

# 3Kings Water Treatment Plant

Phase III Design Engineering and Architectural Services

Schematic Design Review City Council Working Session

June 21, 2018



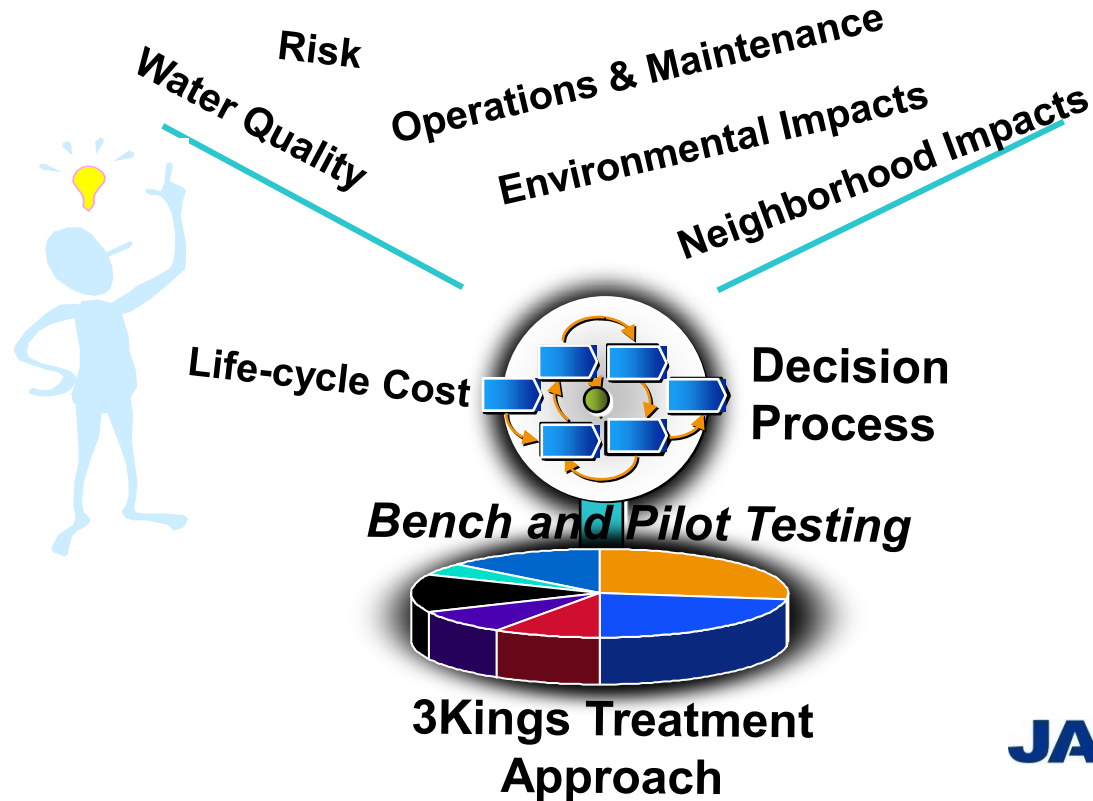
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# 3Kings Water Treatment Plant Schematic Design: Builds from Previous Projects

- Replaces the Spiro WTP
- Provides additional potable water supply capacity
- Treats all Judge Tunnel, some Spiro Tunnel flows, and Thiriot Spring
- Addresses complex treatment challenges



# 3Kings WTP Schematic Design Approach is the Outcome from a Multi-faceted Planning and Site Optimization Effort

## Neighborhood Impacts

- Reduced potential truck traffic
- Relocated buildings based on Golf input
- Managed approach to noise
- Minimized footprint
- Visual appeal of facilities
- Accelerated construction schedule
- 10,000 SF of office/admin space

## Environmental Impacts

- Net Zero requirements
- Micro-Hydro power generation
- Solar panels
- Decisions considered energy use
- Use source water for heating/cooling

## Operations and Maintenance

- Proven technologies
- Equipment access and removal
- Site security
- Safety in design

## Water Quality

- Address treatment challenges
- Produce high-quality drinking water
- Multiple barrier treatment
- Flexible for water quality changes
- Space for future treatment train, vessels, and future chemical

## Risk

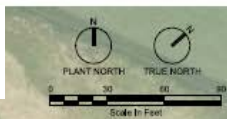
- Parallel treatment trains for reliable treatment
- Avoid high spring runoff zone
- Fire Dept. coordination



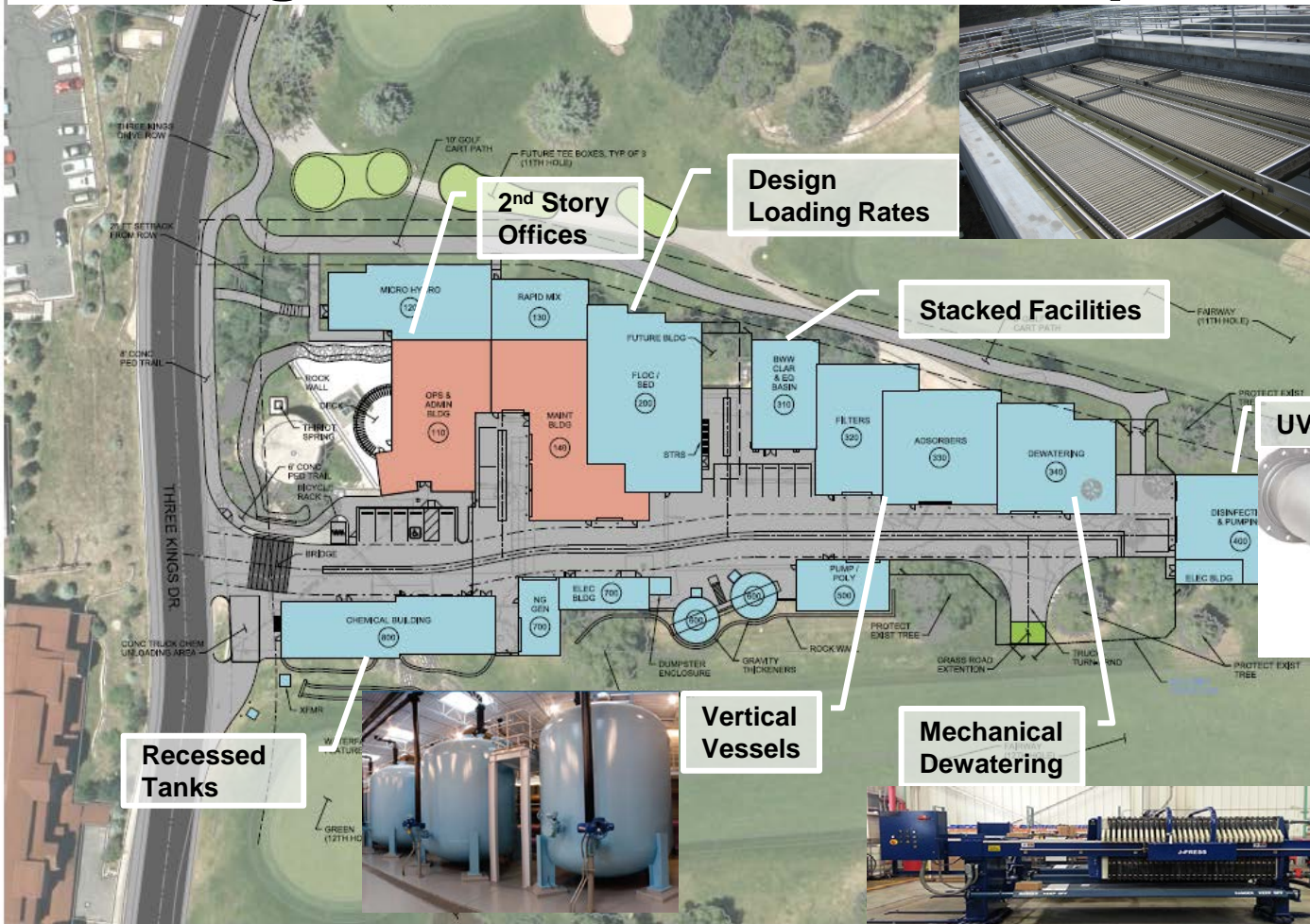
# 3Kings WTP Site Plan

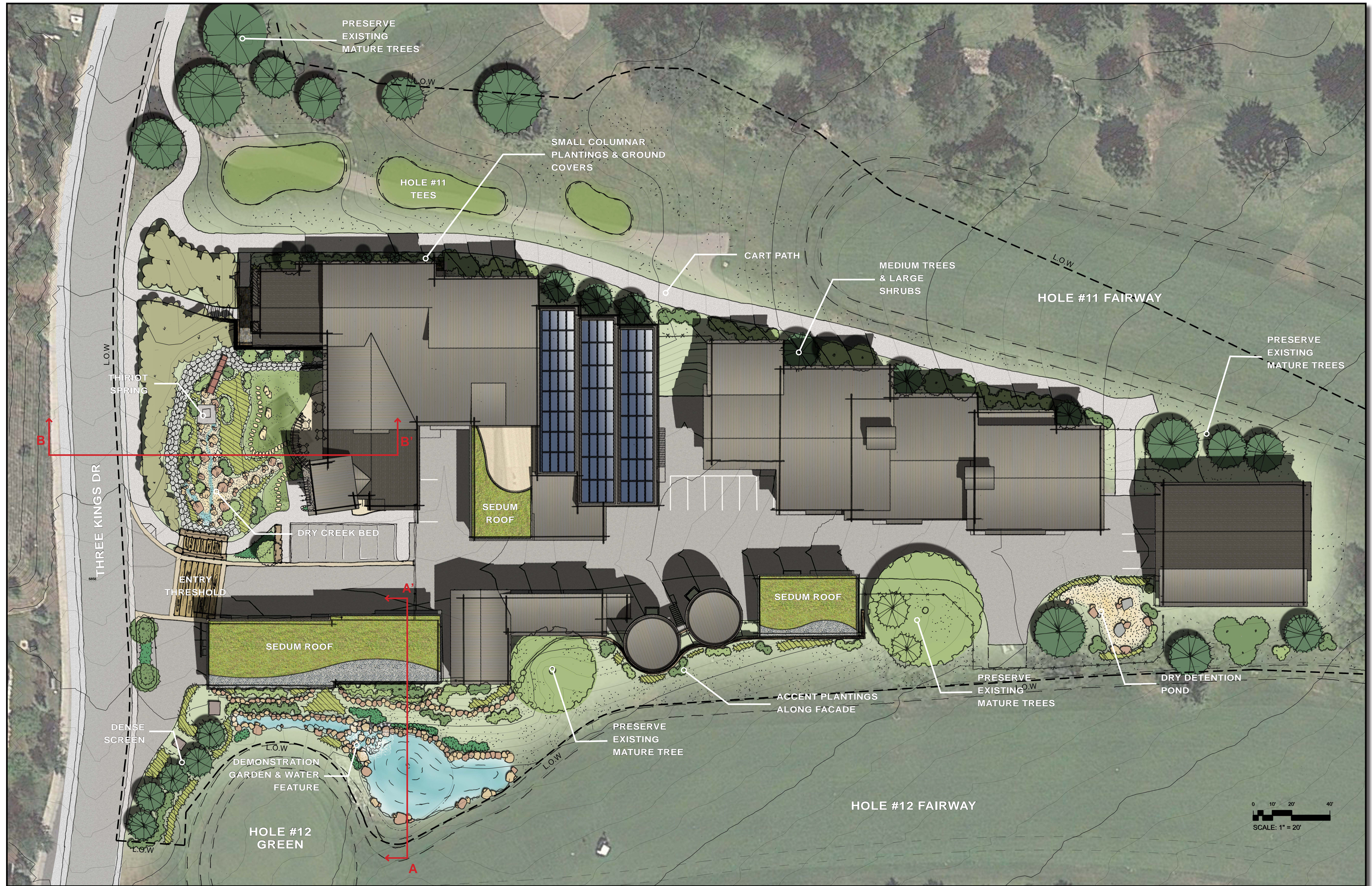


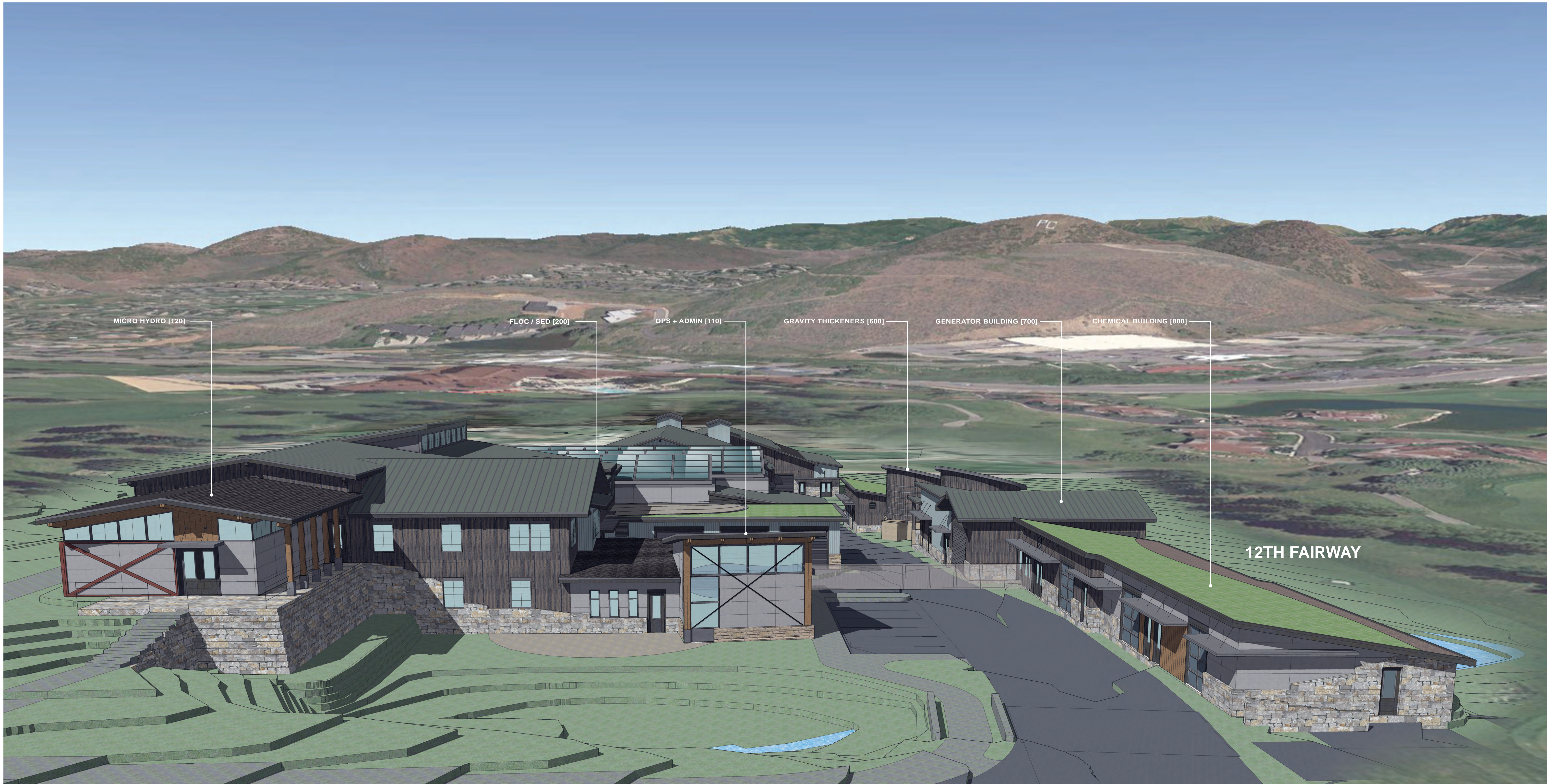
# Planning Decisions Reduce Footprint



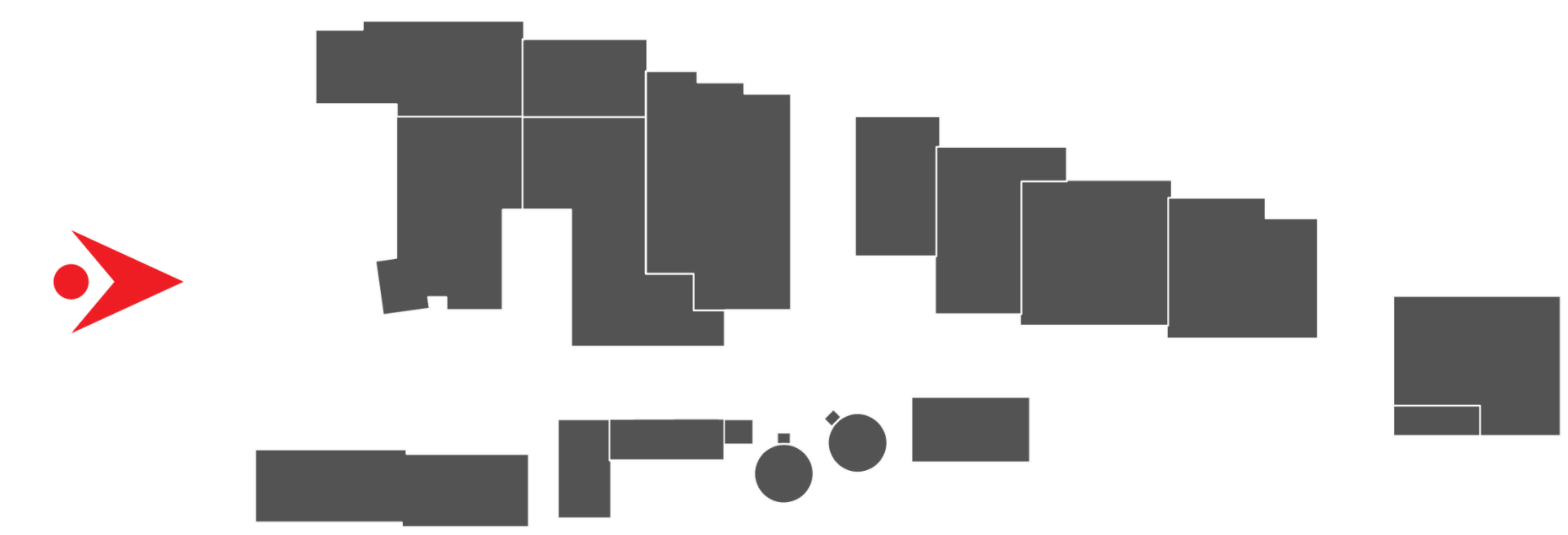
## 3Kings WTP Site Plan



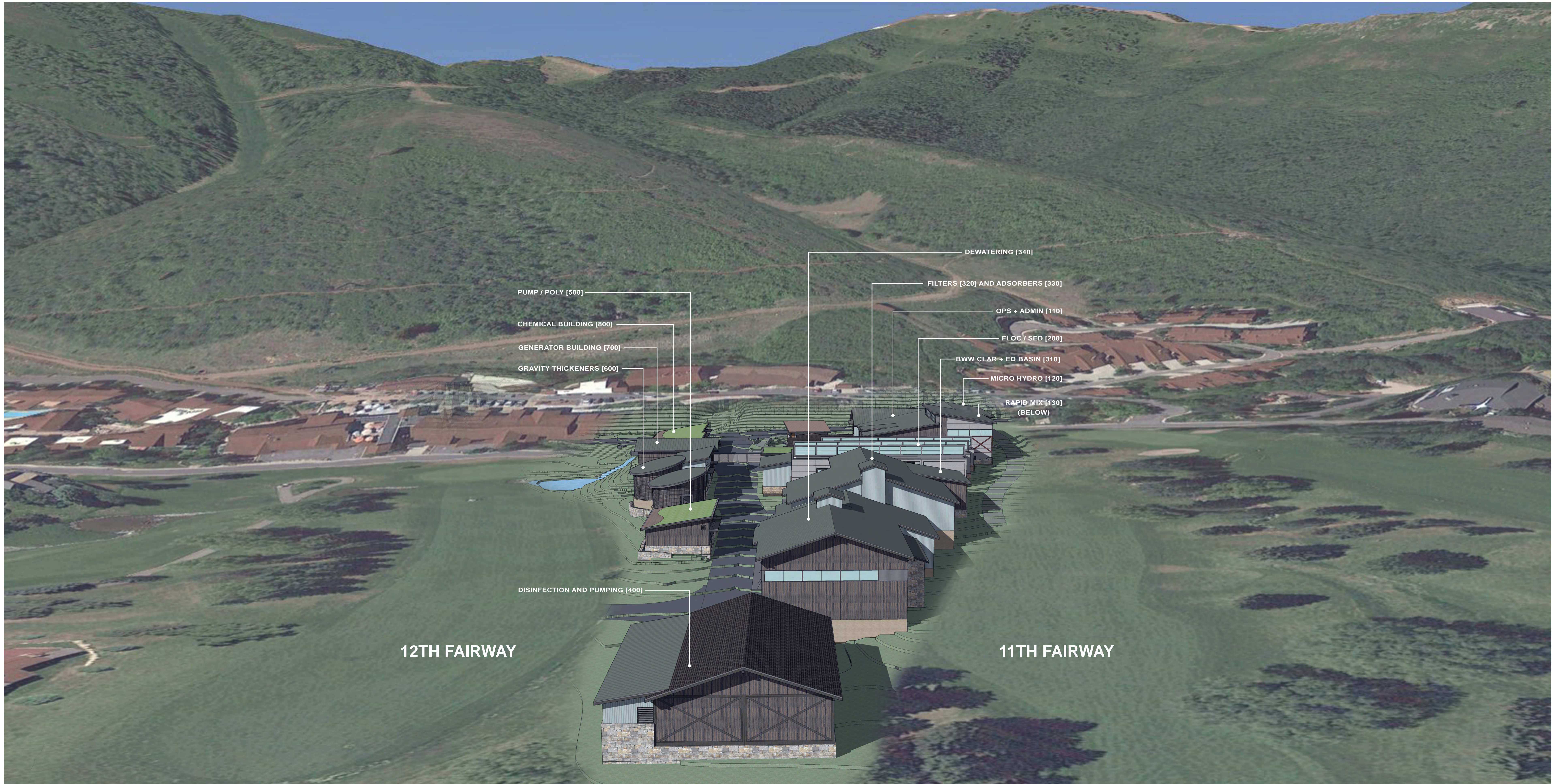




KEY



NTS



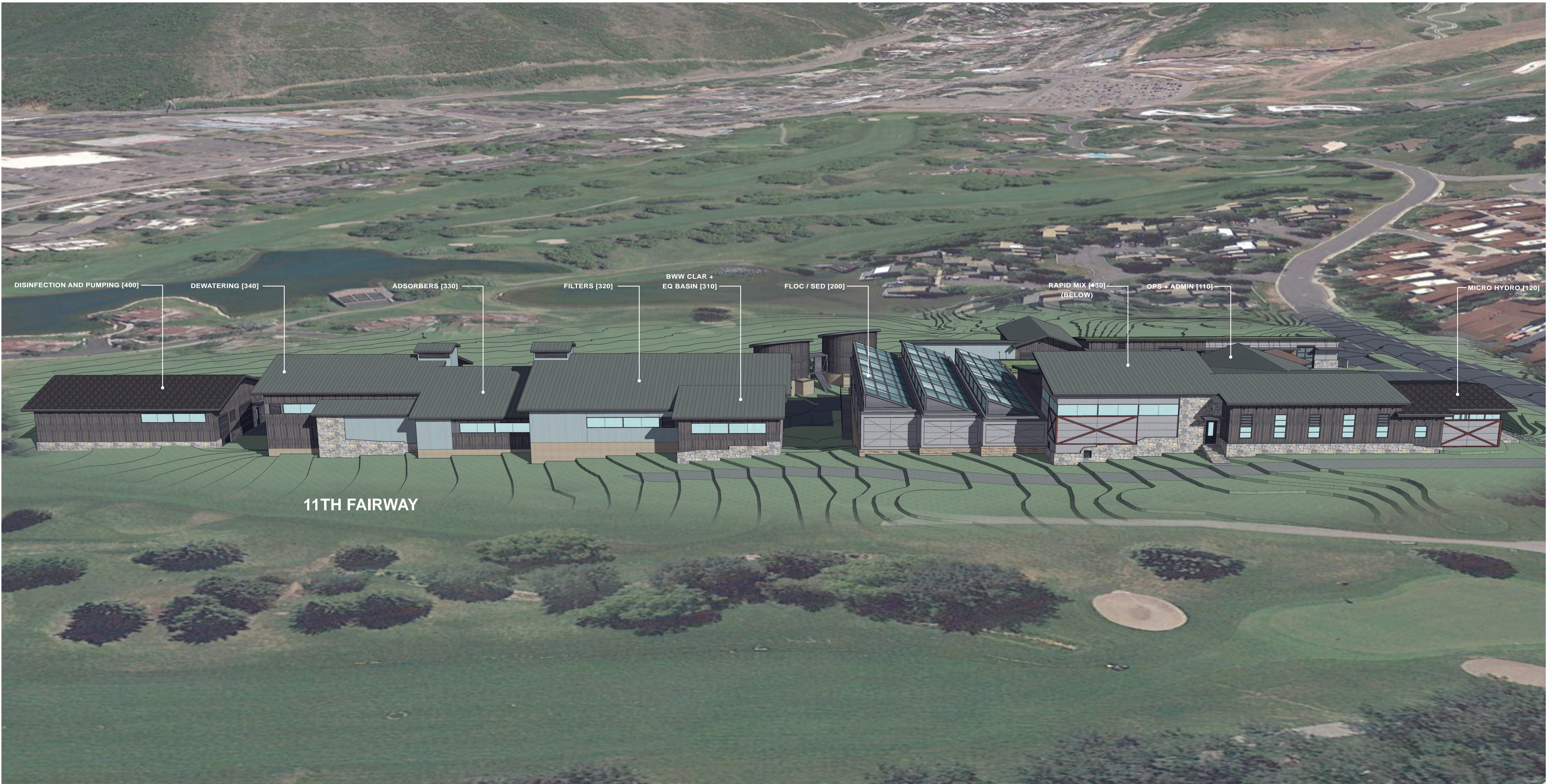
12TH FAIRWAY

11TH FAIRWAY

KEY







DISINFECTION AND PUMPING [400]    DEWATERING [340]    ADSORBERS [330]    FILTERS [320]    BWV CLAR + EQ BASIN [310]    FLOC / SED [200]    RAPID MIX [430] (BELOW)    OPS + ADMIN [110]    MICRO HYDRO [120]

11TH FAIRWAY





12TH FAIRWAY

