

Continued from inside

This step is imperative to ensure that overflow exits back onto the street and not onto adjacent properties. The more a site is sloped, the shorter the basin must be to maintain these levels.

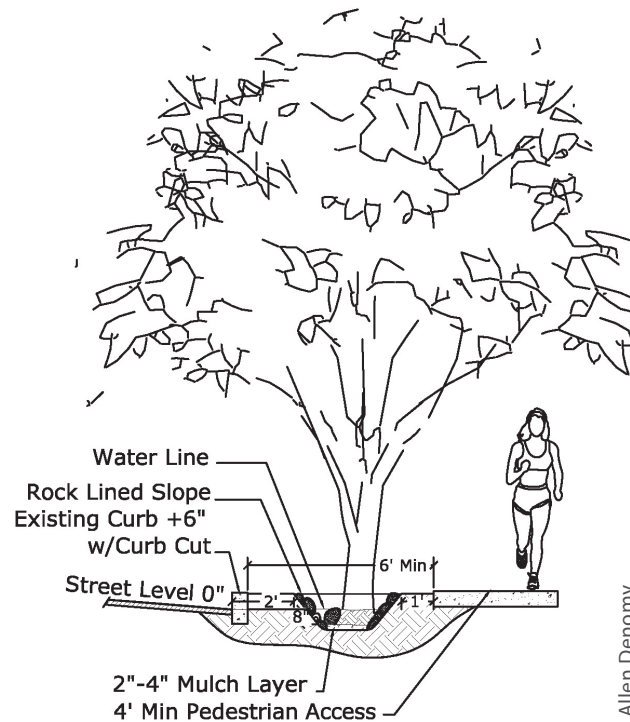
- Create planting shelves (raised terraces) along the basin to support native trees and shrubs. Be sure planting shelves do not block flow of storm water along the basin length.
- Use organic mulch (see GI-1) in basin wherever possible. If street experiences severe flooding, gravel mulch may be necessary.

Maintenance

- It is the adjacent property owner's responsibility and liability to maintain the right-of-way.
- Observe basin during rain events to evaluate function and make adjustments.
- Periodically remove accumulated trash.
- Add organic mulch to maintain maximum ponding depth of 8" below street surface (annually).
- If rock mulch is used, remove plant debris from mulch surface (1-2 times per year).
- Remove sediment from bottom of basin to retain designed depth. In areas with high sediment loads, consider using sediment traps (see handout GI-2, "Sediment Traps").
- Check inlet apron, slopes, and edges for erosion and repair/reinforce (annually).
- Prune vegetation to preserve visibility and prevent obstruction of travel lanes and pedestrian pathways.
- Remove undesirable and invasive plants (weeds) on a regular basis.

Adapting the practice to your site

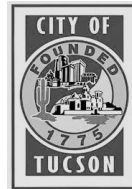
- In ROW areas without on-street parking, reduce step-out zone to a minimum of 6".
- If utilities cross the ROW perpendicularly, use these areas as raised pathways for pedestrians to cross the ROW between basins.



- In areas where the ROW is not wide enough, consider creating smaller basins without curb cuts to capture runoff from adjacent sidewalk/path and properties.



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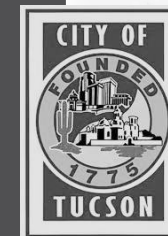
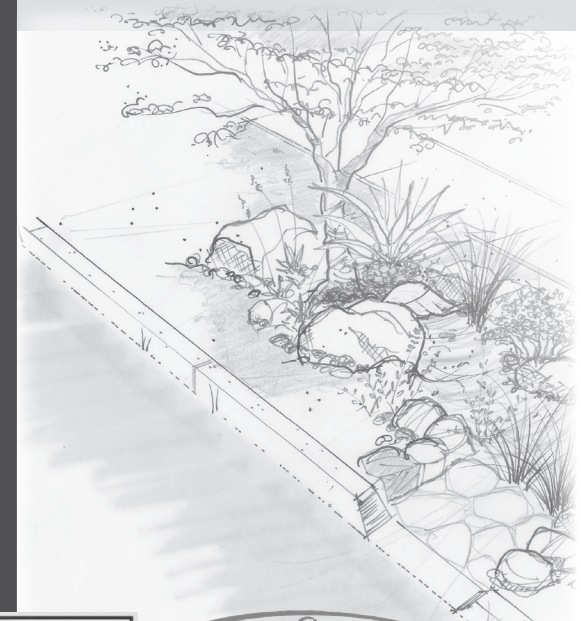


GI-3

Green Infrastructure for Public Right-of-ways

A back-of-curb practice: Rock-Edged Basin

Purpose: To collect and infiltrate stormwater from city streets within the right-of-way. Rocks are used to prevent erosion along the steeply sloped sides of the basin.

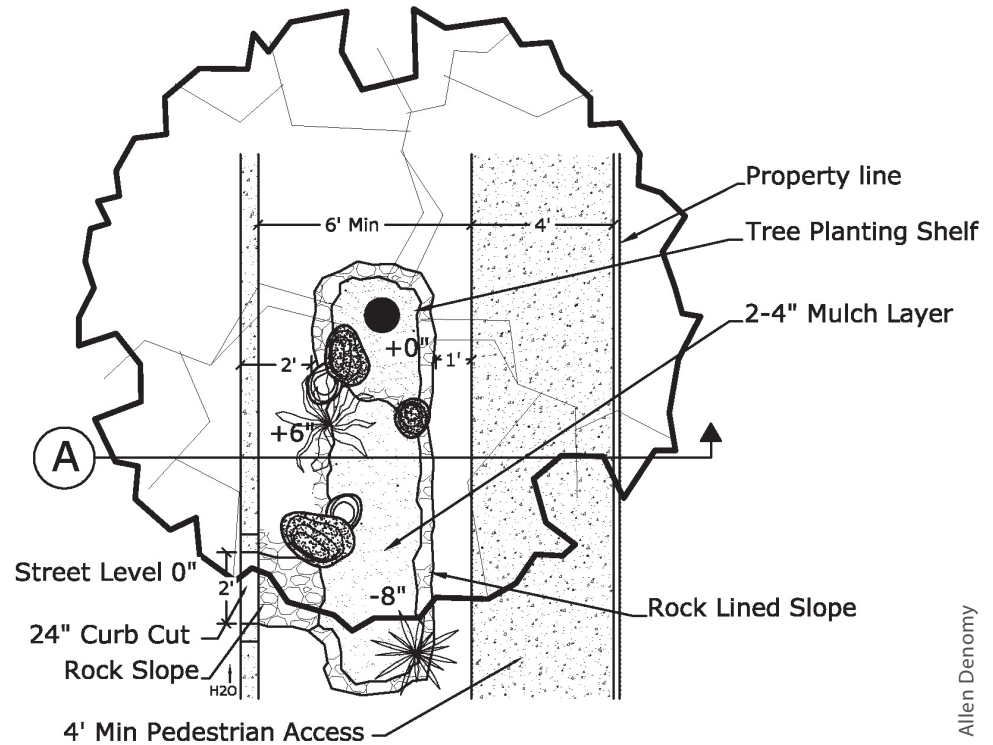
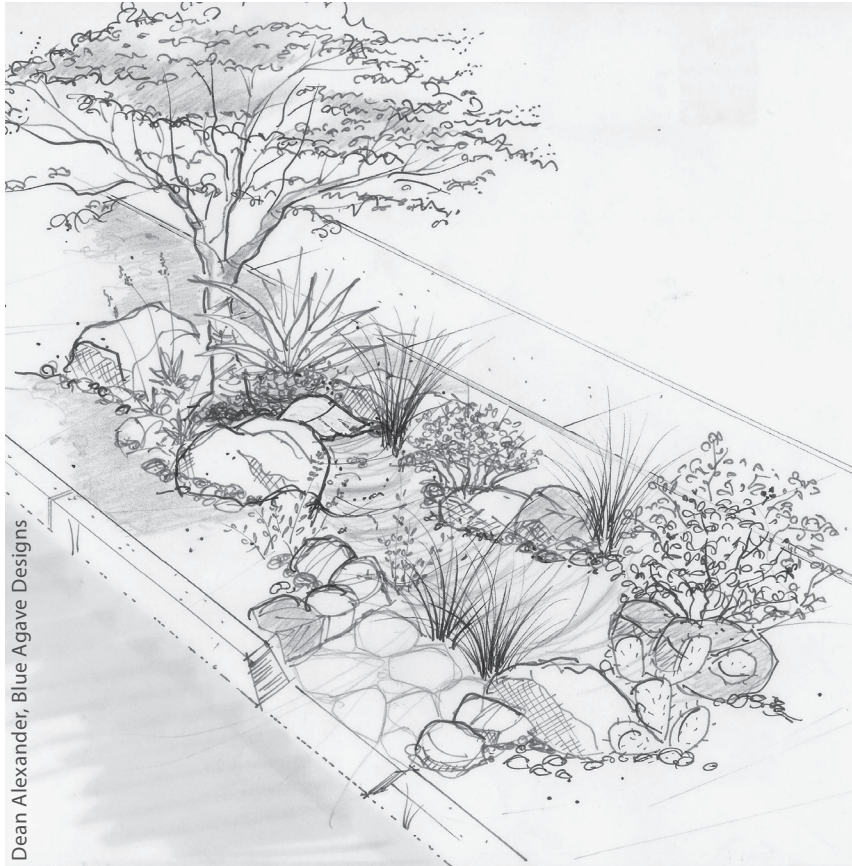


A green infrastructure practice developed by Watershed Management Group in coordination with City of Tucson Department of Transportation.

Rock-edged basin, A back-of-curb practice

Site selection

- Follow site selection guidelines for curb cuts (see handout GI-2) and vegetation (see handout GI-1).
- Minimum width of the right-of-way from the curb to the property line must be 9'.
- Width of earthen area between the curb and sidewalk/path must be at least 6' wide in areas with on-street parking (5' without parking).
- Avoid streets with slopes greater than 5%.
- Maintain setbacks from above- and below ground utilities as required by local codes.
- Maintain setbacks from drive ways and street corners to maintain visibility.



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Design and construction

- Excavate bottom of basin 10"-12" below the surface of the street and backfill with 2"-4" of mulch. Basins must not allow standing water deeper than 8". Excavating deeper and backfilling with mulch allows greater stormwater capacity. The top of the mulch must be at least 2" below the curb cut inlet.
- In areas where the slopes of the basin exceed 33%, the edges of the basin must be lined with rock to prevent erosion.
- Basins should be no longer than 20' in length, with 5' spacing between basins.
- Maximize the area of level bottom within site constraints to maximize stormwater infiltration.
- In areas with on-street parking, preserve an 18" step-out zone of slightly sloped (1% toward basin) soil or gravel next to curb to allow passengers to step in and out of vehicles.
- Preserve a 1' slightly sloped (1% toward basin) area next to pedestrian pathway
- If sidewalks are not present, preserve a minimum 4' pedestrian pathway sloped 1% toward the basin in the right-of-way (ROW).
- Curb cut should be both the inlet and the overflow outlet of the basin. To achieve this, the bottom of the curb cut should be at least 4" below any other point along the top edge of the basin down slope from the curb cut.

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Center Median with Water Harvesting - A Conceptual Drawing

Standard design details developed by Watershed Management Group in coordination with the City of Tucson to incorporate stormwater harvesting and native plantings in streetscape improvements.



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