City of Goleta Department of Public Works - Virtual Town Hall and Q&A on June 22, 2021

City Staff (4):

Charlie Ebeling, Director of Public Works
James Campero, Deputy Director of Public Works
Michael Winnewisser, Project Manager
Ryan Kintz, Assistant to the City Manager

Tanko Streetlighting (3):

Jason Tanko, CEO
Emily Danko, Project Manager
Maeve Hanafin, Project Associate

Eight members of the public

Q&A Section

Q: Does the "2% up light" [Dark Sky Compliance] criterion consider reflection from the ground, or is it only emission from the light itself?

A: Dark sky criteria only considers up light from the fixture itself. It does not take the ground into consideration because that would vary by location. A lot of Cities replace lumen level for lumen level. During design, we look at how inefficient the light level of an HPS fixture is, then design the LED replacement based on the lumen level needed. LED lights are designed to optimize light to only illuminate what you need, and not over light the ground.

Q: Can you please remind us where the link to the design maps can be found?

A: Link:
https://www.cityofgoleta.org/home/showpublisheddocument/25450/637600438229970000

Alternatively, navigating from the project webpage, you can find the link to the maps located in the paragraph below the project video.

Q: What is the total project cost?

A: Streetlight acquisition from SCE:	$510,000
Conversion to LED Cost:	$576,000
Average per-LED fixture cost:	$250-$370 (Included in LED conversion costs)
Total Project Costs:	**$1,086,000***

**Total project cost does not include maintenance costs.*

Q: In the pilot study bar chart, a higher bar means the option is LESS preferred, a lower bar means MORE preferred. All four manufacturers produce these lights, yet Goleta selected GE, which was least preferred by the study respondents. Why?

A: The manufacturer ratings resulted in less than one point of difference in preference between the top rated and lowest rated light. Additionally, the decision was based on several criteria, the pilot study rankings being one. The City also considered the LED fixture performance ratings, their use in other municipalities, and consultants experience with the piloted manufacturers. The City also found that the majority of the written comments they received were regarding the design criteria rather than manufacturer differences specifically.

For GE lights specifically, the LED lights are mounted at the top of the fixture. Other manufacturers are mounted towards the bottom. This allows GE to have a very tight light distribution and will be the best at containing the light in the right of way.

Finally, GE is the chosen manufacturer for SCE sponsored conversions, and so is the same fixture seen throughout Santa Barbara County.

Q: At the March 10 Green Committee meeting, Councilmember Richards specifically asked the team to explore the possibility of installing amber lights. These lights have less blue light, which hinders night vision. What happened with that study?

A: The design team did investigate amber lights as an option. However, the main issue with amber lights is their design. The fixtures contain the same LED chips as other fixtures, but are coated in an additional coat of phosphor, which while reducing the color temperature, also makes them less efficient. In order to compensate for that, the City would need to increase the wattages of all lights, and therefore increase the cost of the LED purchase and increase the monthly energy costs. Amber lights are also typically installed in specifically sensitive areas like observatories or areas known for endangered turtle migration. The team found 2700K lights to be a great middle ground.

Q: Why is there a deadline to install these lights?

A: SCE is discontinued the rebate program at the end of 2020. Goleta was able to get an extension of these rebates if all streetlights are installed and the project is closed out by the end of 2021.

Q: Cathedral Oaks will be installed with shields, correct?

A: As indicated in the mapbook, the portion of Cathedral Oaks between Calle Real and Winchester Canyon Road will be shielded.

Q: Will the lights be installed in the same location as the existing streetlight poles?

A: Yes. No poles will be added or removed as a part of this project.

Q: If the fixtures that are chosen direct the light downwards, why do we need shields?

A: There are very specific circumstances, Cathedral Oaks from Calle Real to Winchester Canyon Road being one, where backyards are right up against the street. Because the light is so close to the houses, we want to ensure the light is cutoff and does not trespass into residents' properties. There are other circumstances that could call for shields but the City has not identified any as of yet.

Q: Shielding will be applied when the lights are initially installed, correct?

A: Yes. However, only lights which meet specific criteria will be shielded. Not every light in the City will have a shield.

Q: If a resident wants to request a shield, how long will it take? Will shields be installed "no questions asked" when residents request them?

A: Timing depends on material availability. There may be a lead time between ordering and receiving the material. Additionally, the contractor will not be called out to install a shield for one light at a time, and will need to be included in a batch of requests. Assuming material availability, turnaround time is likely no more than 2-3 weeks.

The City may take a few weeks to investigate whether a shield is needed. The City will take into account the area surrounding the light, do research, and consult with the resident. Based on experience, residents often adjust to the light change and do not need the shield. Rest assured, when a concern comes in, the team will look at it right away.

The City has already received requests for shields and has responded very quickly.

Q: Will dimming be an option? Specifically, with the lights proposed for Storke along the North Campus Open Space, south of Whittier Dr. Would it be possible to dim these during avian migration or breeding seasons? There may be other locations as well. How much it would cost to implement a dimming system for the whole city?

A: The City's streetlight consultant has dealt a lot with these issues. In these events, the City would not recommend dimming and would instead recommend turning off the lights completely during certain migration periods if necessary.

Dimming systems cost upward of $80,000 to $100,000. Tanko has done a few projects that included streetlight controls, which includes dimming. They have found a lot of dimming systems currently on the market are disappointing, problematic, and overpriced. The main problem tends to be the absence of rate discounts with SCE for dimming. There are timing options for turning lights off, but turning lights off creates issues with traffic regulations and accidents. Most importantly, dimming is not covered under the City's OBF funds, and would need to be payed out of the City's general fund. The City can look to implement this in the future.

Q: There are 3 of 98W lights shown for installation on Fairview just north of Hollister. There is no other area where three of these lights are shown so close together on your maps. I'm concerned that it's going to be really bright. Can we prevent over-lighting the streets?

A: All county lights have been converted by SCE, and are a color temperature of 3000K. It happens to be that the noted area is by the highway so they are designed as higher wattage. City will investigate this area and similar areas to see if reducing the designed wattage may be an option.

Q: Is reducing wattage possible?

A: If the City wants to reduce the wattage, that can be considered. But it is important to make sure we are not compromising any standards. Currently, all lights are appropriately replacing existing lights in the City. You can send any change requests for the mapbook to the project manager, Michael Winnewisser, at mwinnewisser@cityofgoleta.org.

Q: Will changes to the design maps be presented to council?

A: Yes. Changes are listed at the bottom of the design mapbook.

Q: Will all lights be the same color temperature?

A: Correct, all lights will be 2700K.

Q: Council will have availability to make changes to the map?

A: Small changes will be considered. Because of funding deadlines, larger changes to the design or scope are not recommended.

Q: Do you know about the dangers to the circadian rhythms of using blue light spectrums at night?

A: The American Medical Association recommends using a maximum of 3000K. We are going below that and installing 2700K lights.

Q: Will the City ever gain control of the SCE lights that weren't sold?

A: It is possible, but will likely not happen until well after this installation.

Q: Will the light fixtures accept bulbs with different wattages, so that you can change the brightness if needed?

A: The LED chips are built into the fixture, so it is not possible to switch out the chips in each fixture. The city will have shields on hand, and the City will be able order different fixtures as needed.

Q: Can you get front or side shields?

A: Yes. Front, Side, and Back shields are available.