NOTES:

1. PROVIDE STATIONS AND ELEVATIONS AT EVERY INLET, OUTLET, CHECK DAM, PLANTER WALL CORNER, AND SIDEWALK NOTCH.

2. SIDEWALK NOTCH ELEVATION MUST BE SET ABOVE INLET AND OUTLET ELEVATIONS.

3. SEE DETAIL GS-104 FOR INLET DETAILS.

4. CHECK DAMS REQUIRED PER GS-105. CHECK DAMS SHALL BE EQUALLY SPACED TO CREATE EQUALLY SIZED CELLS.

5. SPECIAL REQUIREMENTS FOR WATER LINES, METERS, AND FIRE HYDRANTS; SEE DETAIL GS-109.

6. MODIFIED CURB AND GUTTER: SEE DETAIL GS-103.

7. SEE GRESHAM STORMWATER MANAGEMENT MANUAL FOR PLANTING GUIDANCE.

8. IF STREET LIGHTS ARE PLACED IN FACILITY, PGE APPROVED FOUNDATION WITH 1’ CONCRETE SURROUND MUST BE USED.

9. ANY ADDITIONAL INLETS SHALL BE LOCATED ON DOWNSTREAM SIDE OF CHECK DAMS.

10. SIDEWALK NOTCHES TO BE LOCATED AT DOWNSTREAM SIDE OF EACH CHECK DAM, AS WELL AS AT ANY SAG OR LOW POINT.
NOTES:

1. STORMWATER FACILITY TOPSOIL SHALL BE PER THE CITY’S STORMWATER MANAGEMENT MANUAL.

2. SEE GS-107 TO DETERMINE WHEN AGGREGATE AND UNDERDRAINS ARE REQUIRED.

3. FRACTURE AND LOOSEN THE NATIVE SOIL FOLLOWING INITIAL EXCAVATION AND BEFORE INSTALLING TOPSOIL OR ROCK.

4. EMBED OR EPOXY SET 12" MIN. LENGTH #4 REBAR INTO CURB AND PLANTER WALL.
NOTES:

1. PCC SHALL BE 3300 PSI STRENGTH AT 28 DAYS EXCEPT IN COMMERCIAL AREAS WHERE PCC IN MODIFIED MONOLITHIC CURB AND GUTTER SHALL BE 5000 PSI STRENGTH AT 28 DAYS.

2. CONTRACTION JOINTS SHALL BE PLACED AT 15' MAX. SPACING.

3. CRUSHED BASE ROCK SHALL BE COMPACTED TO 95% RELATIVE DENSITY PER ASTM D1557.

4. FINISH ALL EXPOSED CONCRETE SURFACES.

5. IF RAIN DRAIN WILL BE PIPED TO FACILITY, EXTEND 3" SCHEDULE 40 PVC DRAIN PIPE FROM INSIDE OF PLANTER TO CONNECTION AT BACK OF SIDEWALK. RAIN DRAIN SHALL BE LOCATED ABOVE GUTTER ELEVATION.

6. ADD 2" WIDE SHELF WHEN PLANTER WALL IS DESIGNED TO BE ADJACENT TO SIDEWALK.

THICKENED MONOLITHIC CURB AND GUTTER FOR STREET SIDE OF RAIN GARDENS

PLANTER WALL ADJACENT TO WALK

PLANter WALL AND MODIFIED CURB
NOTES:

1. REFER TO GS-103 FOR THICKENED MONOLITHIC CURB AND GUTTER. IF PRESENT, MATCH GUTTER PAN WIDTH OF ADJACENT CURB AND GUTTER.

2. SEE CHECK DAM DETAIL GS-105 FOR DISTANCE TO TOP OF SPLASH PAD.

3. INLETS SHALL BE PLACED AT A MINIMUM OF EVERY 25' OF STREET.

SECTION A-A

CONCRETE CURB INLET
NOTES:

1. CHECK DAM TO BE PLACED ON UNDISTURBED NATIVE SOIL, OR ON AGGREGATE IF REQUIRED.

2. TOP OF CHECK DAM SHALL BE A MINIMUM OF 1" BELOW ELEVATION OF INLET.

3. CHECK DAM WIDTH IS 6". HEIGHT VARIATES DEPENDING ON ROAD GRADE.

4. DIMENSION B VARIES BASED ON EQUAL SPACING REQUIREMENT ON GS-101.

5. SIDEWALK DRAINAGE NOTCH AND ADDITIONAL INLETS TO BE LOCATED DOWNSTREAM OF EACH CHECK DAM.

6. SIDEWALK NOTCH TO BE 1" LOWER THAN SIDEWALK AND SLOPED TO FACILITY. WIDTH IS 4" AND MINIMUM DEPTH 5" WHEN 4" TOE KICK PLANNED FOR.

7. SEE GS-107 TO DETERMINE WHEN AGGREGATE AND UNDERDRAIN ARE REQUIRED.

SECTION C-C

<table>
<thead>
<tr>
<th>ROAD GRADE</th>
<th>A (SEE NOTE 2)</th>
<th>MIN B</th>
<th>MAX B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>&gt;8%-15%</td>
<td>4&quot;</td>
<td>5'</td>
<td>10'</td>
<td>18&quot;</td>
<td>26&quot;</td>
</tr>
<tr>
<td>&gt;4%-8%</td>
<td>5&quot;</td>
<td>7.5'</td>
<td>15'</td>
<td>15&quot;</td>
<td>22&quot;</td>
</tr>
<tr>
<td>0%-4%</td>
<td>6&quot;</td>
<td>12.5'</td>
<td>25'</td>
<td>12&quot;</td>
<td>18&quot;</td>
</tr>
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</table>

NOTES:
NOTES:

1. MONOLITHIC CONCRETE ON SIDES AND BOTTOM PREFERRED OVER USE OF HDPE LINER.

2. FULL LINER REQUIRED IN HILLSIDE CONSTRAINT DISTRICTS, CONTAMINATED SOILS, OR IN UNCONSOLIDATED FILL WITH OVERFLOW INTERCEPTED BY INLET TO STORMWATER SYSTEM. SEE GS-107.
### UNDERDRAIN AND ROCK REQUIREMENTS

#### NOTES:

1. SEE STORMWATER MANAGEMENT MANUAL FOR DETAILS ON STORMWATER FACILITY TOPSOIL SPECIFICATIONS.
2. MINIMUM DEPTH FOR A IS 18 INCHES. SEE GS-105 TO DETERMINE DEPTHS FOR SLOPED FACILITIES.
3. LINED FACILITIES ONLY ALLOWED FOR STEEP SLOPES (>20%), UNCONSOLIDATED FILL (WITH SLOPES OR LOW INFILTRATION SOILS) OR IN CONTAMINATED SOILS, SEE GS-106 FOR DETAILS ON LINED FACILITIES.
4. TREES MUST BE CHOSEN FROM APPROVED TREE LIST. TREES NOT ALLOWED IN LINED FACILITIES OR THOSE WITH ROCK. AN ADDITIONAL 18" TOPSOIL REQUIRED TO BE ADDED WHERE TREES WILL BE PLANTED.
5. CLEAN OUT REQUIRED FOR ALL FACILITIES WITH PERFORATED PIPE. LINE MUST BE ACCESSIBLE FROM BOTH ENDS, WITH MAXIMUM SPACING BETWEEN CLEAN OUTS / ACCESS POINTS OF 100 FEET.

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tbody>
<tr>
<td>GOOD INFILTRATING SOILS (&gt;2&quot;/hr)</td>
<td>12&quot; (MIN) TOPSOIL</td>
<td>0&quot;</td>
<td>0&quot;</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>LOW INFILTRATING SOILS (0.5 to 2&quot;/hr)</td>
<td>12&quot; (MIN) TOPSOIL</td>
<td>0&quot;</td>
<td>0&quot;</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>POOR INFILTRATING SOILS (&lt;0.5&quot;/hr)</td>
<td>24&quot; (MIN) TOPSOIL</td>
<td>3&quot; OF 1/4&quot;-NO. 10 OPEN GRADED AGGREGATE</td>
<td>18&quot; MIN. 1 1/2&quot;-3/4&quot; OPEN GRADED AGGREGATE</td>
<td>6&quot; PERF PIPE</td>
<td>NA</td>
</tr>
<tr>
<td>LINED FACILITIES</td>
<td>24&quot; (MIN) TOPSOIL</td>
<td>3&quot; OF 1/4&quot;-NO. 10 OPEN GRADED AGGREGATE</td>
<td>18&quot; MIN. 1 1/2&quot;-3/4&quot; OPEN GRADED AGGREGATE</td>
<td>NA</td>
<td>6&quot; PERF PIPE</td>
</tr>
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DESIGNER INFORMATION

1. RIM ELEVATION TO BE 2" BELOW GUTTERLINE ELEVATION.

2. SIZE INLET BASED ON CALCULATED FLOWS AND MANUFACTURERS RECOMMENDATIONS.

3. WIRE ROPE BETWEEN 1/8"-3/16" DIAMETER, STAINLESS STEEL, 7 STRANDS OF 19 WIRES.

4. SEE GS-107 TO DETERMINE WHEN AGGREGATE AND UNDERDRAINS ARE REQUIRED.

CONSTRUCTION NOTES

1. SECURE GRATE IN PLACE WITH 54" OF WIRE ROPE. LOOP ENDS OF WIRE ROPE AROUND U-BOLT AND GRATE. CRIMP EACH END OF WIRE ROPE WITH 3" OVERLAP.

2. DRILL 2" DEEP HOLES INTO PIPE AND EPOXY #4 REBAR U-BOLT (2"x4") IN HOLES.

3. GRATE TO BE CAST IRON, ASTM A48 CL30.

4. PIPE CONNECTIONS TO BEEHIVE TO BE CORED.

24"x4" REVERSIBLE MANHOLE FRAME
1. REFER TO FIRE HYDRANT ASSEMBLY STANDARD DETAIL 501A. HYDRANTS MUST HAVE MIN 3FT CLEARANCE FROM THE EDGE OF STORMWATER FACILITY.

2. REFER TO 1" SERVICE ASSEMBLY, STANDARD DETAIL 502.
NOTES:

1. SIDEWALK WIDTH VARIES WITH STREET CLASSIFICATION. SEE STANDARD STREET CROSS SECTIONS. 5' MINIMUM.
2. PLANTER/RAINGARDEN WIDTH VARIES. SEE STANDARD STREET CROSS SECTIONS. 4' MINIMUM.
3. CURB RADIUS SHALL MATCH RAINGARDEN/PLANTER WIDTH. SEE STANDARD STREET CROSS SECTIONS.
4. SEE STANDARD DETAILS 620 AND 621 FOR CURB EXPOSURE DIMENSIONS.
5. SLOPES SHOWN ARE RELATIVE TO HORIZONTAL. TRANSITION RAMP SHALL BE 8.33% MAX SLOPE OR 15' IN LENGTH.
6. ALL CONCRETE SURFACES SHALL BE LIGHTLY BROOMED AND EDGED IN A WORKMANLIKE MANNER.
7. SAW CUT EXISTING CURBS WHERE THEY ARE TO BE REMOVED - IF LESS THAN 3' TO EXISTING JOINT REMOVE TO JOINT. EXISTING ASPHALT ON FRONT OF THE APPROACH SHALL BE SAW CUT AND REPLACED WITH HOT MIX.
8. CONCRETE SHALL BE 3,300 PSI AT 28 DAYS.
9. WATER METER LIDS IN CONCRETE DRIVEWAY RETURN SHALL BE TRAFFIC RATED.