



Walnut Hill Club at Chilesburg Stormwater Improvements Lexington, KY March - May 2022

The Walnut Hill Club at Chilesburg Owners Association was experiencing larger volumes of stormwater entering their property from surrounding areas. When the subdivision was built, one 24" corrugated metal culvert pipe had provided enough conveyance for the water to pass under an emergency access road. Over time, more stormwater coming to this location caused water to backup too close to the houses near the road and increased possibility of structural flooding. The higher flow of stormwater was also causing erosion along the drainage channel.

The Owners Association applied for a Lexington Stormwater Quality Incentive Grant to help pay for the design and construction of the necessary stormwater improvements. A new, larger 30" HDPE pipe was designed as a replacement. However, during excavation we found numerous utility lines both on top and below the existing pipe. The proposed pipe wouldn't fit. Working as a team with Bell Engineering, we were able to quickly adjust and install both a 24" and 18" HDPE pipe, threading two pipes through numerous utilities.

Three headwalls were created by stacking large native limestone boulders, offering a more natural look and consistent theme of materials. Over 400 linear feet of channel was armored with native limestone rock to halt erosion. In addition, the increased hyporheic area is now providing more treatment of the stormwater quality. A buffer of native grasses and wildflowers were planted along the upper 175 linear feet of channel to beautify the area, provide more habitat and further protect water quality.

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