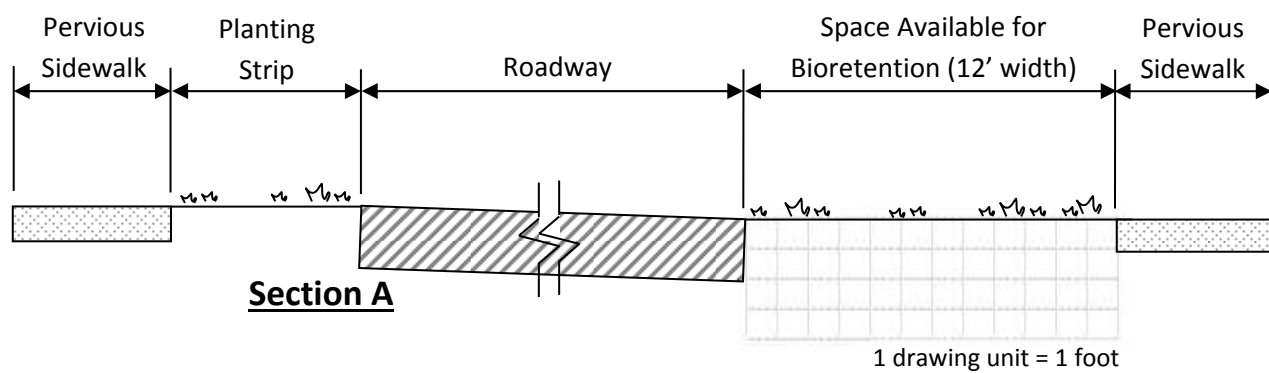
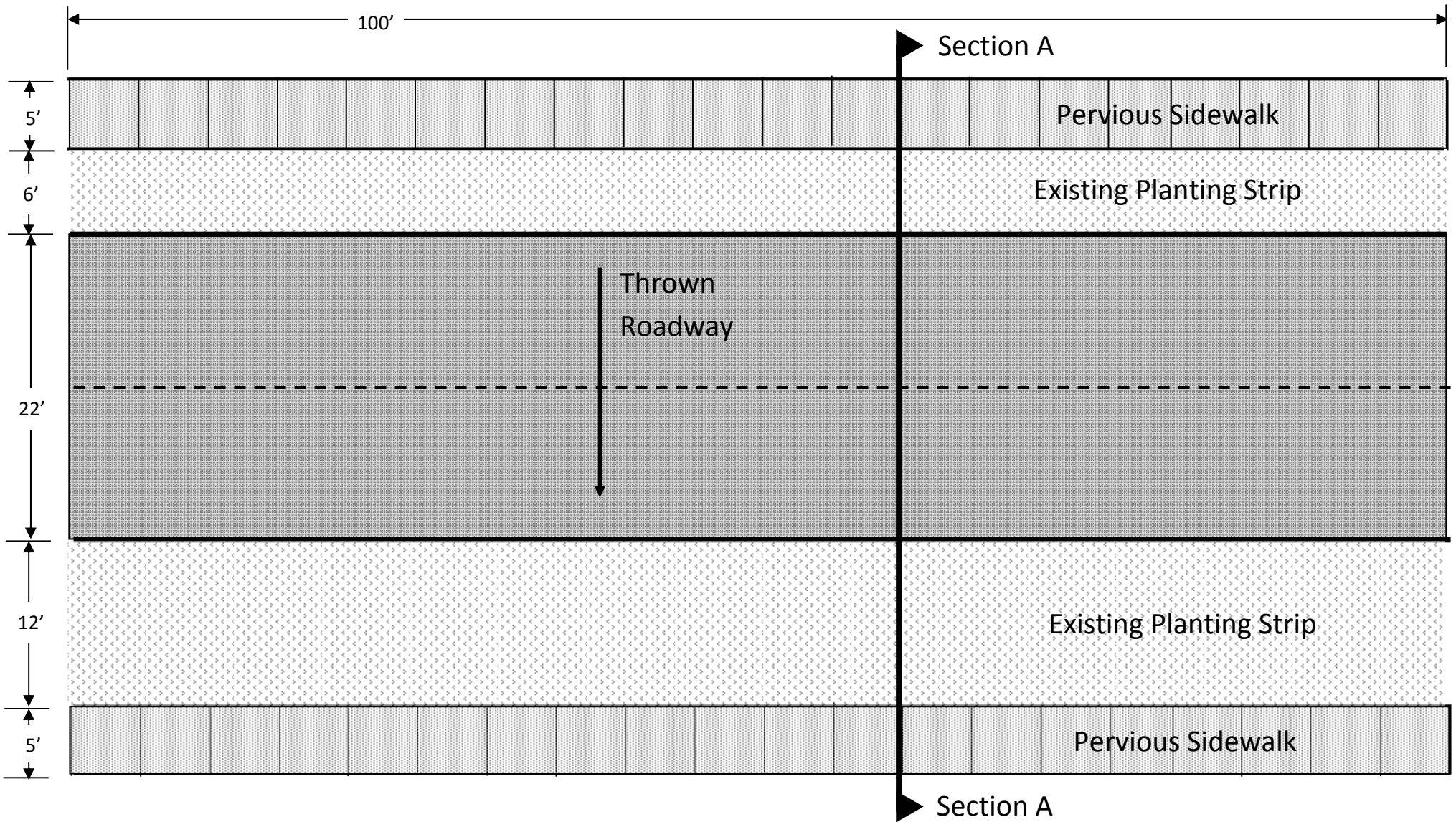


Module 3.6 Exercise #1: Bioretention Sizing Using GSI-Calc

-Size bioretention cell in planting strip to mitigate roadway runoff

- Site conditions: Address: 2606 West Pioneer, Puyallup WA 98371
- Soil is till
- Design infiltration rate = 0.5 inches per hour
- Planting strip cross slope = 0%
- Planting strip longitudinal slope = 2%
- Neglect runoff from pervious surfaces (including permeable pavement)



1. What is the maximum bioretention bottom width available assuming:

 - 3:1 sideslopes
 - 2 foot shoulder adjacent to roadway
 - 6 inches of ponding
 - 6 inches of freeboard? ft
2. Draw a section of the bioretention facility with the maximum bottom width and 24 inches of bioretention soil on the figure above.
3. What bioretention bottom area is required to meet the Ecology forest duration standard?

 sf

Assuming the width from #1, what is the bottom length required?

 ft

4. Assuming a 2 foot facility bottom width, what is the bottom area required to meet the Ecology water quality treatment standard?

 sf

Bottom length?

 ft