Exercise 5: Designing a Streetside Rain Garden

Plan and diagram a rain garden that would treat the street water from NE 40th Street just north of Gould Hall. Assume that the infiltration rate is potentially .5 inches per hour, and your rain garden will have a maximum 6" ponding depth, with 6" of freeboard.

Suggested steps:

1. Measure the contributing area from the street to your rain garden.

2. Use the sizing chart Bioretention for Roadways, Streets and Trails in the City of Seattle code to find the correct co-efficient to apply to the impervious contributing area.

3. Show your calculations for the contributing street area and corresponding required bottom area.

4. Configure your street side rain garden, indicating the bottom area, side slopes, inflow path (e.g. curb cut) and outflow path to a storm drain in the street. Diagram the raingarden at 1" = 20' or (scale of the base map) in plan and 1/2" = 1'0" or larger in section.

5. Use contours and spot elevations on the plans to indicate critical elevations, and include labels.

6. If you have questions, refer to Meghan Feller's Lecture (on website); CAM 523 and resources on the City of Seattle's Green Stormwater Infrastructure (GSI) website, where you will find both the original and retrofit drawings for the Ballard roadside raingardens. ("Retrofit 28th NW Drawings" and Originals are "See the final plans for the pilot roadside raingardens"): http://www.seattle.gov/util/Services/Drainage_&_Sewer/Keep_Water_Safe_&_Clean/CSO/CSOReductionProjects/BallardBasin/BallardRoadsideRaingardens/index.htm.