

# **Project Description**

An existing culvert on Anti-Aircraft Creek at the intersection of Newport Way NW and NW Oakcrest Drive is vulnerable to sedimentation and has low capacity resulting in occasional flooding of Newport Way NW. This project would alleviate the flooding on Newport Way NW by realigning a portion of Anti-Aircraft Creek to its natural drainage pattern. The project consists of replacing existing undersized culverts with larger box culverts and improving the channel grading. The project is located adjacent to and under Newport Way NW, approximately 200 feet south of NW Oakcrest Drive. More specifically, the project is located within the SE  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of Section 20, Township 24 N, Range 6E, WM, Issaquah, King County, Washington (Figure 1: Vicinity Map).

Anti-Aircraft Creek is a tributary of Tibbetts Creek, which drains to the south end of Lake Sammamish. It is seasonally dry, except during wet, winter months as most of its water comes from stormwater drainage. Anti-Aircraft Creek enters a large wetland on parcel 2024069115 prior to the confluence with Tibbetts Creek. Currently, Anti-Aircraft Creek flows westward in a drainage ditch along Newport Way NW, through a culvert under NW Oakcrest Drive and through parallel culverts across Newport Way NW and into an open channel that outlets into the wetland (Figure 2 – Existing Conditions).

The Anti-Aircraft Creek Culvert Replacement Project includes channel modification and installation of a box culvert underneath Newport Way NW from a City of Issaquah owned parcel directly north of Cougar Mountain Regional Wildland Park onto parcel 2024069115 on the east side of Newport Way NW. The box culvert will replace the ditch along Newport Way NW and the existing culverts and will connect back to the existing Anti-Aircraft Creek channel just west of wetland. The culvert under NW Oakcrest Drive and one of culverts under Newport Way NW will be abandoned in place. The second culvert under Newport Way NW will remain (Figure 3 – Proposed Conditions and Figure 4 - Profile). This project will be concurrent with a residential development on parcel 2024069115.

Approximately 200 linear feet of the existing stream channel will be filled to support the residential development. This equates to 753 SF of fill. This fill will be approximately 50 cubic yards. The existing ditch along Newport Way NW and the remaining portion of Anti-Aircraft Creek will remain unchanged. Disturbed areas will be graded and restored to pre-project conditions.

On the west side of Newport Way NW, prior to the inlet to the proposed box culvert, the Anti-Aircraft Creek channel will be extended for and enhanced with plants and gravel providing an additional 317 square feet of stream channel habitat (20 linear feet) and 1,305 square feet of enhanced channel (92 linear feet). An energy dissipater will be constructed at the outlet of the box culvert on the east side of Newport Way NW. The energy dissipater will consist of a concrete floor

and baffles that will dissipate the energy in a short distance and minimize downstream erosion. The energy dissipater is 22 linear feet and will include approximately 5 cubic yards of concrete. Downstream of the dissipater, approximately 45 linear feet of new channel and 21 linear feet of the existing Anti-Aircraft Creek channel will be modified and enhanced with clean streambed gravels. This area will create approximately 293 square feet of new and 69 square feet of enhanced stream channel habitat. The channel modification is within the wetland buffer. No portion of the culvert work will occur in the wetland (Figure 3 – Proposed Conditions).

Clean streambed gravels will be placed in the created channel in the wetland buffer and non-native fill will not be placed within the wetland buffer in general. Culvert backfill will largely consist of native materials, except where native materials do not meet gradation specifications. These may include culvert bedding and foundation materials, other minor utility backfills and topsoils. All non-native materials will contain the appropriate environmental and clean material certifications from sources.

Proposed landscaping will include wetland and buffer plants that are native to the area and specific to the conditions of this setting including those well suited for the surrounding soils, hydrologic nature of the area and to the amount of sunlight or shade.