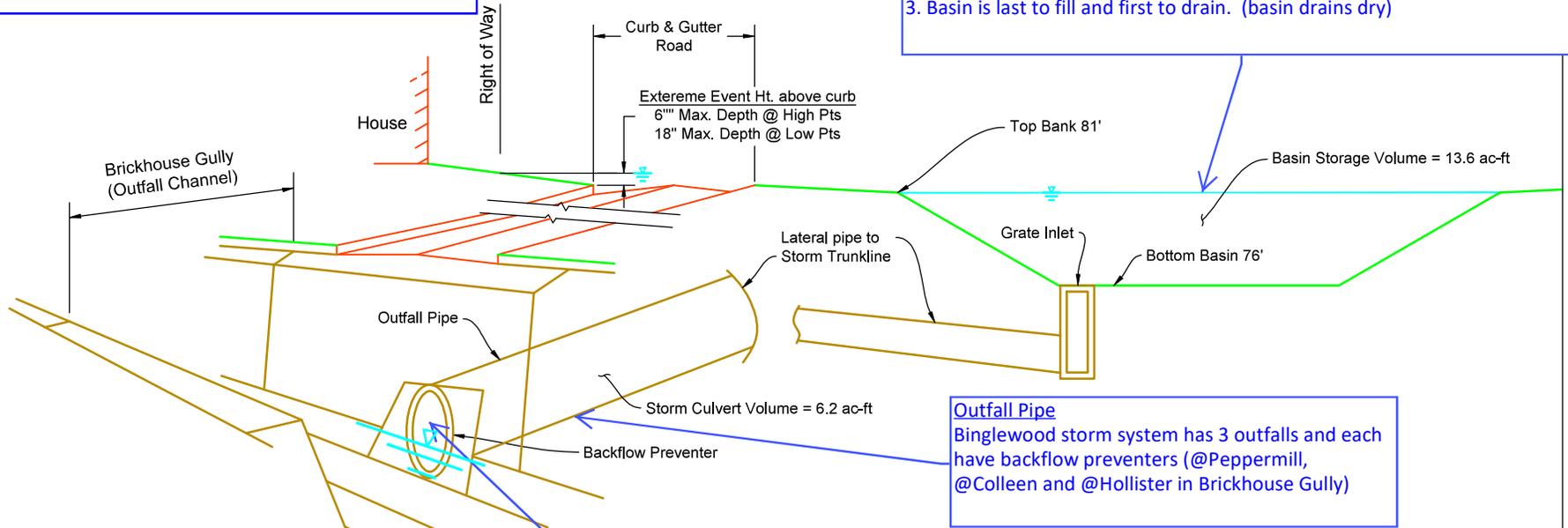


### Storm System function

1. Rainfall collects at roadway curb inlets and enters (underground) storm sewer system, then gravity flows to outfall pipes into Brickhouse Gully.
2. In extreme storm events, Backflow Preventers at the Outfall Pipes in Brickhouse Gully close preventing inundation from Brickhouse Gully storm water into the neighborhood storm sewer system. Backflow Preventers thereby reserve the capacity of the oversized storm system (including Basin) for storage during an extreme storm event.

### Basin (James Lee Park detention)

1. Roadway storm sewer system will overflow into the basin providing added storage during a storm event.
2. Lateral pipes connect roadway sewer system to basin, terminate at the basin with (grate) inlets. Inlets serve as means to allow storm water to both enter and exit the basin.
3. Basin is last to fill and first to drain. (basin drains dry)



### Outfall Pipe

Binglewood storm system has 3 outfalls and each have backflow preventers (@Peppermill, @Colleen and @Hollister in Brickhouse Gully)

### Storm System volumes (capacity)

Existing (pre-project) = 4.2 Acre-feet  
Proposed (completed project) = 19.8 Acre-feet;  
4.7x greater than Existing

### Backflow Preventer Operation - Cast iron gate device installed for backflow prevention from Brickhouse Gully into the Binglewood storm sewer system:

1. At 6-inches of water in the outfall pipe – water seepage through the gates into the channel starts.
2. At 1-foot and above of water in the outfall pipe – the gate opens to allow flow.
3. Channel water level – When Brickhouse Gully water level raises to 1/3rd of the outfall pipe diameter, the gate will close from the channel side preventing any flow from Brickhouse Gully into the system.
3. The seepage through the gates from Binglewood storm sewer system continues even when gate is closed at high channel water levels.
4. Outfall flow with open gate from the Binglewood system is resumed when the channel level goes to below the 1/3rd of pipe diameter.

BINGLEWOOD AREA  
DRAINAGE AND PAVING  
(WBS NO. M-000293-0001-4)

**PROPOSED  
DRAINAGE SYSTEM**