Chapin Residence Ecoroof Final Report

Overview:
Putting an ecoroof seemed like an obvious option for us since we the roof of our garage is flat and visible from our front porch and dining room. We thought it would be great to have a green roof both for the positive environmental impact and for the aesthetics of it. It certainly is more pleasing to be looking out onto plants rather than asphalt!

Ecoroof details:
The roof is relatively small - 198 sq ft and is south facing in the front of our house. The garage already had an asphalt roof and we did not need any extra structural support for a simple eco roof of sedums. The moisture barrier was placed directly on top of the asphalt roof, followed by the planting mixture and a netting. Around the perimeter we put small rocks to make sure the dirt would not prevent drainage.

Ecoroof benefits:
The environmental benefits of the eco roof include: a reduction in rainwater run-off; as well as a reduction of heat produced from sun hitting the asphalt, especially in summer. Not only is the roof a lot nicer visually but it also makes the front porch more pleasant providing. I think it will be a lot cooler in the summer out there too!

Cost:
We contracted with Ecoroofs Everywhere to do the assessment and the work. The total cost of the project including all materials and labor was $1980.

Lessons learned/Surprises:
We really did not have any surprises other than how easy it was really. I wish I had done it years ago had I realized it would be so simple. I think the hardest part was finding a choosing a contractor and also making the decision to go ahead. It seems that eco roofs have not been around too long and so our questions regarding how long it would last and possible problems where not answered very well. However, we decided to take the chance to try it out.

Project timeline:
We started investigating the project in the Spring, interviewing contractors and applying with the city. It was decided it would be best to delay planting until the fall so that the new plants would not have to suffer the summer heat. The roof was installed in late October. A structural engineer came to assess the weight bearing capacity of the roof and decided the structure was sufficient for the eco roof planned. The actual installation of the roof was quick and only took 2 days.

Planting:
Due to the weight bearing limit of the structure of the roof and the fact that the roof is south facing and gets LOTS of sun in the summer, we decided to plant a mix of sedums. They are relatively low maintenance and can withstand high temperatures without much water. The mix of plants ensures that there will be at least several a few varieties that strive to cover the roof. The planting was done in October and the plants are looking really good now in early spring, coming through the netting.

Irrigation:
The roof did not need an irrigation system since it's relatively small and since we can access the roof easily from our front porch. If necessary we can water the plants with a gardening hose during hot summer days.

Maintenance:
So far, the roof has been very little maintenance. I imagine we may need to water occasionally during the summer and may need to cut back flowers from the sedums in late fall.

Photo of our garage roof before the eco roof was installed:

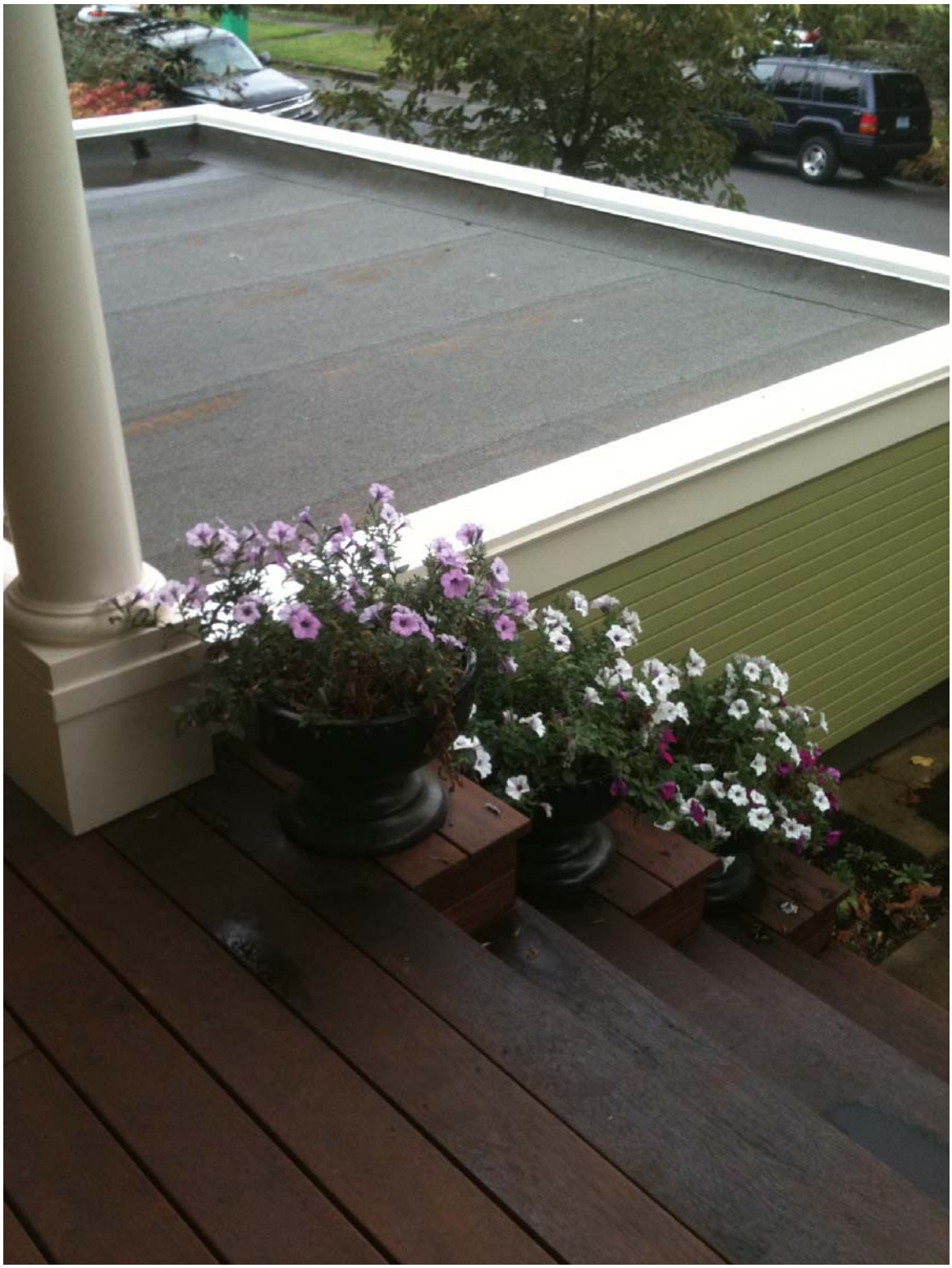

Photo of the eco roof as it was being installed:

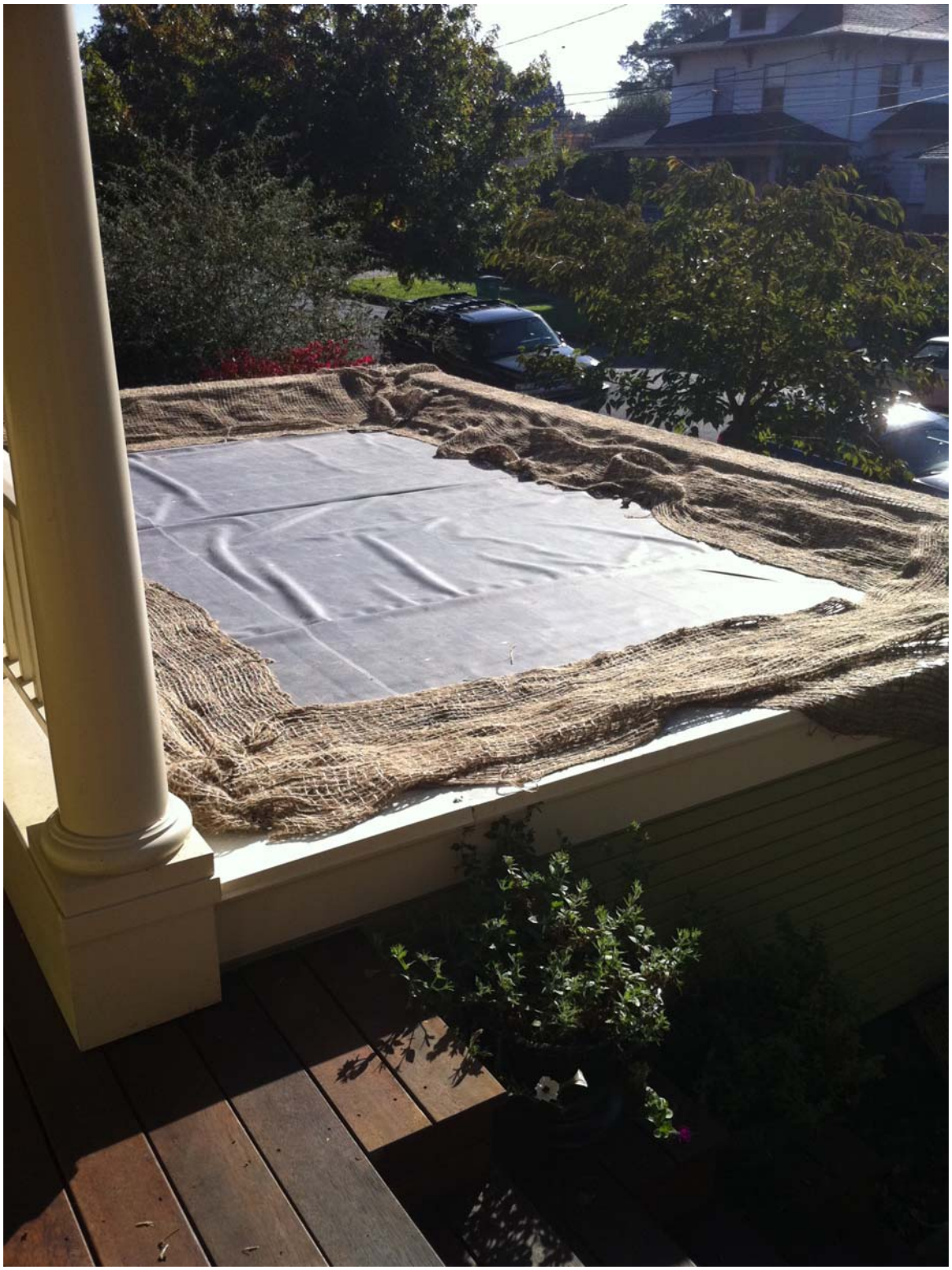

Photo of our roof as it looks now in the Spring: