

SCHEMATIC DESIGN SUBMITTAL

Date: March 1, 2024

To: Andrea Kuns, PLA
Principal, Landscape Architect
Understory Landscape Architecture LLC

From: Jasmin Woodside, PE — Akana

Subject: City of Stevenson Skamania Plaza Design
Akana Project No. 23-068

Understory Landscape Architecture LLC contracted with Akana to provide civil design services for a plaza design for the City of Stevenson, Oregon. The design includes a hardscape, a premanufactured restroom, and a water feature. This document presents the results of the schematic design phase of the project.

STANDARDS AND GUIDELINES

The City of Stevenson, Oregon, uses the following construction standards and guidelines:

- + May 1999 City of Stevenson Engineering Standards for Public Works Construction (Stevenson PWC)
- + Stormwater Management Manual for the Puget Sound Basin by the Washington State Department of Ecology (Puget Sound Manual)
- + August 1999 Stormwater Management in Washington State Volume I Minimum Technical Requirements by the Washington State Department of Ecology (SWM Washington)
- + November 2020 Public Utility District No. 1 of Skamania County Water System Service Policies & Design Standards (PUD No. 1 Design Standards)

DESIGN CONSIDERATIONS

EXISTING CONDITIONS

The project scope includes converting a sloped lawn into a public plaza in the City of Stevenson. The project site is located at Lewis and Clark Highway (2nd Street) and Russel Avenue on approximately 0.49 acres. The existing lawn slopes north to south at approximately 15% with overland drainage naturally moving north to south down to 2nd Street, into catch basins in the gutter, and conveyed to a municipal storm drain line.

SITE DEVELOPMENT

The proposed site will incorporate flexible lawn space with three small gathering plazas offering expanded views at each level on the slope. The site is accessed through an accessible walkway winding through the different levels with seating steps, interactive water feature, restroom, built in wood benches and movable seating to allow for small daily gatherings. All utilities will be expanded to accommodate per recommendations below.

CIVIL SYSTEMS

DOMESTIC WATER DISTRIBUTION

- + The existing waterline is a municipal 10" ductile iron pipe that runs along 2nd Street.
- + The existing line will be hot tapped for two new water services, a 1.5" water meter sized for irrigation and the restroom, and a meter sized for the interactive water feature. Both services will backflow protected.
- + All piping, fittings and structures will be designed and built per PUD No.1 Design Standards.

SANITARY SEWER

- + The existing sanitary main is anticipated to come from the southeast corner of the site where a sanitary sewer line terminates at a cleanout in the sidewalk and is conveyed to a municipal sanitary sewer main in Leavens Street. Size and depth are still being verified.
- + One 4-inch sanitary main is proposed to serve the restroom. The sanitary sewer line will also be extended to the surge tank for the interactive water feature for intermittent draining during cleaning. If the existing sanitary sewer is not deep enough, the surge tank will have a sump pump to pump the water up to grade.
- + All piping, fittings and structures will be designed and built to Stevenson PWC standards.



STORM DRAIN

- + The existing storm drain for this area runs naturally down the grassy lawn to the sidewalk and then to the street. It is conveyed to a catch basin in the gutter and then a 9" concrete pipe to a manhole in 2nd Street.
- + According to the Stevenson PWC, onsite detention is only required on sites that are one-half (0.5) acres or greater. The disturbed area is less than one-half (0.49) acre, therefore onsite water detention is not required.
- + The proposed impervious area is approximately 8,598 SF and the proposed pervious area is 12,861 SF. In SWM Washington State, if there is greater than 5,000 SF of pollution-generating impervious surfaces (PGIS) then large site treatment best management practices (BMP) should be used. The water quality storm event will be sized for design storm per City Stevenson requirements.
- + All piping, fittings and structures will be designed and built to Stevenson PWC standards.

