

City of Piedmont
COUNCIL AGENDA REPORT

DATE: January 18, 2022

TO: Mayor and Council

FROM: Sara Lillevand, City Administrator

SUBJECT: Consideration of the Piedmont Community Pool Final Conceptual Plan as Recommended by the Pool Advisory Committee

RECOMMENDATION

By motion, approve the Piedmont Community Pool Final Conceptual Plan as recommended by the Pool Advisory Committee and direct staff to proceed to schematic design.

BACKGROUND

At its meeting on January 6, 2022, the Pool Advisory Committee recommended the Community Pool Final Conceptual Plan for City Council approval after extensive community input. The plan, which is intended to update and replace the conceptual plan approved by the Council in 2016, was developed by ELS Architecture and Urban Design, led by Piedmonter Clarence Mamuyac. As envisioned, the plan contains a competition pool, a recreation pool, and an accompanying structure, which contains offices, equipment, and multipurpose rooms. Should Council accept the plan as recommended by the Pool Advisory Committee, ELS will begin work to advance the concept to the Schematic Design phase of the project.

Following the passage of Measure UU in November 2020, the City Council established the Pool Advisory Committee and appointed five residents to serve on the Committee. The primary responsibility of the Committee is to offer advice throughout the design process and to serve as a conduit for the community's voice in the design refinement and construction of the Piedmont Community Pool. The Committee held its first meeting on July 12, 2021 shortly after Griffin Structures was selected as the project manager/owners representative.

On July 19, 2021, Council authorized staff to issue an RFQ/P for Architecture and Engineering Design Services, which was released on July 20, 2021. Following the September 3, 2021 response deadline, the eight proposals received were narrowed down to the top three firms. ELS was unanimously selected by a 10-person review panel and the City Council approved an agreement with ELS Architecture & Urban Design (ELS) for Architecture and Engineering Design Services for the Piedmont Community Pool Project on October 18, 2021.

Knowing that public outreach and participation would be essential to the success of the project, the City and ELS worked together to develop and execute a thorough communications plan

around the community design process. ELS kicked off a robust community collaboration effort with a city-wide community letter outlining a three-part workshop series designed to gather community input for the design of the new pool. Large banners were posted in key locations around the city announcing the workshop series, the city's website and social media outlets shared information regarding the process, and the City's eNews sent weekly announcements, reminders, and recaps from the three workshops.

Workshops #1A & 1B were held on November 2, 2021; the goal of these initial workshops was to collect more information from the community. The community members strolled through a gallery walk where they could ask questions, share ideas, and give input. Eight informative boards, displayed throughout the space, were accompanied by ELS staff facilitating a variety of discussion topics. With upwards of one hundred community members attending, Piedmonters' dreams and aspirations for the new pool were on full display. The final station at the workshop, a design tree with sticky notes available for thoughts and comments, was covered with a range of ideas. Following this workshop, ELS set up an electronic survey for the community to provide additional input and comments.

Workshop #2 was held on November 16, 2021. ELS took information gathered from the first workshops and survey and developed a draft program and three concept schemes (A, B, C) which were presented to the group. Attendees were invited to join a table-top design team for a design charrette. Working as part of a charrette, participants analyzed the relative benefits of three potential schemes, each showing various options of building shape and location in relation to the pools and surrounding neighborhood. Workshop #2 culminated in providing a direction for a preferred concept design (Scheme C). Again, ELS created a post workshop survey for the community to provide additional input and comments on the design.

At the November 18, 2021 Pool Advisory Committee meeting, ELS provided the Committee with a recap of Workshop #2, reviewed the results of the charrette, and shared the preferred concept design Scheme C. The committee members and public offered a number of comments regarding pool programming and design, sustainability and strategies for eliminating greenhouse gases.

Community Workshop #3 took place on December 14, 2021. ELS further developed the preferred design direction based upon Scheme C, incorporating input from Workshop #2, the post workshop survey, and the input received at the Pool Advisory Committee meeting. ELS presented the concept design and then participants were asked to join table-top design teams and review a large site plan of the preferred design direction. These table-top design teams provided additional comments and input on the concept design. Following this workshop, ELS also posted a community pool programming survey asking the community to rank programs they would like to have offered at the new community pool.

On December 16, 2021, the Pool Advisory Committee received a recap of Workshop #3 and reviewed the preferred design direction. The Committee and public provided additional input and comments to ELS to consider as they developed the Final Conceptual Plan.

On January 6, 2022, ELS returned to the Pool Advisory Committee to present the Piedmont

Community Pool Final Conceptual Plan. ELS walked the Committee through the plan, detailing refinements that had been incorporated into the plan since the December 16th Pool Advisory Committee meeting and Workshop #3. Committee members and the public asked clarifying questions regarding a variety of topics such as deck storage, potential uses of the multi-purpose rooms, locker room size, deck seating and lighting. Following a robust discussion, the Committee unanimously voted to recommend to City Council the final version of the Piedmont Community Pool Conceptual Plan.

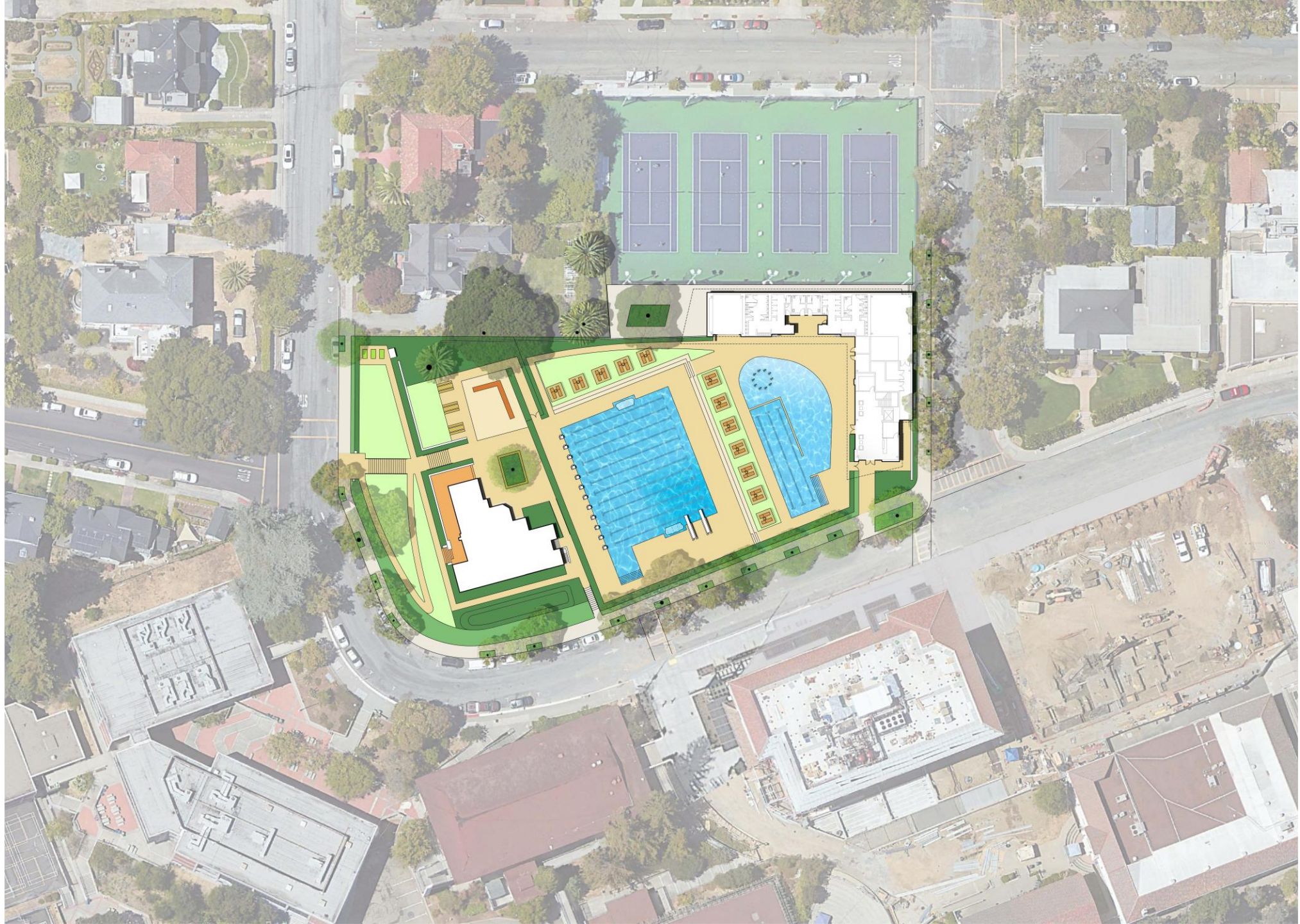
The presentations given at each Community Workshop as well as a video of the conceptual plan are available on the Community Pool Project page of the City's web site at:

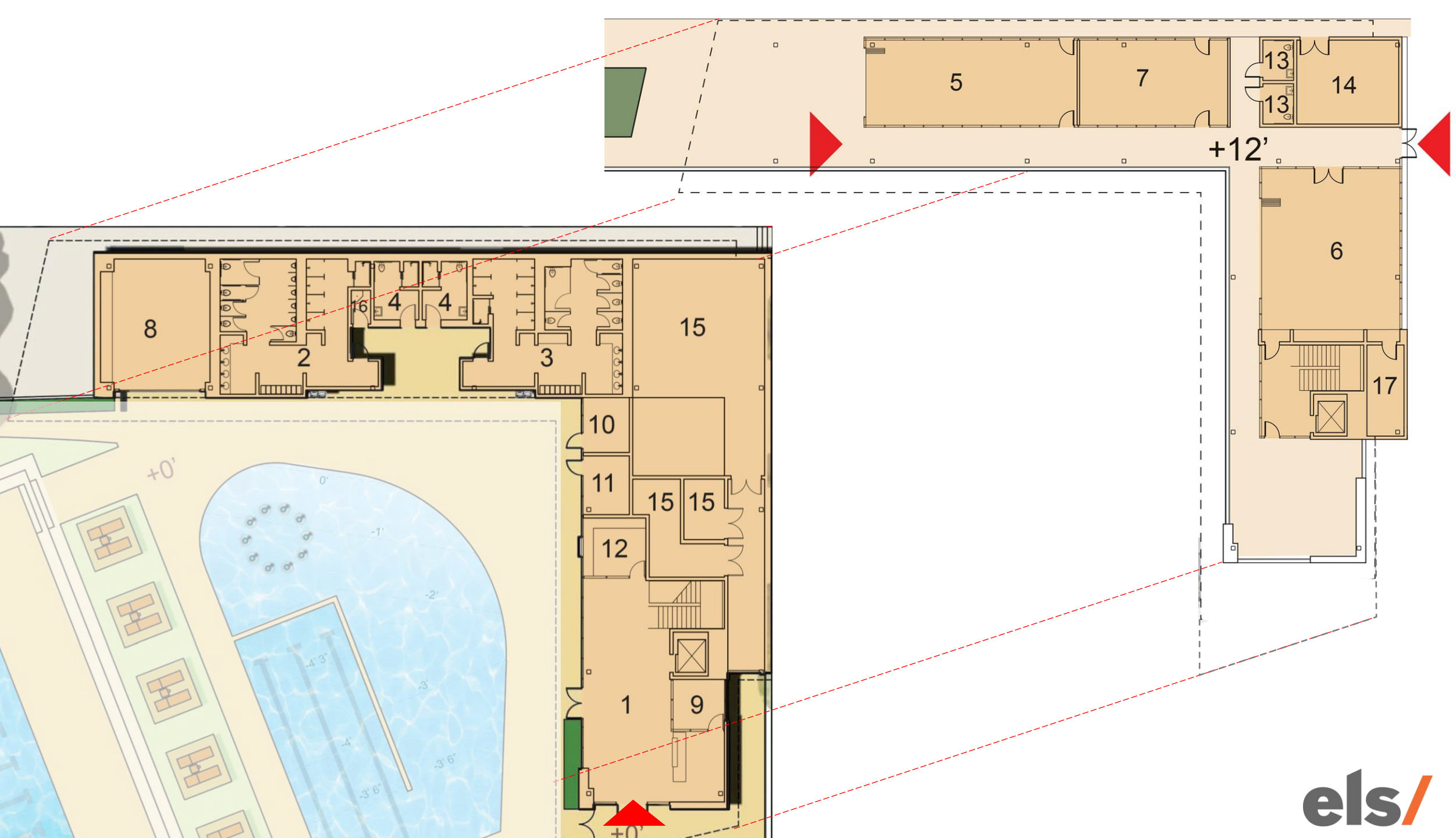
<https://piedmont.ca.gov/communitypool>

ATTACHMENTS

- 1: Piedmont Community Pool Final Conceptual Plan

By: Chelle Putzer, Recreation Director











Item #4 – Community Pool Final Conceptual Plan
Correspondence Received Before 4:30 p.m. on Tuesday, January 18th

Dear City Council -

I would like to compliment the City and ELS on the conceptual design of the Piedmont Community Pool (the Pool). I very much appreciate the efforts that the City and ELS have made to identify and address community questions and concerns.

In all of the discussions to date ELS has mentioned that the Pool will be all electric. I wholeheartedly support and applaud the City and ELS's support for green (non-fossil fuel heated) pools and hope that the Conceptual Design represents a commitment to maximize the use photovoltaics (PV) and photovoltaic thermal (PVT) panels, as well as using energy efficient heat pumps. It would also be helpful if the Conceptual Model drawings included renderings of the PV/PVT panels and their locations. This would assist individuals in understanding this aspect of the design.

Finally, I was wondering if in addition to installing PV/PVT on top of the pool building could additional PV/PVT be installed on additional roof surfaces such as the recreation center's roof to provide more in-situ generated electricity.

Best regards,
Indira Balkissoon

Dear City Council,

City council should accept the final design by ELS subject to certain provisos or considerations detailed below.

In reading the bond language presented in the ballot to voters the words “conserve energy and water” are very apparent, see text highlighted in yellow below. (I will talk about what's highlighted in green later.)

“Shall the measure to prevent permanent closure of Piedmont’s Community Pool by constructing new pool facilities, restrooms and related areas, to conserve energy and water, provide greater community access and safety, and authorize Piedmont to issue \$19,500,000 in bonds at legal rates, generating \$1,257,950 annually at an average rate of 2.6 cents per \$100 of assessed valuation while bonds are outstanding, with all money staying local and independent citizens’ oversight, be adopted?”

To conserve energy and water

I reviewed many of the documents presented to the City of Mountain View related to their swimming pool project, see attached. I also looked into energy simulations for pools, working with Tom Webster and Dr. Garrett Keating of Piedmont Connect. I think this is a great

opportunity for the City of Piedmont to be very thoughtful and scientific on how to conserve energy (primarily heating and cooling) and water which are badly needed for our environment. I'd like to share my thoughts and observations on this topic.

1. ELS has stated the use of pool covers is a no brainer. The Department of Energy report linked below states pool covers are expected to reduce 82.5% of heat losses for pools in the San Francisco area. This reduction in energy loss only applies during the hours the pool covers are used which makes it very important for the City of Piedmont to a) ensure the use the pool covers daily, b) be conservative on how many hours the pool will be open, and c) significantly reduce those hours of use during colder months (December - March). The majority of the heat loss from the surface of the pools is due to evaporation and therefore the appropriate use of pool covers achieves the second goal of conserving water, a precious commodity in the State of California.
2. The new building design calls for much larger window areas (compared to the older building) to allow for enjoying the views. Windows look great but come at the price of the additional loss of heat energy during the colder times of day and months of the year as well as loss of cooling energy during the summer months. The plans should call for double pane or triple pane windows as well as R-25 or higher insulation in the walls, floors and ceilings if possible.
3. The new plan calls for much larger pool areas, roughly 2.2 times the original sizes. The energy demand for these new pools can be reduced by utilizing heat pump technology which captures heat energy from one location and moves it to another location. Pumping existing heat using a heat pump is far more energy efficient than creating new heat using combustion or electric resistance. This additional energy efficiency is represented in terms of the coefficient of performance (COP) multiplier. A COP of 3 means one third of the energy of electric resistance heating is required to move "pump" heat using that heat pump. Council should ask if room for heat pumps has been accounted for in the design and should insist on Energy Star rated heat pumps which may have a COP of closer to 4.
4. Adoption of electric heat pump technologies was delayed when hydraulic fracturing (a.k.a. fracking) dropped the price of natural gas below the price of electricity (per kWh). That's why it is uncommon to find them in residential homes. Because of the new technology, at times commercial projects can also go astray. This happened in the case of Laney College pools. Their heat pumps had to be upgraded because the original equipment was insufficient to properly heat the pools, see boarddocs reference below. Piedmont City Council should insist upon a detailed energy simulation of the expected energy demand of the pools and building that reports hour by hour and month by month results. Luckily engineering firm Guttman & Blaevoet subcontracted that work to Sunlight & Power and they produced a good report using energy simulation software called "Polysun". For the Mountain View project this software produced the hour by hour and month by month simulation I suggest is important (see page 8 of the Polysun report). Council should approve the design subject to this report and detailed energy designs (like what was given to Mountain View's City Council) being presented at a later city council meeting by engineering firm Guttman & Blaevoet.
5. Adoption of electric heat pumps opens the question of going all-electric or supplementing with natural gas. Given the goals of being Net Zero Energy (NZE) in the near future, I

recommend going all-electric subject to a thorough energy analysis to back up its effectiveness. All-electric also has lower per kWh pricing from PG&E.

6. Adoption of electric heat pumps also makes it more difficult to achieve NZE since all the energy required to heat the pools and heat / cool the building requires electricity. The City of Piedmont could consider putting the highest efficiency solar panels on all its buildings to try to achieve this goal. That might be an interesting question that Council could inquire about. However I don't think NZE is required at this time and such an analysis should not be a distraction or interfere with the progress of the project.
7. The Mountain View project has been planning on adopting a new style of solar panel called PVT. These combination panels capture solar power in two forms: electricity (or photovoltaic "PV") and heat via the use of solar thermal ("T"). This is a very efficient use of limited rooftop space and can double the energy captured compared to regular solar PV panels. The plumbing to the roof gets a bit more complicated with this approach and Council should inquire if ELS is planning the same approach for the Piedmont Aquatic Center.

Provide greater community access

1. More commonly this statement is interpreted to mean handicap and wheelchair access and gender neutral bathroom access. ELS is doing a great job addressing these legal requirements.
2. An alternative interpretation of this, which may be an interpretation taken by many city residents, is to suggest that the cost of admission to the facility be as affordable or more so than the prior facilities were. In designing a beautiful facility (that could be used as a wedding venue) we should be careful to not end up with a very high price of admission.
3. If the City Council chose heating the pools with natural gas, the larger pool and building footprints will result in double or triple the ongoing utility cost compared to the prior pools. Higher utility prices obviously would impact the price of admission.
4. The price of admission may end up higher simply due to higher maintenance costs for larger pools and facilities.
5. If we instead choose electric heat pumps with a COP of around 4, for 2.2 times the size of the previous pools, we'd end up with significantly less energy consumption which means lower utility bills which might compensate for higher facility maintenance costs.

Hari Titan
125 St James Drive

P.S. My energy efficiency experience: I've done a number of permitted projects that improve the energy efficiency of my house in Piedmont including rooftop solar panels, installing double-pane windows, upgrading the space and water heating to Energy Star equipment, wall and attic insulation, and getting Title 24 compliance for my lower level to increase the legal square footage of my house. We also drive EV and Plug-in-hybrid EV (PHEV) vehicles that reduce our daily carbon footprint significantly.

References

<https://www.energy.gov/energysaver/heat-pump-swimming-pool-heaters>
<https://www.swimuniversity.com/solar-pool-covers/>
[https://www.boarddocs.com/ca/peralta/Board.nsf/files/B964YD824E0E/\\$file/Attachment%20%232%20-%20Tricon%20CO%232%20-%20Amendment%20%233.pdf](https://www.boarddocs.com/ca/peralta/Board.nsf/files/B964YD824E0E/$file/Attachment%20%232%20-%20Tricon%20CO%232%20-%20Amendment%20%233.pdf)

The ZIP file for the Mountain View aquatic center project contains these files:

ATT 1 - Final Design.pdf
ATT 2 - Responsible Bidders List.pdf
ATT 1 - Aquatic Center Concepts.pdf
ATT 4 - Operational Plan and Comparison Report.pdf
ATT 1 - Consultant Fee Schedule.pdf
Council Report Oct 2020.pdf
Council Report Oct 2021.pdf
PRA 21-208_DRAFT- ELS-011 Rengstorff Aquatic Cntr LEED Energy Summary.pdf
PRA 21-208_Rengstorff Aquatics Center - Pool Water Heating Design - Partial Set.pdf
PRA 21-208_DRAFT_ELS011zP202-SYSTEM OPTIONS 02-12-21.pdf
DualSun-US-Datasheet-SPRING-375-Shingle-Black.pdf
Dualsun shingle - SRCC OG100 cert.pdf
Polysun Report - rev4 - S Rengstorff, 201, Mountain View.pdf

(Compilers Note: Security Settings in some of the attachments prevented them from being compiled into this document. They were received by the City Council and can be viewed at the City Clerk's Office during regular business hours).