Appendix H
Green Block Cost Calculation
## Typical Residential Block with Green Infrastructure to Capture 0.5-inch of Runoff

### Option 1

**Pervious Concrete in Parking Lanes**

<table>
<thead>
<tr>
<th>Block length (Ft)</th>
<th>Road removed</th>
<th>Right-of-Way Width (Ft)</th>
<th>Road Width (Ft)</th>
<th>Drainage Area (Ac)</th>
<th>Storage Volume Needed (Ac-Ft)</th>
<th>Storage Volume Needed, CF</th>
<th>Control type for 1/2&quot; runoff</th>
<th>Volume Aggregates Req, CF</th>
<th>Aggregates Depth reqd for parking lanes (6-ft each side), Ft</th>
<th>Open Graded Aggregate Unit Cost (per SF)</th>
<th>Excavation Unit Cost (per SF)</th>
<th>10-inch Pervious Concrete unit cost (per SF)</th>
<th>6-inch underdrain unit cost (per LF)</th>
<th>Green component total cost</th>
<th>Green component adjusted cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>350</td>
<td>Full width</td>
<td>60</td>
<td>24</td>
<td>0.48</td>
<td>0.02</td>
<td>875</td>
<td>0.52</td>
<td>$0.49</td>
<td>$0.62</td>
<td>$8.00</td>
<td>$6.50</td>
<td>$42,817</td>
<td>$42,817</td>
<td>$15,517</td>
<td>Use a min. of 8 inches of aggregate depth.</td>
</tr>
</tbody>
</table>

### Option 2

**Bioretention Curb Extensions (nodes)**

| Block length (Ft) | Road removed | Right-of-Way Width (Ft) | Road Width (Ft) | Drainage Area (Ac) | Storage Volume Needed, Ac-Ft | Storage Volume Needed, CF | Control type for 1/2" runoff | Area of Bioretention Req, SF | Open Graded Aggregate Unit Cost (per SF) | Excavation Unit Cost (per SF) | Engineeried Soil Unit Cost (per SF) | Vegetation Unit Cost (per SF) | Mulch Unit Cost (per SF) | Curb and Gutter Unit Cost (per LF) | 6-inch underdrain unit cost (per LF) | Green component total cost | Green component adjusted cost |
|-------------------|--------------|-------------------------|----------------|-------------------|-------------------------------|--------------------------|-------------------------------|-------------------------------|-----------------------------|-----------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|---------------------------------|
| 350               | Full width   | 60                      | 24             | 0.48              | 0.02                          | 875                       | 0.52                          | 438                          | $2.22                        | $0.83                       | $2.22                           | $5.00                           | $0.42                           | $12.00                          | $6.50                           | $2,500                         | $11,538                         | $7,886                         | The Green Component Adjusted Cost is the additional cost per block for "Green" as part of a road reconstruction project. |

**Notes:**

Assume 0.5-inch of runoff.

The green component adjusted cost for pervious concrete is the green infrastructure practice cost less what would have typically been spent on traditional concrete pavement (~$5/SF), 8-inch aggregate base ($8.50/SY), and 18 inches of excavation ($10/CY).

Cross-section design for bioretention: 6 inches of ponding, 1.5 feet of engineered soil (20% void), 3 feet of aggregate (40% void). 1 SF of bioretention = 2 CF of storage

Assume the bioretention practice is 5 feet wide from existing curb toward center of road.

The area of bioretention (438 SF) is equivalent to a curb extension approximately 5 feet wide by 44 feet long per side of the street. This could be designed as one unit or multiple smaller units at the corners and mid-block.

The green component adjusted cost for bioretention is the green infrastructure practice cost less what would have typically been spent on traditional concrete pavement (~$5/SF), 8-inch aggregate base ($8.50/SY), 18 inches of excavation ($10/CY) and concrete curb and gutter ($12/LF).

Aggregate void space is assumed to be 40% of total aggregate volume.