ultimately, Council approval. As IoT technologies develop, and as such technology is deployed on City properties (including streetlights), the development of privacy policies is an important issue that the City Council will need to tackle.

If Council accepts staff’s recommendation to reject all bids, this concern will be addressed with respect to this project.

15. Is it possible to include an apprenticeship or job training component if there is new process for procuring the streetlight conversion?

Staff can analyze the options around apprenticeship or job training as part of its analysis of financing and procuring streetlight conversion.

Questions from Councilmember Rocha Memo

- 1) *Does the proposal from the top-scoring respondent meet the objectives for this procurement as laid out in the staff memo for item 6.2 on the February 24, 2015 Council agenda and in the memo from the Mayor, Vice Mayor, and Councilmember Kalra on the same item? In particular, does it meet the following criteria:*
 - a. *“After a limited period of time, City intends to achieve market rents and revenue sharing for the City’s assets.” (from the staff memo)*
 - b. *“Calls for minimal capital outlay by the city, but permits some allocation through the budget process where appropriate. Where capital dollars are used, the prevailing bidders must leverage greater savings in General Fund dollars through energy and maintenance cost savings and PG&E rebates.” (from the Mayor, Vice Mayor, and Kalra memo).*

All of the proposals were scored against the RFP criteria, including the ability to generate revenue and limit impacts to the General Fund:

Highest Verified Value will be evaluated using the information provided. Factors will include the Proposal Valuation (per Attachment C, Proposal Valuations and Cost Form with Designated Responsible Parties); ability to generate ongoing revenue; total value to the City over time; cost realism vs. revenue realism, including ability in the marketplace to cogenerate revenue. Any telecommunications proposals will be evaluated using the City’s adopted telecommunications rates (adopted by close of RFP) as a baseline.

In this category, the evaluation team could award:

- 1) Up to 55 points for Total Proposal Valuation, including looking at the ability to generate ongoing revenue, total value to the City over time, and the use of the City’s adopted telecommunications rates; and
- 2) Up to 45 points for Cost Realism vs. Revenue Realism, which included ability in the marketplace to cogenerate revenue, revenue guarantees, and other factors that might impact the likelihood of the proposer meeting revenue forecasts.

The combined total was multiplied by 35%, to come up with the weighted score for this category.

As the chart below shows, different components impacted the scores of each proposer:

- Black & Veatch projected the highest amount of revenue, but lost points for the lack of a minimum annual guarantee, for the cost of managing the Special Purpose Entity, for the lack of experience of some of its revenue-generating partners, and for proposing telecommunications rates below the City’s adopted rates.

- Philips proposed a \$2 million upfront payment to the City and a financing timeframe that showed no cost to the General Fund throughout the life of the contract. However, while the revenue projections were based on the City's adopted rates, the proposal includes a critical out clause ("only if the carriers agree") that means those rates are not guaranteed, which could result in impacts to the General Fund.
- Siemens provided the most realistic revenue proposal as it only projected the \$12/node (with annual escalators) lease rate for the anyCOMM controller unit. While other revenues were proposed, based on anyCOMM's "net profits" from the units, the proposal did not project dollar values for potential revenues. For these reasons, Siemens' proposal lost points in this category.

HIGHEST VERIFIED VALUE	DESCRIPTION	Black & Veatch	Philips	Siemens
Total Proposal Valuation (55 points)	Includes ability to generate ongoing revenue, total value to the City over time, use of City's adopted telecomm rates.	50	35	40
Cost realism vs. Revenue Realism (45 points)	Includes ability in the marketplace to cogenerate revenue, revenue guarantees, etc.	28	30	27
Total Points (100 possible)		78	65	67
Weighted Score (35% of Total)		27.3	22.75	23.45

- 2) *Assuming that anyCOMM is able to make its \$12 per unit payments, with escalators, over the entire life of the contract, and also assuming any other grants or rebates the City might reasonably expect to receive to fund LED streetlight conversion, but not assuming any revenue under the provision granting the City 15% of net profits, how much would we expect to spend out of the General Fund or other City funds, if anything, to make payments on the financing of the LED streetlight conversion? How would the anticipated savings to the General Fund from energy costs compare to any City expenditure?*

Staff's estimate for the traditional City installation option (Base Case) totals \$36.7 million to purchase and install all approximately 40,000 streetlights and smart controller units.

Staff initially projected financing the lights over a 12-year period at an interest rate of 3 percent, which results in an annual cost of \$3.7 million a year. This annual payment could be lowered if the financing period were extended, however, interest costs would increase.

Also, PG&E offers a one-time rebate for installation of LED streetlights. Staff estimates this rebate would total \$1.9 million, which would offset financing costs in Year 1.

Base Case – Lights + Controller Units	
Annual Cost (over 12 years)	\$3,700,000
Energy Savings per year	-\$1,666,000
Dimming Savings per year	-\$333,000
Net annual difference (Years 2-12)	\$1,011,000

Each of the three finalists submitted proposals in which these costs were \$2 million to \$4 million less than staff's estimate, however their models also included other areas where the proposer anticipated earning revenue from the project. Staff believes it is possible that in a competitive environment for construction bids and for purchasing lights and control units, the Base Case cost could drop.

Staff has run models in the lights are financed at periods ranging from 12 to 20 years, and has looked at models in which the City would install LED streetlights only without smart controller units. That would bring the project cost down to \$30 million, but would eliminate the annual savings for dimming selected lights for five hours each night.

Base Case – Lights Only	
Annual Cost (over 12 years)	\$3,000,000
Energy Savings per year	-\$1,666,000
Dimming Savings per year	0
Net Annual Cost (Years 2-12)	\$1,334,000

- 3) *If for whatever reason anyCOMM were unable to make its \$12 per unit payments, with escalators, would the General Fund or any other City source be obligated to cover an increased share of the payments on the financing for the LED conversion?*

With each of the proposals, there is significant risk to the General Fund if projected revenues are not achieved. In scoring the proposals, staff not only took projected revenues into account, but also revenue realism. In the final analysis, staff believes the most prudent course is to reject all bids.

- 4) *The arrangement we are considering under this item is essentially a vast real estate deal that stretches across the entire City and lasts for a term of 24 years. Before committing City assets on this scale for such a long term, we should be satisfied that we are getting the best possible deal for the public. Staff should answer the following questions:*

- a. *Given the RFP structure that was used for this procurement, how confident is staff that we maximized competitive bidding for the City's real estate assets to ensure the best possible financial return for the public over the long term?*

This RFP was not an RFP for use of the City's real estate assets alone. This was an RFP to obtain streetlights at little to no cost to the City. Maximizing the City's financial return is complicated by the requirement that the proposer undertake a significant public works project and install streetlights at the front end.

More than 40 people attended the RFP kick-off meeting, however, only 11 companies submitted Conceptual Proposals in Phase 1 of the RFP. In Phase 2, only six of those submitted, and four of those met RFP requirements to move forward to the scoring round.

It is likely that the City would see more bidders under a traditional streetlight installation RFP. However, these would be competitive bids with construction financed by the City. They would not include a revenue component, and the City would have to pay off the lights from the General Fund.

- b. *If the Council decides to pursue agreements with Siemens and anyCOMM, should it consider providing direction that the term of the agreement be shorter than 24 years?*

Given the rapidly changing nature of technology, staff believes that shorter terms for telecom contracts may be most prudent. This will be reviewed in the broadband strategy.

Twenty-five years is the maximum time that someone can contract for a private use of City property. The RFP left the length of time (up to 25 years) to the proposers to determine. Each of the proposers has proposed a 24 to 25-year term. Each of the proposals envisions financing the lights over a period of 12 to 15 years.

- c. *Do we anticipate that the City would have the discretion to terminate the contract with anyCOMM at any time? If so, what residual obligations do we expect would fall on the City if the contract were terminated?*

Contracts typically have termination clauses that outline the terms and conditions under which both parties could terminate the contract. Early termination by either side could result in unexpected costs.

Questions from Mayor Liccardo's Memorandum

Direct the City Manager to provide at the next Council hearing the following information (where responsive information is not complete or readily attainable, provide whatever information is available):

- 1) *Apples-to-apples comparisons of anticipated streams of future revenues and costs (if necessary, discounted to net present value), that can provide meaningful comparisons of the various proposals. Please compare these proposals by virtue of the anticipated stream of future revenues and costs, applying some sensitivity analysis to convey how changes in assumptions might drive substantially different results.*
 - a. *Recognizing that Siemens did not include projected revenue in the “best and final” proposal, please provide financial forecasts and assumptions for potential revenue specifically for femto-cell/small cell/4g/LTE/5g/Wifi and any other relevant revenue streams for this project.*

This RFP was for streetlight conversion, not maximizing the value of the streetlight real estate. Staff is required to analyze proposals using the criteria outlined in the RFP (see above for the evaluation of Highest Verified Value).

This question asks the City to introduce an alternate means of scoring the RFP after the fact. Staff has conferred with the City Attorney and Department of Finance-Purchasing Division, and cannot change the RFP purpose or methodology after the fact.

If Council wishes to pursue maximizing revenue from the City’s streetlight assets, the policy alternative is to reject all proposals and issue a new RFP that is equipped to do so.

Staff is recommending rejecting all proposals for the reasons outlined in the staff report.

- 2) *Several terms of the AnyComm & Siemens proposal may not meet Council’s reasonable financial expectations, either in protecting the General Fund, or in maximizing the revenue from the use of its infrastructure. Please determine the extent to which Council can legally approve of Siemens/AnyComm as the winning bidder, without conceding the right to negotiate key terms and provisions, such as:*
 - a. *Increasing the \$12 per unit payment*
 - b. *Modifying the City’s compensation term from one based on net profits (based compensation to a revenue) to one based on revenues, with a minimum amount guaranteed (MAG)*
 - c. *Modifying the length of contract*
 - d. *Require Siemens, or another third party (e.g., a bonding agency), to provide an assurance of some minimum revenue stream to the City should AnyComm become insolvent or defunct.*

Council has the ability to provide staff with negotiating principals or other direction regarding terms of the contract. So long as that direction doesn’t conflict with the requirements and terms

laid out in the RFP, staff can move forward with negotiating terms and conditions that meet those goals.

- 3) *Please provide the Council with whatever information is available that reflects the most recent pricing and rates charged by other cities or other public agencies for small cell and/or femto cell deployment on public infrastructure. Please also provide the past price comparison to other cities used to establish San Jose's fee schedule for Master Agreements for (Small-Scale) Telecommunications Facilities on City-owned Property.*

There is a relatively large variance from city to city. Staff's most recent pricing survey found a rate of approximately \$5,000 per pole per year in San Francisco. In Los Angeles, which owns its own electric utility, the pricing is approximately \$700 per pole per year. Cities in the southwest, including Scottsdale and Tempe charge approximately \$3,000 to \$3,500 per pole per year.

- 4) *Under our current rate structure for small cell deployment, how many companies and how many poles/sites are currently utilized? What rates are currently charged? How many are in process? What is the forecast demand for this technology (e.g., poles/sites, companies)? How much revenue have we received since the implementation of the policy? What is the forecast revenue for small cells across the city?*

No small cells have yet been deployed on streetlight poles. There are 19 small cell permit applications under Public Works review for AT&T and 101 applications under review for Mobilitie. More are expected in the near term from AT&T. The applications have been delayed for a variety of design-related reasons, including PG&E requirements, but we have most issues ironed out and these should move forward in the next 1-2 months.

The current rates are in the adopted fee schedule (link) as approved by Council on October 6, 2015, with the 3% annual escalator.

The broadband strategy will further explore future demand for this technology as well as explore issues of digital inclusion. Staff expects to see requests to deploy several hundred small cell units over the next few years, based on what telecommunications companies have shared. Some providers have indicated that they are unwilling to accept the adopted fee schedule, but would be interested if the City reduced fees.

With respect to forecasted revenue, with the installation of the 120 small cell sites currently under review, revenue will total approximately \$400,000 per year with a 3% annual escalator.

- 5) *The memo indicates that this contract will not be an exclusive agreement for use and access to the street lights, so that additional companies can access, with the City's approval. Practically speaking, however, the power source on each pole can only accommodate a single user. From a technical perspective, how difficult will it be for*

other companies to use the streetlight and power source once AnyComm has used the designated power source? How expensive/feasible is it to install the equivalent of a “power strip” for each pole?

The receptacle spot on top of each streetlight fixture is designed for use by a lighting controller unit, which turns the light on/off and, in case of a smart controller unit, also monitors energy use and operational status of the light. Currently, San José’s LED streetlights are installed with a smart controller unit on each LED light fixture.

As we’ve seen from the Siemens proposal, which proposes to deploy the anyCOMM controller unit, companies are beginning integrate smart lighting control functions with other Internet of Things functions.

Adapter units are available that would allow access to power from the streetlight circuit at the controller receptacle spot. These adapters should work with controllers proposed in each of the three proposals.

Power can also be accessed from other locations on the pole or at the pull box at the base of streetlight pole in most cases. However, the amount and type of electrical load (or number of devices) that can be added to the streetlight circuit is limited, both by the capacity of the circuit and by utility regulations. A streetlight circuit may include up to 15 individual streetlights. The current utility limit is 150 watts per streetlight circuit without metering.