
15190 River Road Fueling Station – Sustainability Goals

Issued for Planning: 27 July 2021

This document summarizes the project's sustainability goals as discussed between the architect and sustainability consultant to date.

This project, a mixed-use project including a fueling station, market/convenience store and housing component, is intended to 1) enhance occupants' well-being and quality of life, 2) minimize long-term operations and maintenance costs for the owner and occupants, and 3) support a healthy natural environment. This narrative outlines overarching goals for the project and is intended to provide high-level guidance to the owner and design team on best practices and performance goals. Specific methods, systems, materials, and products will be further refined and specified in design development and construction documents.

Overview

The client has owned and operated a gas station, including an antique store and market/convenience store, at this location for almost ten years. The gas station has not been in operation since 2019, when significant flooding of the Russian River forced its closure. To reopen as a gas station per its previous use, tanks and updated are required to be upgraded. Some electric vehicle charging stations are also planned to be incorporated. The proposed development will also include a small housing component with seven units to help address housing supply issues in the region.

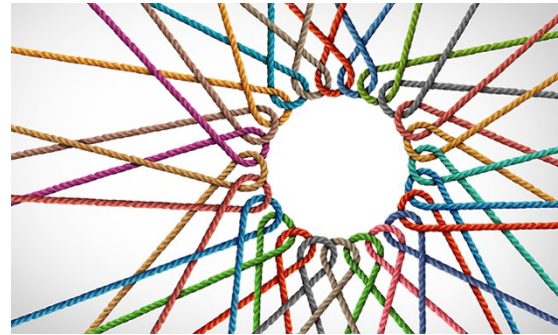


Sustainability Concepts

The client would like to create a project that is as environmentally friendly as possible within budget constraints, and the following information highlights key aspects of the proposed building and site.

Integrated Design Approach

The team will invest in an integrated design process to facilitate communication and collaborative problem solving. This approach requires the project team to consider the whole building as an integrated collection of its systems, considering how each decision impacts other disciplines and overall project goals. To support this approach, the sustainability consultant will schedule a design charrette during the schematic design phase. A charrette is an interdisciplinary session involving all key disciplines and can help facilitate efficient, common-sense, achievable strategies for optimizing a project's environmental performance.



Site

- Reuse of a previously developed site
- Attractive, environmentally responsible, integrated storm water management system
 - o Rain gardens/bioswales and permeable paving
 - o Native drought-tolerant landscaping and irrigation design



Housing

- Passive envelope design and durable, low-maintenance materials for lasting affordability and livability
- High performance building envelope strategies to reduce heating demands and thus minimize energy required for space heating and cooling
 - o Dual-pane, low-E, argon-filled non-metal windows
 - o Reasonably airtight exterior building envelope tested for performance
 - o Insulation detailed to minimize thermal bridging from structural components and verified for quality installation
- Efficient HVAC, DHW, lighting and appliances to reduce energy from all end uses
- All-electric technologies for heating, cooling and DHW to minimize carbon footprint
 - o Mini-split heat pumps for space heating
 - o Heat pump water heaters (HPWH)
 - o 100% high-efficacy LED lighting
 - o ENERGY STAR appliances
 - o Magnetic induction cooktops
 - o Heat pump condensing (ventless) clothes dryers
- Balanced ventilation (equal supply and exhaust) with filtered supply air to improve indoor air quality during wildfires and typical day to day scenarios
 - o Energy recovery units (ERVs) to be considered
- Water-conserving plumbing design and fixtures
 - o High-efficiency toilets
 - o Low-flow high performance showerheads and faucets
 - o On-demand hot water circulation
- Low-emitting materials and finishes
- Incorporation of renewables (solar photovoltaic panels) to offset the remaining energy use

Closing

The intent of this narrative is to summarize key concepts proposed to be integrated into the project; it is not comprehensive.

- END -



PROPOSAL STATEMENT
15190 RIVER ROAD GUERNEVILLE CA 95446

The current buildings (residential and retail) and the gas station at 15190 are in a run-down and outdated condition. After carefully evaluating all options, we propose to demolish both buildings and the gas station and rebuild a gas station and new buildings.

The new gas station would be similar in size and located a little bit further south than previously as this allows for easy access for cars but also for trucks to fill the tanks when needed.

The new buildings will contain a convenience store as part of the gas station but also have much needed residential units for Guerneville. It will be a mix of SRO's and two-bedroom. All residential units are on the second or third floor and out of the flood plain. Parking will be accessible from Old River Road and shielded with landscaping. The two-bedroom apartments will have private decks, the SRO's will have open space on the ground floor. One of the SRO's will be the manager's unit. The architectural style reflects the location of the building in Guerneville with a strong presence of western false façades with a modern interpretation of it.

Most of the hardscape area is supposed to be permeable pavers to limit storm water. All other storm water is supposed to be diverted to the storm water drain system along Old River Road. Huffman Engineering has been reviewing the existing site conditions and the feasibility of the proposed new design.

A special consultant for gas stations will be part of the design team and will establish a way how to remove the current gas tanks and any potentially contaminated soil. This will be part of the construction documents.

The project site is located between River Road and Old River Road, the cross street is Orchard Road. The site is mostly level with a slight slope down towards Old River Road and Orchard Road. A gas station including a convenience store and an antique store are currently on site. The complete area is paved, and no vegetation is on site. A hotel is to the north west of the site, residential buildings are to the west and more commercial spaces to the south including a pet supply store and a car mechanic. All lots to the east towards the Russian River are vacant.

Due to the urban location on River Road noise will mainly be from car traffic. Given this all apartments are oriented towards Old River Road having the staircases, hallways, and other public areas towards River Road.



The proposed project will be a mixed use with approximately 2,000 square feet of commercial space on the ground floor, 5 SRO's on the second floor and 2 two bedroom apartments on the third floor. Parking areas will be shielded with landscaping, outdoor space will be provided in the landscaped area. The parcel allows for zero setbacks, nonetheless the building steps back 1ft from the east and west property line.

The setback of the building to the north is about 110ft and to the south about 134ft. The gas station has a setback to the south of about 38ft. The height of the building is 31'-8" and the lot coverage 5,178 sq ft with a maximum allowable lot coverage of 7,226 sq ft.

The gas station and convenience store will be open from 6am to 10pm during weekdays and until 12am on weekends with probably 3-4 employees on site. Based on experiences of the previous gas station we expect an average of 250 visitors a day (including summer/ weekends and holidays). Storage will be on the shelves and coolers in the store.

Two areas within the building have been addressed for garbage bins, one is close to the staircase and another bigger one to the north west corner of the building. This area is directly accessible from the store and from outside for the residents.

Fire and emergency vehicles will have easy access to the building due to the circulation area of the gas station.

We just recently engaged the company "Beyond Efficiency", a firm specialized in energy efficiency and sustainability. We will submit their narrative asap.