

ONE NET ZERO

Silicon Valley, the world's center of innovative technology, derives its name from the chemical element that allows a controlled flow of electrons in a transistor, turning it ON (1) or OFF (0).

In the second half of the 20th century, the Santa Clara Valley was the global hub of the silicon chip industry that enabled the rise of personal and mobile computing, making way for the thriving companies that create the technological applications individual consumers use today.

Billions of nano-scale transistors make up the circuits of computer processors. Circuits are integrated on silicon chips, a semiconducting substrate with properties that allow or block electricity. The negative or positive state of electrons makes transistors work as switches with an ON (1) or an OFF (0) state. The binary electrical signal in transistors is the foundation for the storage, processing, and transmission of information.

Computers today use the binary system to encode information from a myriad of data formats. Text, numbers, sounds, and images become strings of binary numbers so computers can process the information with billions of ON and OFF switches.

At Arena Green, the proposal showcases the binary numbers ubiquitous in all computer processes. Straddling the two sites, a bridge suspended by tension cables spans between the monumental digits 1 (Arena Green East) and 0 (Arena Green West). The cable-generated surface produces a highly visible urban landmark and a tubular space where pedestrians can experience an exceptional crossing above Confluence Point. Both visual experiences are enhanced at night with an orchestration of environmentally conscious kinetic lights.

The bridge unites both sides of Arena Green on an enjoyable journey. On the highway side, a linear switchback ramp runs along a sustainable urban farm, taking visitors up to the base of the '1' shape. On the SAP Center side, a helicoidal canopy walkway leading up to the bottom of the '0' shape allows us to explore the world of the existing trees from different perspectives.

The versatile minimalism of the binary system serves as the inspiration for the design proposal: despite the austerity of forms and materiality, the landmark delivers a variety of extraordinary experiences and photographic opportunities.

Silicon Valley unites people from around the world to collaborate in the search for solutions that enhance the human experience. The landmark celebrates a region that promotes the confluence of ideas driven by a relentless quest for simplicity in its solutions.

Digits One "1" and Zero "0" (in plan and in elevation) are used to compose a sequence of different experiences, just as the two digits can encode a wealth of information. The monument is a landmark and also a space to discover and explore.

TIMELINE OF SILICON VALLEY HISTORY

From Semiconductors to Quantum computing and beyond. Exhibits along the helicoidal ramping trail.

TIMELINE OF SANTA CLARA VALLEY AGRICULTURAL HISTORY

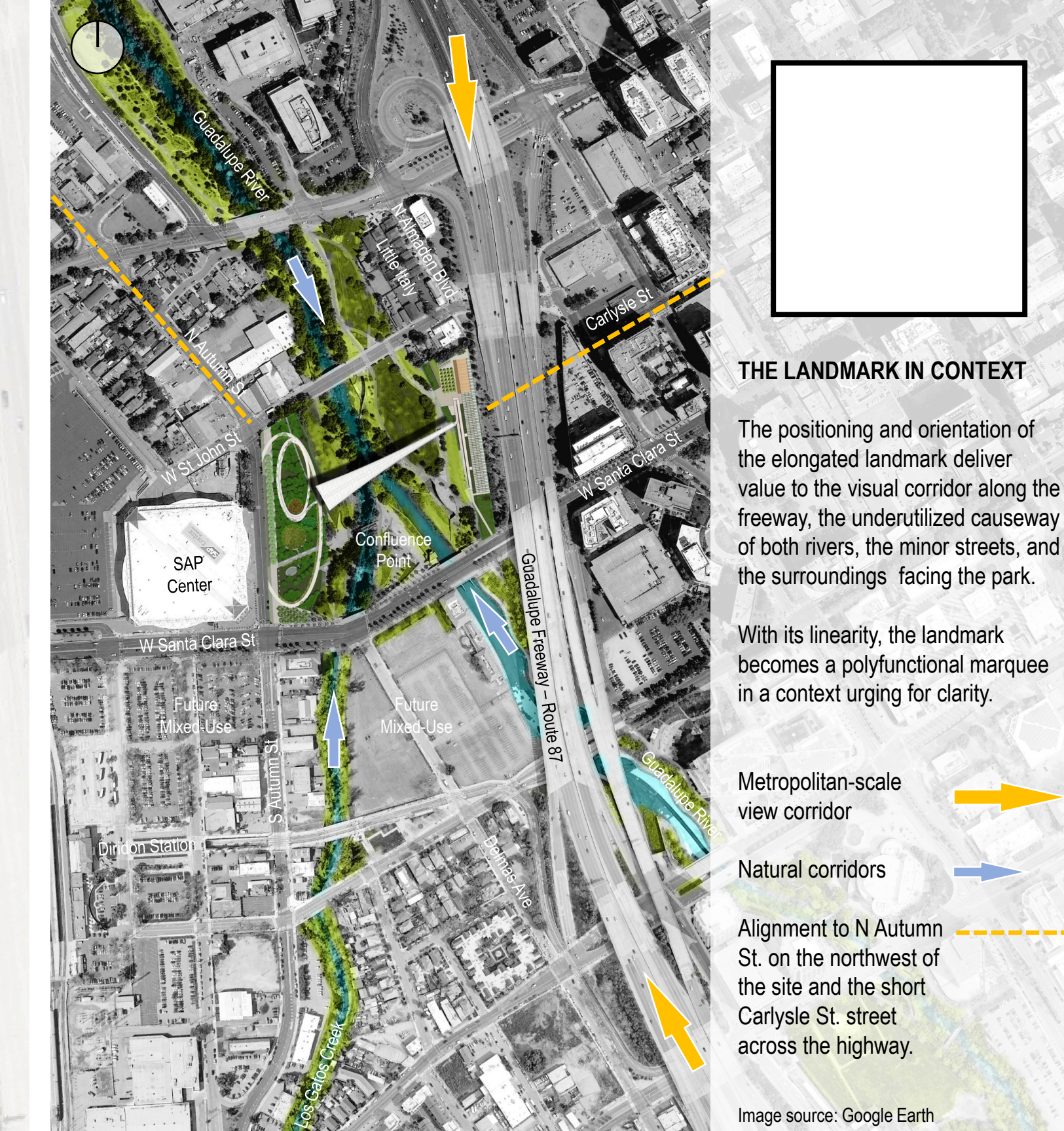
From the Ohlone Native American people, Mission Santa Clara and Mission San Jose's first Orchards to becoming the largest fruit-producing region in the world in the 1960's. "The Valley of Heart's Delight". Exhibits along the linear ramping trail.

SITE PLAN

- Entry to accessible ramp leading to bridge
- Bridge
- All trees to be preserved or replanted within site
- Food truck, school bus parallel parking
- Widened sidewalk
- New curved promenade
- Column located within designated site and outside riparian corridor
- Wildflower gardens to support park ecosystem and pollinators. Children's carousel to be relocated to the Rotary PlayGarden (as currently planned).
- Restaurant-café, Interpretive Center and Multipurpose space for educational and social events
- Urban farm greenhouse. Solar roof with controlled heat gain and ventilation. (9 and 10 occupy impervious footprint of tennis courts)
- Bicycle parking
- Fruit tree orchard
- Pervious plaza connected to trail
- Horticultural Garden. A transition buffer between the urban farm and the riparian corridor. The native horticultural garden coexists with the local habitat. Four-season plants will draw visitors all year round to experience seasonal changes. At Urban Confluence, visitors will have glimpses of Santa Clara Valley's rich farming past.

PRESERVED ITEMS OF CULTURAL SIGNIFICANCE

- A. Weaver's Gift
- B. Five Skaters
- C. San Jose Vietnam Memorial
- D. Rangers Station
- E. Tributaries Monument



THE LANDMARK IN CONTEXT

The positioning and orientation of the elongated landmark deliver value to the visual corridor along the freeway, the underutilized causeway of both rivers, the minor streets, and the surroundings facing the park.

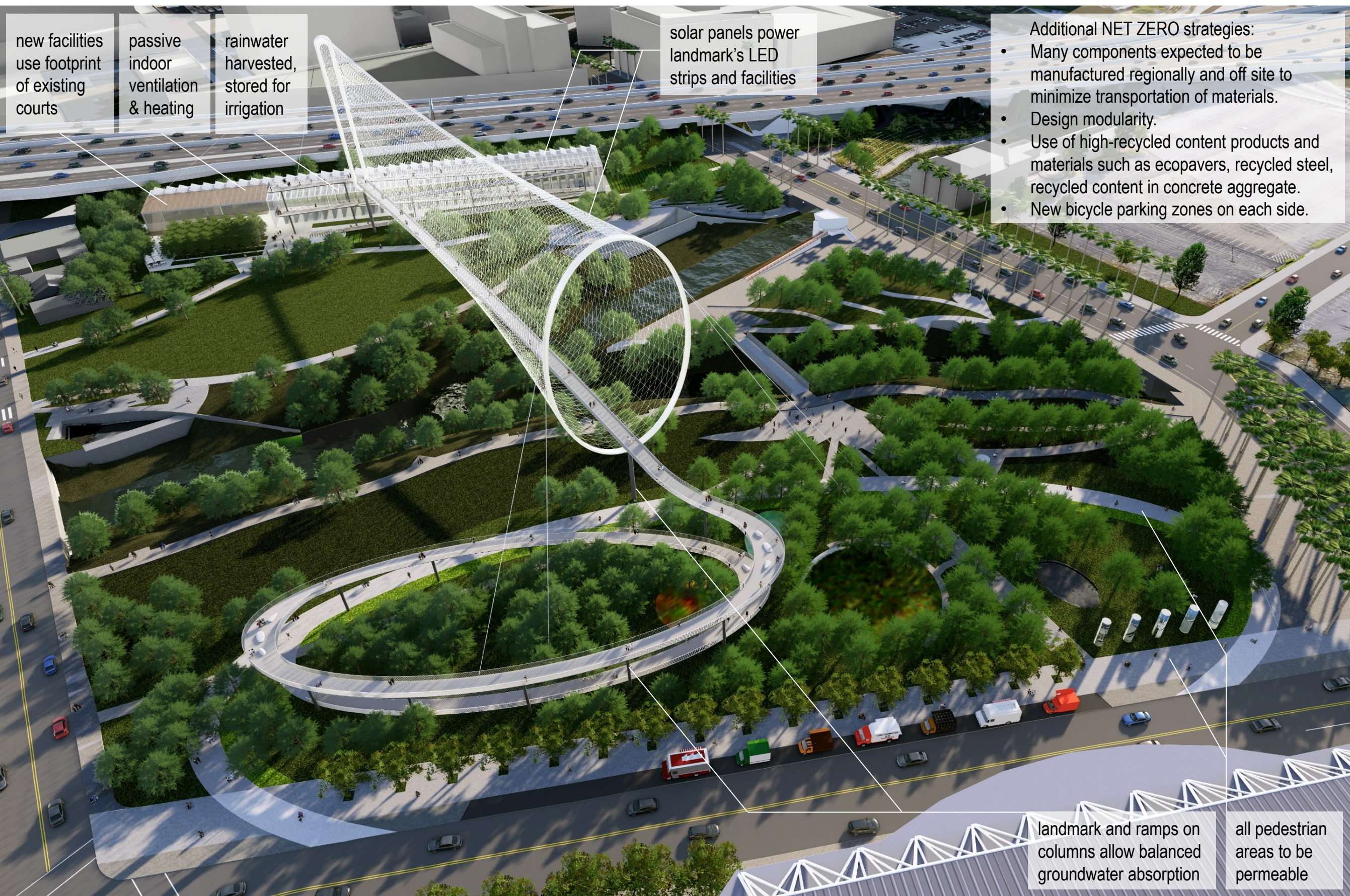
With its linearity, the landmark becomes a polyfunctional marquee in a context urging for clarity.

Metropolitan-scale view corridor

Natural corridors

Alignment to N Autumn St. on the northwest of the site and the short Carlyle St. street across the highway.

Image source: Google Earth



- new facilities use footprint of existing courts
- passive indoor ventilation & heating
- rainwater harvested, stored for irrigation
- solar panels power landmark's LED strips and facilities
- Additional NET ZERO strategies:
 - Many components expected to be manufactured regionally and off site to minimize transportation of materials.
 - Design modularity.
 - Use of high-recycled content products and materials such as ecopavers, recycled steel, recycled content in concrete aggregate.
 - New bicycle parking zones on each side.

The bridge provides new vantage views of the city and celebrates Confluence Point.

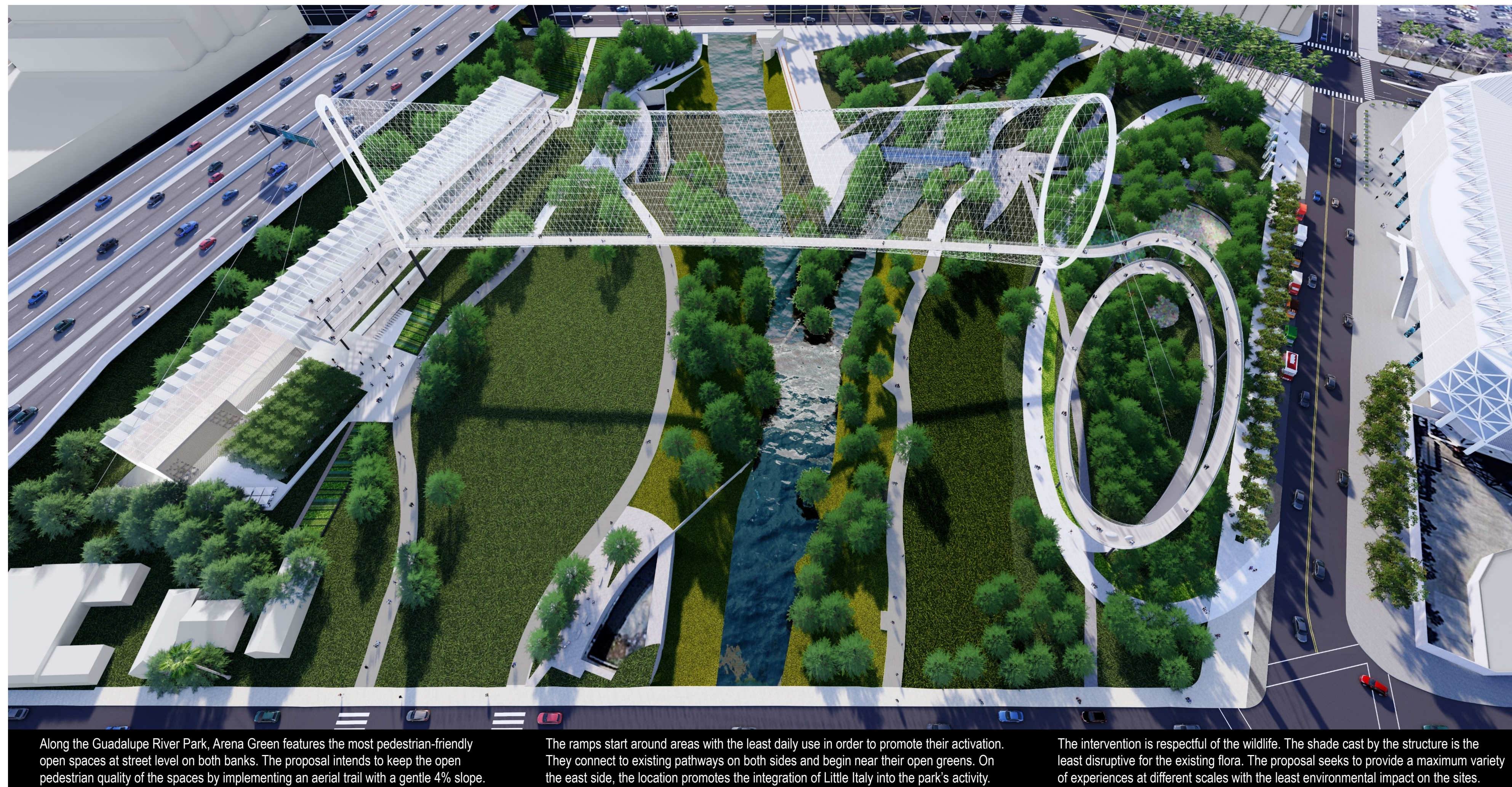
The aerial trail offers the opportunity to see the Guadalupe River and Los Gatos Creek from new viewpoints.

The elevated pedestrian bridge heightens the awareness of nature and water running through the middle of downtown.

- landmark and ramps on columns allow balanced groundwater absorption
- all pedestrian areas to be permeable

NET ZERO WATER Absorption of groundwater for the replenishment of aquifers and the Guadalupe River is of utmost importance in this proposal. The landmark is supported by columns that allow the entire site to remain pervious. The ancillary facilities (urban farm, interpretive center, restaurant-café) occupy the footprint of the existing tennis and basketball courts. Rainwater falling on the urban farm's roof is harvested for irrigation. Pavement in all new walkways will be permeable.

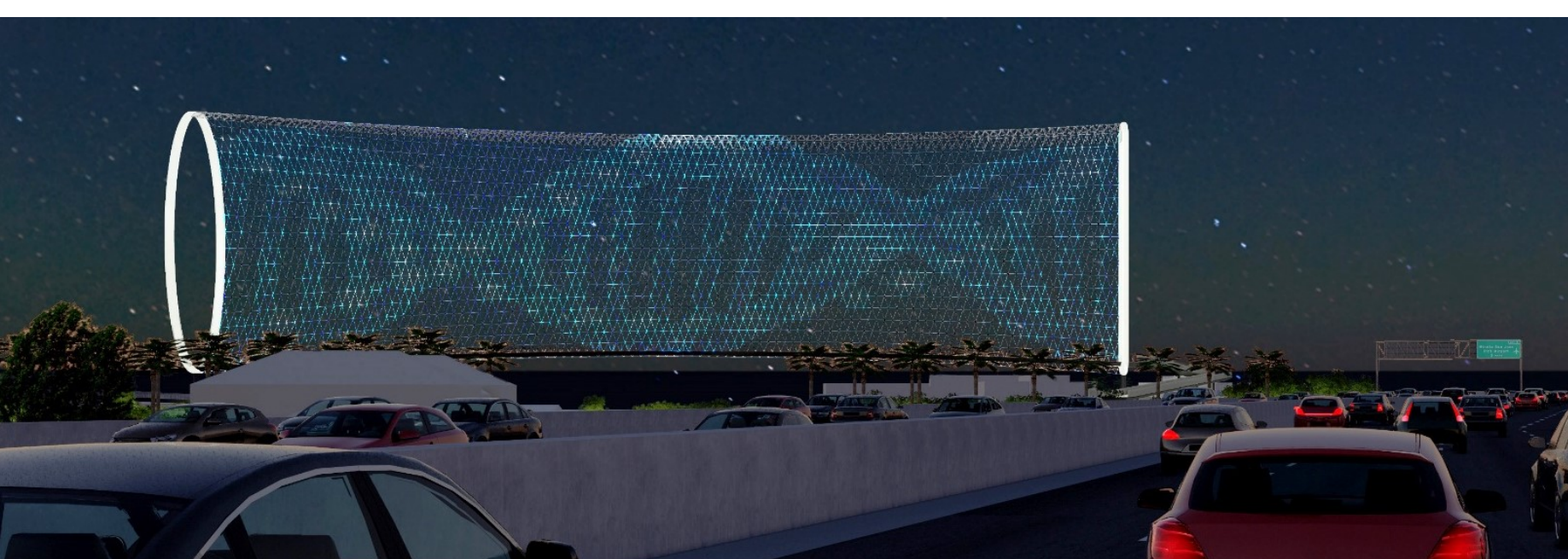
ENERGY Photovoltaic panels on the roof of the urban farm maximize light absorption and minimize glare. The solar panels feature a multi-layer anti-reflective light trapping coating. The solar panels feature a multi-layer anti-reflective light trapping coating. The solar panels feature a multi-layer anti-reflective light trapping coating. Power for LED strips will be limited by the energy harvested from all solar panels. The landmark will produce no waste. Ancillary facilities will guide on the hierarchy of Reducing, Reusing, Recycling and Recovering discards.



Along the Guadalupe River Park, Arena Green features the most pedestrian-friendly open spaces at street level on both banks. The proposal intends to keep the open pedestrian quality of the spaces by implementing an aerial trail with a gentle 4% slope.

The ramps start around areas with the least daily use in order to promote their activation. They connect to existing pathways on both sides and begin near their open greens. On the east side, the location promotes the integration of Little Italy into the park's activity.

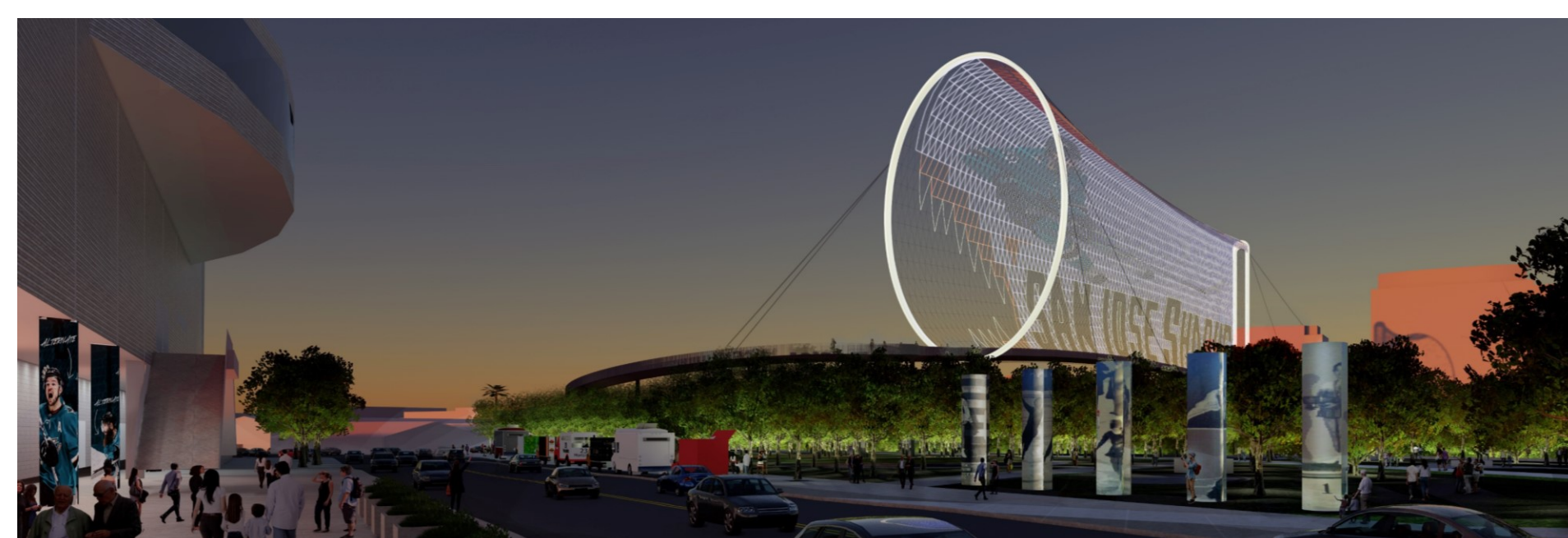
The intervention is respectful of the wildlife. The shade cast by the structure is the least disruptive for the existing flora. The proposal seeks to provide a maximum variety of experiences at different scales with the least environmental impact on the sites.



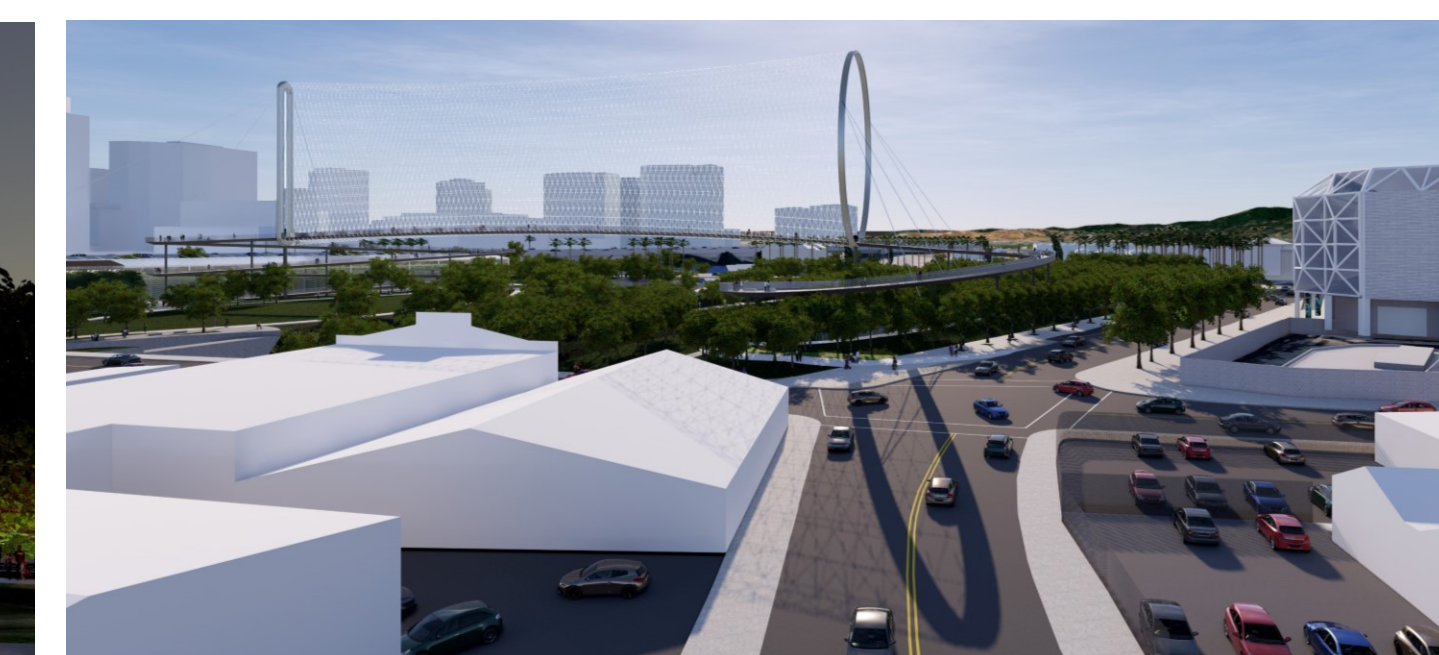
VIEW ALONG ROUTE 87 FROM THE SOUTH. The landmark establishes a strong visual presence and memorializes the view corridor that splits the Envisioned San Jose 2040 Downtown in two halves.



ARRIVING FROM SJC ON ROUTE 87. The landmark welcomes visitors to San Jose arriving from the airport. It is also the gateway to Silicon Valley when leaving San Jose northbound.



VIEW FROM THE SAP CENTER ENTRANCE. Hovering above the trees, the bridge is an open invitation to a unique experience for all.



VALUE ADDED TO STREET REDEVELOPMENT. The landmark operates as a terminus to the view along N Autumn St. It becomes a wayfinding enabler and a catalyst for urban densification.

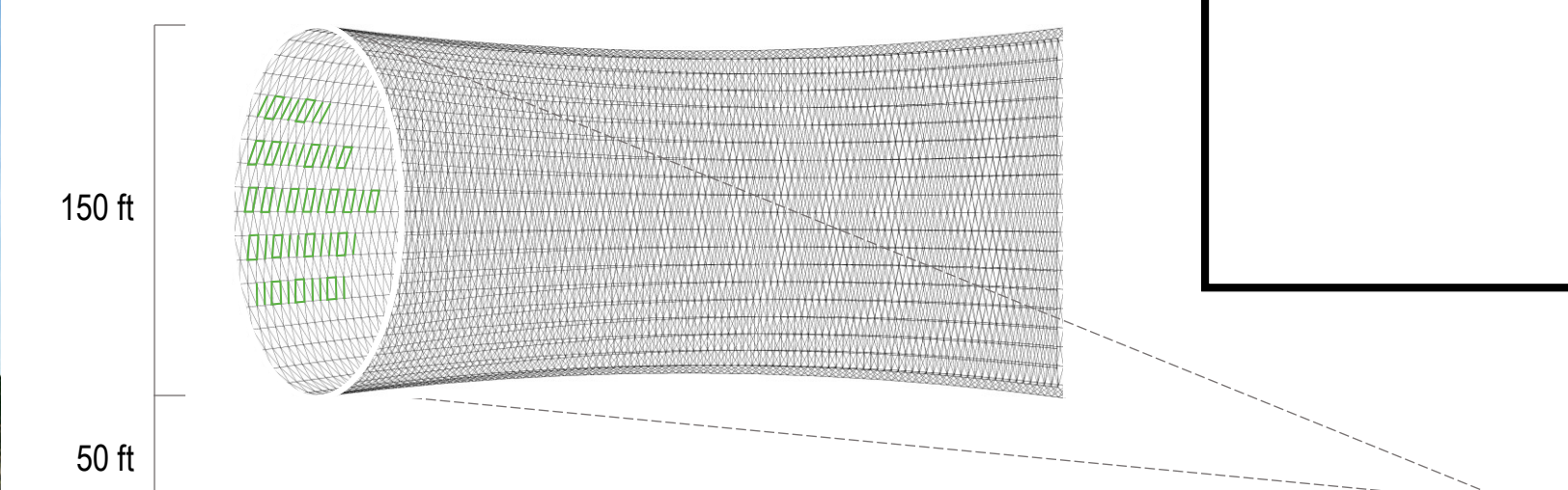


URBAN BIRDING. The canopy walkway offers a tree-top stroll for a singular contact with nature with minimum disruption of the existing trees and soil around them. Along a swirling timeline exhibit of Silicon Valley history, people of all ages can easily engage into the world of birdwatching. "Urban birding" enhances the consciousness of coexisting with nature in the city.



TREE-TOP WALKWAY. All trees are to be preserved. Existing trees provide shade for visitors and refuge for wildlife. Very few trees may need to be replanted after the construction of the ramp, ideally no tree should be displaced to protect the park's existing habitat. Tree-top walkways are becoming tourist attractions in major cities. The elliptical and the linear switchback ramps are at least 10 ft. wide and wheelchair accessible with a gentle 4% slope. They offer intermittent resting opportunities along their way. Each of them rises about 50 ft. to the bridge level.

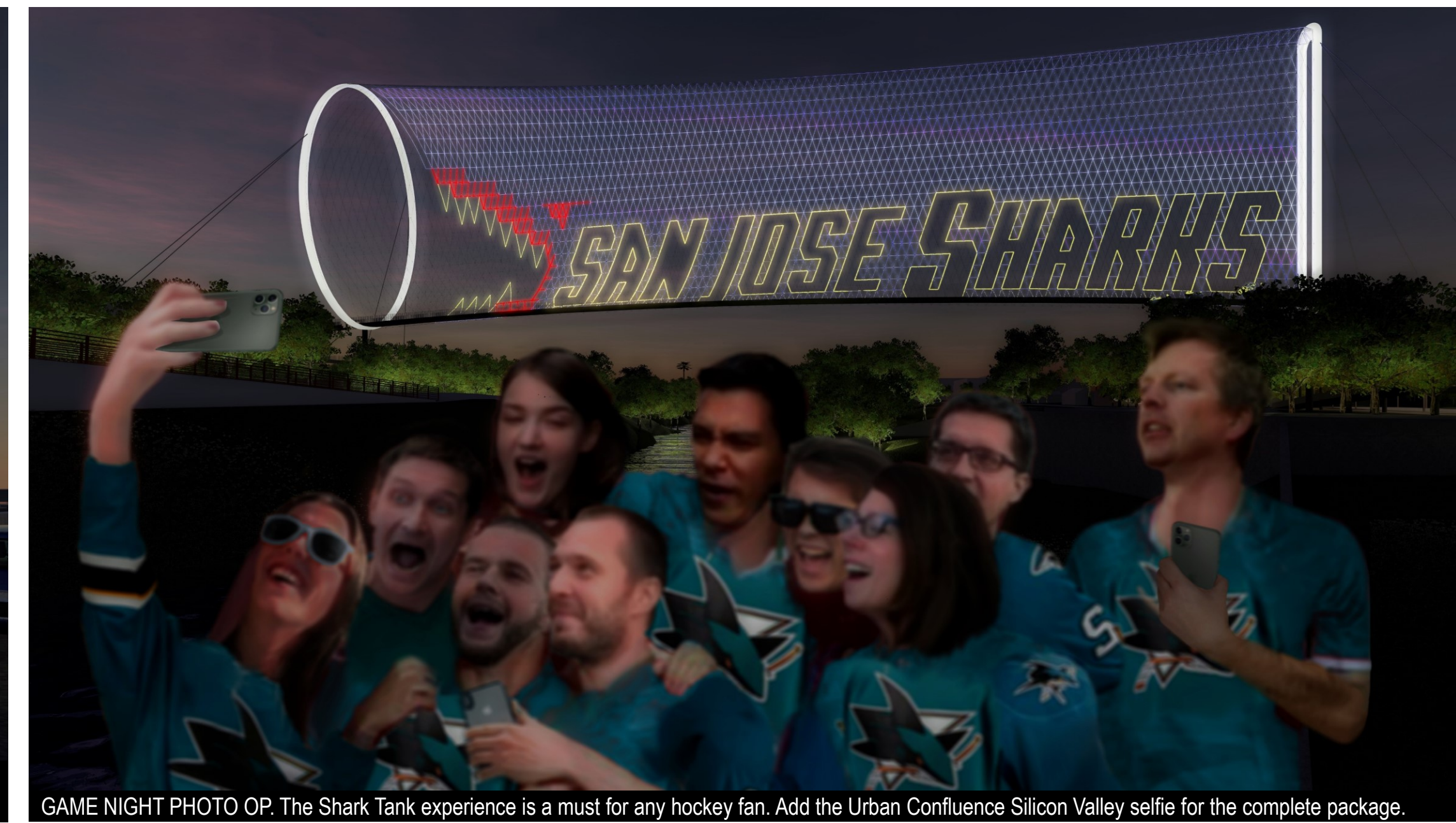
Programmable LED strips are mounted on the inner facing surface of the cable net; crossing the bridge gives the visitor a complete immersive experience.



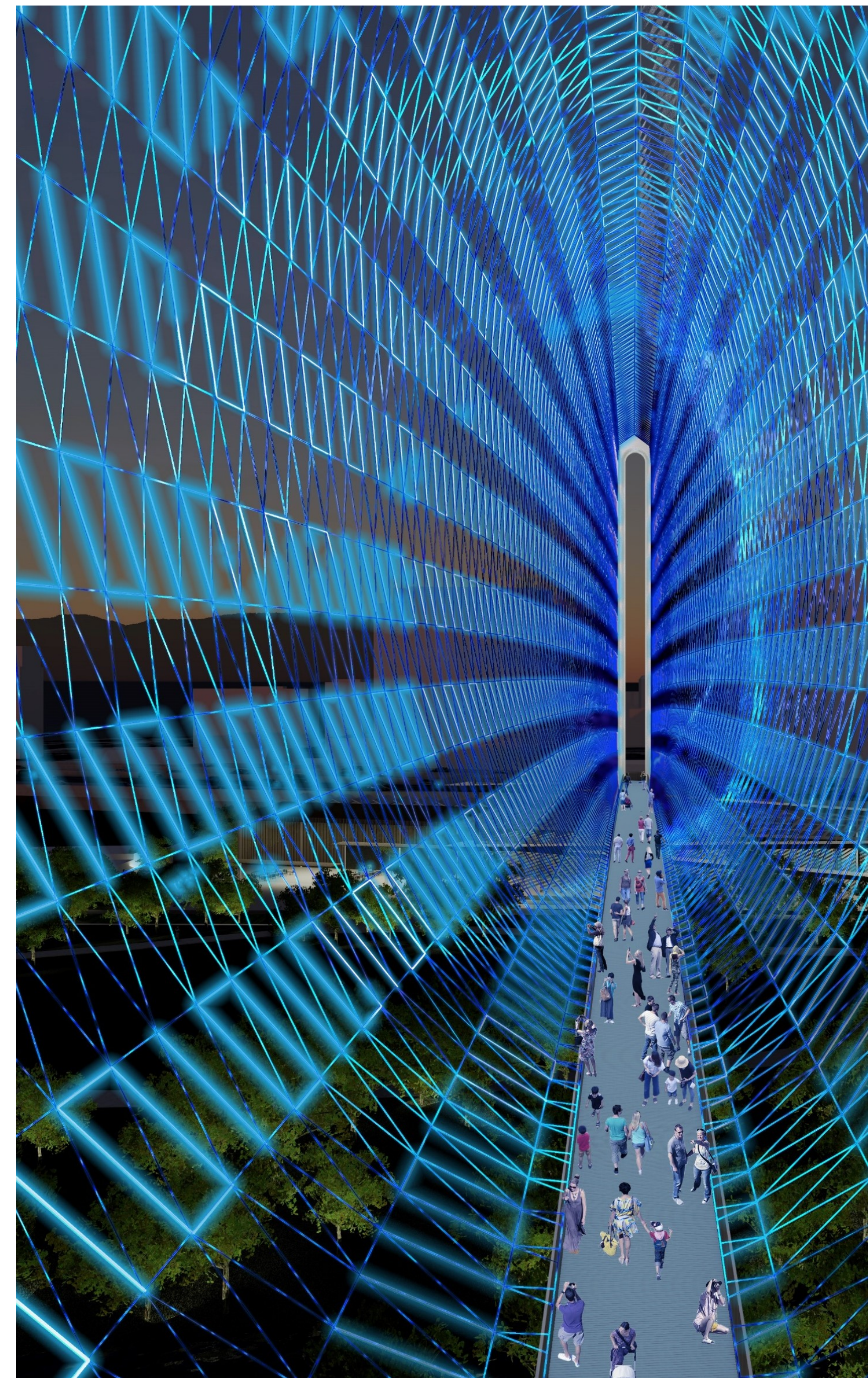
HOLIDAY SEASON LIGHT SPECTACULAR. An unrivaled winter wonderland new tradition of San Jose. A must see!



SILICON VALLEY WISHES EVERYONE A GREAT 4th OF JULY! The view from the road of a celebration banner, a billboard, a medium to showcase kinetic digital art, or an AMBER alert, among other uses. Kinetic lights will transition smoothly. No casting of light will occur on the riparian corridor or into the sky. No glare will be produced on the water.



GAME NIGHT PHOTO OP. The Shark Tank experience is a must for any hockey fan. Add the Urban Confluence Silicon Valley selfie for the complete package.



ONE NET ZERO, AN IMMERSIVE EXPERIENCE. More than just a cityscape icon, the landmark is a memorable space to traverse. Lights are dimmer at eye level; brighter lights are displayed in the upper parts to be visible from far away.



URBAN FARMING. The urban farm celebrates the agricultural past of the region with an environmental awareness. It is combined with an interpretive center to provide a learning opportunity for all ages. As downtown San Jose expands towards the west and its density increases, grocery stores, restaurants, and residents will benefit from the urban farm's sustainable approach of production and distribution due to its central location. The location substantially reduces the distance, time, and refrigeration costs needed to transport fresh produce. Hydroponics systems in vertical farming requires over 95% less water, less land, no soil, no pesticides, reduces power consumption and labor costs.



Bathing golden light. Selfies above and below: our landmark icon.

Rolling hills around, two rivers meet in downtown. Peek over the trees

Flows of fresh water merge gently by the landmark, an urban confluence

NATIONAL POETRY NIGHT OUT: HAIKU CONTEST AT CONFLUENCE POINT. Curated freedom of expression of a highly creative population must yield unparalleled collective joy. View of a possible event from the restaurant-café. The dining venue is the link between Little Italy and the Urban Farm, it reinforces the activation at the start of the linear switchback ramp.