

Industry: Agriculture

Application: Rain Garden

Product Description: Rain Garden Layout with WLs

Situation: A BETE customer was designing a rain garden to simulate the difference between runoff on pavement and natural runoff with grass and trees, and its effects. The area they needed to cover was a 20' (6.1m) diameter circle. They wanted to create the effect of a heavy rainstorm. The customer was also unsure of how much rain needed to flow, although they were thinking about 2 inches per hour.

Technical Questions?

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BETE's solution: BETE Application Engineers utilized data from an online study that showed rainfalls for heavy storms in cities across the United States (<http://www.mifab.com/pdf/r-sizing-us.pdf>); the study is used for the purpose of calculating rooftop runoff rates. The website study showed that a very heavy storm for the area in question was in fact 2.1" (5.3 cm) per hour. Knowing the flux across the customer's area, BETE Application Engineers were able to calculate a total flow across the area. Using this total flow calculation, BETE specified the WL 3/4 - 120°, the best type of nozzle for rain simulation, in an array. BETE Applications Engineers have a sizable collection of useful pre-designed nozzle arrays and thus specified a 12-nozzle array that covered the required area. The nozzle array sheets include header layout and placement for all nozzles in the array.

