

# Memorandum

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**DATE:** October 27, 2020

**PROJECT:** 1900456-Waverly Master Planning

**SUBJECT:** Storm Drainage Memo

**TO:** Vera Kalias  
City of Milwaukie

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## **PRIVATE ONSITE STORM DRAINAGE SYSTEM**

The onsite stormwater system is designed to meet all City of Milwaukie and/or other applicable engineering standards. All modified surfaces will be directed towards an underground system that collects the stormwater runoff and directs it to an integrated detention storage system in one of the building foundations. This system will be designed to detain storm events up to a 10-year return period and slowly release these to match the pre-developed conditions.

The detention release and overflow will be connected to an existing storm system as part of the existing southeast development. This system was specifically stubbed out to provide a future connection for the uphill development to the public storm system in Lava Drive.

All new impervious hardscape surfaces will be picked up either by roof drains and/or catch basins for roads, parking, and sidewalks. All roads will be curbed to contain any runoff within the road system. New pervious landscape areas are generally directed towards the roads and parking surfaces to intercept any runoff and directed to low spots with area drains.

The system is designed to treat the water quality storm event in a water quality or filter cartridge manhole prior to entering the detention system. Water is filtered and the natural drainage of the undeveloped property is mimicked by detaining and slowly releasing larger storm events. This design should improve the current drainage system as the entire development is being directed to the public storm system rather than freely surface flowing across the property, taking approximately four acres out of the existing drainage pattern.

## **PUBLIC STORM DRAINAGE SYSTEM**

Currently, there are two catch basins in Waverly Court that intercept almost all the uphill drainage and discharges that freely to the project property via an open outfall system. In the proposed conditions, this outfall will be connected to a water quality filter cartridge manhole for water quality treatment and then conveyed via an underground piped system to the same storm connection in Lava Drive. This should also help alleviate any additional surface drainage from the project property.

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## **SUMMARY**

A new drainage system is being implemented to manage approximately four acres of disturbed development. This drainage is being intercepted and conveyed via an underground piped system through a water quality filter manhole and a detention system prior to final discharge to the public drainage system in Lava Drive.

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