Green Street BMP Matrix

BMP	Description	Application	Effectiveness	Cost
 www.duluthstreams.ogr	**Bioswale** A bioswale is a broad, shallow channel with a dense stand of vegetation covering the side slopes and bottom. Bioswales are designed to treat stormwater primarily through filtration, and plant uptake before conveying the flow to a downstream discharge location. The vegetation helps in reducing flow velocity to prevent erosion.	Can be planted with either grass or native vegetation, bioswales are best served in residential, industrial, and commercial landuse with smaller tributary drainage areas.		
 www.estormwater.com	**Planter Boxes** Planter boxes provide stormwater treatment through filtration and adsorption. Stormwater is captured and treated via filtration through the soil media and root zone and evapotranspiration through the planted vegetation before discharging back to storm drain system.	Planter boxes are typically used in urban areas adjacent to buildings and along sidewalks		

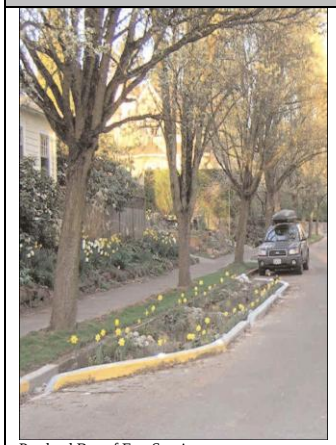
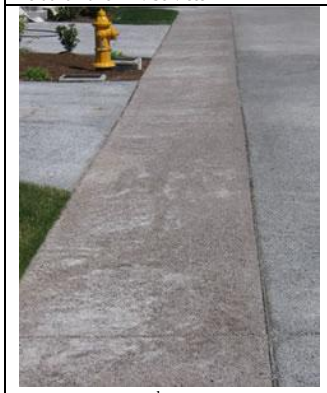
Green Street BMP Matrix

BMP	Description	Application	Effectiveness	Cost
 www.ricecreek.org	**Infiltration Trench** An infiltration trench is a long, narrow, rock-filled trench bordered on each side by a grass or vegetated buffer. Runoff is stored in the void space between the stones and infiltrates through the bottom into the soil matrix. The buffer strips provide pretreatment to limit the amounts of coarse sediments entering the trench which can cause clogging.			
	**Bioretention/Infiltration Curb Inlets** They provide stormwater treatment as well as peak flow attenuation through storage and filtration/infiltration, and adsorption. Stormwater is captured and treated via filtration/infiltration through the soil media and evapotranspiration through the planted vegetation.	Bioretention/Infiltration Curb Inlets are great for uses in urban environments and offer green spaces in highly urbanized areas.		

Green Street BMP Matrix

BMP	Description	Application	Effectiveness	Cost
 www.stormh2o.com	**Biotreatment Curb Inlet** Biotreatment curb inlets are well suited for the urban environment. They add green space while providing stormwater runoff treatment. Unlike end-of-line treatment systems, it treats smaller drainage areas closer to the source of pollutants. This BMP can be used in retrofit project using existing catch basins and provides a natural approach to address high levels of fecal coliform and enterococcus bacteria, as well as other pollutants found in stormwater.			

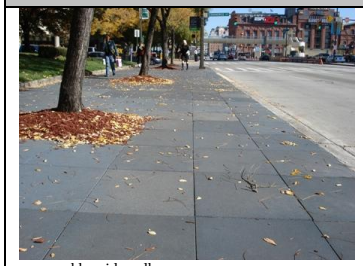
Green Street BMP Matrix

BMP	Description	Application	Effectiveness	Cost
 Portland Bur of Env Services	**Curb Extension** Curb extensions have historically been used to slow traffic and improve pedestrian safety. A landscaped curb extension version are now being increasingly used to treat stormwater runoff and provide green space. Essentially similar to rain gardens, they treat stormwater through filtration, infiltration, and evapotranspiration.			
 www.concretenetwork.com	**Pervious Concrete Pavement** Pervious concrete is an open void material designed to allow rainwater to filter through the paved surface into the ground or a storage container rather than settling on the surface. It's two main objectives are runoff peak flow attenuation while provide stormwater treatment. Site specific design of the retention/recharge area include an initial soils site survey, and site specific storm water calculations for volume and duration			

Green Street BMP Matrix

BMP	Description	Application	Effectiveness	Cost
 blogspot.com	**Porous Concrete Pavers** Similar to the porous concrete pavement, unit pavers provide a hardscape alternative to stormwater treatment BMPs. Unit pavers, or paving stones, are impermeable blocks made of brick, stone, or concrete, set on a prepared sand base. The joints between the blocks are filled with sand or stone dust to allow water to percolate downward.			
 picasaweb.google.com	**Grass Pavers** Similar in concept and function to the porous concrete pavements and unit pavers, the grass pavers are "landscapted" alternatives designed to allow infiltration of stormwater runoff to the underlaying soil media. Grass pavers, or turf blocks, are a type of open-cell unit paver whereby the cells are filled with soil and planted with turf. The cell matrix are typically made of concrete or synthetic material.			
	Recycled Rubber Sidewalk			

Green Street BMP Matrix

BMP	Description	Application	Effectiveness	Cost
 www.rubbersidewalks.com	Originally used as alternatives to cracked sidewalks from protruding tree roots, rubber sidewalks are considered as another form of porous pavers to infiltrate runoff. Typically made of recycled rubber from waste tires,			